National Nuclear Security Administration
Sandia Site Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

JAN 1 9 2007

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Road, East, Bldg. 1
Santa Fe, NM 87505

Dear Mr. Bearzi,

On behalf of the Department of Energy (DOE) and Sandia Corporation (Sandia), DOE is submitting the second response to the Notice of Disapproval (NOD): Mixed Waste Landfill Corrective Measures Implementation Work Plan, November 2005 and Requirements for Soil-Vapor Sampling and Analysis Plan, Sandia National Laboratories, EPA ID NM5890110518, HWB-SNL-05-025. In a letter dated December 21, 2006, we submitted responses to Part 1 comments and the required Soil Vapor Sampling and Analysis Plan.

Enclosed with this letter is an Errata sheet correcting a typographical error in the response to Part 1 Comment Number 15. In addition, the enclosure contains responses that address Part 2 comments.

As part of this response submittal, DOE and Sandia are presenting additional information on the monitoring trigger evaluation process. This information provides the basis for requirements to be established under the Long Term Monitoring and Maintenance Plan (LTMMP). Accordingly, this information is preliminary and will be finalized in the LTMMP which is required for submittal to the New Mexico Environment Department and subject to a public review and comment period.

If you have any questions regarding this submittal, please contact me at (505) 845-6036 or Joe Estrada of my staff at (505) 845-5326.

Sincerely,

Kimberly A Davis for

Patty Wagner
Manager

Enclosures (2)

JAN 1 9 2007

Received
JAN 2 6 2007
District

cc w/enclosures:
W. Moats, NMED (via Certified Mail)
J. Kieling, NMED, Santa Fe
L. King, USEPA, Region VI (via Certified Mail)
T. Skibitski, NMED-OB
T. Longo, NNSA/NA-56/HQ, GTN
UNM Zimmerman Library

cc w/o enclosure:
M. Reynolds, NNSA/SSO, MS-0184
J. Gould, NNSA/SSO, MS-0184
A. Blumberg, SNL/NM, Org. 11100, MS- 0141
P. Freshour, SNL/NM, Org. 6765, MS-1089
D. Miller, SNL/NM, Org. 6765, MS -0718
C. Ho, SNL/NM, Org. 6313, MS- 0735
T. Goering, SNL/NM, Org. 6765, MS -1089
S. Griffith, SNL/NM, Org. 6765, MS-1089
M. J. Davis, SNL/NM, Org. 6765, MS-1089
Records, Center, SNL/NM, Org. 6765, MS-1089

AOP 95-45, 06

CERTIFICATION STATEMENT FOR APPROVAL AND FINAL RELEASE OF DOCUMENTS

Document title: **DOE/Sandia Response to NMED's "Notice of Disapproval: Mixed Waste Landfill Corrective Measures Implementation Work Plan, November 2005" (Comment Set 2), January 2007**

Document authors: **Tim Goering, 6765 and Cliff Ho, 6313**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature: Peter B. Davies — 1/15/07

Peter B. Davies
Director
Nuclear Energy & Global Security Technologies
Division 6700
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185
Operator

Date

and

Signature: Kimberly A. Davies for — 1/19/07

Patty Wagner
Manager
U.S. Department of Energy
National Nuclear Security Administration
Sandia Site Office
Owner and Co-Operator

Date

ERRATA SHEET

Part 1, Comments on Landfill Construction Plans and Performance Modeling

Revised Response to Comment No. 15, Comment Set 1 (SNL December 2006):

15. Appendix B, Construction Quality Assurance Plan, Section 8.7 -- The Final Report must be submitted to the NMED as part of the CMI Report. The Final Report must include copies of all quality control data generated by the construction contractor as well as the quality assurance data generated by the CQA contractor.

Response: The Construction Quality Assurance **Report** will include all quality control data generated by the construction contractor as well as quality insurance data generated by the CQA contractor. The Construction Quality Assurance **Report** will be submitted to the NMED as part of the CMI Report.

Note: The original response incorrectly referred to the document as a Construction Quality Assurance Plan, rather than a Construction Quality Assurance Report.

Sandia Corporation
Albuquerque, New Mexico
January 15, 2007

DOE/Sandia Responses to NMED's "Notice of Disapproval: Mixed Waste Landfill Corrective Measures Implementation Work Plan, November 2005"

Comment Set 2

INTRODUCTION

This document responds to the second set of comments received in a letter from the New Mexico Environment Department (NMED) to the U.S. Department of Energy (DOE) and Sandia Corporation (Sandia) on November 24th, 2006 regarding the Mixed Waste Landfill (MWL) Corrective Measures Implementation (CMI) Plan for Sandia National Laboratories (SNL). The letter is entitled "Notice of Disapproval: Mixed Waste Landfill Corrective Measures Implementation Work Plan, November 2005, and Requirement for Soil-Vapor Sampling and Analysis Plan, Sandia National Laboratories" [EPA ID NM5890110518, HWB-SNL-05-025].

The NMED letter contains two sets of comments, divided based on subject. The first set is entitled, "Part 1, Comments on Landfill Construction Plans and Performance Modeling". A response to the first set of comments was submitted by DOE/Sandia to NMED on December 21, 2006 (SNL December 2006). This document provides a correction for the response to Comment No. 15 in Comment Set 1 along with the DOE/Sandia response to the second set of comments, which are entitled, "Part 2, Comments on the MWL Fate and Transport Model (Appendix E)".

This document lists each NMED comment, and DOE/Sandia's response to that comment. The NMED comment is listed in boldface, followed by the DOE/Sandia response, written in normal font under "Response".

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under Contract DE-AC04-94AL85000.

Part 2. Comments on the MWL Fate and Transport Model (Appendix E)

1. Section 2.1.2.2 -- The last paragraph of Section 2.1.2.2 states, "Present conditions were simulated by modeling infiltration through various thicknesses of an engineered cover, while future conditions were simulated by modeling infiltration through various thicknesses of soil under natural conditions (i.e., the 'natural analog')." This description implies that present and future conditions are simulated using different designs (in the near term an engineered cover which in the future eventually degrades to the conditions of natural soil). Section 3.4.2 states that the engineered soil cover reverts to the natural soil conditions around the landfill. Provide clarification in Section 2.1.2.2 regarding the evolving soil conditions within the cover. Explain what soil conditions are expected to evolve, why and when they will evolve, and what will they will evolve to.

Response: Cover performance modeling was conducted in 2003 and 2004 using site-specific climate, hydrologic, and vegetation input parameters, and is discussed in depth the document entitled, "Calculation Set for Design and Optimization of Vegetative Soil Covers" (Peace and Goering 2005). This modeling effort simulated cover performance under present and future conditions using the same design, but slightly different soil hydraulic properties. A complete copy of this report is included on the CD as Attachment 1, under the subdirectory, "Supporting Documentation".

Soil hydraulic properties for modeling present conditions were determined by measuring soil hydraulic properties of an engineered cover test plot, while soil hydraulic properties for modeling future conditions were determined by measuring soil hydraulic properties of the natural analogue. Additional information on measurement of the soil hydraulic properties for both modeling scenarios is presented below.

Present Conditions – Engineered Cover Properties

Soil hydraulic properties for the engineered vegetative cover were determined by field and laboratory measurements conducted on an engineered cover test plot constructed at the IP Test Site west of the MWL. The engineered cover test plot was constructed to the same bulk density and initial moisture contents specified in the current MWL cover design. The test plot consisted of 6 feet of compacted native soil overlain by 9 inches of uncompacted native topsoil. The native soil layer was placed in 8-inch loose lifts to attain maximum 6-inch compacted lift thickness. The native soil was compacted to not less than 90% maximum dry density at -3 to +2 percentage points of optimum moisture content, as determined by ASTM D698 (Standard Proctor testing). A total of 13 lifts, excluding subgrade, were placed to complete construction of the engineered cover test plot. Additional details on the construction of the engineered cover test plot and the measurement of the soil hydraulic properties are presented in Section 4.2 of the document, "Calculation Set for Design and Optimization of Vegetative Soil Covers, Sandia National Laboratories, Albuquerque, New Mexico" (Peace and Goering 2005).

Field and laboratory tests were conducted on the soils of the engineered cover test plot to

measure the soil hydraulic and geotechnical properties used for performance modeling of the engineered cover. Because the engineered cover test plot was constructed to the same specifications as the proposed MWL cover using the same soil type, the soil hydraulic properties of the engineered test plot were considered representative of the proposed MWL cover. Thus, the modeling results from the engineered cover represent present conditions for the proposed MWL cover.

Future Conditions – Natural Analogue Properties

The soil hydraulic properties for the natural analogue were determined by field and laboratory measurements conducted on undisturbed soils near the IP test site west of the MWL. The soil hydraulic properties of the natural analogue are discussed in Section 6.5.3 of Peace and Goering (2005). The soil hydraulic properties of the natural analogue were considered representative of future conditions for reasons presented below.

Evolution of Soil Conditions within the Cover:

The MWL engineered cover will gradually evolve over time to a more natural system (i.e. the natural analogue) as vegetation is established, and natural processes gradually affect the properties of the cover. Pedogenic processes (i.e., soil evolution) will change soil physical and hydraulic properties that are fundamental to the performance of the engineered cover. Pedogenesis includes processes such as 1) hydraulic and mechanical redistribution of soil particles, affecting soil hydrologic properties (i.e. bulk density, porosity, and hydraulic conductivity); 2) formation of macropores for preferential flow associated with root growth, animal intrusion, and soil structural development; 3) secondary mineralization, deposition, and illuviation of fines, colloids, soluble salts, and oxides that can alter water storage and infiltration; and 4) soil mixing caused by freeze-thaw activity, animal burrows, and the shrink-swell action of expansive clays (Chadwick and Graham 2000).

Although vegetation will be established on the MWL cover within three to five years, the pedogenic processes discussed above will take many years for the engineered cover to evolve to, and perform like the natural analogue. Pedogenic processes are driven by climate, organisms, topographic relief, parent material, and time. Many interactions occur between water, air, temperature, microorganisms, plants, animals, and their residues, affecting the mineral material of the original soil and its position in the landscape. During its evolution, the soil profile slowly expands and deepens, developing characteristic discrete soil layers called horizons, while a steady-state balance is approached. One cannot predict when steady state (i.e. the natural analogue) is attained. For this reason, the soil properties of the natural analogue were considered, and used as modeling input parameters to assess the future performance of the MWL cover.

Cover Performance Modeling of Present Conditions versus Future Conditions

Cover performance modeling of both the engineered cover and the natural analogue was conducted using input parameters measured on the engineered cover and the natural

analogue, as described above. Present conditions were simulated by modeling cover performance assuming soil properties of the engineered cover. Future conditions were simulated by modeling cover performance assuming soil properties of the natural analogue. Table 1 presents the model input parameters for both the engineered cover and the natural analogue.

The modeling results confirm that under both current and future scenarios, the MWL cover will meet the EPA-prescribed technical equivalency criteria for RCRA landfills. These criteria are a net annual infiltration of 31.5 millimeter/yr, and an average infiltration rate of 1×10^{-7} cm/s or less (Peace and Goering 2005).

Table 1. UNSAT-H Code Input Parameters

Parameter	Natural Analogue		Engineered Cover		Source
	Input value	Unit(s)	Input value	Unit(s)	
Initial Head	17,200	cm	5620	cm	RETC Code
θ_s	0.39	Percent	0.35	Percent	RETC Code
θ_r	0.001	Percent	0.001	Percent	RETC Code
α	0.0309	cm^{-1}	0.022	cm^{-1}	RETC Code
n	1.19	(-)	1.26	(-)	RETC Code
ℓ	0.5	(-)	0.5	(-)	[a]
K_s	4.05×10^{-4}	cm/s	3.46×10^{-4}	cm/s	Field
Root Depth	80	cm	80	cm	Field
LAI Historical Precipitation	0.8 max	(-)	0.8 max	(-)	[b, c, d]
LAI Maximum Precipitation	1.2 max		1.2 max		
Growing Season	2–364	Julian Day	2–364	Julian Day	[b, c, d]
Percent Bare Area	81	Percent	81	Percent	Field
RLD coefficient *a*	0.5090	(-)	0.5090	(-)	Field
RLD coefficient *b*	-0.0630	(-)	-0.0630	(-)	Field
RLD coefficient *c*	0.0262	(-)	0.0262	(-)	Field
Ψ_w	30,000	cm	30,000	cm	[e, f, g]
Ψ_d	3000	cm	3000	cm	[h, i]
Ψ_n	30	cm	30	cm	[h, i]
PET coefficient *a*	0	(-)	0	(-)	[j]
PET coefficient *b*	0.52	(-)	0.52	(-)	[j]
PET coefficient *c*	0.5	(-)	0.5	(-)	[j]
PET lower limit *d*	0.0	(-)	0.0	(-)	[j]
PET upper limit *e*	3.7	(-)	3.7	(-)	[j]

[a]Maulem (1976)
[b]NMED (1998)
[c]Scurlock et al. (2001)
[d]Munk (2004)
[e]HDR Engineering (2000)
[f]ITRC (2003)
[g]Hillel (1998)
[h]Fayer (2000)
[i]Feddes et al. (1978)
[j]Ritchie and Burnett (1971)

α Air entry parameter
θ_r Residual moisture content
θ_s Saturated moisture content
Ψ_w Wilting point
Ψ_d Limiting point
Ψ_n Anaerobic
cm Centimeter(s)
K_s Saturated hydraulic conductivity
ℓ Mualem numerical parameter
LAI Leaf area index
max Maximum
n van Genuchten curve-fitting parameter
PET Potential evapotranspiration
RDL Root length density

2. The first paragraph of Section 3.2.1 states that lead, cadmium, and radionuclides (except radon) were modeled using the Framework for Risk Analysis in Multimedia Environmental Systems (FRAMES) and Multimedia Environmental Pollutant Assessment System (MEPAS) simulation tools. Section 3.2.2 states, "A separate model was used to model the transient transport of tritium at the MWL". The reader, however, does not learn until Section 3.7.1 that tritium was also modeled using FRAMES and MEPAS. Revise the text of Section 3.2.1 to indicate tritium was modeled using FRAMES and MEPAS, as well as the separate transient transport model.

The second paragraph of Section 3.2.1 indicates MEPAS is capable of computing contaminant fluxes for multiple routes, including radioactive decay and contaminant degradation. The paragraph states further that MEPAS was used only for the source-term and vadose-zone models, suggesting MEPAS was not used to model radioactive decay. In contrast, Section 3.2.2 indicates that the transient model for tritium and perchloroethene (PCE) accounts for contaminant decay. Clarify whether the modeling of radionuclide transport through the vadose zone at the MWL accounts for contaminant decay.

Response: The text in Sections 3.2.1 and 3.2.2 has been clarified to indicate that FRAMES/MEPAS can only simulate liquid-phase transport of constituents such as tritium. A separate analytical model was used to simulate the gas and liquid-phase transport of tritium.

The use of source-term and vadose-zone models in MEPAS does not preclude radioactive decay. Constituent decay can occur in both the source-term and vadose-zone transport models. Text has been added to Section 3.2.1 to clarify this. The revised Probabilistic Performance Assessment Modeling Report is included in Appendix A.

3. The first paragraph of Section 3.3 references Table E-2, which provides a summary of input parameters and distributions of constituents used in the modeling. Footnotes "b" and "d' reference an EPA fact sheet for tetrachloroethene; the fact sheet was reportedly accessed on the U.S. EPA website at www.epa./WGWDW/dwh/t-voc/tetrachl.html, but it is not referenced in Section 6, References, of the report. The fact sheet was not available at the web address provided, so the input parameters could not be verified. Provide the fact sheet as an attachment to the report and update the website address, if available, for the fact sheet. Also, revise Section 6 to include this fact sheet among the references. In addition, provide all other internet-referenced data as attachments to the report and cite these sources in Section 6.

Response: There was a typo in the URL address for the PCE fact sheet. This has been corrected and all online references have been added to Section 6. PDF versions of these web pages are included in the attached CD (Attachment 1). The online references are listed in Section 6 as follows:

- U.S. EPA, Tetrachloroethylene (PCE) Online Fact Sheet: www.epa.gov/OGWDW/dwh/t-voc/tetrachl.html

- U.S. EPA, Cadmium Online Fact Sheet:
  www.epa.gov/safewater/dwh/t-ioc/cadmium.html

- U.S. EPA, Lead Online Fact Sheet:
  www.epa.gov/safewater/dwh/t-ioc/lead.html

- U.S. EPA, Henry's Constant Online Calculator:
  www.epa.gov/athens/learn2model/part-two/onsite/esthenry.htm)

4. Section 3.4.2, page E-35, 2nd paragraph -- Explain why future infiltration rates would be less than current rates.

Response: The cover performance modeling predicted the average infiltration rate through the engineered cover (representing present conditions) to be 1.18 X 10^{-9} cm/s for historical precipitation, and 5.34 X 10^{-9} cm/s for the maximum precipitation scenario (Peace and Goering 2005). The modeling predicted the average infiltration rate for the natural analogue (representing future conditions) to be 2.44 X 10^{-10} cm/s for the historical precipitation scenario, and 1.04 X 10^{-9} cm/s for the maximum precipitation scenario.

The difference in modeling results between the engineered cover (representing present conditions) and the natural analogue (representing future conditions) reflect variations in soil properties between the engineered cover and the natural analogue, as shown in Table 1. These include minor differences in saturated hydraulic conductivity (4.05 X 10^{-4} cm/s for the natural analogue, versus 3.46 X 10^{-4} cm/s for the engineered cover) and porosity, as indicated by the saturated moisture content (θ_s) of 0.39 for the natural analogue versus 0.35 for the engineered cover. These variations in soil properties are a result of the pedogenic processes discussed above (see Response to Comment No. 1), and result in a net increase in porosity and hydraulic conductivity. The increased porosity and hydraulic conductivity of the natural analogue facilitate evapotranspiration, resulting in a net decrease in infiltration rate for the natural analogue (i.e. future conditions).

***5.* Section 3.6, Fate and Transport of Radon -- Radon was modeled as originating from radium-226 sources. Explain why radon originating from the decay of depleted uranium was not incorporated into the radon fate and transport model.**

Response: Radon was included as a daughter product of uranium-238 in the FRAMES/MEPAS simulations, as discussed in Section 3.6.2.2 and 3.7.2.2. However, U-238 was not included as a source of radon for the gas-transport model detailed in Section 3.6.2.2 because the activity of Ra-226 (parent of Rn-222) resulting from the decay of uranium-238 is negligible (15 microCuries after the first 1,000 years) relative to the activity of Ra-226 assumed in the model (6-12 Curies). This has been clarified in the text.

6. Section 4, Pages E-59 and E-59a -- Revise the trigger evaluation process to follow the corrective action process described in the Consent Order (April 29, 2004) if a trigger level is exceeded (step 3A), provided the Consent Order is still in force at the time the trigger level is exceeded. If the Consent Order has terminated, the trigger evaluation process

should follow the standard RCRA corrective action process.

Response: To be consistent with the Compliance Order on Consent (NMED April 2004) between the NMED, the DOE, and Sandia Corporation, hereinafter referred to as the Consent Order, several minor modifications were made to the trigger evaluation process figure on Pages E-59 and E-59a. The Consent Order requires notification of the NMED in writing within 15 days after the discovery of any previously unknown release of a Contaminant from a SWMU or Area of Concern. For consistency with the Consent Order, Step 3B on Figure E-25 has been revised to state, "If verified, notify NMED ***in writing within 15 days*** and increase sampling frequency as negotiated with NMED".

In addition, the following line was added to Item 5 on Page E-59a, which explains the trigger evaluation process, ***"If the NMED determines that further investigation of the trigger exceedance is needed, NMED may require corrective action based on a finding that releases of contaminants have occurred, are occurring, or are likely to occur."***

The revised Trigger Evaluation Process is shown in Figure 1 below. All proposed monitoring triggers are considered preliminary at this point, and provide the basis for requirements to be established under the Long Term Monitoring and Maintenance Plan (LTMMP). Accordingly, this information is preliminary and will be finalized in the LTMMP which is required for submittal to NMED and subject to a public review and comment period.

7. Section 3.3 -- The fourth paragraph of Section 3.3 discusses the dose via inhalation and dermal adsorption for gas-phase tritium, but a similar discussion is not presented for radon gas or gas-phase PCE. Clarify whether this dose discussion is applicable to all gas-phase constituents considered in the Report. If the dose discussion is only applicable to gas-phase tritium, then explain why this is the case. Alternatively, discuss inhalation and dermal adsorption doses for radon gas and gas-phase PCE.

Response: Inhalation and dermal adsorption of gas-phase radon and PCE were not used as performance metrics in this analysis. Table 1 in Section 3.1 of the Performance Assessment Modeling Report summarizes the performance metrics that were used for these constituents. Text has been added to clarify this in the report. The inhalation dose is only applicable to gas-phase tritium because the enforceable regulatory metrics pertaining to radon and PCE do not use dose (surface flux is used for radon and groundwater concentration is used for PCE).

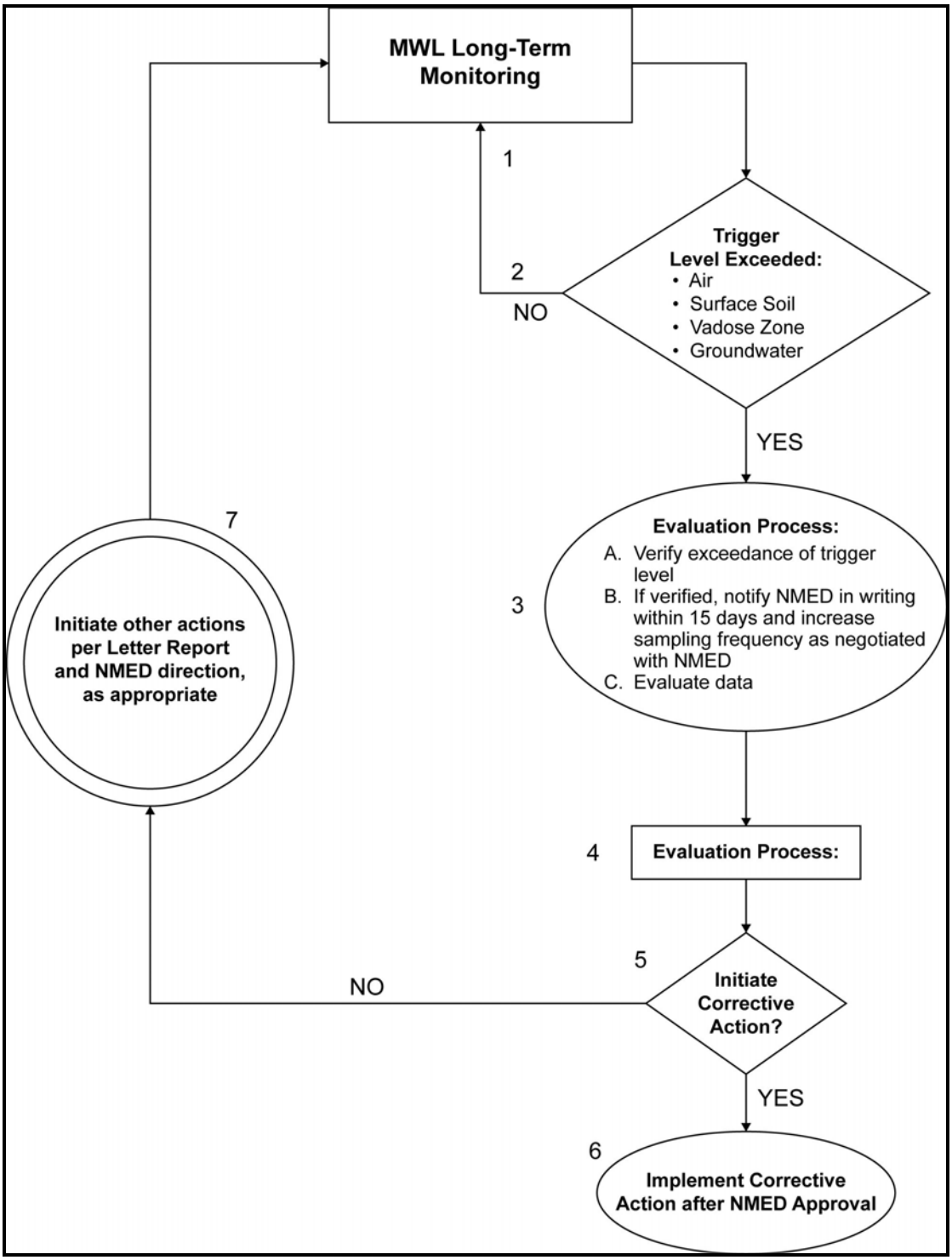

Figure 1. Trigger evaluation process for the Mixed Waste Landfill (revised)

8. Section 3.4.1 --The first paragraph of Section 3.4.1 states the modeling study of water infiltration through the cover was "discretized by placing computational nodes at predetermined vertical spacing in a conceptual soil profile to evaluate the performance of a cover 3 ft in thickness." The model evaluated a soil profile that was actually 6 feet thick in order to avoid impacts due to boundary conditions, but these impacts and boundary conditions are not discussed. Thirty nodes were located within this 6-foot-thick soil profile. However, the discussion does not describe how or why the 30 node locations were predetermined within this soil profile. Explain the specific impacts caused by boundary conditions. Clarify how and why the computational node locations were predetermined.

The conceptual soil profile for the infiltration model, as discussed in Section 3.4.1, is presented side-by-side in Figure E-3 with nodal discretization used in the UNSAT-H model. As illustrated, the conceptual soil profile does not correspond to the components of the MWL soil cover cross-section. The soil profile illustration is dimensionless; i.e., it is not clear whether the soil profile is 6 feet thick. Also, only 23 of the 30 computational nodes within the cross-section are shown. In addition, the nodal depth locations cannot be determined from the illustration. Revise the Figure E-3 conceptual model to clearly indicate the components of the MWL soil cover (i.e., subgrade layer, biointrusion barrier, native soil layer, topsoil layer, and vegetation) and their location relative to the MWL waste zone. Revise Figure E-3 to include a vertical scale for depth (i.e., inches or feet below the cover surface) and the locations of all 30 computational nodes. Clarify the soil type specified for each component of the soil cover.

Response: Section 3.4.1 presents only a conceptualization of the model used to predict water percolation through the cover. A detailed description of the model and extensive discussion of the input parameters, boundary conditions, and results are discussed in the document, "Calculation Set for Design and Optimization of Vegetative Soil Covers, Sandia National Laboratories, Albuquerque, New Mexico" (Peace and Goering, 2005). Additional information from this report is included below.

Node Locations:

The 30 node locations within this soil profile were carefully selected to minimize modeling computational requirements, yet yield accurate numerical results. Node spacing is very fine near the ground surface and becomes progressively larger with increased depth through the soil profile. The fine node spacing near the surface is necessary for an accurate numerical solution because very large and rapid changes in suction head occur as the surface dries and wets in response to evaporation and precipitation. Deeper in the soil profile, suction head changes are less dramatic and node spacing is increased. This spacing was selected to minimize numerical errors while maintaining reasonable execution times.

By code convention, nodal depths in the soil profile were assigned metric values. The node locations were "predetermined" within the soil profile to facilitate interpretation of modeling results. Node numbers 10, 14, 19, 22, and 26 were assigned depths of 30, 61, 91, 122 and 152 cm, respectively, to represent the lower boundary of covers 1,2,3,4 and 5 ft in thickness. Model output included flux across each nodal boundary; hence, the results could be used to optimize cover thickness for the remedy design.

Boundary Conditions:

Boundary conditions were selected to be conservative with regards to prediction of net percolation through the cover. Hence, predicted percolation values may be higher than actual percolation values. The water flow for the upper boundary (i.e., through the surface of the soil profile), is specified as an evaporation flux boundary and an infiltration boundary equivalent to hourly precipitation over a 24-hr period. The water flow for the lower boundary or the base of the soil profile at 6 ft is specified as a unit downward gradient —flow is always directed downward. A lower boundary specified as a unit gradient is conservative because in nature, movement of water is either upward or downward as the soil profile responds to precipitation, evaporation, and transpiration. Since hourly precipitation is designated and the model regards daily precipitation as occurring over a 24-hr period, all flow is directed downward through the soil profile.

Nodal Discretization versus Conceptual Soil Profile (Figure E-3):

The MWL cover was modeled as a lithologic monolayer to be conservative. A soil profile with uniform soil and hydrologic properties translates into a significant conservative estimate of liquid water flow, i.e. water flow is increased. If multiple layers are simulated, the water potential in the underlying layer must equal the water potential in the overlying layer before flow into the lower layer occurs. Multiple layering in performance modeling as well as multiple layers in nature attenuate the downward flow of liquid water (e.g., yielding multiple capillary barriers that slow water flow).

Figure E-3 does not show the actual components of the MWL soil cover (i.e., subgrade layer, biointrusion barrier, native soil layer, topsoil layer, and vegetation), because the model did not model each of these as individual components of the cover. Figure E-3 represents a conservative 3-ft thick, monolithic cover (i.e., the native soil layer, the topsoil layer, and the vegetation). The subgrade layer adds additional thickness to the lithologic monolayer represented by the modeled thicknesses of 4 and 5 ft. Although the biointrusion barrier was not modeled, its inclusion in the design does not adversely affect cover performance. In fact, the biointrusion barrier serves as a capillary break, further reducing the downward flow of water and adding additional conservatism to the estimate of net percolation by the model.

The figure has been revised to include a vertical scale for depth (i.e., feet below the cover surface) and the locations of all 30 computational nodes. However, to be true to the infiltration model, the biointrusion barrier, subgrade layer, and underlying wastes are not shown on the revised figure. The revised figure is shown below.

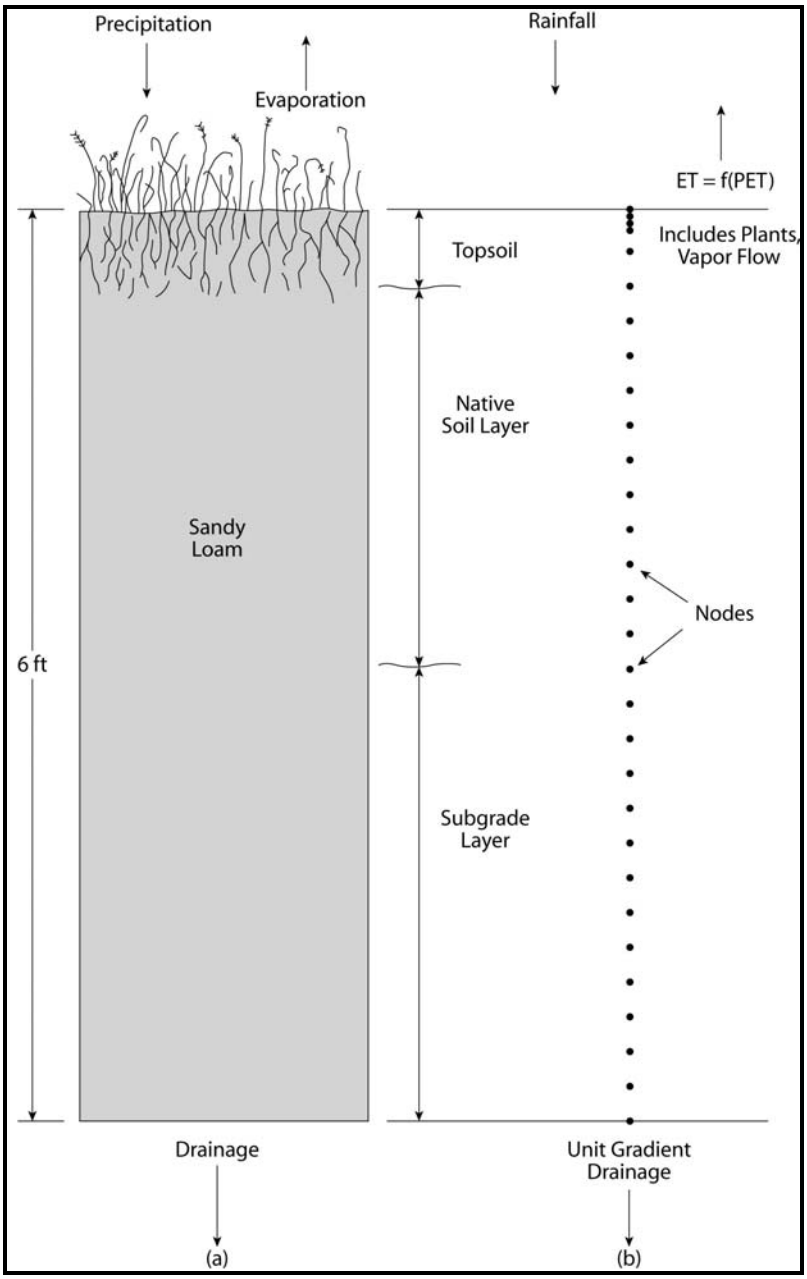

Figure 2. (a) Conceptual model for infiltration model. (b) Nodal discretization in UNSAT-H.

Soil Type Modeled:

The soil type modeled for the cover is a sandy loam.

9. Section 4.2.2 -- Section 4.2.2 discusses the proposed neutron probe system for monitoring moisture content beneath the MWL. However, for the neutron probes to detect percolation through the soil cover, water will have to move through the bio-

intrusion barrier, the waste zone, and a portion of the vadose zone prior to detection, which would be expected to require a considerable amount of time. The neutron probe system is thus more reliably a vadose-zone monitoring system rather than a tool to determine loss of integrity of the soil cover. If the Permittees want to monitor the cover for performance, the neutron probes should be placed just below the cover in the subgrade.

Response: Neutron probes installed immediately below the cover in the subgrade could be used to detect changes in moisture content as a result of infiltration through the cover. However, installation of horizontal neutron access tubes beneath the MWL to monitor moisture would yield limited additional monitoring benefits. The behavior of the cover design was evaluated at the engineered cover test plot constructed at the IP Test Site west of the MWL and is well understood. It is of more interest to monitor the vadose zone beneath the landfill to monitor potential migration of contaminants from the landfill. The proposed neutron probe system is suggested as part of the vadose zone monitoring system to be utilized for long-term monitoring of the landfill.

Installation of vertical neutron probe access holes through the MWL cover to monitor the subgrade is also not recommended. Access holes installed directly through the cover would increase the potential for preferential flow down the boreholes, and into the underlying wastes. In addition, increased vehicular traffic on the cover during monitoring activities could damage the vegetation growing on the cover, and would negatively affect bulk density and porosity of the cover. Increased traffic on the cover may also cause rutting and potential erosion of the cover itself.

The current neutron moisture monitoring system, consisting of three boreholes angled 30 degrees from vertical beneath the MWL, will be used to monitor the vadose zone beneath the landfill, and to indirectly monitor the cover performance. If infiltration through the cover were to significantly increase, the resulting percolation through the disposal cell would be detected by neutron moisture logging in the underlying vadose zone. The angled boreholes extend well beneath the lateral extent of the cover with depth, as shown in Plate 4 of the MWL CMI Plan, and will intercept any increased percolation through the cover. Additional details on use of the current neutron moisture monitoring system to monitor cover performance are included in the response to Comment No. 16, below.

10. Figures -- Figures E-13, E-15, E-19, and E-24 present a graphical illustration of the sensitivity analyses performed for some of the constituents. The figures present histograms to compare ΔR^2 for constituent concentration and dose. Clarify why actual concentrations and doses were not presented in the sensitivity analyses.

Response: Section 2.2.1 describes the stepwise linear rank-regression sensitivity analysis that was used in this study. In this approach, the actual concentrations and doses *are* used as performance metrics in the sensitivity analyses. The impact of the uncertainty of the input parameters on the simulated performance metrics (e.g., concentration, dose) is evaluated, and the relative impact is presented as ΔR^2 in Figures E-13, E-15, E-19, and E-24 Those

parameters with a large ΔR^2 have a greater correlation to the simulated performance metric; in other words, the simulated performance metric (e.g., concentration, dose) has a greater sensitivity to those parameters. Additional text has been added to Section 3.5.2.3 to clarify this.

11. General Comment on the Fate and Transport Model -- Compared to typical reports for modeling studies, the report as presented is brief, particularly when considering the complexity of using a Monte Carlo approach with multiple models, scenarios, and constituents of concern. In general, the report provides a narrative of a probabilistic model that is presented as a "black box." The report discusses the input parameters and selectively presents output results, but there is not adequate information to assess whether the "black box" is operating satisfactorily. The report does not present a discussion regarding software quality assurance -- it is not known how well the various models work separately or together. Also, the report does not provide a critique of the modeling runs, except for an occasional qualitative statement In contrast, a typical modeling report is a detailed and exhaustive presentation that addresses the conceptual development and construction of the model (e.g., the data quality objectives, the software code), the software quality assurance performed (including software validation and verification) to assess model performance both separately and when working together, the details regarding specific inputs and outputs for all runs of every scenario, and a quantitative analysis of the sensitivities of the input parameters, including an assessment of the bias of the model toward specific outputs. The report, however, does not provide this level of information. The Permittees must provide additional information to address the deficiencies mentioned above.

Response: The software and models that are used in this report are taken from widely used packages (e.g., FRAMES/MEPAS) or peer-reviewed journal articles. The report provides references for each model and software that is used (the gas-phase radon-transport model is derived in an appendix). These references contain the full description of each mathematical model and associated validation studies, and the report qualitatively summarizes the relevant features and processes that are utilized in the analysis. We felt that this was the best approach for this report; inclusion of this material in the report would have made the report extremely large and cumbersome to read.

We agree, however, that additional work and materials are needed to provide quality assurance for the models and software used in this particular study. With regard to model and software validation and verification, we have added additional documentation of tests that demonstrate the models and software were working properly and as intended (see "Model_Supplement_12-7-06.doc," included on the CD in Attachment 1). This supplement includes additional details regarding each of the models and software that were used in the analyses, and tests are performed to demonstrate the performance of each model. Links are provided to the Mathcad models (written in plain English and symbolic text) for the radon, tritium, and PCE transport models. In addition, all of the model input and output files have been made available on the CD.

With regard to "details regarding specific inputs and outputs for all runs of every scenario," the CD contains Excel files that contain the inputs and outputs for every realization that was simulated for each constituent. This information is summarized in the cumulative distribution

functions and plots presented in the report. We believe that presenting the input and output data for every realization in the report would be excessive, so we have included it on the CD instead.

Finally, with regard to "a quantitative analysis of the sensitivities of the input parameters," this has been done and is described in the sensitivity-analysis sections throughout the report for each constituent (see Sections 3.5.2.3, 3.6.2.3, 3.7.2.3, and 3.9.2.3).

12. Provide information evaluating the risk to ecological receptors for tritium, radon, and radon daughter products, which are expected to be released to surface soil and the atmosphere.

Response: Risk to ecological receptors from tritium, radon, and radon daughter products that would be expected to be released to surface soil and the atmosphere is anticipated to be negligible, and is typically not evaluated for ecological risk. The primary components of ecological risk from these radionuclides are due to ingestion and external exposure.

SNL current ecological risk assessment methodology, as agreed upon by NMED, does not account for inhalation as a primary pathway. Within the current SNL ecological risk assessment methodology, the inhalation pathway is considered to be a minor pathway in the overall contribution to ecological risk. Furthermore, ecological risks due to radiological contaminants have been minimal at other SNL sites when compared to human health radiological risk assessment concerns (i.e., the allowable dose is significantly higher for ecological receptors when compared to human receptors), and are anticipated to be negligible at the MWL as well. For this reason, evaluation of risk to ecological receptors was not included in the report.

13. Provide information evaluating the risk to human receptors for tritium, radon, and radon daughter products that would be expected to be released to surface soil and the atmosphere. Include external exposures.

Response: For tritium, calculation of risk to human receptors can be estimated from dose which was calculated in the fate and transport (F&T) modeling report. The maximum dose from tritium calculated in the F&T realizations was 18 mrem/year, while the average dose was 1.7 mrem/year. The risk from these tritium doses ranges from 1E-5 to 1E-6.

Regulatory-based metrics (e.g., dose, groundwater concentrations, and surface flux rate for radon) provide a more rigorous basis for performance-assessment calculations than risk. For this reason, risk from tritium to human receptors was not calculated in the F&T report.

Risk from radon and radon daughter products is implicit in the airborne concentrations provided in the EPA guidelines. Dose/risk from radon and radon daughter products are considered as one. The majority of dose/risk from exposure to radon and its daughter products comes from the daughter products, which are solids that may be deposited in lung tissue.

The estimate of risk from radon is subject to considerable uncertainty, and depends on a

myriad of variables affecting dose for a given exposure scenario. For example, risk from radon (and its daughter products) is a function of age, gender and whether or not one currently smokes, has smoked in the past, or has never smoked. Additional information on the risk to human receptors from radon (and radon daughter products) is presented in the document, "EPA Assessment of Risks from Radon in Homes", US EPA 2003 (*http://www.epa.gov/radon/images/402-r-03-003.pdf*). A copy of this document is included on the attached CD (Attachment 1) under the subdirectory, "Supporting Documentation".

14. The NMED expects surface soil surrounding animal borrows (including ant nests) to be monitored for radionuclides and metals. Develop triggers that are protective of both human health and the environment for radionuclides and metals in soil.

Response: Surface soil surrounding select animal burrows and ant nests was sampled prior to clearing and grubbing the site in order to obtain baseline environmental monitoring data. The data are being evaluated, and will be presented in a report to NMED on baseline environmental monitoring data for the MWL that is currently being drafted.

During long-term monitoring at the MWL, DOE/Sandia will monitor animal burrows and ant nests (ant hills). Current plans are to survey locations of animal burrows and ant hills by GPS on an annual basis, and to collect surface soil samples from animal burrows and ant hills every five years to ensure that contaminants have not been mobilized by biota. The soil samples will be analyzed for RCRA metals, gamma-emitting radionuclides, and gross alpha and gross beta activity.

Triggers proposed for RCRA metals concentrations in the surface soil samples are the NMED Industrial/Occupational Soil Screening Levels (NMED 2006). Triggers proposed for gamma-emitting radionuclides are the NMED-HWB Approved Background Values (Dinwiddie 1997).

A table summarizing all proposed monitoring triggers is included in the DOE/Sandia response to Comment No. 20, below.

Please note that the Consent Order includes the corrective action requirements for the MWL but contains no requirements for radionuclides or the radioactive portion of mixed waste. Thus, any triggers proposed for radionuclides are provided voluntarily, pursuant to the Consent Order. The voluntary inclusion of such radionuclide information shall not be enforceable and shall not constitute the basis for any enforcement because such information falls wholly outside the requirements of the Consent Order. Additional information on radionuclides and the scope of the Consent Order is available in Section III.A of the Consent Order. Throughout the remainder of this submittal, this paragraph will be referred to as the Consent Order note.

15. Develop triggers for tritium, radon, PCE and total VOCs as soil vapor. The NMED expects soil-gas in the vadose zone to be monitored for these constituents.

Response: In order to monitor soil vapor for contaminants, DOE/Sandia is proposing

installation of a robust monitoring system for sampling soil gas within the vadose zone at the MWL. The proposed vadose zone monitoring system would serve as an early warning system to protect groundwater, and would allow early detection of contaminants migrating through the vadose zone, before they impact groundwater quality. Soil gas samples would be analyzed for VOCs, but not for tritium or radon for reasons described below.

During the Phase 2 RCRA Facility Investigation (RFI) in the mid 1990s, extensive soil gas data were collected to determine the nature and extent of VOC contamination in near-surface soils at the site (SNL/NM 1996) with most of the samples collected from depths of 10 ft and 30 ft below ground surface. Although low concentrations of VOCs are present in the vadose zone at the MWL, they have not impacted groundwater quality based on sixteen years of groundwater monitoring data collected since 1990.

The proposed vadose zone monitoring system will provide updated data regarding VOC profiles with depth, and is proposed to consist of three Flexible Liner Underground Technologies (FLUTe™) sampling wells. The FLUTes™ are proposed to be constructed in vertical boreholes located immediately outside the perimeter of the MWL cover with the locations selected near areas where the highest concentrations of VOCs were detected during earlier studies at the MWL. Actual locations of the FLUTe™ boreholes will be selected in conjunction with NMED. Soil gas sampling ports are proposed to be installed in each FLUTe™ at depths of 50 ft, 100 ft, 200 ft, 300 ft, and 400 ft below ground surface.

Soil gas data collected from the FLUTes™ will be used to assess current VOC distributions with depth, and to monitor VOC concentrations over time, allowing early identification of any potential threats to groundwater. The VOC data from the FLUTes™ will also be used to update the MWL fate and transport model every five years, as required in the NMED Final Order (NMED 2005).

Triggers for Tritium and Radon

Analysis of FLUTe™ soil gas samples for tritium and radon is not recommended, as these are not routine analyses, and would yield data of limited value. Tritium and radon can be more directly monitored at ground surface, as described in Section 4.2.1 of the Performance Assessment Modeling Report. Because of tritium's high mobility, any significant releases of tritium would be readily detected in surface soils adjacent to the landfill, eliminating the need to sample tritium in soil gas. As discussed in the Performance Assessment Modeling Report, the proposed trigger for tritium in surface soils along the MWL perimeter is 20,000 pCi/L in soil moisture. Tritium concentrations measured in soil samples collected with depth during the Phase 2 RFI were relatively low below depths of 26 feet, pose minimal risk to human health, and have not impacted groundwater quality.

Radon will be monitored above ground surface along the MWL perimeter using track etch monitors (Section 4.2.1), with a proposed trigger value of 4 pCi/L in air. This technique is superior for analysis of radon flux over time, and will provide more useful information than time-discrete samples collected from the FLUTes™. Radon has not been detected above background levels in soils at the MWL, and any significant releases of radon in the near future are unlikely, due to the nature of the sealed sources containing radium-226, from which the

radon would emanate.

Please see Consent Order note provided in response to Comment No. 14.

Triggers for VOCs in the Vadose Zone

Triggers are proposed for PCE, TCE, and total VOCs in soil gas at the MWL. TCE has been detected in groundwater at other locations across SNL and Kirtland Air Force Base, and for this reason, a trigger is proposed for TCE, as well as PCE.

There are no regulatory limits for individual concentrations of volatile organic compounds in the vadose zone. DOE/Sandia propose trigger levels for TCE and PCE in soil gas based on a similar trigger proposed for the Chemical Waste Landfill (CWL). In the Post-Closure Care Plan for the CWL, a trigger of 20 ppmv was proposed for TCE in soil vapor samples collected from the deepest sampling ports (SNL September 2005). The CWL is located only 1.3 miles to the southeast of the MWL, and overlies similar hydrogeologic conditions, with similar depths to groundwater. Triggers protective of groundwater at the CWL should also be protective of groundwater at the MWL because of the similar hydrogeologic conditions at both sites.

DOE/Sandia propose triggers of 20 parts per million by volume (ppmv) for TCE and 20 ppmv for PCE for soil gas samples at the MWL. In addition, DOE/Sandia propose a trigger of 25 ppmv for total VOCs in soil gas samples at the MWL. These triggers, although not based on risk or regulatory limits, are sufficiently low to protect groundwater quality of the aquifer. All triggers would apply to samples collected from the deepest sampling port in each FLUTe™. Triggers would not apply to samples collected from shallower ports.

16. Table E-6 -- The proposed trigger value for "infiltration" is *25%* by volume. Specify whether "infiltration" means moisture content. Also, the proposed trigger is too high, as it likely represents conditions whereby there is near complete saturation of the soil.

Response: The trigger parameter actually applies to “moisture content” rather than “infiltration”. The moisture content of the subsurface soil provides an indirect indication of the infiltration through the cover. The EPA-prescribed technical equivalence criteria for RCRA landfills is an average infiltration rate of 10^{-7} cm/s through the landfill cover, equivalent to a net annual infiltration of 31.5 mm of water per year through the cover. Assuming an average vertical hydraulic gradient of unity, an infiltration rate of 10^{-7} cm/s would result in an underlying moisture content of the soils to be approximately 23 percent by volume. A 23 percent volumetric moisture content is equal to 59 percent saturation, assuming an average soil porosity of 39 percent.

Figure 3 shows the relationship between unsaturated hydraulic conductivity and volumetric moisture content for 18 subsurface soil samples collected from the IP Test Site, located 500 ft west of the MWL. Assuming a vertical hydraulic gradient of unity, the infiltration rate through soil at a given moisture content is equal to the unsaturated hydraulic conductivity at that moisture content. Thus, by drawing a horizontal line across the graph at the EPA-prescribed infiltration rate of 10^{-7} cm/s through the cover, one can estimate the volumetric moisture content of the underlying soils, based on their soil moisture characteristic curves. This

moisture content is equivalent to the extrapolated moisture content at the x-intercept along the graph where the horizontal line meets the soil moisture characteristic curve.

Based on soil moisture characteristic data for MWL soils shown in Figure 3, moisture contents in underlying soils would range from approximately 18 percent by volume up to 28 percent by volume, and would average approximately 23 percent by volume, if infiltration through the MWL cover averaged the EPA-prescribed equivalence criterion of 10^{-7} cm/s.

For this reason, DOE/Sandia recommend using the average 23 percent volumetric moisture content of underlying soils as the trigger to indicate that the MWL cover is meeting the EPA-prescribed technical equivalency criteria for RCRA landfills. This 23 percent volumetric moisture content has a regulatory basis, and is considered a reasonable value for a trigger to indicate cover performance. Because the accuracy of the neutron logging tool is ± 2 percent volumetric moisture content, a 2 percent delta was originally added to the 23 percent value to ensure that readings at this level are not false positive interpretations, and the trigger was initially proposed at 25 percent by volume in the original Performance Assessment Modeling Report (Appendix E in SNL November 2005). However, because NMED considers the initially-proposed 25 percent moisture content value to be too high, DOE/Sandia suggest eliminating the 2 percent delta, with the final moisture content trigger set at 23 percent by volume. The proposed trigger of 23 percent by volume would apply to linear depths of 10 ft to 100 ft (vertical depths of 8.7 ft to 86.6 ft) along the neutron probe access holes in the vadose zone beneath the MWL. This interval is proposed as the "regulated interval" because it lies beneath the root zone, and yet is shallow enough that a response would be readily detected if there is a significant increase in infiltration through the cover.

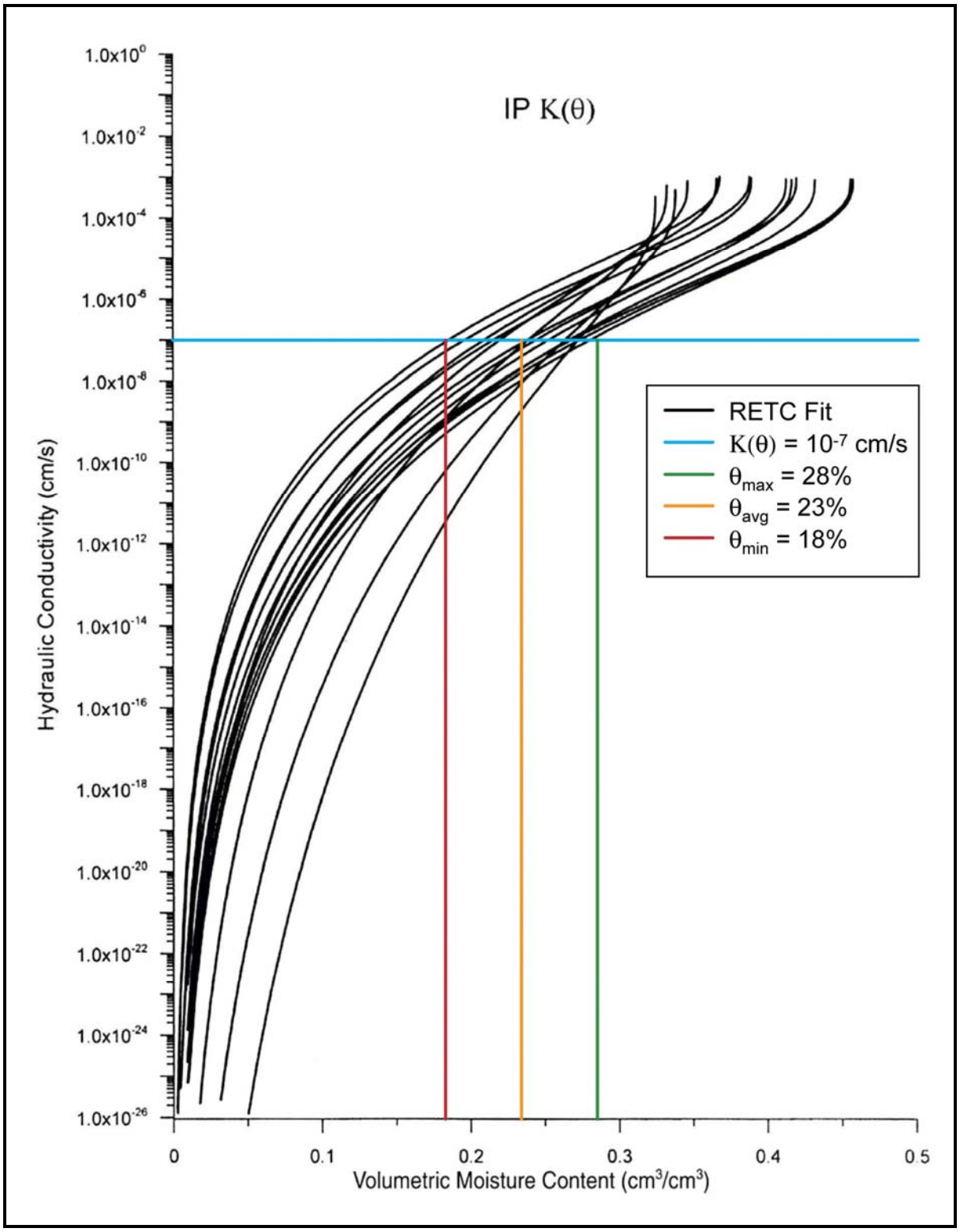

Figure 3. Relationship between unsaturated hydraulic conductivity and volumetric moisture content for 18 subsurface soil samples collected from the IP Test Site

17. Provide NMED a copy of the reference: Johnson et al (1995), *A Human Health Risk Assessment for the Mixed Waste Landfill, Sandia National Laboratories, Albuquerque, New Mexico,* Argonne National Laboratories, Argonne, IL.

Response: This document is actually entitled, "A Preliminary Human Health Risk Assessment for the Mixed Waste Landfill, Sandia National Laboratories, Albuquerque, New Mexico" by Johnson et al., 1995. A copy of this report is included on the attached CD, under the subdirectory "Preliminary Risk Assessment by Johnson et al".

18. Table E-6, the proposed trigger levels for 1,1,1-TCA, ethylbenzene, styrene, toluene, and total xylenes in groundwater are set too high. For these unnatural constituents, the levels of detection normally achieved by laboratories are much lower than groundwater standards set by the New Mexico Water Quality Control Commission (WQCC). The trigger levels can be set to much lower levels, and still allow for a given trigger level to be sufficiently above the limit of detection such that the constituent can be readily quantified with a high degree of confidence. Additionally, trigger levels should be set well below WQCC standards or below U. S. Environmental Protection Agency Maximum Contaminant Levels so that there will be time to react to prevent unacceptable levels of contamination should any trigger levels be exceeded.

Response: The proposed trigger levels for 1,1,1-TCA, ethylbenzene, styrene, toluene, and total xylenes in groundwater are regulatory-based, and are set at a value of one-half the EPA Primary Drinking Water Standard (MCL) (EPA 2003a) for each constituent. There is no technical or regulatory basis for further reducing these trigger levels (with respect to risk and human health), and DOE/Sandia are concerned that reductions in these triggers to even lower concentrations will result in more false positive detections for these constituents. There are often analytical difficulties with measuring extremely low concentrations of VOCs in groundwater.

Rather than lowering the trigger levels for VOCs in groundwater and increasing the risk of false positive detections, DOE/Sandia recommend installation of a robust vadose-zone monitoring system to allow early detection of any potential migration of VOCs through the vadose zone, well before they reach groundwater (see response to Comment No. 16). DOE/Sandia recommend keeping trigger levels for VOCs in groundwater at one-half the EPA Primary Drinking Water Standard, as proposed originally in Table E-6. DOE/Sandia also recommend expanding the list of triggers for VOC in groundwater to include triggers for all Target Compound List (TCL) VOCs analyzed using EPA Method 8260. See response to Comment No. 20, below.

19. Propose some additional monitoring to be conducted at locations within the landfill where contaminants were detected at their highest levels during the RFI. These locations should be subject to the same triggers as those proposed as points of compliance in Table E-6.

Response: Additional monitoring at locations within the landfill using intrusive techniques is not recommended, and could compromise the integrity of the cover. However, Appendix A to the first NOD Comment Set (SNL December 2006) presented a sampling and analysis plan

(SAP) for soil-gas volatile organic compounds, tritium, and radon at the Mixed Waste Landfill. Sampling locations were selected based on maximum concentrations of VOC contaminants detected during the Phase 2 RFI in the mid 1990s (SNL 1996). VOC concentrations will be measured at depths of 10 ft and 30 ft in a total of six boreholes in and around the MWL, and two background boreholes. The boreholes will be advanced using a GeoProbe in the same manner as was done during the Phase 2 RFI. Soil samples will also be collected at depths of 10 ft and 30 ft in each borehole for analysis of tritium concentrations in soil moisture. All sampling will be conducted prior to construction of the MWL cover.

If the upcoming sampling program within the MWL shows concentrations of VOC contaminants significantly elevated above concentrations detected during the Phase 2 RFI study, DOE/Sandia will open discussions with NMED on the potential need for additional intrusive monitoring activities within the landfill. However, at this time, DOE/Sandia suggest approaching this issue in a phased manner; if the data show no significant increases in contaminant concentrations, additional intrusive monitoring within the landfill is not recommended.

Additional monitoring for VOCs in soil gas is proposed using FLUTes™ installed around the perimeter of the MWL. The FLUTes™ are proposed to be located near areas of the landfill where contaminants were detected at their highest levels during the Phase 2 RFI. In order to protect the integrity of the cover and to minimize the potential for preferential flow down boreholes, the FLUTes™ are not planned to be installed directly through the cover of the landfill.

Monitoring of animal burrows and ant nests is also proposed for the MWL cover (see response to Comment No. 14). Samples of soil from the vicinity of animal burrows and ant nests on the MWL cover will be collected on a five-year basis and analyzed for RCRA metals, gross alpha and beta activity, and gamma-emitting radionuclides. Additional details on future monitoring activities will be included in the MWL Long Term Monitoring and Maintenance Plan.

20. Expand the proposed monitoring triggers in Table E-6, giving consideration of the following table:

Environmental Medium	Monitoring Parameters	Main Potential Receptors	Sampling Points
Air	**radon, tritium**	**humans**	**landfill perimeter and interior stations**
Surface Soil	**radon, tritium, other radionuclides, metals**	**humans and ecological receptors**	**landfill perimeter, interior stations, and animal burrows located on cover**
Subsurface Soil	**moisture**	**humans via groundwater**	**neutron probe monitoring wells**
Subsurface Soil Gas	**radon, tritium, VOCs**	**humans via groundwater**	**beneath landfill**
Groundwater	**tritium, radon, isotopic uranium, VOCs**	**humans**	**down gradient groundwater monitoring wells**

Radionuclides (other than radon and tritium) and metals should be the same as those listed in Table E-2. VOCs should include PCE, all organic constituents listed in Table E-6, and all other organic constituents normally detected by method 8260. NMED reserves the right to require additional monitoring pending review of the long-term monitoring and maintenance plan to be submitted later by the Permittees and pending receipt and review of public input of this latter mentioned plan.

Response: The proposed monitoring triggers in Table E-6 have been revised, based on NMED's requests presented in Comments No. 14, 15, 16, 18, and 20. The updated monitoring triggers are shown in Table 2. Based on NMED's recommendations, modifications to the proposed monitoring discussed in Appendix E (SNL November 2005) include the addition of the following:

- Collection of surface soil samples near animal burrows and ant nests, and analysis for RCRA metals, gamma-emitting radionuclides, gross alpha activity, and gross beta activity. Additional triggers are proposed for RCRA metals and gamma-emitting radionuclides. Please see Consent Order note provided response to Comment No. 14.

- Installation of a robust multi-level vadose zone sampling system for VOCs using FLUTe™ technology. This system will be used as an early-warning system to protect groundwater.

- Monitoring of the vadose zone to assess VOC profiles with depth. Triggers are proposed for TCE, PCE, and Total VOCs in soil vapor.

- Additional triggers are proposed for VOCs in groundwater. Triggers are proposed for all Target Compound List (EPA Method 8260) VOCs.

Table 2. Proposed Monitoring Triggers for the Mixed Waste Landfill.

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Air	Radon	Humans	4 pCi/L (measured by Track-Etch radon detectors)	MWL Perimeter	Average flux of radon-222 gas shall be less than 20 pCi/m^2/s at the landfill surface (design standard)	EPA Action Threshold for radon in air (U.S. EPA 2005)
Surface Soil	Tritium	Humans and ecological receptors	20,000 pCi/L tritium in soil moisture	MWL Perimeter	Dose to the public via the air pathway shall be less than 10 mrem/yr	DOE Order 5400.5, 10 CFR 61 Subpart H, 40 CFR 141.66
Surface Soil	Cs-137	Humans and ecological receptors	0.664 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)
Surface Soil	Ra-226	Humans and ecological receptors	2.30 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)
Surface Soil	Th-232	Humans and ecological receptors	1.01 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)
Surface Soil	U-235	Humans and ecological receptors	0.16 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)
Surface Soil	U-238	Humans and ecological receptors	1.4 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)

Table 2 (continued)

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Surface Soil	Arsenic	Humans and ecological receptors	17.7 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Barium	Humans and ecological receptors	100,000 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Cadmium	Humans and ecological receptors	56.4	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Chromium	Humans and ecological receptors	3400 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Lead	Humans and ecological receptors	800 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Mercury	Humans and ecological receptors	100,000 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Selenium	Humans and ecological receptors	5680 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)

Table 2 (continued)

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Surface Soil	Silver	Humans and ecological receptors	5680 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Subsurface Soil	Moisture Content	Humans via groundwater	23 percent by volume	Linear depths of 10 ft to 100 ft along neutron probe access holes beneath the MWL	Infiltration through the cover shall be less than the EPA-prescribed technical equivalence criterion of 31.5 mm/yr [10E-7 cm/s]	RCRA 40 CFR Part 264.301
Subsurface Soil Gas	PCE	Humans via groundwater	20 ppmv	Deepest FLUTe Sampling Port	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Subsurface Soil Gas	TCE	Humans via groundwater	20 ppmv	Deepest FLUTe Sampling Port	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Subsurface Soil Gas	Total Volatile Organic Compounds	Humans via groundwater	25 ppmv	Deepest FLUTe Sampling Port	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Uranium	Humans via groundwater	15 µg/L	Downgradient monitoring well locations	Uranium concentrations in groundwater shall not exceed the EPA MCL of 30 µg/L	EPA Primary Drinking Water Standard
Groundwater	1,1,1-Trichloroethane (1,1,1-TCA)	Humans via groundwater	100 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	1,1,2-Trichloroethane	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	1,1-Dichloroethene	Humans via groundwater	3.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard

Table 2 (continued)

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Groundwater	1,2-Dichloroethane	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	1,2-Dichloropropane	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Benzene	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Carbon tetrachloride	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Chlorobenzene	Humans via groundwater	50 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Ethyl benzene	Humans via groundwater	350 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Methylene chloride	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Styrene	Humans via groundwater	50 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Tetrachloroethene (PCE)	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Toluene	Humans via groundwater	500 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Trichloroethene (TCE)	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard

Table 2 (continued)

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Groundwater	Vinyl Chloride	Humans via groundwater	1.0 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Xylenes (Total)	Humans via groundwater	5,000 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	cis-1,2-Dichloroethene	Humans via groundwater	35 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Trans-1,2-Dichloroethene	Humans via groundwater	50 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Method 8260 VOCs with no MCLs	Humans via groundwater	EPA Region 6 Human Health Medium-Specific Screening Levels	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA Region 6 Human Health Medium-Specific Screening Levels	EPA Region 6 Human Health Medium-Specific Screening Levels

CFR = Code of Federal Regulations.
cm = Centimeter(s).
DOE = U.S. Department of Energy.
EPA = U.S. Environmental Protection Agency.
ft = Foot (feet).
L = Liter(s).
m = Meter(s).
m^2 = Square meter(s).
µg = Microgram(s).
MCL = Maximum contaminant level.
mm = Millimeter(s).
mrem = Millirem.
MWL = Mixed Waste Landfill.
pCi = Picocurie(s).
RCRA = Resource Conservation and Recovery Act.
s = Second(s).
TCA = Trichloroethane.
VOC = Volatile organic compound.
yr = Year(s).

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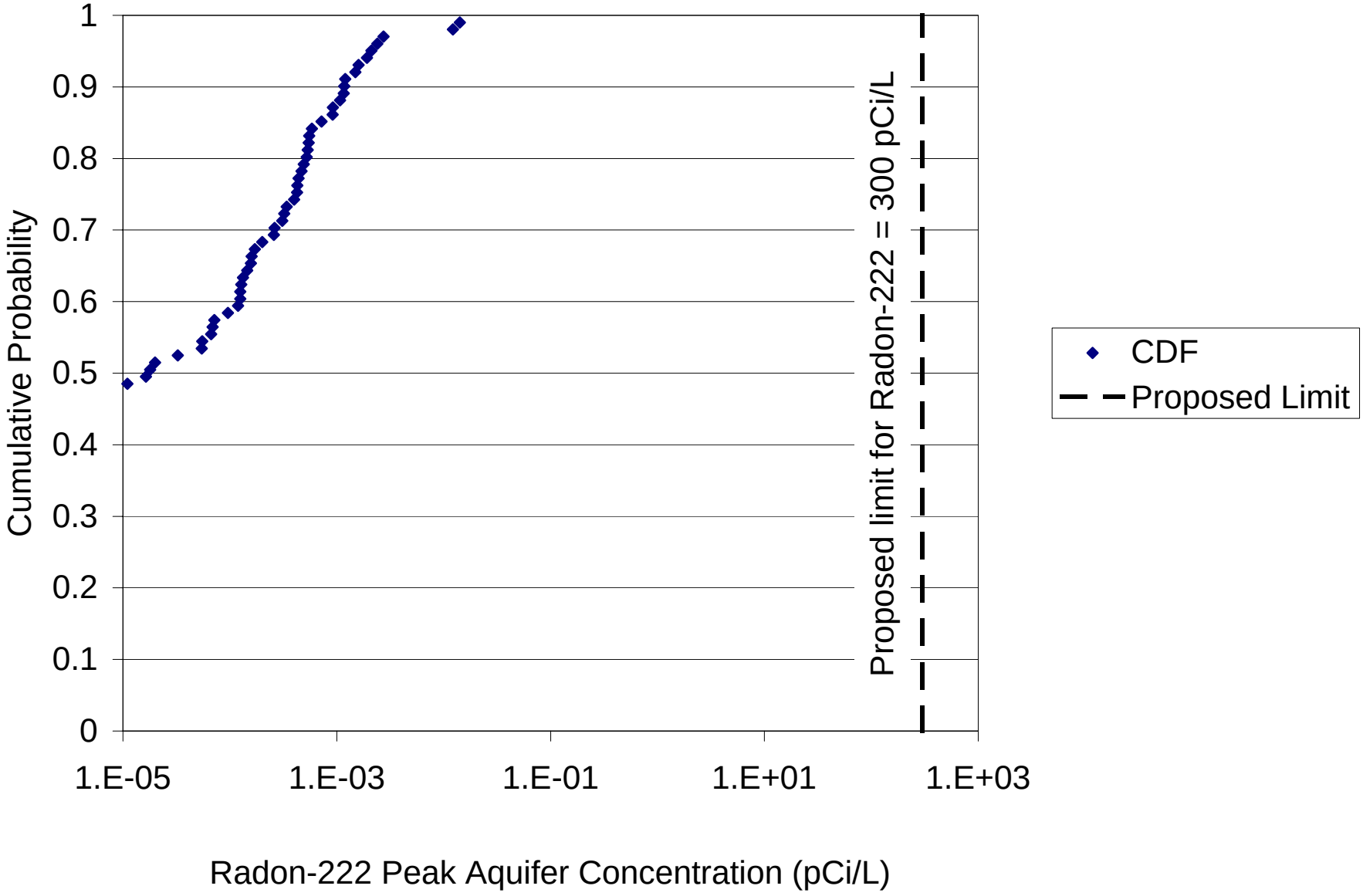
1
0.9
0.8
0.7
0.6
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0.3
0.2
0.1
0
Cumulative Probability
1.E-05
1.E-03
1.E-01
1.E+01
1.E+03
Radon-222 Peak Aquifer Concentration (pCi/L)
Proposed limit for Radon-222 = 300 pCi/L
CDF
Proposed Limit

sen14 177
2
Sensitivity/Uncertainty Module for FRAMES
Beta Test version
56 15

ThickSrc	Thickness of waste zone from src2 (cm)
Length	Length of waste zone from src2 (cm)
Width	Width of waste zone from src2 (cm)
rhob	Bulk density of soil from src2 (g/cm^3)
MoistSrc	Moisture content from src2 (fraction)
porosity	Total porosity from src2 (fraction)
U238Inv	Inventory quantity, URANIUM-238 from src2 (Ci)
AmInv	Inventory quantity, AMERICIUM-241 from src2 (Ci)
CsInv	Inventory quantity, CESIUM-137+D from src2 (Ci)
CoInv	Inventory quantity, COBALT-60 from src2 (Ci)
Pu238Inv	Inventory quantity, PLUTONIUM-238 from src2 (Ci)
Pu239Inv	Inventory quantity, PLUTONIUM-239 from src2 (Ci)
Ra226Inv	Inventory quantity, RADIUM-226 from src2 (Ci)
SrInv	Inventory quantity, STRONTIUM-90 from src2 (Ci)
ThInv	Inventory quantity, THORIUM-232 from src2 (Ci)
H3Inv	Inventory quantity, TRITIUM (tritiated water) from src2 (Ci)
U238Kd1	Equilibrium coefficients (kd), URANIUM-238, time # 1 from sr (ml/g)
U238Kd2	Equilibrium coefficients (kd), URANIUM-238, time # 2 from src2 (ml/g)
U234Kd1	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd2	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd3	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
U234Kd4	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
Ra226Kd1	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd2	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
Ra226Kd3	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
AmKd1	Equilibrium coefficients (kd), AMERICIUM-241, time # 1 from (ml/g)
AmKd2	Equilibrium coefficients (kd), AMERICIUM-241, time # 2 from src2 (ml/g)
CsKd1	Equilibrium coefficients (kd), CESIUM-137+D, time # 1 from s (ml/g)
CsKd2	Equilibrium coefficients (kd), CESIUM-137+D, time # 2 from src2 (ml/g)
CoKd1	Equilibrium coefficients (kd), COBALT-60, time # 1 from src2 (ml/g)
CoKd2	Equilibrium coefficients (kd), COBALT-60, time # 2 from src2 (ml/g)
Pu238Kd1	Equilibrium coefficients (kd), PLUTONIUM-238, time # 1 from (ml/g)
Pu238Kd2	Equilibrium coefficients (kd), PLUTONIUM-238, time # 2 from src2 (ml/g)
Pu239Kd1	Equilibrium coefficients (kd), PLUTONIUM-239, time # 1 from (ml/g)
Pu239Kd2	Equilibrium coefficients (kd), PLUTONIUM-239, time # 2 from src2 (ml/g)
SrKd1	Equilibrium coefficients (kd), STRONTIUM-90, time # 1 from s (ml/g)
SrKd2	Equilibrium coefficients (kd), STRONTIUM-90, time # 2 from src2 (ml/g)
ThKd1	Equilibrium coefficients (kd), THORIUM-232, time # 1 from sr (ml/g)
ThKd2	Equilibrium coefficients (kd), THORIUM-232, time # 2 from src2 (ml/g)
Darcy1	Darcy Vadose rate, time # 1 from src2 (cm/yr)
Darcy2	Darcy Vadose rate, time # 2 from src2 (cm/yr)
porVad	Soil total porosity from vad3 (percent)
KsatVad	Soil hydraulic conductivity from vad3 (cm/day)
rhobVad	Soil bulk density from vad3 (g/cm^3)
AmKdVad	Soil equilibrium coefficient, AMERICIUM-241 from vad3 (ml/g)
CsKdVad	Soil equilibrium coefficient, CESIUM-137+D from vad3 (ml/g)

CoKdVad	Soil equilibrium coefficient, COBALT-60 from vad3 (ml/g)	
Pu238KdVa	Soil equilibrium coefficient, PLUTONIUM-238 from vad3 (ml/g)	
U234VadKd	Soil equilibrium coefficient, URANIUM-234 from vad3 (ml/g)	
Pu239KdVa	Soil equilibrium coefficient, PLUTONIUM-239 from vad3 (ml/g)	
RaKdVad	Soil equilibrium coefficient, RADIUM-226 from vad3 (ml/g)	
U234KdVad	Soil equilibrium coefficient, LEAD-210 from vad3 (ml/g)	
SrKdVad	Soil equilibrium coefficient, STRONTIUM-90 from vad3 (ml/g)	
ThKdVad	Soil equilibrium coefficient, THORIUM-232 from vad3 (ml/g)	
U238KdVad	Soil equilibrium coefficient, TRITIUM (tritiated water) from vad3 (ml/g)	
waterflow.all.Vadose	vad3 water flux peak (m^3/yr)	yr
Am241Flux.all.Vadose	vad3 total constituent flux peak for AM241 (pCi/yr)	yr
C137Flux.all.Vadose	vad3 total constituent flux peak for CS137 (pCi/yr)	yr
Co60Flux.all.Vadose	vad3 total constituent flux peak for CO60 (pCi/yr)	yr
Pu238Flux.all.Vadose	vad3 total constituent flux peak for PU238 (pCi/yr)	yr
U234Flux.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of PU238 (pCi/yr)	yr
Pu239Flux.all.Vadose	vad3 total constituent flux peak for PU239 (pCi/yr)	yr
Ra226Flux.all.Vadose	vad3 total constituent flux peak for RA226 (pCi/yr)	yr

Rn222Flux.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of RA226 (pCi/yr)	yr
Sr90Flux.all.Vadose	vad3 total constituent flux peak for SR90 (pCi/yr)	yr
Th232Flux.all.Vadose	vad3 total constituent flux peak for TH232 (pCi/yr)	yr
H3Flux.all.Vadose	vad3 total constituent flux peak for THO (pCi/yr)	yr
U238Flux.all.Vadose	vad3 total constituent flux peak for U238 (pCi/yr)	yr
U234Flux2.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of U238 (pCi/yr)	yr
Rn222Flx2.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of U238 (pCi/yr)	yr

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	AmInv	CsInv
1	3.08E+02	7.01E+03	2.97E+03	1.64E+00	2.16E-01	3.44E-01	1.77E+01	1.24E-03	7.12E+02
2	3.94E+02	6.77E+03	6.37E+03	1.70E+00	8.99E-02	3.73E-01	1.15E+01	1.69E-03	5.95E+02
3	7.34E+02	1.08E+04	1.41E+03	1.77E+00	1.38E-01	4.05E-01	1.17E+01	1.28E-03	5.52E+02
4	3.77E+02	2.97E+03	3.30E+03	1.55E+00	1.31E-01	3.46E-01	1.21E+01	1.56E-03	4.81E+02
5	3.40E+02	3.39E+03	7.52E+03	1.54E+00	1.68E-01	3.87E-01	1.63E+01	1.58E-03	6.12E+02
6	4.79E+02	9.04E+03	4.14E+03	1.67E+00	9.28E-02	3.65E-01	1.05E+01	1.97E-03	6.48E+02
7	7.05E+02	8.27E+03	8.77E+03	1.48E+00	7.93E-02	3.24E-01	9.62E+00	1.77E-03	6.02E+02
8	3.81E+02	8.45E+03	1.99E+03	1.47E+00	1.42E-01	3.58E-01	1.19E+01	1.33E-03	8.17E+02
9	6.15E+02	1.25E+04	1.63E+03	1.49E+00	9.56E-02	3.91E-01	1.34E+01	1.42E-03	7.36E+02
10	4.04E+02	1.47E+03	3.17E+03	1.68E+00	1.47E-01	3.38E-01	1.07E+01	1.35E-03	6.09E+02
11	5.40E+02	1.14E+04	1.77E+03	1.77E+00	1.77E-01	3.82E-01	1.34E+01	1.90E-03	6.24E+02
12	6.65E+02	4.45E+03	7.81E+03	1.50E+00	1.11E-01	4.22E-01	1.60E+01	1.95E-03	7.27E+02
13	6.53E+02	6.49E+03	7.24E+03	1.68E+00	1.58E-01	3.05E-01	1.30E+01	1.30E-03	8.10E+02
14	4.45E+02	1.20E+04	1.36E+03	1.84E+00	2.00E-01	3.55E-01	9.41E+00	1.10E-03	6.89E+02
15	7.27E+02	1.18E+04	6.79E+03	1.72E+00	8.37E-02	3.49E-01	1.75E+01	1.97E-03	5.60E+02
16	3.13E+02	1.10E+04	5.90E+03	1.72E+00	7.43E-02	3.62E-01	1.58E+01	1.18E-03	4.56E+02
17	5.93E+02	1.07E+04	4.31E+03	1.63E+00	1.66E-01	4.29E-01	1.27E+01	1.34E-03	7.00E+02
18	3.34E+02	4.07E+03	7.18E+03	1.48E+00	1.72E-01	3.18E-01	1.03E+01	1.67E-03	4.31E+02
19	7.74E+02	7.56E+03	5.13E+03	1.69E+00	1.20E-01	4.30E-01	9.75E+00	1.46E-03	4.92E+02
20	5.75E+02	6.18E+03	2.46E+03	1.65E+00	1.81E-01	3.51E-01	1.57E+01	1.19E-03	7.77E+02
21	5.15E+02	9.00E+03	1.94E+03	1.82E+00	5.76E-02	3.85E-01	1.28E+01	1.22E-03	4.60E+02
22	4.72E+02	8.78E+03	6.69E+03	1.75E+00	1.50E-01	3.09E-01	1.08E+01	1.88E-03	5.00E+02
23	6.49E+02	4.95E+03	4.70E+03	1.73E+00	8.42E-02	4.13E-01	1.37E+01	1.86E-03	4.27E+02
24	8.15E+02	1.26E+04	6.97E+03	1.57E+00	1.37E-01	3.31E-01	1.65E+01	1.14E-03	7.48E+02
25	5.55E+02	1.24E+04	1.51E+03	1.50E+00	2.23E-01	3.90E-01	1.46E+01	1.08E-03	7.17E+02
26	5.81E+02	1.11E+04	8.90E+03	1.51E+00	7.35E-02	4.25E-01	1.41E+01	1.38E-03	5.88E+02
27	6.78E+02	1.22E+04	8.85E+03	1.78E+00	1.03E-01	3.80E-01	1.73E+01	1.36E-03	7.24E+02
28	7.79E+02	9.62E+03	6.21E+03	1.62E+00	1.83E-01	3.72E-01	1.85E+01	1.68E-03	7.94E+02
29	6.32E+02	1.05E+04	8.09E+03	1.56E+00	1.99E-01	3.07E-01	1.09E+01	1.75E-03	5.49E+02
30	4.88E+02	1.01E+04	5.38E+03	1.53E+00	2.21E-01	3.94E-01	1.76E+01	1.03E-03	5.29E+02
31	7.85E+02	1.02E+03	5.73E+03	1.83E+00	1.44E-01	4.25E-01	1.59E+01	1.66E-03	5.35E+02
32	5.86E+02	5.33E+03	6.27E+03	1.61E+00	1.93E-01	3.68E-01	1.12E+01	1.81E-03	7.60E+02
33	5.11E+02	7.34E+03	7.16E+02	1.57E+00	1.18E-01	4.36E-01	1.37E+01	1.15E-03	7.68E+02
34	4.02E+02	6.25E+03	2.32E+03	1.66E+00	7.02E-02	4.38E-01	1.68E+01	1.41E-03	7.04E+02
35	3.62E+02	9.24E+03	1.87E+03	1.71E+00	1.28E-01	4.27E-01	9.77E+00	1.25E-03	4.40E+02
36	6.77E+02	9.45E+03	1.20E+03	1.54E+00	2.03E-01	3.34E-01	1.42E+01	1.88E-03	4.55E+02
37	8.07E+02	1.14E+04	3.49E+03	1.79E+00	1.54E-01	4.10E-01	1.79E+01	1.52E-03	7.33E+02
38	8.22E+02	1.42E+03	5.07E+03	1.61E+00	1.09E-01	3.39E-01	1.72E+01	1.44E-03	6.35E+02
39	4.51E+02	7.36E+03	4.87E+03	1.79E+00	7.62E-02	3.83E-01	1.26E+01	1.63E-03	6.53E+02
40	4.09E+02	1.04E+04	7.97E+03	1.58E+00	1.16E-01	4.08E-01	1.02E+01	1.09E-03	6.93E+02
41	5.61E+02	5.64E+03	9.38E+02	1.54E+00	2.06E-01	3.28E-01	1.07E+01	1.78E-03	4.11E+02
42	3.21E+02	2.04E+03	6.85E+03	1.52E+00	1.96E-01	4.44E-01	1.48E+01	1.90E-03	4.90E+02
43	6.95E+02	5.05E+03	3.94E+03	1.64E+00	1.91E-01	3.78E-01	1.32E+01	1.94E-03	4.74E+02
44	5.74E+02	4.72E+03	3.59E+02	1.53E+00	1.72E-01	4.42E-01	1.66E+01	1.82E-03	5.54E+02
45	5.96E+02	3.21E+03	5.54E+03	1.81E+00	1.40E-01	3.49E-01	1.63E+01	1.06E-03	6.62E+02
46	6.46E+02	5.74E+03	7.04E+03	1.52E+00	2.14E-01	3.53E-01	1.39E+01	1.27E-03	7.45E+02
47	6.68E+02	3.57E+03	2.60E+03	1.80E+00	1.76E-01	3.84E-01	1.84E+01	1.72E-03	7.52E+02
48	6.23E+02	1.24E+03	6.07E+03	1.67E+00	1.30E-01	3.93E-01	1.45E+01	1.93E-03	7.57E+02
49	7.91E+02	5.21E+03	2.64E+03	1.70E+00	1.61E-01	3.60E-01	1.83E+01	1.04E-03	5.14E+02
50	6.28E+02	3.06E+03	2.21E+03	1.49E+00	1.63E-01	4.18E-01	1.11E+01	1.02E-03	5.44E+02
51	3.66E+02	1.10E+03	3.42E+03	1.79E+00	6.04E-02	4.00E-01	1.75E+01	1.43E-03	7.66E+02
52	4.38E+02	4.58E+03	7.65E+03	1.56E+00	6.56E-02	3.96E-01	1.85E+01	1.71E-03	6.74E+02
53	3.87E+02	1.68E+03	8.22E+03	1.83E+00	1.17E-01	3.76E-01	1.50E+01	1.61E-03	4.15E+02

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	AmInv	CsInv
54	6.89E+02	1.16E+04	2.34E+03	1.60E+00	1.68E-01	3.75E-01	1.22E+01	1.57E-03	7.19E+02
55	3.27E+02	6.63E+03	1.16E+03	1.59E+00	8.10E-02	3.15E-01	1.80E+01	1.32E-03	8.16E+02
56	4.19E+02	8.56E+03	4.09E+03	1.85E+00	1.95E-01	3.35E-01	1.40E+01	1.73E-03	8.07E+02
57	7.96E+02	6.44E+03	7.61E+02	1.71E+00	6.95E-02	4.34E-01	1.23E+01	1.77E-03	4.24E+02
58	7.46E+02	1.28E+04	3.71E+03	1.70E+00	1.75E-01	4.14E-01	9.52E+00	1.85E-03	6.43E+02
59	5.44E+02	3.67E+03	6.64E+03	1.83E+00	1.48E-01	3.63E-01	1.31E+01	1.48E-03	5.07E+02
60	4.94E+02	7.80E+03	4.80E+03	1.75E+00	1.05E-01	3.03E-01	1.18E+01	1.54E-03	6.28E+02
61	5.38E+02	3.83E+03	9.03E+03	1.77E+00	2.17E-01	3.33E-01	1.82E+01	1.45E-03	4.70E+02
62	4.46E+02	7.64E+03	3.88E+03	1.56E+00	2.20E-01	3.25E-01	1.69E+01	1.99E-03	7.86E+02
63	3.89E+02	3.94E+02	2.72E+03	1.76E+00	2.24E-01	4.05E-01	1.53E+01	1.62E-03	6.59E+02
64	3.41E+02	9.99E+03	6.51E+03	1.61E+00	1.88E-01	3.98E-01	1.18E+01	1.92E-03	5.93E+02
65	3.49E+02	1.29E+04	4.43E+03	1.84E+00	8.75E-02	3.67E-01	1.35E+01	1.84E-03	6.16E+02
66	4.15E+02	5.29E+02	4.51E+03	1.67E+00	1.80E-01	4.33E-01	1.33E+01	1.46E-03	6.84E+02
67	7.40E+02	2.50E+03	4.26E+02	1.68E+00	1.46E-01	3.43E-01	1.01E+01	1.31E-03	7.79E+02
68	4.57E+02	8.11E+03	9.11E+03	1.65E+00	1.90E-01	4.37E-01	1.05E+01	1.21E-03	7.09E+02
69	5.25E+02	3.29E+03	5.02E+02	1.74E+00	1.56E-01	3.16E-01	1.67E+01	1.13E-03	6.20E+02
70	7.60E+02	2.31E+03	6.48E+03	1.73E+00	1.01E-01	4.12E-01	1.61E+01	1.24E-03	4.87E+02
71	4.83E+02	7.16E+03	8.46E+03	1.84E+00	8.68E-02	4.31E-01	1.25E+01	1.13E-03	7.72E+02
72	7.54E+02	1.91E+03	4.23E+03	1.51E+00	1.64E-01	3.30E-01	1.70E+01	1.16E-03	4.78E+02
73	5.29E+02	2.67E+03	3.06E+03	1.50E+00	9.15E-02	3.22E-01	1.79E+01	1.82E-03	5.26E+02
74	3.17E+02	8.74E+03	8.38E+03	1.52E+00	6.48E-02	3.47E-01	1.64E+01	1.18E-03	5.65E+02
75	4.97E+02	6.92E+03	1.02E+03	1.76E+00	1.14E-01	3.42E-01	1.81E+01	1.75E-03	5.38E+02
76	7.13E+02	9.79E+03	7.40E+03	1.82E+00	2.09E-01	4.42E-01	1.28E+01	1.53E-03	6.39E+02
77	4.69E+02	1.02E+04	5.97E+03	1.71E+00	1.24E-01	4.21E-01	1.51E+01	1.86E-03	5.04E+02
78	5.66E+02	1.30E+04	2.93E+03	1.59E+00	2.13E-01	4.03E-01	1.73E+01	1.09E-03	4.20E+02
79	7.17E+02	2.37E+03	5.91E+02	1.75E+00	5.37E-02	3.16E-01	9.90E+00	1.80E-03	8.02E+02
80	7.21E+02	5.90E+03	2.11E+03	1.48E+00	6.27E-02	4.17E-01	1.04E+01	1.11E-03	6.72E+02
81	3.70E+02	1.12E+04	3.76E+03	1.64E+00	9.77E-02	3.54E-01	1.71E+01	1.60E-03	5.19E+02
82	8.11E+02	1.19E+04	8.57E+03	1.74E+00	1.87E-01	3.78E-01	1.41E+01	1.49E-03	5.24E+02
83	7.99E+02	7.92E+03	8.68E+03	1.63E+00	1.52E-01	4.15E-01	1.52E+01	1.68E-03	5.71E+02
84	4.29E+02	8.09E+03	5.82E+03	1.80E+00	2.11E-01	3.12E-01	1.38E+01	1.63E-03	5.12E+02
85	7.44E+02	8.24E+02	8.26E+03	1.60E+00	1.56E-01	3.37E-01	9.38E+00	1.05E-03	6.44E+02
86	5.51E+02	4.18E+03	7.83E+03	1.69E+00	5.53E-02	4.08E-01	1.16E+01	1.31E-03	7.98E+02
87	7.70E+02	2.14E+03	1.62E+03	1.55E+00	6.70E-02	3.20E-01	1.56E+01	1.39E-03	4.50E+02
88	6.04E+02	1.78E+03	5.61E+03	1.59E+00	1.13E-01	3.97E-01	1.47E+01	1.56E-03	6.96E+02
89	6.17E+02	5.51E+03	9.01E+02	1.81E+00	1.27E-01	3.11E-01	1.24E+01	1.48E-03	4.66E+02
90	6.09E+02	2.85E+03	2.82E+03	1.73E+00	1.02E-01	4.40E-01	1.14E+01	1.73E-03	7.41E+02
91	4.65E+02	4.32E+03	7.28E+03	1.76E+00	9.71E-02	3.06E-01	1.44E+01	1.50E-03	6.05E+02
92	6.84E+02	3.95E+03	5.30E+03	1.49E+00	7.77E-02	3.57E-01	1.59E+01	1.21E-03	4.46E+02
93	4.26E+02	9.65E+03	3.39E+03	1.78E+00	1.07E-01	3.28E-01	1.47E+01	1.00E-03	4.38E+02
94	3.54E+02	9.35E+03	5.46E+03	1.62E+00	1.22E-01	4.02E-01	1.55E+01	1.96E-03	5.67E+02
95	7.00E+02	7.70E+02	8.08E+03	1.66E+00	1.85E-01	3.08E-01	1.13E+01	1.54E-03	6.66E+02
96	6.62E+02	1.08E+04	4.93E+03	1.63E+00	5.84E-02	3.22E-01	1.49E+01	1.27E-03	5.85E+02
97	5.22E+02	6.47E+02	7.59E+03	1.81E+00	2.03E-01	4.20E-01	1.10E+01	1.01E-03	5.78E+02
98	6.37E+02	1.21E+04	4.62E+03	1.57E+00	1.34E-01	3.64E-01	1.54E+01	1.40E-03	5.82E+02
99	5.05E+02	4.83E+03	5.20E+03	1.58E+00	1.32E-01	3.89E-01	1.00E+01	1.65E-03	7.88E+02
100	7.62E+02	6.03E+03	3.58E+03	1.65E+00	2.06E-01	3.71E-01	1.20E+01	1.99E-03	6.79E+02
Max Value:	**8.22E+02**	**1.30E+04**	**9.11E+03**	**1.85E+00**	**2.24E-01**	**4.44E-01**	**1.85E+01**	**1.99E-03**	**8.17E+02**
Median Value:	**5.64E+02**	**6.70E+03**	**4.75E+03**	**1.66E+00**	**1.39E-01**	**3.74E-01**	**1.39E+01**	**1.50E-03**	**6.14E+02**

realizations	CoInv	Pu238Inv	Pu239Inv	Ra226Inv	SrInv	ThInv	H3Inv	U238Kd1	U238Kd2
1	6.26E+03	1.12E-03	1.09E-03	1.06E+01	5.45E+02	1.89E+00	4.35E+03	1.21E+01	12.072
2	3.56E+03	1.79E-03	1.38E-03	8.97E+00	4.74E+02	1.87E+00	4.13E+03	9.98E-01	0.99761
3	5.16E+03	1.48E-03	1.32E-03	7.95E+00	7.70E+02	1.75E+00	2.40E+03	5.03E-01	0.5031
4	5.35E+03	1.45E-03	1.43E-03	8.36E+00	7.88E+02	1.70E+00	4.50E+03	8.81E-01	0.88131
5	3.52E+03	1.53E-03	1.13E-03	6.21E+00	5.64E+02	1.65E+00	2.82E+03	7.11E+00	7.1126
6	5.28E+03	1.02E-03	1.91E-03	6.16E+00	5.11E+02	1.18E+00	4.25E+03	1.27E+00	1.2743
7	3.61E+03	1.50E-03	1.49E-03	1.14E+01	4.54E+02	1.25E+00	3.97E+03	7.93E+00	7.9335
8	4.84E+03	1.77E-03	1.78E-03	9.42E+00	4.88E+02	1.58E+00	3.65E+03	1.20E+00	1.1965
9	5.46E+03	1.75E-03	1.29E-03	1.15E+01	7.97E+02	1.76E+00	2.74E+03	3.80E+00	3.795
10	6.19E+03	1.31E-03	1.54E-03	7.26E+00	4.58E+02	1.82E+00	2.46E+03	5.23E-01	0.52267
11	4.64E+03	1.18E-03	1.85E-03	6.60E+00	5.21E+02	1.12E+00	2.56E+03	6.28E-01	0.62772
12	6.84E+03	1.19E-03	1.99E-03	7.25E+00	7.57E+02	1.71E+00	2.45E+03	1.46E+01	14.576
13	6.97E+03	1.61E-03	1.93E-03	6.29E+00	4.67E+02	1.01E+00	4.63E+03	1.17E+00	1.1698
14	4.47E+03	1.63E-03	1.11E-03	6.36E+00	7.21E+02	1.60E+00	3.71E+03	8.91E-01	0.89064
15	5.09E+03	1.99E-03	1.13E-03	9.30E+00	6.22E+02	1.10E+00	2.48E+03	1.03E+00	1.0293
16	6.07E+03	1.88E-03	1.53E-03	6.51E+00	5.92E+02	1.16E+00	4.54E+03	7.66E+00	7.6592
17	3.91E+03	1.70E-03	1.03E-03	1.12E+01	7.84E+02	1.37E+00	4.48E+03	7.91E-01	0.7906
18	5.87E+03	1.55E-03	1.14E-03	7.87E+00	6.60E+02	1.11E+00	2.93E+03	2.35E+00	2.3476
19	3.68E+03	1.04E-03	1.59E-03	1.01E+01	6.50E+02	1.02E+00	3.16E+03	8.60E+00	8.599
20	5.29E+03	1.56E-03	1.71E-03	9.78E+00	4.47E+02	1.07E+00	3.59E+03	8.20E-01	0.82027
21	6.88E+03	1.05E-03	1.19E-03	7.34E+00	5.90E+02	1.31E+00	4.74E+03	4.34E+00	4.3369
22	5.95E+03	1.97E-03	1.04E-03	7.13E+00	4.82E+02	1.85E+00	2.85E+03	5.88E+00	5.8778
23	4.09E+03	1.21E-03	1.29E-03	9.80E+00	4.89E+02	1.20E+00	3.00E+03	2.10E+00	2.1022
24	3.72E+03	1.70E-03	1.98E-03	9.97E+00	6.94E+02	1.04E+00	3.01E+03	2.62E+00	2.6161
25	6.62E+03	1.29E-03	1.46E-03	8.21E+00	4.39E+02	1.74E+00	2.73E+03	1.11E+01	11.097
26	4.88E+03	1.10E-03	1.82E-03	1.10E+01	6.01E+02	1.68E+00	3.07E+03	9.25E-01	0.92542
27	5.74E+03	1.05E-03	1.56E-03	8.04E+00	7.30E+02	1.40E+00	4.37E+03	4.63E-01	0.46263
28	3.67E+03	1.74E-03	1.31E-03	8.94E+00	5.97E+02	1.44E+00	4.00E+03	1.08E+01	10.819
29	3.88E+03	1.12E-03	1.76E-03	7.50E+00	7.75E+02	1.78E+00	4.25E+03	5.67E-01	0.5672
30	6.54E+03	1.84E-03	1.12E-03	7.52E+00	6.66E+02	1.53E+00	3.74E+03	9.58E+00	9.5774
31	6.57E+03	1.66E-03	1.15E-03	8.13E+00	6.79E+02	1.24E+00	3.83E+03	3.47E+00	3.4662
32	5.70E+03	1.56E-03	1.49E-03	8.42E+00	6.90E+02	1.26E+00	2.62E+03	1.03E+01	10.271
33	5.58E+03	1.65E-03	1.36E-03	8.24E+00	5.06E+02	1.86E+00	3.94E+03	2.26E+00	2.2597
34	4.26E+03	1.40E-03	1.72E-03	6.32E+00	5.43E+02	1.79E+00	2.79E+03	4.62E+00	4.6205
35	5.66E+03	1.59E-03	1.73E-03	1.19E+01	7.35E+02	1.62E+00	4.32E+03	6.35E+00	6.3454
36	5.84E+03	1.26E-03	1.16E-03	6.88E+00	6.25E+02	1.65E+00	3.42E+03	9.25E+00	9.2511
37	6.32E+03	1.69E-03	1.42E-03	7.08E+00	7.17E+02	1.89E+00	3.51E+03	5.05E+00	5.0488
38	6.28E+03	1.32E-03	1.21E-03	9.09E+00	5.51E+02	1.58E+00	2.53E+03	2.37E+00	2.3663
39	5.05E+03	1.19E-03	1.25E-03	6.78E+00	8.05E+02	1.39E+00	2.58E+03	1.32E+01	13.151
40	5.61E+03	1.41E-03	1.28E-03	8.03E+00	7.66E+02	1.28E+00	4.13E+03	1.28E+01	12.788
41	4.36E+03	1.38E-03	1.86E-03	9.69E+00	5.26E+02	1.21E+00	2.77E+03	6.95E+00	6.9489
42	6.79E+03	1.82E-03	1.78E-03	9.05E+00	8.02E+02	1.50E+00	3.21E+03	4.81E-01	0.48089
43	4.53E+03	1.97E-03	1.70E-03	6.43E+00	7.03E+02	1.46E+00	4.08E+03	7.65E-01	0.76487
44	5.01E+03	1.59E-03	1.43E-03	7.84E+00	6.72E+02	1.08E+00	3.26E+03	1.88E+00	1.8831
45	4.57E+03	1.35E-03	1.51E-03	1.04E+01	6.86E+02	1.45E+00	2.60E+03	4.55E-01	0.45524
46	3.77E+03	1.86E-03	1.88E-03	8.51E+00	4.34E+02	1.88E+00	4.31E+03	1.13E+01	11.321
47	4.05E+03	1.25E-03	1.93E-03	1.10E+01	7.81E+02	1.15E+00	4.18E+03	7.29E+00	7.2904
48	4.69E+03	1.90E-03	1.82E-03	1.02E+01	5.32E+02	1.41E+00	3.87E+03	2.04E+00	2.038
49	5.55E+03	1.67E-03	1.18E-03	6.07E+00	6.35E+02	1.32E+00	3.92E+03	6.42E-01	0.64213
50	6.12E+03	1.06E-03	1.91E-03	1.13E+01	5.57E+02	1.96E+00	3.30E+03	4.22E-01	0.42198
51	6.71E+03	1.52E-03	1.65E-03	1.02E+01	7.75E+02	1.48E+00	3.57E+03	6.18E+00	6.1846
52	6.74E+03	1.23E-03	1.07E-03	1.05E+01	4.68E+02	1.54E+00	4.41E+03	3.29E+00	3.2908
53	5.97E+03	1.73E-03	1.94E-03	1.14E+01	4.18E+02	1.99E+00	3.74E+03	1.14E+00	1.135

realizations	CoInv	Pu238Inv	Pu239Inv	Ra226Inv	SrInv	ThInv	H3Inv	U238Kd1	U238Kd2
54	4.33E+03	1.39E-03	1.67E-03	8.78E+00	6.82E+02	1.93E+00	3.64E+03	5.95E-01	0.59472
55	4.41E+03	1.77E-03	1.26E-03	1.04E+01	6.53E+02	1.80E+00	2.96E+03	5.08E+00	5.0819
56	6.76E+03	1.26E-03	1.62E-03	1.01E+01	6.12E+02	1.42E+00	3.05E+03	1.74E+00	1.7359
57	6.65E+03	1.17E-03	1.70E-03	1.13E+01	4.26E+02	1.05E+00	4.44E+03	6.74E+00	6.736
58	6.91E+03	1.37E-03	1.35E-03	7.57E+00	5.39E+02	1.94E+00	2.51E+03	1.77E+00	1.7744
59	4.59E+03	1.28E-03	1.22E-03	6.94E+00	6.08E+02	1.47E+00	4.16E+03	1.39E+01	13.863
60	6.60E+03	1.50E-03	1.87E-03	1.18E+01	7.92E+02	1.24E+00	3.22E+03	4.77E+00	4.7744
61	4.10E+03	1.33E-03	1.46E-03	9.59E+00	6.45E+02	1.82E+00	4.54E+03	1.37E+00	1.366
62	6.34E+03	1.10E-03	1.07E-03	9.86E+00	5.04E+02	1.20E+00	3.55E+03	6.00E-01	0.60014
63	4.67E+03	1.88E-03	1.97E-03	9.92E+00	5.84E+02	1.37E+00	3.85E+03	2.79E+00	2.787
64	5.78E+03	1.81E-03	1.76E-03	1.07E+01	7.54E+02	1.34E+00	4.59E+03	1.46E+00	1.462
65	4.17E+03	1.71E-03	1.55E-03	9.20E+00	4.14E+02	1.68E+00	3.89E+03	8.32E+00	8.3186
66	4.73E+03	1.44E-03	1.30E-03	8.71E+00	8.08E+02	1.02E+00	2.87E+03	3.74E+00	3.735
67	4.48E+03	1.95E-03	1.27E-03	1.17E+01	7.62E+02	1.03E+00	4.68E+03	1.40E+00	1.3999
68	5.42E+03	1.65E-03	1.06E-03	1.07E+01	5.78E+02	1.07E+00	3.09E+03	5.60E+00	5.5968
69	4.39E+03	1.13E-03	1.90E-03	6.71E+00	5.15E+02	1.29E+00	4.06E+03	2.84E+00	2.8441
70	3.81E+03	1.48E-03	1.24E-03	8.31E+00	4.63E+02	1.67E+00	2.92E+03	1.54E+00	1.5415
71	3.59E+03	1.43E-03	1.89E-03	6.76E+00	6.36E+02	1.63E+00	3.11E+03	1.93E+00	1.9311
72	4.82E+03	1.15E-03	1.66E-03	8.61E+00	5.35E+02	1.54E+00	4.42E+03	4.51E+00	4.5144
73	4.93E+03	1.08E-03	1.41E-03	7.63E+00	5.73E+02	1.41E+00	3.36E+03	3.65E+00	3.6465
74	6.44E+03	1.92E-03	1.75E-03	9.12E+00	6.04E+02	1.36E+00	3.12E+03	2.65E+00	2.6506
75	5.99E+03	1.90E-03	1.33E-03	9.61E+00	5.69E+02	1.13E+00	3.79E+03	7.04E-01	0.70385
76	6.50E+03	1.84E-03	1.57E-03	1.05E+01	4.76E+02	1.98E+00	3.61E+03	3.19E+00	3.1877
77	5.71E+03	1.86E-03	1.37E-03	8.54E+00	6.42E+02	1.50E+00	4.78E+03	3.10E+00	3.1046
78	4.27E+03	1.29E-03	1.80E-03	1.19E+01	7.28E+02	1.31E+00	3.43E+03	5.39E+00	5.3938
79	5.47E+03	1.47E-03	1.53E-03	1.20E+01	6.74E+02	1.95E+00	4.01E+03	1.40E+01	14.045
80	4.14E+03	1.79E-03	1.64E-03	6.05E+00	5.62E+02	1.29E+00	4.69E+03	2.94E+00	2.9442
81	4.77E+03	1.15E-03	1.65E-03	1.11E+01	4.96E+02	1.57E+00	2.89E+03	2.54E+00	2.536
82	6.05E+03	1.80E-03	1.17E-03	1.17E+01	4.35E+02	1.23E+00	3.35E+03	1.20E+01	11.959
83	6.20E+03	1.62E-03	1.84E-03	6.58E+00	8.12E+02	1.95E+00	4.65E+03	4.06E+00	4.0562
84	3.93E+03	1.00E-03	1.61E-03	6.99E+00	6.16E+02	1.73E+00	4.58E+03	9.81E+00	9.8143
85	6.94E+03	1.52E-03	1.61E-03	7.17E+00	7.09E+02	1.63E+00	3.80E+03	1.67E+00	1.6691
86	5.19E+03	1.01E-03	1.03E-03	8.88E+00	7.11E+02	1.59E+00	3.67E+03	5.39E-01	0.53924
87	6.14E+03	1.98E-03	1.47E-03	8.68E+00	7.50E+02	1.92E+00	4.21E+03	8.96E+00	8.9629
88	3.99E+03	1.21E-03	1.02E-03	1.16E+01	4.29E+02	1.45E+00	3.17E+03	7.37E-01	0.73714
89	4.22E+03	1.23E-03	1.22E-03	9.48E+00	7.25E+02	1.83E+00	3.27E+03	4.09E+00	4.0899
90	3.96E+03	1.73E-03	1.59E-03	7.79E+00	5.18E+02	1.90E+00	4.70E+03	1.60E+00	1.5985
91	3.85E+03	1.63E-03	1.99E-03	9.35E+00	8.16E+02	1.73E+00	2.70E+03	1.30E+00	1.3016
92	4.94E+03	1.58E-03	1.40E-03	7.70E+00	7.41E+02	1.79E+00	3.40E+03	9.69E-01	0.96878
93	5.24E+03	1.95E-03	1.51E-03	9.36E+00	5.75E+02	1.34E+00	2.67E+03	1.51E+00	1.5091
94	5.50E+03	1.35E-03	1.45E-03	1.08E+01	7.43E+02	1.15E+00	3.49E+03	4.07E-01	0.40708
95	5.14E+03	1.32E-03	1.00E-03	1.11E+01	6.57E+02	1.55E+00	3.33E+03	1.08E+00	1.0763
96	6.44E+03	1.93E-03	1.96E-03	1.07E+01	4.19E+02	1.51E+00	3.46E+03	4.38E-01	0.43753
97	5.00E+03	1.43E-03	1.79E-03	1.15E+01	4.45E+02	1.18E+00	2.65E+03	5.84E+00	5.8361
98	6.38E+03	1.08E-03	1.08E-03	1.09E+01	6.28E+02	1.72E+00	4.76E+03	6.79E-01	0.67927
99	5.38E+03	1.92E-03	1.36E-03	7.41E+00	4.98E+02	1.09E+00	4.04E+03	2.13E+00	2.1281
100	5.89E+03	1.41E-03	1.69E-03	1.03E+01	7.00E+02	1.99E+00	4.29E+03	8.27E-01	0.82735
Max Value:	**6.97E+03**	**1.99E-03**	**1.99E-03**	**1.20E+01**	**8.16E+02**	**1.99E+00**	**4.78E+03**	**1.46E+01**	**1.46E+01**
Median Value:	**5.26E+03**	**1.50E-03**	**1.50E-03**	**9.01E+00**	**6.14E+02**	**1.50E+00**	**3.60E+03**	**2.45E+00**	**2.45E+00**

realizations	U234Kd1	U234Kd2	U234Kd3	U234Kd4	Ra226Kd1	Ra226Kd	Ra226Kd2	Ra226Kd3	AmKd1
1	12.072	12.072	12.072	12.072	8.76E+03	1.44E+04	8764.9	8764.9	4.13E+03
2	0.99761	0.99761	0.99761	0.99761	2.28E+03	7.62E+03	2276.9	2276.9	6.60E+03
3	0.5031	0.5031	0.5031	0.5031	3.05E+03	2.41E+03	3048.7	3048.7	5.06E+03
4	0.88131	0.88131	0.88131	0.88131	2.98E+04	5.57E+02	29772	29772	6.64E+03
5	7.1126	7.1126	7.1126	7.1126	1.98E+03	3.50E+04	1981.2	1981.2	4.34E+03
6	1.2743	1.2743	1.2743	1.2743	2.38E+04	9.87E+03	23816	23816	8.39E+03
7	7.9335	7.9335	7.9335	7.9335	2.45E+03	1.15E+04	2452	2452	3.54E+03
8	1.1965	1.1965	1.1965	1.1965	8.20E+02	5.58E+03	819.67	819.67	2.80E+03
9	3.795	3.795	3.795	3.795	2.94E+03	1.22E+04	2941.9	2941.9	2.84E+03
10	0.52267	0.52267	0.52267	0.52267	6.78E+02	2.89E+04	677.7	677.7	7.87E+03
11	0.62772	0.62772	0.62772	0.62772	1.55E+04	2.53E+03	15485	15485	3.17E+03
12	14.576	14.576	14.576	14.576	1.27E+04	3.49E+03	12651	12651	5.76E+03
13	1.1698	1.1698	1.1698	1.1698	9.98E+02	3.98E+03	998.11	998.11	2.10E+03
14	0.89064	0.89064	0.89064	0.89064	2.18E+04	3.07E+03	21760	21760	2.53E+03
15	1.0293	1.0293	1.0293	1.0293	3.21E+03	1.78E+04	3208.2	3208.2	3.31E+03
16	7.6592	7.6592	7.6592	7.6592	2.84E+04	2.25E+03	28424	28424	3.24E+03
17	0.7906	0.7906	0.7906	0.7906	1.85E+03	4.76E+03	1849.1	1849.1	5.13E+03
18	2.3476	2.3476	2.3476	2.3476	3.06E+04	1.12E+03	30614	30614	2.38E+03
19	8.599	8.599	8.599	8.599	1.22E+03	1.62E+04	1217.6	1217.6	7.65E+03
20	0.82027	0.82027	0.82027	0.82027	1.36E+04	3.38E+04	13625	13625	4.69E+03
21	4.3369	4.3369	4.3369	4.3369	2.19E+03	5.87E+03	2194.5	2194.5	2.07E+03
22	5.8778	5.8778	5.8778	5.8778	1.52E+04	2.97E+04	15172	15172	5.61E+03
23	2.1022	2.1022	2.1022	2.1022	3.35E+03	8.92E+02	3345.3	3345.3	6.96E+03
24	2.6161	2.6161	2.6161	2.6161	1.62E+04	6.49E+02	16175	16175	3.88E+03
25	11.097	11.097	11.097	11.097	5.17E+02	8.49E+02	517.33	517.33	8.74E+03
26	0.92542	0.92542	0.92542	0.92542	3.79E+03	1.37E+04	3785.7	3785.7	1.98E+03
27	0.46263	0.46263	0.46263	0.46263	8.63E+02	2.02E+03	862.56	862.56	6.32E+03
28	10.819	10.819	10.819	10.819	3.27E+04	5.79E+02	32730	32730	2.86E+03
29	0.5672	0.5672	0.5672	0.5672	8.85E+03	9.29E+03	8850.3	8850.3	5.22E+03
30	9.5774	9.5774	9.5774	9.5774	2.04E+04	5.00E+03	20446	20446	6.13E+03
31	3.4662	3.4662	3.4662	3.4662	8.05E+03	1.05E+04	8053.3	8053.3	8.99E+03
32	10.271	10.271	10.271	10.271	1.97E+04	1.91E+03	19725	19725	7.63E+03
33	2.2597	2.2597	2.2597	2.2597	2.72E+04	2.22E+04	27220	27220	2.34E+03
34	4.6205	4.6205	4.6205	4.6205	2.07E+04	4.11E+03	20678	20678	5.99E+03
35	6.3454	6.3454	6.3454	6.3454	3.92E+03	3.85E+03	3920.9	3920.9	7.19E+03
36	9.2511	9.2511	9.2511	9.2511	1.17E+03	9.79E+02	1166.7	1166.7	4.57E+03
37	5.0488	5.0488	5.0488	5.0488	6.49E+03	4.29E+03	6485.4	6485.4	7.33E+03
38	2.3663	2.3663	2.3663	2.3663	1.76E+04	1.96E+04	17565	17565	5.35E+03
39	13.151	13.151	13.151	13.151	7.14E+03	1.49E+03	7136.1	7136.1	2.28E+03
40	12.788	12.788	12.788	12.788	6.01E+03	2.10E+04	6007.9	6007.9	9.19E+03
41	6.9489	6.9489	6.9489	6.9489	4.45E+03	6.05E+02	4453.6	4453.6	2.49E+03
42	0.48089	0.48089	0.48089	0.48089	1.11E+03	6.82E+03	1114.7	1114.7	2.27E+03
43	0.76487	0.76487	0.76487	0.76487	5.11E+03	8.67E+03	5105.1	5105.1	3.82E+03
44	1.8831	1.8831	1.8831	1.8831	4.23E+03	3.28E+04	4227.3	4227.3	4.34E+03
45	0.45524	0.45524	0.45524	0.45524	3.70E+03	4.52E+03	3699	3699	3.09E+03
46	11.321	11.321	11.321	11.321	1.77E+03	3.32E+03	1772.2	1772.2	3.39E+03
47	7.2904	7.2904	7.2904	7.2904	7.01E+03	2.39E+04	7006.5	7006.5	6.82E+03
48	2.038	2.038	2.038	2.038	3.39E+04	2.68E+04	33920	33920	5.69E+03
49	0.64213	0.64213	0.64213	0.64213	4.36E+03	1.01E+03	4364.9	4364.9	4.82E+03
50	0.42198	0.42198	0.42198	0.42198	1.30E+04	5.47E+03	13043	13043	8.16E+03
51	6.1846	6.1846	6.1846	6.1846	5.61E+03	8.24E+02	5612.5	5612.5	4.94E+03
52	3.2908	3.2908	3.2908	3.2908	9.92E+03	8.32E+03	9922.1	9922.1	4.14E+03
53	1.135	1.135	1.135	1.135	1.95E+03	6.24E+02	1953.7	1953.7	3.97E+03

realizations		U234Kd1	U234Kd2	U234Kd3	U234Kd4	Ra226Kd1	Ra226Kd	Ra226Kd2	Ra226Kd3	AmKd1
	54	0.59472	0.59472	0.59472	0.59472	1.46E+04	7.79E+02	14604	14604	3.03E+03
	55	5.0819	5.0819	5.0819	5.0819	1.13E+04	1.66E+03	11253	11253	3.45E+03
	56	1.7359	1.7359	1.7359	1.7359	5.78E+02	1.12E+04	577.88	577.88	4.04E+03
	57	6.736	6.736	6.736	6.736	1.19E+04	7.82E+03	11884	11884	2.65E+03
	58	1.7744	1.7744	1.7744	1.7744	2.43E+03	6.10E+03	2432.6	2432.6	6.93E+03
	59	13.863	13.863	13.863	13.863	1.57E+03	1.24E+04	1570.7	1570.7	6.30E+03
	60	4.7744	4.7744	4.7744	4.7744	1.18E+04	2.13E+03	11800	11800	8.49E+03
	61	1.366	1.366	1.366	1.366	2.63E+04	2.52E+04	26327	26327	9.41E+03
	62	0.60014	0.60014	0.60014	0.60014	6.19E+02	1.88E+03	618.83	618.83	3.59E+03
	63	2.787	2.787	2.787	2.787	8.36E+03	1.25E+03	8362.3	8362.3	4.24E+03
	64	1.462	1.462	1.462	1.462	1.27E+03	5.23E+02	1271.9	1271.9	7.98E+03
	65	8.3186	8.3186	8.3186	8.3186	1.05E+04	2.76E+03	10516	10516	2.01E+03
	66	3.735	3.735	3.735	3.735	1.45E+03	7.22E+02	1452.1	1452.1	2.05E+03
	67	1.3999	1.3999	1.3999	1.3999	9.23E+03	2.03E+04	9228.3	9228.3	2.96E+03
	68	5.5968	5.5968	5.5968	5.5968	5.34E+02	1.54E+03	533.93	533.93	1.94E+03
	69	2.8441	2.8441	2.8441	2.8441	1.36E+03	6.92E+02	1362	1362	4.54E+03
	70	1.5415	1.5415	1.5415	1.5415	7.57E+03	7.51E+02	7574.8	7574.8	3.50E+03
	71	1.9311	1.9311	1.9311	1.9311	9.06E+02	1.17E+03	906.02	906.02	9.11E+03
	72	4.5144	4.5144	4.5144	4.5144	7.09E+02	7.28E+03	709.48	709.48	2.22E+03
	73	3.6465	3.6465	3.6465	3.6465	1.05E+03	2.27E+04	1045.1	1045.1	3.28E+03
	74	2.6506	2.6506	2.6506	2.6506	1.50E+03	3.23E+03	1503.3	1503.3	6.07E+03
	75	0.70385	0.70385	0.70385	0.70385	1.29E+03	1.20E+03	1287.6	1287.6	5.37E+03
	76	3.1877	3.1877	3.1877	3.1877	1.67E+04	1.29E+03	16705	16705	2.59E+03
	77	3.1046	3.1046	3.1046	3.1046	2.11E+03	5.25E+03	2111.4	2111.4	5.46E+03
	78	5.3938	5.3938	5.3938	5.3938	1.01E+04	3.07E+04	10146	10146	3.75E+03
	79	14.045	14.045	14.045	14.045	1.68E+03	2.16E+03	1679.9	1679.9	5.90E+03
	80	2.9442	2.9442	2.9442	2.9442	2.86E+03	1.40E+03	2862.8	2862.8	8.66E+03
	81	2.536	2.536	2.536	2.536	2.30E+04	9.12E+02	23010	23010	4.97E+03
	82	11.959	11.959	11.959	11.959	9.87E+02	2.55E+03	986.97	986.97	3.79E+03
	83	4.0562	4.0562	4.0562	4.0562	7.97E+02	1.39E+03	796.52	796.52	2.15E+03
	84	9.8143	9.8143	9.8143	9.8143	2.72E+03	1.49E+04	2715.9	2715.9	2.42E+03
	85	1.6691	1.6691	1.6691	1.6691	3.52E+04	3.71E+03	35159	35159	2.69E+03
	86	0.53924	0.53924	0.53924	0.53924	1.85E+04	2.91E+03	18463	18463	2.45E+03
	87	8.9629	8.9629	8.9629	8.9629	5.55E+02	1.79E+03	555.38	555.38	6.43E+03
	88	0.73714	0.73714	0.73714	0.73714	3.49E+03	5.12E+02	3488.8	3488.8	7.07E+03
	89	4.0899	4.0899	4.0899	4.0899	7.43E+02	2.88E+03	743.2	743.2	3.68E+03
	90	1.5985	1.5985	1.5985	1.5985	6.21E+02	2.61E+04	621.42	621.42	2.17E+03
	91	1.3016	1.3016	1.3016	1.3016	6.51E+02	1.88E+04	650.88	650.88	2.56E+03
	92	0.96878	0.96878	0.96878	0.96878	9.21E+02	6.70E+03	921.02	921.02	2.72E+03
	93	1.5091	1.5091	1.5091	1.5091	5.82E+03	1.01E+04	5818	5818	2.93E+03
	94	0.40708	0.40708	0.40708	0.40708	2.62E+03	9.11E+03	2616	2616	7.46E+03
	95	1.0763	1.0763	1.0763	1.0763	5.47E+03	6.39E+03	5472.7	5472.7	4.43E+03
	96	0.43753	0.43753	0.43753	0.43753	4.85E+03	1.30E+04	4853.7	4853.7	4.74E+03
	97	5.8361	5.8361	5.8361	5.8361	4.78E+03	1.55E+04	4777.9	4777.9	3.13E+03
	98	0.67927	0.67927	0.67927	0.67927	6.61E+03	1.68E+04	6613.3	6613.3	8.28E+03
	99	2.1281	2.1281	2.1281	2.1281	1.60E+03	1.07E+03	1601.5	1601.5	9.46E+03
	100	0.82735	0.82735	0.82735	0.82735	2.51E+04	1.67E+03	25134	25134	1.91E+03
Max Value:		**1.46E+01**	**1.46E+01**	**1.46E+01**	**1.46E+01**	**3.52E+04**	**3.50E+04**	**3.52E+04**	**3.52E+04**	**9.46E+03**
Median Value:		**2.45E+00**	**2.45E+00**	**2.45E+00**	**2.45E+00**	**4.30E+03**	**4.20E+03**	**4.30E+03**	**4.30E+03**	**4.29E+03**

realizations	AmKd2	CsKd1	CsKd2	CoKd1	CoKd2	Pu238Kd1	Pu238Kd2	Pu239Kd1	Pu239Kd2
1	4131.2	1.51E+02	151.27	7.36E+01	73.597	9.62E+01	96.216	1.05E+02	105.29
2	6602.3	6.73E+02	672.52	1.16E+02	116	4.42E+02	441.92	1.72E+02	172.08
3	5063.3	4.30E+01	43.026	9.59E+01	95.875	1.51E+02	150.77	1.69E+02	169.37
4	6642.2	8.35E+02	834.55	1.52E+02	151.55	9.26E+01	92.591	2.12E+02	211.68
5	4335.8	2.16E+03	2159.3	3.76E+02	376.07	1.69E+02	168.54	2.52E+02	252.44
6	8393.8	9.23E+01	92.273	2.58E+02	258.1	4.65E+02	465.14	1.38E+02	138.09
7	3543.9	3.26E+01	32.638	2.16E+02	216.38	2.08E+02	208.3	1.26E+02	125.85
8	2800.8	2.27E+03	2266.1	1.94E+02	193.93	1.36E+02	136.23	1.35E+02	135.04
9	2842.2	3.16E+02	315.67	1.00E+03	1003.4	1.40E+02	139.87	2.28E+02	227.64
10	7869.7	1.89E+02	189.22	6.63E+01	66.279	4.32E+02	431.76	8.60E+01	85.99
11	3170.2	3.01E+03	3006.9	6.82E+01	68.178	8.48E+01	84.79	2.65E+02	265.46
12	5764.1	1.03E+02	102.94	5.60E+02	559.94	1.51E+02	151.18	2.48E+02	248.25
13	2103.4	1.41E+02	140.6	2.51E+02	250.77	9.70E+01	96.993	2.74E+02	274.17
14	2526	6.59E+01	65.877	1.04E+03	1042.7	4.83E+02	483.05	3.76E+02	375.92
15	3306	2.36E+02	236.02	1.60E+02	159.56	4.09E+02	408.55	1.10E+02	110.08
16	3242.7	7.67E+01	76.722	5.34E+02	534.17	3.43E+02	343.08	4.31E+02	431.44
17	5126.1	5.82E+01	58.179	8.65E+02	864.53	1.41E+02	141.16	4.07E+02	406.95
18	2376.8	5.04E+01	50.448	8.78E+02	877.73	1.14E+02	113.83	8.03E+01	80.273
19	7653.6	3.97E+01	39.666	2.34E+02	233.9	8.77E+01	87.686	2.24E+02	224.32
20	4685	9.06E+01	90.595	3.49E+02	348.58	4.30E+02	430.21	3.45E+02	344.61
21	2068.8	1.59E+03	1591.1	1.35E+02	134.65	1.70E+02	169.74	8.52E+01	85.153
22	5609.4	3.83E+02	382.96	8.47E+01	84.698	8.88E+01	88.826	4.44E+02	444.27
23	6963.8	8.40E+01	84.026	1.20E+03	1199.8	1.33E+02	132.82	2.92E+02	292.44
24	3879.2	5.54E+02	554.33	1.03E+02	102.77	4.02E+02	402.04	2.20E+02	220.49
25	8743.6	6.76E+01	67.642	3.12E+02	312.11	5.04E+02	503.93	4.14E+02	414.26
26	1979.2	5.72E+02	572.05	8.96E+01	89.649	4.58E+02	457.91	2.88E+02	288.35
27	6319.5	1.62E+02	161.51	1.66E+02	165.74	8.06E+01	80.648	1.33E+02	132.54
28	2862.5	1.67E+03	1665.3	2.80E+02	279.98	3.06E+02	306.21	9.01E+01	90.081
29	5221.4	1.46E+03	1463.5	1.62E+02	161.68	2.03E+02	203.03	2.42E+02	241.71
30	6132.1	1.10E+03	1098.3	8.36E+01	83.617	3.32E+02	332.03	1.03E+02	103.47
31	8988.8	5.31E+01	53.116	3.36E+02	336.42	2.42E+02	241.71	1.49E+02	148.72
32	7632	2.41E+02	240.92	5.00E+02	500.18	1.79E+02	179.36	4.59E+02	458.93
33	2341.9	2.85E+03	2854.9	5.07E+02	506.67	2.38E+02	237.51	4.68E+02	467.72
34	5991.5	4.60E+02	460.28	4.14E+02	413.5	1.18E+02	118.1	2.98E+02	297.77
35	7193.2	3.78E+03	3778.7	3.17E+02	317.33	1.58E+02	157.78	2.34E+02	234.11
36	4573	4.25E+01	42.517	7.83E+01	78.287	1.88E+02	187.78	3.54E+02	354.45
37	7332.6	1.71E+03	1713.9	1.27E+03	1268.8	2.29E+02	228.56	1.47E+02	146.69
38	5345.6	9.21E+02	920.55	7.60E+01	75.958	1.46E+02	146.26	2.59E+02	258.86
39	2277	9.80E+01	97.973	6.04E+02	604.19	1.20E+02	119.6	1.09E+02	108.79
40	9185.3	5.97E+02	596.73	4.34E+02	434.07	2.84E+02	284.41	8.25E+01	82.485
41	2486.5	2.36E+03	2358.2	1.42E+02	141.95	3.82E+02	381.98	1.18E+02	117.74
42	2268.5	5.68E+01	56.793	8.19E+02	818.77	4.22E+02	421.61	2.04E+02	204.46
43	3821.7	3.32E+01	33.217	3.96E+02	396.16	3.50E+02	349.93	3.51E+02	351.08
44	4343.7	4.34E+03	4338.9	4.61E+02	460.95	4.94E+02	494.17	1.83E+02	182.73
45	3088.7	4.66E+01	46.648	6.47E+02	646.69	3.23E+02	323.49	9.68E+01	96.772
46	3386.4	1.02E+03	1016	1.13E+03	1126.6	2.72E+02	272.36	1.02E+02	101.98
47	6820.3	2.65E+02	265.21	2.29E+02	228.61	2.48E+02	247.53	2.12E+02	212.26
48	5691.8	1.31E+02	131.42	3.90E+02	390.41	1.01E+02	100.54	1.55E+02	154.53
49	4821.4	1.80E+03	1802.3	1.21E+02	120.96	1.08E+02	107.94	1.06E+02	106.4
50	8159.4	3.15E+01	31.452	2.89E+02	288.79	2.59E+02	258.5	9.87E+01	98.728
51	4939.5	1.10E+02	109.99	1.25E+02	125.17	3.66E+02	365.76	1.96E+02	195.66
52	4140.5	3.55E+01	35.502	3.61E+02	360.83	1.45E+02	144.91	3.04E+02	304.01
53	3971.6	7.22E+02	722.04	5.89E+02	589.32	1.06E+02	105.66	3.65E+02	365.1

realizations	AmKd2	CsKd1	CsKd2	CoKd1	CoKd2	Pu238Kd1	Pu238Kd2	Pu239Kd1	Pu239Kd2
54	3027.7	6.22E+02	622.48	5.83E+02	583.04	1.12E+02	111.68	1.60E+02	160.04
55	3451.1	6.22E+01	62.157	6.11E+01	61.1	1.14E+02	114.35	1.58E+02	158.17
56	4037.4	1.27E+02	126.92	7.04E+02	704.06	1.62E+02	162.13	8.38E+01	83.788
57	2651	2.51E+03	2512.1	8.10E+01	81.003	2.89E+02	288.85	3.91E+02	390.59
58	6931.5	4.13E+03	4134.6	9.13E+02	912.8	1.08E+02	107.76	9.98E+01	99.822
59	6299.4	4.87E+02	487.43	1.28E+02	127.5	3.86E+02	386.12	9.07E+01	90.682
60	8485.7	3.34E+03	3342.4	1.23E+03	1230.8	2.22E+02	222.34	1.31E+02	130.63
61	9410.4	1.99E+02	198.83	4.44E+02	444.09	2.80E+02	279.83	3.80E+02	380.32
62	3588.1	1.13E+03	1130.3	7.47E+02	746.81	3.08E+02	307.91	4.00E+02	399.54
63	4244	3.60E+03	3603.9	2.04E+02	203.74	1.31E+02	131.4	1.22E+02	122.04
64	7978.3	1.79E+02	179.41	4.81E+02	481.42	1.99E+02	199.13	1.92E+02	192.46
65	2013.1	8.20E+01	82.048	1.33E+02	133.11	2.14E+02	214.45	1.53E+02	152.68
66	2050.8	1.14E+02	114.14	6.23E+01	62.295	2.36E+02	235.96	1.79E+02	179.04
67	2959.1	1.70E+02	169.86	2.22E+02	222.06	1.93E+02	192.67	1.24E+02	124.25
68	1938.8	8.96E+02	895.7	1.05E+02	104.59	1.65E+02	165.04	4.25E+02	425.38
69	4542.9	3.67E+01	36.69	6.71E+02	670.63	2.92E+02	292.24	4.51E+02	450.6
70	3502.1	3.41E+03	3413.5	9.79E+02	979.11	1.94E+02	193.72	1.67E+02	166.55
71	9108.9	1.98E+03	1975.1	8.87E+01	88.736	3.97E+02	396.84	1.65E+02	164.6
72	2215.3	1.40E+03	1400.6	6.28E+02	628.01	1.27E+02	126.89	1.88E+02	188.38
73	3284.2	4.26E+02	426.48	9.39E+02	939.05	1.84E+02	183.74	8.89E+01	88.905
74	6070.7	3.16E+03	3162.6	7.69E+02	769.06	1.74E+02	174.14	3.40E+02	339.56
75	5369.2	2.17E+02	216.92	6.83E+02	682.94	9.32E+01	93.153	2.18E+02	218.17
76	2590.7	4.91E+01	49.061	7.17E+01	71.717	9.93E+01	99.296	1.20E+02	119.93
77	5460.7	1.23E+03	1227.3	6.42E+01	64.245	5.18E+02	518.25	9.46E+01	94.643
78	3749.1	2.76E+02	275.71	1.78E+02	177.66	8.38E+01	83.803	3.18E+02	317.63
79	5904	4.03E+02	403.08	1.92E+02	191.6	3.62E+02	361.6	2.84E+02	284.25
80	8655.5	4.45E+02	444.67	2.73E+02	273.44	8.30E+01	83.035	1.29E+02	128.9
81	4970.9	3.31E+02	331.02	3.34E+02	334.08	2.27E+02	227.16	2.06E+02	206.46
82	3788.2	7.67E+02	766.9	8.37E+02	837.21	2.54E+02	253.8	1.15E+02	115.35
83	2150.1	2.08E+02	208.21	1.00E+02	100.14	2.66E+02	265.92	2.81E+02	280.73
84	2418.9	2.56E+02	255.94	7.87E+02	787.21	3.76E+02	375.67	1.45E+02	144.72
85	2687.2	2.71E+03	2709.5	1.84E+02	184.32	4.79E+02	479.38	3.29E+02	328.53
86	2450.4	2.61E+03	2607.8	1.17E+03	1167.6	3.26E+02	325.87	3.33E+02	333.05
87	6431.3	7.16E+01	71.578	4.18E+02	418	1.78E+02	177.94	3.22E+02	321.6
88	7068.6	3.49E+02	348.7	3.00E+02	300.46	4.52E+02	451.85	2.00E+02	200.25
89	3678.2	1.88E+03	1876.2	1.49E+02	148.52	2.99E+02	299.44	2.71E+02	270.64
90	2169.6	1.43E+02	143.21	1.07E+03	1068.1	9.03E+01	90.26	1.40E+02	140.22
91	2555.7	1.25E+03	1251.1	1.10E+02	110.25	1.30E+02	129.84	4.20E+02	419.5
92	2723.7	1.06E+03	1059.1	1.11E+02	111.18	2.07E+02	206.7	1.87E+02	186.98
93	2925.7	1.22E+02	121.87	1.09E+03	1089.6	3.16E+02	315.76	1.14E+02	113.87
94	7456.2	4.60E+03	4598.1	2.43E+02	243.28	1.54E+02	154.2	1.77E+02	177.27
95	4427.1	7.08E+02	708.13	2.10E+02	209.54	1.23E+02	123.04	2.39E+02	239.03
96	4737.2	5.06E+02	506.1	1.74E+02	173.88	3.56E+02	355.86	9.27E+01	92.683
97	3129.8	8.01E+02	800.84	5.19E+02	519.03	1.03E+02	103.33	3.10E+02	309.56
98	8283.3	3.69E+02	368.59	9.28E+01	92.844	2.20E+02	219.72	3.72E+02	371.93
99	9461.6	1.34E+03	1341.4	1.42E+02	142.42	1.23E+02	123.46	2.55E+02	255.11
100	1913.3	2.95E+02	294.96	2.67E+02	267.16	2.61E+02	261.28	1.43E+02	143.43
Max Value:	**9.46E+03**	**4.60E+03**	**4.60E+03**	**1.27E+03**	**1.27E+03**	**5.18E+02**	**5.18E+02**	**4.68E+02**	**4.68E+02**
Median Value:	**4.29E+03**	**3.76E+02**	**3.76E+02**	**2.77E+02**	**2.77E+02**	**2.05E+02**	**2.05E+02**	**1.94E+02**	**1.94E+02**

realizations	SrKd1	SrKd2	ThKd1	ThKd2	Darcy1	Darcy2	porVad	KsatVad	rhobVad
1	1.71E+01	17.111	3.39E+01	33.945	1.88E-01	0.18814	0.34435	4.86E+01	1.6419
2	1.73E+01	17.281	4.36E+02	435.96	4.82E-02	0.048214	0.37263	7.74E+01	1.6997
3	1.86E+01	18.552	1.99E+02	199.18	1.75E-01	0.17469	0.40459	2.02E+00	1.7678
4	1.61E+01	16.059	8.15E+01	81.483	1.22E-01	0.1222	0.34572	4.71E+00	1.5496
5	1.81E+01	18.104	7.36E+02	736.18	1.28E-01	0.12781	0.38719	2.86E+00	1.5407
6	1.91E+01	19.071	1.40E+03	1403.8	7.57E-02	0.075702	0.36523	1.03E+01	1.6674
7	1.64E+01	16.442	1.02E+03	1021.8	6.50E-02	0.065035	0.32407	3.71E+01	1.4795
8	1.82E+01	18.21	2.80E+02	279.6	1.12E-01	0.11221	0.35793	3.59E+01	1.4723
9	1.59E+01	15.94	7.94E+02	793.92	1.32E-01	0.13152	0.39137	5.04E+00	1.4907
10	1.72E+01	17.15	3.91E+02	390.8	1.38E-01	0.13778	0.33829	6.28E+00	1.6763
11	1.63E+01	16.301	8.61E+02	861.33	1.27E-01	0.12659	0.382	9.81E+01	1.7746
12	1.55E+01	15.537	6.57E+01	65.663	8.26E-02	0.082645	0.42241	1.46E+01	1.5043
13	1.67E+01	16.673	3.38E+02	338.49	1.54E-01	0.15445	0.30456	1.23E+01	1.6826
14	1.97E+01	19.737	5.79E+02	579.49	1.52E-01	0.15154	0.35494	9.29E+00	1.8446
15	1.83E+01	18.339	1.17E+02	116.85	8.78E-02	0.087805	0.34906	1.06E+01	1.7219
16	1.56E+01	15.594	1.26E+02	126.48	6.27E-02	0.062733	0.36157	1.40E+00	1.7183
17	1.69E+01	16.931	2.51E+01	25.085	9.11E-02	0.09109	0.42922	8.43E+01	1.6322
18	1.52E+01	15.186	6.94E+02	694.04	1.50E-01	0.14988	0.31797	1.99E+01	1.4763
19	1.91E+01	19.11	2.06E+02	206.39	1.04E-01	0.10441	0.42961	4.02E+01	1.692
20	1.51E+01	15.072	2.24E+01	22.408	1.62E-01	0.16246	0.35078	6.57E+01	1.6534
21	1.54E+01	15.443	1.71E+03	1705.8	5.45E-02	0.054498	0.38506	3.00E+01	1.816
22	1.86E+01	18.614	9.02E+01	90.169	1.36E-01	0.13607	0.30939	9.27E+01	1.7482
23	1.58E+01	15.84	6.72E+02	672.14	8.03E-02	0.080255	0.41256	2.07E+00	1.7297
24	1.66E+01	16.619	1.35E+03	1347	9.78E-02	0.097843	0.33129	1.78E+00	1.5745
25	1.96E+01	19.626	3.54E+02	354.27	1.77E-01	0.17669	0.39044	6.22E+00	1.5032
26	1.96E+01	19.597	1.60E+02	160.48	5.26E-02	0.052633	0.42508	4.38E+00	1.5138
27	1.90E+01	18.987	7.91E+01	79.08	8.10E-02	0.081039	0.37971	1.66E+00	1.7784
28	1.93E+01	19.258	2.02E+01	20.231	1.80E-01	0.17999	0.37176	3.91E+00	1.6205
29	1.53E+01	15.272	8.53E+01	85.284	1.33E-01	0.13337	0.30669	5.24E+00	1.5592
30	1.61E+01	16.133	3.23E+01	32.278	1.74E-01	0.17438	0.39444	2.29E+01	1.5274
31	1.57E+01	15.669	8.08E+02	808.36	1.45E-01	0.14533	0.42462	1.01E+00	1.8344
32	1.61E+01	16.113	2.55E+01	25.519	1.49E-01	0.14886	0.36781	1.68E+01	1.6104
33	1.66E+01	16.552	1.18E+03	1178.9	1.02E-01	0.10204	0.43621	7.18E-01	1.5676
34	1.95E+01	19.536	8.74E+02	874.4	4.67E-02	0.046689	0.43802	7.60E+00	1.6587
35	1.79E+01	17.936	2.21E+02	220.56	9.25E-02	0.092458	0.42707	1.27E+01	1.7085
36	1.73E+01	17.343	3.57E+01	35.749	1.85E-01	0.18543	0.33383	1.65E+00	1.5445
37	1.69E+01	16.856	9.19E+02	919.05	1.40E-01	0.13984	0.41013	5.78E+01	1.7944
38	1.94E+01	19.394	5.08E+02	507.86	6.71E-02	0.067052	0.33948	2.39E+01	1.6115
39	1.76E+01	17.608	4.32E+01	43.224	5.01E-02	0.050061	0.3826	3.89E+01	1.786
40	1.79E+01	17.876	6.84E+01	68.368	8.66E-02	0.086595	0.4075	1.24E+02	1.5829
41	1.94E+01	19.448	4.70E+02	470.18	1.71E-01	0.17069	0.32764	5.83E+00	1.5367
42	1.99E+01	19.911	5.02E+02	502.03	1.73E-01	0.17263	0.44366	4.59E+01	1.5241
43	1.64E+01	16.365	2.31E+01	23.082	1.58E-01	0.15765	0.37762	1.10E+02	1.6392
44	1.51E+01	15.11	5.45E+02	544.64	1.60E-01	0.16012	0.44206	1.41E+01	1.5323
45	1.82E+01	18.15	1.28E+03	1283	1.16E-01	0.1155	0.34947	4.36E+01	1.8132
46	1.90E+01	18.991	1.78E+03	1775.8	1.91E-01	0.19083	0.35318	2.60E+01	1.5195
47	1.68E+01	16.802	9.90E+01	99.012	1.53E-01	0.15335	0.38401	1.86E+01	1.8002
48	1.99E+01	19.855	9.58E+02	957.82	9.61E-02	0.096124	0.39326	8.83E+00	1.6747
49	1.89E+01	18.926	2.11E+02	210.98	1.20E-01	0.1196	0.36048	1.20E+01	1.7022
50	1.72E+01	17.191	5.11E+01	51.119	1.14E-01	0.11376	0.41802	3.19E+00	1.4874
51	2.00E+01	19.971	3.97E+01	39.711	6.11E-02	0.061097	0.39964	9.82E+00	1.791
52	1.77E+01	17.705	3.99E+02	399.13	4.52E-02	0.045227	0.39557	7.92E-01	1.5555
53	1.68E+01	16.762	2.77E+01	27.661	9.81E-02	0.098126	0.37612	6.98E+00	1.8307

realizations	SrKd1	SrKd2	ThKd1	ThKd2	Darcy1	Darcy2	porVad	KsatVad	rhobVad
54	1.97E+01	19.68	7.51E+01	75.106	1.00E-01	0.10001	0.37454	1.12E+00	1.6019
55	1.57E+01	15.657	1.91E+03	1908.5	4.12E-02	0.041177	0.31487	2.15E+01	1.5939
56	1.59E+01	15.865	4.43E+01	44.308	1.61E-01	0.16137	0.3352	8.10E+00	1.8463
57	1.93E+01	19.284	1.06E+02	105.5	3.94E-02	0.039449	0.43368	2.26E+01	1.7098
58	1.57E+01	15.714	5.60E+01	55.999	1.24E-01	0.124	0.41441	4.19E+00	1.6969
59	1.72E+01	17.228	4.41E+02	440.95	1.35E-01	0.13522	0.36255	1.21E+00	1.8268
60	1.71E+01	17.073	2.34E+02	233.81	7.25E-02	0.072519	0.30319	5.65E+00	1.7454
61	1.70E+01	17.019	1.54E+03	1536.7	1.85E-01	0.18525	0.33316	4.66E+00	1.7733
62	1.54E+01	15.411	1.45E+03	1450.8	1.82E-01	0.1815	0.32493	3.41E+00	1.5637
63	1.88E+01	18.775	1.33E+02	132.56	1.92E-01	0.19199	0.40519	7.66E+00	1.7621
64	1.92E+01	19.208	1.60E+03	1601.9	1.82E-01	0.18237	0.39831	6.88E+01	1.605
65	1.80E+01	18.004	4.85E+01	48.462	9.40E-02	0.093991	0.36682	1.57E+01	1.8392
66	1.78E+01	17.763	1.87E+02	187.34	1.18E-01	0.1181	0.43311	1.13E+01	1.6686
67	1.54E+01	15.362	6.14E+01	61.353	1.10E-01	0.10965	0.34313	4.98E-01	1.6847
68	1.65E+01	16.475	7.13E+01	71.277	1.41E-01	0.14099	0.43664	5.54E-01	1.652
69	1.58E+01	15.795	2.96E+01	29.591	1.20E-01	0.12044	0.31647	1.39E+02	1.742
70	1.55E+01	15.496	2.96E+02	296.34	5.96E-02	0.059634	0.4119	1.61E+02	1.7275
71	1.52E+01	15.165	1.39E+02	138.72	1.03E-01	0.10325	0.43098	5.48E+00	1.8377
72	1.85E+01	18.485	5.50E+01	54.996	1.43E-01	0.14311	0.32955	3.32E+01	1.5082
73	1.74E+01	17.427	1.13E+02	112.9	5.88E-02	0.058805	0.32233	8.51E-01	1.4985
74	1.67E+01	16.716	3.12E+02	311.9	5.67E-02	0.056721	0.34684	8.56E+00	1.5168
75	1.86E+01	18.575	1.99E+03	1994.1	7.43E-02	0.074279	0.34194	2.93E+01	1.7587
76	1.50E+01	15.003	1.26E+03	1258.7	1.64E-01	0.16393	0.44221	1.52E+01	1.8227
77	1.76E+01	17.633	2.61E+02	260.57	6.56E-02	0.065592	0.42087	2.23E+00	1.7149
78	1.75E+01	17.507	1.14E+03	1144.8	1.90E-01	0.18964	0.403	1.33E+01	1.5889
79	1.59E+01	15.921	6.16E+02	616.49	3.77E-02	0.037707	0.31594	3.17E+01	1.7516
80	1.81E+01	18.066	1.26E+02	126.04	7.85E-02	0.078469	0.41693	3.56E+00	1.4836
81	1.65E+01	16.507	4.10E+01	41.01	7.67E-02	0.076748	0.35448	3.28E+00	1.6365
82	1.94E+01	19.352	1.56E+02	155.7	1.45E-01	0.1448	0.37798	1.73E+01	1.7362
83	1.53E+01	15.331	1.08E+03	1075.3	1.12E-01	0.11202	0.41515	6.27E+01	1.625
84	1.88E+01	18.761	5.78E+01	57.798	1.65E-01	0.16532	0.31211	3.82E+00	1.8022
85	1.83E+01	18.259	5.76E+02	575.84	1.57E-01	0.15666	0.33672	1.11E+01	1.5965
86	1.74E+01	17.405	9.54E+01	95.381	4.44E-02	0.044429	0.40818	2.77E+01	1.6871
87	1.63E+01	16.331	6.34E+02	634.42	4.27E-02	0.042736	0.31977	6.61E+00	1.5527
88	1.53E+01	15.255	1.76E+02	176.06	1.25E-01	0.12517	0.39688	2.05E+01	1.586
89	1.85E+01	18.452	1.02E+02	101.91	1.30E-01	0.13001	0.31134	9.15E+00	1.806
90	1.84E+01	18.38	2.73E+01	27.289	8.45E-02	0.084537	0.44044	2.71E+00	1.7335
91	1.69E+01	16.889	2.48E+02	248.12	8.93E-02	0.089345	0.30607	2.96E+00	1.7645
92	1.62E+01	16.215	3.78E+01	37.838	7.03E-02	0.070321	0.35741	5.09E+01	1.4934
93	1.78E+01	17.807	2.75E+02	275.2	6.86E-02	0.068631	0.32789	2.57E+00	1.7818
94	1.76E+01	17.564	3.09E+01	30.85	1.07E-01	0.10684	0.40198	2.53E+01	1.616
95	1.98E+01	19.799	1.69E+02	168.93	1.47E-01	0.14729	0.3081	1.65E+01	1.66
96	1.79E+01	17.895	2.12E+01	21.186	5.29E-02	0.052863	0.3217	1.89E+01	1.6293
97	1.62E+01	16.189	1.47E+02	146.92	1.78E-01	0.17758	0.41963	7.08E+00	1.8107
98	1.88E+01	18.845	3.25E+02	325.49	1.69E-01	0.16912	0.36404	5.31E+01	1.5703
99	1.87E+01	18.666	4.75E+01	47.499	1.08E-01	0.10811	0.38891	1.49E+00	1.5782
100	1.60E+01	16.024	3.66E+02	365.86	1.67E-01	0.16677	0.37052	2.41E+00	1.6453
Max Value:	**2.00E+01**	**2.00E+01**	**1.99E+03**	**1.99E+03**	**1.92E-01**	**1.92E-01**	**4.44E-01**	**1.61E+02**	**1.85E+00**
Median Value:	**1.73E+01**	**1.73E+01**	**2.03E+02**	**2.03E+02**	**1.15E-01**	**1.15E-01**	**3.74E-01**	**1.05E+01**	**1.66E+00**

realizations	AmKdVad	CsKdVad	CoKdVad	Pu238KdVa	U234VadKd	Pu239KdVa	RaKdVad	U234KdVad	SrKdVad
1	4131.2	151.27	73.597	96.216	12.072	105.29	8764.9	12.072	17.111
2	6602.3	672.52	116	441.92	0.99761	172.08	2276.9	0.99761	17.281
3	5063.3	43.026	95.875	150.77	0.5031	169.37	3048.7	0.5031	18.552
4	6642.2	834.55	151.55	92.591	0.88131	211.68	29772	0.88131	16.059
5	4335.8	2159.3	376.07	168.54	7.1126	252.44	1981.2	7.1126	18.104
6	8393.8	92.273	258.1	465.14	1.2743	138.09	23816	1.2743	19.071
7	3543.9	32.638	216.38	208.3	7.9335	125.85	2452	7.9335	16.442
8	2800.8	2266.1	193.93	136.23	1.1965	135.04	819.67	1.1965	18.21
9	2842.2	315.67	1003.4	139.87	3.795	227.64	2941.9	3.795	15.94
10	7869.7	189.22	66.279	431.76	0.52267	85.99	677.7	0.52267	17.15
11	3170.2	3006.9	68.178	84.79	0.62772	265.46	15485	0.62772	16.301
12	5764.1	102.94	559.94	151.18	14.576	248.25	12651	14.576	15.537
13	2103.4	140.6	250.77	96.993	1.1698	274.17	998.11	1.1698	16.673
14	2526	65.877	1042.7	483.05	0.89064	375.92	21760	0.89064	19.737
15	3306	236.02	159.56	408.55	1.0293	110.08	3208.2	1.0293	18.339
16	3242.7	76.722	534.17	343.08	7.6592	431.44	28424	7.6592	15.594
17	5126.1	58.179	864.53	141.16	0.7906	406.95	1849.1	0.7906	16.931
18	2376.8	50.448	877.73	113.83	2.3476	80.273	30614	2.3476	15.186
19	7653.6	39.666	233.9	87.686	8.599	224.32	1217.6	8.599	19.11
20	4685	90.595	348.58	430.21	0.82027	344.61	13625	0.82027	15.072
21	2068.8	1591.1	134.65	169.74	4.3369	85.153	2194.5	4.3369	15.443
22	5609.4	382.96	84.698	88.826	5.8778	444.27	15172	5.8778	18.614
23	6963.8	84.026	1199.8	132.82	2.1022	292.44	3345.3	2.1022	15.84
24	3879.2	554.33	102.77	402.04	2.6161	220.49	16175	2.6161	16.619
25	8743.6	67.642	312.11	503.93	11.097	414.26	517.33	11.097	19.626
26	1979.2	572.05	89.649	457.91	0.92542	288.35	3785.7	0.92542	19.597
27	6319.5	161.51	165.74	80.648	0.46263	132.54	862.56	0.46263	18.987
28	2862.5	1665.3	279.98	306.21	10.819	90.081	32730	10.819	19.258
29	5221.4	1463.5	161.68	203.03	0.5672	241.71	8850.3	0.5672	15.272
30	6132.1	1098.3	83.617	332.03	9.5774	103.47	20446	9.5774	16.133
31	8988.8	53.116	336.42	241.71	3.4662	148.72	8053.3	3.4662	15.669
32	7632	240.92	500.18	179.36	10.271	458.93	19725	10.271	16.113
33	2341.9	2854.9	506.67	237.51	2.2597	467.72	27220	2.2597	16.552
34	5991.5	460.28	413.5	118.1	4.6205	297.77	20678	4.6205	19.536
35	7193.2	3778.7	317.33	157.78	6.3454	234.11	3920.9	6.3454	17.936
36	4573	42.517	78.287	187.78	9.2511	354.45	1166.7	9.2511	17.343
37	7332.6	1713.9	1268.8	228.56	5.0488	146.69	6485.4	5.0488	16.856
38	5345.6	920.55	75.958	146.26	2.3663	258.86	17565	2.3663	19.394
39	2277	97.973	604.19	119.6	13.151	108.79	7136.1	13.151	17.608
40	9185.3	596.73	434.07	284.41	12.788	82.485	6007.9	12.788	17.876
41	2486.5	2358.2	141.95	381.98	6.9489	117.74	4453.6	6.9489	19.448
42	2268.5	56.793	818.77	421.61	0.48089	204.46	1114.7	0.48089	19.911
43	3821.7	33.217	396.16	349.93	0.76487	351.08	5105.1	0.76487	16.365
44	4343.7	4338.9	460.95	494.17	1.8831	182.73	4227.3	1.8831	15.11
45	3088.7	46.648	646.69	323.49	0.45524	96.772	3699	0.45524	18.15
46	3386.4	1016	1126.6	272.36	11.321	101.98	1772.2	11.321	18.991
47	6820.3	265.21	228.61	247.53	7.2904	212.26	7006.5	7.2904	16.802
48	5691.8	131.42	390.41	100.54	2.038	154.53	33920	2.038	19.855
49	4821.4	1802.3	120.96	107.94	0.64213	106.4	4364.9	0.64213	18.926
50	8159.4	31.452	288.79	258.5	0.42198	98.728	13043	0.42198	17.191
51	4939.5	109.99	125.17	365.76	6.1846	195.66	5612.5	6.1846	19.971
52	4140.5	35.502	360.83	144.91	3.2908	304.01	9922.1	3.2908	17.705
53	3971.6	722.04	589.32	105.66	1.135	365.1	1953.7	1.135	16.762

realizations	AmKdVad	CsKdVad	CoKdVad	Pu238KdVa	U234VadKd	Pu239KdVa	RaKdVad	U234KdVad	SrKdVad
54	3027.7	622.48	583.04	111.68	0.59472	160.04	14604	0.59472	19.68
55	3451.1	62.157	61.1	114.35	5.0819	158.17	11253	5.0819	15.657
56	4037.4	126.92	704.06	162.13	1.7359	83.788	577.88	1.7359	15.865
57	2651	2512.1	81.003	288.85	6.736	390.59	11884	6.736	19.284
58	6931.5	4134.6	912.8	107.76	1.7744	99.822	2432.6	1.7744	15.714
59	6299.4	487.43	127.5	386.12	13.863	90.682	1570.7	13.863	17.228
60	8485.7	3342.4	1230.8	222.34	4.7744	130.63	11800	4.7744	17.073
61	9410.4	198.83	444.09	279.83	1.366	380.32	26327	1.366	17.019
62	3588.1	1130.3	746.81	307.91	0.60014	399.54	618.83	0.60014	15.411
63	4244	3603.9	203.74	131.4	2.787	122.04	8362.3	2.787	18.775
64	7978.3	179.41	481.42	199.13	1.462	192.46	1271.9	1.462	19.208
65	2013.1	82.048	133.11	214.45	8.3186	152.68	10516	8.3186	18.004
66	2050.8	114.14	62.295	235.96	3.735	179.04	1452.1	3.735	17.763
67	2959.1	169.86	222.06	192.67	1.3999	124.25	9228.3	1.3999	15.362
68	1938.8	895.7	104.59	165.04	5.5968	425.38	533.93	5.5968	16.475
69	4542.9	36.69	670.63	292.24	2.8441	450.6	1362	2.8441	15.795
70	3502.1	3413.5	979.11	193.72	1.5415	166.55	7574.8	1.5415	15.496
71	9108.9	1975.1	88.736	396.84	1.9311	164.6	906.02	1.9311	15.165
72	2215.3	1400.6	628.01	126.89	4.5144	188.38	709.48	4.5144	18.485
73	3284.2	426.48	939.05	183.74	3.6465	88.905	1045.1	3.6465	17.427
74	6070.7	3162.6	769.06	174.14	2.6506	339.56	1503.3	2.6506	16.716
75	5369.2	216.92	682.94	93.153	0.70385	218.17	1287.6	0.70385	18.575
76	2590.7	49.061	71.717	99.296	3.1877	119.93	16705	3.1877	15.003
77	5460.7	1227.3	64.245	518.25	3.1046	94.643	2111.4	3.1046	17.633
78	3749.1	275.71	177.66	83.803	5.3938	317.63	10146	5.3938	17.507
79	5904	403.08	191.6	361.6	14.045	284.25	1679.9	14.045	15.921
80	8655.5	444.67	273.44	83.035	2.9442	128.9	2862.8	2.9442	18.066
81	4970.9	331.02	334.08	227.16	2.536	206.46	23010	2.536	16.507
82	3788.2	766.9	837.21	253.8	11.959	115.35	986.97	11.959	19.352
83	2150.1	208.21	100.14	265.92	4.0562	280.73	796.52	4.0562	15.331
84	2418.9	255.94	787.21	375.67	9.8143	144.72	2715.9	9.8143	18.761
85	2687.2	2709.5	184.32	479.38	1.6691	328.53	35159	1.6691	18.259
86	2450.4	2607.8	1167.6	325.87	0.53924	333.05	18463	0.53924	17.405
87	6431.3	71.578	418	177.94	8.9629	321.6	555.38	8.9629	16.331
88	7068.6	348.7	300.46	451.85	0.73714	200.25	3488.8	0.73714	15.255
89	3678.2	1876.2	148.52	299.44	4.0899	270.64	743.2	4.0899	18.452
90	2169.6	143.21	1068.1	90.26	1.5985	140.22	621.42	1.5985	18.38
91	2555.7	1251.1	110.25	129.84	1.3016	419.5	650.88	1.3016	16.889
92	2723.7	1059.1	111.18	206.7	0.96878	186.98	921.02	0.96878	16.215
93	2925.7	121.87	1089.6	315.76	1.5091	113.87	5818	1.5091	17.807
94	7456.2	4598.1	243.28	154.2	0.40708	177.27	2616	0.40708	17.564
95	4427.1	708.13	209.54	123.04	1.0763	239.03	5472.7	1.0763	19.799
96	4737.2	506.1	173.88	355.86	0.43753	92.683	4853.7	0.43753	17.895
97	3129.8	800.84	519.03	103.33	5.8361	309.56	4777.9	5.8361	16.189
98	8283.3	368.59	92.844	219.72	0.67927	371.93	6613.3	0.67927	18.845
99	9461.6	1341.4	142.42	123.46	2.1281	255.11	1601.5	2.1281	18.666
100	1913.3	294.96	267.16	261.28	0.82735	143.43	25134	0.82735	16.024
Max Value:	**9.46E+03**	**4.60E+03**	**1.27E+03**	**5.18E+02**	**1.46E+01**	**4.68E+02**	**3.52E+04**	**1.46E+01**	**2.00E+01**
Median Value:	**4.29E+03**	**3.76E+02**	**2.77E+02**	**2.05E+02**	**2.45E+00**	**1.94E+02**	**4.30E+03**	**2.45E+00**	**1.73E+01**

realizations	ThKdVad	U238KdVad	waterflow.all.Vadose water flux peak time	waterflow.all.Vadose water flux peak value	Am241Flux.all.Vadose total constituent flux peak time	Am241Flux.all.Vadose total constituent flux peak value	C137Flux.all.Vadose total constituent flux peak time	C137Flux.all.Vadose total constituent flux peak value	Co60Flux.all.Vadose total constituent flux peak time
1	33.945	12.072	0	3.916	321.925	1.22E-43	255.1	1.22E-43	250.975
2	435.96	0.99761	0	2.079	321.925	1.22E-43	255.1	1.22E-43	250.975
3	199.18	0.5031	0	2.659	321.925	1.22E-43	255.1	1.22E-43	250.975
4	81.483	0.88131	0	1.199	321.925	1.22E-43	255.1	1.22E-43	250.975
5	736.18	7.1126	0	3.259	321.925	1.22E-43	255.1	1.22E-43	250.975
6	1403.8	1.2743	0	2.83	321.925	1.22E-43	255.1	1.22E-43	250.975
7	1021.8	7.9335	0	4.715	321.925	1.22E-43	255.1	1.22E-43	250.975
8	279.6	1.1965	0	1.886	321.925	1.22E-43	255.1	1.22E-43	250.975
9	793.92	3.795	0	2.679	321.925	1.22E-43	255.1	1.22E-43	250.975
10	390.8	0.52267	0	0.6417	321.925	1.22E-43	255.1	1.22E-43	250.975
11	861.33	0.62772	0	2.557	321.925	1.22E-43	255.1	1.22E-43	250.975
12	65.663	14.576	0	2.869	321.925	1.22E-43	255.1	1.22E-43	250.975
13	338.49	1.1698	0	7.26	321.925	1.22E-43	255.1	1.22E-43	250.975
14	579.49	0.89064	0	2.474	321.925	1.22E-43	255.1	1.22E-43	250.975
15	116.85	1.0293	0	7.023	321.925	1.22E-43	255.1	1.22E-43	250.975
16	126.48	7.6592	0	4.077	321.925	1.22E-43	255.1	1.22E-43	250.975
17	25.085	0.7906	0	4.194	321.925	1.22E-43	255.1	1.22E-43	250.975
18	694.04	2.3476	0	4.376	321.925	1.22E-43	255.1	1.22E-43	250.975
19	206.39	8.599	0	4.051	321.925	1.22E-43	255.1	1.22E-43	250.975
20	22.408	0.82027	0	2.471	321.925	1.22E-43	255.1	1.22E-43	250.975
21	1705.8	4.3369	0	0.9502	321.925	1.22E-43	255.1	1.22E-43	250.975
22	90.169	5.8778	0	8.002	321.925	1.22E-43	255.1	1.22E-43	250.975
23	672.14	2.1022	0	1.869	321.925	1.22E-43	255.1	1.22E-43	250.975
24	1347	2.6161	0	8.597	321.925	1.22E-43	255.1	1.22E-43	250.975
25	354.27	11.097	0	3.31	321.925	1.22E-43	255.1	1.22E-43	250.975
26	160.48	0.92542	0	5.196	321.925	1.22E-43	255.1	1.22E-43	250.975
27	79.08	0.46263	0	8.755	321.925	1.22E-43	255.1	1.22E-43	250.975
28	20.231	10.819	0	10.76	321.925	1.22E-43	255.1	1.22E-43	250.975
29	85.284	0.5672	0	11.32	321.925	1.22E-43	255.1	1.22E-43	250.975
30	32.278	9.5774	0	9.467	321.925	1.22E-43	255.1	1.22E-43	250.975
31	808.36	3.4662	0	0.8496	321.925	1.22E-43	255.1	1.22E-43	250.975
32	25.519	10.271	0	4.98	321.925	1.22E-43	255.1	1.22E-43	250.975
33	1178.9	2.2597	0	0.5356	321.925	1.22E-43	255.1	1.22E-43	250.975
34	874.4	4.6205	0	0.6779	321.925	1.22E-43	255.1	1.22E-43	250.975
35	220.56	6.3454	0	1.597	321.925	1.22E-43	255.1	1.22E-43	250.975
36	35.749	9.2511	0	2.104	321.925	1.22E-43	255.1	1.22E-43	250.975
37	919.05	5.0488	0	5.566	321.925	1.22E-43	255.1	1.22E-43	250.975
38	507.86	2.3663	0	0.4838	321.925	1.22E-43	255.1	1.22E-43	250.975
39	43.224	13.151	0	1.794	321.925	1.22E-43	255.1	1.22E-43	250.975
40	68.368	12.788	0	7.175	321.925	1.22E-43	255.1	1.22E-43	250.975
41	470.18	6.9489	0	0.9024	321.925	1.22E-43	255.1	1.22E-43	250.975
42	502.03	0.48089	0	2.414	321.925	1.22E-43	255.1	1.22E-43	250.975
43	23.082	0.76487	0	3.14	321.925	1.22E-43	255.1	1.22E-43	250.975
44	544.64	1.8831	0	0.2711	321.925	1.22E-43	255.1	1.22E-43	250.975
45	1283	0.45524	0	2.053	321.925	1.22E-43	255.1	1.22E-43	250.975
46	1775.8	11.321	0	7.705	321.925	1.22E-43	255.1	1.22E-43	250.975
47	99.012	7.2904	0	1.424	321.925	1.22E-43	255.1	1.22E-43	250.975
48	957.82	2.038	0	0.723	321.925	1.22E-43	255.1	1.22E-43	250.975
49	210.98	0.64213	0	1.643	321.925	1.22E-43	255.1	1.22E-43	250.975
50	51.119	0.42198	0	0.7682	321.925	1.22E-43	255.1	1.22E-43	250.975
51	39.711	6.1846	0	0.2295	321.925	1.22E-43	255.1	1.22E-43	250.975
52	399.13	3.2908	0	1.587	321.925	1.22E-43	255.1	1.22E-43	250.975
53	27.661	1.135	0	1.357	321.925	1.22E-43	255.1	1.22E-43	250.975

realizations	ThKdVad	U238KdVad	waterflow.all.Vadose water flux peak time	waterflow.all.Vadose water flux peak value	Am241Flux.all.Vadose total constituent flux peak time	Am241Flux.all.Vadose total constituent flux peak value	C137Flux.all.Vadose total constituent flux peak time	C137Flux.all.Vadose total constituent flux peak value	Co60Flux.all.Vadose total constituent flux peak time
54	75.106	0.59472	0	2.717	321.925	1.22E-43	255.1	1.22E-43	250.975
55	1908.5	5.0819	0	0.3174	321.925	1.22E-43	255.1	1.22E-43	250.975
56	44.308	1.7359	0	5.652	321.925	1.22E-43	255.1	1.22E-43	250.975
57	105.5	6.736	0	0.1933	321.925	1.22E-43	255.1	1.22E-43	250.975
58	55.999	1.7744	0	5.88	321.925	1.22E-43	255.1	1.22E-43	250.975
59	440.95	13.863	0	3.293	321.925	1.22E-43	255.1	1.22E-43	250.975
60	233.81	4.7744	0	2.721	321.925	1.22E-43	255.1	1.22E-43	250.975
61	1536.7	1.366	0	6.404	321.925	1.22E-43	255.1	1.22E-43	250.975
62	1450.8	0.60014	0	5.381	321.925	1.22E-43	255.1	1.22E-43	250.975
63	132.56	2.787	0	0.2059	321.925	1.22E-43	255.1	1.22E-43	250.975
64	1601.9	1.462	0	11.85	321.925	1.22E-43	255.1	1.22E-43	250.975
65	48.462	8.3186	0	5.364	321.925	1.22E-43	255.1	1.22E-43	250.975
66	187.34	3.735	0	0.2815	321.925	1.22E-43	255.1	1.22E-43	250.975
67	61.353	1.3999	0	0.1167	321.925	1.22E-43	255.1	1.22E-43	250.975
68	71.277	5.5968	0	10.42	321.925	1.22E-43	255.1	1.22E-43	250.975
69	29.591	2.8441	0	0.1991	321.925	1.22E-43	255.1	1.22E-43	250.975
70	296.34	1.5415	0	0.8912	321.925	1.22E-43	255.1	1.22E-43	250.975
71	138.72	1.9311	0	6.261	321.925	1.22E-43	255.1	1.22E-43	250.975
72	54.996	4.5144	0	1.157	321.925	1.22E-43	255.1	1.22E-43	250.975
73	112.9	3.6465	0	0.4805	321.925	1.22E-43	255.1	1.22E-43	250.975
74	311.9	2.6506	0	4.146	321.925	1.22E-43	255.1	1.22E-43	250.975
75	1994.1	0.70385	0	0.5234	321.925	1.22E-43	255.1	1.22E-43	250.975
76	1258.7	3.1877	0	11.88	321.925	1.22E-43	255.1	1.22E-43	250.975
77	260.57	3.1046	0	4.003	321.925	1.22E-43	255.1	1.22E-43	250.975
78	1144.8	5.3938	0	7.221	321.925	1.22E-43	255.1	1.22E-43	250.975
79	616.49	14.045	0	0.05269	321.925	1.22E-43	255.1	1.22E-43	250.975
80	126.04	2.9442	0	0.9776	321.925	1.22E-43	255.1	1.22E-43	250.975
81	41.01	2.536	0	3.23	321.925	1.22E-43	255.1	1.22E-43	250.975
82	155.7	11.959	0	14.75	321.925	1.22E-43	255.1	1.22E-43	250.975
83	1075.3	4.0562	0	7.709	321.925	1.22E-43	255.1	1.22E-43	250.975
84	57.798	9.8143	0	7.79	321.925	1.22E-43	255.1	1.22E-43	250.975
85	575.84	1.6691	0	1.066	321.925	1.22E-43	255.1	1.22E-43	250.975
86	95.381	0.53924	0	1.458	321.925	1.22E-43	255.1	1.22E-43	250.975
87	634.42	8.9629	0	0.1482	321.925	1.22E-43	255.1	1.22E-43	250.975
88	176.06	0.73714	0	1.251	321.925	1.22E-43	255.1	1.22E-43	250.975
89	101.91	4.0899	0	0.6455	321.925	1.22E-43	255.1	1.22E-43	250.975
90	27.289	1.5985	0	0.6781	321.925	1.22E-43	255.1	1.22E-43	250.975
91	248.12	1.3016	0	2.814	321.925	1.22E-43	255.1	1.22E-43	250.975
92	37.838	0.96878	0	1.476	321.925	1.22E-43	255.1	1.22E-43	250.975
93	275.2	1.5091	0	2.246	321.925	1.22E-43	255.1	1.22E-43	250.975
94	30.85	0.40708	0	5.463	321.925	1.22E-43	255.1	1.22E-43	250.975
95	168.93	1.0763	0	0.9158	321.925	1.22E-43	255.1	1.22E-43	250.975
96	21.186	0.43753	0	2.82	321.925	1.22E-43	255.1	1.22E-43	250.975
97	146.92	5.8361	0	0.8717	321.925	1.22E-43	255.1	1.22E-43	250.975
98	325.49	0.67927	0	9.454	321.925	1.22E-43	255.1	1.22E-43	250.975
99	47.499	2.1281	0	2.715	321.925	1.22E-43	255.1	1.22E-43	250.975
100	365.86	0.82735	0	3.603	321.925	1.22E-43	255.1	1.22E-43	250.975
Max Value:	**1.99E+03**	**1.46E+01**	**0.00E+00**	**1.48E+01**	**3.22E+02**	**1.22E-43**	**2.55E+02**	**1.22E-43**	**2.51E+02**
Median Value:	**2.03E+02**	**2.45E+00**	**0.00E+00**	**2.67E+00**	**3.22E+02**	**1.22E-43**	**2.55E+02**	**1.22E-43**	**2.51E+02**

realizations	Co60Flux.all.Vadose total constituent flux peak value	Pu238Flux.all.Vadose total constituent flux peak time	Pu238Flux.all.Vadose total constituent flux peak value	U234Flux.all.Vadose total constituent flux peak time	U234Flux.all.Vadose total constituent flux peak value	Pu239Flux.all.Vadose total constituent flux peak time	Pu239Flux.all.Vadose total constituent flux peak value	Ra226Flux.all.Vadose total constituent flux peak time	Ra226Flux.all.Vadose total constituent flux peak value
1	1.22E-43	264.625	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
2	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
3	1.22E-43	264.65	1.22E-43	10500.53	1.79E-05	500.025	1.22E-43	500.025	1.22E-43
4	1.22E-43	264.625	1.22E-43	8997.25	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
5	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
6	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
7	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
8	1.22E-43	264.65	1.22E-43	10500.53	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
9	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
10	1.22E-43	264.65	1.22E-43	10500.53	2.59E-07	500.025	1.22E-43	500.025	1.22E-43
11	1.22E-43	264.625	1.22E-43	8997.25	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
12	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
13	1.22E-43	264.625	1.22E-43	8997.25	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
14	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
15	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
16	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
17	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
18	1.22E-43	264.625	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
19	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
20	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
21	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
22	1.22E-43	264.625	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
23	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
24	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
25	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
26	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
27	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
28	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
29	1.22E-43	264.65	1.22E-43	10500.53	5.89E-08	500.025	1.22E-43	500.025	1.22E-43
30	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
31	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
32	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
33	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
34	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
35	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
36	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
37	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
38	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
39	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
40	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
41	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
42	1.22E-43	264.65	1.22E-43	10500.53	0.000602	500.025	1.22E-43	500.025	1.22E-43
43	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
44	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
45	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
46	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
47	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
48	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
49	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
50	1.22E-43	264.65	1.22E-43	10500.53	2.48E-06	500.025	1.22E-43	500.025	1.22E-43
51	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
52	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
53	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43

realizations	Co60Flux.all.Vadose total constituent flux peak value	Pu238Flux.all.Vadose total constituent flux peak time	Pu238Flux.all.Vadose total constituent flux peak value	U234Flux.all.Vadose total constituent flux peak time	U234Flux.all.Vadose total constituent flux peak value	Pu239Flux.all.Vadose total constituent flux peak time	Pu239Flux.all.Vadose total constituent flux peak value	Ra226Flux.all.Vadose total constituent flux peak time	Ra226Flux.all.Vadose total constituent flux peak value
54	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
55	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
56	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
57	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
58	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
59	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
60	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
61	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
62	1.22E-43	264.65	1.22E-43	10500.53	1.44E-05	500.025	1.22E-43	500.025	1.22E-43
63	1.22E-43	264.625	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
64	1.22E-43	264.625	1.22E-43	8997.25	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
65	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
66	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
67	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
68	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
69	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
70	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
71	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
72	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
73	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
74	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
75	1.22E-43	264.65	1.22E-43	10500.53	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
76	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
77	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
78	1.22E-43	264.625	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
79	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
80	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
81	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
82	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
83	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
84	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
85	1.22E-43	264.65	1.22E-43	10000.5	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
86	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
87	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
88	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
89	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
90	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
91	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
92	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
93	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
94	1.22E-43	264.65	1.22E-43	10500.53	5.53E-07	500.025	1.22E-43	500.025	1.22E-43
95	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
96	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
97	1.22E-43	264.625	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
98	1.22E-43	264.65	1.22E-43	10500.53	2.32E-07	500.025	1.22E-43	500.025	1.22E-43
99	1.22E-43	264.65	1.22E-43	9000.449	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
100	1.22E-43	264.65	1.22E-43	8998.1	1.07E-16	500.025	1.22E-43	500.025	1.22E-43
Max Value:	**1.22E-43**	**2.65E+02**	**1.22E-43**	**1.05E+04**	**6.02E-04**	**5.00E+02**	**1.22E-43**	**5.00E+02**	**1.22E-43**
Median Value:	**1.22E-43**	**2.65E+02**	**1.22E-43**	**9.00E+03**	**1.07E-16**	**5.00E+02**	**1.22E-43**	**5.00E+02**	**1.22E-43**

realizations	Rn222Flux.all.Vadose total constituent flux peak time	Rn222Flux.all.Vadose total constituent flux peak value	Sr90Flux.all.Vadose total constituent flux peak time	Sr90Flux.all.Vadose total constituent flux peak value	Th232Flux.all.Vadose total constituent flux peak time	Th232Flux.all.Vadose total constituent flux peak value	H3Flux.all.Vadose total constituent flux peak time	H3Flux.all.Vadose total constituent flux peak value	U238Flux.all.Vadose total constituent flux **peak time**
1	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10344.3
2	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
3	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	11560.76
4	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	12740.96
5	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	12868.06
6	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
7	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
8	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10413.24
9	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10649.17
10	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	15485.47
11	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10750.48
12	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
13	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10110.27
14	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	14172.08
15	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
16	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
17	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
18	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10080.51
19	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	14102.75
20	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	12627.42
21	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
22	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10273.31
23	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
24	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10560.5
25	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	11767.46
26	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
27	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
28	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	13755.44
29	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	15064.6
30	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10007.53
31	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	12379.68
32	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10088.36
33	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10261.79
34	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
35	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
36	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10197.65
37	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10248.88
38	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
39	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
40	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
41	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10101.4
42	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10014.84
43	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	14438.14
44	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	14615.79
45	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	14225.01
46	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10459.16
47	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	16707.26
48	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10178.45
49	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	17644.54
50	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	16289.98
51	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
52	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
53	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0

realizations	Rn222Flux.all.Vadose total constituent flux peak time	Rn222Flux.all.Vadose total constituent flux peak value	Sr90Flux.all.Vadose total constituent flux peak time	Sr90Flux.all.Vadose total constituent flux peak value	Th232Flux.all.Vadose total constituent flux peak time	Th232Flux.all.Vadose total constituent flux peak value	H3Flux.all.Vadose total constituent flux peak time	H3Flux.all.Vadose total constituent flux peak value	U238Flux.all.Vadose total constituent flux **peak time**
54	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	12156.82
55	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10500.52
56	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	16334.32
57	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10500.52
58	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10052.55
59	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10260.83
60	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
61	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10284.39
62	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	11423.79
63	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10132.98
64	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10019.8
65	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
66	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	13498.91
67	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	14130.76
68	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	11766.85
69	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	14163.32
70	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
71	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
72	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	13789.7
73	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
74	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
75	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
76	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	12557.98
77	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
78	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10601.73
79	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10500.52
80	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
81	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
82	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10248.55
83	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10092.43
84	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	16246.31
85	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	14049.02
86	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10500.52
87	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
88	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10221.86
89	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10130
90	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
91	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
92	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
93	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
94	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	14078.31
95	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	16312.24
96	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	0
97	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	12630.78
98	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10196.49
99	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	10173.48
100	10000.5	1.22E-39	254.9	1.22E-43	500.025	1.22E-43	250.075	1.22E-43	15742.37
Max Value:	**1.00E+04**	**1.22E-39**	**2.55E+02**	**1.22E-43**	**5.00E+02**	**1.22E-43**	**2.50E+02**	**1.22E-43**	**1.76E+04**
Median Value:	**1.00E+04**	**1.22E-39**	**2.55E+02**	**1.22E-43**	**5.00E+02**	**1.22E-43**	**2.50E+02**	**1.22E-43**	**1.02E+04**

realizations	U238Flux.all.Vadose total constituent flux peak value	U234Flux2.all.Vadose total constituent flux peak time	U234Flux2.all.Vadose total constituent flux peak value	Rn222Flx2.all.Vadose total constituent flux peak time	Rn222Flx2.all.Vadose total constituent flux peak value
1	1350.353	18000.91	302.1065	19500.98	1.330142
2	0	10000.5	8.27E-16	10000.5	6.94E-23
3	138.2284	18000.91	161.7694	19500.98	3.967719
4	1.959096	18000.91	4.85686	18500.93	0.663118
5	12.10927	18500.93	4.06393	18500.93	0.522064
6	0	10000.5	8.27E-16	10000.5	6.94E-23
7	0	10000.5	8.27E-16	10000.5	6.94E-23
8	1.663803	18000.91	2.176676	18500.93	0.297309
9	25.36001	18000.91	10.20496	18500.93	1.312065
10	2.045488	18000.91	10.01186	18500.93	1.355918
11	0.811469	18500.93	1.031879	18500.93	0.140889
12	0	10000.5	8.27E-16	10000.5	6.94E-23
13	136.322	18000.91	44.89856	19500.98	3.085713
14	9.035161	18000.91	8.143508	18500.93	1.086644
15	0	10000.5	8.27E-16	10000.5	6.94E-23
16	0	10000.5	8.27E-16	10000.5	6.94E-23
17	0	10000.5	8.27E-16	10000.5	6.94E-23
18	289.296	18000.91	112.0322	19500.98	2.341558
19	0.058759	19000.96	0.006401	19000.96	0.000676
20	121.8584	18000.91	179.5289	19500.98	4.743021
21	0	10000.5	8.27E-16	10000.5	6.94E-23
22	11.07473	18500.93	1.325615	18500.93	0.143314
23	0	10000.5	8.27E-16	10000.5	6.94E-23
24	0.149166	19000.96	0.026834	19000.96	0.003236
25	1483.155	18000.91	243.8472	19500.98	0.853281
26	0	10000.5	8.27E-16	10000.5	6.94E-23
27	0	10000.5	8.27E-16	10000.5	6.94E-23
28	2512.932	18000.91	124.8528	19500.98	1.031214
29	67.24767	18000.91	18.45372	18500.93	2.268457
30	2872.939	18000.91	243.106	19500.98	1.375843
31	1.6962	18500.93	2.011525	18500.93	0.274345
32	100.0586	18500.93	9.010825	19500.98	0.62222
33	0.02311	18500.93	0.062362	19000.96	0.008787
34	0	10000.5	8.27E-16	10000.5	6.94E-23
35	0	10000.5	8.27E-16	10000.5	6.94E-23
36	1236.066	18000.91	326.1958	19500.98	0.83877
37	8.312581	18500.93	1.520928	18500.93	0.180998
38	0	10000.5	8.27E-16	10000.5	6.94E-23
39	0	10000.5	8.27E-16	10000.5	6.94E-23
40	0	10000.5	8.27E-16	10000.5	6.94E-23
41	195.6361	18500.93	127.3658	19500.98	0.829689
42	711.8804	17000.86	1400.593	19500.98	5.796765
43	110.7932	18000.91	101.8223	19500.98	3.775145
44	28.27129	18000.91	255.6822	19500.98	3.30386
45	0.064372	18500.93	0.135438	19000.96	0.019094
46	7064.272	18000.91	435.4626	20001	0.920219
47	8.792105	18500.93	4.594236	18500.93	0.608571
48	0.000441	19500.98	0.00167	19500.98	0.000245
49	0.358112	18500.93	0.796359	18500.93	0.109754
50	0.6776	18000.91	2.619104	18500.93	0.359254
51	0	10000.5	8.27E-16	10000.5	6.94E-23
52	0	10000.5	8.27E-16	10000.5	6.94E-23
53	0	10000.5	8.27E-16	10000.5	6.94E-23

realizations		U238Flux.all.Vadose total constituent flux peak value	U234Flux2.all.Vadose total constituent flux peak time	U234Flux2.all.Vadose total constituent flux peak value	Rn222Flx2.all.Vadose total constituent flux peak time	Rn222Flx2.all.Vadose total constituent flux peak value
	54	0.051394	19000.96	0.052002	19000.96	0.007257
	55	2.92E-14	10500.53	1.64E-15	19000.96	9.86E-17
	56	51.12817	18000.91	22.8525	18500.93	2.95832
	57	8.98E-17	10000.5	8.31E-16	19500.98	9.20E-18
	58	2.487969	18500.93	0.532646	18500.93	0.064806
	59	1.858476	18500.93	0.244694	18500.93	0.02707
	60	0	10000.5	8.27E-16	10000.5	6.94E-23
	61	735.7753	18000.91	387.2543	19500.98	4.612332
	62	2135.07	17500.88	1943.32	19500.98	6.246769
	63	40.36624	18000.91	423.06	19500.98	2.920357
	64	3452.292	17500.88	753.1913	19500.98	3.671977
	65	0	10000.5	8.27E-16	10000.5	6.94E-23
	66	0.067267	18500.93	0.259344	18500.93	0.035935
	67	0.00577	18500.93	0.059564	19000.96	0.00837
	68	63.73462	18000.91	6.910683	18500.93	0.719843
	69	0.033363	18500.93	0.245382	18500.93	0.034116
	70	0	10000.5	8.27E-16	10000.5	6.94E-23
	71	0	10000.5	8.27E-16	10000.5	6.94E-23
	72	31.60043	18000.91	26.86948	19500.98	1.356772
	73	0	10000.5	8.27E-16	10000.5	6.94E-23
	74	0	10000.5	8.27E-16	10000.5	6.94E-23
	75	0	10000.5	8.27E-16	10000.5	6.94E-23
	76	172.9007	18500.93	18.7038	19000.96	1.578623
	77	0	10000.5	8.27E-16	10000.5	6.94E-23
	78	3844.919	18000.91	648.9825	19500.98	1.897103
	79	8.68E-19	10000.5	8.27E-16	19500.98	1.29E-19
	80	0	10000.5	8.27E-16	10000.5	6.94E-23
	81	0	10000.5	8.27E-16	10000.5	6.94E-23
	82	49.39822	18000.91	3.386445	18500.93	0.294279
	83	1.229366	18500.93	0.175176	18500.93	0.019667
	84	151.2354	18500.93	13.78721	19500.98	0.972703
	85	47.52674	18000.91	56.12596	19500.98	1.705521
	86	2.11E-13	19000.96	1.11E-14	19000.96	7.15E-16
	87	0	10000.5	8.27E-16	10000.5	6.94E-23
	88	2.011572	18000.91	5.324067	18500.93	0.730226
	89	0.219074	18500.93	0.257986	18500.93	0.035163
	90	0	10000.5	8.27E-16	10000.5	6.94E-23
	91	0	10000.5	8.27E-16	10000.5	6.94E-23
	92	0	10000.5	8.27E-16	10000.5	6.94E-23
	93	0	10000.5	8.27E-16	10000.5	6.94E-23
	94	0.345412	18500.93	0.317752	18500.93	0.042986
	95	9.937462	18000.91	21.53811	19000.96	2.510885
	96	0	10000.5	8.27E-16	10000.5	6.94E-23
	97	42.58331	18000.91	32.7522	19500.98	0.933734
	98	1469.736	17500.88	597.0755	19500.98	5.148549
	99	0.342491	18500.93	0.158275	18500.93	0.020751
	100	254.4162	18000.91	174.131	19500.98	3.300539
Max Value:		**7.06E+03**	**1.95E+04**	**1.94E+03**	**2.00E+04**	**6.25E+00**
Median Value:		**3.44E-01**	**1.80E+04**	**2.52E-01**	**1.85E+04**	**3.46E-02**

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Sensitivity/Uncertainty Module for FRAMES
Beta Test version
56 15

ThickSrc	Thickness of waste zone from src2 (cm)
Length	Length of waste zone from src2 (cm)
Width	Width of waste zone from src2 (cm)
rhob	Bulk density of soil from src2 (g/cm^3)
MoistSrc	Moisture content from src2 (fraction)
porosity	Total porosity from src2 (fraction)
U238Inv	Inventory quantity, URANIUM-238 from src2 (Ci)
AmInv	Inventory quantity, AMERICIUM-241 from src2 (Ci)
CsInv	Inventory quantity, CESIUM-137+D from src2 (Ci)
CoInv	Inventory quantity, COBALT-60 from src2 (Ci)
Pu238Inv	Inventory quantity, PLUTONIUM-238 from src2 (Ci)
Pu239Inv	Inventory quantity, PLUTONIUM-239 from src2 (Ci)
Ra226Inv	Inventory quantity, RADIUM-226 from src2 (Ci)
SrInv	Inventory quantity, STRONTIUM-90 from src2 (Ci)
ThInv	Inventory quantity, THORIUM-232 from src2 (Ci)
H3Inv	Inventory quantity, TRITIUM (tritiated water) from src2 (Ci)
U238Kd1	Equilibrium coefficients (kd), URANIUM-238, time # 1 from sr (ml/g)
U238Kd2	Equilibrium coefficients (kd), URANIUM-238, time # 2 from src2 (ml/g)
U234Kd1	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd2	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd3	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
U234Kd4	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
Ra226Kd1	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd2	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
Ra226Kd3	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
AmKd1	Equilibrium coefficients (kd), AMERICIUM-241, time # 1 from (ml/g)
AmKd2	Equilibrium coefficients (kd), AMERICIUM-241, time # 2 from src2 (ml/g)
CsKd1	Equilibrium coefficients (kd), CESIUM-137+D, time # 1 from s (ml/g)
CsKd2	Equilibrium coefficients (kd), CESIUM-137+D, time # 2 from src2 (ml/g)
CoKd1	Equilibrium coefficients (kd), COBALT-60, time # 1 from src2 (ml/g)
CoKd2	Equilibrium coefficients (kd), COBALT-60, time # 2 from src2 (ml/g)
Pu238Kd1	Equilibrium coefficients (kd), PLUTONIUM-238, time # 1 from (ml/g)
Pu238Kd2	Equilibrium coefficients (kd), PLUTONIUM-238, time # 2 from src2 (ml/g)
Pu239Kd1	Equilibrium coefficients (kd), PLUTONIUM-239, time # 1 from (ml/g)
Pu239Kd2	Equilibrium coefficients (kd), PLUTONIUM-239, time # 2 from src2 (ml/g)
SrKd1	Equilibrium coefficients (kd), STRONTIUM-90, time # 1 from s (ml/g)
SrKd2	Equilibrium coefficients (kd), STRONTIUM-90, time # 2 from src2 (ml/g)
ThKd1	Equilibrium coefficients (kd), THORIUM-232, time # 1 from sr (ml/g)
ThKd2	Equilibrium coefficients (kd), THORIUM-232, time # 2 from src2 (ml/g)
Darcy1	Darcy Vadose rate, time # 1 from src2 (cm/yr)
Darcy2	Darcy Vadose rate, time # 2 from src2 (cm/yr)
porVad	Soil total porosity from vad3 (percent)
KsatVad	Soil hydraulic conductivity from vad3 (cm/day)
rhobVad	Soil bulk density from vad3 (g/cm^3)
AmKdVad	Soil equilibrium coefficient, AMERICIUM-241 from vad3 (ml/g)
CsKdVad	Soil equilibrium coefficient, CESIUM-137+D from vad3 (ml/g)

CoKdVad	Soil equilibrium coefficient, COBALT-60 from vad3 (ml/g)	
Pu238KdVa	Soil equilibrium coefficient, PLUTONIUM-238 from vad3 (ml/g)	
U234VadKd	Soil equilibrium coefficient, URANIUM-234 from vad3 (ml/g)	
Pu239KdVa	Soil equilibrium coefficient, PLUTONIUM-239 from vad3 (ml/g)	
RaKdVad	Soil equilibrium coefficient, RADIUM-226 from vad3 (ml/g)	
U234KdVad	Soil equilibrium coefficient, LEAD-210 from vad3 (ml/g)	
SrKdVad	Soil equilibrium coefficient, STRONTIUM-90 from vad3 (ml/g)	
ThKdVad	Soil equilibrium coefficient, THORIUM-232 from vad3 (ml/g)	
U238KdVad	Soil equilibrium coefficient, TRITIUM (tritiated water) from vad3 (ml/g)	
waterflow.all.Vadose	vad3 water flux peak (m^3/yr)	yr
Am241Flux.all.Vadose	vad3 total constituent flux peak for AM241 (pCi/yr)	yr
C137Flux.all.Vadose	vad3 total constituent flux peak for CS137 (pCi/yr)	yr
Co60Flux.all.Vadose	vad3 total constituent flux peak for CO60 (pCi/yr)	yr
Pu238Flux.all.Vadose	vad3 total constituent flux peak for PU238 (pCi/yr)	yr
U234Flux.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of PU238 (pCi/yr)	yr
Pu239Flux.all.Vadose	vad3 total constituent flux peak for PU239 (pCi/yr)	yr
Ra226Flux.all.Vadose	vad3 total constituent flux peak for RA226 (pCi/yr)	yr

Rn222Flux.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of RA226 (pCi/yr)	yr
Sr90Flux.all.Vadose	vad3 total constituent flux peak for SR90 (pCi/yr)	yr
Th232Flux.all.Vadose	vad3 total constituent flux peak for TH232 (pCi/yr)	yr
H3Flux.all.Vadose	vad3 total constituent flux peak for THO (pCi/yr)	yr
U238Flux.all.Vadose	vad3 total constituent flux peak for U238 (pCi/yr)	yr
U234Flux2.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of U238 (pCi/yr)	yr
Rn222Flx2.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of U238 (pCi/yr)	yr

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	AmInv
1	3.08E+02	7.01E+03	2.97E+03	1.64E+00	2.16E-01	3.44E-01	1.77E+01	1.24E-03
2	3.94E+02	6.77E+03	6.37E+03	1.70E+00	8.99E-02	3.73E-01	1.15E+01	1.69E-03
3	7.34E+02	1.08E+04	1.41E+03	1.77E+00	1.38E-01	4.05E-01	1.17E+01	1.28E-03
4	3.77E+02	2.97E+03	3.30E+03	1.55E+00	1.31E-01	3.46E-01	1.21E+01	1.56E-03
5	3.40E+02	3.39E+03	7.52E+03	1.54E+00	1.68E-01	3.87E-01	1.63E+01	1.58E-03
6	4.79E+02	9.04E+03	4.14E+03	1.67E+00	9.28E-02	3.65E-01	1.05E+01	1.97E-03
7	7.05E+02	8.27E+03	8.77E+03	1.48E+00	7.93E-02	3.24E-01	9.62E+00	1.77E-03
8	3.81E+02	8.45E+03	1.99E+03	1.47E+00	1.42E-01	3.58E-01	1.19E+01	1.33E-03
9	6.15E+02	1.25E+04	1.63E+03	1.49E+00	9.56E-02	3.91E-01	1.34E+01	1.42E-03
10	4.04E+02	1.47E+03	3.17E+03	1.68E+00	1.47E-01	3.38E-01	1.07E+01	1.35E-03
11	5.40E+02	1.14E+04	1.77E+03	1.77E+00	1.77E-01	3.82E-01	1.34E+01	1.90E-03
12	6.65E+02	4.45E+03	7.81E+03	1.50E+00	1.11E-01	4.22E-01	1.60E+01	1.95E-03
13	6.53E+02	6.49E+03	7.24E+03	1.68E+00	1.58E-01	3.05E-01	1.30E+01	1.30E-03
14	4.45E+02	1.20E+04	1.36E+03	1.84E+00	2.00E-01	3.55E-01	9.41E+00	1.10E-03
15	7.27E+02	1.18E+04	6.79E+03	1.72E+00	8.37E-02	3.49E-01	1.75E+01	1.97E-03
16	3.13E+02	1.10E+04	5.90E+03	1.72E+00	7.43E-02	3.62E-01	1.58E+01	1.18E-03
17	5.93E+02	1.07E+04	4.31E+03	1.63E+00	1.66E-01	4.29E-01	1.27E+01	1.34E-03
18	3.34E+02	4.07E+03	7.18E+03	1.48E+00	1.72E-01	3.18E-01	1.03E+01	1.67E-03
19	7.74E+02	7.56E+03	5.13E+03	1.69E+00	1.20E-01	4.30E-01	9.75E+00	1.46E-03
20	5.75E+02	6.18E+03	2.46E+03	1.65E+00	1.81E-01	3.51E-01	1.57E+01	1.19E-03
21	5.15E+02	9.00E+03	1.94E+03	1.82E+00	5.76E-02	3.85E-01	1.28E+01	1.22E-03
22	4.72E+02	8.78E+03	6.69E+03	1.75E+00	1.50E-01	3.09E-01	1.08E+01	1.88E-03
23	6.49E+02	4.95E+03	4.70E+03	1.73E+00	8.42E-02	4.13E-01	1.37E+01	1.86E-03
24	8.15E+02	1.26E+04	6.97E+03	1.57E+00	1.37E-01	3.31E-01	1.65E+01	1.14E-03
25	5.55E+02	1.24E+04	1.51E+03	1.50E+00	2.23E-01	3.90E-01	1.46E+01	1.08E-03
26	5.81E+02	1.11E+04	8.90E+03	1.51E+00	7.35E-02	4.25E-01	1.41E+01	1.38E-03
27	6.78E+02	1.22E+04	8.85E+03	1.78E+00	1.03E-01	3.80E-01	1.73E+01	1.36E-03
28	7.79E+02	9.62E+03	6.21E+03	1.62E+00	1.83E-01	3.72E-01	1.85E+01	1.68E-03
29	6.32E+02	1.05E+04	8.09E+03	1.56E+00	1.99E-01	3.07E-01	1.09E+01	1.75E-03
30	4.88E+02	1.01E+04	5.38E+03	1.53E+00	2.21E-01	3.94E-01	1.76E+01	1.03E-03
31	7.85E+02	1.02E+03	5.73E+03	1.83E+00	1.44E-01	4.25E-01	1.59E+01	1.66E-03
32	5.86E+02	5.33E+03	6.27E+03	1.61E+00	1.93E-01	3.68E-01	1.12E+01	1.81E-03
33	5.11E+02	7.34E+03	7.16E+02	1.57E+00	1.18E-01	4.36E-01	1.37E+01	1.15E-03
34	4.02E+02	6.25E+03	2.32E+03	1.66E+00	7.02E-02	4.38E-01	1.68E+01	1.41E-03
35	3.62E+02	9.24E+03	1.87E+03	1.71E+00	1.28E-01	4.27E-01	9.77E+00	1.25E-03
36	6.77E+02	9.45E+03	1.20E+03	1.54E+00	2.03E-01	3.34E-01	1.42E+01	1.88E-03
37	8.07E+02	1.14E+04	3.49E+03	1.79E+00	1.54E-01	4.10E-01	1.79E+01	1.52E-03
38	8.22E+02	1.42E+03	5.07E+03	1.61E+00	1.09E-01	3.39E-01	1.72E+01	1.44E-03
39	4.51E+02	7.36E+03	4.87E+03	1.79E+00	7.62E-02	3.83E-01	1.26E+01	1.63E-03
40	4.09E+02	1.04E+04	7.97E+03	1.58E+00	1.16E-01	4.08E-01	1.02E+01	1.09E-03
41	5.61E+02	5.64E+03	9.38E+02	1.54E+00	2.06E-01	3.28E-01	1.07E+01	1.78E-03
42	3.21E+02	2.04E+03	6.85E+03	1.52E+00	1.96E-01	4.44E-01	1.48E+01	1.90E-03
43	6.95E+02	5.05E+03	3.94E+03	1.64E+00	1.91E-01	3.78E-01	1.32E+01	1.94E-03
44	5.74E+02	4.72E+03	3.59E+02	1.53E+00	1.72E-01	4.42E-01	1.66E+01	1.82E-03
45	5.96E+02	3.21E+03	5.54E+03	1.81E+00	1.40E-01	3.49E-01	1.63E+01	1.06E-03
46	6.46E+02	5.74E+03	7.04E+03	1.52E+00	2.14E-01	3.53E-01	1.39E+01	1.27E-03
47	6.68E+02	3.57E+03	2.60E+03	1.80E+00	1.76E-01	3.84E-01	1.84E+01	1.72E-03
48	6.23E+02	1.24E+03	6.07E+03	1.67E+00	1.30E-01	3.93E-01	1.45E+01	1.93E-03
49	7.91E+02	5.21E+03	2.64E+03	1.70E+00	1.61E-01	3.60E-01	1.83E+01	1.04E-03
50	6.28E+02	3.06E+03	2.21E+03	1.49E+00	1.63E-01	4.18E-01	1.11E+01	1.02E-03
51	3.66E+02	1.10E+03	3.42E+03	1.79E+00	6.04E-02	4.00E-01	1.75E+01	1.43E-03
52	4.38E+02	4.58E+03	7.65E+03	1.56E+00	6.56E-02	3.96E-01	1.85E+01	1.71E-03

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	AmInv
53	3.87E+02	1.68E+03	8.22E+03	1.83E+00	1.17E-01	3.76E-01	1.50E+01	1.61E-03
54	6.89E+02	1.16E+04	2.34E+03	1.60E+00	1.68E-01	3.75E-01	1.22E+01	1.57E-03
55	3.27E+02	6.63E+03	1.16E+03	1.59E+00	8.10E-02	3.15E-01	1.80E+01	1.32E-03
56	4.19E+02	8.56E+03	4.09E+03	1.85E+00	1.95E-01	3.35E-01	1.40E+01	1.73E-03
57	7.96E+02	6.44E+03	7.61E+02	1.71E+00	6.95E-02	4.34E-01	1.23E+01	1.77E-03
58	7.46E+02	1.28E+04	3.71E+03	1.70E+00	1.75E-01	4.14E-01	9.52E+00	1.85E-03
59	5.44E+02	3.67E+03	6.64E+03	1.83E+00	1.48E-01	3.63E-01	1.31E+01	1.48E-03
60	4.94E+02	7.80E+03	4.80E+03	1.75E+00	1.05E-01	3.03E-01	1.18E+01	1.54E-03
61	5.38E+02	3.83E+03	9.03E+03	1.77E+00	2.17E-01	3.33E-01	1.82E+01	1.45E-03
62	4.46E+02	7.64E+03	3.88E+03	1.56E+00	2.20E-01	3.25E-01	1.69E+01	1.99E-03
63	3.89E+02	3.94E+02	2.72E+03	1.76E+00	2.24E-01	4.05E-01	1.53E+01	1.62E-03
64	3.41E+02	9.99E+03	6.51E+03	1.61E+00	1.88E-01	3.98E-01	1.18E+01	1.92E-03
65	3.49E+02	1.29E+04	4.43E+03	1.84E+00	8.75E-02	3.67E-01	1.35E+01	1.84E-03
66	4.15E+02	5.29E+02	4.51E+03	1.67E+00	1.80E-01	4.33E-01	1.33E+01	1.46E-03
67	7.40E+02	2.50E+03	4.26E+02	1.68E+00	1.46E-01	3.43E-01	1.01E+01	1.31E-03
68	4.57E+02	8.11E+03	9.11E+03	1.65E+00	1.90E-01	4.37E-01	1.05E+01	1.21E-03
69	5.25E+02	3.29E+03	5.02E+02	1.74E+00	1.56E-01	3.16E-01	1.67E+01	1.13E-03
70	7.60E+02	2.31E+03	6.48E+03	1.73E+00	1.01E-01	4.12E-01	1.61E+01	1.24E-03
71	4.83E+02	7.16E+03	8.46E+03	1.84E+00	8.68E-02	4.31E-01	1.25E+01	1.13E-03
72	7.54E+02	1.91E+03	4.23E+03	1.51E+00	1.64E-01	3.30E-01	1.70E+01	1.16E-03
73	5.29E+02	2.67E+03	3.06E+03	1.50E+00	9.15E-02	3.22E-01	1.79E+01	1.82E-03
74	3.17E+02	8.74E+03	8.38E+03	1.52E+00	6.48E-02	3.47E-01	1.64E+01	1.18E-03
75	4.97E+02	6.92E+03	1.02E+03	1.76E+00	1.14E-01	3.42E-01	1.81E+01	1.75E-03
76	7.13E+02	9.79E+03	7.40E+03	1.82E+00	2.09E-01	4.42E-01	1.28E+01	1.53E-03
77	4.69E+02	1.02E+04	5.97E+03	1.71E+00	1.24E-01	4.21E-01	1.51E+01	1.86E-03
78	5.66E+02	1.30E+04	2.93E+03	1.59E+00	2.13E-01	4.03E-01	1.73E+01	1.09E-03
79	7.17E+02	2.37E+03	5.91E+02	1.75E+00	5.37E-02	3.16E-01	9.90E+00	1.80E-03
80	7.21E+02	5.90E+03	2.11E+03	1.48E+00	6.27E-02	4.17E-01	1.04E+01	1.11E-03
81	3.70E+02	1.12E+04	3.76E+03	1.64E+00	9.77E-02	3.54E-01	1.71E+01	1.60E-03
82	8.11E+02	1.19E+04	8.57E+03	1.74E+00	1.87E-01	3.78E-01	1.41E+01	1.49E-03
83	7.99E+02	7.92E+03	8.68E+03	1.63E+00	1.52E-01	4.15E-01	1.52E+01	1.68E-03
84	4.29E+02	8.09E+03	5.82E+03	1.80E+00	2.11E-01	3.12E-01	1.38E+01	1.63E-03
85	7.44E+02	8.24E+02	8.26E+03	1.60E+00	1.56E-01	3.37E-01	9.38E+00	1.05E-03
86	5.51E+02	4.18E+03	7.83E+03	1.69E+00	5.53E-02	4.08E-01	1.16E+01	1.31E-03
87	7.70E+02	2.14E+03	1.62E+03	1.55E+00	6.70E-02	3.20E-01	1.56E+01	1.39E-03
88	6.04E+02	1.78E+03	5.61E+03	1.59E+00	1.13E-01	3.97E-01	1.47E+01	1.56E-03
89	6.17E+02	5.51E+03	9.01E+02	1.81E+00	1.27E-01	3.11E-01	1.24E+01	1.48E-03
90	6.09E+02	2.85E+03	2.82E+03	1.73E+00	1.02E-01	4.40E-01	1.14E+01	1.73E-03
91	4.65E+02	4.32E+03	7.28E+03	1.76E+00	9.71E-02	3.06E-01	1.44E+01	1.50E-03
92	6.84E+02	3.95E+03	5.30E+03	1.49E+00	7.77E-02	3.57E-01	1.59E+01	1.21E-03
93	4.26E+02	9.65E+03	3.39E+03	1.78E+00	1.07E-01	3.28E-01	1.47E+01	1.00E-03
94	3.54E+02	9.35E+03	5.46E+03	1.62E+00	1.22E-01	4.02E-01	1.55E+01	1.96E-03
95	7.00E+02	7.70E+02	8.08E+03	1.66E+00	1.85E-01	3.08E-01	1.13E+01	1.54E-03
96	6.62E+02	1.08E+04	4.93E+03	1.63E+00	5.84E-02	3.22E-01	1.49E+01	1.27E-03
97	5.22E+02	6.47E+02	7.59E+03	1.81E+00	2.03E-01	4.20E-01	1.10E+01	1.01E-03
98	6.37E+02	1.21E+04	4.62E+03	1.57E+00	1.34E-01	3.64E-01	1.54E+01	1.40E-03
99	5.05E+02	4.83E+03	5.20E+03	1.58E+00	1.32E-01	3.89E-01	1.00E+01	1.65E-03
100	7.62E+02	6.03E+03	3.58E+03	1.65E+00	2.06E-01	3.71E-01	1.20E+01	1.99E-03
Max Value:	**8.22E+02**	**1.30E+04**	**9.11E+03**	**1.85E+00**	**2.24E-01**	**4.44E-01**	**1.85E+01**	**1.99E-03**
Median Value:	**5.64E+02**	**6.70E+03**	**4.75E+03**	**1.66E+00**	**1.39E-01**	**3.74E-01**	**1.39E+01**	**1.50E-03**

realizations	CsInv	CoInv	Pu238Inv	Pu239Inv	Ra226Inv	SrInv	ThInv	H3Inv	U238Kd1
1	7.12E+02	6.26E+03	1.12E-03	1.09E-03	1.06E+01	5.45E+02	1.89E+00	4.35E+03	1.21E+01
2	5.95E+02	3.56E+03	1.79E-03	1.38E-03	8.97E+00	4.74E+02	1.87E+00	4.13E+03	9.98E-01
3	5.52E+02	5.16E+03	1.48E-03	1.32E-03	7.95E+00	7.70E+02	1.75E+00	2.40E+03	5.03E-01
4	4.81E+02	5.35E+03	1.45E-03	1.43E-03	8.36E+00	7.88E+02	1.70E+00	4.50E+03	8.81E-01
5	6.12E+02	3.52E+03	1.53E-03	1.13E-03	6.21E+00	5.64E+02	1.65E+00	2.82E+03	7.11E+00
6	6.48E+02	5.28E+03	1.02E-03	1.91E-03	6.16E+00	5.11E+02	1.18E+00	4.25E+03	1.27E+00
7	6.02E+02	3.61E+03	1.50E-03	1.49E-03	1.14E+01	4.54E+02	1.25E+00	3.97E+03	7.93E+00
8	8.17E+02	4.84E+03	1.77E-03	1.78E-03	9.42E+00	4.88E+02	1.58E+00	3.65E+03	1.20E+00
9	7.36E+02	5.46E+03	1.75E-03	1.29E-03	1.15E+01	7.97E+02	1.76E+00	2.74E+03	3.80E+00
10	6.09E+02	6.19E+03	1.31E-03	1.54E-03	7.26E+00	4.58E+02	1.82E+00	2.46E+03	5.23E-01
11	6.24E+02	4.64E+03	1.18E-03	1.85E-03	6.60E+00	5.21E+02	1.12E+00	2.56E+03	6.28E-01
12	7.27E+02	6.84E+03	1.19E-03	1.99E-03	7.25E+00	7.57E+02	1.71E+00	2.45E+03	1.46E+01
13	8.10E+02	6.97E+03	1.61E-03	1.93E-03	6.29E+00	4.67E+02	1.01E+00	4.63E+03	1.17E+00
14	6.89E+02	4.47E+03	1.63E-03	1.11E-03	6.36E+00	7.21E+02	1.60E+00	3.71E+03	8.91E-01
15	5.60E+02	5.09E+03	1.99E-03	1.13E-03	9.30E+00	6.22E+02	1.10E+00	2.48E+03	1.03E+00
16	4.56E+02	6.07E+03	1.88E-03	1.53E-03	6.51E+00	5.92E+02	1.16E+00	4.54E+03	7.66E+00
17	7.00E+02	3.91E+03	1.70E-03	1.03E-03	1.12E+01	7.84E+02	1.37E+00	4.48E+03	7.91E-01
18	4.31E+02	5.87E+03	1.55E-03	1.14E-03	7.87E+00	6.60E+02	1.11E+00	2.93E+03	2.35E+00
19	4.92E+02	3.68E+03	1.04E-03	1.59E-03	1.01E+01	6.50E+02	1.02E+00	3.16E+03	8.60E+00
20	7.77E+02	5.29E+03	1.56E-03	1.71E-03	9.78E+00	4.47E+02	1.07E+00	3.59E+03	8.20E-01
21	4.60E+02	6.88E+03	1.05E-03	1.19E-03	7.34E+00	5.90E+02	1.31E+00	4.74E+03	4.34E+00
22	5.00E+02	5.95E+03	1.97E-03	1.04E-03	7.13E+00	4.82E+02	1.85E+00	2.85E+03	5.88E+00
23	4.27E+02	4.09E+03	1.21E-03	1.29E-03	9.80E+00	4.89E+02	1.20E+00	3.00E+03	2.10E+00
24	7.48E+02	3.72E+03	1.70E-03	1.98E-03	9.97E+00	6.94E+02	1.04E+00	3.01E+03	2.62E+00
25	7.17E+02	6.62E+03	1.29E-03	1.46E-03	8.21E+00	4.39E+02	1.74E+00	2.73E+03	1.11E+01
26	5.88E+02	4.88E+03	1.10E-03	1.82E-03	1.10E+01	6.01E+02	1.68E+00	3.07E+03	9.25E-01
27	7.24E+02	5.74E+03	1.05E-03	1.56E-03	8.04E+00	7.30E+02	1.40E+00	4.37E+03	4.63E-01
28	7.94E+02	3.67E+03	1.74E-03	1.31E-03	8.94E+00	5.97E+02	1.44E+00	4.00E+03	1.08E+01
29	5.49E+02	3.88E+03	1.12E-03	1.76E-03	7.50E+00	7.75E+02	1.78E+00	4.25E+03	5.67E-01
30	5.29E+02	6.54E+03	1.84E-03	1.12E-03	7.52E+00	6.66E+02	1.53E+00	3.74E+03	9.58E+00
31	5.35E+02	6.57E+03	1.66E-03	1.15E-03	8.13E+00	6.79E+02	1.24E+00	3.83E+03	3.47E+00
32	7.60E+02	5.70E+03	1.56E-03	1.49E-03	8.42E+00	6.90E+02	1.26E+00	2.62E+03	1.03E+01
33	7.68E+02	5.58E+03	1.65E-03	1.36E-03	8.24E+00	5.06E+02	1.86E+00	3.94E+03	2.26E+00
34	7.04E+02	4.26E+03	1.40E-03	1.72E-03	6.32E+00	5.43E+02	1.79E+00	2.79E+03	4.62E+00
35	4.40E+02	5.66E+03	1.59E-03	1.73E-03	1.19E+01	7.35E+02	1.62E+00	4.32E+03	6.35E+00
36	4.55E+02	5.84E+03	1.26E-03	1.16E-03	6.88E+00	6.25E+02	1.65E+00	3.42E+03	9.25E+00
37	7.33E+02	6.32E+03	1.69E-03	1.42E-03	7.08E+00	7.17E+02	1.89E+00	3.51E+03	5.05E+00
38	6.35E+02	6.28E+03	1.32E-03	1.21E-03	9.09E+00	5.51E+02	1.58E+00	2.53E+03	2.37E+00
39	6.53E+02	5.05E+03	1.19E-03	1.25E-03	6.78E+00	8.05E+02	1.39E+00	2.58E+03	1.32E+01
40	6.93E+02	5.61E+03	1.41E-03	1.28E-03	8.03E+00	7.66E+02	1.28E+00	4.13E+03	1.28E+01
41	4.11E+02	4.36E+03	1.38E-03	1.86E-03	9.69E+00	5.26E+02	1.21E+00	2.77E+03	6.95E+00
42	4.90E+02	6.79E+03	1.82E-03	1.78E-03	9.05E+00	8.02E+02	1.50E+00	3.21E+03	4.81E-01
43	4.74E+02	4.53E+03	1.97E-03	1.70E-03	6.43E+00	7.03E+02	1.46E+00	4.08E+03	7.65E-01
44	5.54E+02	5.01E+03	1.59E-03	1.43E-03	7.84E+00	6.72E+02	1.08E+00	3.26E+03	1.88E+00
45	6.62E+02	4.57E+03	1.35E-03	1.51E-03	1.04E+01	6.86E+02	1.45E+00	2.60E+03	4.55E-01
46	7.45E+02	3.77E+03	1.86E-03	1.88E-03	8.51E+00	4.34E+02	1.88E+00	4.31E+03	1.13E+01
47	7.52E+02	4.05E+03	1.25E-03	1.93E-03	1.10E+01	7.81E+02	1.15E+00	4.18E+03	7.29E+00
48	7.57E+02	4.69E+03	1.90E-03	1.82E-03	1.02E+01	5.32E+02	1.41E+00	3.87E+03	2.04E+00
49	5.14E+02	5.55E+03	1.67E-03	1.18E-03	6.07E+00	6.35E+02	1.32E+00	3.92E+03	6.42E-01
50	5.44E+02	6.12E+03	1.06E-03	1.91E-03	1.13E+01	5.57E+02	1.96E+00	3.30E+03	4.22E-01
51	7.66E+02	6.71E+03	1.52E-03	1.65E-03	1.02E+01	7.75E+02	1.48E+00	3.57E+03	6.18E+00
52	6.74E+02	6.74E+03	1.23E-03	1.07E-03	1.05E+01	4.68E+02	1.54E+00	4.41E+03	3.29E+00

realizations	CsInv	CoInv	Pu238Inv	Pu239Inv	Ra226Inv	SrInv	ThInv	H3Inv	U238Kd1
53	4.15E+02	5.97E+03	1.73E-03	1.94E-03	1.14E+01	4.18E+02	1.99E+00	3.74E+03	1.14E+00
54	7.19E+02	4.33E+03	1.39E-03	1.67E-03	8.78E+00	6.82E+02	1.93E+00	3.64E+03	5.95E-01
55	8.16E+02	4.41E+03	1.77E-03	1.26E-03	1.04E+01	6.53E+02	1.80E+00	2.96E+03	5.08E+00
56	8.07E+02	6.76E+03	1.26E-03	1.62E-03	1.01E+01	6.12E+02	1.42E+00	3.05E+03	1.74E+00
57	4.24E+02	6.65E+03	1.17E-03	1.70E-03	1.13E+01	4.26E+02	1.05E+00	4.44E+03	6.74E+00
58	6.43E+02	6.91E+03	1.37E-03	1.35E-03	7.57E+00	5.39E+02	1.94E+00	2.51E+03	1.77E+00
59	5.07E+02	4.59E+03	1.28E-03	1.22E-03	6.94E+00	6.08E+02	1.47E+00	4.16E+03	1.39E+01
60	6.28E+02	6.60E+03	1.50E-03	1.87E-03	1.18E+01	7.92E+02	1.24E+00	3.22E+03	4.77E+00
61	4.70E+02	4.10E+03	1.33E-03	1.46E-03	9.59E+00	6.45E+02	1.82E+00	4.54E+03	1.37E+00
62	7.86E+02	6.34E+03	1.10E-03	1.07E-03	9.86E+00	5.04E+02	1.20E+00	3.55E+03	6.00E-01
63	6.59E+02	4.67E+03	1.88E-03	1.97E-03	9.92E+00	5.84E+02	1.37E+00	3.85E+03	2.79E+00
64	5.93E+02	5.78E+03	1.81E-03	1.76E-03	1.07E+01	7.54E+02	1.34E+00	4.59E+03	1.46E+00
65	6.16E+02	4.17E+03	1.71E-03	1.55E-03	9.20E+00	4.14E+02	1.68E+00	3.89E+03	8.32E+00
66	6.84E+02	4.73E+03	1.44E-03	1.30E-03	8.71E+00	8.08E+02	1.02E+00	2.87E+03	3.74E+00
67	7.79E+02	4.48E+03	1.95E-03	1.27E-03	1.17E+01	7.62E+02	1.03E+00	4.68E+03	1.40E+00
68	7.09E+02	5.42E+03	1.65E-03	1.06E-03	1.07E+01	5.78E+02	1.07E+00	3.09E+03	5.60E+00
69	6.20E+02	4.39E+03	1.13E-03	1.90E-03	6.71E+00	5.15E+02	1.29E+00	4.06E+03	2.84E+00
70	4.87E+02	3.81E+03	1.48E-03	1.24E-03	8.31E+00	4.63E+02	1.67E+00	2.92E+03	1.54E+00
71	7.72E+02	3.59E+03	1.43E-03	1.89E-03	6.76E+00	6.36E+02	1.63E+00	3.11E+03	1.93E+00
72	4.78E+02	4.82E+03	1.15E-03	1.66E-03	8.61E+00	5.35E+02	1.54E+00	4.42E+03	4.51E+00
73	5.26E+02	4.93E+03	1.08E-03	1.41E-03	7.63E+00	5.73E+02	1.41E+00	3.36E+03	3.65E+00
74	5.65E+02	6.44E+03	1.92E-03	1.75E-03	9.12E+00	6.04E+02	1.36E+00	3.12E+03	2.65E+00
75	5.38E+02	5.99E+03	1.90E-03	1.33E-03	9.61E+00	5.69E+02	1.13E+00	3.79E+03	7.04E-01
76	6.39E+02	6.50E+03	1.84E-03	1.57E-03	1.05E+01	4.76E+02	1.98E+00	3.61E+03	3.19E+00
77	5.04E+02	5.71E+03	1.86E-03	1.37E-03	8.54E+00	6.42E+02	1.50E+00	4.78E+03	3.10E+00
78	4.20E+02	4.27E+03	1.29E-03	1.80E-03	1.19E+01	7.28E+02	1.31E+00	3.43E+03	5.39E+00
79	8.02E+02	5.47E+03	1.47E-03	1.53E-03	1.20E+01	6.74E+02	1.95E+00	4.01E+03	1.40E+01
80	6.72E+02	4.14E+03	1.79E-03	1.64E-03	6.05E+00	5.62E+02	1.29E+00	4.69E+03	2.94E+00
81	5.19E+02	4.77E+03	1.15E-03	1.65E-03	1.11E+01	4.96E+02	1.57E+00	2.89E+03	2.54E+00
82	5.24E+02	6.05E+03	1.80E-03	1.17E-03	1.17E+01	4.35E+02	1.23E+00	3.35E+03	1.20E+01
83	5.71E+02	6.20E+03	1.62E-03	1.84E-03	6.58E+00	8.12E+02	1.95E+00	4.65E+03	4.06E+00
84	5.12E+02	3.93E+03	1.00E-03	1.61E-03	6.99E+00	6.16E+02	1.73E+00	4.58E+03	9.81E+00
85	6.44E+02	6.94E+03	1.52E-03	1.61E-03	7.17E+00	7.09E+02	1.63E+00	3.80E+03	1.67E+00
86	7.98E+02	5.19E+03	1.01E-03	1.03E-03	8.88E+00	7.11E+02	1.59E+00	3.67E+03	5.39E-01
87	4.50E+02	6.14E+03	1.98E-03	1.47E-03	8.68E+00	7.50E+02	1.92E+00	4.21E+03	8.96E+00
88	6.96E+02	3.99E+03	1.21E-03	1.02E-03	1.16E+01	4.29E+02	1.45E+00	3.17E+03	7.37E-01
89	4.66E+02	4.22E+03	1.23E-03	1.22E-03	9.48E+00	7.25E+02	1.83E+00	3.27E+03	4.09E+00
90	7.41E+02	3.96E+03	1.73E-03	1.59E-03	7.79E+00	5.18E+02	1.90E+00	4.70E+03	1.60E+00
91	6.05E+02	3.85E+03	1.63E-03	1.99E-03	9.35E+00	8.16E+02	1.73E+00	2.70E+03	1.30E+00
92	4.46E+02	4.94E+03	1.58E-03	1.40E-03	7.70E+00	7.41E+02	1.79E+00	3.40E+03	9.69E-01
93	4.38E+02	5.24E+03	1.95E-03	1.51E-03	9.36E+00	5.75E+02	1.34E+00	2.67E+03	1.51E+00
94	5.67E+02	5.50E+03	1.35E-03	1.45E-03	1.08E+01	7.43E+02	1.15E+00	3.49E+03	4.07E-01
95	6.66E+02	5.14E+03	1.32E-03	1.00E-03	1.11E+01	6.57E+02	1.55E+00	3.33E+03	1.08E+00
96	5.85E+02	6.44E+03	1.93E-03	1.96E-03	1.07E+01	4.19E+02	1.51E+00	3.46E+03	4.38E-01
97	5.78E+02	5.00E+03	1.43E-03	1.79E-03	1.15E+01	4.45E+02	1.18E+00	2.65E+03	5.84E+00
98	5.82E+02	6.38E+03	1.08E-03	1.08E-03	1.09E+01	6.28E+02	1.72E+00	4.76E+03	6.79E-01
99	7.88E+02	5.38E+03	1.92E-03	1.36E-03	7.41E+00	4.98E+02	1.09E+00	4.04E+03	2.13E+00
100	6.79E+02	5.89E+03	1.41E-03	1.69E-03	1.03E+01	7.00E+02	1.99E+00	4.29E+03	8.27E-01
Max Value:	**8.17E+02**	**6.97E+03**	**1.99E-03**	**1.99E-03**	**1.20E+01**	**8.16E+02**	**1.99E+00**	**4.78E+03**	**1.46E+01**
Median Value:	**6.14E+02**	**5.26E+03**	**1.50E-03**	**1.50E-03**	**9.01E+00**	**6.14E+02**	**1.50E+00**	**3.60E+03**	**2.45E+00**

realizations	U238Kd2	U234Kd1	U234Kd2	U234Kd3	U234Kd4	Ra226Kd1	Ra226Kd	Ra226Kd2	Ra226Kd3
1	12.072	12.072	12.072	12.072	12.072	8.76E+03	1.44E+04	8764.9	8764.9
2	0.99761	0.99761	0.99761	0.99761	0.99761	2.28E+03	7.62E+03	2276.9	2276.9
3	0.5031	0.5031	0.5031	0.5031	0.5031	3.05E+03	2.41E+03	3048.7	3048.7
4	0.88131	0.88131	0.88131	0.88131	0.88131	2.98E+04	5.57E+02	29772	29772
5	7.1126	7.1126	7.1126	7.1126	7.1126	1.98E+03	3.50E+04	1981.2	1981.2
6	1.2743	1.2743	1.2743	1.2743	1.2743	2.38E+04	9.87E+03	23816	23816
7	7.9335	7.9335	7.9335	7.9335	7.9335	2.45E+03	1.15E+04	2452	2452
8	1.1965	1.1965	1.1965	1.1965	1.1965	8.20E+02	5.58E+03	819.67	819.67
9	3.795	3.795	3.795	3.795	3.795	2.94E+03	1.22E+04	2941.9	2941.9
10	0.52267	0.52267	0.52267	0.52267	0.52267	6.78E+02	2.89E+04	677.7	677.7
11	0.62772	0.62772	0.62772	0.62772	0.62772	1.55E+04	2.53E+03	15485	15485
12	14.576	14.576	14.576	14.576	14.576	1.27E+04	3.49E+03	12651	12651
13	1.1698	1.1698	1.1698	1.1698	1.1698	9.98E+02	3.98E+03	998.11	998.11
14	0.89064	0.89064	0.89064	0.89064	0.89064	2.18E+04	3.07E+03	21760	21760
15	1.0293	1.0293	1.0293	1.0293	1.0293	3.21E+03	1.78E+04	3208.2	3208.2
16	7.6592	7.6592	7.6592	7.6592	7.6592	2.84E+04	2.25E+03	28424	28424
17	0.7906	0.7906	0.7906	0.7906	0.7906	1.85E+03	4.76E+03	1849.1	1849.1
18	2.3476	2.3476	2.3476	2.3476	2.3476	3.06E+04	1.12E+03	30614	30614
19	8.599	8.599	8.599	8.599	8.599	1.22E+03	1.62E+04	1217.6	1217.6
20	0.82027	0.82027	0.82027	0.82027	0.82027	1.36E+04	3.38E+04	13625	13625
21	4.3369	4.3369	4.3369	4.3369	4.3369	2.19E+03	5.87E+03	2194.5	2194.5
22	5.8778	5.8778	5.8778	5.8778	5.8778	1.52E+04	2.97E+04	15172	15172
23	2.1022	2.1022	2.1022	2.1022	2.1022	3.35E+03	8.92E+02	3345.3	3345.3
24	2.6161	2.6161	2.6161	2.6161	2.6161	1.62E+04	6.49E+02	16175	16175
25	11.097	11.097	11.097	11.097	11.097	5.17E+02	8.49E+02	517.33	517.33
26	0.92542	0.92542	0.92542	0.92542	0.92542	3.79E+03	1.37E+04	3785.7	3785.7
27	0.46263	0.46263	0.46263	0.46263	0.46263	8.63E+02	2.02E+03	862.56	862.56
28	10.819	10.819	10.819	10.819	10.819	3.27E+04	5.79E+02	32730	32730
29	0.5672	0.5672	0.5672	0.5672	0.5672	8.85E+03	9.29E+03	8850.3	8850.3
30	9.5774	9.5774	9.5774	9.5774	9.5774	2.04E+04	5.00E+03	20446	20446
31	3.4662	3.4662	3.4662	3.4662	3.4662	8.05E+03	1.05E+04	8053.3	8053.3
32	10.271	10.271	10.271	10.271	10.271	1.97E+04	1.91E+03	19725	19725
33	2.2597	2.2597	2.2597	2.2597	2.2597	2.72E+04	2.22E+04	27220	27220
34	4.6205	4.6205	4.6205	4.6205	4.6205	2.07E+04	4.11E+03	20678	20678
35	6.3454	6.3454	6.3454	6.3454	6.3454	3.92E+03	3.85E+03	3920.9	3920.9
36	9.2511	9.2511	9.2511	9.2511	9.2511	1.17E+03	9.79E+02	1166.7	1166.7
37	5.0488	5.0488	5.0488	5.0488	5.0488	6.49E+03	4.29E+03	6485.4	6485.4
38	2.3663	2.3663	2.3663	2.3663	2.3663	1.76E+04	1.96E+04	17565	17565
39	13.151	13.151	13.151	13.151	13.151	7.14E+03	1.49E+03	7136.1	7136.1
40	12.788	12.788	12.788	12.788	12.788	6.01E+03	2.10E+04	6007.9	6007.9
41	6.9489	6.9489	6.9489	6.9489	6.9489	4.45E+03	6.05E+02	4453.6	4453.6
42	0.48089	0.48089	0.48089	0.48089	0.48089	1.11E+03	6.82E+03	1114.7	1114.7
43	0.76487	0.76487	0.76487	0.76487	0.76487	5.11E+03	8.67E+03	5105.1	5105.1
44	1.8831	1.8831	1.8831	1.8831	1.8831	4.23E+03	3.28E+04	4227.3	4227.3
45	0.45524	0.45524	0.45524	0.45524	0.45524	3.70E+03	4.52E+03	3699	3699
46	11.321	11.321	11.321	11.321	11.321	1.77E+03	3.32E+03	1772.2	1772.2
47	7.2904	7.2904	7.2904	7.2904	7.2904	7.01E+03	2.39E+04	7006.5	7006.5
48	2.038	2.038	2.038	2.038	2.038	3.39E+04	2.68E+04	33920	33920
49	0.64213	0.64213	0.64213	0.64213	0.64213	4.36E+03	1.01E+03	4364.9	4364.9
50	0.42198	0.42198	0.42198	0.42198	0.42198	1.30E+04	5.47E+03	13043	13043
51	6.1846	6.1846	6.1846	6.1846	6.1846	5.61E+03	8.24E+02	5612.5	5612.5
52	3.2908	3.2908	3.2908	3.2908	3.2908	9.92E+03	8.32E+03	9922.1	9922.1

realizations	U238Kd2	U234Kd1	U234Kd2	U234Kd3	U234Kd4	Ra226Kd1	Ra226Kd	Ra226Kd2	Ra226Kd3
53	1.135	1.135	1.135	1.135	1.135	1.95E+03	6.24E+02	1953.7	1953.7
54	0.59472	0.59472	0.59472	0.59472	0.59472	1.46E+04	7.79E+02	14604	14604
55	5.0819	5.0819	5.0819	5.0819	5.0819	1.13E+04	1.66E+03	11253	11253
56	1.7359	1.7359	1.7359	1.7359	1.7359	5.78E+02	1.12E+04	577.88	577.88
57	6.736	6.736	6.736	6.736	6.736	1.19E+04	7.82E+03	11884	11884
58	1.7744	1.7744	1.7744	1.7744	1.7744	2.43E+03	6.10E+03	2432.6	2432.6
59	13.863	13.863	13.863	13.863	13.863	1.57E+03	1.24E+04	1570.7	1570.7
60	4.7744	4.7744	4.7744	4.7744	4.7744	1.18E+04	2.13E+03	11800	11800
61	1.366	1.366	1.366	1.366	1.366	2.63E+04	2.52E+04	26327	26327
62	0.60014	0.60014	0.60014	0.60014	0.60014	6.19E+02	1.88E+03	618.83	618.83
63	2.787	2.787	2.787	2.787	2.787	8.36E+03	1.25E+03	8362.3	8362.3
64	1.462	1.462	1.462	1.462	1.462	1.27E+03	5.23E+02	1271.9	1271.9
65	8.3186	8.3186	8.3186	8.3186	8.3186	1.05E+04	2.76E+03	10516	10516
66	3.735	3.735	3.735	3.735	3.735	1.45E+03	7.22E+02	1452.1	1452.1
67	1.3999	1.3999	1.3999	1.3999	1.3999	9.23E+03	2.03E+04	9228.3	9228.3
68	5.5968	5.5968	5.5968	5.5968	5.5968	5.34E+02	1.54E+03	533.93	533.93
69	2.8441	2.8441	2.8441	2.8441	2.8441	1.36E+03	6.92E+02	1362	1362
70	1.5415	1.5415	1.5415	1.5415	1.5415	7.57E+03	7.51E+02	7574.8	7574.8
71	1.9311	1.9311	1.9311	1.9311	1.9311	9.06E+02	1.17E+03	906.02	906.02
72	4.5144	4.5144	4.5144	4.5144	4.5144	7.09E+02	7.28E+03	709.48	709.48
73	3.6465	3.6465	3.6465	3.6465	3.6465	1.05E+03	2.27E+04	1045.1	1045.1
74	2.6506	2.6506	2.6506	2.6506	2.6506	1.50E+03	3.23E+03	1503.3	1503.3
75	0.70385	0.70385	0.70385	0.70385	0.70385	1.29E+03	1.20E+03	1287.6	1287.6
76	3.1877	3.1877	3.1877	3.1877	3.1877	1.67E+04	1.29E+03	16705	16705
77	3.1046	3.1046	3.1046	3.1046	3.1046	2.11E+03	5.25E+03	2111.4	2111.4
78	5.3938	5.3938	5.3938	5.3938	5.3938	1.01E+04	3.07E+04	10146	10146
79	14.045	14.045	14.045	14.045	14.045	1.68E+03	2.16E+03	1679.9	1679.9
80	2.9442	2.9442	2.9442	2.9442	2.9442	2.86E+03	1.40E+03	2862.8	2862.8
81	2.536	2.536	2.536	2.536	2.536	2.30E+04	9.12E+02	23010	23010
82	11.959	11.959	11.959	11.959	11.959	9.87E+02	2.55E+03	986.97	986.97
83	4.0562	4.0562	4.0562	4.0562	4.0562	7.97E+02	1.39E+03	796.52	796.52
84	9.8143	9.8143	9.8143	9.8143	9.8143	2.72E+03	1.49E+04	2715.9	2715.9
85	1.6691	1.6691	1.6691	1.6691	1.6691	3.52E+04	3.71E+03	35159	35159
86	0.53924	0.53924	0.53924	0.53924	0.53924	1.85E+04	2.91E+03	18463	18463
87	8.9629	8.9629	8.9629	8.9629	8.9629	5.55E+02	1.79E+03	555.38	555.38
88	0.73714	0.73714	0.73714	0.73714	0.73714	3.49E+03	5.12E+02	3488.8	3488.8
89	4.0899	4.0899	4.0899	4.0899	4.0899	7.43E+02	2.88E+03	743.2	743.2
90	1.5985	1.5985	1.5985	1.5985	1.5985	6.21E+02	2.61E+04	621.42	621.42
91	1.3016	1.3016	1.3016	1.3016	1.3016	6.51E+02	1.88E+04	650.88	650.88
92	0.96878	0.96878	0.96878	0.96878	0.96878	9.21E+02	6.70E+03	921.02	921.02
93	1.5091	1.5091	1.5091	1.5091	1.5091	5.82E+03	1.01E+04	5818	5818
94	0.40708	0.40708	0.40708	0.40708	0.40708	2.62E+03	9.11E+03	2616	2616
95	1.0763	1.0763	1.0763	1.0763	1.0763	5.47E+03	6.39E+03	5472.7	5472.7
96	0.43753	0.43753	0.43753	0.43753	0.43753	4.85E+03	1.30E+04	4853.7	4853.7
97	5.8361	5.8361	5.8361	5.8361	5.8361	4.78E+03	1.55E+04	4777.9	4777.9
98	0.67927	0.67927	0.67927	0.67927	0.67927	6.61E+03	1.68E+04	6613.3	6613.3
99	2.1281	2.1281	2.1281	2.1281	2.1281	1.60E+03	1.07E+03	1601.5	1601.5
100	0.82735	0.82735	0.82735	0.82735	0.82735	2.51E+04	1.67E+03	25134	25134
Max Value:	**1.46E+01**	**1.46E+01**	**1.46E+01**	**1.46E+01**	**1.46E+01**	**3.52E+04**	**3.50E+04**	**3.52E+04**	**3.52E+04**
Median Value:	**2.45E+00**	**2.45E+00**	**2.45E+00**	**2.45E+00**	**2.45E+00**	**4.30E+03**	**4.20E+03**	**4.30E+03**	**4.30E+03**

realizations	AmKd1	AmKd2	CsKd1	CsKd2	CoKd1	CoKd2	Pu238Kd1	Pu238Kd2	Pu239Kd1
1	4.13E+03	4131.2	1.51E+02	151.27	7.36E+01	73.597	9.62E+01	96.216	1.05E+02
2	6.60E+03	6602.3	6.73E+02	672.52	1.16E+02	116	4.42E+02	441.92	1.72E+02
3	5.06E+03	5063.3	4.30E+01	43.026	9.59E+01	95.875	1.51E+02	150.77	1.69E+02
4	6.64E+03	6642.2	8.35E+02	834.55	1.52E+02	151.55	9.26E+01	92.591	2.12E+02
5	4.34E+03	4335.8	2.16E+03	2159.3	3.76E+02	376.07	1.69E+02	168.54	2.52E+02
6	8.39E+03	8393.8	9.23E+01	92.273	2.58E+02	258.1	4.65E+02	465.14	1.38E+02
7	3.54E+03	3543.9	3.26E+01	32.638	2.16E+02	216.38	2.08E+02	208.3	1.26E+02
8	2.80E+03	2800.8	2.27E+03	2266.1	1.94E+02	193.93	1.36E+02	136.23	1.35E+02
9	2.84E+03	2842.2	3.16E+02	315.67	1.00E+03	1003.4	1.40E+02	139.87	2.28E+02
10	7.87E+03	7869.7	1.89E+02	189.22	6.63E+01	66.279	4.32E+02	431.76	8.60E+01
11	3.17E+03	3170.2	3.01E+03	3006.9	6.82E+01	68.178	8.48E+01	84.79	2.65E+02
12	5.76E+03	5764.1	1.03E+02	102.94	5.60E+02	559.94	1.51E+02	151.18	2.48E+02
13	2.10E+03	2103.4	1.41E+02	140.6	2.51E+02	250.77	9.70E+01	96.993	2.74E+02
14	2.53E+03	2526	6.59E+01	65.877	1.04E+03	1042.7	4.83E+02	483.05	3.76E+02
15	3.31E+03	3306	2.36E+02	236.02	1.60E+02	159.56	4.09E+02	408.55	1.10E+02
16	3.24E+03	3242.7	7.67E+01	76.722	5.34E+02	534.17	3.43E+02	343.08	4.31E+02
17	5.13E+03	5126.1	5.82E+01	58.179	8.65E+02	864.53	1.41E+02	141.16	4.07E+02
18	2.38E+03	2376.8	5.04E+01	50.448	8.78E+02	877.73	1.14E+02	113.83	8.03E+01
19	7.65E+03	7653.6	3.97E+01	39.666	2.34E+02	233.9	8.77E+01	87.686	2.24E+02
20	4.69E+03	4685	9.06E+01	90.595	3.49E+02	348.58	4.30E+02	430.21	3.45E+02
21	2.07E+03	2068.8	1.59E+03	1591.1	1.35E+02	134.65	1.70E+02	169.74	8.52E+01
22	5.61E+03	5609.4	3.83E+02	382.96	8.47E+01	84.698	8.88E+01	88.826	4.44E+02
23	6.96E+03	6963.8	8.40E+01	84.026	1.20E+03	1199.8	1.33E+02	132.82	2.92E+02
24	3.88E+03	3879.2	5.54E+02	554.33	1.03E+02	102.77	4.02E+02	402.04	2.20E+02
25	8.74E+03	8743.6	6.76E+01	67.642	3.12E+02	312.11	5.04E+02	503.93	4.14E+02
26	1.98E+03	1979.2	5.72E+02	572.05	8.96E+01	89.649	4.58E+02	457.91	2.88E+02
27	6.32E+03	6319.5	1.62E+02	161.51	1.66E+02	165.74	8.06E+01	80.648	1.33E+02
28	2.86E+03	2862.5	1.67E+03	1665.3	2.80E+02	279.98	3.06E+02	306.21	9.01E+01
29	5.22E+03	5221.4	1.46E+03	1463.5	1.62E+02	161.68	2.03E+02	203.03	2.42E+02
30	6.13E+03	6132.1	1.10E+03	1098.3	8.36E+01	83.617	3.32E+02	332.03	1.03E+02
31	8.99E+03	8988.8	5.31E+01	53.116	3.36E+02	336.42	2.42E+02	241.71	1.49E+02
32	7.63E+03	7632	2.41E+02	240.92	5.00E+02	500.18	1.79E+02	179.36	4.59E+02
33	2.34E+03	2341.9	2.85E+03	2854.9	5.07E+02	506.67	2.38E+02	237.51	4.68E+02
34	5.99E+03	5991.5	4.60E+02	460.28	4.14E+02	413.5	1.18E+02	118.1	2.98E+02
35	7.19E+03	7193.2	3.78E+03	3778.7	3.17E+02	317.33	1.58E+02	157.78	2.34E+02
36	4.57E+03	4573	4.25E+01	42.517	7.83E+01	78.287	1.88E+02	187.78	3.54E+02
37	7.33E+03	7332.6	1.71E+03	1713.9	1.27E+03	1268.8	2.29E+02	228.56	1.47E+02
38	5.35E+03	5345.6	9.21E+02	920.55	7.60E+01	75.958	1.46E+02	146.26	2.59E+02
39	2.28E+03	2277	9.80E+01	97.973	6.04E+02	604.19	1.20E+02	119.6	1.09E+02
40	9.19E+03	9185.3	5.97E+02	596.73	4.34E+02	434.07	2.84E+02	284.41	8.25E+01
41	2.49E+03	2486.5	2.36E+03	2358.2	1.42E+02	141.95	3.82E+02	381.98	1.18E+02
42	2.27E+03	2268.5	5.68E+01	56.793	8.19E+02	818.77	4.22E+02	421.61	2.04E+02
43	3.82E+03	3821.7	3.32E+01	33.217	3.96E+02	396.16	3.50E+02	349.93	3.51E+02
44	4.34E+03	4343.7	4.34E+03	4338.9	4.61E+02	460.95	4.94E+02	494.17	1.83E+02
45	3.09E+03	3088.7	4.66E+01	46.648	6.47E+02	646.69	3.23E+02	323.49	9.68E+01
46	3.39E+03	3386.4	1.02E+03	1016	1.13E+03	1126.6	2.72E+02	272.36	1.02E+02
47	6.82E+03	6820.3	2.65E+02	265.21	2.29E+02	228.61	2.48E+02	247.53	2.12E+02
48	5.69E+03	5691.8	1.31E+02	131.42	3.90E+02	390.41	1.01E+02	100.54	1.55E+02
49	4.82E+03	4821.4	1.80E+03	1802.3	1.21E+02	120.96	1.08E+02	107.94	1.06E+02
50	8.16E+03	8159.4	3.15E+01	31.452	2.89E+02	288.79	2.59E+02	258.5	9.87E+01
51	4.94E+03	4939.5	1.10E+02	109.99	1.25E+02	125.17	3.66E+02	365.76	1.96E+02
52	4.14E+03	4140.5	3.55E+01	35.502	3.61E+02	360.83	1.45E+02	144.91	3.04E+02

realizations	AmKd1	AmKd2	CsKd1	CsKd2	CoKd1	CoKd2	Pu238Kd1	Pu238Kd2	Pu239Kd1
53	3.97E+03	3971.6	7.22E+02	722.04	5.89E+02	589.32	1.06E+02	105.66	3.65E+02
54	3.03E+03	3027.7	6.22E+02	622.48	5.83E+02	583.04	1.12E+02	111.68	1.60E+02
55	3.45E+03	3451.1	6.22E+01	62.157	6.11E+01	61.1	1.14E+02	114.35	1.58E+02
56	4.04E+03	4037.4	1.27E+02	126.92	7.04E+02	704.06	1.62E+02	162.13	8.38E+01
57	2.65E+03	2651	2.51E+03	2512.1	8.10E+01	81.003	2.89E+02	288.85	3.91E+02
58	6.93E+03	6931.5	4.13E+03	4134.6	9.13E+02	912.8	1.08E+02	107.76	9.98E+01
59	6.30E+03	6299.4	4.87E+02	487.43	1.28E+02	127.5	3.86E+02	386.12	9.07E+01
60	8.49E+03	8485.7	3.34E+03	3342.4	1.23E+03	1230.8	2.22E+02	222.34	1.31E+02
61	9.41E+03	9410.4	1.99E+02	198.83	4.44E+02	444.09	2.80E+02	279.83	3.80E+02
62	3.59E+03	3588.1	1.13E+03	1130.3	7.47E+02	746.81	3.08E+02	307.91	4.00E+02
63	4.24E+03	4244	3.60E+03	3603.9	2.04E+02	203.74	1.31E+02	131.4	1.22E+02
64	7.98E+03	7978.3	1.79E+02	179.41	4.81E+02	481.42	1.99E+02	199.13	1.92E+02
65	2.01E+03	2013.1	8.20E+01	82.048	1.33E+02	133.11	2.14E+02	214.45	1.53E+02
66	2.05E+03	2050.8	1.14E+02	114.14	6.23E+01	62.295	2.36E+02	235.96	1.79E+02
67	2.96E+03	2959.1	1.70E+02	169.86	2.22E+02	222.06	1.93E+02	192.67	1.24E+02
68	1.94E+03	1938.8	8.96E+02	895.7	1.05E+02	104.59	1.65E+02	165.04	4.25E+02
69	4.54E+03	4542.9	3.67E+01	36.69	6.71E+02	670.63	2.92E+02	292.24	4.51E+02
70	3.50E+03	3502.1	3.41E+03	3413.5	9.79E+02	979.11	1.94E+02	193.72	1.67E+02
71	9.11E+03	9108.9	1.98E+03	1975.1	8.87E+01	88.736	3.97E+02	396.84	1.65E+02
72	2.22E+03	2215.3	1.40E+03	1400.6	6.28E+02	628.01	1.27E+02	126.89	1.88E+02
73	3.28E+03	3284.2	4.26E+02	426.48	9.39E+02	939.05	1.84E+02	183.74	8.89E+01
74	6.07E+03	6070.7	3.16E+03	3162.6	7.69E+02	769.06	1.74E+02	174.14	3.40E+02
75	5.37E+03	5369.2	2.17E+02	216.92	6.83E+02	682.94	9.32E+01	93.153	2.18E+02
76	2.59E+03	2590.7	4.91E+01	49.061	7.17E+01	71.717	9.93E+01	99.296	1.20E+02
77	5.46E+03	5460.7	1.23E+03	1227.3	6.42E+01	64.245	5.18E+02	518.25	9.46E+01
78	3.75E+03	3749.1	2.76E+02	275.71	1.78E+02	177.66	8.38E+01	83.803	3.18E+02
79	5.90E+03	5904	4.03E+02	403.08	1.92E+02	191.6	3.62E+02	361.6	2.84E+02
80	8.66E+03	8655.5	4.45E+02	444.67	2.73E+02	273.44	8.30E+01	83.035	1.29E+02
81	4.97E+03	4970.9	3.31E+02	331.02	3.34E+02	334.08	2.27E+02	227.16	2.06E+02
82	3.79E+03	3788.2	7.67E+02	766.9	8.37E+02	837.21	2.54E+02	253.8	1.15E+02
83	2.15E+03	2150.1	2.08E+02	208.21	1.00E+02	100.14	2.66E+02	265.92	2.81E+02
84	2.42E+03	2418.9	2.56E+02	255.94	7.87E+02	787.21	3.76E+02	375.67	1.45E+02
85	2.69E+03	2687.2	2.71E+03	2709.5	1.84E+02	184.32	4.79E+02	479.38	3.29E+02
86	2.45E+03	2450.4	2.61E+03	2607.8	1.17E+03	1167.6	3.26E+02	325.87	3.33E+02
87	6.43E+03	6431.3	7.16E+01	71.578	4.18E+02	418	1.78E+02	177.94	3.22E+02
88	7.07E+03	7068.6	3.49E+02	348.7	3.00E+02	300.46	4.52E+02	451.85	2.00E+02
89	3.68E+03	3678.2	1.88E+03	1876.2	1.49E+02	148.52	2.99E+02	299.44	2.71E+02
90	2.17E+03	2169.6	1.43E+02	143.21	1.07E+03	1068.1	9.03E+01	90.26	1.40E+02
91	2.56E+03	2555.7	1.25E+03	1251.1	1.10E+02	110.25	1.30E+02	129.84	4.20E+02
92	2.72E+03	2723.7	1.06E+03	1059.1	1.11E+02	111.18	2.07E+02	206.7	1.87E+02
93	2.93E+03	2925.7	1.22E+02	121.87	1.09E+03	1089.6	3.16E+02	315.76	1.14E+02
94	7.46E+03	7456.2	4.60E+03	4598.1	2.43E+02	243.28	1.54E+02	154.2	1.77E+02
95	4.43E+03	4427.1	7.08E+02	708.13	2.10E+02	209.54	1.23E+02	123.04	2.39E+02
96	4.74E+03	4737.2	5.06E+02	506.1	1.74E+02	173.88	3.56E+02	355.86	9.27E+01
97	3.13E+03	3129.8	8.01E+02	800.84	5.19E+02	519.03	1.03E+02	103.33	3.10E+02
98	8.28E+03	8283.3	3.69E+02	368.59	9.28E+01	92.844	2.20E+02	219.72	3.72E+02
99	9.46E+03	9461.6	1.34E+03	1341.4	1.42E+02	142.42	1.23E+02	123.46	2.55E+02
100	1.91E+03	1913.3	2.95E+02	294.96	2.67E+02	267.16	2.61E+02	261.28	1.43E+02
Max Value:	**9.46E+03**	**9.46E+03**	**4.60E+03**	**4.60E+03**	**1.27E+03**	**1.27E+03**	**5.18E+02**	**5.18E+02**	**4.68E+02**
Median Value:	**4.29E+03**	**4.29E+03**	**3.76E+02**	**3.76E+02**	**2.77E+02**	**2.77E+02**	**2.05E+02**	**2.05E+02**	**1.94E+02**

realizations	Pu239Kd2	SrKd1	SrKd2	ThKd1	ThKd2	Darcy1	Darcy2	porVad	KsatVad
1	105.29	1.71E+01	17.111	3.39E+01	33.945	1.88E-01	0.18814	0.34435	4.86E+01
2	172.08	1.73E+01	17.281	4.36E+02	435.96	4.82E-02	0.048214	0.37263	7.74E+01
3	169.37	1.86E+01	18.552	1.99E+02	199.18	1.75E-01	0.17469	0.40459	2.02E+00
4	211.68	1.61E+01	16.059	8.15E+01	81.483	1.22E-01	0.1222	0.34572	4.71E+00
5	252.44	1.81E+01	18.104	7.36E+02	736.18	1.28E-01	0.12781	0.38719	2.86E+00
6	138.09	1.91E+01	19.071	1.40E+03	1403.8	7.57E-02	0.075702	0.36523	1.03E+01
7	125.85	1.64E+01	16.442	1.02E+03	1021.8	6.50E-02	0.065035	0.32407	3.71E+01
8	135.04	1.82E+01	18.21	2.80E+02	279.6	1.12E-01	0.11221	0.35793	3.59E+01
9	227.64	1.59E+01	15.94	7.94E+02	793.92	1.32E-01	0.13152	0.39137	5.04E+00
10	85.99	1.72E+01	17.15	3.91E+02	390.8	1.38E-01	0.13778	0.33829	6.28E+00
11	265.46	1.63E+01	16.301	8.61E+02	861.33	1.27E-01	0.12659	0.382	9.81E+01
12	248.25	1.55E+01	15.537	6.57E+01	65.663	8.26E-02	0.082645	0.42241	1.46E+01
13	274.17	1.67E+01	16.673	3.38E+02	338.49	1.54E-01	0.15445	0.30456	1.23E+01
14	375.92	1.97E+01	19.737	5.79E+02	579.49	1.52E-01	0.15154	0.35494	9.29E+00
15	110.08	1.83E+01	18.339	1.17E+02	116.85	8.78E-02	0.087805	0.34906	1.06E+01
16	431.44	1.56E+01	15.594	1.26E+02	126.48	6.27E-02	0.062733	0.36157	1.40E+00
17	406.95	1.69E+01	16.931	2.51E+01	25.085	9.11E-02	0.09109	0.42922	8.43E+01
18	80.273	1.52E+01	15.186	6.94E+02	694.04	1.50E-01	0.14988	0.31797	1.99E+01
19	224.32	1.91E+01	19.11	2.06E+02	206.39	1.04E-01	0.10441	0.42961	4.02E+01
20	344.61	1.51E+01	15.072	2.24E+01	22.408	1.62E-01	0.16246	0.35078	6.57E+01
21	85.153	1.54E+01	15.443	1.71E+03	1705.8	5.45E-02	0.054498	0.38506	3.00E+01
22	444.27	1.86E+01	18.614	9.02E+01	90.169	1.36E-01	0.13607	0.30939	9.27E+01
23	292.44	1.58E+01	15.84	6.72E+02	672.14	8.03E-02	0.080255	0.41256	2.07E+00
24	220.49	1.66E+01	16.619	1.35E+03	1347	9.78E-02	0.097843	0.33129	1.78E+00
25	414.26	1.96E+01	19.626	3.54E+02	354.27	1.77E-01	0.17669	0.39044	6.22E+00
26	288.35	1.96E+01	19.597	1.60E+02	160.48	5.26E-02	0.052633	0.42508	4.38E+00
27	132.54	1.90E+01	18.987	7.91E+01	79.08	8.10E-02	0.081039	0.37971	1.66E+00
28	90.081	1.93E+01	19.258	2.02E+01	20.231	1.80E-01	0.17999	0.37176	3.91E+00
29	241.71	1.53E+01	15.272	8.53E+01	85.284	1.33E-01	0.13337	0.30669	5.24E+00
30	103.47	1.61E+01	16.133	3.23E+01	32.278	1.74E-01	0.17438	0.39444	2.29E+01
31	148.72	1.57E+01	15.669	8.08E+02	808.36	1.45E-01	0.14533	0.42462	1.01E+00
32	458.93	1.61E+01	16.113	2.55E+01	25.519	1.49E-01	0.14886	0.36781	1.68E+01
33	467.72	1.66E+01	16.552	1.18E+03	1178.9	1.02E-01	0.10204	0.43621	7.18E-01
34	297.77	1.95E+01	19.536	8.74E+02	874.4	4.67E-02	0.046689	0.43802	7.60E+00
35	234.11	1.79E+01	17.936	2.21E+02	220.56	9.25E-02	0.092458	0.42707	1.27E+01
36	354.45	1.73E+01	17.343	3.57E+01	35.749	1.85E-01	0.18543	0.33383	1.65E+00
37	146.69	1.69E+01	16.856	9.19E+02	919.05	1.40E-01	0.13984	0.41013	5.78E+01
38	258.86	1.94E+01	19.394	5.08E+02	507.86	6.71E-02	0.067052	0.33948	2.39E+01
39	108.79	1.76E+01	17.608	4.32E+01	43.224	5.01E-02	0.050061	0.3826	3.89E+01
40	82.485	1.79E+01	17.876	6.84E+01	68.368	8.66E-02	0.086595	0.4075	1.24E+02
41	117.74	1.94E+01	19.448	4.70E+02	470.18	1.71E-01	0.17069	0.32764	5.83E+00
42	204.46	1.99E+01	19.911	5.02E+02	502.03	1.73E-01	0.17263	0.44366	4.59E+01
43	351.08	1.64E+01	16.365	2.31E+01	23.082	1.58E-01	0.15765	0.37762	1.10E+02
44	182.73	1.51E+01	15.11	5.45E+02	544.64	1.60E-01	0.16012	0.44206	1.41E+01
45	96.772	1.82E+01	18.15	1.28E+03	1283	1.16E-01	0.1155	0.34947	4.36E+01
46	101.98	1.90E+01	18.991	1.78E+03	1775.8	1.91E-01	0.19083	0.35318	2.60E+01
47	212.26	1.68E+01	16.802	9.90E+01	99.012	1.53E-01	0.15335	0.38401	1.86E+01
48	154.53	1.99E+01	19.855	9.58E+02	957.82	9.61E-02	0.096124	0.39326	8.83E+00
49	106.4	1.89E+01	18.926	2.11E+02	210.98	1.20E-01	0.1196	0.36048	1.20E+01
50	98.728	1.72E+01	17.191	5.11E+01	51.119	1.14E-01	0.11376	0.41802	3.19E+00
51	195.66	2.00E+01	19.971	3.97E+01	39.711	6.11E-02	0.061097	0.39964	9.82E+00
52	304.01	1.77E+01	17.705	3.99E+02	399.13	4.52E-02	0.045227	0.39557	7.92E-01

realizations	Pu239Kd2	SrKd1	SrKd2	ThKd1	ThKd2	Darcy1	Darcy2	porVad	KsatVad
53	365.1	1.68E+01	16.762	2.77E+01	27.661	9.81E-02	0.098126	0.37612	6.98E+00
54	160.04	1.97E+01	19.68	7.51E+01	75.106	1.00E-01	0.10001	0.37454	1.12E+00
55	158.17	1.57E+01	15.657	1.91E+03	1908.5	4.12E-02	0.041177	0.31487	2.15E+01
56	83.788	1.59E+01	15.865	4.43E+01	44.308	1.61E-01	0.16137	0.3352	8.10E+00
57	390.59	1.93E+01	19.284	1.06E+02	105.5	3.94E-02	0.039449	0.43368	2.26E+01
58	99.822	1.57E+01	15.714	5.60E+01	55.999	1.24E-01	0.124	0.41441	4.19E+00
59	90.682	1.72E+01	17.228	4.41E+02	440.95	1.35E-01	0.13522	0.36255	1.21E+00
60	130.63	1.71E+01	17.073	2.34E+02	233.81	7.25E-02	0.072519	0.30319	5.65E+00
61	380.32	1.70E+01	17.019	1.54E+03	1536.7	1.85E-01	0.18525	0.33316	4.66E+00
62	399.54	1.54E+01	15.411	1.45E+03	1450.8	1.82E-01	0.1815	0.32493	3.41E+00
63	122.04	1.88E+01	18.775	1.33E+02	132.56	1.92E-01	0.19199	0.40519	7.66E+00
64	192.46	1.92E+01	19.208	1.60E+03	1601.9	1.82E-01	0.18237	0.39831	6.88E+01
65	152.68	1.80E+01	18.004	4.85E+01	48.462	9.40E-02	0.093991	0.36682	1.57E+01
66	179.04	1.78E+01	17.763	1.87E+02	187.34	1.18E-01	0.1181	0.43311	1.13E+01
67	124.25	1.54E+01	15.362	6.14E+01	61.353	1.10E-01	0.10965	0.34313	4.98E-01
68	425.38	1.65E+01	16.475	7.13E+01	71.277	1.41E-01	0.14099	0.43664	5.54E-01
69	450.6	1.58E+01	15.795	2.96E+01	29.591	1.20E-01	0.12044	0.31647	1.39E+02
70	166.55	1.55E+01	15.496	2.96E+02	296.34	5.96E-02	0.059634	0.4119	1.61E+02
71	164.6	1.52E+01	15.165	1.39E+02	138.72	1.03E-01	0.10325	0.43098	5.48E+00
72	188.38	1.85E+01	18.485	5.50E+01	54.996	1.43E-01	0.14311	0.32955	3.32E+01
73	88.905	1.74E+01	17.427	1.13E+02	112.9	5.88E-02	0.058805	0.32233	8.51E-01
74	339.56	1.67E+01	16.716	3.12E+02	311.9	5.67E-02	0.056721	0.34684	8.56E+00
75	218.17	1.86E+01	18.575	1.99E+03	1994.1	7.43E-02	0.074279	0.34194	2.93E+01
76	119.93	1.50E+01	15.003	1.26E+03	1258.7	1.64E-01	0.16393	0.44221	1.52E+01
77	94.643	1.76E+01	17.633	2.61E+02	260.57	6.56E-02	0.065592	0.42087	2.23E+00
78	317.63	1.75E+01	17.507	1.14E+03	1144.8	1.90E-01	0.18964	0.403	1.33E+01
79	284.25	1.59E+01	15.921	6.16E+02	616.49	3.77E-02	0.037707	0.31594	3.17E+01
80	128.9	1.81E+01	18.066	1.26E+02	126.04	7.85E-02	0.078469	0.41693	3.56E+00
81	206.46	1.65E+01	16.507	4.10E+01	41.01	7.67E-02	0.076748	0.35448	3.28E+00
82	115.35	1.94E+01	19.352	1.56E+02	155.7	1.45E-01	0.1448	0.37798	1.73E+01
83	280.73	1.53E+01	15.331	1.08E+03	1075.3	1.12E-01	0.11202	0.41515	6.27E+01
84	144.72	1.88E+01	18.761	5.78E+01	57.798	1.65E-01	0.16532	0.31211	3.82E+00
85	328.53	1.83E+01	18.259	5.76E+02	575.84	1.57E-01	0.15666	0.33672	1.11E+01
86	333.05	1.74E+01	17.405	9.54E+01	95.381	4.44E-02	0.044429	0.40818	2.77E+01
87	321.6	1.63E+01	16.331	6.34E+02	634.42	4.27E-02	0.042736	0.31977	6.61E+00
88	200.25	1.53E+01	15.255	1.76E+02	176.06	1.25E-01	0.12517	0.39688	2.05E+01
89	270.64	1.85E+01	18.452	1.02E+02	101.91	1.30E-01	0.13001	0.31134	9.15E+00
90	140.22	1.84E+01	18.38	2.73E+01	27.289	8.45E-02	0.084537	0.44044	2.71E+00
91	419.5	1.69E+01	16.889	2.48E+02	248.12	8.93E-02	0.089345	0.30607	2.96E+00
92	186.98	1.62E+01	16.215	3.78E+01	37.838	7.03E-02	0.070321	0.35741	5.09E+01
93	113.87	1.78E+01	17.807	2.75E+02	275.2	6.86E-02	0.068631	0.32789	2.57E+00
94	177.27	1.76E+01	17.564	3.09E+01	30.85	1.07E-01	0.10684	0.40198	2.53E+01
95	239.03	1.98E+01	19.799	1.69E+02	168.93	1.47E-01	0.14729	0.3081	1.65E+01
96	92.683	1.79E+01	17.895	2.12E+01	21.186	5.29E-02	0.052863	0.3217	1.89E+01
97	309.56	1.62E+01	16.189	1.47E+02	146.92	1.78E-01	0.17758	0.41963	7.08E+00
98	371.93	1.88E+01	18.845	3.25E+02	325.49	1.69E-01	0.16912	0.36404	5.31E+01
99	255.11	1.87E+01	18.666	4.75E+01	47.499	1.08E-01	0.10811	0.38891	1.49E+00
100	143.43	1.60E+01	16.024	3.66E+02	365.86	1.67E-01	0.16677	0.37052	2.41E+00
Max Value:	**4.68E+02**	**2.00E+01**	**2.00E+01**	**1.99E+03**	**1.99E+03**	**1.92E-01**	**1.92E-01**	**4.44E-01**	**1.61E+02**
Median Value:	**1.94E+02**	**1.73E+01**	**1.73E+01**	**2.03E+02**	**2.03E+02**	**1.15E-01**	**1.15E-01**	**3.74E-01**	**1.05E+01**

realizations	rhobVad	AmKdVad	CsKdVad	CoKdVad	Pu238KdVa	U234VadKd	Pu239KdVa	RaKdVad	U234KdVad
1	1.6419	4131.2	151.27	73.597	96.216	12.072	105.29	8764.9	12.072
2	1.6997	6602.3	672.52	116	441.92	0.99761	172.08	2276.9	0.99761
3	1.7678	5063.3	43.026	95.875	150.77	0.5031	169.37	3048.7	0.5031
4	1.5496	6642.2	834.55	151.55	92.591	0.88131	211.68	29772	0.88131
5	1.5407	4335.8	2159.3	376.07	168.54	7.1126	252.44	1981.2	7.1126
6	1.6674	8393.8	92.273	258.1	465.14	1.2743	138.09	23816	1.2743
7	1.4795	3543.9	32.638	216.38	208.3	7.9335	125.85	2452	7.9335
8	1.4723	2800.8	2266.1	193.93	136.23	1.1965	135.04	819.67	1.1965
9	1.4907	2842.2	315.67	1003.4	139.87	3.795	227.64	2941.9	3.795
10	1.6763	7869.7	189.22	66.279	431.76	0.52267	85.99	677.7	0.52267
11	1.7746	3170.2	3006.9	68.178	84.79	0.62772	265.46	15485	0.62772
12	1.5043	5764.1	102.94	559.94	151.18	14.576	248.25	12651	14.576
13	1.6826	2103.4	140.6	250.77	96.993	1.1698	274.17	998.11	1.1698
14	1.8446	2526	65.877	1042.7	483.05	0.89064	375.92	21760	0.89064
15	1.7219	3306	236.02	159.56	408.55	1.0293	110.08	3208.2	1.0293
16	1.7183	3242.7	76.722	534.17	343.08	7.6592	431.44	28424	7.6592
17	1.6322	5126.1	58.179	864.53	141.16	0.7906	406.95	1849.1	0.7906
18	1.4763	2376.8	50.448	877.73	113.83	2.3476	80.273	30614	2.3476
19	1.692	7653.6	39.666	233.9	87.686	8.599	224.32	1217.6	8.599
20	1.6534	4685	90.595	348.58	430.21	0.82027	344.61	13625	0.82027
21	1.816	2068.8	1591.1	134.65	169.74	4.3369	85.153	2194.5	4.3369
22	1.7482	5609.4	382.96	84.698	88.826	5.8778	444.27	15172	5.8778
23	1.7297	6963.8	84.026	1199.8	132.82	2.1022	292.44	3345.3	2.1022
24	1.5745	3879.2	554.33	102.77	402.04	2.6161	220.49	16175	2.6161
25	1.5032	8743.6	67.642	312.11	503.93	11.097	414.26	517.33	11.097
26	1.5138	1979.2	572.05	89.649	457.91	0.92542	288.35	3785.7	0.92542
27	1.7784	6319.5	161.51	165.74	80.648	0.46263	132.54	862.56	0.46263
28	1.6205	2862.5	1665.3	279.98	306.21	10.819	90.081	32730	10.819
29	1.5592	5221.4	1463.5	161.68	203.03	0.5672	241.71	8850.3	0.5672
30	1.5274	6132.1	1098.3	83.617	332.03	9.5774	103.47	20446	9.5774
31	1.8344	8988.8	53.116	336.42	241.71	3.4662	148.72	8053.3	3.4662
32	1.6104	7632	240.92	500.18	179.36	10.271	458.93	19725	10.271
33	1.5676	2341.9	2854.9	506.67	237.51	2.2597	467.72	27220	2.2597
34	1.6587	5991.5	460.28	413.5	118.1	4.6205	297.77	20678	4.6205
35	1.7085	7193.2	3778.7	317.33	157.78	6.3454	234.11	3920.9	6.3454
36	1.5445	4573	42.517	78.287	187.78	9.2511	354.45	1166.7	9.2511
37	1.7944	7332.6	1713.9	1268.8	228.56	5.0488	146.69	6485.4	5.0488
38	1.6115	5345.6	920.55	75.958	146.26	2.3663	258.86	17565	2.3663
39	1.786	2277	97.973	604.19	119.6	13.151	108.79	7136.1	13.151
40	1.5829	9185.3	596.73	434.07	284.41	12.788	82.485	6007.9	12.788
41	1.5367	2486.5	2358.2	141.95	381.98	6.9489	117.74	4453.6	6.9489
42	1.5241	2268.5	56.793	818.77	421.61	0.48089	204.46	1114.7	0.48089
43	1.6392	3821.7	33.217	396.16	349.93	0.76487	351.08	5105.1	0.76487
44	1.5323	4343.7	4338.9	460.95	494.17	1.8831	182.73	4227.3	1.8831
45	1.8132	3088.7	46.648	646.69	323.49	0.45524	96.772	3699	0.45524
46	1.5195	3386.4	1016	1126.6	272.36	11.321	101.98	1772.2	11.321
47	1.8002	6820.3	265.21	228.61	247.53	7.2904	212.26	7006.5	7.2904
48	1.6747	5691.8	131.42	390.41	100.54	2.038	154.53	33920	2.038
49	1.7022	4821.4	1802.3	120.96	107.94	0.64213	106.4	4364.9	0.64213
50	1.4874	8159.4	31.452	288.79	258.5	0.42198	98.728	13043	0.42198
51	1.791	4939.5	109.99	125.17	365.76	6.1846	195.66	5612.5	6.1846
52	1.5555	4140.5	35.502	360.83	144.91	3.2908	304.01	9922.1	3.2908

realizations	rhobVad	AmKdVad	CsKdVad	CoKdVad	Pu238KdVa	U234VadKd	Pu239KdVa	RaKdVad	U234KdVad
53	1.8307	3971.6	722.04	589.32	105.66	1.135	365.1	1953.7	1.135
54	1.6019	3027.7	622.48	583.04	111.68	0.59472	160.04	14604	0.59472
55	1.5939	3451.1	62.157	61.1	114.35	5.0819	158.17	11253	5.0819
56	1.8463	4037.4	126.92	704.06	162.13	1.7359	83.788	577.88	1.7359
57	1.7098	2651	2512.1	81.003	288.85	6.736	390.59	11884	6.736
58	1.6969	6931.5	4134.6	912.8	107.76	1.7744	99.822	2432.6	1.7744
59	1.8268	6299.4	487.43	127.5	386.12	13.863	90.682	1570.7	13.863
60	1.7454	8485.7	3342.4	1230.8	222.34	4.7744	130.63	11800	4.7744
61	1.7733	9410.4	198.83	444.09	279.83	1.366	380.32	26327	1.366
62	1.5637	3588.1	1130.3	746.81	307.91	0.60014	399.54	618.83	0.60014
63	1.7621	4244	3603.9	203.74	131.4	2.787	122.04	8362.3	2.787
64	1.605	7978.3	179.41	481.42	199.13	1.462	192.46	1271.9	1.462
65	1.8392	2013.1	82.048	133.11	214.45	8.3186	152.68	10516	8.3186
66	1.6686	2050.8	114.14	62.295	235.96	3.735	179.04	1452.1	3.735
67	1.6847	2959.1	169.86	222.06	192.67	1.3999	124.25	9228.3	1.3999
68	1.652	1938.8	895.7	104.59	165.04	5.5968	425.38	533.93	5.5968
69	1.742	4542.9	36.69	670.63	292.24	2.8441	450.6	1362	2.8441
70	1.7275	3502.1	3413.5	979.11	193.72	1.5415	166.55	7574.8	1.5415
71	1.8377	9108.9	1975.1	88.736	396.84	1.9311	164.6	906.02	1.9311
72	1.5082	2215.3	1400.6	628.01	126.89	4.5144	188.38	709.48	4.5144
73	1.4985	3284.2	426.48	939.05	183.74	3.6465	88.905	1045.1	3.6465
74	1.5168	6070.7	3162.6	769.06	174.14	2.6506	339.56	1503.3	2.6506
75	1.7587	5369.2	216.92	682.94	93.153	0.70385	218.17	1287.6	0.70385
76	1.8227	2590.7	49.061	71.717	99.296	3.1877	119.93	16705	3.1877
77	1.7149	5460.7	1227.3	64.245	518.25	3.1046	94.643	2111.4	3.1046
78	1.5889	3749.1	275.71	177.66	83.803	5.3938	317.63	10146	5.3938
79	1.7516	5904	403.08	191.6	361.6	14.045	284.25	1679.9	14.045
80	1.4836	8655.5	444.67	273.44	83.035	2.9442	128.9	2862.8	2.9442
81	1.6365	4970.9	331.02	334.08	227.16	2.536	206.46	23010	2.536
82	1.7362	3788.2	766.9	837.21	253.8	11.959	115.35	986.97	11.959
83	1.625	2150.1	208.21	100.14	265.92	4.0562	280.73	796.52	4.0562
84	1.8022	2418.9	255.94	787.21	375.67	9.8143	144.72	2715.9	9.8143
85	1.5965	2687.2	2709.5	184.32	479.38	1.6691	328.53	35159	1.6691
86	1.6871	2450.4	2607.8	1167.6	325.87	0.53924	333.05	18463	0.53924
87	1.5527	6431.3	71.578	418	177.94	8.9629	321.6	555.38	8.9629
88	1.586	7068.6	348.7	300.46	451.85	0.73714	200.25	3488.8	0.73714
89	1.806	3678.2	1876.2	148.52	299.44	4.0899	270.64	743.2	4.0899
90	1.7335	2169.6	143.21	1068.1	90.26	1.5985	140.22	621.42	1.5985
91	1.7645	2555.7	1251.1	110.25	129.84	1.3016	419.5	650.88	1.3016
92	1.4934	2723.7	1059.1	111.18	206.7	0.96878	186.98	921.02	0.96878
93	1.7818	2925.7	121.87	1089.6	315.76	1.5091	113.87	5818	1.5091
94	1.616	7456.2	4598.1	243.28	154.2	0.40708	177.27	2616	0.40708
95	1.66	4427.1	708.13	209.54	123.04	1.0763	239.03	5472.7	1.0763
96	1.6293	4737.2	506.1	173.88	355.86	0.43753	92.683	4853.7	0.43753
97	1.8107	3129.8	800.84	519.03	103.33	5.8361	309.56	4777.9	5.8361
98	1.5703	8283.3	368.59	92.844	219.72	0.67927	371.93	6613.3	0.67927
99	1.5782	9461.6	1341.4	142.42	123.46	2.1281	255.11	1601.5	2.1281
100	1.6453	1913.3	294.96	267.16	261.28	0.82735	143.43	25134	0.82735
Max Value:	**1.85E+00**	**9.46E+03**	**4.60E+03**	**1.27E+03**	**5.18E+02**	**1.46E+01**	**4.68E+02**	**3.52E+04**	**1.46E+01**
Median Value:	**1.66E+00**	**4.29E+03**	**3.76E+02**	**2.77E+02**	**2.05E+02**	**2.45E+00**	**1.94E+02**	**4.30E+03**	**2.45E+00**

realizations	SrKdVad	ThKdVad	U238KdVad	waterflow.all.Vadose water flux peak value	U234Flux.all.Vadose total constituent flux peak time	U234Flux.all.Vadose total constituent flux peak value	U238Flux.all.Vadose total constituent flux peak time	U238Flux.all.Vadose total constituent flux peak value	U234Flux2.all.Vadose total constituent flux peak time
1	17.111	33.945	12.072	3.916	9000.449	1.07E-16	10344.3	1350.353	18000.91
2	17.281	435.96	0.99761	2.079	9000.449	1.07E-16	0	0	10000.5
3	18.552	199.18	0.5031	2.659	10500.53	1.79E-05	11560.76	138.2284	18000.91
4	16.059	81.483	0.88131	1.199	8997.25	1.07E-16	12740.96	1.959096	18000.91
5	18.104	736.18	7.1126	3.259	9000.449	1.07E-16	12868.06	12.10927	18500.93
6	19.071	1403.8	1.2743	2.83	9000.449	1.07E-16	0	0	10000.5
7	16.442	1021.8	7.9335	4.715	9000.449	1.07E-16	0	0	10000.5
8	18.21	279.6	1.1965	1.886	10500.53	1.07E-16	10413.24	1.663803	18000.91
9	15.94	793.92	3.795	2.679	9000.449	1.07E-16	10649.17	25.36001	18000.91
10	17.15	390.8	0.52267	0.6417	10500.53	2.59E-07	15485.47	2.045488	18000.91
11	16.301	861.33	0.62772	2.557	8997.25	1.07E-16	10750.48	0.811469	18500.93
12	15.537	65.663	14.576	2.869	9000.449	1.07E-16	0	0	10000.5
13	16.673	338.49	1.1698	7.26	8997.25	1.07E-16	10110.27	136.322	18000.91
14	19.737	579.49	0.89064	2.474	8998.1	1.07E-16	14172.08	9.035161	18000.91
15	18.339	116.85	1.0293	7.023	9000.449	1.07E-16	0	0	10000.5
16	15.594	126.48	7.6592	4.077	9000.449	1.07E-16	0	0	10000.5
17	16.931	25.085	0.7906	4.194	8998.1	1.07E-16	0	0	10000.5
18	15.186	694.04	2.3476	4.376	9000.449	1.07E-16	10080.51	289.296	18000.91
19	19.11	206.39	8.599	4.051	9000.449	1.07E-16	14102.75	0.058759	19000.96
20	15.072	22.408	0.82027	2.471	8998.1	1.07E-16	12627.42	121.8584	18000.91
21	15.443	1705.8	4.3369	0.9502	9000.449	1.07E-16	0	0	10000.5
22	18.614	90.169	5.8778	8.002	9000.449	1.07E-16	10273.31	11.07473	18500.93
23	15.84	672.14	2.1022	1.869	9000.449	1.07E-16	0	0	10000.5
24	16.619	1347	2.6161	8.597	9000.449	1.07E-16	10560.5	0.149166	19000.96
25	19.626	354.27	11.097	3.31	9000.449	1.07E-16	11767.46	1483.155	18000.91
26	19.597	160.48	0.92542	5.196	9000.449	1.07E-16	0	0	10000.5
27	18.987	79.08	0.46263	8.755	8998.1	1.07E-16	0	0	10000.5
28	19.258	20.231	10.819	10.76	9000.449	1.07E-16	13755.44	2512.932	18000.91
29	15.272	85.284	0.5672	11.32	10500.53	5.89E-08	15064.6	67.24767	18000.91
30	16.133	32.278	9.5774	9.467	9000.449	1.07E-16	10007.53	2872.939	18000.91
31	15.669	808.36	3.4662	0.8496	9000.449	1.07E-16	12379.68	1.6962	18500.93
32	16.113	25.519	10.271	4.98	9000.449	1.07E-16	10088.36	100.0586	18500.93
33	16.552	1178.9	2.2597	0.5356	9000.449	1.07E-16	10261.79	0.02311	18500.93
34	19.536	874.4	4.6205	0.6779	9000.449	1.07E-16	0	0	10000.5
35	17.936	220.56	6.3454	1.597	9000.449	1.07E-16	0	0	10000.5
36	17.343	35.749	9.2511	2.104	9000.449	1.07E-16	10197.65	1236.066	18000.91
37	16.856	919.05	5.0488	5.566	9000.449	1.07E-16	10248.88	8.312581	18500.93
38	19.394	507.86	2.3663	0.4838	9000.449	1.07E-16	0	0	10000.5
39	17.608	43.224	13.151	1.794	9000.449	1.07E-16	0	0	10000.5
40	17.876	68.368	12.788	7.175	9000.449	1.07E-16	0	0	10000.5
41	19.448	470.18	6.9489	0.9024	9000.449	1.07E-16	10101.4	195.6361	18500.93
42	19.911	502.03	0.48089	2.414	10500.53	0.000602	10014.84	711.8804	17000.86
43	16.365	23.082	0.76487	3.14	8998.1	1.07E-16	14438.14	110.7932	18000.91
44	15.11	544.64	1.8831	0.2711	9000.449	1.07E-16	14615.79	28.27129	18000.91
45	18.15	1283	0.45524	2.053	8998.1	1.07E-16	14225.01	0.064372	18500.93
46	18.991	1775.8	11.321	7.705	9000.449	1.07E-16	10459.16	7064.272	18000.91
47	16.802	99.012	7.2904	1.424	9000.449	1.07E-16	16707.26	8.792105	18500.93
48	19.855	957.82	2.038	0.723	9000.449	1.07E-16	10178.45	0.000441	19500.98
49	18.926	210.98	0.64213	1.643	8998.1	1.07E-16	17644.54	0.358112	18500.93
50	17.191	51.119	0.42198	0.7682	10500.53	2.48E-06	16289.98	0.6776	18000.91
51	19.971	39.711	6.1846	0.2295	9000.449	1.07E-16	0	0	10000.5
52	17.705	399.13	3.2908	1.587	9000.449	1.07E-16	0	0	10000.5

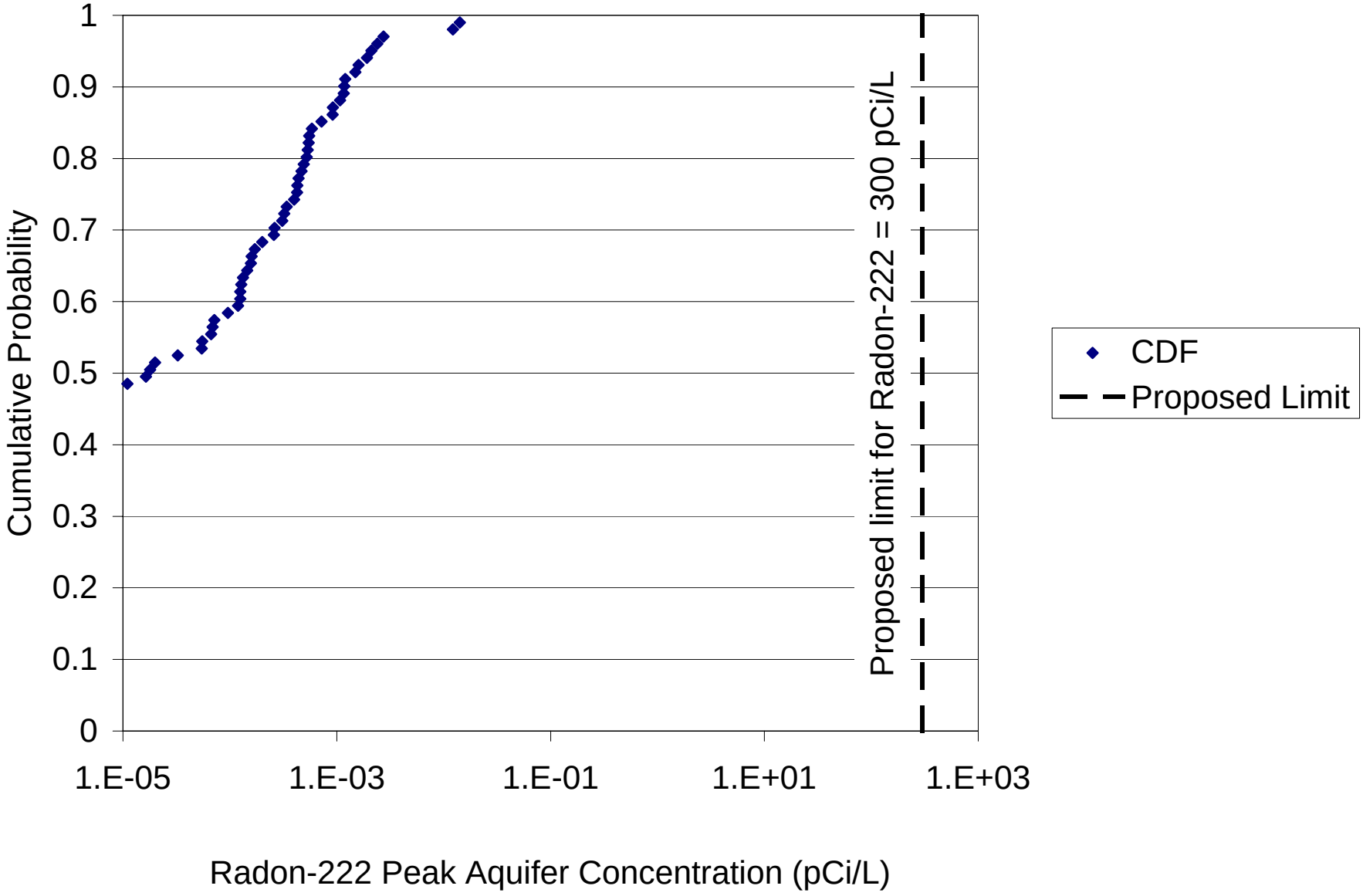
realizations	SrKdVad	ThKdVad	U238KdVad	waterflow.all.Vadose water flux peak value	U234Flux.all.Vadose total constituent flux peak time	U234Flux.all.Vadose total constituent flux peak value	U238Flux.all.Vadose total constituent flux peak time	U238Flux.all.Vadose total constituent flux peak value	U234Flux2.all.Vadose total constituent flux peak time
53	16.762	27.661	1.135	1.357	9000.449	1.07E-16	0	0	10000.5
54	19.68	75.106	0.59472	2.717	8998.1	1.07E-16	12156.82	0.051394	19000.96
55	15.657	1908.5	5.0819	0.3174	9000.449	1.07E-16	10500.52	2.92E-14	10500.53
56	15.865	44.308	1.7359	5.652	9000.449	1.07E-16	16334.32	51.12817	18000.91
57	19.284	105.5	6.736	0.1933	9000.449	1.07E-16	10500.52	8.98E-17	10000.5
58	15.714	55.999	1.7744	5.88	9000.449	1.07E-16	10052.55	2.487969	18500.93
59	17.228	440.95	13.863	3.293	9000.449	1.07E-16	10260.83	1.858476	18500.93
60	17.073	233.81	4.7744	2.721	9000.449	1.07E-16	0	0	10000.5
61	17.019	1536.7	1.366	6.404	8998.1	1.07E-16	10284.39	735.7753	18000.91
62	15.411	1450.8	0.60014	5.381	10500.53	1.44E-05	11423.79	2135.07	17500.88
63	18.775	132.56	2.787	0.2059	9000.449	1.07E-16	10132.98	40.36624	18000.91
64	19.208	1601.9	1.462	11.85	8997.25	1.07E-16	10019.8	3452.292	17500.88
65	18.004	48.462	8.3186	5.364	9000.449	1.07E-16	0	0	10000.5
66	17.763	187.34	3.735	0.2815	9000.449	1.07E-16	13498.91	0.067267	18500.93
67	15.362	61.353	1.3999	0.1167	9000.449	1.07E-16	14130.76	0.00577	18500.93
68	16.475	71.277	5.5968	10.42	9000.449	1.07E-16	11766.85	63.73462	18000.91
69	15.795	29.591	2.8441	0.1991	9000.449	1.07E-16	14163.32	0.033363	18500.93
70	15.496	296.34	1.5415	0.8912	9000.449	1.07E-16	0	0	10000.5
71	15.165	138.72	1.9311	6.261	9000.449	1.07E-16	0	0	10000.5
72	18.485	54.996	4.5144	1.157	9000.449	1.07E-16	13789.7	31.60043	18000.91
73	17.427	112.9	3.6465	0.4805	9000.449	1.07E-16	0	0	10000.5
74	16.716	311.9	2.6506	4.146	9000.449	1.07E-16	0	0	10000.5
75	18.575	1994.1	0.70385	0.5234	10500.53	1.07E-16	0	0	10000.5
76	15.003	1258.7	3.1877	11.88	9000.449	1.07E-16	12557.98	172.9007	18500.93
77	17.633	260.57	3.1046	4.003	9000.449	1.07E-16	0	0	10000.5
78	17.507	1144.8	5.3938	7.221	9000.449	1.07E-16	10601.73	3844.919	18000.91
79	15.921	616.49	14.045	0.05269	9000.449	1.07E-16	10500.52	8.68E-19	10000.5
80	18.066	126.04	2.9442	0.9776	9000.449	1.07E-16	0	0	10000.5
81	16.507	41.01	2.536	3.23	9000.449	1.07E-16	0	0	10000.5
82	19.352	155.7	11.959	14.75	9000.449	1.07E-16	10248.55	49.39822	18000.91
83	15.331	1075.3	4.0562	7.709	9000.449	1.07E-16	10092.43	1.229366	18500.93
84	18.761	57.798	9.8143	7.79	9000.449	1.07E-16	16246.31	151.2354	18500.93
85	18.259	575.84	1.6691	1.066	10000.5	1.07E-16	14049.02	47.52674	18000.91
86	17.405	95.381	0.53924	1.458	9000.449	1.07E-16	10500.52	2.11E-13	19000.96
87	16.331	634.42	8.9629	0.1482	9000.449	1.07E-16	0	0	10000.5
88	15.255	176.06	0.73714	1.251	8998.1	1.07E-16	10221.86	2.011572	18000.91
89	18.452	101.91	4.0899	0.6455	9000.449	1.07E-16	10130	0.219074	18500.93
90	18.38	27.289	1.5985	0.6781	9000.449	1.07E-16	0	0	10000.5
91	16.889	248.12	1.3016	2.814	9000.449	1.07E-16	0	0	10000.5
92	16.215	37.838	0.96878	1.476	9000.449	1.07E-16	0	0	10000.5
93	17.807	275.2	1.5091	2.246	9000.449	1.07E-16	0	0	10000.5
94	17.564	30.85	0.40708	5.463	10500.53	5.53E-07	14078.31	0.345412	18500.93
95	19.799	168.93	1.0763	0.9158	8998.1	1.07E-16	16312.24	9.937462	18000.91
96	17.895	21.186	0.43753	2.82	8998.1	1.07E-16	0	0	10000.5
97	16.189	146.92	5.8361	0.8717	9000.449	1.07E-16	12630.78	42.58331	18000.91
98	18.845	325.49	0.67927	9.454	10500.53	2.32E-07	10196.49	1469.736	17500.88
99	18.666	47.499	2.1281	2.715	9000.449	1.07E-16	10173.48	0.342491	18500.93
100	16.024	365.86	0.82735	3.603	8998.1	1.07E-16	15742.37	254.4162	18000.91
Max Value:	**2.00E+01**	**1.99E+03**	**1.46E+01**	**1.48E+01**	**1.05E+04**	**6.02E-04**	**1.76E+04**	**7.06E+03**	**1.95E+04**
Median Value:	**1.73E+01**	**2.03E+02**	**2.45E+00**	**2.67E+00**	**9.00E+03**	**1.07E-16**	**1.02E+04**	**3.44E-01**	**1.80E+04**

realizations	U234Flux2.all.Vadose total constituent flux peak value	Rn222Flx2.all.Vadose total constituent flux peak time	Rn222Flx2.all.Vadose total constituent flux peak value	**Rn-222 Aquifer Concentration (pCi/L)**	**Total Uranium Aquifer Concentration (pCi/L)**	**Total Uranium Concentration (micrograms/L)**	**Water Consumption (L/day)**
1	302.1065	19500.98	1.330142	0.000339669	0.421976379	1.259630982	10
2	8.27E-16	10000.5	6.94E-23	3.33592E-26	4.49486E-19	1.34175E-18	10
3	161.7694	19500.98	3.967719	0.001492185	0.112823549	0.336786715	10
4	4.85686	18500.93	0.663118	0.000553059	0.005684701	0.016969255	10
5	4.06393	18500.93	0.522064	0.000160192	0.004962627	0.014813811	10
6	8.27E-16	10000.5	6.94E-23	2.45066E-26	3.30205E-19	9.85687E-19	10
7	8.27E-16	10000.5	6.94E-23	1.47092E-26	1.98193E-19	5.91621E-19	10
8	2.176676	18500.93	0.297309	0.00015764	0.002036309	0.006078535	10
9	10.20496	18500.93	1.312065	0.000489759	0.013275465	0.039628253	10
10	10.01186	18500.93	1.355918	0.002113009	0.018789697	0.056088646	10
11	1.031879	18500.93	0.140889	5.50993E-05	0.000720902	0.002151948	10
12	8.27E-16	10000.5	6.94E-23	2.41735E-26	3.25716E-19	9.72288E-19	10
13	44.89856	19500.98	3.085713	0.000425029	0.02496151	0.074511969	10
14	8.143508	18500.93	1.086644	0.000439226	0.006943682	0.020727409	10
15	8.27E-16	10000.5	6.94E-23	9.87524E-27	1.3306E-19	3.97194E-19	10
16	8.27E-16	10000.5	6.94E-23	1.7011E-26	2.29208E-19	6.84203E-19	10
17	8.27E-16	10000.5	6.94E-23	1.65364E-26	2.22814E-19	6.65115E-19	10
18	112.0322	19500.98	2.341558	0.000535091	0.091711197	0.273764768	10
19	0.006401	19000.96	0.000676	1.66803E-07	1.60848E-05	4.80144E-05	10
20	179.5289	19500.98	4.743021	0.001919474	0.121969769	0.364088864	10
21	8.27E-16	10000.5	6.94E-23	7.29886E-26	9.83457E-19	2.93569E-18	10
22	1.325615	18500.93	0.143314	1.79098E-05	0.001549656	0.004625838	10
23	8.27E-16	10000.5	6.94E-23	3.71074E-26	4.9999E-19	1.49251E-18	10
24	0.026834	19000.96	0.003236	3.76394E-07	2.04722E-05	6.11112E-05	10
25	243.8472	19500.98	0.853281	0.000257789	0.521752931	1.557471434	10
26	8.27E-16	10000.5	6.94E-23	1.33475E-26	1.79846E-19	5.36854E-19	10
27	8.27E-16	10000.5	6.94E-23	7.92162E-27	1.06737E-19	3.18617E-19	10
28	124.8528	19500.98	1.031214	9.58377E-05	0.245147286	0.731782944	10
29	18.45372	18500.93	2.268457	0.000200394	0.007570794	0.022599386	10
30	243.106	19500.98	1.375843	0.00014533	0.329148093	0.982531622	10
31	2.011525	18500.93	0.274345	0.000322911	0.004364083	0.013027114	10
32	9.010825	19500.98	0.62222	0.000124944	0.021901491	0.065377585	10
33	0.062362	19000.96	0.008787	1.64053E-05	0.00015958	0.000476359	10
34	8.27E-16	10000.5	6.94E-23	1.02307E-25	1.37849E-18	4.1149E-18	10
35	8.27E-16	10000.5	6.94E-23	4.34276E-26	5.85147E-19	1.74671E-18	10
36	326.1958	19500.98	0.83877	0.000398655	0.742519867	2.216477215	10
37	1.520928	18500.93	0.180998	3.25185E-05	0.00176671	0.005273762	10
38	8.27E-16	10000.5	6.94E-23	1.43352E-25	1.93154E-18	5.7658E-18	10
39	8.27E-16	10000.5	6.94E-23	3.86588E-26	5.20892E-19	1.5549E-18	10
40	8.27E-16	10000.5	6.94E-23	9.66603E-27	1.30241E-19	3.8878E-19	10
41	127.3658	19500.98	0.829689	0.000919425	0.357936503	1.068467172	10
42	1400.593	19500.98	5.796765	0.002401311	0.875092793	2.612217292	10
43	101.8223	19500.98	3.775145	0.001202275	0.067711943	0.202125202	10
44	255.6822	19500.98	3.30386	0.012186868	1.047412357	3.126604051	10
45	0.135438	19000.96	0.019094	9.30062E-06	9.73256E-05	0.000290524	10
46	435.4626	20001	0.920219	0.000119431	0.973359455	2.905550612	10
47	4.594236	18500.93	0.608571	0.000427367	0.00940052	0.028061255	10
48	0.00167	19500.98	0.000245	3.38546E-07	2.91987E-06	8.71603E-06	10
49	0.796359	18500.93	0.109754	6.68008E-05	0.00070266	0.002097494	10
50	2.619104	18500.93	0.359254	0.000467657	0.004291469	0.012810355	10
51	8.27E-16	10000.5	6.94E-23	3.02195E-25	4.07181E-18	1.21547E-17	10
52	8.27E-16	10000.5	6.94E-23	4.37012E-26	5.88835E-19	1.75772E-18	10

realizations	U234Flux2.all.Vadose total constituent flux peak value	Rn222Flx2.all.Vadose total constituent flux peak time	Rn222Flx2.all.Vadose total constituent flux peak value	**Rn-222 Aquifer Concentration (pCi/L)**	**Total Uranium Aquifer Concentration (pCi/L)**	**Total Uranium Concentration (micrograms/L)**	**Water Consumption (L/day)**
53	8.27E-16	10000.5	6.94E-23	5.11082E-26	6.88637E-19	2.05563E-18	10
54	0.052002	19000.96	0.007257	2.67094E-06	3.80553E-05	0.000113598	10
55	1.64E-15	19000.96	9.86E-17	3.10683E-19	9.7434E-17	2.90848E-16	10
56	22.8525	18500.93	2.95832	0.000523411	0.013089291	0.039072509	10
57	8.31E-16	19500.98	9.20E-18	4.75704E-20	5.31835E-18	1.58757E-17	10
58	0.532646	18500.93	0.064806	1.10214E-05	0.00051371	0.001533463	10
59	0.244694	18500.93	0.02707	8.22039E-06	0.000638679	0.001906505	10
60	8.27E-16	10000.5	6.94E-23	2.54883E-26	3.43433E-19	1.02517E-18	10
61	387.2543	19500.98	4.612332	0.000720227	0.175363773	0.523473948	10
62	1943.32	19500.98	6.246769	0.001160894	0.75792418	2.26246024	10
63	423.06	19500.98	2.920357	0.014183375	2.250734531	6.718610541	10
64	753.1913	19500.98	3.671977	0.000309871	0.354893105	1.059382404	10
65	8.27E-16	10000.5	6.94E-23	1.29295E-26	1.74213E-19	5.2004E-19	10
66	0.259344	18500.93	0.035935	0.000127654	0.001160252	0.00346344	10
67	0.059564	19000.96	0.00837	7.17213E-05	0.000559842	0.00167117	10
68	6.910683	18500.93	0.719843	6.90828E-05	0.00677978	0.020238148	10
69	0.245382	18500.93	0.034116	0.000171351	0.00140002	0.004179165	10
70	8.27E-16	10000.5	6.94E-23	7.78207E-26	1.04856E-18	3.13004E-18	10
71	8.27E-16	10000.5	6.94E-23	1.10771E-26	1.49254E-19	4.45535E-19	10
72	26.86948	19500.98	1.356772	0.001172664	0.050535791	0.150853107	10
73	8.27E-16	10000.5	6.94E-23	1.44337E-25	1.94481E-18	5.8054E-18	10
74	8.27E-16	10000.5	6.94E-23	1.67279E-26	2.25393E-19	6.72816E-19	10
75	8.27E-16	10000.5	6.94E-23	1.32506E-25	1.78541E-18	5.32958E-18	10
76	18.7038	19000.96	1.578623	0.000132881	0.016128325	0.048144253	10
77	8.27E-16	10000.5	6.94E-23	1.73255E-26	2.33445E-19	6.96851E-19	10
78	648.9825	19500.98	1.897103	0.00026272	0.622337834	1.857724878	10
79	8.27E-16	19500.98	1.29E-19	2.45066E-21	1.77527E-17	5.29931E-17	10
80	8.27E-16	10000.5	6.94E-23	7.09429E-26	9.55892E-19	2.85341E-18	10
81	8.27E-16	10000.5	6.94E-23	2.14718E-26	2.89313E-19	8.6362E-19	10
82	3.386445	18500.93	0.294279	1.99511E-05	0.003578621	0.010682452	10
83	0.175176	18500.93	0.019667	2.55119E-06	0.000182195	0.000543866	10
84	13.78721	19500.98	0.972703	0.000124866	0.021183904	0.063235534	10
85	56.12596	19500.98	1.705521	0.001599926	0.097235178	0.290254263	10
86	1.11E-14	19000.96	7.15E-16	4.90161E-19	1.5276E-16	4.55999E-16	10
87	8.27E-16	10000.5	6.94E-23	4.67974E-25	6.30554E-18	1.88225E-17	10
88	5.324067	18500.93	0.730226	0.000583714	0.00586382	0.017503941	10
89	0.257986	18500.93	0.035163	5.44745E-05	0.000739055	0.002206134	10
90	8.27E-16	10000.5	6.94E-23	1.02277E-25	1.37809E-18	4.11369E-18	10
91	8.27E-16	10000.5	6.94E-23	2.4646E-26	3.32083E-19	9.91291E-19	10
92	8.27E-16	10000.5	6.94E-23	4.69877E-26	6.33117E-19	1.8899E-18	10
93	8.27E-16	10000.5	6.94E-23	3.08788E-26	4.16064E-19	1.24198E-18	10
94	0.317752	18500.93	0.042986	7.8685E-06	0.000121392	0.000362364	10
95	21.53811	19000.96	2.510885	0.002741739	0.034369482	0.10259547	10
96	8.27E-16	10000.5	6.94E-23	2.45935E-26	3.31376E-19	9.89182E-19	10
97	32.7522	19500.98	0.933734	0.001071164	0.086423666	0.257981094	10
98	597.0755	19500.98	5.148549	0.000544589	0.218617675	0.652590075	10
99	0.158275	18500.93	0.020751	7.64295E-06	0.000184444	0.000550579	10
100	174.131	19500.98	3.300539	0.000916053	0.118941771	0.355050062	10
Max Value:	**1.94E+03**	**2.00E+04**	**6.25E+00**	**1.42E-02**	**2.25E+00**	**6.72E+00**	**1.00E+01**
Median Value:	**2.52E-01**	**1.85E+04**	**3.46E-02**	**1.72E-05**	**5.99E-04**	**1.79E-03**	**1.00E+01**

realizations	Rn-222 Dose (mrem/year)	Uranium Dose (mrem/year)	Total Groundwdater Dose (mrem/year)
1	1.79E-05	3.93E-01	3.93E-01
2	1.75E-27	4.19E-19	4.19E-19
3	7.85E-05	1.05E-01	1.05E-01
4	2.91E-05	5.29E-03	5.32E-03
5	8.43E-06	4.62E-03	4.63E-03
6	1.29E-27	3.08E-19	3.08E-19
7	7.74E-28	1.85E-19	1.85E-19
8	8.29E-06	1.90E-03	1.90E-03
9	2.58E-05	1.24E-02	1.24E-02
10	1.11E-04	1.75E-02	1.76E-02
11	2.90E-06	6.71E-04	6.74E-04
12	1.27E-27	3.03E-19	3.03E-19
13	2.24E-05	2.32E-02	2.33E-02
14	2.31E-05	6.47E-03	6.49E-03
15	5.19E-28	1.24E-19	1.24E-19
16	8.95E-28	2.13E-19	2.13E-19
17	8.70E-28	2.08E-19	2.08E-19
18	2.81E-05	8.54E-02	8.54E-02
19	8.77E-09	1.50E-05	1.50E-05
20	1.01E-04	1.14E-01	1.14E-01
21	3.84E-27	9.16E-19	9.16E-19
22	9.42E-07	1.44E-03	1.44E-03
23	1.95E-27	4.66E-19	4.66E-19
24	1.98E-08	1.91E-05	1.91E-05
25	1.36E-05	4.86E-01	4.86E-01
26	7.02E-28	1.68E-19	1.68E-19
27	4.17E-28	9.94E-20	9.94E-20
28	5.04E-06	2.28E-01	2.28E-01
29	1.05E-05	7.05E-03	7.06E-03
30	7.64E-06	3.07E-01	3.07E-01
31	1.70E-05	4.06E-03	4.08E-03
32	6.57E-06	2.04E-02	2.04E-02
33	8.63E-07	1.49E-04	1.49E-04
34	5.38E-27	1.28E-18	1.28E-18
35	2.28E-27	5.45E-19	5.45E-19
36	2.10E-05	6.92E-01	6.92E-01
37	1.71E-06	1.65E-03	1.65E-03
38	7.54E-27	1.80E-18	1.80E-18
39	2.03E-27	4.85E-19	4.85E-19
40	5.08E-28	1.21E-19	1.21E-19
41	4.84E-05	3.33E-01	3.33E-01
42	1.26E-04	8.15E-01	8.15E-01
43	6.32E-05	6.31E-02	6.31E-02
44	6.41E-04	9.76E-01	9.76E-01
45	4.89E-07	9.06E-05	9.11E-05
46	6.28E-06	9.07E-01	9.07E-01
47	2.25E-05	8.76E-03	8.78E-03
48	1.78E-08	2.72E-06	2.74E-06
49	3.51E-06	6.54E-04	6.58E-04
50	2.46E-05	4.00E-03	4.02E-03
51	1.59E-26	3.79E-18	3.79E-18
52	2.30E-27	5.48E-19	5.48E-19

realizations	Rn-222 Dose (mrem/year)	Uranium Dose (mrem/year)	Total Groundwdater Dose (mrem/year)
53	2.69E-27	6.41E-19	6.41E-19
54	1.40E-07	3.54E-05	3.56E-05
55	1.63E-20	9.07E-17	9.08E-17
56	2.75E-05	1.22E-02	1.22E-02
57	2.50E-21	4.95E-18	4.96E-18
58	5.80E-07	4.78E-04	4.79E-04
59	4.32E-07	5.95E-04	5.95E-04
60	1.34E-27	3.20E-19	3.20E-19
61	3.79E-05	1.63E-01	1.63E-01
62	6.11E-05	7.06E-01	7.06E-01
63	7.46E-04	2.10E+00	2.10E+00
64	1.63E-05	3.31E-01	3.31E-01
65	6.80E-28	1.62E-19	1.62E-19
66	6.71E-06	1.08E-03	1.09E-03
67	3.77E-06	5.21E-04	5.25E-04
68	3.63E-06	6.31E-03	6.32E-03
69	9.01E-06	1.30E-03	1.31E-03
70	4.09E-27	9.77E-19	9.77E-19
71	5.83E-28	1.39E-19	1.39E-19
72	6.17E-05	4.71E-02	4.71E-02
73	7.59E-27	1.81E-18	1.81E-18
74	8.80E-28	2.10E-19	2.10E-19
75	6.97E-27	1.66E-18	1.66E-18
76	6.99E-06	1.50E-02	1.50E-02
77	9.11E-28	2.17E-19	2.17E-19
78	1.38E-05	5.80E-01	5.80E-01
79	1.29E-22	1.65E-17	1.65E-17
80	3.73E-27	8.90E-19	8.90E-19
81	1.13E-27	2.69E-19	2.69E-19
82	1.05E-06	3.33E-03	3.33E-03
83	1.34E-07	1.70E-04	1.70E-04
84	6.57E-06	1.97E-02	1.97E-02
85	8.41E-05	9.06E-02	9.06E-02
86	2.58E-20	1.42E-16	1.42E-16
87	2.46E-26	5.87E-18	5.87E-18
88	3.07E-05	5.46E-03	5.49E-03
89	2.87E-06	6.88E-04	6.91E-04
90	5.38E-27	1.28E-18	1.28E-18
91	1.30E-27	3.09E-19	3.09E-19
92	2.47E-27	5.90E-19	5.90E-19
93	1.62E-27	3.88E-19	3.88E-19
94	4.14E-07	1.13E-04	1.13E-04
95	1.44E-04	3.20E-02	3.22E-02
96	1.29E-27	3.09E-19	3.09E-19
97	5.63E-05	8.05E-02	8.06E-02
98	2.86E-05	2.04E-01	2.04E-01
99	4.02E-07	1.72E-04	1.72E-04
100	4.82E-05	1.11E-01	1.11E-01
Max Value:	**7.46E-04**	**2.10E+00**	**2.10E+00**
Median Value:	**9.02E-07**	**5.58E-04**	**5.60E-04**


1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Cumulative Probability
1.E-05
1.E-03
1.E-01
1.E+01
1.E+03
Radon-222 Peak Aquifer Concentration (pCi/L)
Proposed limit for Radon-222 = 300 pCi/L
CDF
Proposed Limit

sen14 177
2
Sensitivity/Uncertainty Module for FRAMES
Beta Test version
56 15

ThickSrc	Thickness of waste zone from src2 (cm)
Length	Length of waste zone from src2 (cm)
Width	Width of waste zone from src2 (cm)
rhob	Bulk density of soil from src2 (g/cm^3)
MoistSrc	Moisture content from src2 (fraction)
porosity	Total porosity from src2 (fraction)
U238Inv	Inventory quantity, URANIUM-238 from src2 (Ci)
AmInv	Inventory quantity, AMERICIUM-241 from src2 (Ci)
CsInv	Inventory quantity, CESIUM-137+D from src2 (Ci)
CoInv	Inventory quantity, COBALT-60 from src2 (Ci)
Pu238Inv	Inventory quantity, PLUTONIUM-238 from src2 (Ci)
Pu239Inv	Inventory quantity, PLUTONIUM-239 from src2 (Ci)
Ra226Inv	Inventory quantity, RADIUM-226 from src2 (Ci)
SrInv	Inventory quantity, STRONTIUM-90 from src2 (Ci)
ThInv	Inventory quantity, THORIUM-232 from src2 (Ci)
H3Inv	Inventory quantity, TRITIUM (tritiated water) from src2 (Ci)
U238Kd1	Equilibrium coefficients (kd), URANIUM-238, time # 1 from sr (ml/g)
U238Kd2	Equilibrium coefficients (kd), URANIUM-238, time # 2 from src2 (ml/g)
U234Kd1	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd2	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd3	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
U234Kd4	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
Ra226Kd1	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd2	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
Ra226Kd3	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
AmKd1	Equilibrium coefficients (kd), AMERICIUM-241, time # 1 from (ml/g)
AmKd2	Equilibrium coefficients (kd), AMERICIUM-241, time # 2 from src2 (ml/g)
CsKd1	Equilibrium coefficients (kd), CESIUM-137+D, time # 1 from s (ml/g)
CsKd2	Equilibrium coefficients (kd), CESIUM-137+D, time # 2 from src2 (ml/g)
CoKd1	Equilibrium coefficients (kd), COBALT-60, time # 1 from src2 (ml/g)
CoKd2	Equilibrium coefficients (kd), COBALT-60, time # 2 from src2 (ml/g)
Pu238Kd1	Equilibrium coefficients (kd), PLUTONIUM-238, time # 1 from (ml/g)
Pu238Kd2	Equilibrium coefficients (kd), PLUTONIUM-238, time # 2 from src2 (ml/g)
Pu239Kd1	Equilibrium coefficients (kd), PLUTONIUM-239, time # 1 from (ml/g)
Pu239Kd2	Equilibrium coefficients (kd), PLUTONIUM-239, time # 2 from src2 (ml/g)
SrKd1	Equilibrium coefficients (kd), STRONTIUM-90, time # 1 from s (ml/g)
SrKd2	Equilibrium coefficients (kd), STRONTIUM-90, time # 2 from src2 (ml/g)
ThKd1	Equilibrium coefficients (kd), THORIUM-232, time # 1 from sr (ml/g)
ThKd2	Equilibrium coefficients (kd), THORIUM-232, time # 2 from src2 (ml/g)
Darcy1	Darcy Vadose rate, time # 1 from src2 (cm/yr)
Darcy2	Darcy Vadose rate, time # 2 from src2 (cm/yr)
porVad	Soil total porosity from vad3 (percent)
KsatVad	Soil hydraulic conductivity from vad3 (cm/day)
rhobVad	Soil bulk density from vad3 (g/cm^3)
AmKdVad	Soil equilibrium coefficient, AMERICIUM-241 from vad3 (ml/g)
CsKdVad	Soil equilibrium coefficient, CESIUM-137+D from vad3 (ml/g)

CoKdVad	Soil equilibrium coefficient, COBALT-60 from vad3 (ml/g)	
Pu238KdVa	Soil equilibrium coefficient, PLUTONIUM-238 from vad3 (ml/g)	
U234VadKd	Soil equilibrium coefficient, URANIUM-234 from vad3 (ml/g)	
Pu239KdVa	Soil equilibrium coefficient, PLUTONIUM-239 from vad3 (ml/g)	
RaKdVad	Soil equilibrium coefficient, RADIUM-226 from vad3 (ml/g)	
U234KdVad	Soil equilibrium coefficient, LEAD-210 from vad3 (ml/g)	
SrKdVad	Soil equilibrium coefficient, STRONTIUM-90 from vad3 (ml/g)	
ThKdVad	Soil equilibrium coefficient, THORIUM-232 from vad3 (ml/g)	
U238KdVad	Soil equilibrium coefficient, TRITIUM (tritiated water) from vad3 (ml/g)	
waterflow.all.Vadose	vad3 water flux peak (m^3/yr)	yr
Am241Flux.all.Vadose	vad3 total constituent flux peak for AM241 (pCi/yr)	yr
C137Flux.all.Vadose	vad3 total constituent flux peak for CS137 (pCi/yr)	yr
Co60Flux.all.Vadose	vad3 total constituent flux peak for CO60 (pCi/yr)	yr
Pu238Flux.all.Vadose	vad3 total constituent flux peak for PU238 (pCi/yr)	yr
U234Flux.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of PU238 (pCi/yr)	yr
Pu239Flux.all.Vadose	vad3 total constituent flux peak for PU239 (pCi/yr)	yr
Ra226Flux.all.Vadose	vad3 total constituent flux peak for RA226 (pCi/yr)	yr

Rn222Flux.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of RA226 (pCi/yr)	yr
Sr90Flux.all.Vadose	vad3 total constituent flux peak for SR90 (pCi/yr)	yr
Th232Flux.all.Vadose	vad3 total constituent flux peak for TH232 (pCi/yr)	yr
H3Flux.all.Vadose	vad3 total constituent flux peak for THO (pCi/yr)	yr
U238Flux.all.Vadose	vad3 total constituent flux peak for U238 (pCi/yr)	yr
U234Flux2.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of U238 (pCi/yr)	yr
Rn222Flx2.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of U238 (pCi/yr)	yr

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	U238Kd1	Darcy1
1	6.78E+02	1.22E+04	8.85E+03	1.78E+00	1.03E-01	3.80E-01	1.73E+01	4.63E-01	8.10E-02
2	4.09E+02	1.04E+04	7.97E+03	1.58E+00	1.16E-01	4.08E-01	1.02E+01	1.28E+01	8.66E-02
3	7.27E+02	1.18E+04	6.79E+03	1.72E+00	8.37E-02	3.49E-01	1.75E+01	1.03E+00	8.78E-02
4	4.83E+02	7.16E+03	8.46E+03	1.84E+00	8.68E-02	4.31E-01	1.25E+01	1.93E+00	1.03E-01
5	3.49E+02	1.29E+04	4.43E+03	1.84E+00	8.75E-02	3.67E-01	1.35E+01	8.32E+00	9.40E-02
6	5.81E+02	1.11E+04	8.90E+03	1.51E+00	7.35E-02	4.25E-01	1.41E+01	9.25E-01	5.26E-02
7	7.05E+02	8.27E+03	8.77E+03	1.48E+00	7.93E-02	3.24E-01	9.62E+00	7.93E+00	6.50E-02
8	5.93E+02	1.07E+04	4.31E+03	1.63E+00	1.66E-01	4.29E-01	1.27E+01	7.91E-01	9.11E-02
9	3.17E+02	8.74E+03	8.38E+03	1.52E+00	6.48E-02	3.47E-01	1.64E+01	2.65E+00	5.67E-02
10	3.13E+02	1.10E+04	5.90E+03	1.72E+00	7.43E-02	3.62E-01	1.58E+01	7.66E+00	6.27E-02
11	4.69E+02	1.02E+04	5.97E+03	1.71E+00	1.24E-01	4.21E-01	1.51E+01	3.10E+00	6.56E-02
12	3.70E+02	1.12E+04	3.76E+03	1.64E+00	9.77E-02	3.54E-01	1.71E+01	2.54E+00	7.67E-02
13	6.65E+02	4.45E+03	7.81E+03	1.50E+00	1.11E-01	4.22E-01	1.60E+01	1.46E+01	8.26E-02
14	4.79E+02	9.04E+03	4.14E+03	1.67E+00	9.28E-02	3.65E-01	1.05E+01	1.27E+00	7.57E-02
15	6.62E+02	1.08E+04	4.93E+03	1.63E+00	5.84E-02	3.22E-01	1.49E+01	4.38E-01	5.29E-02
16	4.65E+02	4.32E+03	7.28E+03	1.76E+00	9.71E-02	3.06E-01	1.44E+01	1.30E+00	8.93E-02
17	4.94E+02	7.80E+03	4.80E+03	1.75E+00	1.05E-01	3.03E-01	1.18E+01	4.77E+00	7.25E-02
18	4.26E+02	9.65E+03	3.39E+03	1.78E+00	1.07E-01	3.28E-01	1.47E+01	1.51E+00	6.86E-02
19	3.94E+02	6.77E+03	6.37E+03	1.70E+00	8.99E-02	3.73E-01	1.15E+01	9.98E-01	4.82E-02
20	6.49E+02	4.95E+03	4.70E+03	1.73E+00	8.42E-02	4.13E-01	1.37E+01	2.10E+00	8.03E-02
21	4.51E+02	7.36E+03	4.87E+03	1.79E+00	7.62E-02	3.83E-01	1.26E+01	1.32E+01	5.01E-02
22	3.62E+02	9.24E+03	1.87E+03	1.71E+00	1.28E-01	4.27E-01	9.77E+00	6.35E+00	9.25E-02
23	4.38E+02	4.58E+03	7.65E+03	1.56E+00	6.56E-02	3.96E-01	1.85E+01	3.29E+00	4.52E-02
24	6.84E+02	3.95E+03	5.30E+03	1.49E+00	7.77E-02	3.57E-01	1.59E+01	9.69E-01	7.03E-02
25	3.87E+02	1.68E+03	8.22E+03	1.83E+00	1.17E-01	3.76E-01	1.50E+01	1.14E+00	9.81E-02
26	7.21E+02	5.90E+03	2.11E+03	1.48E+00	6.27E-02	4.17E-01	1.04E+01	2.94E+00	7.85E-02
27	5.15E+02	9.00E+03	1.94E+03	1.82E+00	5.76E-02	3.85E-01	1.28E+01	4.34E+00	5.45E-02
28	7.60E+02	2.31E+03	6.48E+03	1.73E+00	1.01E-01	4.12E-01	1.61E+01	1.54E+00	5.96E-02
29	6.09E+02	2.85E+03	2.82E+03	1.73E+00	1.02E-01	4.40E-01	1.14E+01	1.60E+00	8.45E-02
30	4.02E+02	6.25E+03	2.32E+03	1.66E+00	7.02E-02	4.38E-01	1.68E+01	4.62E+00	4.67E-02
31	4.97E+02	6.92E+03	1.02E+03	1.76E+00	1.14E-01	3.42E-01	1.81E+01	7.04E-01	7.43E-02
32	8.22E+02	1.42E+03	5.07E+03	1.61E+00	1.09E-01	3.39E-01	1.72E+01	2.37E+00	6.71E-02
33	5.29E+02	2.67E+03	3.06E+03	1.50E+00	9.15E-02	3.22E-01	1.79E+01	3.65E+00	5.88E-02
34	3.66E+02	1.10E+03	3.42E+03	1.79E+00	6.04E-02	4.00E-01	1.75E+01	6.18E+00	6.11E-02
35	7.70E+02	2.14E+03	1.62E+03	1.55E+00	6.70E-02	3.20E-01	1.56E+01	8.96E+00	4.27E-02
36	7.17E+02	2.37E+03	5.91E+02	1.75E+00	5.37E-02	3.16E-01	9.90E+00	1.40E+01	3.77E-02
37	7.96E+02	6.44E+03	7.61E+02	1.71E+00	6.95E-02	4.34E-01	1.23E+01	6.74E+00	3.94E-02
38	3.27E+02	6.63E+03	1.16E+03	1.59E+00	8.10E-02	3.15E-01	1.80E+01	5.08E+00	4.12E-02
39	5.51E+02	4.18E+03	7.83E+03	1.69E+00	5.53E-02	4.08E-01	1.16E+01	5.39E-01	4.44E-02
40	7.74E+02	7.56E+03	5.13E+03	1.69E+00	1.20E-01	4.30E-01	9.75E+00	8.60E+00	1.04E-01
41	6.23E+02	1.24E+03	6.07E+03	1.67E+00	1.30E-01	3.93E-01	1.45E+01	2.04E+00	9.61E-02
42	8.15E+02	1.26E+04	6.97E+03	1.57E+00	1.37E-01	3.31E-01	1.65E+01	2.62E+00	9.78E-02
43	7.99E+02	7.92E+03	8.68E+03	1.63E+00	1.52E-01	4.15E-01	1.52E+01	4.06E+00	1.12E-01
44	6.89E+02	1.16E+04	2.34E+03	1.60E+00	1.68E-01	3.75E-01	1.22E+01	5.95E-01	1.00E-01
45	5.05E+02	4.83E+03	5.20E+03	1.58E+00	1.32E-01	3.89E-01	1.00E+01	2.13E+00	1.08E-01
46	3.54E+02	9.35E+03	5.46E+03	1.62E+00	1.22E-01	4.02E-01	1.55E+01	4.07E-01	1.07E-01
47	5.44E+02	3.67E+03	6.64E+03	1.83E+00	1.48E-01	3.63E-01	1.31E+01	1.39E+01	1.35E-01
48	5.96E+02	3.21E+03	5.54E+03	1.81E+00	1.40E-01	3.49E-01	1.63E+01	4.55E-01	1.16E-01
49	7.46E+02	1.28E+04	3.71E+03	1.70E+00	1.75E-01	4.14E-01	9.52E+00	1.77E+00	1.24E-01
50	5.11E+02	7.34E+03	7.16E+02	1.57E+00	1.18E-01	4.36E-01	1.37E+01	2.26E+00	1.02E-01
51	4.72E+02	8.78E+03	6.69E+03	1.75E+00	1.50E-01	3.09E-01	1.08E+01	5.88E+00	1.36E-01

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	U238Kd1	Darcy1
52	8.11E+02	1.19E+04	8.57E+03	1.74E+00	1.87E-01	3.78E-01	1.41E+01	1.20E+01	1.45E-01
53	8.07E+02	1.14E+04	3.49E+03	1.79E+00	1.54E-01	4.10E-01	1.79E+01	5.05E+00	1.40E-01
54	6.17E+02	5.51E+03	9.01E+02	1.81E+00	1.27E-01	3.11E-01	1.24E+01	4.09E+00	1.30E-01
55	5.40E+02	1.14E+04	1.77E+03	1.77E+00	1.77E-01	3.82E-01	1.34E+01	6.28E-01	1.27E-01
56	7.91E+02	5.21E+03	2.64E+03	1.70E+00	1.61E-01	3.60E-01	1.83E+01	6.42E-01	1.20E-01
57	4.57E+02	8.11E+03	9.11E+03	1.65E+00	1.90E-01	4.37E-01	1.05E+01	5.60E+00	1.41E-01
58	7.40E+02	2.50E+03	4.26E+02	1.68E+00	1.46E-01	3.43E-01	1.01E+01	1.40E+00	1.10E-01
59	7.79E+02	9.62E+03	6.21E+03	1.62E+00	1.83E-01	3.72E-01	1.85E+01	1.08E+01	1.80E-01
60	6.46E+02	5.74E+03	7.04E+03	1.52E+00	2.14E-01	3.53E-01	1.39E+01	1.13E+01	1.91E-01
61	4.29E+02	8.09E+03	5.82E+03	1.80E+00	2.11E-01	3.12E-01	1.38E+01	9.81E+00	1.65E-01
62	5.86E+02	5.33E+03	6.27E+03	1.61E+00	1.93E-01	3.68E-01	1.12E+01	1.03E+01	1.49E-01
63	4.15E+02	5.29E+02	4.51E+03	1.67E+00	1.80E-01	4.33E-01	1.33E+01	3.74E+00	1.18E-01
64	7.13E+02	9.79E+03	7.40E+03	1.82E+00	2.09E-01	4.42E-01	1.28E+01	3.19E+00	1.64E-01
65	4.88E+02	1.01E+04	5.38E+03	1.53E+00	2.21E-01	3.94E-01	1.76E+01	9.58E+00	1.74E-01
66	3.81E+02	8.45E+03	1.99E+03	1.47E+00	1.42E-01	3.58E-01	1.19E+01	1.20E+00	1.12E-01
67	3.40E+02	3.39E+03	7.52E+03	1.54E+00	1.68E-01	3.87E-01	1.63E+01	7.11E+00	1.28E-01
68	5.25E+02	3.29E+03	5.02E+02	1.74E+00	1.56E-01	3.16E-01	1.67E+01	2.84E+00	1.20E-01
69	6.32E+02	1.05E+04	8.09E+03	1.56E+00	1.99E-01	3.07E-01	1.09E+01	5.67E-01	1.33E-01
70	5.55E+02	1.24E+04	1.51E+03	1.50E+00	2.23E-01	3.90E-01	1.46E+01	1.11E+01	1.77E-01
71	5.66E+02	1.30E+04	2.93E+03	1.59E+00	2.13E-01	4.03E-01	1.73E+01	5.39E+00	1.90E-01
72	3.41E+02	9.99E+03	6.51E+03	1.61E+00	1.88E-01	3.98E-01	1.18E+01	1.46E+00	1.82E-01
73	7.85E+02	1.02E+03	5.73E+03	1.83E+00	1.44E-01	4.25E-01	1.59E+01	3.47E+00	1.45E-01
74	3.08E+02	7.01E+03	2.97E+03	1.64E+00	2.16E-01	3.44E-01	1.77E+01	1.21E+01	1.88E-01
75	6.77E+02	9.45E+03	1.20E+03	1.54E+00	2.03E-01	3.34E-01	1.42E+01	9.25E+00	1.85E-01
76	6.53E+02	6.49E+03	7.24E+03	1.68E+00	1.58E-01	3.05E-01	1.30E+01	1.17E+00	1.54E-01
77	6.68E+02	3.57E+03	2.60E+03	1.80E+00	1.76E-01	3.84E-01	1.84E+01	7.29E+00	1.53E-01
78	4.45E+02	1.20E+04	1.36E+03	1.84E+00	2.00E-01	3.55E-01	9.41E+00	8.91E-01	1.52E-01
79	6.28E+02	3.06E+03	2.21E+03	1.49E+00	1.63E-01	4.18E-01	1.11E+01	4.22E-01	1.14E-01
80	6.15E+02	1.25E+04	1.63E+03	1.49E+00	9.56E-02	3.91E-01	1.34E+01	3.80E+00	1.32E-01
81	4.19E+02	8.56E+03	4.09E+03	1.85E+00	1.95E-01	3.35E-01	1.40E+01	1.74E+00	1.61E-01
82	3.34E+02	4.07E+03	7.18E+03	1.48E+00	1.72E-01	3.18E-01	1.03E+01	2.35E+00	1.50E-01
83	6.37E+02	1.21E+04	4.62E+03	1.57E+00	1.34E-01	3.64E-01	1.54E+01	6.79E-01	1.69E-01
84	3.77E+02	2.97E+03	3.30E+03	1.55E+00	1.31E-01	3.46E-01	1.21E+01	8.81E-01	1.22E-01
85	6.04E+02	1.78E+03	5.61E+03	1.59E+00	1.13E-01	3.97E-01	1.47E+01	7.37E-01	1.25E-01
86	5.38E+02	3.83E+03	9.03E+03	1.77E+00	2.17E-01	3.33E-01	1.82E+01	1.37E+00	1.85E-01
87	7.62E+02	6.03E+03	3.58E+03	1.65E+00	2.06E-01	3.71E-01	1.20E+01	8.27E-01	1.67E-01
88	5.61E+02	5.64E+03	9.38E+02	1.54E+00	2.06E-01	3.28E-01	1.07E+01	6.95E+00	1.71E-01
89	5.22E+02	6.47E+02	7.59E+03	1.81E+00	2.03E-01	4.20E-01	1.10E+01	5.84E+00	1.78E-01
90	4.46E+02	7.64E+03	3.88E+03	1.56E+00	2.20E-01	3.25E-01	1.69E+01	6.00E-01	1.82E-01
91	7.54E+02	1.91E+03	4.23E+03	1.51E+00	1.64E-01	3.30E-01	1.70E+01	4.51E+00	1.43E-01
92	6.95E+02	5.05E+03	3.94E+03	1.64E+00	1.91E-01	3.78E-01	1.32E+01	7.65E-01	1.58E-01
93	7.34E+02	1.08E+04	1.41E+03	1.77E+00	1.38E-01	4.05E-01	1.17E+01	5.03E-01	1.75E-01
94	7.44E+02	8.24E+02	8.26E+03	1.60E+00	1.56E-01	3.37E-01	9.38E+00	1.67E+00	1.57E-01
95	5.75E+02	6.18E+03	2.46E+03	1.65E+00	1.81E-01	3.51E-01	1.57E+01	8.20E-01	1.62E-01
96	4.04E+02	1.47E+03	3.17E+03	1.68E+00	1.47E-01	3.38E-01	1.07E+01	5.23E-01	1.38E-01
97	3.21E+02	2.04E+03	6.85E+03	1.52E+00	1.96E-01	4.44E-01	1.48E+01	4.81E-01	1.73E-01
98	7.00E+02	7.70E+02	8.08E+03	1.66E+00	1.85E-01	3.08E-01	1.13E+01	1.08E+00	1.47E-01
99	5.74E+02	4.72E+03	3.59E+02	1.53E+00	1.72E-01	4.42E-01	1.66E+01	1.88E+00	1.60E-01
100	3.89E+02	3.94E+02	2.72E+03	1.76E+00	2.24E-01	4.05E-01	1.53E+01	2.79E+00	1.92E-01
Max Value:	**8.22E+02**	**1.30E+04**	**9.11E+03**	**1.85E+00**	**2.24E-01**	**4.44E-01**	**1.85E+01**	**1.46E+01**	**1.92E-01**
Median Value:	**5.64E+02**	**6.70E+03**	**4.75E+03**	**1.66E+00**	**1.39E-01**	**3.74E-01**	**1.39E+01**	**2.45E+00**	**1.15E-01**

realizations	KsatVad	**Rn-222 Aquifer Concentration (pCi/L)**	**CDF**	EPA Limit for Alpha Particles (pCi/L)	CDF	Propopsed Limit for Radon-222 (pCi/L)
1	1.66E+00	7.92162E-27	0.009901	1.50E+01	0.00E+00	3.00E+02
2	1.24E+02	9.66603E-27	0.019802	1.50E+01	1.00E+00	3.00E+02
3	1.06E+01	9.87524E-27	0.029703			
4	5.48E+00	1.10771E-26	0.039604			
5	1.57E+01	1.29295E-26	0.049505			
6	4.38E+00	1.33475E-26	0.059406			
7	3.71E+01	1.47092E-26	0.069307			
8	8.43E+01	1.65364E-26	0.079208			
9	8.56E+00	1.67279E-26	0.089109			
10	1.40E+00	1.7011E-26	0.09901			
11	2.23E+00	1.73255E-26	0.108911			
12	3.28E+00	2.14718E-26	0.118812			
13	1.46E+01	2.41735E-26	0.128713			
14	1.03E+01	2.45066E-26	0.138614			
15	1.89E+01	2.45935E-26	0.148515			
16	2.96E+00	2.4646E-26	0.158416			
17	5.65E+00	2.54883E-26	0.168317			
18	2.57E+00	3.08788E-26	0.178218			
19	7.74E+01	3.33592E-26	0.188119			
20	2.07E+00	3.71074E-26	0.19802			
21	3.89E+01	3.86588E-26	0.207921			
22	1.27E+01	4.34276E-26	0.217822			
23	7.92E-01	4.37012E-26	0.227723			
24	5.09E+01	4.69877E-26	0.237624			
25	6.98E+00	5.11082E-26	0.247525			
26	3.56E+00	7.09429E-26	0.257426			
27	3.00E+01	7.29886E-26	0.267327			
28	1.61E+02	7.78207E-26	0.277228			
29	2.71E+00	1.02277E-25	0.287129			
30	7.60E+00	1.02307E-25	0.29703			
31	2.93E+01	1.32506E-25	0.306931			
32	2.39E+01	1.43352E-25	0.316832			
33	8.51E-01	1.44337E-25	0.326733			
34	9.82E+00	3.02195E-25	0.336634			
35	6.61E+00	4.67974E-25	0.346535			
36	3.17E+01	2.45066E-21	0.356436			
37	2.26E+01	4.75704E-20	0.366337			
38	2.15E+01	3.10683E-19	0.376238			
39	2.77E+01	4.90161E-19	0.386139			
40	4.02E+01	1.66803E-07	0.39604			
41	8.83E+00	3.38546E-07	0.405941			
42	1.78E+00	3.76394E-07	0.415842			
43	6.27E+01	2.55119E-06	0.425743			
44	1.12E+00	2.67094E-06	0.435644			
45	1.49E+00	7.64295E-06	0.445545			
46	2.53E+01	7.8685E-06	0.455446			
47	1.21E+00	8.22039E-06	0.465347			
48	4.36E+01	9.30062E-06	0.475248			
49	4.19E+00	1.10214E-05	0.485149			
50	7.18E-01	1.64053E-05	0.49505			
51	9.27E+01	1.79098E-05	0.50495			

realizations	KsatVad	**Rn-222 Aquifer Concentration (pCi/L)**	**CDF**	EPA Limit for Alpha Particles (pCi/L)	CDF	Propopsed Limit for Radon-222 (pCi/L)
52	1.73E+01	1.99511E-05	0.514851			
53	5.78E+01	3.25185E-05	0.524752			
54	9.15E+00	5.44745E-05	0.534653			
55	9.81E+01	5.50993E-05	0.544554			
56	1.20E+01	6.68008E-05	0.554455			
57	5.54E-01	6.90828E-05	0.564356			
58	4.98E-01	7.17213E-05	0.574257			
59	3.91E+00	9.58377E-05	0.584158			
60	2.60E+01	0.000119431	0.594059			
61	3.82E+00	0.000124866	0.60396			
62	1.68E+01	0.000124944	0.613861			
63	1.13E+01	0.000127654	0.623762			
64	1.52E+01	0.000132881	0.633663			
65	2.29E+01	0.00014533	0.643564			
66	3.59E+01	0.00015764	0.653465			
67	2.86E+00	0.000160192	0.663366			
68	1.39E+02	0.000171351	0.673267			
69	5.24E+00	0.000200394	0.683168			
70	6.22E+00	0.000257789	0.693069			
71	1.33E+01	0.00026272	0.70297			
72	6.88E+01	0.000309871	0.712871			
73	1.01E+00	0.000322911	0.722772			
74	4.86E+01	0.000339669	0.732673			
75	1.65E+00	0.000398655	0.742574			
76	1.23E+01	0.000425029	0.752475			
77	1.86E+01	0.000427367	0.762376			
78	9.29E+00	0.000439226	0.772277			
79	3.19E+00	0.000467657	0.782178			
80	5.04E+00	0.000489759	0.792079			
81	8.10E+00	0.000523411	0.80198			
82	1.99E+01	0.000535091	0.811881			
83	5.31E+01	0.000544589	0.821782			
84	4.71E+00	0.000553059	0.831683			
85	2.05E+01	0.000583714	0.841584			
86	4.66E+00	0.000720227	0.851485			
87	2.41E+00	0.000916053	0.861386			
88	5.83E+00	0.000919425	0.871287			
89	7.08E+00	0.001071164	0.881188			
90	3.41E+00	0.001160894	0.891089			
91	3.32E+01	0.001172664	0.90099			
92	1.10E+02	0.001202275	0.910891			
93	2.02E+00	0.001492185	0.920792			
94	1.11E+01	0.001599926	0.930693			
95	6.57E+01	0.001919474	0.940594			
96	6.28E+00	0.002113009	0.950495			
97	4.59E+01	0.002401311	0.960396			
98	1.65E+01	0.002741739	0.970297			
99	1.41E+01	0.012186868	0.980198			
100	7.66E+00	0.014183375	0.990099			
Max Value:	**1.61E+02**	**0.014183375**				
Median Value:	**1.05E+01**	**1.71576E-05**				

Rn-222 Aquifer Concentration

	Step	Multiple	Multiple	R-square	F - to	p-level	Variables	Semipart
Darcy1	1	0.814461	0.663347	0.663347	193.1013	0.000000	1	0.817146
Length	2	0.869529	0.756080	0.092733	36.8773	0.000000	2	-0.305169
Width	3	0.897481	0.805473	0.049392	24.3752	0.000003	3	-0.223223
U238Kd1	4	0.910278	0.828606	0.023134	12.8225	0.000542	4	-0.149873
rhob	5	0.918063	0.842839	0.014233	8.5131	0.004411	5	-0.119854

Uranium Aquifer Concentration

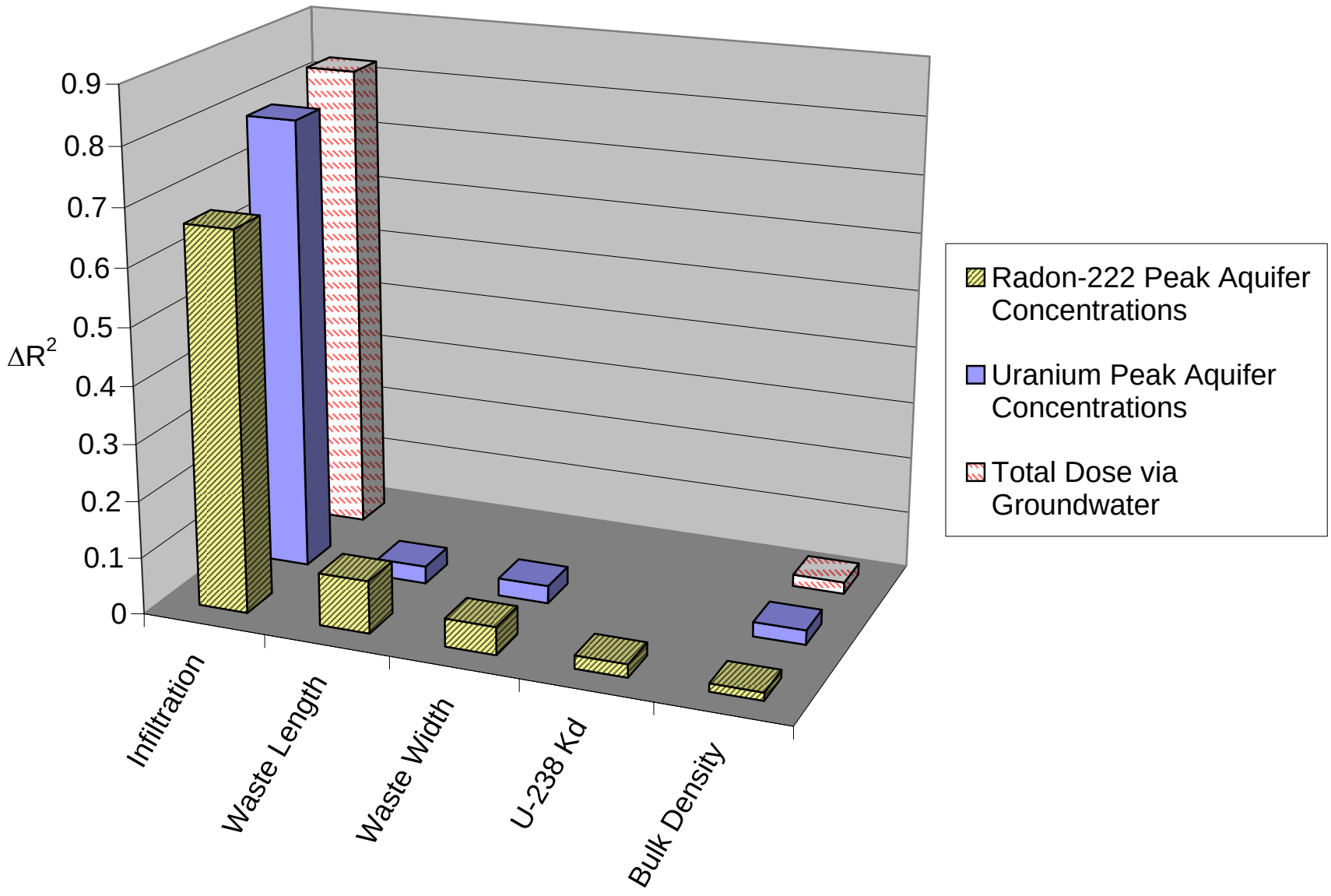
	Step	Multiple	Multiple	R-square	F - to	p-level	Variables	Semipart
Darcy1	1	0.889313	0.790877	0.790877	370.6248	0.000000	1	0.887390
rhob	2	0.906519	0.821776	0.030899	16.8170	0.000086	2	-0.178485
Width	3	0.923513	0.852875	0.031099	20.2924	0.000019	3	-0.177869
porosity	4	0.937292	0.878515	0.025640	20.0503	0.000021	4	-0.160253

Total Groundwater Dose

	Step	Multiple	Multiple	R-square	F - to	p-level	Variables	Semipart
Darcy1	1	0.909331	0.826883	0.826883	468.0903	0.000000	1	0.901521
rhob	2	0.920613	0.847528	0.020646	13.1343	0.000464	2	-0.142402

Delta R^2 for 100 Realizations

Input Parameter	Rn-22 Peak Aquifer Concentration	Uranium Peak Aquifer Concentration	Total Groundwater Dose
Infiltration	0.663347	0.790877	0.826883
Waste Length	0.092733	0.030899	
Waste Width	0.049392	0.031099	
U-238 Kd	0.023134		
Bulk Density	0.014233	0.025640	0.020646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ΔR2
Infiltration
Waste Length
Waste Width
U-238 Kd
Bulk Density
Radon-222 Peak Aquifer Concentrations
Uranium Peak Aquifer Concentrations
Total Dose via Groundwater

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Sensitivity/Uncertainty Module for FRAMES
Beta Test version
56 15

ThickSrc	Thickness of waste zone from src2 (cm)
Length	Length of waste zone from src2 (cm)
Width	Width of waste zone from src2 (cm)
rhob	Bulk density of soil from src2 (g/cm^3)
MoistSrc	Moisture content from src2 (fraction)
porosity	Total porosity from src2 (fraction)
U238Inv	Inventory quantity, URANIUM-238 from src2 (Ci)
AmInv	Inventory quantity, AMERICIUM-241 from src2 (Ci)
CsInv	Inventory quantity, CESIUM-137+D from src2 (Ci)
CoInv	Inventory quantity, COBALT-60 from src2 (Ci)
Pu238Inv	Inventory quantity, PLUTONIUM-238 from src2 (Ci)
Pu239Inv	Inventory quantity, PLUTONIUM-239 from src2 (Ci)
Ra226Inv	Inventory quantity, RADIUM-226 from src2 (Ci)
SrInv	Inventory quantity, STRONTIUM-90 from src2 (Ci)
ThInv	Inventory quantity, THORIUM-232 from src2 (Ci)
H3Inv	Inventory quantity, TRITIUM (tritiated water) from src2 (Ci)
U238Kd1	Equilibrium coefficients (kd), URANIUM-238, time # 1 from sr (ml/g)
U238Kd2	Equilibrium coefficients (kd), URANIUM-238, time # 2 from src2 (ml/g)
U234Kd1	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd2	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd3	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
U234Kd4	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
Ra226Kd1	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd2	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
Ra226Kd3	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
AmKd1	Equilibrium coefficients (kd), AMERICIUM-241, time # 1 from (ml/g)
AmKd2	Equilibrium coefficients (kd), AMERICIUM-241, time # 2 from src2 (ml/g)
CsKd1	Equilibrium coefficients (kd), CESIUM-137+D, time # 1 from s (ml/g)
CsKd2	Equilibrium coefficients (kd), CESIUM-137+D, time # 2 from src2 (ml/g)
CoKd1	Equilibrium coefficients (kd), COBALT-60, time # 1 from src2 (ml/g)
CoKd2	Equilibrium coefficients (kd), COBALT-60, time # 2 from src2 (ml/g)
Pu238Kd1	Equilibrium coefficients (kd), PLUTONIUM-238, time # 1 from (ml/g)
Pu238Kd2	Equilibrium coefficients (kd), PLUTONIUM-238, time # 2 from src2 (ml/g)
Pu239Kd1	Equilibrium coefficients (kd), PLUTONIUM-239, time # 1 from (ml/g)
Pu239Kd2	Equilibrium coefficients (kd), PLUTONIUM-239, time # 2 from src2 (ml/g)
SrKd1	Equilibrium coefficients (kd), STRONTIUM-90, time # 1 from s (ml/g)
SrKd2	Equilibrium coefficients (kd), STRONTIUM-90, time # 2 from src2 (ml/g)
ThKd1	Equilibrium coefficients (kd), THORIUM-232, time # 1 from sr (ml/g)
ThKd2	Equilibrium coefficients (kd), THORIUM-232, time # 2 from src2 (ml/g)
Darcy1	Darcy Vadose rate, time # 1 from src2 (cm/yr)
Darcy2	Darcy Vadose rate, time # 2 from src2 (cm/yr)
porVad	Soil total porosity from vad3 (percent)
KsatVad	Soil hydraulic conductivity from vad3 (cm/day)
rhobVad	Soil bulk density from vad3 (g/cm^3)
AmKdVad	Soil equilibrium coefficient, AMERICIUM-241 from vad3 (ml/g)
CsKdVad	Soil equilibrium coefficient, CESIUM-137+D from vad3 (ml/g)

CoKdVad	Soil equilibrium coefficient, COBALT-60 from vad3 (ml/g)	
Pu238KdVa	Soil equilibrium coefficient, PLUTONIUM-238 from vad3 (ml/g)	
U234VadKd	Soil equilibrium coefficient, URANIUM-234 from vad3 (ml/g)	
Pu239KdVa	Soil equilibrium coefficient, PLUTONIUM-239 from vad3 (ml/g)	
RaKdVad	Soil equilibrium coefficient, RADIUM-226 from vad3 (ml/g)	
U234KdVad	Soil equilibrium coefficient, LEAD-210 from vad3 (ml/g)	
SrKdVad	Soil equilibrium coefficient, STRONTIUM-90 from vad3 (ml/g)	
ThKdVad	Soil equilibrium coefficient, THORIUM-232 from vad3 (ml/g)	
U238KdVad	Soil equilibrium coefficient, TRITIUM (tritiated water) from vad3 (ml/g)	
waterflow.all.Vadose	vad3 water flux peak (m^3/yr)	yr
Am241Flux.all.Vadose	vad3 total constituent flux peak for AM241 (pCi/yr)	yr
C137Flux.all.Vadose	vad3 total constituent flux peak for CS137 (pCi/yr)	yr
Co60Flux.all.Vadose	vad3 total constituent flux peak for CO60 (pCi/yr)	yr
Pu238Flux.all.Vadose	vad3 total constituent flux peak for PU238 (pCi/yr)	yr
U234Flux.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of PU238 (pCi/yr)	yr
Pu239Flux.all.Vadose	vad3 total constituent flux peak for PU239 (pCi/yr)	yr
Ra226Flux.all.Vadose	vad3 total constituent flux peak for RA226 (pCi/yr)	yr

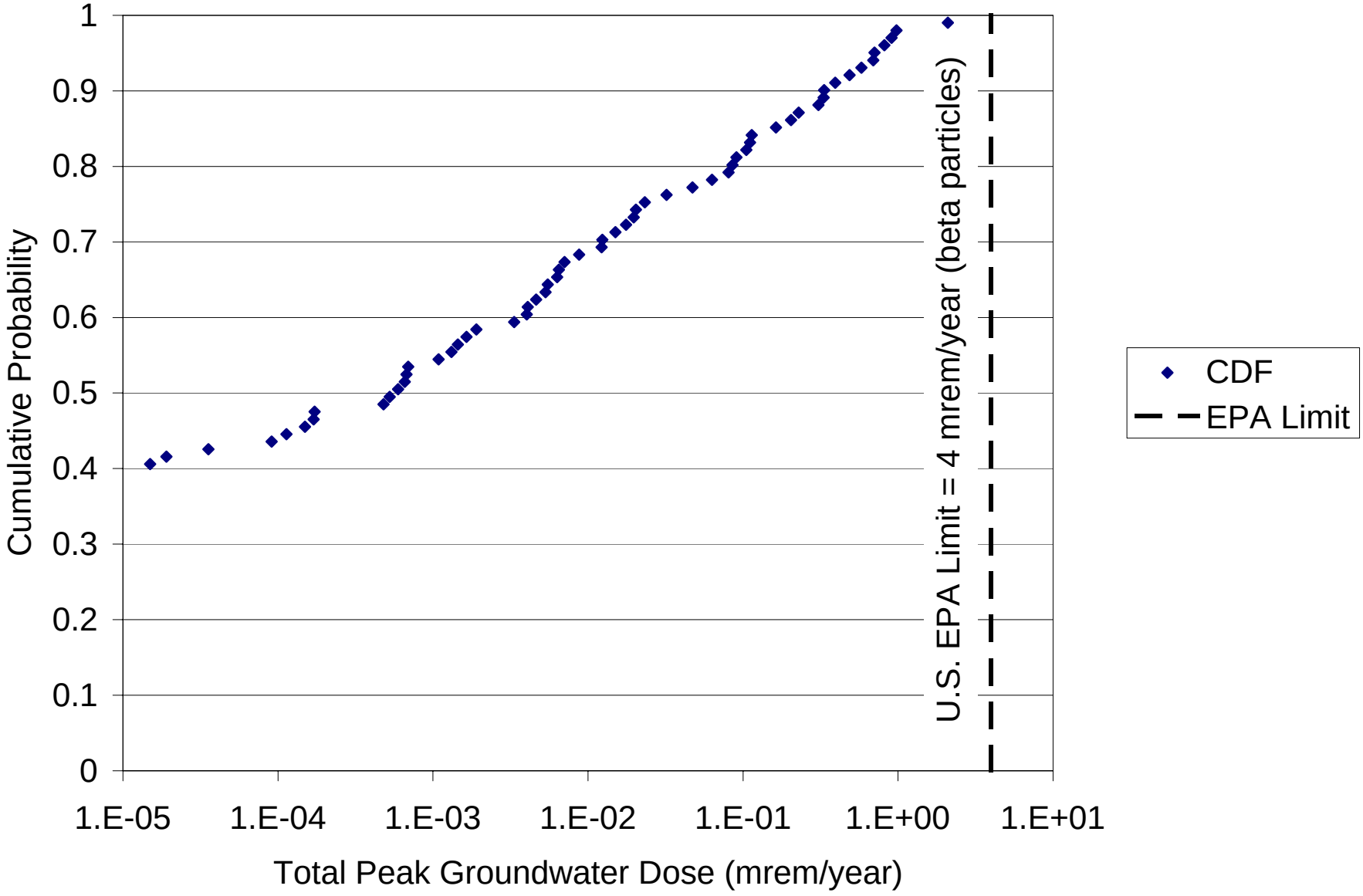
Rn222Flux.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of RA226 (pCi/yr)	yr
Sr90Flux.all.Vadose	vad3 total constituent flux peak for SR90 (pCi/yr)	yr
Th232Flux.all.Vadose	vad3 total constituent flux peak for TH232 (pCi/yr)	yr
H3Flux.all.Vadose	vad3 total constituent flux peak for THO (pCi/yr)	yr
U238Flux.all.Vadose	vad3 total constituent flux peak for U238 (pCi/yr)	yr
U234Flux2.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of U238 (pCi/yr)	yr
Rn222Flx2.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of U238 (pCi/yr)	yr

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	U238Kd1	Darcy1
1	3.94E+02	6.77E+03	6.37E+03	1.70E+00	8.99E-02	3.73E-01	1.15E+01	9.98E-01	4.82E-02
2	4.79E+02	9.04E+03	4.14E+03	1.67E+00	9.28E-02	3.65E-01	1.05E+01	1.27E+00	7.57E-02
3	7.05E+02	8.27E+03	8.77E+03	1.48E+00	7.93E-02	3.24E-01	9.62E+00	7.93E+00	6.50E-02
4	6.65E+02	4.45E+03	7.81E+03	1.50E+00	1.11E-01	4.22E-01	1.60E+01	1.46E+01	8.26E-02
5	7.27E+02	1.18E+04	6.79E+03	1.72E+00	8.37E-02	3.49E-01	1.75E+01	1.03E+00	8.78E-02
6	3.13E+02	1.10E+04	5.90E+03	1.72E+00	7.43E-02	3.62E-01	1.58E+01	7.66E+00	6.27E-02
7	5.93E+02	1.07E+04	4.31E+03	1.63E+00	1.66E-01	4.29E-01	1.27E+01	7.91E-01	9.11E-02
8	5.15E+02	9.00E+03	1.94E+03	1.82E+00	5.76E-02	3.85E-01	1.28E+01	4.34E+00	5.45E-02
9	6.49E+02	4.95E+03	4.70E+03	1.73E+00	8.42E-02	4.13E-01	1.37E+01	2.10E+00	8.03E-02
10	5.81E+02	1.11E+04	8.90E+03	1.51E+00	7.35E-02	4.25E-01	1.41E+01	9.25E-01	5.26E-02
11	6.78E+02	1.22E+04	8.85E+03	1.78E+00	1.03E-01	3.80E-01	1.73E+01	4.63E-01	8.10E-02
12	4.02E+02	6.25E+03	2.32E+03	1.66E+00	7.02E-02	4.38E-01	1.68E+01	4.62E+00	4.67E-02
13	3.62E+02	9.24E+03	1.87E+03	1.71E+00	1.28E-01	4.27E-01	9.77E+00	6.35E+00	9.25E-02
14	8.22E+02	1.42E+03	5.07E+03	1.61E+00	1.09E-01	3.39E-01	1.72E+01	2.37E+00	6.71E-02
15	4.51E+02	7.36E+03	4.87E+03	1.79E+00	7.62E-02	3.83E-01	1.26E+01	1.32E+01	5.01E-02
16	4.09E+02	1.04E+04	7.97E+03	1.58E+00	1.16E-01	4.08E-01	1.02E+01	1.28E+01	8.66E-02
17	3.66E+02	1.10E+03	3.42E+03	1.79E+00	6.04E-02	4.00E-01	1.75E+01	6.18E+00	6.11E-02
18	4.38E+02	4.58E+03	7.65E+03	1.56E+00	6.56E-02	3.96E-01	1.85E+01	3.29E+00	4.52E-02
19	3.87E+02	1.68E+03	8.22E+03	1.83E+00	1.17E-01	3.76E-01	1.50E+01	1.14E+00	9.81E-02
20	4.94E+02	7.80E+03	4.80E+03	1.75E+00	1.05E-01	3.03E-01	1.18E+01	4.77E+00	7.25E-02
21	3.49E+02	1.29E+04	4.43E+03	1.84E+00	8.75E-02	3.67E-01	1.35E+01	8.32E+00	9.40E-02
22	7.60E+02	2.31E+03	6.48E+03	1.73E+00	1.01E-01	4.12E-01	1.61E+01	1.54E+00	5.96E-02
23	4.83E+02	7.16E+03	8.46E+03	1.84E+00	8.68E-02	4.31E-01	1.25E+01	1.93E+00	1.03E-01
24	5.29E+02	2.67E+03	3.06E+03	1.50E+00	9.15E-02	3.22E-01	1.79E+01	3.65E+00	5.88E-02
25	3.17E+02	8.74E+03	8.38E+03	1.52E+00	6.48E-02	3.47E-01	1.64E+01	2.65E+00	5.67E-02
26	4.69E+02	1.02E+04	5.97E+03	1.71E+00	1.24E-01	4.21E-01	1.51E+01	3.10E+00	6.56E-02
27	7.21E+02	5.90E+03	2.11E+03	1.48E+00	6.27E-02	4.17E-01	1.04E+01	2.94E+00	7.85E-02
28	3.70E+02	1.12E+04	3.76E+03	1.64E+00	9.77E-02	3.54E-01	1.71E+01	2.54E+00	7.67E-02
29	7.70E+02	2.14E+03	1.62E+03	1.55E+00	6.70E-02	3.20E-01	1.56E+01	8.96E+00	4.27E-02
30	6.09E+02	2.85E+03	2.82E+03	1.73E+00	1.02E-01	4.40E-01	1.14E+01	1.60E+00	8.45E-02
31	4.65E+02	4.32E+03	7.28E+03	1.76E+00	9.71E-02	3.06E-01	1.44E+01	1.30E+00	8.93E-02
32	6.84E+02	3.95E+03	5.30E+03	1.49E+00	7.77E-02	3.57E-01	1.59E+01	9.69E-01	7.03E-02
33	4.26E+02	9.65E+03	3.39E+03	1.78E+00	1.07E-01	3.28E-01	1.47E+01	1.51E+00	6.86E-02
34	6.62E+02	1.08E+04	4.93E+03	1.63E+00	5.84E-02	3.22E-01	1.49E+01	4.38E-01	5.29E-02
35	4.97E+02	6.92E+03	1.02E+03	1.76E+00	1.14E-01	3.42E-01	1.81E+01	7.04E-01	7.43E-02
36	7.17E+02	2.37E+03	5.91E+02	1.75E+00	5.37E-02	3.16E-01	9.90E+00	1.40E+01	3.77E-02
37	7.96E+02	6.44E+03	7.61E+02	1.71E+00	6.95E-02	4.34E-01	1.23E+01	6.74E+00	3.94E-02
38	3.27E+02	6.63E+03	1.16E+03	1.59E+00	8.10E-02	3.15E-01	1.80E+01	5.08E+00	4.12E-02
39	5.51E+02	4.18E+03	7.83E+03	1.69E+00	5.53E-02	4.08E-01	1.16E+01	5.39E-01	4.44E-02
40	6.23E+02	1.24E+03	6.07E+03	1.67E+00	1.30E-01	3.93E-01	1.45E+01	2.04E+00	9.61E-02
41	7.74E+02	7.56E+03	5.13E+03	1.69E+00	1.20E-01	4.30E-01	9.75E+00	8.60E+00	1.04E-01
42	7.40E+02	2.50E+03	4.26E+02	1.68E+00	1.46E-01	3.43E-01	1.01E+01	1.40E+00	1.10E-01
43	5.11E+02	7.34E+03	7.16E+02	1.57E+00	1.18E-01	4.36E-01	1.37E+01	2.26E+00	1.02E-01
44	6.89E+02	1.16E+04	2.34E+03	1.60E+00	1.68E-01	3.75E-01	1.22E+01	5.95E-01	1.00E-01
45	8.15E+02	1.26E+04	6.97E+03	1.57E+00	1.37E-01	3.31E-01	1.65E+01	2.62E+00	9.78E-02
46	5.96E+02	3.21E+03	5.54E+03	1.81E+00	1.40E-01	3.49E-01	1.63E+01	4.55E-01	1.16E-01
47	5.25E+02	3.29E+03	5.02E+02	1.74E+00	1.56E-01	3.16E-01	1.67E+01	2.84E+00	1.20E-01
48	4.15E+02	5.29E+02	4.51E+03	1.67E+00	1.80E-01	4.33E-01	1.33E+01	3.74E+00	1.18E-01
49	6.17E+02	5.51E+03	9.01E+02	1.81E+00	1.27E-01	3.11E-01	1.24E+01	4.09E+00	1.30E-01
50	5.05E+02	4.83E+03	5.20E+03	1.58E+00	1.32E-01	3.89E-01	1.00E+01	2.13E+00	1.08E-01
51	3.54E+02	9.35E+03	5.46E+03	1.62E+00	1.22E-01	4.02E-01	1.55E+01	4.07E-01	1.07E-01
52	7.91E+02	5.21E+03	2.64E+03	1.70E+00	1.61E-01	3.60E-01	1.83E+01	6.42E-01	1.20E-01
53	7.99E+02	7.92E+03	8.68E+03	1.63E+00	1.52E-01	4.15E-01	1.52E+01	4.06E+00	1.12E-01
54	5.40E+02	1.14E+04	1.77E+03	1.77E+00	1.77E-01	3.82E-01	1.34E+01	6.28E-01	1.27E-01
55	5.44E+02	3.67E+03	6.64E+03	1.83E+00	1.48E-01	3.63E-01	1.31E+01	1.39E+01	1.35E-01

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	U238Kd1	Darcy1
56	7.46E+02	1.28E+04	3.71E+03	1.70E+00	1.75E-01	4.14E-01	9.52E+00	1.77E+00	1.24E-01
57	6.28E+02	3.06E+03	2.21E+03	1.49E+00	1.63E-01	4.18E-01	1.11E+01	4.22E-01	1.14E-01
58	7.85E+02	1.02E+03	5.73E+03	1.83E+00	1.44E-01	4.25E-01	1.59E+01	3.47E+00	1.45E-01
59	3.81E+02	8.45E+03	1.99E+03	1.47E+00	1.42E-01	3.58E-01	1.19E+01	1.20E+00	1.12E-01
60	3.77E+02	2.97E+03	3.30E+03	1.55E+00	1.31E-01	3.46E-01	1.21E+01	8.81E-01	1.22E-01
61	6.04E+02	1.78E+03	5.61E+03	1.59E+00	1.13E-01	3.97E-01	1.47E+01	7.37E-01	1.25E-01
62	8.07E+02	1.14E+04	3.49E+03	1.79E+00	1.54E-01	4.10E-01	1.79E+01	5.05E+00	1.40E-01
63	4.04E+02	1.47E+03	3.17E+03	1.68E+00	1.47E-01	3.38E-01	1.07E+01	5.23E-01	1.38E-01
64	4.72E+02	8.78E+03	6.69E+03	1.75E+00	1.50E-01	3.09E-01	1.08E+01	5.88E+00	1.36E-01
65	6.68E+02	3.57E+03	2.60E+03	1.80E+00	1.76E-01	3.84E-01	1.84E+01	7.29E+00	1.53E-01
66	3.40E+02	3.39E+03	7.52E+03	1.54E+00	1.68E-01	3.87E-01	1.63E+01	7.11E+00	1.28E-01
67	4.45E+02	1.20E+04	1.36E+03	1.84E+00	2.00E-01	3.55E-01	9.41E+00	8.91E-01	1.52E-01
68	7.00E+02	7.70E+02	8.08E+03	1.66E+00	1.85E-01	3.08E-01	1.13E+01	1.08E+00	1.47E-01
69	6.15E+02	1.25E+04	1.63E+03	1.49E+00	9.56E-02	3.91E-01	1.34E+01	3.80E+00	1.32E-01
70	8.11E+02	1.19E+04	8.57E+03	1.74E+00	1.87E-01	3.78E-01	1.41E+01	1.20E+01	1.45E-01
71	7.54E+02	1.91E+03	4.23E+03	1.51E+00	1.64E-01	3.30E-01	1.70E+01	4.51E+00	1.43E-01
72	4.57E+02	8.11E+03	9.11E+03	1.65E+00	1.90E-01	4.37E-01	1.05E+01	5.60E+00	1.41E-01
73	4.19E+02	8.56E+03	4.09E+03	1.85E+00	1.95E-01	3.35E-01	1.40E+01	1.74E+00	1.61E-01
74	5.22E+02	6.47E+02	7.59E+03	1.81E+00	2.03E-01	4.20E-01	1.10E+01	5.84E+00	1.78E-01
75	6.32E+02	1.05E+04	8.09E+03	1.56E+00	1.99E-01	3.07E-01	1.09E+01	5.67E-01	1.33E-01
76	7.44E+02	8.24E+02	8.26E+03	1.60E+00	1.56E-01	3.37E-01	9.38E+00	1.67E+00	1.57E-01
77	5.86E+02	5.33E+03	6.27E+03	1.61E+00	1.93E-01	3.68E-01	1.12E+01	1.03E+01	1.49E-01
78	4.29E+02	8.09E+03	5.82E+03	1.80E+00	2.11E-01	3.12E-01	1.38E+01	9.81E+00	1.65E-01
79	6.53E+02	6.49E+03	7.24E+03	1.68E+00	1.58E-01	3.05E-01	1.30E+01	1.17E+00	1.54E-01
80	7.13E+02	9.79E+03	7.40E+03	1.82E+00	2.09E-01	4.42E-01	1.28E+01	3.19E+00	1.64E-01
81	6.95E+02	5.05E+03	3.94E+03	1.64E+00	1.91E-01	3.78E-01	1.32E+01	7.65E-01	1.58E-01
82	5.74E+02	4.72E+03	3.59E+02	1.53E+00	1.72E-01	4.42E-01	1.66E+01	1.88E+00	1.60E-01
83	7.34E+02	1.08E+04	1.41E+03	1.77E+00	1.38E-01	4.05E-01	1.17E+01	5.03E-01	1.75E-01
84	5.75E+02	6.18E+03	2.46E+03	1.65E+00	1.81E-01	3.51E-01	1.57E+01	8.20E-01	1.62E-01
85	5.61E+02	5.64E+03	9.38E+02	1.54E+00	2.06E-01	3.28E-01	1.07E+01	6.95E+00	1.71E-01
86	3.34E+02	4.07E+03	7.18E+03	1.48E+00	1.72E-01	3.18E-01	1.03E+01	2.35E+00	1.50E-01
87	7.62E+02	6.03E+03	3.58E+03	1.65E+00	2.06E-01	3.71E-01	1.20E+01	8.27E-01	1.67E-01
88	3.89E+02	3.94E+02	2.72E+03	1.76E+00	2.24E-01	4.05E-01	1.53E+01	2.79E+00	1.92E-01
89	5.38E+02	3.83E+03	9.03E+03	1.77E+00	2.17E-01	3.33E-01	1.82E+01	1.37E+00	1.85E-01
90	6.77E+02	9.45E+03	1.20E+03	1.54E+00	2.03E-01	3.34E-01	1.42E+01	9.25E+00	1.85E-01
91	3.08E+02	7.01E+03	2.97E+03	1.64E+00	2.16E-01	3.44E-01	1.77E+01	1.21E+01	1.88E-01
92	5.55E+02	1.24E+04	1.51E+03	1.50E+00	2.23E-01	3.90E-01	1.46E+01	1.11E+01	1.77E-01
93	6.37E+02	1.21E+04	4.62E+03	1.57E+00	1.34E-01	3.64E-01	1.54E+01	6.79E-01	1.69E-01
94	3.21E+02	2.04E+03	6.85E+03	1.52E+00	1.96E-01	4.44E-01	1.48E+01	4.81E-01	1.73E-01
95	7.79E+02	9.62E+03	6.21E+03	1.62E+00	1.83E-01	3.72E-01	1.85E+01	1.08E+01	1.80E-01
96	4.88E+02	1.01E+04	5.38E+03	1.53E+00	2.21E-01	3.94E-01	1.76E+01	9.58E+00	1.74E-01
97	4.46E+02	7.64E+03	3.88E+03	1.56E+00	2.20E-01	3.25E-01	1.69E+01	6.00E-01	1.82E-01
98	3.41E+02	9.99E+03	6.51E+03	1.61E+00	1.88E-01	3.98E-01	1.18E+01	1.46E+00	1.82E-01
99	5.66E+02	1.30E+04	2.93E+03	1.59E+00	2.13E-01	4.03E-01	1.73E+01	5.39E+00	1.90E-01
100	6.46E+02	5.74E+03	7.04E+03	1.52E+00	2.14E-01	3.53E-01	1.39E+01	1.13E+01	1.91E-01
Max Value:	**8.22E+02**	**1.30E+04**	**9.11E+03**	**1.85E+00**	**2.24E-01**	**4.44E-01**	**1.85E+01**	**1.46E+01**	**1.92E-01**
Median Value:	**5.64E+02**	**6.70E+03**	**4.75E+03**	**1.66E+00**	**1.39E-01**	**3.74E-01**	**1.39E+01**	**2.45E+00**	**1.15E-01**

realizations	KsatVad	**Total Groundwater Dose (mrem/year)**	**CDF**	EPA Limit (millirem/year)	CDF
1	7.74E+01	9.94E-20	0.009901	4.00E+00	0.00E+00
2	1.03E+01	1.21E-19	0.019802	4.00E+00	1.00E+00
3	3.71E+01	1.24E-19	0.029703		
4	1.46E+01	1.39E-19	0.039604		
5	1.06E+01	1.62E-19	0.049505		
6	1.40E+00	1.68E-19	0.059406		
7	8.43E+01	1.85E-19	0.069307		
8	3.00E+01	2.08E-19	0.079208		
9	2.07E+00	2.10E-19	0.089109		
10	4.38E+00	2.13E-19	0.09901		
11	1.66E+00	2.17E-19	0.108911		
12	7.60E+00	2.69E-19	0.118812		
13	1.27E+01	3.03E-19	0.128713		
14	2.39E+01	3.08E-19	0.138614		
15	3.89E+01	3.09E-19	0.148515		
16	1.24E+02	3.09E-19	0.158416		
17	9.82E+00	3.20E-19	0.168317		
18	7.92E-01	3.88E-19	0.178218		
19	6.98E+00	4.19E-19	0.188119		
20	5.65E+00	4.66E-19	0.19802		
21	1.57E+01	4.85E-19	0.207921		
22	1.61E+02	5.45E-19	0.217822		
23	5.48E+00	5.48E-19	0.227723		
24	8.51E-01	5.90E-19	0.237624		
25	8.56E+00	6.41E-19	0.247525		
26	2.23E+00	8.90E-19	0.257426		
27	3.56E+00	9.16E-19	0.267327		
28	3.28E+00	9.77E-19	0.277228		
29	6.61E+00	1.28E-18	0.287129		
30	2.71E+00	1.28E-18	0.29703		
31	2.96E+00	1.66E-18	0.306931		
32	5.09E+01	1.80E-18	0.316832		
33	2.57E+00	1.81E-18	0.326733		
34	1.89E+01	3.79E-18	0.336634		
35	2.93E+01	4.96E-18	0.346535		
36	3.17E+01	5.87E-18	0.356436		
37	2.26E+01	1.65E-17	0.366337		
38	2.15E+01	9.08E-17	0.376238		
39	2.77E+01	1.42E-16	0.386139		
40	8.83E+00	2.74E-06	0.39604		
41	4.02E+01	1.50E-05	0.405941		
42	4.98E-01	1.91E-05	0.415842		
43	7.18E-01	3.56E-05	0.425743		
44	1.12E+00	9.11E-05	0.435644		
45	1.78E+00	1.13E-04	0.445545		
46	4.36E+01	1.49E-04	0.455446		
47	1.39E+02	1.70E-04	0.465347		
48	1.13E+01	1.72E-04	0.475248		
49	9.15E+00	4.79E-04	0.485149		
50	1.49E+00	5.25E-04	0.49505		
51	2.53E+01	5.95E-04	0.50495		
52	1.20E+01	6.58E-04	0.514851		
53	6.27E+01	6.74E-04	0.524752		
54	9.81E+01	6.91E-04	0.534653		
55	1.21E+00	1.09E-03	0.544554		

realizations		KsatVad	**Total Groundwater Dose (mrem/year)**	**CDF**	EPA Limit (millirem/year)	CDF
	56	4.19E+00	1.31E-03	0.554455		
	57	3.19E+00	1.44E-03	0.564356		
	58	1.01E+00	1.65E-03	0.574257		
	59	3.59E+01	1.90E-03	0.584158		
	60	4.71E+00	3.33E-03	0.594059		
	61	2.05E+01	4.02E-03	0.60396		
	62	5.78E+01	4.08E-03	0.613861		
	63	6.28E+00	4.63E-03	0.623762		
	64	9.27E+01	5.32E-03	0.633663		
	65	1.86E+01	5.49E-03	0.643564		
	66	2.86E+00	6.32E-03	0.653465		
	67	9.29E+00	6.49E-03	0.663366		
	68	1.65E+01	7.06E-03	0.673267		
	69	5.04E+00	8.78E-03	0.683168		
	70	1.73E+01	1.22E-02	0.693069		
	71	3.32E+01	1.24E-02	0.70297		
	72	5.54E-01	1.50E-02	0.712871		
	73	8.10E+00	1.76E-02	0.722772		
	74	7.08E+00	1.97E-02	0.732673		
	75	5.24E+00	2.04E-02	0.742574		
	76	1.11E+01	2.33E-02	0.752475		
	77	1.68E+01	3.22E-02	0.762376		
	78	3.82E+00	4.71E-02	0.772277		
	79	1.23E+01	6.31E-02	0.782178		
	80	1.52E+01	8.06E-02	0.792079		
	81	1.10E+02	8.54E-02	0.80198		
	82	1.41E+01	9.06E-02	0.811881		
	83	2.02E+00	1.05E-01	0.821782		
	84	6.57E+01	1.11E-01	0.831683		
	85	5.83E+00	1.14E-01	0.841584		
	86	1.99E+01	1.63E-01	0.851485		
	87	2.41E+00	2.04E-01	0.861386		
	88	7.66E+00	2.28E-01	0.871287		
	89	4.66E+00	3.07E-01	0.881188		
	90	1.65E+00	3.31E-01	0.891089		
	91	4.86E+01	3.33E-01	0.90099		
	92	6.22E+00	3.93E-01	0.910891		
	93	5.31E+01	4.86E-01	0.920792		
	94	4.59E+01	5.80E-01	0.930693		
	95	3.91E+00	6.92E-01	0.940594		
	96	2.29E+01	7.06E-01	0.950495		
	97	3.41E+00	8.15E-01	0.960396		
	98	6.88E+01	9.07E-01	0.970297		
	99	1.33E+01	9.76E-01	0.980198		
	100	2.60E+01	2.10E+00	0.990099		
Max Value:		**1.61E+02**	**1.912445574**			
Median Value:		**1.05E+01**	**0.00014886**			


1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Cumulative Probability
1.E-05
1.E-04
1.E-03
1.E-02
1.E-01
1.E+00
1.E+01
Total Peak Groundwater Dose (mrem/year)
U.S. EPA Limit = 4 mrem/year (beta particles)
CDF
EPA Limit

sen14 177
2
Sensitivity/Uncertainty Module for FRAMES
Beta Test version
56 15

ThickSrc	Thickness of waste zone from src2 (cm)
Length	Length of waste zone from src2 (cm)
Width	Width of waste zone from src2 (cm)
rhob	Bulk density of soil from src2 (g/cm^3)
MoistSrc	Moisture content from src2 (fraction)
porosity	Total porosity from src2 (fraction)
U238Inv	Inventory quantity, URANIUM-238 from src2 (Ci)
AmInv	Inventory quantity, AMERICIUM-241 from src2 (Ci)
CsInv	Inventory quantity, CESIUM-137+D from src2 (Ci)
CoInv	Inventory quantity, COBALT-60 from src2 (Ci)
Pu238Inv	Inventory quantity, PLUTONIUM-238 from src2 (Ci)
Pu239Inv	Inventory quantity, PLUTONIUM-239 from src2 (Ci)
Ra226Inv	Inventory quantity, RADIUM-226 from src2 (Ci)
SrInv	Inventory quantity, STRONTIUM-90 from src2 (Ci)
ThInv	Inventory quantity, THORIUM-232 from src2 (Ci)
H3Inv	Inventory quantity, TRITIUM (tritiated water) from src2 (Ci)
U238Kd1	Equilibrium coefficients (kd), URANIUM-238, time # 1 from sr (ml/g)
U238Kd2	Equilibrium coefficients (kd), URANIUM-238, time # 2 from src2 (ml/g)
U234Kd1	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd2	Equilibrium coefficients (kd), URANIUM-234, time # 1 from src2 (ml/g)
U234Kd3	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
U234Kd4	Equilibrium coefficients (kd), URANIUM-234, time # 2 from src2 (ml/g)
Ra226Kd1	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd	Equilibrium coefficients (kd), RADIUM-226, time # 1 from src (ml/g)
Ra226Kd2	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
Ra226Kd3	Equilibrium coefficients (kd), RADIUM-226, time # 2 from src2 (ml/g)
AmKd1	Equilibrium coefficients (kd), AMERICIUM-241, time # 1 from (ml/g)
AmKd2	Equilibrium coefficients (kd), AMERICIUM-241, time # 2 from src2 (ml/g)
CsKd1	Equilibrium coefficients (kd), CESIUM-137+D, time # 1 from s (ml/g)
CsKd2	Equilibrium coefficients (kd), CESIUM-137+D, time # 2 from src2 (ml/g)
CoKd1	Equilibrium coefficients (kd), COBALT-60, time # 1 from src2 (ml/g)
CoKd2	Equilibrium coefficients (kd), COBALT-60, time # 2 from src2 (ml/g)
Pu238Kd1	Equilibrium coefficients (kd), PLUTONIUM-238, time # 1 from (ml/g)
Pu238Kd2	Equilibrium coefficients (kd), PLUTONIUM-238, time # 2 from src2 (ml/g)
Pu239Kd1	Equilibrium coefficients (kd), PLUTONIUM-239, time # 1 from (ml/g)
Pu239Kd2	Equilibrium coefficients (kd), PLUTONIUM-239, time # 2 from src2 (ml/g)
SrKd1	Equilibrium coefficients (kd), STRONTIUM-90, time # 1 from s (ml/g)
SrKd2	Equilibrium coefficients (kd), STRONTIUM-90, time # 2 from src2 (ml/g)
ThKd1	Equilibrium coefficients (kd), THORIUM-232, time # 1 from sr (ml/g)
ThKd2	Equilibrium coefficients (kd), THORIUM-232, time # 2 from src2 (ml/g)
Darcy1	Darcy Vadose rate, time # 1 from src2 (cm/yr)
Darcy2	Darcy Vadose rate, time # 2 from src2 (cm/yr)
porVad	Soil total porosity from vad3 (percent)
KsatVad	Soil hydraulic conductivity from vad3 (cm/day)
rhobVad	Soil bulk density from vad3 (g/cm^3)
AmKdVad	Soil equilibrium coefficient, AMERICIUM-241 from vad3 (ml/g)
CsKdVad	Soil equilibrium coefficient, CESIUM-137+D from vad3 (ml/g)

CoKdVad	Soil equilibrium coefficient, COBALT-60 from vad3 (ml/g)	
Pu238KdVa	Soil equilibrium coefficient, PLUTONIUM-238 from vad3 (ml/g)	
U234VadKd	Soil equilibrium coefficient, URANIUM-234 from vad3 (ml/g)	
Pu239KdVa	Soil equilibrium coefficient, PLUTONIUM-239 from vad3 (ml/g)	
RaKdVad	Soil equilibrium coefficient, RADIUM-226 from vad3 (ml/g)	
U234KdVad	Soil equilibrium coefficient, LEAD-210 from vad3 (ml/g)	
SrKdVad	Soil equilibrium coefficient, STRONTIUM-90 from vad3 (ml/g)	
ThKdVad	Soil equilibrium coefficient, THORIUM-232 from vad3 (ml/g)	
U238KdVad	Soil equilibrium coefficient, TRITIUM (tritiated water) from vad3 (ml/g)	
waterflow.all.Vadose	vad3 water flux peak (m^3/yr)	yr
Am241Flux.all.Vadose	vad3 total constituent flux peak for AM241 (pCi/yr)	yr
C137Flux.all.Vadose	vad3 total constituent flux peak for CS137 (pCi/yr)	yr
Co60Flux.all.Vadose	vad3 total constituent flux peak for CO60 (pCi/yr)	yr
Pu238Flux.all.Vadose	vad3 total constituent flux peak for PU238 (pCi/yr)	yr
U234Flux.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of PU238 (pCi/yr)	yr
Pu239Flux.all.Vadose	vad3 total constituent flux peak for PU239 (pCi/yr)	yr
Ra226Flux.all.Vadose	vad3 total constituent flux peak for RA226 (pCi/yr)	yr

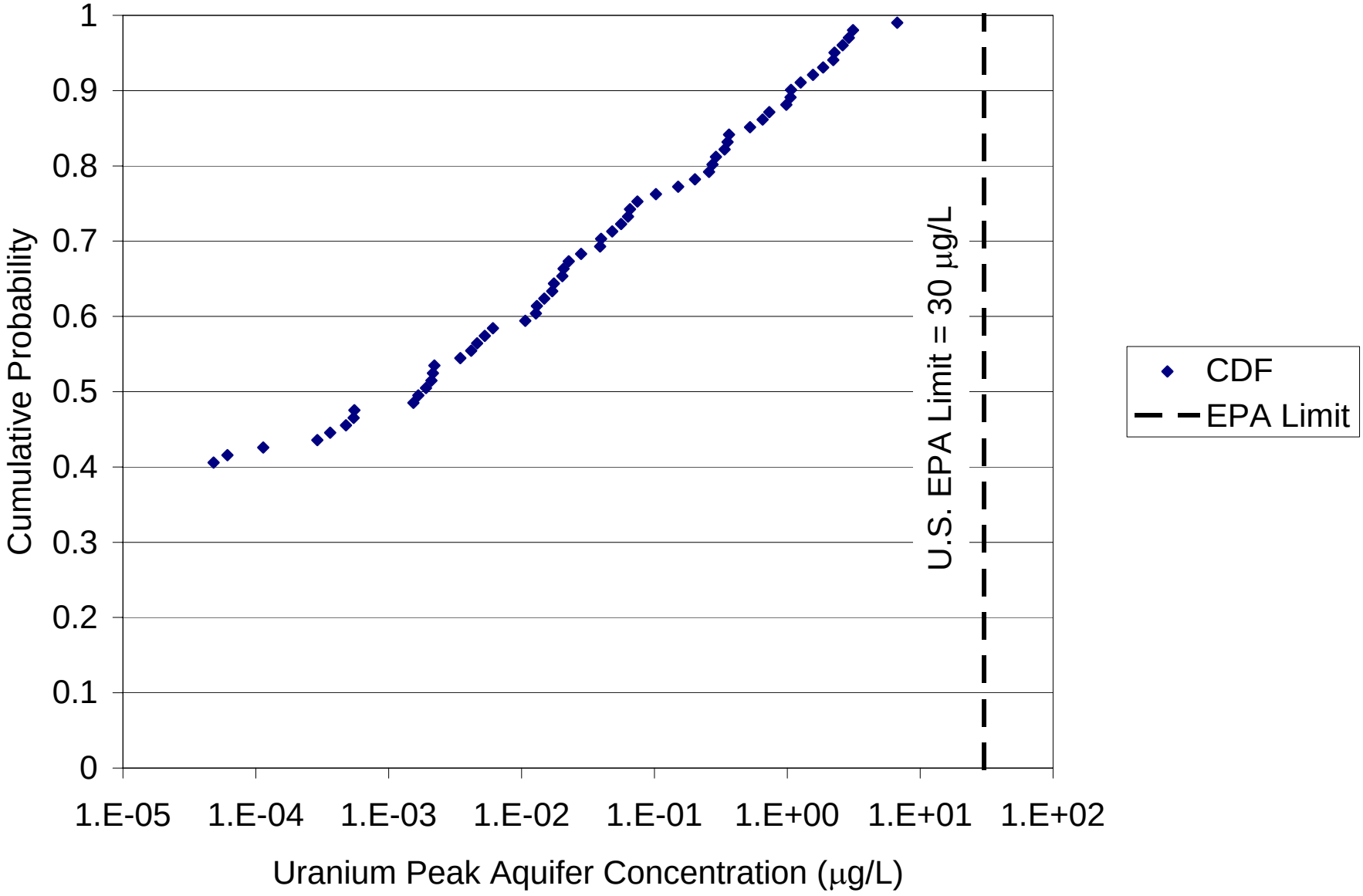
Rn222Flux.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of RA226 (pCi/yr)	yr
Sr90Flux.all.Vadose	vad3 total constituent flux peak for SR90 (pCi/yr)	yr
Th232Flux.all.Vadose	vad3 total constituent flux peak for TH232 (pCi/yr)	yr
H3Flux.all.Vadose	vad3 total constituent flux peak for THO (pCi/yr)	yr
U238Flux.all.Vadose	vad3 total constituent flux peak for U238 (pCi/yr)	yr
U234Flux2.all.Vadose	vad3 total constituent flux peak for U234 prodgeny of U238 (pCi/yr)	yr
Rn222Flx2.all.Vadose	vad3 total constituent flux peak for RN222 prodgeny of U238 (pCi/yr)	yr

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	U238Kd1	Darcy1
1	6.78E+02	1.22E+04	8.85E+03	1.78E+00	1.03E-01	3.80E-01	1.73E+01	4.63E-01	8.10E-02
2	4.09E+02	1.04E+04	7.97E+03	1.58E+00	1.16E-01	4.08E-01	1.02E+01	1.28E+01	8.66E-02
3	7.27E+02	1.18E+04	6.79E+03	1.72E+00	8.37E-02	3.49E-01	1.75E+01	1.03E+00	8.78E-02
4	4.83E+02	7.16E+03	8.46E+03	1.84E+00	8.68E-02	4.31E-01	1.25E+01	1.93E+00	1.03E-01
5	3.49E+02	1.29E+04	4.43E+03	1.84E+00	8.75E-02	3.67E-01	1.35E+01	8.32E+00	9.40E-02
6	5.81E+02	1.11E+04	8.90E+03	1.51E+00	7.35E-02	4.25E-01	1.41E+01	9.25E-01	5.26E-02
7	7.05E+02	8.27E+03	8.77E+03	1.48E+00	7.93E-02	3.24E-01	9.62E+00	7.93E+00	6.50E-02
8	5.93E+02	1.07E+04	4.31E+03	1.63E+00	1.66E-01	4.29E-01	1.27E+01	7.91E-01	9.11E-02
9	3.17E+02	8.74E+03	8.38E+03	1.52E+00	6.48E-02	3.47E-01	1.64E+01	2.65E+00	5.67E-02
10	3.13E+02	1.10E+04	5.90E+03	1.72E+00	7.43E-02	3.62E-01	1.58E+01	7.66E+00	6.27E-02
11	4.69E+02	1.02E+04	5.97E+03	1.71E+00	1.24E-01	4.21E-01	1.51E+01	3.10E+00	6.56E-02
12	3.70E+02	1.12E+04	3.76E+03	1.64E+00	9.77E-02	3.54E-01	1.71E+01	2.54E+00	7.67E-02
13	6.65E+02	4.45E+03	7.81E+03	1.50E+00	1.11E-01	4.22E-01	1.60E+01	1.46E+01	8.26E-02
14	4.79E+02	9.04E+03	4.14E+03	1.67E+00	9.28E-02	3.65E-01	1.05E+01	1.27E+00	7.57E-02
15	6.62E+02	1.08E+04	4.93E+03	1.63E+00	5.84E-02	3.22E-01	1.49E+01	4.38E-01	5.29E-02
16	4.65E+02	4.32E+03	7.28E+03	1.76E+00	9.71E-02	3.06E-01	1.44E+01	1.30E+00	8.93E-02
17	4.94E+02	7.80E+03	4.80E+03	1.75E+00	1.05E-01	3.03E-01	1.18E+01	4.77E+00	7.25E-02
18	4.26E+02	9.65E+03	3.39E+03	1.78E+00	1.07E-01	3.28E-01	1.47E+01	1.51E+00	6.86E-02
19	3.94E+02	6.77E+03	6.37E+03	1.70E+00	8.99E-02	3.73E-01	1.15E+01	9.98E-01	4.82E-02
20	6.49E+02	4.95E+03	4.70E+03	1.73E+00	8.42E-02	4.13E-01	1.37E+01	2.10E+00	8.03E-02
21	4.51E+02	7.36E+03	4.87E+03	1.79E+00	7.62E-02	3.83E-01	1.26E+01	1.32E+01	5.01E-02
22	3.62E+02	9.24E+03	1.87E+03	1.71E+00	1.28E-01	4.27E-01	9.77E+00	6.35E+00	9.25E-02
23	4.38E+02	4.58E+03	7.65E+03	1.56E+00	6.56E-02	3.96E-01	1.85E+01	3.29E+00	4.52E-02
24	6.84E+02	3.95E+03	5.30E+03	1.49E+00	7.77E-02	3.57E-01	1.59E+01	9.69E-01	7.03E-02
25	3.87E+02	1.68E+03	8.22E+03	1.83E+00	1.17E-01	3.76E-01	1.50E+01	1.14E+00	9.81E-02
26	7.21E+02	5.90E+03	2.11E+03	1.48E+00	6.27E-02	4.17E-01	1.04E+01	2.94E+00	7.85E-02
27	5.15E+02	9.00E+03	1.94E+03	1.82E+00	5.76E-02	3.85E-01	1.28E+01	4.34E+00	5.45E-02
28	7.60E+02	2.31E+03	6.48E+03	1.73E+00	1.01E-01	4.12E-01	1.61E+01	1.54E+00	5.96E-02
29	6.09E+02	2.85E+03	2.82E+03	1.73E+00	1.02E-01	4.40E-01	1.14E+01	1.60E+00	8.45E-02
30	4.02E+02	6.25E+03	2.32E+03	1.66E+00	7.02E-02	4.38E-01	1.68E+01	4.62E+00	4.67E-02
31	4.97E+02	6.92E+03	1.02E+03	1.76E+00	1.14E-01	3.42E-01	1.81E+01	7.04E-01	7.43E-02
32	8.22E+02	1.42E+03	5.07E+03	1.61E+00	1.09E-01	3.39E-01	1.72E+01	2.37E+00	6.71E-02
33	5.29E+02	2.67E+03	3.06E+03	1.50E+00	9.15E-02	3.22E-01	1.79E+01	3.65E+00	5.88E-02
34	3.66E+02	1.10E+03	3.42E+03	1.79E+00	6.04E-02	4.00E-01	1.75E+01	6.18E+00	6.11E-02
35	7.96E+02	6.44E+03	7.61E+02	1.71E+00	6.95E-02	4.34E-01	1.23E+01	6.74E+00	3.94E-02
36	7.70E+02	2.14E+03	1.62E+03	1.55E+00	6.70E-02	3.20E-01	1.56E+01	8.96E+00	4.27E-02
37	7.17E+02	2.37E+03	5.91E+02	1.75E+00	5.37E-02	3.16E-01	9.90E+00	1.40E+01	3.77E-02
38	3.27E+02	6.63E+03	1.16E+03	1.59E+00	8.10E-02	3.15E-01	1.80E+01	5.08E+00	4.12E-02
39	5.51E+02	4.18E+03	7.83E+03	1.69E+00	5.53E-02	4.08E-01	1.16E+01	5.39E-01	4.44E-02
40	6.23E+02	1.24E+03	6.07E+03	1.67E+00	1.30E-01	3.93E-01	1.45E+01	2.04E+00	9.61E-02
41	7.74E+02	7.56E+03	5.13E+03	1.69E+00	1.20E-01	4.30E-01	9.75E+00	8.60E+00	1.04E-01
42	8.15E+02	1.26E+04	6.97E+03	1.57E+00	1.37E-01	3.31E-01	1.65E+01	2.62E+00	9.78E-02
43	6.89E+02	1.16E+04	2.34E+03	1.60E+00	1.68E-01	3.75E-01	1.22E+01	5.95E-01	1.00E-01
44	5.96E+02	3.21E+03	5.54E+03	1.81E+00	1.40E-01	3.49E-01	1.63E+01	4.55E-01	1.16E-01
45	3.54E+02	9.35E+03	5.46E+03	1.62E+00	1.22E-01	4.02E-01	1.55E+01	4.07E-01	1.07E-01
46	5.11E+02	7.34E+03	7.16E+02	1.57E+00	1.18E-01	4.36E-01	1.37E+01	2.26E+00	1.02E-01
47	7.99E+02	7.92E+03	8.68E+03	1.63E+00	1.52E-01	4.15E-01	1.52E+01	4.06E+00	1.12E-01
48	5.05E+02	4.83E+03	5.20E+03	1.58E+00	1.32E-01	3.89E-01	1.00E+01	2.13E+00	1.08E-01
49	7.46E+02	1.28E+04	3.71E+03	1.70E+00	1.75E-01	4.14E-01	9.52E+00	1.77E+00	1.24E-01
50	7.40E+02	2.50E+03	4.26E+02	1.68E+00	1.46E-01	3.43E-01	1.01E+01	1.40E+00	1.10E-01
51	5.44E+02	3.67E+03	6.64E+03	1.83E+00	1.48E-01	3.63E-01	1.31E+01	1.39E+01	1.35E-01
52	7.91E+02	5.21E+03	2.64E+03	1.70E+00	1.61E-01	3.60E-01	1.83E+01	6.42E-01	1.20E-01
53	5.40E+02	1.14E+04	1.77E+03	1.77E+00	1.77E-01	3.82E-01	1.34E+01	6.28E-01	1.27E-01
54	6.17E+02	5.51E+03	9.01E+02	1.81E+00	1.27E-01	3.11E-01	1.24E+01	4.09E+00	1.30E-01

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	U238Inv	U238Kd1	Darcy1
55	4.15E+02	5.29E+02	4.51E+03	1.67E+00	1.80E-01	4.33E-01	1.33E+01	3.74E+00	1.18E-01
56	5.25E+02	3.29E+03	5.02E+02	1.74E+00	1.56E-01	3.16E-01	1.67E+01	2.84E+00	1.20E-01
57	4.72E+02	8.78E+03	6.69E+03	1.75E+00	1.50E-01	3.09E-01	1.08E+01	5.88E+00	1.36E-01
58	8.07E+02	1.14E+04	3.49E+03	1.79E+00	1.54E-01	4.10E-01	1.79E+01	5.05E+00	1.40E-01
59	3.81E+02	8.45E+03	1.99E+03	1.47E+00	1.42E-01	3.58E-01	1.19E+01	1.20E+00	1.12E-01
60	8.11E+02	1.19E+04	8.57E+03	1.74E+00	1.87E-01	3.78E-01	1.41E+01	1.20E+01	1.45E-01
61	6.28E+02	3.06E+03	2.21E+03	1.49E+00	1.63E-01	4.18E-01	1.11E+01	4.22E-01	1.14E-01
62	7.85E+02	1.02E+03	5.73E+03	1.83E+00	1.44E-01	4.25E-01	1.59E+01	3.47E+00	1.45E-01
63	3.40E+02	3.39E+03	7.52E+03	1.54E+00	1.68E-01	3.87E-01	1.63E+01	7.11E+00	1.28E-01
64	3.77E+02	2.97E+03	3.30E+03	1.55E+00	1.31E-01	3.46E-01	1.21E+01	8.81E-01	1.22E-01
65	6.04E+02	1.78E+03	5.61E+03	1.59E+00	1.13E-01	3.97E-01	1.47E+01	7.37E-01	1.25E-01
66	4.57E+02	8.11E+03	9.11E+03	1.65E+00	1.90E-01	4.37E-01	1.05E+01	5.60E+00	1.41E-01
67	4.45E+02	1.20E+04	1.36E+03	1.84E+00	2.00E-01	3.55E-01	9.41E+00	8.91E-01	1.52E-01
68	6.32E+02	1.05E+04	8.09E+03	1.56E+00	1.99E-01	3.07E-01	1.09E+01	5.67E-01	1.33E-01
69	6.68E+02	3.57E+03	2.60E+03	1.80E+00	1.76E-01	3.84E-01	1.84E+01	7.29E+00	1.53E-01
70	4.19E+02	8.56E+03	4.09E+03	1.85E+00	1.95E-01	3.35E-01	1.40E+01	1.74E+00	1.61E-01
71	6.15E+02	1.25E+04	1.63E+03	1.49E+00	9.56E-02	3.91E-01	1.34E+01	3.80E+00	1.32E-01
72	7.13E+02	9.79E+03	7.40E+03	1.82E+00	2.09E-01	4.42E-01	1.28E+01	3.19E+00	1.64E-01
73	4.04E+02	1.47E+03	3.17E+03	1.68E+00	1.47E-01	3.38E-01	1.07E+01	5.23E-01	1.38E-01
74	4.29E+02	8.09E+03	5.82E+03	1.80E+00	2.11E-01	3.12E-01	1.38E+01	9.81E+00	1.65E-01
75	5.86E+02	5.33E+03	6.27E+03	1.61E+00	1.93E-01	3.68E-01	1.12E+01	1.03E+01	1.49E-01
76	6.53E+02	6.49E+03	7.24E+03	1.68E+00	1.58E-01	3.05E-01	1.30E+01	1.17E+00	1.54E-01
77	7.00E+02	7.70E+02	8.08E+03	1.66E+00	1.85E-01	3.08E-01	1.13E+01	1.08E+00	1.47E-01
78	7.54E+02	1.91E+03	4.23E+03	1.51E+00	1.64E-01	3.30E-01	1.70E+01	4.51E+00	1.43E-01
79	6.95E+02	5.05E+03	3.94E+03	1.64E+00	1.91E-01	3.78E-01	1.32E+01	7.65E-01	1.58E-01
80	5.22E+02	6.47E+02	7.59E+03	1.81E+00	2.03E-01	4.20E-01	1.10E+01	5.84E+00	1.78E-01
81	3.34E+02	4.07E+03	7.18E+03	1.48E+00	1.72E-01	3.18E-01	1.03E+01	2.35E+00	1.50E-01
82	7.44E+02	8.24E+02	8.26E+03	1.60E+00	1.56E-01	3.37E-01	9.38E+00	1.67E+00	1.57E-01
83	7.34E+02	1.08E+04	1.41E+03	1.77E+00	1.38E-01	4.05E-01	1.17E+01	5.03E-01	1.75E-01
84	7.62E+02	6.03E+03	3.58E+03	1.65E+00	2.06E-01	3.71E-01	1.20E+01	8.27E-01	1.67E-01
85	5.75E+02	6.18E+03	2.46E+03	1.65E+00	1.81E-01	3.51E-01	1.57E+01	8.20E-01	1.62E-01
86	5.38E+02	3.83E+03	9.03E+03	1.77E+00	2.17E-01	3.33E-01	1.82E+01	1.37E+00	1.85E-01
87	6.37E+02	1.21E+04	4.62E+03	1.57E+00	1.34E-01	3.64E-01	1.54E+01	6.79E-01	1.69E-01
88	7.79E+02	9.62E+03	6.21E+03	1.62E+00	1.83E-01	3.72E-01	1.85E+01	1.08E+01	1.80E-01
89	4.88E+02	1.01E+04	5.38E+03	1.53E+00	2.21E-01	3.94E-01	1.76E+01	9.58E+00	1.74E-01
90	3.41E+02	9.99E+03	6.51E+03	1.61E+00	1.88E-01	3.98E-01	1.18E+01	1.46E+00	1.82E-01
91	5.61E+02	5.64E+03	9.38E+02	1.54E+00	2.06E-01	3.28E-01	1.07E+01	6.95E+00	1.71E-01
92	3.08E+02	7.01E+03	2.97E+03	1.64E+00	2.16E-01	3.44E-01	1.77E+01	1.21E+01	1.88E-01
93	5.55E+02	1.24E+04	1.51E+03	1.50E+00	2.23E-01	3.90E-01	1.46E+01	1.11E+01	1.77E-01
94	5.66E+02	1.30E+04	2.93E+03	1.59E+00	2.13E-01	4.03E-01	1.73E+01	5.39E+00	1.90E-01
95	6.77E+02	9.45E+03	1.20E+03	1.54E+00	2.03E-01	3.34E-01	1.42E+01	9.25E+00	1.85E-01
96	4.46E+02	7.64E+03	3.88E+03	1.56E+00	2.20E-01	3.25E-01	1.69E+01	6.00E-01	1.82E-01
97	3.21E+02	2.04E+03	6.85E+03	1.52E+00	1.96E-01	4.44E-01	1.48E+01	4.81E-01	1.73E-01
98	6.46E+02	5.74E+03	7.04E+03	1.52E+00	2.14E-01	3.53E-01	1.39E+01	1.13E+01	1.91E-01
99	5.74E+02	4.72E+03	3.59E+02	1.53E+00	1.72E-01	4.42E-01	1.66E+01	1.88E+00	1.60E-01
100	3.89E+02	3.94E+02	2.72E+03	1.76E+00	2.24E-01	4.05E-01	1.53E+01	2.79E+00	1.92E-01
Max Value:	**8.22E+02**	**1.30E+04**	**9.11E+03**	**1.85E+00**	**2.24E-01**	**4.44E-01**	**1.85E+01**	**1.46E+01**	**1.92E-01**
Median Value:	**5.64E+02**	**6.70E+03**	**4.75E+03**	**1.66E+00**	**1.39E-01**	**3.74E-01**	**1.39E+01**	**2.45E+00**	**1.15E-01**

realizations	KsatVad	**Total Uranium Concentration (micrograms/L)**	**CDF**	EPA Limit (micrograms/L)	CDF
1	1.66E+00	3.18617E-19	0.009901	3.00E+01	0.00E+00
2	1.24E+02	3.8878E-19	0.019802	3.00E+01	1.00E+00
3	1.06E+01	3.97194E-19	0.029703		
4	5.48E+00	4.45535E-19	0.039604		
5	1.57E+01	5.2004E-19	0.049505		
6	4.38E+00	5.36854E-19	0.059406		
7	3.71E+01	5.91621E-19	0.069307		
8	8.43E+01	6.65115E-19	0.079208		
9	8.56E+00	6.72816E-19	0.089109		
10	1.40E+00	6.84203E-19	0.09901		
11	2.23E+00	6.96851E-19	0.108911		
12	3.28E+00	8.6362E-19	0.118812		
13	1.46E+01	9.72288E-19	0.128713		
14	1.03E+01	9.85687E-19	0.138614		
15	1.89E+01	9.89182E-19	0.148515		
16	2.96E+00	9.91291E-19	0.158416		
17	5.65E+00	1.02517E-18	0.168317		
18	2.57E+00	1.24198E-18	0.178218		
19	7.74E+01	1.34175E-18	0.188119		
20	2.07E+00	1.49251E-18	0.19802		
21	3.89E+01	1.5549E-18	0.207921		
22	1.27E+01	1.74671E-18	0.217822		
23	7.92E-01	1.75772E-18	0.227723		
24	5.09E+01	1.8899E-18	0.237624		
25	6.98E+00	2.05563E-18	0.247525		
26	3.56E+00	2.85341E-18	0.257426		
27	3.00E+01	2.93569E-18	0.267327		
28	1.61E+02	3.13004E-18	0.277228		
29	2.71E+00	4.11369E-18	0.287129		
30	7.60E+00	4.1149E-18	0.29703		
31	2.93E+01	5.32958E-18	0.306931		
32	2.39E+01	5.7658E-18	0.316832		
33	8.51E-01	5.8054E-18	0.326733		
34	9.82E+00	1.21547E-17	0.336634		
35	2.26E+01	1.58757E-17	0.346535		
36	6.61E+00	1.88225E-17	0.356436		
37	3.17E+01	5.29931E-17	0.366337		
38	2.15E+01	2.90848E-16	0.376238		
39	2.77E+01	4.55999E-16	0.386139		
40	8.83E+00	8.71603E-06	0.39604		
41	4.02E+01	4.80144E-05	0.405941		
42	1.78E+00	6.11112E-05	0.415842		
43	1.12E+00	0.000113598	0.425743		
44	4.36E+01	0.000290524	0.435644		
45	2.53E+01	0.000362364	0.445545		
46	7.18E-01	0.000476359	0.455446		
47	6.27E+01	0.000543866	0.465347		
48	1.49E+00	0.000550579	0.475248		
49	4.19E+00	0.001533463	0.485149		
50	4.98E-01	0.00167117	0.49505		
51	1.21E+00	0.001906505	0.50495		
52	1.20E+01	0.002097494	0.514851		
53	9.81E+01	0.002151948	0.524752		
54	9.15E+00	0.002206134	0.534653		

realizations	KsatVad	**Total Uranium Concentration (micrograms/L)**	**CDF**	EPA Limit (micrograms/L)	CDF
55	1.13E+01	0.00346344	0.544554		
56	1.39E+02	0.004179165	0.554455		
57	9.27E+01	0.004625838	0.564356		
58	5.78E+01	0.005273762	0.574257		
59	3.59E+01	0.006078535	0.584158		
60	1.73E+01	0.010682452	0.594059		
61	3.19E+00	0.012810355	0.60396		
62	1.01E+00	0.013027114	0.613861		
63	2.86E+00	0.014813811	0.623762		
64	4.71E+00	0.016969255	0.633663		
65	2.05E+01	0.017503941	0.643564		
66	5.54E-01	0.020238148	0.653465		
67	9.29E+00	0.020727409	0.663366		
68	5.24E+00	0.022599386	0.673267		
69	1.86E+01	0.028061255	0.683168		
70	8.10E+00	0.039072509	0.693069		
71	5.04E+00	0.039628253	0.70297		
72	1.52E+01	0.048144253	0.712871		
73	6.28E+00	0.056088646	0.722772		
74	3.82E+00	0.063235534	0.732673		
75	1.68E+01	0.065377585	0.742574		
76	1.23E+01	0.074511969	0.752475		
77	1.65E+01	0.10259547	0.762376		
78	3.32E+01	0.150853107	0.772277		
79	1.10E+02	0.202125202	0.782178		
80	7.08E+00	0.257981094	0.792079		
81	1.99E+01	0.273764768	0.80198		
82	1.11E+01	0.290254263	0.811881		
83	2.02E+00	0.336786715	0.821782		
84	2.41E+00	0.355050062	0.831683		
85	6.57E+01	0.364088864	0.841584		
86	4.66E+00	0.523473948	0.851485		
87	5.31E+01	0.652590075	0.861386		
88	3.91E+00	0.731782944	0.871287		
89	2.29E+01	0.982531622	0.881188		
90	6.88E+01	1.059382404	0.891089		
91	5.83E+00	1.068467172	0.90099		
92	4.86E+01	1.259630982	0.910891		
93	6.22E+00	1.557471434	0.920792		
94	1.33E+01	1.857724878	0.930693		
95	1.65E+00	2.216477215	0.940594		
96	3.41E+00	2.26246024	0.950495		
97	4.59E+01	2.612217292	0.960396		
98	2.60E+01	2.905550612	0.970297		
99	1.41E+01	3.126604051	0.980198		
100	7.66E+00	6.718610541	0.990099		
Max Value:	**1.61E+02**	**6.718610541**			
Median Value:	**1.05E+01**	**0.001788837**			


1
0.9
0.8
0.7
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0.3
0.2
0.1
0
Cumulative Probability
1.E-05
1.E-04
1.E-03
1.E-02
1.E-01
1.E+00
1.E+01
1.E+02
Uranium Peak Aquifer Concentration (μg/L)
U.S. EPA Limit = 30 μg/L
CDF
EPA Limit

File: c:\frames\training_files\source.wff
Module: Source (src2)

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Analytical (see "Analytical Solution" worksheet)			
			Initial Inventory (Ci)	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
			13000			
0	0	0		13000	9.01091E+13	9.71E+10
1	9.71E+10	9.71E+10	Half-life (yrs)	12910.10605	8.9486E+13	9.64E+10
2	1.93E+11	9.64E+10	100	12820.83371	8.88672E+13	9.57E+10
3	2.89E+11	9.57E+10		12732.17868	8.82527E+13	9.51E+10
4	3.84E+11	9.51E+10	decay constant (1/yr)	12644.13669	8.76425E+13	9.44E+10
5	4.79E+11	9.44E+10	0.006931	12556.7035	8.70364E+13	9.38E+10
6	5.72E+11	9.38E+10		12469.87491	8.64346E+13	9.31E+10
7	6.66E+11	9.31E+10	moisture content	12383.64673	8.58369E+13	9.25E+10
8	7.58E+11	9.25E+10	0.095	12298.01481	8.52433E+13	9.18E+10
9	8.5E+11	9.18E+10		12212.97503	8.46539E+13	9.12E+10
10	9.41E+11	9.12E+10	Kd (mL/g)	12128.5233	8.40685E+13	9.06E+10
11	1.03E+12	9.06E+10	230	12044.65554	8.34872E+13	8.99E+10
12	1.12E+12	8.99E+10		11961.36771	8.29099E+13	8.93E+10
13	1.21E+12	8.93E+10	Bulk density (kg/m^3)	11878.65582	8.23366E+13	8.87E+10
14	1.3E+12	8.87E+10	2385	11796.51587	8.17672E+13	8.81E+10
15	1.39E+12	8.81E+10		11714.94392	8.12018E+13	8.75E+10
16	1.48E+12	8.75E+10	R	11633.93603	8.06403E+13	8.69E+10
17	1.56E+12	8.69E+10	5775.211	11553.4883	8.00827E+13	8.63E+10
18	1.65E+12	8.63E+10		11473.59686	7.95289E+13	8.57E+10
19	1.73E+12	8.57E+10	Infiltration (m/yr)	11394.25786	7.8979E+13	8.51E+10
20	1.82E+12	8.51E+10	0.034	11315.46749	7.84328E+13	8.45E+10
21	1.9E+12	8.45E+10		11237.22194	7.78905E+13	8.39E+10
22	1.99E+12	8.39E+10	Thickness (m)	11159.51746	7.73519E+13	8.33E+10
23	2.07E+12	8.33E+10	8.3	11082.3503	7.6817E+13	8.27E+10
24	2.15E+12	8.27E+10		11005.71674	7.62858E+13	8.22E+10
25	2.24E+12	8.22E+10		10929.6131	7.57583E+13	8.16E+10
26	2.32E+12	8.16E+10		10854.0357	7.52344E+13	8.10E+10
27	2.4E+12	8.1E+10		10778.98092	7.47142E+13	8.05E+10
28	2.48E+12	8.05E+10		10704.44514	7.41976E+13	7.99E+10
29	2.56E+12	7.99E+10		10630.42476	7.36845E+13	7.94E+10
30	2.64E+12	7.94E+10		10556.91623	7.3175E+13	7.88E+10
31	2.72E+12	7.88E+10		10483.91601	7.2669E+13	7.83E+10
32	2.8E+12	7.83E+10		10411.42058	7.21665E+13	7.77E+10
33	2.87E+12	7.77E+10		10339.42644	7.16674E+13	7.72E+10
34	2.95E+12	7.72E+10		10267.93014	7.11719E+13	7.67E+10
35	3.03E+12	7.67E+10		10196.92823	7.06797E+13	7.61E+10
36	3.1E+12	7.61E+10		10126.4173	7.0191E+13	7.56E+10
37	3.18E+12	7.56E+10		10056.39394	6.97056E+13	7.51E+10
38	3.25E+12	7.51E+10		9986.854786	6.92236E+13	7.46E+10
39	3.33E+12	7.46E+10		9917.796491	6.87449E+13	7.40E+10
40	3.4E+12	7.4E+10		9849.215728	6.82696E+13	7.35E+10
41	3.48E+12	7.35E+10		9781.109196	6.77975E+13	7.30E+10
42	3.55E+12	7.3E+10		9713.473615	6.73287E+13	7.25E+10
43	3.62E+12	7.25E+10		9646.305728	6.68631E+13	7.20E+10
44	3.69E+12	7.2E+10		9579.602303	6.64007E+13	7.15E+10
45	3.76E+12	7.15E+10		9513.360125	6.59416E+13	7.10E+10
46	3.84E+12	7.1E+10		9447.576008	6.54856E+13	7.05E+10
47	3.91E+12	7.05E+10		9382.246782	6.50328E+13	7.01E+10
48	3.98E+12	7.01E+10		9317.369302	6.45831E+13	6.96E+10
49	4.05E+12	6.96E+10		9252.940445	6.41365E+13	6.91E+10
50	4.11E+12	6.91E+10		9188.957108	6.3693E+13	6.86E+10
51	4.18E+12	6.86E+10		9125.416211	6.32526E+13	6.81E+10

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
52	4.25E+12	6.81E+10		9062.314694	6.28152E+13	6.77E+10
53	4.32E+12	6.77E+10		8999.649519	6.23808E+13	6.72E+10
54	4.39E+12	6.72E+10		8937.417669	6.19495E+13	6.67E+10
55	4.45E+12	6.67E+10		8875.616146	6.15211E+13	6.63E+10
56	4.52E+12	6.63E+10		8814.241977	6.10957E+13	6.58E+10
57	4.59E+12	6.58E+10		8753.292205	6.06732E+13	6.54E+10
58	4.65E+12	6.54E+10		8692.763895	6.02536E+13	6.49E+10
59	4.72E+12	6.49E+10		8632.654134	5.9837E+13	6.45E+10
60	4.78E+12	6.45E+10		8572.960027	5.94232E+13	6.40E+10
61	4.84E+12	6.4E+10		8513.6787	5.90123E+13	6.36E+10
62	4.91E+12	6.36E+10		8454.807299	5.86043E+13	6.31E+10
63	4.97E+12	6.31E+10		8396.342988	5.8199E+13	6.27E+10
64	5.03E+12	6.27E+10		8338.282954	5.77966E+13	6.23E+10
65	5.1E+12	6.23E+10		8280.6244	5.73969E+13	6.18E+10
66	5.16E+12	6.18E+10		8223.36455	5.7E+13	6.14E+10
67	5.22E+12	6.14E+10		8166.500648	5.66059E+13	6.10E+10
68	5.28E+12	6.1E+10		8110.029955	5.62144E+13	6.06E+10
69	5.34E+12	6.06E+10		8053.949752	5.58257E+13	6.01E+10
70	5.4E+12	6.01E+10		7998.257339	5.54397E+13	5.97E+10
71	5.46E+12	5.97E+10		7942.950035	5.50563E+13	5.93E+10
72	5.52E+12	5.93E+10		7888.025176	5.46756E+13	5.89E+10
73	5.58E+12	5.89E+10		7833.480118	5.42975E+13	5.85E+10
74	5.64E+12	5.85E+10		7779.312235	5.39221E+13	5.81E+10
75	5.7E+12	5.81E+10		7725.518918	5.35492E+13	5.77E+10
76	5.75E+12	5.77E+10		7672.097578	5.31789E+13	5.73E+10
77	5.81E+12	5.73E+10		7619.045642	5.28112E+13	5.69E+10
78	5.87E+12	5.69E+10		7566.360556	5.2446E+13	5.65E+10
79	5.92E+12	5.65E+10		7514.039784	5.20834E+13	5.61E+10
80	5.98E+12	5.61E+10		7462.080805	5.17232E+13	5.57E+10
81	6.04E+12	5.57E+10		7410.481118	5.13655E+13	5.53E+10
82	6.09E+12	5.53E+10		7359.238239	5.10104E+13	5.49E+10
83	6.15E+12	5.49E+10		7308.3497	5.06576E+13	5.46E+10
84	6.2E+12	5.46E+10		7257.813051	5.03073E+13	5.42E+10
85	6.25E+12	5.42E+10		7207.62586	4.99595E+13	5.38E+10
86	6.31E+12	5.38E+10		7157.785708	4.9614E+13	5.34E+10
87	6.36E+12	5.34E+10		7108.290198	4.92709E+13	5.31E+10
88	6.41E+12	5.31E+10		7059.136944	4.89302E+13	5.27E+10
89	6.47E+12	5.27E+10		7010.323582	4.85919E+13	5.23E+10
90	6.52E+12	5.23E+10		6961.84776	4.82559E+13	5.20E+10
91	6.57E+12	5.2E+10		6913.707144	4.79222E+13	5.16E+10
92	6.62E+12	5.16E+10		6865.899417	4.75908E+13	5.13E+10
93	6.67E+12	5.13E+10		6818.422276	4.72617E+13	5.09E+10
94	6.73E+12	5.09E+10		6771.273436	4.69349E+13	5.06E+10
95	6.78E+12	5.06E+10		6724.450627	4.66103E+13	5.02E+10
96	6.83E+12	5.02E+10		6677.951593	4.6288E+13	4.99E+10
97	6.88E+12	4.99E+10		6631.774097	4.5968E+13	4.95E+10
98	6.93E+12	4.95E+10		6585.915914	4.56501E+13	4.92E+10
99	6.97E+12	4.92E+10		6540.374836	4.53344E+13	4.88E+10
100	7.02E+12	4.88E+10		6495.148672	4.50209E+13	4.85E+10
101	7.07E+12	4.85E+10		6450.235243	4.47096E+13	4.82E+10
102	7.12E+12	4.82E+10		6405.632387	4.44005E+13	4.78E+10
103	7.17E+12	4.78E+10		6361.337955	4.40934E+13	4.75E+10
104	7.22E+12	4.75E+10		6317.349817	4.37885E+13	4.72E+10
105	7.26E+12	4.72E+10		6273.665852	4.34857E+13	4.68E+10
106	7.31E+12	4.68E+10		6230.283959	4.3185E+13	4.65E+10

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
107	7.36E+12	4.65E+10		6187.202048	4.28864E+13	4.62E+10
108	7.4E+12	4.62E+10		6144.418045	4.25899E+13	4.59E+10
109	7.45E+12	4.59E+10		6101.92989	4.22954E+13	4.56E+10
110	7.49E+12	4.56E+10		6059.735537	4.20029E+13	4.52E+10
111	7.54E+12	4.52E+10		6017.832954	4.17124E+13	4.49E+10
112	7.58E+12	4.49E+10		5976.220125	4.1424E+13	4.46E+10
113	7.63E+12	4.46E+10		5934.895045	4.11376E+13	4.43E+10
114	7.67E+12	4.43E+10		5893.855725	4.08531E+13	4.40E+10
115	7.72E+12	4.4E+10		5853.100188	4.05706E+13	4.37E+10
116	7.76E+12	4.37E+10		5812.626472	4.02901E+13	4.34E+10
117	7.8E+12	4.34E+10		5772.432629	4.00115E+13	4.31E+10
118	7.85E+12	4.31E+10		5732.516723	3.97348E+13	4.28E+10
119	7.89E+12	4.28E+10		5692.876832	3.946E+13	4.25E+10
120	7.93E+12	4.25E+10		5653.511048	3.91872E+13	4.22E+10
121	7.97E+12	4.22E+10		5614.417475	3.89162E+13	4.19E+10
122	8.02E+12	4.19E+10		5575.594231	3.86471E+13	4.16E+10
123	8.06E+12	4.16E+10		5537.039447	3.83798E+13	4.13E+10
124	8.1E+12	4.13E+10		5498.751266	3.81144E+13	4.11E+10
125	8.14E+12	4.11E+10		5460.727845	3.78509E+13	4.08E+10
126	8.18E+12	4.08E+10		5422.967352	3.75891E+13	4.05E+10
127	8.22E+12	4.05E+10		5385.46797	3.73292E+13	4.02E+10
128	8.26E+12	4.02E+10		5348.227894	3.70711E+13	3.99E+10
129	8.3E+12	3.99E+10		5311.245329	3.68147E+13	3.97E+10
130	8.34E+12	3.97E+10		5274.518496	3.65602E+13	3.94E+10
131	8.38E+12	3.94E+10		5238.045626	3.63074E+13	3.91E+10
132	8.42E+12	3.91E+10		5201.824963	3.60563E+13	3.88E+10
133	8.46E+12	3.88E+10		5165.854763	3.5807E+13	3.86E+10
134	8.5E+12	3.86E+10		5130.133295	3.55594E+13	3.83E+10
135	8.54E+12	3.83E+10		5094.658837	3.53135E+13	3.80E+10
136	8.57E+12	3.8E+10		5059.429682	3.50693E+13	3.78E+10
137	8.61E+12	3.78E+10		5024.444134	3.48268E+13	3.75E+10
138	8.65E+12	3.75E+10		4989.700508	3.4586E+13	3.73E+10
139	8.69E+12	3.73E+10		4955.197131	3.43468E+13	3.70E+10
140	8.72E+12	3.7E+10		4920.932343	3.41093E+13	3.67E+10
141	8.76E+12	3.67E+10		4886.904493	3.38734E+13	3.65E+10
142	8.8E+12	3.65E+10		4853.111942	3.36392E+13	3.62E+10
143	8.83E+12	3.62E+10		4819.553065	3.34066E+13	3.60E+10
144	8.87E+12	3.6E+10		4786.226244	3.31756E+13	3.57E+10
145	8.9E+12	3.57E+10		4753.129876	3.29462E+13	3.55E+10
146	8.94E+12	3.55E+10		4720.262366	3.27184E+13	3.52E+10
147	8.98E+12	3.52E+10		4687.622133	3.24921E+13	3.50E+10
148	9.01E+12	3.5E+10		4655.207604	3.22674E+13	3.48E+10
149	9.05E+12	3.48E+10		4623.017219	3.20443E+13	3.45E+10
150	9.08E+12	3.45E+10		4591.049428	3.18227E+13	3.43E+10
151	9.11E+12	3.43E+10		4559.302691	3.16027E+13	3.40E+10
152	9.15E+12	3.4E+10		4527.775481	3.13841E+13	3.38E+10
153	9.18E+12	3.38E+10		4496.466279	3.11671E+13	3.36E+10
154	9.22E+12	3.36E+10		4465.373577	3.09516E+13	3.33E+10
155	9.25E+12	3.33E+10		4434.495879	3.07376E+13	3.31E+10
156	9.28E+12	3.31E+10		4403.831698	3.0525E+13	3.29E+10
157	9.31E+12	3.29E+10		4373.379557	3.0314E+13	3.27E+10
158	9.35E+12	3.27E+10		4343.13799	3.01043E+13	3.24E+10
159	9.38E+12	3.24E+10		4313.105541	2.98962E+13	3.22E+10
160	9.41E+12	3.22E+10		4283.280764	2.96894E+13	3.20E+10
161	9.44E+12	3.2E+10		4253.662223	2.94841E+13	3.18E+10

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
162	9.48E+12	3.18E+10		4224.248492	2.92803E+13	3.15E+10
163	9.51E+12	3.15E+10		4195.038155	2.90778E+13	3.13E+10
164	9.54E+12	3.13E+10		4166.029804	2.88767E+13	3.11E+10
165	9.57E+12	3.11E+10		4137.222044	2.8677E+13	3.09E+10
166	9.6E+12	3.09E+10		4108.613488	2.84787E+13	3.07E+10
167	9.63E+12	3.07E+10		4080.202757	2.82818E+13	3.05E+10
168	9.66E+12	3.05E+10		4051.988484	2.80862E+13	3.03E+10
169	9.69E+12	3.03E+10		4023.96931	2.7892E+13	3.00E+10
170	9.72E+12	3E+10		3996.143887	2.76992E+13	2.98E+10
171	9.75E+12	2.98E+10		3968.510875	2.75076E+13	2.96E+10
172	9.78E+12	2.96E+10		3941.068942	2.73174E+13	2.94E+10
173	9.81E+12	2.94E+10		3913.816768	2.71285E+13	2.92E+10
174	9.84E+12	2.92E+10		3886.753041	2.69409E+13	2.90E+10
175	9.87E+12	2.9E+10		3859.876457	2.67546E+13	2.88E+10
176	9.9E+12	2.88E+10		3833.185723	2.65696E+13	2.86E+10
177	9.93E+12	2.86E+10		3806.679553	2.63859E+13	2.84E+10
178	9.95E+12	2.84E+10		3780.356671	2.62034E+13	2.82E+10
179	9.98E+12	2.82E+10		3754.215809	2.60222E+13	2.80E+10
180	1E+13	2.8E+10		3728.25571	2.58423E+13	2.78E+10
181	1E+13	2.78E+10		3702.475122	2.56636E+13	2.76E+10
182	1.01E+13	2.76E+10		3676.872806	2.54861E+13	2.75E+10
183	1.01E+13	2.75E+10		3651.447527	2.53099E+13	2.73E+10
184	1.01E+13	2.73E+10		3626.198062	2.51349E+13	2.71E+10
185	1.01E+13	2.71E+10		3601.123195	2.49611E+13	2.69E+10
186	1.02E+13	2.69E+10		3576.221718	2.47885E+13	2.67E+10
187	1.02E+13	2.67E+10		3551.492434	2.46171E+13	2.65E+10
188	1.02E+13	2.65E+10		3526.93415	2.44468E+13	2.63E+10
189	1.03E+13	2.63E+10		3502.545685	2.42778E+13	2.62E+10
190	1.03E+13	2.62E+10		3478.325864	2.41099E+13	2.60E+10
191	1.03E+13	2.6E+10		3454.273521	2.39432E+13	2.58E+10
192	1.03E+13	2.58E+10		3430.387498	2.37776E+13	2.56E+10
193	1.04E+13	2.56E+10		3406.666646	2.36132E+13	2.54E+10
194	1.04E+13	2.54E+10		3383.109821	2.34499E+13	2.53E+10
195	1.04E+13	2.53E+10		3359.715889	2.32878E+13	2.51E+10
196	1.04E+13	2.51E+10		3336.483725	2.31267E+13	2.49E+10
197	1.05E+13	2.49E+10		3313.412209	2.29668E+13	2.47E+10
198	1.05E+13	2.47E+10		3290.500231	2.2808E+13	2.46E+10
199	1.05E+13	2.46E+10		3267.746687	2.26503E+13	2.44E+10
200	1.05E+13	2.44E+10		3245.150482	2.24937E+13	2.42E+10
201	1.06E+13	2.42E+10		3222.710529	2.23381E+13	2.41E+10
202	1.06E+13	2.41E+10		3200.425745	2.21837E+13	2.39E+10
203	1.06E+13	2.39E+10		3178.295059	2.20303E+13	2.37E+10
204	1.06E+13	2.37E+10		3156.317406	2.18779E+13	2.36E+10
205	1.07E+13	2.36E+10		3134.491725	2.17266E+13	2.34E+10
206	1.07E+13	2.34E+10		3112.816968	2.15764E+13	2.32E+10
207	1.07E+13	2.32E+10		3091.29209	2.14272E+13	2.31E+10
208	1.07E+13	2.31E+10		3069.916054	2.1279E+13	2.29E+10
209	1.07E+13	2.29E+10		3048.687832	2.11319E+13	2.28E+10
210	1.08E+13	2.28E+10		3027.606402	2.09858E+13	2.26E+10
211	1.08E+13	2.26E+10		3006.670748	2.08407E+13	2.24E+10
212	1.08E+13	2.24E+10		2985.879862	2.06965E+13	2.23E+10
213	1.08E+13	2.23E+10		2965.232744	2.05534E+13	2.21E+10
214	1.09E+13	2.21E+10		2944.728399	2.04113E+13	2.20E+10
215	1.09E+13	2.2E+10		2924.365839	2.02702E+13	2.18E+10
216	1.09E+13	2.18E+10		2904.144085	2.013E+13	2.17E+10

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
217	1.09E+13	2.17E+10		2884.062163	1.99908E+13	2.15E+10
218	1.09E+13	2.15E+10		2864.119106	1.98526E+13	2.14E+10
219	1.1E+13	2.14E+10		2844.313954	1.97153E+13	2.12E+10
220	1.1E+13	2.12E+10		2824.645752	1.9579E+13	2.11E+10
221	1.1E+13	2.11E+10		2805.113555	1.94436E+13	2.09E+10
222	1.1E+13	2.09E+10		2785.716421	1.93091E+13	2.08E+10
223	1.1E+13	2.08E+10		2766.453416	1.91756E+13	2.07E+10
224	1.11E+13	2.07E+10		2747.323614	1.9043E+13	2.05E+10
225	1.11E+13	2.05E+10		2728.326093	1.89113E+13	2.04E+10
226	1.11E+13	2.04E+10		2709.459938	1.87805E+13	2.02E+10
227	1.11E+13	2.02E+10		2690.724241	1.86507E+13	2.01E+10
228	1.12E+13	2.01E+10		2672.1181	1.85217E+13	2.00E+10
229	1.12E+13	2E+10		2653.640619	1.83936E+13	1.98E+10
230	1.12E+13	1.98E+10		2635.290908	1.82664E+13	1.97E+10
231	1.12E+13	1.97E+10		2617.068084	1.81401E+13	1.95E+10
232	1.12E+13	1.95E+10		2598.97127	1.80147E+13	1.94E+10
233	1.12E+13	1.94E+10		2580.999593	1.78901E+13	1.93E+10
234	1.13E+13	1.93E+10		2563.152189	1.77664E+13	1.91E+10
235	1.13E+13	1.91E+10		2545.428198	1.76436E+13	1.90E+10
236	1.13E+13	1.9E+10		2527.826768	1.75216E+13	1.89E+10
237	1.13E+13	1.89E+10		2510.347049	1.74004E+13	1.87E+10
238	1.13E+13	1.87E+10		2492.988202	1.72801E+13	1.86E+10
239	1.14E+13	1.86E+10		2475.74939	1.71606E+13	1.85E+10
240	1.14E+13	1.85E+10		2458.629782	1.70419E+13	1.84E+10
241	1.14E+13	1.84E+10		2441.628556	1.69241E+13	1.82E+10
242	1.14E+13	1.82E+10		2424.744891	1.68071E+13	1.81E+10
243	1.14E+13	1.81E+10		2407.977976	1.66908E+13	1.80E+10
244	1.15E+13	1.8E+10		2391.327003	1.65754E+13	1.79E+10
245	1.15E+13	1.79E+10		2374.791169	1.64608E+13	1.77E+10
246	1.15E+13	1.77E+10		2358.36968	1.6347E+13	1.76E+10
247	1.15E+13	1.76E+10		2342.061744	1.62339E+13	1.75E+10
248	1.15E+13	1.75E+10		2325.866576	1.61217E+13	1.74E+10
249	1.15E+13	1.74E+10		2309.783396	1.60102E+13	1.72E+10
250	1.16E+13	1.72E+10		2293.81143	1.58995E+13	1.71E+10
251	1.16E+13	1.71E+10		2277.949909	1.57895E+13	1.70E+10
252	1.16E+13	1.7E+10		2262.198069	1.56804E+13	1.69E+10
253	1.16E+13	1.69E+10		2246.555152	1.55719E+13	1.68E+10
254	1.16E+13	1.68E+10		2231.020405	1.54643E+13	1.67E+10
255	1.16E+13	1.67E+10		2215.593078	1.53573E+13	1.65E+10
256	1.17E+13	1.65E+10		2200.272431	1.52511E+13	1.64E+10
257	1.17E+13	1.64E+10		2185.057725	1.51457E+13	1.63E+10
258	1.17E+13	1.63E+10		2169.948227	1.50409E+13	1.62E+10
259	1.17E+13	1.62E+10		2154.94321	1.49369E+13	1.61E+10
260	1.17E+13	1.61E+10		2140.041951	1.48336E+13	1.60E+10
261	1.17E+13	1.6E+10		2125.243734	1.47311E+13	1.59E+10
262	1.18E+13	1.59E+10		2110.547845	1.46292E+13	1.58E+10
263	1.18E+13	1.58E+10		2095.953577	1.4528E+13	1.56E+10
264	1.18E+13	1.56E+10		2081.460227	1.44276E+13	1.55E+10
265	1.18E+13	1.55E+10		2067.067097	1.43278E+13	1.54E+10
266	1.18E+13	1.54E+10		2052.773495	1.42287E+13	1.53E+10
267	1.18E+13	1.53E+10		2038.578732	1.41304E+13	1.52E+10
268	1.19E+13	1.52E+10		2024.482125	1.40326E+13	1.51E+10
269	1.19E+13	1.51E+10		2010.482994	1.39356E+13	1.50E+10
270	1.19E+13	1.5E+10		1996.580666	1.38392E+13	1.49E+10
271	1.19E+13	1.49E+10		1982.774472	1.37435E+13	1.48E+10

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
272	1.19E+13	1.48E+10		1969.063747	1.36485E+13	1.47E+10
273	1.19E+13	1.47E+10		1955.44783	1.35541E+13	1.46E+10
274	1.19E+13	1.46E+10		1941.926066	1.34604E+13	1.45E+10
275	1.2E+13	1.45E+10		1928.497803	1.33673E+13	1.44E+10
276	1.2E+13	1.44E+10		1915.162397	1.32749E+13	1.43E+10
277	1.2E+13	1.43E+10		1901.919203	1.31831E+13	1.42E+10
278	1.2E+13	1.42E+10		1888.767585	1.30919E+13	1.41E+10
279	1.2E+13	1.41E+10		1875.70691	1.30014E+13	1.40E+10
280	1.2E+13	1.4E+10		1862.736548	1.29115E+13	1.39E+10
281	1.2E+13	1.39E+10		1849.855875	1.28222E+13	1.38E+10
282	1.21E+13	1.38E+10		1837.064271	1.27336E+13	1.37E+10
283	1.21E+13	1.37E+10		1824.36112	1.26455E+13	1.36E+10
284	1.21E+13	1.36E+10		1811.74581	1.25581E+13	1.35E+10
285	1.21E+13	1.35E+10		1799.217734	1.24712E+13	1.34E+10
286	1.21E+13	1.34E+10		1786.776288	1.2385E+13	1.33E+10
287	1.21E+13	1.33E+10		1774.420874	1.22993E+13	1.32E+10
288	1.21E+13	1.32E+10		1762.150897	1.22143E+13	1.32E+10
289	1.21E+13	1.32E+10		1749.965766	1.21298E+13	1.31E+10
290	1.22E+13	1.31E+10		1737.864894	1.2046E+13	1.30E+10
291	1.22E+13	1.3E+10		1725.847698	1.19627E+13	1.29E+10
292	1.22E+13	1.29E+10		1713.9136	1.18799E+13	1.28E+10
293	1.22E+13	1.28E+10		1702.062026	1.17978E+13	1.27E+10
294	1.22E+13	1.27E+10		1690.292405	1.17162E+13	1.26E+10
295	1.22E+13	1.26E+10		1678.604169	1.16352E+13	1.25E+10
296	1.22E+13	1.25E+10		1666.996756	1.15547E+13	1.24E+10
297	1.22E+13	1.24E+10		1655.469608	1.14748E+13	1.24E+10
298	1.23E+13	1.24E+10		1644.02217	1.13955E+13	1.23E+10
299	1.23E+13	1.23E+10		1632.653889	1.13167E+13	1.22E+10
300	1.23E+13	1.22E+10		1621.364219	1.12384E+13	1.21E+10
301	1.23E+13	1.21E+10		1610.152616	1.11607E+13	1.20E+10
302	1.23E+13	1.2E+10		1599.018541	1.10836E+13	1.19E+10
303	1.23E+13	1.19E+10		1587.961457	1.10069E+13	1.19E+10
304	1.23E+13	1.19E+10		1576.980831	1.09308E+13	1.18E+10
305	1.23E+13	1.18E+10		1566.076136	1.08552E+13	1.17E+10
306	1.24E+13	1.17E+10		1555.246846	1.07801E+13	1.16E+10
307	1.24E+13	1.16E+10		1544.492439	1.07056E+13	1.15E+10
308	1.24E+13	1.15E+10		1533.812399	1.06316E+13	1.15E+10
309	1.24E+13	1.15E+10		1523.20621	1.05581E+13	1.14E+10
310	1.24E+13	1.14E+10		1512.673362	1.04851E+13	1.13E+10
311	1.24E+13	1.13E+10		1502.213347	1.04125E+13	1.12E+10
312	1.24E+13	1.12E+10		1491.825663	1.03405E+13	1.11E+10
313	1.24E+13	1.11E+10		1481.509809	1.0269E+13	1.11E+10
314	1.24E+13	1.11E+10		1471.265288	1.0198E+13	1.10E+10
315	1.25E+13	1.1E+10		1461.091608	1.01275E+13	1.09E+10
316	1.25E+13	1.09E+10		1450.988277	1.00575E+13	1.08E+10
317	1.25E+13	1.08E+10		1440.95481	9.98794E+12	1.08E+10
318	1.25E+13	1.08E+10		1430.990724	9.91887E+12	1.07E+10
319	1.25E+13	1.07E+10		1421.095538	9.85028E+12	1.06E+10
320	1.25E+13	1.06E+10		1411.268777	9.78217E+12	1.05E+10
321	1.25E+13	1.05E+10		1401.509968	9.71453E+12	1.05E+10
322	1.25E+13	1.05E+10		1391.818639	9.64735E+12	1.04E+10
323	1.25E+13	1.04E+10		1382.194326	9.58064E+12	1.03E+10
324	1.26E+13	1.03E+10		1372.636563	9.51439E+12	1.02E+10
325	1.26E+13	1.02E+10		1363.144892	9.4486E+12	1.02E+10
326	1.26E+13	1.02E+10		1353.718855	9.38326E+12	1.01E+10

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
327	1.26E+13	1.01E+10		1344.357999	9.31838E+12	1.00E+10
328	1.26E+13	1E+10		1335.061872	9.25394E+12	9.97E+09
329	1.26E+13	9.97E+09		1325.830026	9.18995E+12	9.90E+09
330	1.26E+13	9.9E+09		1316.662019	9.12641E+12	9.83E+09
331	1.26E+13	9.83E+09		1307.557407	9.0633E+12	9.76E+09
332	1.26E+13	9.76E+09		1298.515753	9.00063E+12	9.70E+09
333	1.26E+13	9.7E+09		1289.536621	8.93839E+12	9.63E+09
334	1.27E+13	9.63E+09		1280.61958	8.87658E+12	9.56E+09
335	1.27E+13	9.56E+09		1271.764199	8.8152E+12	9.50E+09
336	1.27E+13	9.5E+09		1262.970052	8.75424E+12	9.43E+09
337	1.27E+13	9.43E+09		1254.236716	8.69371E+12	9.36E+09
338	1.27E+13	9.36E+09		1245.56377	8.63359E+12	9.30E+09
339	1.27E+13	9.3E+09		1236.950797	8.57389E+12	9.24E+09
340	1.27E+13	9.24E+09		1228.397382	8.5146E+12	9.17E+09
341	1.27E+13	9.17E+09		1219.903113	8.45572E+12	9.11E+09
342	1.27E+13	9.11E+09		1211.467582	8.39725E+12	9.05E+09
343	1.27E+13	9.05E+09		1203.090381	8.33919E+12	8.98E+09
344	1.27E+13	8.98E+09		1194.771108	8.28152E+12	8.92E+09
345	1.28E+13	8.92E+09		1186.509362	8.22426E+12	8.86E+09
346	1.28E+13	8.86E+09		1178.304746	8.16739E+12	8.80E+09
347	1.28E+13	8.8E+09		1170.156863	8.11091E+12	8.74E+09
348	1.28E+13	8.74E+09		1162.065323	8.05482E+12	8.68E+09
349	1.28E+13	8.68E+09		1154.029735	7.99912E+12	8.62E+09
350	1.28E+13	8.62E+09		1146.049713	7.94381E+12	8.56E+09
351	1.28E+13	8.56E+09		1138.124871	7.88888E+12	8.50E+09
352	1.28E+13	8.5E+09		1130.25483	7.83433E+12	8.44E+09
353	1.28E+13	8.44E+09		1122.439209	7.78016E+12	8.38E+09
354	1.28E+13	8.38E+09		1114.677632	7.72636E+12	8.32E+09
355	1.28E+13	8.32E+09		1106.969726	7.67293E+12	8.27E+09
356	1.28E+13	8.27E+09		1099.31512	7.61987E+12	8.21E+09
357	1.29E+13	8.21E+09		1091.713445	7.56718E+12	8.15E+09
358	1.29E+13	8.15E+09		1084.164334	7.51485E+12	8.09E+09
359	1.29E+13	8.09E+09		1076.667425	7.46289E+12	8.04E+09
360	1.29E+13	8.04E+09		1069.222357	7.41128E+12	7.98E+09
361	1.29E+13	7.98E+09		1061.82877	7.36004E+12	7.93E+09
362	1.29E+13	7.93E+09		1054.48631	7.30914E+12	7.87E+09
363	1.29E+13	7.87E+09		1047.194622	7.2586E+12	7.82E+09
364	1.29E+13	7.82E+09		1039.953356	7.20841E+12	7.76E+09
365	1.29E+13	7.76E+09		1032.762163	7.15856E+12	7.71E+09
366	1.29E+13	7.71E+09		1025.620695	7.10906E+12	7.66E+09
367	1.29E+13	7.66E+09		1018.528611	7.0599E+12	7.60E+09
368	1.29E+13	7.6E+09		1011.485568	7.01108E+12	7.55E+09
369	1.3E+13	7.55E+09		1004.491227	6.9626E+12	7.50E+09
370	1.3E+13	7.5E+09		997.545251	6.91446E+12	7.45E+09
371	1.3E+13	7.45E+09		990.6473061	6.86664E+12	7.40E+09
372	1.3E+13	7.4E+09		983.7970599	6.81916E+12	7.35E+09
373	1.3E+13	7.35E+09		976.9941826	6.77201E+12	7.29E+09
374	1.3E+13	7.29E+09		970.2383466	6.72518E+12	7.24E+09
375	1.3E+13	7.24E+09		963.5292267	6.67868E+12	7.19E+09
376	1.3E+13	7.19E+09		956.8664998	6.63249E+12	7.14E+09
377	1.3E+13	7.14E+09		950.2498452	6.58663E+12	7.09E+09
378	1.3E+13	7.09E+09		943.6789442	6.54108E+12	7.05E+09
379	1.3E+13	7.05E+09		937.1534804	6.49585E+12	7.00E+09
380	1.3E+13	7E+09		930.6731397	6.45093E+12	6.95E+09
381	1.3E+13	6.95E+09		924.23761	6.40633E+12	6.90E+09

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
382	1.3E+13	6.9E+09		917.8465815	6.36203E+12	6.85E+09
383	1.31E+13	6.85E+09		911.4997464	6.31803E+12	6.81E+09
384	1.31E+13	6.81E+09		905.1967992	6.27435E+12	6.76E+09
385	1.31E+13	6.76E+09		898.9374363	6.23096E+12	6.71E+09
386	1.31E+13	6.71E+09		892.7213565	6.18787E+12	6.67E+09
387	1.31E+13	6.67E+09		886.5482603	6.14508E+12	6.62E+09
388	1.31E+13	6.62E+09		880.4178506	6.10259E+12	6.57E+09
389	1.31E+13	6.57E+09		874.3298322	6.06039E+12	6.53E+09
390	1.31E+13	6.53E+09		868.283912	6.01849E+12	6.48E+09
391	1.31E+13	6.48E+09		862.2797988	5.97687E+12	6.44E+09
392	1.31E+13	6.44E+09		856.3172035	5.93554E+12	6.39E+09
393	1.31E+13	6.39E+09		850.3958391	5.89449E+12	6.35E+09
394	1.31E+13	6.35E+09		844.5154205	5.85373E+12	6.31E+09
395	1.31E+13	6.31E+09		838.6756645	5.81326E+12	6.26E+09
396	1.31E+13	6.26E+09		832.8762899	5.77306E+12	6.22E+09
397	1.31E+13	6.22E+09		827.1170176	5.73314E+12	6.18E+09
398	1.31E+13	6.18E+09		821.3975701	5.69349E+12	6.13E+09
399	1.32E+13	6.13E+09		815.7176722	5.65412E+12	6.09E+09
400	1.32E+13	6.09E+09		810.0770503	5.61503E+12	6.05E+09
401	1.32E+13	6.05E+09		804.4754328	5.5762E+12	6.01E+09
402	1.32E+13	6.01E+09		798.9125501	5.53764E+12	5.96E+09
403	1.32E+13	5.96E+09		793.3881343	5.49935E+12	5.92E+09
404	1.32E+13	5.92E+09		787.9019193	5.46132E+12	5.88E+09
405	1.32E+13	5.88E+09		782.4536411	5.42356E+12	5.84E+09
406	1.32E+13	5.84E+09		777.0430373	5.38605E+12	5.80E+09
407	1.32E+13	5.8E+09		771.6698474	5.34881E+12	5.76E+09
408	1.32E+13	5.76E+09		766.3338126	5.31182E+12	5.72E+09
409	1.32E+13	5.72E+09		761.0346762	5.27509E+12	5.68E+09
410	1.32E+13	5.68E+09		755.7721828	5.23861E+12	5.64E+09
411	1.32E+13	5.64E+09		750.5460791	5.20239E+12	5.60E+09
412	1.32E+13	5.6E+09		745.3561135	5.16641E+12	5.57E+09
413	1.32E+13	5.57E+09		740.2020361	5.13069E+12	5.53E+09
414	1.32E+13	5.53E+09		735.0835987	5.09521E+12	5.49E+09
415	1.32E+13	5.49E+09		730.0005549	5.05998E+12	5.45E+09
416	1.33E+13	5.45E+09		724.95266	5.02499E+12	5.41E+09
417	1.33E+13	5.41E+09		719.9396708	4.99024E+12	5.38E+09
418	1.33E+13	5.38E+09		714.9613461	4.95573E+12	5.34E+09
419	1.33E+13	5.34E+09		710.0174461	4.92147E+12	5.30E+09
420	1.33E+13	5.3E+09		705.1077327	4.88743E+12	5.26E+09
421	1.33E+13	5.26E+09		700.2319696	4.85364E+12	5.23E+09
422	1.33E+13	5.23E+09		695.389922	4.82008E+12	5.19E+09
423	1.33E+13	5.19E+09		690.5813568	4.78675E+12	5.16E+09
424	1.33E+13	5.16E+09		685.8060424	4.75365E+12	5.12E+09
425	1.33E+13	5.12E+09		681.063749	4.72077E+12	5.09E+09
426	1.33E+13	5.09E+09		676.3542481	4.68813E+12	5.05E+09
427	1.33E+13	5.05E+09		671.677313	4.65571E+12	5.01E+09
428	1.33E+13	5.01E+09		667.0327186	4.62352E+12	4.98E+09
429	1.33E+13	4.98E+09		662.4202412	4.59155E+12	4.95E+09
430	1.33E+13	4.95E+09		657.8396586	4.5598E+12	4.91E+09
431	1.33E+13	4.91E+09		653.2907505	4.52827E+12	4.88E+09
432	1.33E+13	4.88E+09		648.7732976	4.49695E+12	4.84E+09
433	1.33E+13	4.84E+09		644.2870826	4.46586E+12	4.81E+09
434	1.33E+13	4.81E+09		639.8318894	4.43498E+12	4.78E+09
435	1.34E+13	4.78E+09		635.4075035	4.40431E+12	4.74E+09
436	1.34E+13	4.74E+09		631.0137119	4.37385E+12	4.71E+09

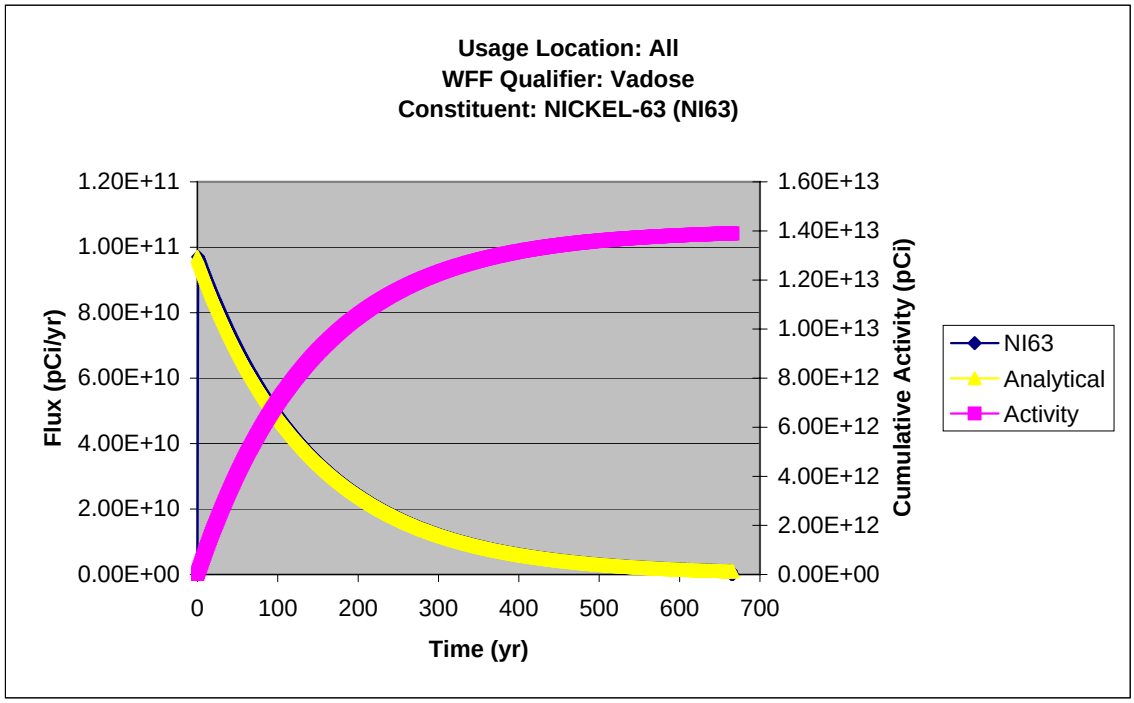
Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
437	1.34E+13	4.71E+09		626.650303	4.34361E+12	4.68E+09
438	1.34E+13	4.68E+09		622.3170667	4.31357E+12	4.65E+09
439	1.34E+13	4.65E+09		618.0137944	4.28375E+12	4.61E+09
440	1.34E+13	4.61E+09		613.7402788	4.25412E+12	4.58E+09
441	1.34E+13	4.58E+09		609.4963143	4.22471E+12	4.55E+09
442	1.34E+13	4.55E+09		605.2816965	4.19549E+12	4.52E+09
443	1.34E+13	4.52E+09		601.0962224	4.16648E+12	4.49E+09
444	1.34E+13	4.49E+09		596.9396905	4.13767E+12	4.46E+09
445	1.34E+13	4.46E+09		592.8119007	4.10906E+12	4.43E+09
446	1.34E+13	4.43E+09		588.7126542	4.08065E+12	4.40E+09
447	1.34E+13	4.4E+09		584.6417537	4.05243E+12	4.37E+09
448	1.34E+13	4.37E+09		580.5990031	4.02441E+12	4.33E+09
449	1.34E+13	4.33E+09		576.5842079	3.99658E+12	4.30E+09
450	1.34E+13	4.3E+09		572.5971746	3.96894E+12	4.28E+09
451	1.34E+13	4.28E+09		568.6377113	3.9415E+12	4.25E+09
452	1.34E+13	4.25E+09		564.7056274	3.91424E+12	4.22E+09
453	1.34E+13	4.22E+09		560.8007335	3.88717E+12	4.19E+09
454	1.34E+13	4.19E+09		556.9228417	3.86029E+12	4.16E+09
455	1.34E+13	4.16E+09		553.0717652	3.8336E+12	4.13E+09
456	1.34E+13	4.13E+09		549.2473185	3.80709E+12	4.10E+09
457	1.34E+13	4.1E+09		545.4493176	3.78077E+12	4.07E+09
458	1.35E+13	4.07E+09		541.6775796	3.75462E+12	4.04E+09
459	1.35E+13	4.04E+09		537.9319229	3.72866E+12	4.02E+09
460	1.35E+13	4.02E+09		534.212167	3.70288E+12	3.99E+09
461	1.35E+13	3.99E+09		530.518133	3.67727E+12	3.96E+09
462	1.35E+13	3.96E+09		526.8496429	3.65184E+12	3.93E+09
463	1.35E+13	3.93E+09		523.2065201	3.62659E+12	3.91E+09
464	1.35E+13	3.91E+09		519.5885892	3.60151E+12	3.88E+09
465	1.35E+13	3.88E+09		515.995676	3.57661E+12	3.85E+09
466	1.35E+13	3.85E+09		512.4276076	3.55188E+12	3.83E+09
467	1.35E+13	3.83E+09		508.884212	3.52732E+12	3.80E+09
468	1.35E+13	3.8E+09		505.3653187	3.50293E+12	3.77E+09
469	1.35E+13	3.77E+09		501.8707583	3.4787E+12	3.75E+09
470	1.35E+13	3.75E+09		498.4003625	3.45465E+12	3.72E+09
471	1.35E+13	3.72E+09		494.9539642	3.43076E+12	3.70E+09
472	1.35E+13	3.7E+09		491.5313975	3.40704E+12	3.67E+09
473	1.35E+13	3.67E+09		488.1324975	3.38348E+12	3.64E+09
474	1.35E+13	3.64E+09		484.7571007	3.36008E+12	3.62E+09
475	1.35E+13	3.62E+09		481.4050444	3.33685E+12	3.59E+09
476	1.35E+13	3.59E+09		478.0761674	3.31377E+12	3.57E+09
477	1.35E+13	3.57E+09		474.7703092	3.29086E+12	3.54E+09
478	1.35E+13	3.54E+09		471.4873108	3.2681E+12	3.52E+09
479	1.35E+13	3.52E+09		468.2270141	3.2455E+12	3.50E+09
480	1.35E+13	3.5E+09		464.9892621	3.22306E+12	3.47E+09
481	1.35E+13	3.47E+09		461.7738989	3.20077E+12	3.45E+09
482	1.35E+13	3.45E+09		458.5807696	3.17864E+12	3.42E+09
483	1.35E+13	3.42E+09		455.4097206	3.15666E+12	3.40E+09
484	1.35E+13	3.4E+09		452.2605991	3.13483E+12	3.38E+09
485	1.36E+13	3.38E+09		449.1332535	3.11315E+12	3.35E+09
486	1.36E+13	3.35E+09		446.0275333	3.09163E+12	3.33E+09
487	1.36E+13	3.33E+09		442.9432889	3.07025E+12	3.31E+09
488	1.36E+13	3.31E+09		439.8803718	3.04902E+12	3.28E+09
489	1.36E+13	3.28E+09		436.8386345	3.02793E+12	3.26E+09
490	1.36E+13	3.26E+09		433.8179306	3.007E+12	3.24E+09
491	1.36E+13	3.24E+09		430.8181146	2.9862E+12	3.22E+09

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
492	1.36E+13	3.22E+09		427.8390421	2.96555E+12	3.19E+09
493	1.36E+13	3.19E+09		424.8805696	2.94505E+12	3.17E+09
494	1.36E+13	3.17E+09		421.9425548	2.92468E+12	3.15E+09
495	1.36E+13	3.15E+09		419.024856	2.90446E+12	3.13E+09
496	1.36E+13	3.13E+09		416.127333	2.88437E+12	3.11E+09
497	1.36E+13	3.11E+09		413.249846	2.86443E+12	3.09E+09
498	1.36E+13	3.09E+09		410.3922567	2.84462E+12	3.06E+09
499	1.36E+13	3.06E+09		407.5544273	2.82495E+12	3.04E+09
500	1.36E+13	3.04E+09		404.7362213	2.80542E+12	3.02E+09
501	1.36E+13	3.02E+09		401.937503	2.78602E+12	3.00E+09
502	1.36E+13	3E+09		399.1581376	2.76675E+12	2.98E+09
503	1.36E+13	2.98E+09		396.3979913	2.74762E+12	2.96E+09
504	1.36E+13	2.96E+09		393.6569312	2.72862E+12	2.94E+09
505	1.36E+13	2.94E+09		390.9348252	2.70975E+12	2.92E+09
506	1.36E+13	2.92E+09		388.2315425	2.69102E+12	2.90E+09
507	1.36E+13	2.9E+09		385.5469527	2.67241E+12	2.88E+09
508	1.36E+13	2.88E+09		382.8809266	2.65393E+12	2.86E+09
509	1.36E+13	2.86E+09		380.2333359	2.63558E+12	2.84E+09
510	1.36E+13	2.84E+09		377.604053	2.61735E+12	2.82E+09
511	1.36E+13	2.82E+09		374.9929515	2.59925E+12	2.80E+09
512	1.36E+13	2.8E+09		372.3999054	2.58128E+12	2.78E+09
513	1.36E+13	2.78E+09		369.8247901	2.56343E+12	2.76E+09
514	1.36E+13	2.76E+09		367.2674816	2.5457E+12	2.74E+09
515	1.36E+13	2.74E+09		364.7278565	2.5281E+12	2.72E+09
516	1.36E+13	2.72E+09		362.2057928	2.51062E+12	2.70E+09
517	1.36E+13	2.7E+09		359.701169	2.49326E+12	2.69E+09
518	1.37E+13	2.69E+09		357.2138644	2.47602E+12	2.67E+09
519	1.37E+13	2.67E+09		354.7437594	2.4589E+12	2.65E+09
520	1.37E+13	2.65E+09		352.2907349	2.44189E+12	2.63E+09
521	1.37E+13	2.63E+09		349.8546729	2.42501E+12	2.61E+09
522	1.37E+13	2.61E+09		347.435456	2.40824E+12	2.59E+09
523	1.37E+13	2.59E+09		345.0329679	2.39159E+12	2.58E+09
524	1.37E+13	2.58E+09		342.6470928	2.37505E+12	2.56E+09
525	1.37E+13	2.56E+09		340.2777158	2.35863E+12	2.54E+09
526	1.37E+13	2.54E+09		337.9247228	2.34232E+12	2.52E+09
527	1.37E+13	2.52E+09		335.5880006	2.32612E+12	2.51E+09
528	1.37E+13	2.51E+09		333.2674366	2.31003E+12	2.49E+09
529	1.37E+13	2.49E+09		330.9629192	2.29406E+12	2.47E+09
530	1.37E+13	2.47E+09		328.6743373	2.2782E+12	2.45E+09
531	1.37E+13	2.45E+09		326.4015808	2.26244E+12	2.44E+09
532	1.37E+13	2.44E+09		324.1445402	2.2468E+12	2.42E+09
533	1.37E+13	2.42E+09		321.9031068	2.23126E+12	2.40E+09
534	1.37E+13	2.4E+09		319.6771728	2.21583E+12	2.39E+09
535	1.37E+13	2.39E+09		317.466631	2.20051E+12	2.37E+09
536	1.37E+13	2.37E+09		315.2713748	2.18529E+12	2.35E+09
537	1.37E+13	2.35E+09		313.0912987	2.17018E+12	2.34E+09
538	1.37E+13	2.34E+09		310.9262976	2.15518E+12	2.32E+09
539	1.37E+13	2.32E+09		308.7762674	2.14027E+12	2.31E+09
540	1.37E+13	2.31E+09		306.6411044	2.12547E+12	2.29E+09
541	1.37E+13	2.29E+09		304.5207059	2.11078E+12	2.27E+09
542	1.37E+13	2.27E+09		302.4149698	2.09618E+12	2.26E+09
543	1.37E+13	2.26E+09		300.3237946	2.08169E+12	2.24E+09
544	1.37E+13	2.24E+09		298.2470798	2.06729E+12	2.23E+09
545	1.37E+13	2.23E+09		296.1847253	2.053E+12	2.21E+09
546	1.37E+13	2.21E+09		294.1366319	2.0388E+12	2.20E+09

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
547	1.37E+13	2.2E+09		292.1027008	2.0247E+12	2.18E+09
548	1.37E+13	2.18E+09		290.0828342	2.0107E+12	2.17E+09
549	1.37E+13	2.17E+09		288.0769348	1.9968E+12	2.15E+09
550	1.37E+13	2.15E+09		286.084906	1.98299E+12	2.14E+09
551	1.37E+13	2.14E+09		284.106652	1.96928E+12	2.12E+09
552	1.37E+13	2.12E+09		282.1420774	1.95566E+12	2.11E+09
553	1.37E+13	2.11E+09		280.1910877	1.94214E+12	2.09E+09
554	1.37E+13	2.09E+09		278.2535889	1.92871E+12	2.08E+09
555	1.37E+13	2.08E+09		276.3294878	1.91537E+12	2.06E+09
556	1.37E+13	2.06E+09		274.4186917	1.90213E+12	2.05E+09
557	1.37E+13	2.05E+09		272.5211086	1.88897E+12	2.03E+09
558	1.37E+13	2.03E+09		270.6366471	1.87591E+12	2.02E+09
559	1.37E+13	2.02E+09		268.7652165	1.86294E+12	2.01E+09
560	1.37E+13	2.01E+09		266.9067267	1.85006E+12	1.99E+09
561	1.38E+13	1.99E+09		265.0610882	1.83726E+12	1.98E+09
562	1.38E+13	1.98E+09		263.2282122	1.82456E+12	1.97E+09
563	1.38E+13	1.97E+09		261.4080103	1.81194E+12	1.95E+09
564	1.38E+13	1.95E+09		259.600395	1.79941E+12	1.94E+09
565	1.38E+13	1.94E+09		257.8052792	1.78697E+12	1.92E+09
566	1.38E+13	1.92E+09		256.0225765	1.77461E+12	1.91E+09
567	1.38E+13	1.91E+09		254.2522011	1.76234E+12	1.90E+09
568	1.38E+13	1.9E+09		252.4940676	1.75016E+12	1.89E+09
569	1.38E+13	1.89E+09		250.7480915	1.73805E+12	1.87E+09
570	1.38E+13	1.87E+09		249.0141887	1.72603E+12	1.86E+09
571	1.38E+13	1.86E+09		247.2922756	1.7141E+12	1.85E+09
572	1.38E+13	1.85E+09		245.5822695	1.70225E+12	1.83E+09
573	1.38E+13	1.83E+09		243.8840879	1.69048E+12	1.82E+09
574	1.38E+13	1.82E+09		242.1976491	1.67879E+12	1.81E+09
575	1.38E+13	1.81E+09		240.5228719	1.66718E+12	1.80E+09
576	1.38E+13	1.8E+09		238.8596757	1.65565E+12	1.78E+09
577	1.38E+13	1.78E+09		237.2079803	1.6442E+12	1.77E+09
578	1.38E+13	1.77E+09		235.5677062	1.63283E+12	1.76E+09
579	1.38E+13	1.76E+09		233.9387745	1.62154E+12	1.75E+09
580	1.38E+13	1.75E+09		232.3211068	1.61033E+12	1.73E+09
581	1.38E+13	1.73E+09		230.7146251	1.59919E+12	1.72E+09
582	1.38E+13	1.72E+09		229.1192521	1.58813E+12	1.71E+09
583	1.38E+13	1.71E+09		227.5349109	1.57715E+12	1.70E+09
584	1.38E+13	1.7E+09		225.9615254	1.56625E+12	1.69E+09
585	1.38E+13	1.69E+09		224.3990196	1.55542E+12	1.68E+09
586	1.38E+13	1.68E+09		222.8473185	1.54466E+12	1.66E+09
587	1.38E+13	1.66E+09		221.3063473	1.53398E+12	1.65E+09
588	1.38E+13	1.65E+09		219.7760317	1.52337E+12	1.64E+09
589	1.38E+13	1.64E+09		218.2562982	1.51284E+12	1.63E+09
590	1.38E+13	1.63E+09		216.7470735	1.50238E+12	1.62E+09
591	1.38E+13	1.62E+09		215.248285	1.49199E+12	1.61E+09
592	1.38E+13	1.61E+09		213.7598605	1.48167E+12	1.60E+09
593	1.38E+13	1.6E+09		212.2817283	1.47142E+12	1.58E+09
594	1.38E+13	1.58E+09		210.8138173	1.46125E+12	1.57E+09
595	1.38E+13	1.57E+09		209.3560567	1.45115E+12	1.56E+09
596	1.38E+13	1.56E+09		207.9083765	1.44111E+12	1.55E+09
597	1.38E+13	1.55E+09		206.4707068	1.43115E+12	1.54E+09
598	1.38E+13	1.54E+09		205.0429785	1.42125E+12	1.53E+09
599	1.38E+13	1.53E+09		203.6251229	1.41142E+12	1.52E+09
600	1.38E+13	1.52E+09		202.2170716	1.40166E+12	1.51E+09
601	1.38E+13	1.51E+09		200.8187568	1.39197E+12	1.50E+09

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
602	1.38E+13	1.5E+09		199.4301113	1.38234E+12	1.49E+09
603	1.38E+13	1.49E+09		198.0510682	1.37279E+12	1.48E+09
604	1.38E+13	1.48E+09		196.681561	1.36329E+12	1.47E+09
605	1.38E+13	1.47E+09		195.3215239	1.35387E+12	1.46E+09
606	1.38E+13	1.46E+09		193.9708913	1.3445E+12	1.45E+09
607	1.38E+13	1.45E+09		192.6295983	1.33521E+12	1.44E+09
608	1.38E+13	1.44E+09		191.2975801	1.32597E+12	1.43E+09
609	1.38E+13	1.43E+09		189.9747728	1.3168E+12	1.42E+09
610	1.38E+13	1.42E+09		188.6611126	1.3077E+12	1.41E+09
611	1.38E+13	1.41E+09		187.3565362	1.29866E+12	1.40E+09
612	1.38E+13	1.4E+09		186.0609809	1.28968E+12	1.39E+09
613	1.38E+13	1.39E+09		184.7743842	1.28076E+12	1.38E+09
614	1.38E+13	1.38E+09		183.4966842	1.2719E+12	1.37E+09
615	1.38E+13	1.37E+09		182.2278195	1.26311E+12	1.36E+09
616	1.38E+13	1.36E+09		180.9677288	1.25437E+12	1.35E+09
617	1.38E+13	1.35E+09		179.7163516	1.2457E+12	1.34E+09
618	1.38E+13	1.34E+09		178.4736275	1.23708E+12	1.33E+09
619	1.38E+13	1.33E+09		177.2394967	1.22853E+12	1.32E+09
620	1.38E+13	1.32E+09		176.0138999	1.22004E+12	1.31E+09
621	1.38E+13	1.31E+09		174.796778	1.2116E+12	1.31E+09
622	1.38E+13	1.31E+09		173.5880724	1.20322E+12	1.30E+09
623	1.39E+13	1.3E+09		172.3877249	1.1949E+12	1.29E+09
624	1.39E+13	1.29E+09		171.1956777	1.18664E+12	1.28E+09
625	1.39E+13	1.28E+09		170.0118734	1.17843E+12	1.27E+09
626	1.39E+13	1.27E+09		168.836255	1.17028E+12	1.26E+09
627	1.39E+13	1.26E+09		167.6687659	1.16219E+12	1.25E+09
628	1.39E+13	1.25E+09		166.5093499	1.15415E+12	1.24E+09
629	1.39E+13	1.24E+09		165.3579512	1.14617E+12	1.23E+09
630	1.39E+13	1.23E+09		164.2145143	1.13825E+12	1.23E+09
631	1.39E+13	1.23E+09		163.0789842	1.13038E+12	1.22E+09
632	1.39E+13	1.22E+09		161.9513061	1.12256E+12	1.21E+09
633	1.39E+13	1.21E+09		160.8314259	1.1148E+12	1.20E+09
634	1.39E+13	1.2E+09		159.7192896	1.10709E+12	1.19E+09
635	1.39E+13	1.19E+09		158.6148436	1.09943E+12	1.18E+09
636	1.39E+13	1.18E+09		157.5180347	1.09183E+12	1.18E+09
637	1.39E+13	1.18E+09		156.4288102	1.08428E+12	1.17E+09
638	1.39E+13	1.17E+09		155.3471176	1.07678E+12	1.16E+09
639	1.39E+13	1.16E+09		154.2729048	1.06934E+12	1.15E+09
640	1.39E+13	1.15E+09		153.2061201	1.06194E+12	1.14E+09
641	1.39E+13	1.14E+09		152.1467122	1.0546E+12	1.14E+09
642	1.39E+13	1.14E+09		151.0946299	1.04731E+12	1.13E+09
643	1.39E+13	1.13E+09		150.0498228	1.04007E+12	1.12E+09
644	1.39E+13	1.12E+09		149.0122403	1.03287E+12	1.11E+09
645	1.39E+13	1.11E+09		147.9818327	1.02573E+12	1.10E+09
646	1.39E+13	1.1E+09		146.9585503	1.01864E+12	1.10E+09
647	1.39E+13	1.1E+09		145.9423438	1.0116E+12	1.09E+09
648	1.39E+13	1.09E+09		144.9331642	1.0046E+12	1.08E+09
649	1.39E+13	1.08E+09		143.9309631	9.97653E+11	1.07E+09
650	1.39E+13	1.07E+09		142.9356921	9.90755E+11	1.07E+09
651	1.39E+13	1.07E+09		141.9473033	9.83904E+11	1.06E+09
652	1.39E+13	1.06E+09		140.9657492	9.771E+11	1.05E+09
653	1.39E+13	1.05E+09		139.9909824	9.70344E+11	1.05E+09
654	1.39E+13	1.05E+09		139.022956	9.63634E+11	1.04E+09
655	1.39E+13	1.04E+09		138.0616235	9.5697E+11	1.03E+09
656	1.39E+13	1.03E+09		137.1069385	9.50353E+11	1.02E+09

Time (yr)	Cumulative (pCi)	NICKEL-63 (NI63) (pCi/yr)	Initial Inventory (Ci) 13000	Inventory (Ci)	Decay mass-loss rate (pCi/yr)	Leaching mass-loss rate (pCi/yr)
657	1.39E+13	1.02E+09		136.1588551	9.43781E+11	1.02E+09
658	1.39E+13	1.02E+09		135.2173276	9.37255E+11	1.01E+09
659	1.39E+13	1.01E+09		134.2823107	9.30774E+11	1.00E+09
660	1.39E+13	1E+09		133.3537593	9.24338E+11	9.96E+08
661	1.39E+13	9.96E+08		132.4316289	9.17946E+11	9.89E+08
662	1.39E+13	9.89E+08		131.5158748	9.11599E+11	9.82E+08
663	1.39E+13	9.82E+08		130.6064532	9.05295E+11	9.75E+08
664	1.39E+13	9.75E+08		129.7033201	8.99035E+11	9.68E+08
665	1.39E+13	0		128.8064321	8.92818E+11	9.62E+08
666	1.39E+13	0		127.915746	8.86644E+11	9.55E+08



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Module: Source (src2)

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
0	0	0
1	6.82E+08	6.82E+08
2	1.36E+09	6.82E+08
3	2.05E+09	6.82E+08
4	2.73E+09	6.82E+08
5	3.41E+09	6.82E+08
6	4.09E+09	6.82E+08
7	4.78E+09	6.82E+08
8	5.46E+09	6.82E+08
9	6.14E+09	6.82E+08
10	6.82E+09	6.82E+08
11	7.51E+09	6.82E+08
12	8.19E+09	6.82E+08
13	8.87E+09	6.82E+08
14	9.55E+09	6.82E+08
15	1.02E+10	6.82E+08
16	1.09E+10	6.82E+08
17	1.16E+10	6.82E+08
18	1.23E+10	6.82E+08
19	1.3E+10	6.82E+08
20	1.36E+10	6.82E+08
21	1.43E+10	6.82E+08
22	1.5E+10	6.82E+08
23	1.57E+10	6.82E+08
24	1.64E+10	6.82E+08
25	1.71E+10	6.82E+08
26	1.77E+10	6.82E+08
27	1.84E+10	6.82E+08
28	1.91E+10	6.82E+08
29	1.98E+10	6.82E+08
30	2.05E+10	6.82E+08
31	2.12E+10	6.82E+08
32	2.18E+10	6.82E+08
33	2.25E+10	6.82E+08
34	2.32E+10	6.82E+08
35	2.39E+10	6.82E+08
36	2.46E+10	6.82E+08
37	2.52E+10	6.82E+08
38	2.59E+10	6.82E+08
39	2.66E+10	6.82E+08
40	2.73E+10	6.82E+08
41	2.8E+10	6.82E+08
42	2.87E+10	6.82E+08
43	2.93E+10	6.82E+08
44	3E+10	6.82E+08
45	3.07E+10	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
46	3.14E+10	6.82E+08
47	3.21E+10	6.82E+08
48	3.28E+10	6.82E+08
49	3.34E+10	6.82E+08
50	3.41E+10	6.82E+08
51	3.48E+10	6.82E+08
52	3.55E+10	6.82E+08
53	3.62E+10	6.82E+08
54	3.68E+10	6.82E+08
55	3.75E+10	6.82E+08
56	3.82E+10	6.82E+08
57	3.89E+10	6.82E+08
58	3.96E+10	6.82E+08
59	4.03E+10	6.82E+08
60	4.09E+10	6.82E+08
61	4.16E+10	6.82E+08
62	4.23E+10	6.82E+08
63	4.3E+10	6.82E+08
64	4.37E+10	6.82E+08
65	4.44E+10	6.82E+08
66	4.5E+10	6.82E+08
67	4.57E+10	6.82E+08
68	4.64E+10	6.82E+08
69	4.71E+10	6.82E+08
70	4.78E+10	6.82E+08
71	4.84E+10	6.82E+08
72	4.91E+10	6.82E+08
73	4.98E+10	6.82E+08
74	5.05E+10	6.82E+08
75	5.12E+10	6.82E+08
76	5.19E+10	6.82E+08
77	5.25E+10	6.82E+08
78	5.32E+10	6.82E+08
79	5.39E+10	6.82E+08
80	5.46E+10	6.82E+08
81	5.53E+10	6.82E+08
82	5.6E+10	6.82E+08
83	5.66E+10	6.82E+08
84	5.73E+10	6.82E+08
85	5.8E+10	6.82E+08
86	5.87E+10	6.82E+08
87	5.94E+10	6.82E+08
88	6E+10	6.82E+08
89	6.07E+10	6.82E+08
90	6.14E+10	6.82E+08
91	6.21E+10	6.82E+08
92	6.28E+10	6.82E+08
93	6.35E+10	6.82E+08
94	6.41E+10	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
95	6.48E+10	6.82E+08
96	6.55E+10	6.82E+08
97	6.62E+10	6.82E+08
98	6.69E+10	6.82E+08
99	6.76E+10	6.82E+08
100	6.82E+10	6.82E+08
101	6.89E+10	6.82E+08
102	6.96E+10	6.82E+08
103	7.03E+10	6.82E+08
104	7.1E+10	6.82E+08
105	7.16E+10	6.82E+08
106	7.23E+10	6.82E+08
107	7.3E+10	6.82E+08
108	7.37E+10	6.82E+08
109	7.44E+10	6.82E+08
110	7.51E+10	6.82E+08
111	7.57E+10	6.82E+08
112	7.64E+10	6.82E+08
113	7.71E+10	6.82E+08
114	7.78E+10	6.82E+08
115	7.85E+10	6.82E+08
116	7.92E+10	6.82E+08
117	7.98E+10	6.82E+08
118	8.05E+10	6.82E+08
119	8.12E+10	6.82E+08
120	8.19E+10	6.82E+08
121	8.26E+10	6.82E+08
122	8.32E+10	6.82E+08
123	8.39E+10	6.82E+08
124	8.46E+10	6.82E+08
125	8.53E+10	6.82E+08
126	8.6E+10	6.82E+08
127	8.67E+10	6.82E+08
128	8.73E+10	6.82E+08
129	8.8E+10	6.82E+08
130	8.87E+10	6.82E+08
131	8.94E+10	6.82E+08
132	9.01E+10	6.82E+08
133	9.08E+10	6.82E+08
134	9.14E+10	6.82E+08
135	9.21E+10	6.82E+08
136	9.28E+10	6.82E+08
137	9.35E+10	6.82E+08
138	9.42E+10	6.82E+08
139	9.48E+10	6.82E+08
140	9.55E+10	6.82E+08
141	9.62E+10	6.82E+08
142	9.69E+10	6.82E+08
143	9.76E+10	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
144	9.83E+10	6.82E+08
145	9.89E+10	6.82E+08
146	9.96E+10	6.82E+08
147	1E+11	6.82E+08
148	1.01E+11	6.82E+08
149	1.02E+11	6.82E+08
150	1.02E+11	6.82E+08
151	1.03E+11	6.82E+08
152	1.04E+11	6.82E+08
153	1.04E+11	6.82E+08
154	1.05E+11	6.82E+08
155	1.06E+11	6.82E+08
156	1.06E+11	6.82E+08
157	1.07E+11	6.82E+08
158	1.08E+11	6.82E+08
159	1.08E+11	6.82E+08
160	1.09E+11	6.82E+08
161	1.1E+11	6.82E+08
162	1.11E+11	6.82E+08
163	1.11E+11	6.82E+08
164	1.12E+11	6.82E+08
165	1.13E+11	6.82E+08
166	1.13E+11	6.82E+08
167	1.14E+11	6.82E+08
168	1.15E+11	6.82E+08
169	1.15E+11	6.82E+08
170	1.16E+11	6.82E+08
171	1.17E+11	6.82E+08
172	1.17E+11	6.82E+08
173	1.18E+11	6.82E+08
174	1.19E+11	6.82E+08
175	1.19E+11	6.82E+08
176	1.2E+11	6.82E+08
177	1.21E+11	6.82E+08
178	1.21E+11	6.82E+08
179	1.22E+11	6.82E+08
180	1.23E+11	6.82E+08
181	1.24E+11	6.82E+08
182	1.24E+11	6.82E+08
183	1.25E+11	6.82E+08
184	1.26E+11	6.82E+08
185	1.26E+11	6.82E+08
186	1.27E+11	6.82E+08
187	1.28E+11	6.82E+08
188	1.28E+11	6.82E+08
189	1.29E+11	6.82E+08
190	1.3E+11	6.82E+08
191	1.3E+11	6.82E+08
192	1.31E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
193	1.32E+11	6.82E+08
194	1.32E+11	6.82E+08
195	1.33E+11	6.82E+08
196	1.34E+11	6.82E+08
197	1.34E+11	6.82E+08
198	1.35E+11	6.82E+08
199	1.36E+11	6.82E+08
200	1.36E+11	6.82E+08
201	1.37E+11	6.82E+08
202	1.38E+11	6.82E+08
203	1.39E+11	6.82E+08
204	1.39E+11	6.82E+08
205	1.4E+11	6.82E+08
206	1.41E+11	6.82E+08
207	1.41E+11	6.82E+08
208	1.42E+11	6.82E+08
209	1.43E+11	6.82E+08
210	1.43E+11	6.82E+08
211	1.44E+11	6.82E+08
212	1.45E+11	6.82E+08
213	1.45E+11	6.82E+08
214	1.46E+11	6.82E+08
215	1.47E+11	6.82E+08
216	1.47E+11	6.82E+08
217	1.48E+11	6.82E+08
218	1.49E+11	6.82E+08
219	1.49E+11	6.82E+08
220	1.5E+11	6.82E+08
221	1.51E+11	6.82E+08
222	1.51E+11	6.82E+08
223	1.52E+11	6.82E+08
224	1.53E+11	6.82E+08
225	1.54E+11	6.82E+08
226	1.54E+11	6.82E+08
227	1.55E+11	6.82E+08
228	1.56E+11	6.82E+08
229	1.56E+11	6.82E+08
230	1.57E+11	6.82E+08
231	1.58E+11	6.82E+08
232	1.58E+11	6.82E+08
233	1.59E+11	6.82E+08
234	1.6E+11	6.82E+08
235	1.6E+11	6.82E+08
236	1.61E+11	6.82E+08
237	1.62E+11	6.82E+08
238	1.62E+11	6.82E+08
239	1.63E+11	6.82E+08
240	1.64E+11	6.82E+08
241	1.64E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
242	1.65E+11	6.82E+08
243	1.66E+11	6.82E+08
244	1.66E+11	6.82E+08
245	1.67E+11	6.82E+08
246	1.68E+11	6.82E+08
247	1.69E+11	6.82E+08
248	1.69E+11	6.82E+08
249	1.7E+11	6.82E+08
250	1.71E+11	6.82E+08
251	1.71E+11	6.82E+08
252	1.72E+11	6.82E+08
253	1.73E+11	6.82E+08
254	1.73E+11	6.82E+08
255	1.74E+11	6.82E+08
256	1.75E+11	6.82E+08
257	1.75E+11	6.82E+08
258	1.76E+11	6.82E+08
259	1.77E+11	6.82E+08
260	1.77E+11	6.82E+08
261	1.78E+11	6.82E+08
262	1.79E+11	6.82E+08
263	1.79E+11	6.82E+08
264	1.8E+11	6.82E+08
265	1.81E+11	6.82E+08
266	1.82E+11	6.82E+08
267	1.82E+11	6.82E+08
268	1.83E+11	6.82E+08
269	1.84E+11	6.82E+08
270	1.84E+11	6.82E+08
271	1.85E+11	6.82E+08
272	1.86E+11	6.82E+08
273	1.86E+11	6.82E+08
274	1.87E+11	6.82E+08
275	1.88E+11	6.82E+08
276	1.88E+11	6.82E+08
277	1.89E+11	6.82E+08
278	1.9E+11	6.82E+08
279	1.9E+11	6.82E+08
280	1.91E+11	6.82E+08
281	1.92E+11	6.82E+08
282	1.92E+11	6.82E+08
283	1.93E+11	6.82E+08
284	1.94E+11	6.82E+08
285	1.94E+11	6.82E+08
286	1.95E+11	6.82E+08
287	1.96E+11	6.82E+08
288	1.97E+11	6.82E+08
289	1.97E+11	6.82E+08
290	1.98E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
291	1.99E+11	6.82E+08
292	1.99E+11	6.82E+08
293	2E+11	6.82E+08
294	2.01E+11	6.82E+08
295	2.01E+11	6.82E+08
296	2.02E+11	6.82E+08
297	2.03E+11	6.82E+08
298	2.03E+11	6.82E+08
299	2.04E+11	6.82E+08
300	2.05E+11	6.82E+08
301	2.05E+11	6.82E+08
302	2.06E+11	6.82E+08
303	2.07E+11	6.82E+08
304	2.07E+11	6.82E+08
305	2.08E+11	6.82E+08
306	2.09E+11	6.82E+08
307	2.09E+11	6.82E+08
308	2.1E+11	6.82E+08
309	2.11E+11	6.82E+08
310	2.12E+11	6.82E+08
311	2.12E+11	6.82E+08
312	2.13E+11	6.82E+08
313	2.14E+11	6.82E+08
314	2.14E+11	6.82E+08
315	2.15E+11	6.82E+08
316	2.16E+11	6.82E+08
317	2.16E+11	6.82E+08
318	2.17E+11	6.82E+08
319	2.18E+11	6.82E+08
320	2.18E+11	6.82E+08
321	2.19E+11	6.82E+08
322	2.2E+11	6.82E+08
323	2.2E+11	6.82E+08
324	2.21E+11	6.82E+08
325	2.22E+11	6.82E+08
326	2.22E+11	6.82E+08
327	2.23E+11	6.82E+08
328	2.24E+11	6.82E+08
329	2.24E+11	6.82E+08
330	2.25E+11	6.82E+08
331	2.26E+11	6.82E+08
332	2.27E+11	6.82E+08
333	2.27E+11	6.82E+08
334	2.28E+11	6.82E+08
335	2.29E+11	6.82E+08
336	2.29E+11	6.82E+08
337	2.3E+11	6.82E+08
338	2.31E+11	6.82E+08
339	2.31E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
340	2.32E+11	6.82E+08
341	2.33E+11	6.82E+08
342	2.33E+11	6.82E+08
343	2.34E+11	6.82E+08
344	2.35E+11	6.82E+08
345	2.35E+11	6.82E+08
346	2.36E+11	6.82E+08
347	2.37E+11	6.82E+08
348	2.37E+11	6.82E+08
349	2.38E+11	6.82E+08
350	2.39E+11	6.82E+08
351	2.4E+11	6.82E+08
352	2.4E+11	6.82E+08
353	2.41E+11	6.82E+08
354	2.42E+11	6.82E+08
355	2.42E+11	6.82E+08
356	2.43E+11	6.82E+08
357	2.44E+11	6.82E+08
358	2.44E+11	6.82E+08
359	2.45E+11	6.82E+08
360	2.46E+11	6.82E+08
361	2.46E+11	6.82E+08
362	2.47E+11	6.82E+08
363	2.48E+11	6.82E+08
364	2.48E+11	6.82E+08
365	2.49E+11	6.82E+08
366	2.5E+11	6.82E+08
367	2.5E+11	6.82E+08
368	2.51E+11	6.82E+08
369	2.52E+11	6.82E+08
370	2.52E+11	6.82E+08
371	2.53E+11	6.82E+08
372	2.54E+11	6.82E+08
373	2.55E+11	6.82E+08
374	2.55E+11	6.82E+08
375	2.56E+11	6.82E+08
376	2.57E+11	6.82E+08
377	2.57E+11	6.82E+08
378	2.58E+11	6.82E+08
379	2.59E+11	6.82E+08
380	2.59E+11	6.82E+08
381	2.6E+11	6.82E+08
382	2.61E+11	6.82E+08
383	2.61E+11	6.82E+08
384	2.62E+11	6.82E+08
385	2.63E+11	6.82E+08
386	2.63E+11	6.82E+08
387	2.64E+11	6.82E+08
388	2.65E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
389	2.65E+11	6.82E+08
390	2.66E+11	6.82E+08
391	2.67E+11	6.82E+08
392	2.67E+11	6.82E+08
393	2.68E+11	6.82E+08
394	2.69E+11	6.82E+08
395	2.7E+11	6.82E+08
396	2.7E+11	6.82E+08
397	2.71E+11	6.82E+08
398	2.72E+11	6.82E+08
399	2.72E+11	6.82E+08
400	2.73E+11	6.82E+08
401	2.74E+11	6.82E+08
402	2.74E+11	6.82E+08
403	2.75E+11	6.82E+08
404	2.76E+11	6.82E+08
405	2.76E+11	6.82E+08
406	2.77E+11	6.82E+08
407	2.78E+11	6.82E+08
408	2.78E+11	6.82E+08
409	2.79E+11	6.82E+08
410	2.8E+11	6.82E+08
411	2.8E+11	6.82E+08
412	2.81E+11	6.82E+08
413	2.82E+11	6.82E+08
414	2.82E+11	6.82E+08
415	2.83E+11	6.82E+08
416	2.84E+11	6.82E+08
417	2.85E+11	6.82E+08
418	2.85E+11	6.82E+08
419	2.86E+11	6.82E+08
420	2.87E+11	6.82E+08
421	2.87E+11	6.82E+08
422	2.88E+11	6.82E+08
423	2.89E+11	6.82E+08
424	2.89E+11	6.82E+08
425	2.9E+11	6.82E+08
426	2.91E+11	6.82E+08
427	2.91E+11	6.82E+08
428	2.92E+11	6.82E+08
429	2.93E+11	6.82E+08
430	2.93E+11	6.82E+08
431	2.94E+11	6.82E+08
432	2.95E+11	6.82E+08
433	2.95E+11	6.82E+08
434	2.96E+11	6.82E+08
435	2.97E+11	6.82E+08
436	2.98E+11	6.82E+08
437	2.98E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
438	2.99E+11	6.82E+08
439	3E+11	6.82E+08
440	3E+11	6.82E+08
441	3.01E+11	6.82E+08
442	3.02E+11	6.82E+08
443	3.02E+11	6.82E+08
444	3.03E+11	6.82E+08
445	3.04E+11	6.82E+08
446	3.04E+11	6.82E+08
447	3.05E+11	6.82E+08
448	3.06E+11	6.82E+08
449	3.06E+11	6.82E+08
450	3.07E+11	6.82E+08
451	3.08E+11	6.82E+08
452	3.08E+11	6.82E+08
453	3.09E+11	6.82E+08
454	3.1E+11	6.82E+08
455	3.1E+11	6.82E+08
456	3.11E+11	6.82E+08
457	3.12E+11	6.82E+08
458	3.13E+11	6.82E+08
459	3.13E+11	6.82E+08
460	3.14E+11	6.82E+08
461	3.15E+11	6.82E+08
462	3.15E+11	6.82E+08
463	3.16E+11	6.82E+08
464	3.17E+11	6.82E+08
465	3.17E+11	6.82E+08
466	3.18E+11	6.82E+08
467	3.19E+11	6.82E+08
468	3.19E+11	6.82E+08
469	3.2E+11	6.82E+08
470	3.21E+11	6.82E+08
471	3.21E+11	6.82E+08
472	3.22E+11	6.82E+08
473	3.23E+11	6.82E+08
474	3.23E+11	6.82E+08
475	3.24E+11	6.82E+08
476	3.25E+11	6.82E+08
477	3.25E+11	6.82E+08
478	3.26E+11	6.82E+08
479	3.27E+11	6.82E+08
480	3.28E+11	6.82E+08
481	3.28E+11	6.82E+08
482	3.29E+11	6.82E+08
483	3.3E+11	6.82E+08
484	3.3E+11	6.82E+08
485	3.31E+11	6.82E+08
486	3.32E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
487	3.32E+11	6.82E+08
488	3.33E+11	6.82E+08
489	3.34E+11	6.82E+08
490	3.34E+11	6.82E+08
491	3.35E+11	6.82E+08
492	3.36E+11	6.82E+08
493	3.36E+11	6.82E+08
494	3.37E+11	6.82E+08
495	3.38E+11	6.82E+08
496	3.38E+11	6.82E+08
497	3.39E+11	6.82E+08
498	3.4E+11	6.82E+08
499	3.4E+11	6.82E+08
500	3.41E+11	6.82E+08
501	3.42E+11	6.82E+08
502	3.43E+11	6.82E+08
503	3.43E+11	6.82E+08
504	3.44E+11	6.82E+08
505	3.45E+11	6.82E+08
506	3.45E+11	6.82E+08
507	3.46E+11	6.82E+08
508	3.47E+11	6.82E+08
509	3.47E+11	6.82E+08
510	3.48E+11	6.82E+08
511	3.49E+11	6.82E+08
512	3.49E+11	6.82E+08
513	3.5E+11	6.82E+08
514	3.51E+11	6.82E+08
515	3.51E+11	6.82E+08
516	3.52E+11	6.82E+08
517	3.53E+11	6.82E+08
518	3.53E+11	6.82E+08
519	3.54E+11	6.82E+08
520	3.55E+11	6.82E+08
521	3.56E+11	6.82E+08
522	3.56E+11	6.82E+08
523	3.57E+11	6.82E+08
524	3.58E+11	6.82E+08
525	3.58E+11	6.82E+08
526	3.59E+11	6.82E+08
527	3.6E+11	6.82E+08
528	3.6E+11	6.82E+08
529	3.61E+11	6.82E+08
530	3.62E+11	6.82E+08
531	3.62E+11	6.82E+08
532	3.63E+11	6.82E+08
533	3.64E+11	6.82E+08
534	3.64E+11	6.82E+08
535	3.65E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
536	3.66E+11	6.82E+08
537	3.66E+11	6.82E+08
538	3.67E+11	6.82E+08
539	3.68E+11	6.82E+08
540	3.68E+11	6.82E+08
541	3.69E+11	6.82E+08
542	3.7E+11	6.82E+08
543	3.71E+11	6.82E+08
544	3.71E+11	6.82E+08
545	3.72E+11	6.82E+08
546	3.73E+11	6.82E+08
547	3.73E+11	6.82E+08
548	3.74E+11	6.82E+08
549	3.75E+11	6.82E+08
550	3.75E+11	6.82E+08
551	3.76E+11	6.82E+08
552	3.77E+11	6.82E+08
553	3.77E+11	6.82E+08
554	3.78E+11	6.82E+08
555	3.79E+11	6.82E+08
556	3.79E+11	6.82E+08
557	3.8E+11	6.82E+08
558	3.81E+11	6.82E+08
559	3.81E+11	6.82E+08
560	3.82E+11	6.82E+08
561	3.83E+11	6.82E+08
562	3.83E+11	6.82E+08
563	3.84E+11	6.82E+08
564	3.85E+11	6.82E+08
565	3.86E+11	6.82E+08
566	3.86E+11	6.82E+08
567	3.87E+11	6.82E+08
568	3.88E+11	6.82E+08
569	3.88E+11	6.82E+08
570	3.89E+11	6.82E+08
571	3.9E+11	6.82E+08
572	3.9E+11	6.82E+08
573	3.91E+11	6.82E+08
574	3.92E+11	6.82E+08
575	3.92E+11	6.82E+08
576	3.93E+11	6.82E+08
577	3.94E+11	6.82E+08
578	3.94E+11	6.82E+08
579	3.95E+11	6.82E+08
580	3.96E+11	6.82E+08
581	3.96E+11	6.82E+08
582	3.97E+11	6.82E+08
583	3.98E+11	6.82E+08
584	3.98E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
585	3.99E+11	6.82E+08
586	4E+11	6.82E+08
587	4.01E+11	6.82E+08
588	4.01E+11	6.82E+08
589	4.02E+11	6.82E+08
590	4.03E+11	6.82E+08
591	4.03E+11	6.82E+08
592	4.04E+11	6.82E+08
593	4.05E+11	6.82E+08
594	4.05E+11	6.82E+08
595	4.06E+11	6.82E+08
596	4.07E+11	6.82E+08
597	4.07E+11	6.82E+08
598	4.08E+11	6.82E+08
599	4.09E+11	6.82E+08
600	4.09E+11	6.82E+08
601	4.1E+11	6.82E+08
602	4.11E+11	6.82E+08
603	4.11E+11	6.82E+08
604	4.12E+11	6.82E+08
605	4.13E+11	6.82E+08
606	4.14E+11	6.82E+08
607	4.14E+11	6.82E+08
608	4.15E+11	6.82E+08
609	4.16E+11	6.82E+08
610	4.16E+11	6.82E+08
611	4.17E+11	6.82E+08
612	4.18E+11	6.82E+08
613	4.18E+11	6.82E+08
614	4.19E+11	6.82E+08
615	4.2E+11	6.82E+08
616	4.2E+11	6.82E+08
617	4.21E+11	6.82E+08
618	4.22E+11	6.82E+08
619	4.22E+11	6.82E+08
620	4.23E+11	6.82E+08
621	4.24E+11	6.82E+08
622	4.24E+11	6.82E+08
623	4.25E+11	6.82E+08
624	4.26E+11	6.82E+08
625	4.26E+11	6.82E+08
626	4.27E+11	6.82E+08
627	4.28E+11	6.82E+08
628	4.29E+11	6.82E+08
629	4.29E+11	6.82E+08
630	4.3E+11	6.82E+08
631	4.31E+11	6.82E+08
632	4.31E+11	6.82E+08
633	4.32E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
634	4.33E+11	6.82E+08
635	4.33E+11	6.82E+08
636	4.34E+11	6.82E+08
637	4.35E+11	6.82E+08
638	4.35E+11	6.82E+08
639	4.36E+11	6.82E+08
640	4.37E+11	6.82E+08
641	4.37E+11	6.82E+08
642	4.38E+11	6.82E+08
643	4.39E+11	6.82E+08
644	4.39E+11	6.82E+08
645	4.4E+11	6.82E+08
646	4.41E+11	6.82E+08
647	4.41E+11	6.82E+08
648	4.42E+11	6.82E+08
649	4.43E+11	6.82E+08
650	4.44E+11	6.82E+08
651	4.44E+11	6.82E+08
652	4.45E+11	6.82E+08
653	4.46E+11	6.82E+08
654	4.46E+11	6.82E+08
655	4.47E+11	6.82E+08
656	4.48E+11	6.82E+08
657	4.48E+11	6.82E+08
658	4.49E+11	6.82E+08
659	4.5E+11	6.82E+08
660	4.5E+11	6.82E+08
661	4.51E+11	6.82E+08
662	4.52E+11	6.82E+08
663	4.52E+11	6.82E+08
664	4.53E+11	6.82E+08
665	4.54E+11	6.82E+08
666	4.54E+11	6.82E+08
667	4.55E+11	6.82E+08
668	4.56E+11	6.82E+08
669	4.56E+11	6.82E+08
670	4.57E+11	6.82E+08
671	4.58E+11	6.82E+08
672	4.59E+11	6.82E+08
673	4.59E+11	6.82E+08
674	4.6E+11	6.82E+08
675	4.61E+11	6.82E+08
676	4.61E+11	6.82E+08
677	4.62E+11	6.82E+08
678	4.63E+11	6.82E+08
679	4.63E+11	6.82E+08
680	4.64E+11	6.82E+08
681	4.65E+11	6.82E+08
682	4.65E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
683	4.66E+11	6.82E+08
684	4.67E+11	6.82E+08
685	4.67E+11	6.82E+08
686	4.68E+11	6.82E+08
687	4.69E+11	6.82E+08
688	4.69E+11	6.82E+08
689	4.7E+11	6.82E+08
690	4.71E+11	6.82E+08
691	4.72E+11	6.82E+08
692	4.72E+11	6.82E+08
693	4.73E+11	6.82E+08
694	4.74E+11	6.82E+08
695	4.74E+11	6.82E+08
696	4.75E+11	6.82E+08
697	4.76E+11	6.82E+08
698	4.76E+11	6.82E+08
699	4.77E+11	6.82E+08
700	4.78E+11	6.82E+08
701	4.78E+11	6.82E+08
702	4.79E+11	6.82E+08
703	4.8E+11	6.82E+08
704	4.8E+11	6.82E+08
705	4.81E+11	6.82E+08
706	4.82E+11	6.82E+08
707	4.82E+11	6.82E+08
708	4.83E+11	6.82E+08
709	4.84E+11	6.82E+08
710	4.84E+11	6.82E+08
711	4.85E+11	6.82E+08
712	4.86E+11	6.82E+08
713	4.87E+11	6.82E+08
714	4.87E+11	6.82E+08
715	4.88E+11	6.82E+08
716	4.89E+11	6.82E+08
717	4.89E+11	6.82E+08
718	4.9E+11	6.82E+08
719	4.91E+11	6.82E+08
720	4.91E+11	6.82E+08
721	4.92E+11	6.82E+08
722	4.93E+11	6.82E+08
723	4.93E+11	6.82E+08
724	4.94E+11	6.82E+08
725	4.95E+11	6.82E+08
726	4.95E+11	6.82E+08
727	4.96E+11	6.82E+08
728	4.97E+11	6.82E+08
729	4.97E+11	6.82E+08
730	4.98E+11	6.82E+08
731	4.99E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
732	4.99E+11	6.82E+08
733	5E+11	6.82E+08
734	5.01E+11	6.82E+08
735	5.02E+11	6.82E+08
736	5.02E+11	6.82E+08
737	5.03E+11	6.82E+08
738	5.04E+11	6.82E+08
739	5.04E+11	6.82E+08
740	5.05E+11	6.82E+08
741	5.06E+11	6.82E+08
742	5.06E+11	6.82E+08
743	5.07E+11	6.82E+08
744	5.08E+11	6.82E+08
745	5.08E+11	6.82E+08
746	5.09E+11	6.82E+08
747	5.1E+11	6.82E+08
748	5.1E+11	6.82E+08
749	5.11E+11	6.82E+08
750	5.12E+11	6.82E+08
751	5.12E+11	6.82E+08
752	5.13E+11	6.82E+08
753	5.14E+11	6.82E+08
754	5.14E+11	6.82E+08
755	5.15E+11	6.82E+08
756	5.16E+11	6.82E+08
757	5.17E+11	6.82E+08
758	5.17E+11	6.82E+08
759	5.18E+11	6.82E+08
760	5.19E+11	6.82E+08
761	5.19E+11	6.82E+08
762	5.2E+11	6.82E+08
763	5.21E+11	6.82E+08
764	5.21E+11	6.82E+08
765	5.22E+11	6.82E+08
766	5.23E+11	6.82E+08
767	5.23E+11	6.82E+08
768	5.24E+11	6.82E+08
769	5.25E+11	6.82E+08
770	5.25E+11	6.82E+08
771	5.26E+11	6.82E+08
772	5.27E+11	6.82E+08
773	5.27E+11	6.82E+08
774	5.28E+11	6.82E+08
775	5.29E+11	6.82E+08
776	5.3E+11	6.82E+08
777	5.3E+11	6.82E+08
778	5.31E+11	6.82E+08
779	5.32E+11	6.82E+08
780	5.32E+11	6.82E+08

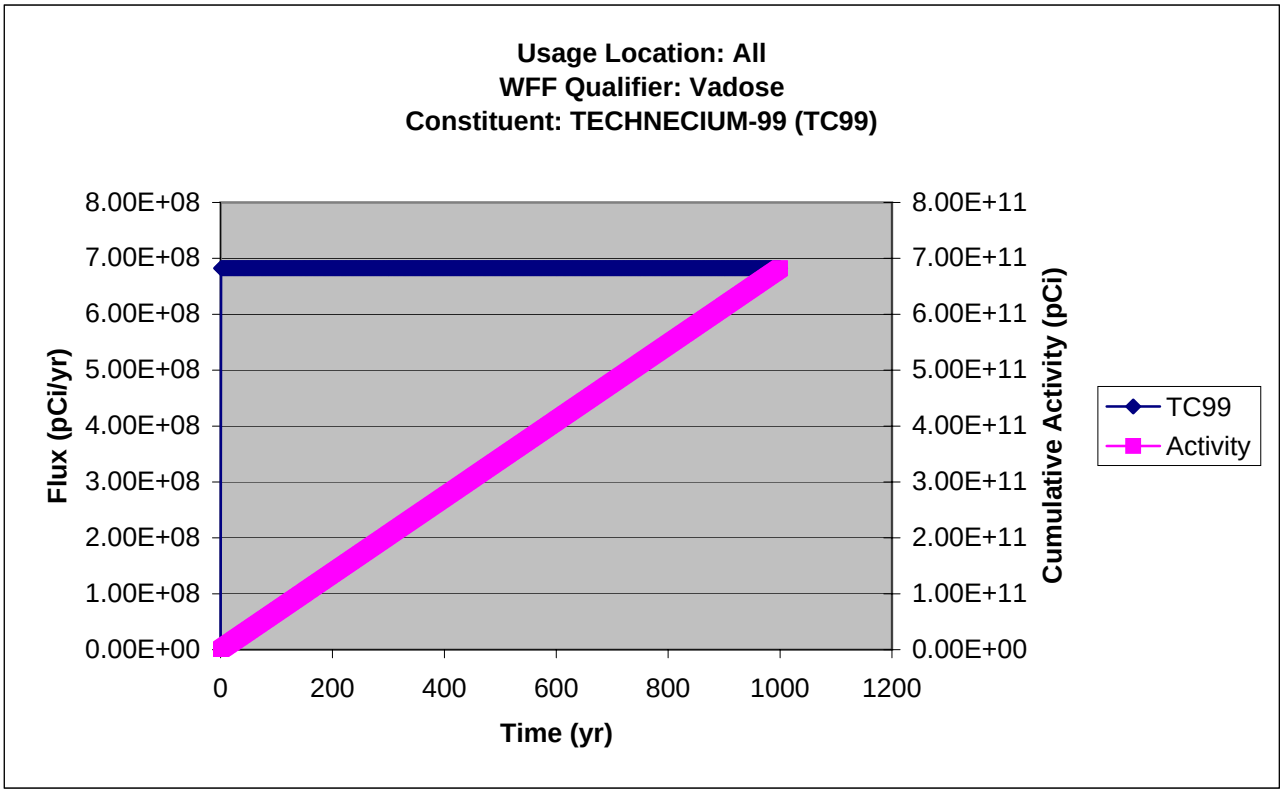
Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
781	5.33E+11	6.82E+08
782	5.34E+11	6.82E+08
783	5.34E+11	6.82E+08
784	5.35E+11	6.82E+08
785	5.36E+11	6.82E+08
786	5.36E+11	6.82E+08
787	5.37E+11	6.82E+08
788	5.38E+11	6.82E+08
789	5.38E+11	6.82E+08
790	5.39E+11	6.82E+08
791	5.4E+11	6.82E+08
792	5.4E+11	6.82E+08
793	5.41E+11	6.82E+08
794	5.42E+11	6.82E+08
795	5.42E+11	6.82E+08
796	5.43E+11	6.82E+08
797	5.44E+11	6.82E+08
798	5.45E+11	6.82E+08
799	5.45E+11	6.82E+08
800	5.46E+11	6.82E+08
801	5.47E+11	6.82E+08
802	5.47E+11	6.82E+08
803	5.48E+11	6.82E+08
804	5.49E+11	6.82E+08
805	5.49E+11	6.82E+08
806	5.5E+11	6.82E+08
807	5.51E+11	6.82E+08
808	5.51E+11	6.82E+08
809	5.52E+11	6.82E+08
810	5.53E+11	6.82E+08
811	5.53E+11	6.82E+08
812	5.54E+11	6.82E+08
813	5.55E+11	6.82E+08
814	5.55E+11	6.82E+08
815	5.56E+11	6.82E+08
816	5.57E+11	6.82E+08
817	5.57E+11	6.82E+08
818	5.58E+11	6.82E+08
819	5.59E+11	6.82E+08
820	5.6E+11	6.82E+08
821	5.6E+11	6.82E+08
822	5.61E+11	6.82E+08
823	5.62E+11	6.82E+08
824	5.62E+11	6.82E+08
825	5.63E+11	6.82E+08
826	5.64E+11	6.82E+08
827	5.64E+11	6.82E+08
828	5.65E+11	6.82E+08
829	5.66E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
830	5.66E+11	6.82E+08
831	5.67E+11	6.82E+08
832	5.68E+11	6.82E+08
833	5.68E+11	6.82E+08
834	5.69E+11	6.82E+08
835	5.7E+11	6.82E+08
836	5.7E+11	6.82E+08
837	5.71E+11	6.82E+08
838	5.72E+11	6.82E+08
839	5.72E+11	6.82E+08
840	5.73E+11	6.82E+08
841	5.74E+11	6.82E+08
842	5.75E+11	6.82E+08
843	5.75E+11	6.82E+08
844	5.76E+11	6.82E+08
845	5.77E+11	6.82E+08
846	5.77E+11	6.82E+08
847	5.78E+11	6.82E+08
848	5.79E+11	6.82E+08
849	5.79E+11	6.82E+08
850	5.8E+11	6.82E+08
851	5.81E+11	6.82E+08
852	5.81E+11	6.82E+08
853	5.82E+11	6.82E+08
854	5.83E+11	6.82E+08
855	5.83E+11	6.82E+08
856	5.84E+11	6.82E+08
857	5.85E+11	6.82E+08
858	5.85E+11	6.82E+08
859	5.86E+11	6.82E+08
860	5.87E+11	6.82E+08
861	5.88E+11	6.82E+08
862	5.88E+11	6.82E+08
863	5.89E+11	6.82E+08
864	5.9E+11	6.82E+08
865	5.9E+11	6.82E+08
866	5.91E+11	6.82E+08
867	5.92E+11	6.82E+08
868	5.92E+11	6.82E+08
869	5.93E+11	6.82E+08
870	5.94E+11	6.82E+08
871	5.94E+11	6.82E+08
872	5.95E+11	6.82E+08
873	5.96E+11	6.82E+08
874	5.96E+11	6.82E+08
875	5.97E+11	6.82E+08
876	5.98E+11	6.82E+08
877	5.98E+11	6.82E+08
878	5.99E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
879	6E+11	6.82E+08
880	6E+11	6.82E+08
881	6.01E+11	6.82E+08
882	6.02E+11	6.82E+08
883	6.03E+11	6.82E+08
884	6.03E+11	6.82E+08
885	6.04E+11	6.82E+08
886	6.05E+11	6.82E+08
887	6.05E+11	6.82E+08
888	6.06E+11	6.82E+08
889	6.07E+11	6.82E+08
890	6.07E+11	6.82E+08
891	6.08E+11	6.82E+08
892	6.09E+11	6.82E+08
893	6.09E+11	6.82E+08
894	6.1E+11	6.82E+08
895	6.11E+11	6.82E+08
896	6.11E+11	6.82E+08
897	6.12E+11	6.82E+08
898	6.13E+11	6.82E+08
899	6.13E+11	6.82E+08
900	6.14E+11	6.82E+08
901	6.15E+11	6.82E+08
902	6.15E+11	6.82E+08
903	6.16E+11	6.82E+08
904	6.17E+11	6.82E+08
905	6.18E+11	6.82E+08
906	6.18E+11	6.82E+08
907	6.19E+11	6.82E+08
908	6.2E+11	6.82E+08
909	6.2E+11	6.82E+08
910	6.21E+11	6.82E+08
911	6.22E+11	6.82E+08
912	6.22E+11	6.82E+08
913	6.23E+11	6.82E+08
914	6.24E+11	6.82E+08
915	6.24E+11	6.82E+08
916	6.25E+11	6.82E+08
917	6.26E+11	6.82E+08
918	6.26E+11	6.82E+08
919	6.27E+11	6.82E+08
920	6.28E+11	6.82E+08
921	6.28E+11	6.82E+08
922	6.29E+11	6.82E+08
923	6.3E+11	6.82E+08
924	6.3E+11	6.82E+08
925	6.31E+11	6.82E+08
926	6.32E+11	6.82E+08
927	6.33E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
928	6.33E+11	6.82E+08
929	6.34E+11	6.82E+08
930	6.35E+11	6.82E+08
931	6.35E+11	6.82E+08
932	6.36E+11	6.82E+08
933	6.37E+11	6.82E+08
934	6.37E+11	6.82E+08
935	6.38E+11	6.82E+08
936	6.39E+11	6.82E+08
937	6.39E+11	6.82E+08
938	6.4E+11	6.82E+08
939	6.41E+11	6.82E+08
940	6.41E+11	6.82E+08
941	6.42E+11	6.82E+08
942	6.43E+11	6.82E+08
943	6.43E+11	6.82E+08
944	6.44E+11	6.82E+08
945	6.45E+11	6.82E+08
946	6.46E+11	6.82E+08
947	6.46E+11	6.82E+08
948	6.47E+11	6.82E+08
949	6.48E+11	6.82E+08
950	6.48E+11	6.82E+08
951	6.49E+11	6.82E+08
952	6.5E+11	6.82E+08
953	6.5E+11	6.82E+08
954	6.51E+11	6.82E+08
955	6.52E+11	6.82E+08
956	6.52E+11	6.82E+08
957	6.53E+11	6.82E+08
958	6.54E+11	6.82E+08
959	6.54E+11	6.82E+08
960	6.55E+11	6.82E+08
961	6.56E+11	6.82E+08
962	6.56E+11	6.82E+08
963	6.57E+11	6.82E+08
964	6.58E+11	6.82E+08
965	6.58E+11	6.82E+08
966	6.59E+11	6.82E+08
967	6.6E+11	6.82E+08
968	6.61E+11	6.82E+08
969	6.61E+11	6.82E+08
970	6.62E+11	6.82E+08
971	6.63E+11	6.82E+08
972	6.63E+11	6.82E+08
973	6.64E+11	6.82E+08
974	6.65E+11	6.82E+08
975	6.65E+11	6.82E+08
976	6.66E+11	6.82E+08

Time (yr)	Cumulative (pCi)	TECHNECIUM-99 (TC99) (pCi/yr)
977	6.67E+11	6.82E+08
978	6.67E+11	6.82E+08
979	6.68E+11	6.82E+08
980	6.69E+11	6.82E+08
981	6.69E+11	6.82E+08
982	6.7E+11	6.82E+08
983	6.71E+11	6.82E+08
984	6.71E+11	6.82E+08
985	6.72E+11	6.82E+08
986	6.73E+11	6.82E+08
987	6.73E+11	6.82E+08
988	6.74E+11	6.82E+08
989	6.75E+11	6.82E+08
990	6.76E+11	6.82E+08
991	6.76E+11	6.82E+08
992	6.77E+11	6.82E+08
993	6.78E+11	6.82E+08
994	6.78E+11	6.82E+08
995	6.79E+11	6.82E+08
996	6.8E+11	6.82E+08
997	6.8E+11	6.82E+08
998	6.81E+11	6.82E+08
999	6.82E+11	6.82E+08
1000	6.82E+11	6.82E+08



For scenarios where the contaminant exists only in the aqueous or solid-sorbent phases and where no contaminant decays into another contaminant (progeny), the total mass loss rate due to decay and leaching is given as follows (Eqs. 3.11 and 5.105, http://mepas.pnl.gov/earth/formulations/source_term/source_form.html):

$$\frac{dM_i}{dt} = -\left(\lambda_i M_i + \frac{q_w M_i}{\theta_w R_i z} \right)$$

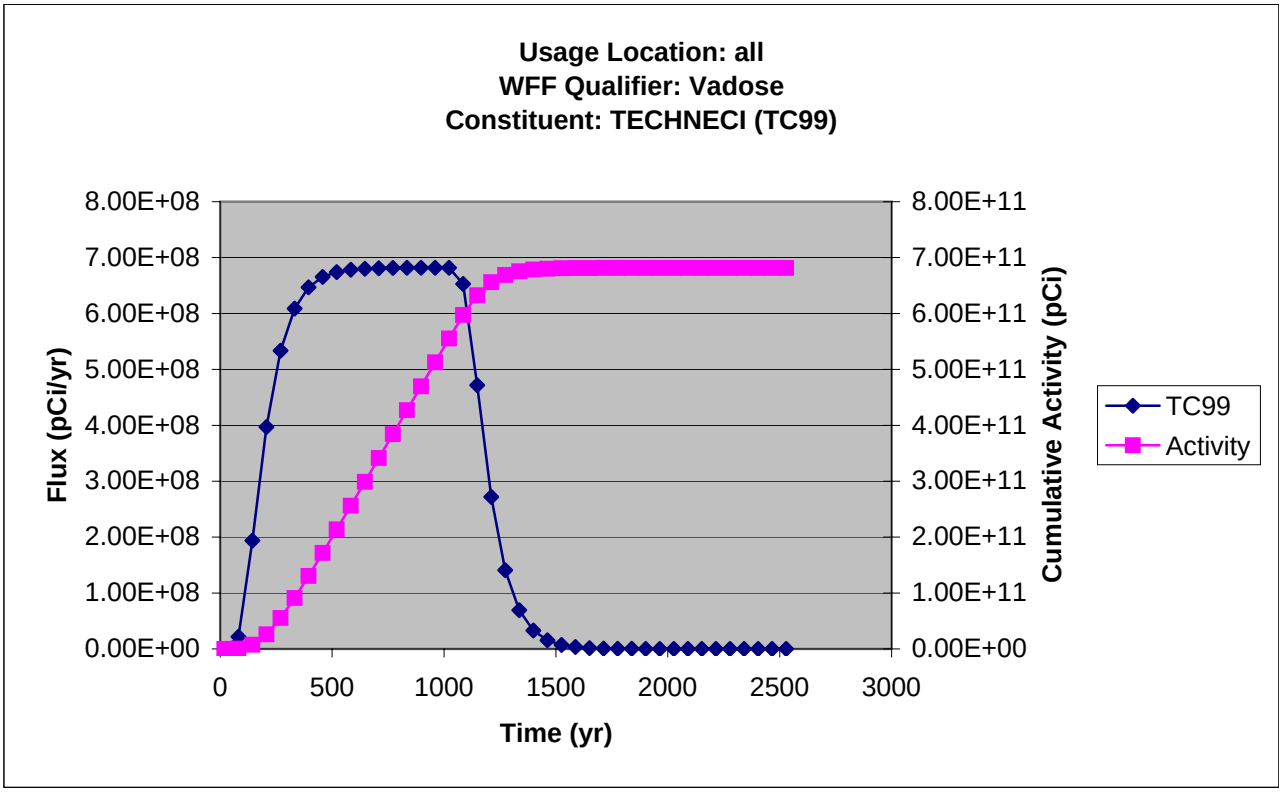
The first term on the right-hand side is the mass loss due to radioactive decay. The second term is the mass loss due to leaching.

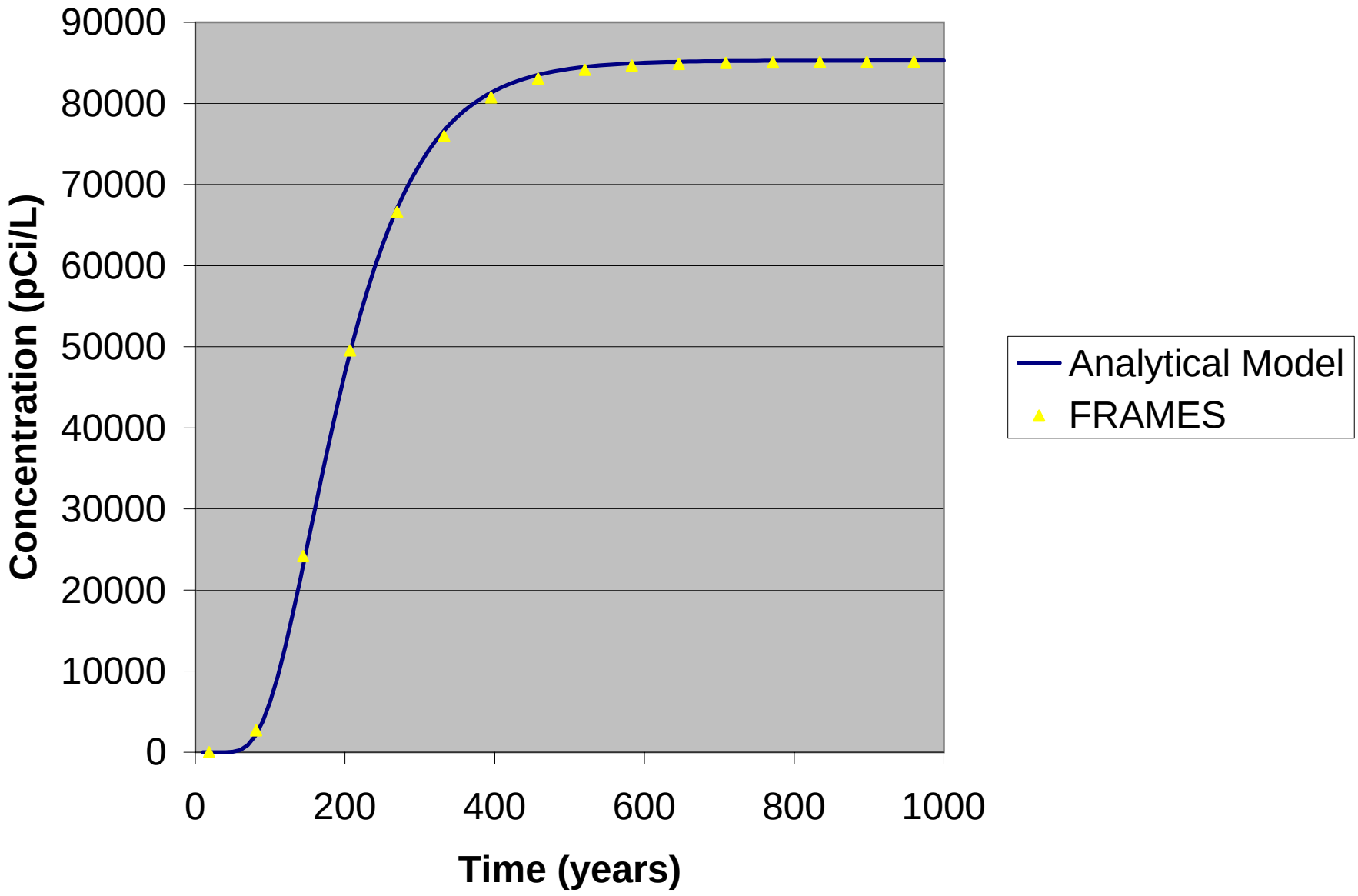
The solution for the mass remaining in the inventory as a function of time is given as follows:

$$M_i(t) = M_{io} \exp\left[-\left(\lambda_i + \frac{q_w}{\theta_w R_i z} \right) t \right]$$

File: c:\frames\training_files\vadose.wff
Module: Vadose_Zone (vad3)

Time (yr)	Cumulative Mass (pCi)	TECHNECI (TC99) (pCi/yr)	Tc-99 Concentration at bottom of vadose zone (pCi/L)
18.40681	0	0	0
81.17149	682795299.9	21757310	2715.590364
143.9362	7448583431	193834800	24193.06041
206.7009	25992793773	397077300	49560.32202
269.4655	55198797170	533574800	66596.95457
332.2302	91049149625	608798300	75985.80879
394.9949	1.30458E+11	646961700	80749.08887
457.7596	1.71645E+11	665453900	83057.15177
520.5243	2.13685E+11	674161600	84143.98402
583.2889	2.56126E+11	678229600	84651.72242
646.0536	2.98749E+11	679960200	84867.72341
708.8183	3.41461E+11	681062000	85005.24214
771.583	3.84222E+11	681505900	85060.64653
834.3477	4.27003E+11	681713900	85086.60759
897.1124	4.69793E+11	681807900	85098.33999
959.8771	5.12588E+11	681855700	85104.30604
1022.642	5.55386E+11	681876100	85106.85222
1085.406	5.97271E+11	652819800	81480.25462
1148.171	6.32557E+11	471568200	58857.73839
1210.936	6.55889E+11	271904800	33937.19421
1273.7	6.68841E+11	140806000	17574.38842
1336.465	6.7543E+11	69149370	8630.725162
1399.23	6.78636E+11	33006480	4119.630554
1461.995	6.80158E+11	15499560	1934.543185
1524.759	6.8087E+11	7207102	899.5384423
1587.524	6.81201E+11	3332042	415.8814279
1650.289	6.81354E+11	1536505	191.7754618
1713.053	6.81424E+11	704666.1	87.9513355
1775.818	6.81457E+11	322581.2	40.26225662
1838.583	6.81471E+11	148066.8	18.48062906
1901.347	6.81478E+11	67654.11	8.444097604
1964.112	6.81481E+11	30963.1	3.864590614
2026.877	6.81483E+11	14214.2	1.774113829
2089.641	6.81483E+11	6495.471	0.810717798
2152.406	6.81484E+11	2956.564	0.369016975
2215.171	6.81484E+11	1337.366	0.166920369
2277.935	6.81484E+11	599.1078	0.074776311
2340.7	6.81484E+11	259.1529	0.032345594
2403.465	6.81484E+11	104.6924	0.01306695
2466.229	6.81484E+11	33.13837	0.004136092
2528.994	6.81484E+11	0.6603234	8.24168E-05


Usage Location: all
WFF Qualifier: Vadose
Constituent: TECHNECI (TC99)
Flux (pCi/yr)
8.00E+08
7.00E+08
6.00E+08
5.00E+08
4.00E+08
3.00E+08
2.00E+08
1.00E+08
0.00E+00
Cumulative Activity (pCi)
8.00E+11
7.00E+11
6.00E+11
5.00E+11
4.00E+11
3.00E+11
2.00E+11
1.00E+11
0.00E+00
0
500
1000
1500
2000
2500
3000
Time (yr)
TC99
Activity


90000
80000
70000
60000
50000
40000
30000
20000
10000
0
Concentration (pCi/L)
0
200
400
600
800
1000
Time (years)
Analytical Model
FRAMES

This worksheet calculates the time-dependent breakthrough concentration of Tc-99 at the bottom of the vadose zone assuming that the source concentration is constant and that transport is by advection and dispersion only with retardation (adsorption). C.K.Ho 7/8/05

Parameters:

Initial Inventory (Ci)	16
Source Concentration (solubility limited) (pCi/L)	8.53E+04
Half-life (yrs)	2.12E+05
decay constant (1/yr)	3.27E-06
moisture content	0.095
Kd (mL/g)	0.5
Bulk density (kg/m^3)	2385
R	13.55263
Thickness (m)	5
Specific activity (Ci/g)	0.017
Solubility (mg/L)	5.00E-03
Total Porosity	0.1
Darcy infiltration velocity (m/year)	0.034
Pore velocity (m/year)	0.357895
Longitudinal dispersivity (m)	0.5

Time (years)	Concentration at vadose exit (pCi/L)	Concentration - full solution (pCi/L)
0		
10	0	0
20	3.23673E-05	5.88E-05
30	0.096961785	0.168696
40	5.308211293	8.877479
50	58.15405684	93.74985
60	283.9731274	442.3902
70	872.2392875	1316.105
80	2003.20172	2933.68
90	3787.920197	5394.591
100	6249.845122	8671.086
110	9337.444177	12641.65
120	12949.3674	17134.65
130	16959.56711	21965
140	21236.9938	26958.84
150	25658.54179	31966.87
160	30116.44666	36869.71
170	34521.4398	41577.81
180	38803.15017	46028.66
190	42908.86379	50182.65
200	46801.43607	54018.58
210	50456.88134	57529.53
220	53861.96019	60719.16
230	57011.94433	63598.63
240	59908.64541	66184.19
250	62558.73756	68495.17
260	64972.36677	70552.58
270	67162.02642	72378
280	69141.66374	73992.79
290	70925.98674	75417.58
300	72529.92764	76671.88
310	73968.28773	77773.95
320	75255.39316	78740.57
330	76404.94779	79587.1
340	77429.88683	80327.47
350	78342.30186	80974.22
360	79153.4136	81538.6
370	79873.55597	82030.64
380	80512.19742	82459.26
390	81077.97024	82832.36
400	81578.71231	83156.93
410	82021.51221	83439.11
420	82412.76374	83684.32
430	82758.21643	83897.29
440	83063.02667	84082.2
450	83331.81129	84242.69
460	83568.69363	84381.93
470	83777.35109	84502.7
480	83961.0584	84607.44
490	84122.72671	84698.24
500	84264.94119	84776.95

510	84389.99513	84845.16
520	84499.92009	84904.27
530	84596.51455	84955.48
540	84681.36901	84999.85
550	84755.8892	85038.28
560	84821.31627	85071.58
570	84878.74557	85100.41
580	84929.14308	85125.38
590	84973.36027	85147.01
600	85012.14718	85165.74
610	85046.16434	85181.96
620	85075.99302	85196
630	85102.14461	85208.17
640	85125.06886	85218.7
650	85145.16113	85227.82
660	85162.76887	85235.72
670	85178.19736	85242.56
680	85191.71468	85248.48
690	85203.55624	85253.61
700	85213.92869	85258.05
710	85223.0134	85261.9
720	85230.96948	85265.23
730	85237.93655	85268.11
740	85244.03704	85270.61
750	85249.37832	85272.78
760	85254.05453	85274.65
770	85258.1482	85276.28
780	85261.73167	85277.69
790	85264.86834	85278.91
800	85267.61374	85279.96
810	85270.01657	85280.88
820	85272.11945	85281.67
830	85273.95975	85282.36
840	85275.57017	85282.95
850	85276.97938	85283.47
860	85278.21245	85283.92
870	85279.29138	85284.3
880	85280.23538	85284.64
890	85281.06131	85284.93
900	85281.78392	85285.18
910	85282.4161	85285.4
920	85282.96916	85285.59
930	85283.45299	85285.76
940	85283.87625	85285.9
950	85284.2465	85286.02
960	85284.57038	85286.13
970	85284.8537	85286.22
980	85285.10152	85286.3
990	85285.31829	85286.37
1000	85285.5079	85286.43

$$D\frac{\partial^2 C}{\partial x^2} - v\frac{\partial C}{\partial x} = R\frac{\partial C}{\partial t}$$

$$C(x, t = 0) = 0$$

$$C(0, t) = C_o$$

$$C(x \to \infty, t) = 0$$

Solution:

$$C = \frac{C_o}{2}\left(erfc\left[\frac{Rx - vt}{2\sqrt{\alpha vtR}}\right]\right)$$

$$where\, D = \alpha v$$

From Domenico and Schwartz, 1998, Phyical and Chemical Hydrogeology, p. 375, Eq. 18.6

sen14 123
2
Sensitivity/Uncertainty Module for FRAMES
Beta Test version
15 2

ThickSrc	Thickness of waste zone from src2 (cm)
Length	Length of waste zone from src2 (cm)
Width	Width of waste zone from src2 (cm)
rhob	Bulk density of soil from src2 (g/cm^3)
MoistSrc	Moisture content from src2 (fraction)
porosity	Total porosity from src2 (fraction)
CdInv	Inventory quantity, Cadmium from src2 (g)
PbKd1	Equilibrium coefficients (kd), Cadmium, time # 1 from src2 (ml/g)
PbKd2	Equilibrium coefficients (kd), Cadmium, time # 2 from src2 (ml/g)
Darcy1	Darcy Vadose rate, time # 1 from src2 (cm/yr)
Darcy2	Darcy Vadose rate, time # 2 from src2 (cm/yr)
porVad	Soil total porosity from vad3 (percent)
KsatVad	Soil hydraulic conductivity from vad3 (cm/day)
rhobVad	Soil bulk density from vad3 (g/cm^3)
PbKdVad	Soil equilibrium coefficient, Cadmium from vad3 (ml/g)
waterflow.all.Vadose	vad3 water yr
CdFlux.all.Vadose	vad3 total (yr

100

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	CdInv	PbKd1
1	3.08E+02	7.01E+03	2.97E+03	1.64E+00	2.16E-01	3.44E-01	2.57E+06	1.39E+01
2	3.94E+02	6.77E+03	6.37E+03	1.70E+00	8.99E-02	3.73E-01	1.67E+06	3.94E+01
3	7.34E+02	1.08E+04	1.41E+03	1.77E+00	1.38E-01	4.05E-01	1.70E+06	1.53E+01
4	3.77E+02	2.97E+03	3.30E+03	1.55E+00	1.31E-01	3.46E-01	1.76E+06	2.88E+01
5	3.40E+02	3.39E+03	7.52E+03	1.54E+00	1.68E-01	3.87E-01	2.36E+06	3.05E+01
6	4.79E+02	9.04E+03	4.14E+03	1.67E+00	9.28E-02	3.65E-01	1.52E+06	7.45E+01
7	7.05E+02	8.27E+03	8.77E+03	1.48E+00	7.93E-02	3.24E-01	1.40E+06	4.71E+01
8	3.81E+02	8.45E+03	1.99E+03	1.47E+00	1.42E-01	3.58E-01	1.73E+06	1.72E+01
9	6.15E+02	1.25E+04	1.63E+03	1.49E+00	9.56E-02	3.91E-01	1.94E+06	2.08E+01
10	4.04E+02	1.47E+03	3.17E+03	1.68E+00	1.47E-01	3.38E-01	1.56E+06	1.80E+01
11	5.40E+02	1.14E+04	1.77E+03	1.77E+00	1.77E-01	3.82E-01	1.95E+06	6.35E+01
12	6.65E+02	4.45E+03	7.81E+03	1.50E+00	1.11E-01	4.22E-01	2.33E+06	7.12E+01
13	6.53E+02	6.49E+03	7.24E+03	1.68E+00	1.58E-01	3.05E-01	1.89E+06	1.59E+01
14	4.45E+02	1.20E+04	1.36E+03	1.84E+00	2.00E-01	3.55E-01	1.37E+06	1.01E+01
15	7.27E+02	1.18E+04	6.79E+03	1.72E+00	8.37E-02	3.49E-01	2.54E+06	7.50E+01
16	3.13E+02	1.10E+04	5.90E+03	1.72E+00	7.43E-02	3.62E-01	2.29E+06	1.22E+01
17	5.93E+02	1.07E+04	4.31E+03	1.63E+00	1.66E-01	4.29E-01	1.85E+06	1.77E+01
18	3.34E+02	4.07E+03	7.18E+03	1.48E+00	1.72E-01	3.18E-01	1.50E+06	3.70E+01
19	7.74E+02	7.56E+03	5.13E+03	1.69E+00	1.20E-01	4.30E-01	1.42E+06	2.32E+01
20	5.75E+02	6.18E+03	2.46E+03	1.65E+00	1.81E-01	3.51E-01	2.28E+06	1.24E+01
21	5.15E+02	9.00E+03	1.94E+03	1.82E+00	5.76E-02	3.85E-01	1.85E+06	1.34E+01
22	4.72E+02	8.78E+03	6.69E+03	1.75E+00	1.50E-01	3.09E-01	1.57E+06	6.08E+01
23	6.49E+02	4.95E+03	4.70E+03	1.73E+00	8.42E-02	4.13E-01	1.99E+06	5.76E+01
24	8.15E+02	1.26E+04	6.97E+03	1.57E+00	1.37E-01	3.31E-01	2.39E+06	1.11E+01
25	5.55E+02	1.24E+04	1.51E+03	1.50E+00	2.23E-01	3.90E-01	2.11E+06	9.54E+00
26	5.81E+02	1.11E+04	8.90E+03	1.51E+00	7.35E-02	4.25E-01	2.04E+06	1.90E+01
27	6.78E+02	1.22E+04	8.85E+03	1.78E+00	1.03E-01	3.80E-01	2.51E+06	1.84E+01
28	7.79E+02	9.62E+03	6.21E+03	1.62E+00	1.83E-01	3.72E-01	2.68E+06	3.83E+01
29	6.32E+02	1.05E+04	8.09E+03	1.56E+00	1.99E-01	3.07E-01	1.59E+06	4.45E+01
30	4.88E+02	1.01E+04	5.38E+03	1.53E+00	2.21E-01	3.94E-01	2.56E+06	8.64E+00
31	7.85E+02	1.02E+03	5.73E+03	1.83E+00	1.44E-01	4.25E-01	2.31E+06	3.65E+01
32	5.86E+02	5.33E+03	6.27E+03	1.61E+00	1.93E-01	3.68E-01	1.63E+06	5.15E+01
33	5.11E+02	7.34E+03	7.16E+02	1.57E+00	1.18E-01	4.36E-01	1.98E+06	1.14E+01
34	4.02E+02	6.25E+03	2.32E+03	1.66E+00	7.02E-02	4.38E-01	2.44E+06	2.04E+01
35	3.62E+02	9.24E+03	1.87E+03	1.71E+00	1.28E-01	4.27E-01	1.42E+06	1.43E+01
36	6.77E+02	9.45E+03	1.20E+03	1.54E+00	2.03E-01	3.34E-01	2.07E+06	6.05E+01
37	8.07E+02	1.14E+04	3.49E+03	1.79E+00	1.54E-01	4.10E-01	2.60E+06	2.63E+01
38	8.22E+02	1.42E+03	5.07E+03	1.61E+00	1.09E-01	3.39E-01	2.50E+06	2.20E+01
39	4.51E+02	7.36E+03	4.87E+03	1.79E+00	7.62E-02	3.83E-01	1.83E+06	3.40E+01
40	4.09E+02	1.04E+04	7.97E+03	1.58E+00	1.16E-01	4.08E-01	1.48E+06	9.85E+00
41	5.61E+02	5.64E+03	9.38E+02	1.54E+00	2.06E-01	3.28E-01	1.55E+06	4.85E+01
42	3.21E+02	2.04E+03	6.85E+03	1.52E+00	1.96E-01	4.44E-01	2.15E+06	6.39E+01
43	6.95E+02	5.05E+03	3.94E+03	1.64E+00	1.91E-01	3.78E-01	1.91E+06	6.93E+01
44	5.74E+02	4.72E+03	3.59E+02	1.53E+00	1.72E-01	4.42E-01	2.41E+06	5.23E+01
45	5.96E+02	3.21E+03	5.54E+03	1.81E+00	1.40E-01	3.49E-01	2.37E+06	9.27E+00
46	6.46E+02	5.74E+03	7.04E+03	1.52E+00	2.14E-01	3.53E-01	2.01E+06	1.49E+01
47	6.68E+02	3.57E+03	2.60E+03	1.80E+00	1.76E-01	3.84E-01	2.67E+06	4.18E+01
48	6.23E+02	1.24E+03	6.07E+03	1.67E+00	1.30E-01	3.93E-01	2.10E+06	6.76E+01
49	7.91E+02	5.21E+03	2.64E+03	1.70E+00	1.61E-01	3.60E-01	2.66E+06	8.80E+00
50	6.28E+02	3.06E+03	2.21E+03	1.49E+00	1.63E-01	4.18E-01	1.61E+06	8.44E+00
51	3.66E+02	1.10E+03	3.42E+03	1.79E+00	6.04E-02	4.00E-01	2.54E+06	2.14E+01
52	4.38E+02	4.58E+03	7.65E+03	1.56E+00	6.56E-02	3.96E-01	2.69E+06	4.10E+01
53	3.87E+02	1.68E+03	8.22E+03	1.83E+00	1.17E-01	3.76E-01	2.17E+06	3.22E+01
54	6.89E+02	1.16E+04	2.34E+03	1.60E+00	1.68E-01	3.75E-01	1.78E+06	2.98E+01
55	3.27E+02	6.63E+03	1.16E+03	1.59E+00	8.10E-02	3.15E-01	2.61E+06	1.68E+01
56	4.19E+02	8.56E+03	4.09E+03	1.85E+00	1.95E-01	3.35E-01	2.03E+06	4.30E+01
57	7.96E+02	6.44E+03	7.61E+02	1.71E+00	6.95E-02	4.34E-01	1.79E+06	4.73E+01
58	7.46E+02	1.28E+04	3.71E+03	1.70E+00	1.75E-01	4.14E-01	1.38E+06	5.63E+01

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	CdInv	PbKd1
59	5.44E+02	3.67E+03	6.64E+03	1.83E+00	1.48E-01	3.63E-01	1.90E+06	2.43E+01
60	4.94E+02	7.80E+03	4.80E+03	1.75E+00	1.05E-01	3.03E-01	1.72E+06	2.76E+01
61	5.38E+02	3.83E+03	9.03E+03	1.77E+00	2.17E-01	3.33E-01	2.64E+06	2.25E+01
62	4.46E+02	7.64E+03	3.88E+03	1.56E+00	2.20E-01	3.25E-01	2.46E+06	7.78E+01
63	3.89E+02	3.94E+02	2.72E+03	1.76E+00	2.24E-01	4.05E-01	2.22E+06	3.33E+01
64	3.41E+02	9.99E+03	6.51E+03	1.61E+00	1.88E-01	3.98E-01	1.71E+06	6.58E+01
65	3.49E+02	1.29E+04	4.43E+03	1.84E+00	8.75E-02	3.67E-01	1.97E+06	5.51E+01
66	4.15E+02	5.29E+02	4.51E+03	1.67E+00	1.80E-01	4.33E-01	1.92E+06	2.29E+01
67	7.40E+02	2.50E+03	4.26E+02	1.68E+00	1.46E-01	3.43E-01	1.46E+06	1.63E+01
68	4.57E+02	8.11E+03	9.11E+03	1.65E+00	1.90E-01	4.37E-01	1.53E+06	1.30E+01
69	5.25E+02	3.29E+03	5.02E+02	1.74E+00	1.56E-01	3.16E-01	2.42E+06	1.09E+01
70	7.60E+02	2.31E+03	6.48E+03	1.73E+00	1.01E-01	4.12E-01	2.34E+06	1.40E+01
71	4.83E+02	7.16E+03	8.46E+03	1.84E+00	8.68E-02	4.31E-01	1.81E+06	1.07E+01
72	7.54E+02	1.91E+03	4.23E+03	1.51E+00	1.64E-01	3.30E-01	2.46E+06	1.17E+01
73	5.29E+02	2.67E+03	3.06E+03	1.50E+00	9.15E-02	3.22E-01	2.59E+06	5.30E+01
74	3.17E+02	8.74E+03	8.38E+03	1.52E+00	6.48E-02	3.47E-01	2.39E+06	1.20E+01
75	4.97E+02	6.92E+03	1.02E+03	1.76E+00	1.14E-01	3.42E-01	2.62E+06	4.54E+01
76	7.13E+02	9.79E+03	7.40E+03	1.82E+00	2.09E-01	4.42E-01	1.87E+06	2.71E+01
77	4.69E+02	1.02E+04	5.97E+03	1.71E+00	1.24E-01	4.21E-01	2.19E+06	5.80E+01
78	5.66E+02	1.30E+04	2.93E+03	1.59E+00	2.13E-01	4.03E-01	2.50E+06	9.75E+00
79	7.17E+02	2.37E+03	5.91E+02	1.75E+00	5.37E-02	3.16E-01	1.44E+06	5.00E+01
80	7.21E+02	5.90E+03	2.11E+03	1.48E+00	6.27E-02	4.17E-01	1.51E+06	1.03E+01
81	3.70E+02	1.12E+04	3.76E+03	1.64E+00	9.77E-02	3.54E-01	2.48E+06	3.17E+01
82	8.11E+02	1.19E+04	8.57E+03	1.74E+00	1.87E-01	3.78E-01	2.05E+06	2.49E+01
83	7.99E+02	7.92E+03	8.68E+03	1.63E+00	1.52E-01	4.15E-01	2.21E+06	3.81E+01
84	4.29E+02	8.09E+03	5.82E+03	1.80E+00	2.11E-01	3.12E-01	2.00E+06	3.44E+01
85	7.44E+02	8.24E+02	8.26E+03	1.60E+00	1.56E-01	3.37E-01	1.36E+06	9.04E+00
86	5.51E+02	4.18E+03	7.83E+03	1.69E+00	5.53E-02	4.08E-01	1.69E+06	1.64E+01
87	7.70E+02	2.14E+03	1.62E+03	1.55E+00	6.70E-02	3.20E-01	2.26E+06	1.96E+01
88	6.04E+02	1.78E+03	5.61E+03	1.59E+00	1.13E-01	3.97E-01	2.14E+06	2.94E+01
89	6.17E+02	5.51E+03	9.01E+02	1.81E+00	1.27E-01	3.11E-01	1.80E+06	2.42E+01
90	6.09E+02	2.85E+03	2.82E+03	1.73E+00	1.02E-01	4.40E-01	1.66E+06	4.28E+01
91	4.65E+02	4.32E+03	7.28E+03	1.76E+00	9.71E-02	3.06E-01	2.09E+06	2.55E+01
92	6.84E+02	3.95E+03	5.30E+03	1.49E+00	7.77E-02	3.57E-01	2.31E+06	1.30E+01
93	4.26E+02	9.65E+03	3.39E+03	1.78E+00	1.07E-01	3.28E-01	2.13E+06	8.03E+00
94	3.54E+02	9.35E+03	5.46E+03	1.62E+00	1.22E-01	4.02E-01	2.25E+06	7.24E+01
95	7.00E+02	7.70E+02	8.08E+03	1.66E+00	1.85E-01	3.08E-01	1.64E+06	2.80E+01
96	6.62E+02	1.08E+04	4.93E+03	1.63E+00	5.84E-02	3.22E-01	2.17E+06	1.49E+01
97	5.22E+02	6.47E+02	7.59E+03	1.81E+00	2.03E-01	4.20E-01	1.60E+06	8.25E+00
98	6.37E+02	1.21E+04	4.62E+03	1.57E+00	1.34E-01	3.64E-01	2.23E+06	2.00E+01
99	5.05E+02	4.83E+03	5.20E+03	1.58E+00	1.32E-01	3.89E-01	1.45E+06	3.54E+01
100	7.62E+02	6.03E+03	3.58E+03	1.65E+00	2.06E-01	3.71E-01	1.75E+06	7.87E+01

realizations	PbKd2	Darcy1	Darcy2	porVad	KsatVad	rhobVad	PbKdVad
1	13.888	1.88E-01	0.18806	0.34435	3.40E+01	1.6419	13.888
2	39.354	7.40E-02	0.07398	0.37263	5.68E-01	1.6997	39.354
3	15.258	1.05E-01	0.10479	0.40459	9.39E+00	1.7678	15.258
4	28.808	8.58E-02	0.085768	0.34572	1.16E+01	1.5496	28.808
5	30.543	1.38E-01	0.13753	0.38719	4.65E-01	1.5407	30.543
6	74.509	8.06E-02	0.080587	0.36523	1.07E+01	1.6674	74.509
7	47.075	6.43E-02	0.064289	0.32407	7.34E-01	1.4795	47.075
8	17.204	1.80E-01	0.18013	0.35793	6.62E+00	1.4723	17.204
9	20.829	8.80E-02	0.08802	0.39137	1.30E+01	1.4907	20.829
10	18.01	1.24E-01	0.12434	0.33829	3.07E+01	1.6763	18.01
11	63.538	1.46E-01	0.14609	0.382	5.23E+00	1.7746	63.538
12	71.209	1.17E-01	0.117	0.42241	9.79E+01	1.5043	71.209
13	15.948	1.73E-01	0.17271	0.30456	1.50E+02	1.6826	15.948
14	10.149	1.74E-01	0.17354	0.35494	4.22E+00	1.8446	10.149
15	74.955	5.64E-02	0.056388	0.34906	8.74E+00	1.7219	74.955
16	12.2	4.25E-02	0.042499	0.36157	2.65E+01	1.7183	12.2
17	17.679	1.52E-01	0.15202	0.42922	1.75E+00	1.6322	17.679
18	37.028	9.69E-02	0.096934	0.31797	2.08E+01	1.4763	37.028
19	23.197	8.25E-02	0.082515	0.42961	9.72E-01	1.692	23.197
20	12.391	1.69E-01	0.1691	0.35078	1.09E+01	1.6534	12.391
21	13.374	3.76E-02	0.037576	0.38506	1.11E+02	1.816	13.374
22	60.786	1.01E-01	0.10112	0.30939	2.27E+01	1.7482	60.786
23	57.567	4.53E-02	0.045289	0.41256	2.42E+00	1.7297	57.567
24	11.117	1.41E-01	0.14134	0.33129	1.09E+00	1.5745	11.117
25	9.539	1.89E-01	0.18947	0.39044	6.07E+01	1.5032	9.539
26	18.993	5.11E-02	0.051102	0.42508	6.94E+00	1.5138	18.993
27	18.447	1.03E-01	0.10269	0.37971	1.79E+01	1.7784	18.447
28	38.339	1.78E-01	0.17754	0.37176	9.36E-01	1.6205	38.339
29	44.491	1.60E-01	0.16009	0.30669	1.62E+00	1.5592	44.491
30	8.6424	1.83E-01	0.1831	0.39444	5.26E+01	1.5274	8.6424
31	36.546	1.07E-01	0.10664	0.42462	5.55E+01	1.8344	36.546
32	51.529	1.81E-01	0.1808	0.36781	1.71E+01	1.6104	51.529
33	11.366	1.28E-01	0.12791	0.43621	1.50E+01	1.5676	11.366
34	20.408	6.66E-02	0.066637	0.43802	3.19E+00	1.6587	20.408
35	14.281	7.87E-02	0.078687	0.42707	1.63E+01	1.7085	14.281
36	60.524	1.35E-01	0.1345	0.33383	2.00E+01	1.5445	60.524
37	26.336	1.51E-01	0.15079	0.41013	3.72E+01	1.7944	26.336
38	21.984	9.42E-02	0.094239	0.33948	3.47E+01	1.6115	21.984
39	34.046	7.14E-02	0.071403	0.3826	8.31E+00	1.786	34.046
40	9.8507	1.19E-01	0.11874	0.4075	1.55E+01	1.5829	9.8507
41	48.459	1.10E-01	0.11021	0.32764	3.66E+00	1.5367	48.459
42	63.942	1.49E-01	0.14899	0.44366	8.75E+01	1.5241	63.942
43	69.275	1.32E-01	0.13196	0.37762	4.55E+00	1.6392	69.275
44	52.31	1.26E-01	0.12577	0.44206	7.96E+00	1.5323	52.31
45	9.2659	1.26E-01	0.12624	0.34947	4.78E+00	1.8132	9.2659
46	14.892	1.86E-01	0.18638	0.35318	1.26E+00	1.5195	14.892
47	41.758	1.66E-01	0.16593	0.38401	2.29E+00	1.8002	41.758
48	67.603	1.37E-01	0.1368	0.39326	5.55E+00	1.6747	67.603
49	8.8048	1.16E-01	0.1155	0.36048	1.44E+01	1.7022	8.8048
50	8.4369	1.23E-01	0.12266	0.41802	2.83E+01	1.4874	8.4369
51	21.413	6.75E-02	0.067501	0.39964	7.17E+01	1.791	21.413
52	41.006	5.48E-02	0.054777	0.39557	7.78E+01	1.5555	41.006
53	32.22	5.43E-02	0.054331	0.37612	2.34E+01	1.8307	32.22
54	29.793	1.61E-01	0.16114	0.37454	3.48E+00	1.6019	29.793
55	16.753	1.13E-01	0.11299	0.31487	3.92E+00	1.5939	16.753
56	42.995	1.85E-01	0.18484	0.3352	8.11E+01	1.8463	42.995
57	47.317	3.91E-02	0.039067	0.43368	6.42E+01	1.7098	47.317
58	56.338	1.45E-01	0.14473	0.41441	1.21E+02	1.6969	56.338

realizations	PbKd2	Darcy1	Darcy2	porVad	KsatVad	rhobVad	PbKdVad
59	24.305	9.85E-02	0.098514	0.36255	4.90E+00	1.8268	24.305
60	27.59	9.13E-02	0.091304	0.30319	5.82E+01	1.7454	27.59
61	22.471	1.70E-01	0.17049	0.33316	2.48E+00	1.7733	22.471
62	77.847	1.92E-01	0.19155	0.32493	3.81E+01	1.5637	77.847
63	33.297	1.92E-01	0.19201	0.40519	5.41E+00	1.7621	33.297
64	65.779	1.55E-01	0.15478	0.39831	1.87E+01	1.605	65.779
65	55.063	7.62E-02	0.076208	0.36682	2.78E+00	1.8392	55.063
66	22.945	1.54E-01	0.1538	0.43311	5.83E+00	1.6686	22.945
67	16.253	1.58E-01	0.15793	0.34313	4.28E+00	1.6847	16.253
68	13.005	1.67E-01	0.16709	0.43664	1.25E+01	1.652	13.005
69	10.914	1.30E-01	0.1296	0.31647	3.80E+00	1.742	10.914
70	14.015	7.30E-02	0.073031	0.4119	1.39E+00	1.7275	14.015
71	10.679	9.21E-02	0.092124	0.43098	6.91E-01	1.8377	10.679
72	11.681	1.12E-01	0.11157	0.32955	6.43E+00	1.5082	11.681
73	52.959	6.29E-02	0.06294	0.32233	7.28E+00	1.4985	52.959
74	12.014	4.85E-02	0.048533	0.34684	4.44E+01	1.5168	12.014
75	45.378	8.49E-02	0.084857	0.34194	2.38E+01	1.7587	45.378
76	27.102	1.75E-01	0.17483	0.44221	4.85E+01	1.8227	27.102
77	58.024	9.02E-02	0.090194	0.42087	1.73E+01	1.7149	58.024
78	9.7524	1.48E-01	0.14758	0.403	3.22E+00	1.5889	9.7524
79	50.01	6.14E-02	0.061425	0.31594	1.33E+01	1.7516	50.01
80	10.325	5.25E-02	0.052502	0.41693	2.66E+00	1.4836	10.325
81	31.749	6.84E-02	0.068449	0.35448	6.10E+00	1.6365	31.749
82	24.937	1.40E-01	0.1395	0.37798	2.57E+01	1.7362	24.937
83	38.141	1.20E-01	0.12017	0.41515	3.13E+01	1.625	38.141
84	34.356	1.65E-01	0.16478	0.31211	1.80E+00	1.8022	34.356
85	9.043	1.33E-01	0.13314	0.33672	1.34E+02	1.5965	9.043
86	16.417	6.02E-02	0.060184	0.40818	9.76E+00	1.6871	16.417
87	19.585	4.10E-02	0.040956	0.31977	2.88E+01	1.5527	19.585
88	29.358	1.14E-01	0.11394	0.39688	2.04E+00	1.586	29.358
89	24.159	8.15E-02	0.081525	0.31134	3.00E+00	1.806	24.159
90	42.834	1.04E-01	0.10362	0.44044	1.94E+00	1.7335	42.834
91	25.473	7.68E-02	0.076836	0.30607	1.53E+00	1.7645	25.473
92	12.966	4.39E-02	0.043886	0.35741	7.37E+00	1.4934	12.966
93	8.0259	5.84E-02	0.058361	0.32789	1.03E+01	1.7818	8.0259
94	72.441	9.62E-02	0.096214	0.40198	1.37E+01	1.616	72.441
95	28.014	1.57E-01	0.15663	0.3081	9.21E+00	1.66	28.014
96	14.937	4.79E-02	0.047927	0.3217	4.41E+01	1.6293	14.937
97	8.2495	1.63E-01	0.16303	0.41963	7.87E+00	1.8107	8.2495
98	20.027	1.08E-01	0.10752	0.36404	4.04E+01	1.5703	20.027
99	35.431	1.43E-01	0.14323	0.38891	1.20E+01	1.5782	35.431
100	78.69	1.77E-01	0.17671	0.37052	2.13E+01	1.6453	78.69

realizations	waterflow.all.Vadose water flux peak time	waterflow.all.Vadose water flux peak value
1	0	3.916
2	0	3.198
3	0	1.596
4	0	0.8413
5	0	3.51
6	0	3.021
7	0	4.662
8	0	3.028
9	0	1.794
10	0	0.5787
11	0	2.948
12	0	4.062
13	0	8.118
14	0	2.831
15	0	4.507
16	0	2.75
17	0	7.007
18	0	2.828
19	0	3.201
20	0	2.571
21	0	0.6569
22	0	5.943
23	0	1.054
24	0	12.41
25	0	3.549
26	0	5.052
27	0	11.08
28	0	10.6
29	0	13.59
30	0	9.943
31	0	0.6233
32	0	6.042
33	0	0.6718
34	0	0.9639
35	0	1.357
36	0	1.524
37	0	6.002
38	0	0.6784
39	0	2.553
40	0	9.839
41	0	0.5836
42	0	2.082
43	0	2.624
44	0	0.2129
45	0	2.247
46	0	7.527
47	0	1.539
48	0	1.031
49	0	1.588
50	0	0.8299
51	0	0.2542
52	0	1.92
53	0	0.7515
54	0	4.372
55	0	0.868
56	0	6.47
57	0	0.1915
58	0	6.869

realizations	waterflow.all.Vadose water flux peak time	waterflow.all.Vadose water flux peak value
59	0	2.403
60	0	3.419
61	0	5.899
62	0	5.673
63	0	0.2059
64	0	10.07
65	0	4.362
66	0	0.3669
67	0	0.168
68	0	12.33
69	0	0.2142
70	0	1.093
71	0	5.575
72	0	0.9
73	0	0.5133
74	0	3.558
75	0	0.5981
76	0	12.67
77	0	5.494
78	0	5.621
79	0	0.08595
80	0	0.6548
81	0	2.876
82	0	14.23
83	0	8.261
84	0	7.756
85	0	0.9074
86	0	1.972
87	0	0.1418
88	0	1.138
89	0	0.4044
90	0	0.8337
91	0	2.412
92	0	0.9176
93	0	1.912
94	0	4.904
95	0	0.9749
96	0	2.548
97	0	0.8
98	0	6.003
99	0	3.596
100	0	3.816

realizations	CdFlux.all.Vadose total constituent flux peak time
1	500.025
2	500.025
3	500.025
4	500.025
5	500.025
6	500.025
7	500.025
8	500.025
9	500.025
10	500.025
11	500.025
12	500.025
13	500.025
14	500.025
15	500.025
16	500.025
17	500.025
18	500.025
19	500.025
20	500.025
21	500.025
22	500.025
23	500.025
24	500.025
25	20001
26	500.025
27	500.025
28	500.025
29	500.025
30	20001
31	500.025
32	500.025
33	500.025
34	500.025
35	500.025
36	500.025
37	500.025
38	500.025
39	500.025
40	500.025
41	500.025
42	500.025
43	500.025
44	500.025
45	500.025
46	500.025
47	500.025
48	500.025
49	500.025
50	500.025
51	500.025
52	500.025
53	500.025
54	500.025
55	500.025
56	500.025
57	500.025
58	500.025

realizations	CdFlux.all.Vadose total constituent flux peak time
59	500.025
60	500.025
61	500.025
62	500.025
63	500.025
64	500.025
65	500.025
66	500.025
67	500.025
68	500.025
69	500.025
70	500.025
71	500.025
72	500.025
73	500.025
74	500.025
75	500.025
76	500.025
77	500.025
78	500.025
79	500.025
80	500.025
81	500.025
82	500.025
83	500.025
84	500.025
85	500.025
86	500.025
87	500.025
88	500.025
89	500.025
90	500.025
91	500.025
92	500.025
93	500.025
94	500.025
95	500.025
96	500.025
97	500.025
98	500.025
99	500.025
100	500.025

realizations	CdFlux.all.Vadose total constituent flux peak value
1	1.22E-43
2	1.22E-43
3	1.22E-43
4	1.22E-43
5	1.22E-43
6	1.22E-43
7	1.22E-43
8	1.22E-43
9	1.22E-43
10	1.22E-43
11	1.22E-43
12	1.22E-43
13	1.22E-43
14	1.22E-43
15	1.22E-43
16	1.22E-43
17	1.22E-43
18	1.22E-43
19	1.22E-43
20	1.22E-43
21	1.22E-43
22	1.22E-43
23	1.22E-43
24	1.22E-43
25	1.05E-37
26	1.22E-43
27	1.22E-43
28	1.22E-43
29	1.22E-43
30	9.03E-36
31	1.22E-43
32	1.22E-43
33	1.22E-43
34	1.22E-43
35	1.22E-43
36	1.22E-43
37	1.22E-43
38	1.22E-43
39	1.22E-43
40	1.22E-43
41	1.22E-43
42	1.22E-43
43	1.22E-43
44	1.22E-43
45	1.22E-43
46	1.22E-43
47	1.22E-43
48	1.22E-43
49	1.22E-43
50	1.22E-43
51	1.22E-43
52	1.22E-43
53	1.22E-43
54	1.22E-43
55	1.22E-43
56	1.22E-43
57	1.22E-43
58	1.22E-43

realizations	CdFlux.all.Vadose total constituent flux peak value
59	1.22E-43
60	1.22E-43
61	1.22E-43
62	1.22E-43
63	1.22E-43
64	1.22E-43
65	1.22E-43
66	1.22E-43
67	1.22E-43
68	1.22E-43
69	1.22E-43
70	1.22E-43
71	1.22E-43
72	1.22E-43
73	1.22E-43
74	1.22E-43
75	1.22E-43
76	1.22E-43
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78	1.22E-43
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94	1.22E-43
95	1.22E-43
96	1.22E-43
97	1.22E-43
98	1.22E-43
99	1.22E-43
100	1.22E-43

Technical Factsheet on: CADMIUM

List of Contaminants

As part of the Drinking Water and Health pages, this fact sheet is part of a larger publication:
National Primary Drinking Water Regulations

Drinking Water Standards

MCLG: 0.005 mg/l
MCL: 0.005 mg/l
HAL(child): 1- to 10-day: 0.04 mg/L; Longer-term: 0.005 mg/L

Health Effects Summary

Acute: EPA has found cadmium to potentially cause a variety of effects from acute exposures, including: nausea, vomiting, diarrhea, muscle cramps, salivation, sensory disturbances, liver injury, convulsions, shock and renal failure.

Drinking water levels which are considered "safe" for short-term exposures: For a 10-kg (22 lb.) child consuming 1 liter of water per day, a one- to ten-day exposure to 0.04 mg/L; a longer-term (up to 7 years) exposure to 0.005 mg/L.

Chronic: Cadmium has the potential to cause kidney, liver, bone and blood damage from long- term exposure at levels above the MCL.

Cancer: There is inadequate evidence to state whether or not cadmium has the potential to cause cancer from lifetime exposures in drinking water.

Usage Patterns

2.9 million lbs of cadmium were produced in the US in 1986, and nearly twice that amount was imported in the same year.

According to 1986 estimates, cadmium is used primarily for metal plating and coating operations (35%), including transportation equipment, machinery and baking enamels, photography, television phosphors. It is also used in nickel-cadmium and solar batteries (25%), in pigments (20%), as a stabilizer in plastics and synthetic products (15%), alloys and other uses (5%). Cadmium salts have had a very limited use as fungicide for golf courses and home lawns.

Release Patterns

Cadmium occurs naturally in zinc, lead and copper ores, in coal and other fossil fuels, shales and is released during volcanic action. These deposits can serve as sources to ground and surface waters, especially when in contact with soft, acidic waters.

Major industrial releases of cadmium are due to wastestreams and leaching of landfills, and from a variety of operations that involve cadmium or zinc. These may include: during the smelting and refining of zinc, lead and copper bearing ores; during recovery of metal by processing scrap; during melting and pouring of cadmium metal; during casting of various

cadmium alloy products used for coating telephone cables, trolley wires, welding, electrodes, automatic sprinkling systems, steam boilers, fire alarms, high pressure/temperature bearings, starting switches, aircraft relays, light duty circuit breakers, low temperature solder, and jewelry; during fabrication of metal, alloys, or plated steel; during casting and use of solders; during melting of cadmium ingots for paint and pigment manufacture used for coloring of plastics and ceramic glazes, electroplating, and in chemical synthesis; during coating of metals by hot dipping or spraying; during manufacture of nickel-cadmium batteries for use in radio portable telephones, convenience appliances, and vented cells used in airplanes, helicopters, and stand-by power and lighting. The remaining cadmium emissions are from fossil fuel combustion, fertilizer application, and sewage sludge disposal.

Cadmium also occurs as a by-product of corrosion of some galvanized plumbing and distribution system materials.

From 1987 to 1993, according to EPA's Toxic Chemical Release Inventory, cadmium releases were primarily from zinc, lead and copper smelting and refining industries, with the largest releases occurring in Arizona and Utah.

Environmental Fate

The oxide and sulfide are relatively insoluble while the chloride and sulfate salts are soluble. The adsorption of cadmium onto soils and silicon or aluminum oxides is strongly pH-dependent, increasing as conditions become more alkaline. When the pH is below 6-7, cadmium is desorbed from these materials. Cadmium has considerably less affinity for the absorbents tested than do copper, zinc, and lead and might be expected to be more mobile in the environment than these materials.

Studies have indicated that cadmium concentrations in bed sediments are generally at least an order of magnitude higher than in overlying water. A study of Ottawa River sediments found that sediment composed mainly of well sorted sand may be an efficient sink for heavy metals if there is a significant amount of organic material added to the sediments by the commercial activities such as logging. Both sorption and desorption were controlled by the nature of total heavy metal loading, the sediment type, and the surface water characteristics.

Addition of anions, such as humate, tartrate, to dissolved cadmium caused an increase in adsorption. The mode by which cadmium is sorbed to the sediments is important in determining its disposition toward remobilization.

Cadmium found in association with carbonate minerals, precipitated as stable solid compounds, or co-precipitated with hydrous iron oxides would be less likely to be mobilized by resuspension of sediments or biological activity. Cadmium absorbed to mineral surfaces (eg clay) or organic materials would be more easily bioaccumulated or released in the dissolved state when sediments are disturbed, such as during flooding.

Cadmium is not known to form volatile compounds in the aquatic environment.

Bioconcentration of cadmium sulfate, nitrate and chloride has been studied in a wide variety of aquatic organisms, and can be quite high in some species, low in others. For example, rainbow trout have a BCF of 33 while a BCF of 2213 was measured in the mosquito fish. Similarly, different species of clams have BCFs ranging from 160 to 3770.

Chemical/Physical Properties

CAS Number: 7440-43-9 (metal)

Color/ Form/Odor: Cadmium is a lustrous silvery metallic element found only in combined forms in nature.

Soil sorption coefficient: Koc = N/A; mobility higher than other metals

Bioconcentration Factor: Fish: 33 to 2213; Shell fish: 5 to 2500; Other invertebrates: 164 to 4190; Plants: 603 to 960.

Common Ores: sulfide- greenockite; carbonate- octavite; others: hawleyite. Also found in zinc, copper, lead ores.

Solubilities (water):

acetate- very soluble
bromide- 570 g/L at 10 deg C
carbonate- insoluble
chloride- 1400 g/L at 20 deg C
fluoroborate- very soluble
mercury sulfide- N/A
nitrate- 1090 g/L at 0 deg C
oxide- insoluble
sulfate- 755 g/L at 0 deg C
sulfide- insoluble
stearate- N/A

Other Regulatory Information

Monitoring:

-- For Ground Water Sources:

Initial Frequency-1 sample once every 3 years

Repeat Frequency-If no detections for 3 rounds, once every 9 years

-- For Surface Water Sources:

Initial Frequency-1 sample annually

Repeat Frequency-If no detections for 3 rounds, once every 9 years

-- Triggers - If detect at > 0.005 mg/L, sample quarterly.

Analysis

Reference Source	Method Number
EPA 600/4-79-020	213.2
NTIS PB 91-231498	200.7
Standard Methods	3113B

Treatment/Best Available Technologies: Coagulation/Filtration, Ion Exchange, Lime Softening, Reverse Osmosis

Toxic Release Inventory - Releases to Water and Land, 1987 to 1993 (in pounds):

	Water	Land
TOTALS	**31,487**	**2,059,574**

Top Seven States *		
AZ	503	433,035
UT	1,750	372,010
MT	0	315,965
TN	2,700	288,781
ID	250	225,761

MO	2,361	189,914
WI	0	106,000

Major Industries*		
Zinc, lead smelting	5,061	831,948
Copper smelting, refining	2,253	805,045
Indust. inorganic chems	250	225,761
Electroplating, anodizing	0	106,000
Steelworks, blast furnaces	5	13,000
Inorganic pigments	5,140	7,000

* State/Industry totals only include facilities with releases greater than a certain amount - usually 1000 to 10,000 lbs.

For Additional Information:

EPA can provide further regulatory and other general information:
EPA Safe Drinking Water Hotline - 800/426-4791

Other sources of toxicological and environmental fate data include:
Toxic Substance Control Act Information Line - 202/554-1404
Toxics Release Inventory, National Library of Medicine - 301/496-6531
Agency for Toxic Substances and Disease Registry - 404/639-6000

List of Contaminants

Safewater Home | About Our Office | Publications | Links | Office of Water | En Español

EPA Home | Privacy and Security Notice | Contact Us

Last updated on Tuesday, November 21st, 2006
URL: http://www.epa.gov/safewater/dwh/t-ioc/cadmium.html

Institute of Nuclear Energy Research

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FRAMES and MEPAS Training

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Agenda

- **Day 1**
  - Introduction to FRAMES and MEPAS
  - Constituent Database
  - Source Term
  - Vadose Zone Transport
  - Case Study Example
- **Day 2**
  - Aquifer Transport
  - Exposure Models (Exposure Pathways, Receptor Intake, Health Effects)
  - Sensitivity/Uncertainty Model
  - Adding Additional Modules

Hands-on examples will be provided in each lesson

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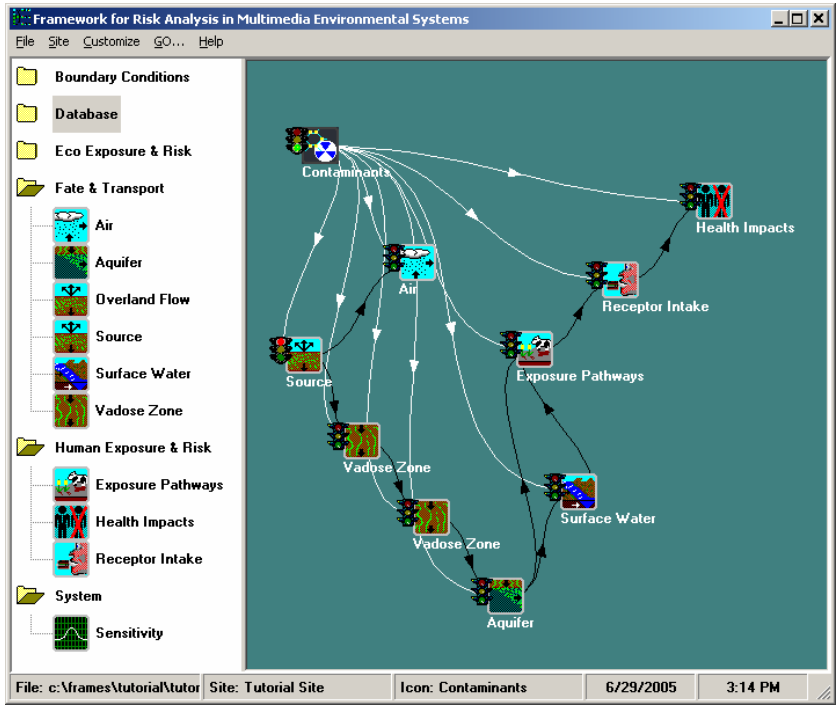
Introduction to FRAMES and MEPAS

Overview of FRAMES

- Framework tool developed by PNNL that links various models under one integrated system using pre-defined data-file specifications
- Defines conceptual site model using “drag-and-drop” module icons in a Windows-based interface
- Conducts sensitivity and uncertainty analyses on any model integrated into FRAMES
- Provides user with graphical and text viewers for analyses of intermediate and final results



http://mepas.pnl.gov/FRAMESV1/

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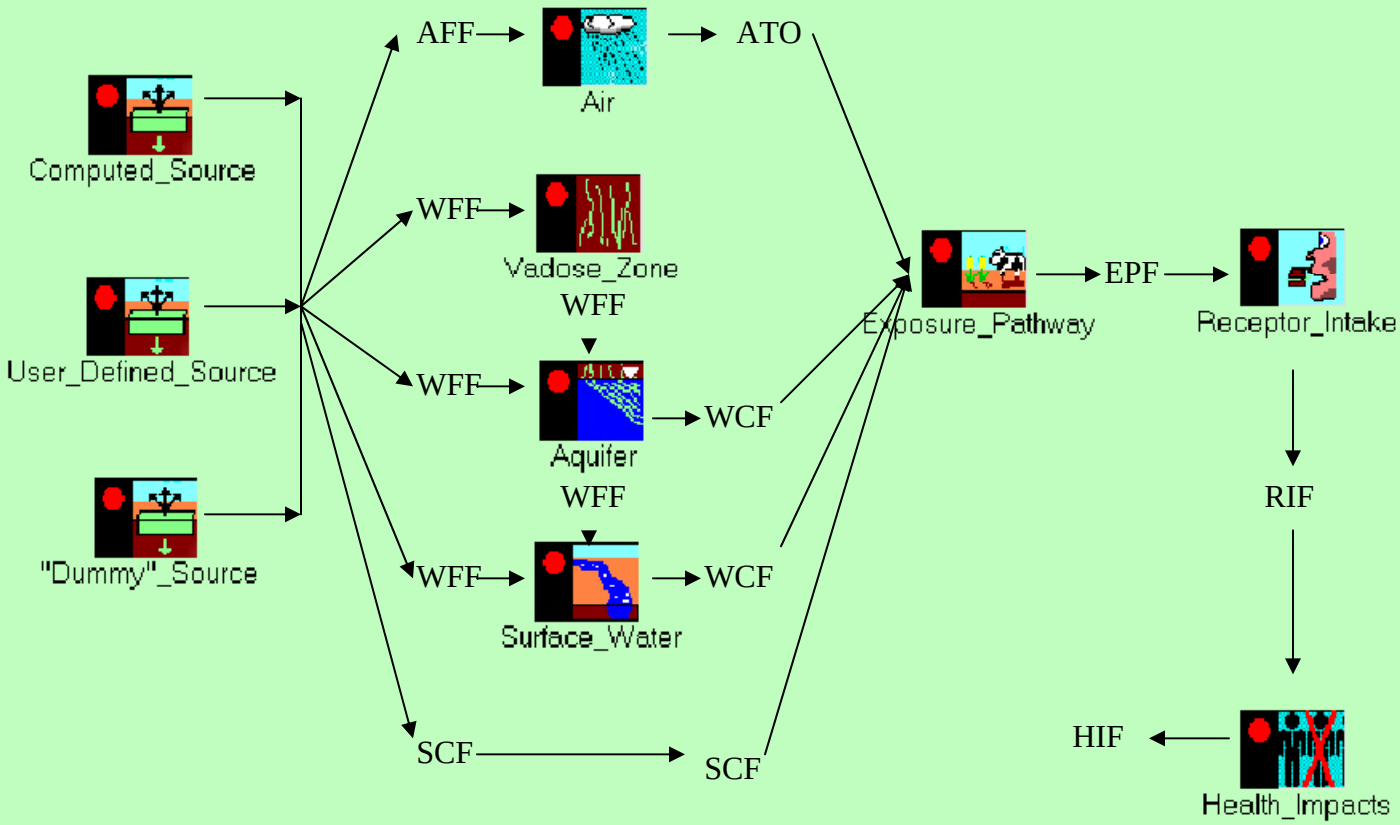
Multimedia Framework

File Scenario Customize GO... Help

- Database
  - Contaminant
- Model
  - Air
  - Aquifer
  - Exposure Pathways
  - Health Impacts
  - Overland Flow
  - Receptor Intake
  - Source
  - Surface Water
  - Vadose Zone
- Sensitivity
  - Sensitivity
- Viewer
  - Viewer

Data Transfer Between Modules

AFF -- Air Flux File
ATO-- Air Concentration File
EPF -- Exposure Pathway File
HIF -- Health Impacts File
RIF -- Receptor Intake File
SCF -- Source Concentration File
WCF-- Water Concentration File
WFF-- Water Flux File



FRAMES File Types

- GID -- Global Input Data
- SCF -- Source Concentration File
- AFF -- Air Flux File
- WFF -- Water Flux File
- WCF -- Water Concentration File
- ATO -- Air Concentration File
- EPF -- Exposure Pathway File
- RIF -- Receptor Intake File
- HIF -- Health Impacts File
- SUF -- Sensitivity/Uncertainty File

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Overview of MEPAS

- **Suite of environmental models developed by PNNL to evaluate contaminant transport**
  - **Source-term release**
  - **Aqueous transport (vadose-zone, aquifer, rivers)**
  - **Atmospheric transport**
  - **Exposure (pathways, receptor intake, health impacts)**
  - **http://mepas.pnl.gov/earth/mepasmain.html**
- **Individual models integrated in FRAMES**

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History

MEPAS

- DOE recognizes the need (1984)
- MEPAS V1.0 Released (1987)
- MEPAS V2.0 Released (1989)
- MEPAS V3.0 Released (1994)
- MEPAS V3.1 Released (1995)
- MEPAS V3.2 Released (1996)
- MEPAS V4.0 Released (1998)
- MEPAS V4.1 Released (1999)
- MEPAS V4.1.1 Released (2000)

FRAMES

- Initial concept (1994)
- Initial funding (1997)
- FRAMES V1.0 Released (1998)
- FRAMES V1.2 Released (2000)
- FRAMES V1.3 Released (2002)
- FRAMES V1.5 Released (2005)

Support from U.S. DOE, EPA, DoD, NRC

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Software Comparison

	HELP[1]	FRAMES/MEPAS	PRESTO[2]
Infiltration through Covers			
Water infiltration through multi-layer cover	✓		
Water infiltration through single-layer cover	✓	✓	✓
Consideration of environmental factors	✓	✓	✓
Transport Pathways			
Radionuclide transport		✓	✓
Chemical transport		✓	
Aqueous transport		✓	✓
Atmospheric transport		✓	✓
Exposure Models			
Multiple exposure pathways		✓	✓
Health impacts		✓	✓
Other Features			
Probabilistic modeling		✓	

[1]http://el.erdc.usace.army.mil/products.cfm?Topic=model&Type=landfill
[2]www.epa.gov/radiation/assessment/presto.html

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FRAMES/MEPAS Quality Assurance

- **Validation and benchmarking documentation**
  - http://mepas.pnl.gov/FRAMESV1/referenc.html
- **Software configuration management**
  - http://mepas.pnl.gov/FRAMESV1/qaqc.html
  - http://mepas.pnl.gov/Wiki/page.jsp?website=FWikiWiki&path=QAQCDoc
- **Contact**
  - Gariann Gelston, Pacific Northwest National Laboratory, (509) 372-6060, gariann.gelston@pnl.gov

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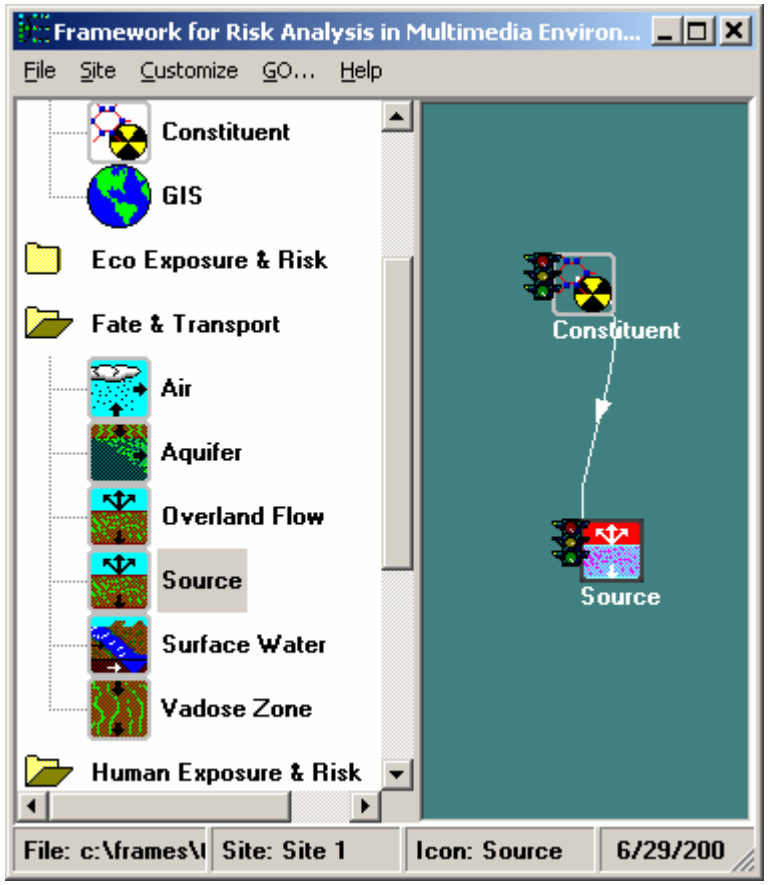
FRAMES Fundamentals

Agenda

- Create or open GID (Global Input Data) file
- Double click icons to insert modules into model
- Arrange icons with left mouse button
- Use shift key and left mouse button to connect icons/models
- Right click on icons to choose model and enter input data
  - note color-coded status
    - Red: model selected, need input data
    - Yellow: input data entered, model not run
    - Green: model completed



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Constituent Database

Constituent Database Features

- Contains numerous radionuclides and chemicals
- Can select multiple constituents
- Many properties are listed and referenced for constituents
- Use on-line help (F1) to see definitions of property fields
- Can use constituent database as a stand-alone program
  - Start → Programs → FRAMES → FRAMES Constituent Database

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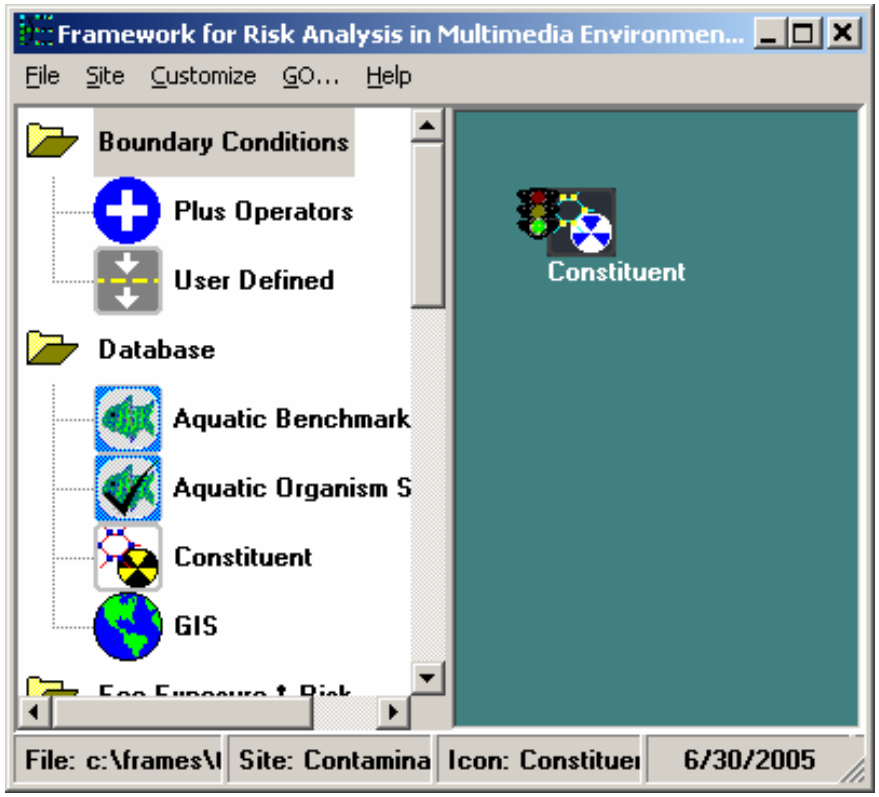
Constituent Database Implementation

- All models must contain a contaminant (constituent) database
- Double-click the 'Constituent' icon to place it in the main window
- Right-click icon, select General Info, and select model
- Right-click, select User Input, and select constituents from database
- Save changes and exit



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Constituent Database Exercise

Agenda

- **Select the following constituents from the database**
  - **H-3**
  - **C-14**
  - **Ni-59**
  - **Co-60**
  - **Ni-63**
  - **Sr-90**
  - **Nb-94**
  - **Tc-99**
  - **I-129**
  - **Cs-137**
  - **Am-241**

See ‘contam.gid’ in directory ‘Training_files’ for solution

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Source-Term Release Model

Source-Term Models

- **Source-term models calculate time-varying changes in inventory and constituent mass-flux releases to the following transport pathways:**
  - **Air transport module**
  - **Vadose zone transport module**
  - **Saturated zone transport module**
  - **Surface Water transport module**
  - **Exposure pathway module**

- **MEPAS has three source-term models**
  - **Source in Soil**
  - **Source in Standing Surface Water**
  - **Source in an Aquifer**

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Assumptions

- Source is a “well-mixed reactor”
- Mass loss occurs from decay, leaching, wind suspension, water erosion of soil, overland flow of contaminated water, and volatilization
- Degradation/decay is first-order
- Leaching controlled by solubility or aqueous/sorbed equilibrium (K_d)
- Volatilization theories based on EPA-recommended models
- Computed contaminant fluxes based on user-provided inventories or concentrations

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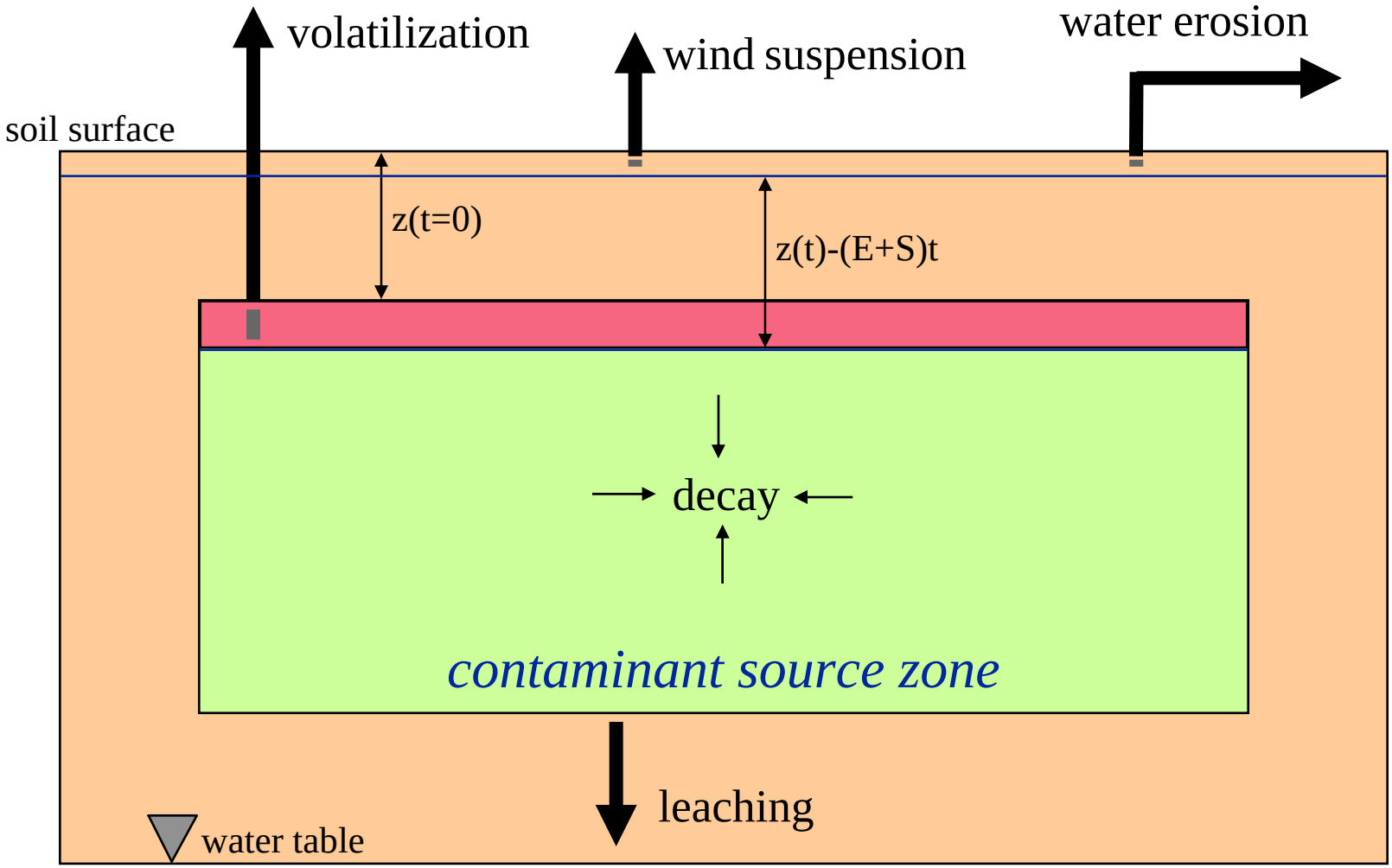
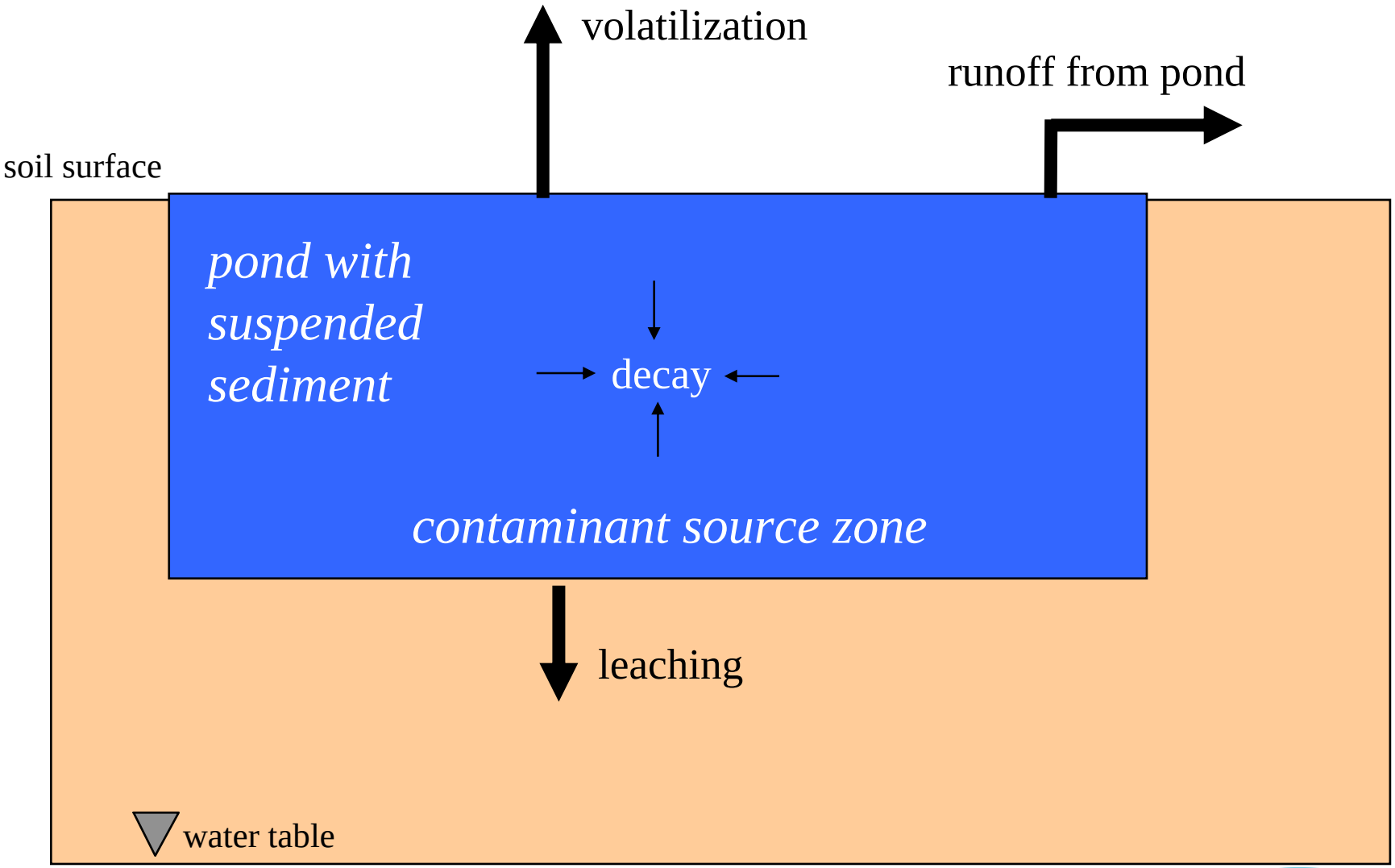
Contaminated Vadose Zone

"Source in Soil" Loss Routes



Contaminated Pond

"Source in Standing Surface Water" Loss Routes



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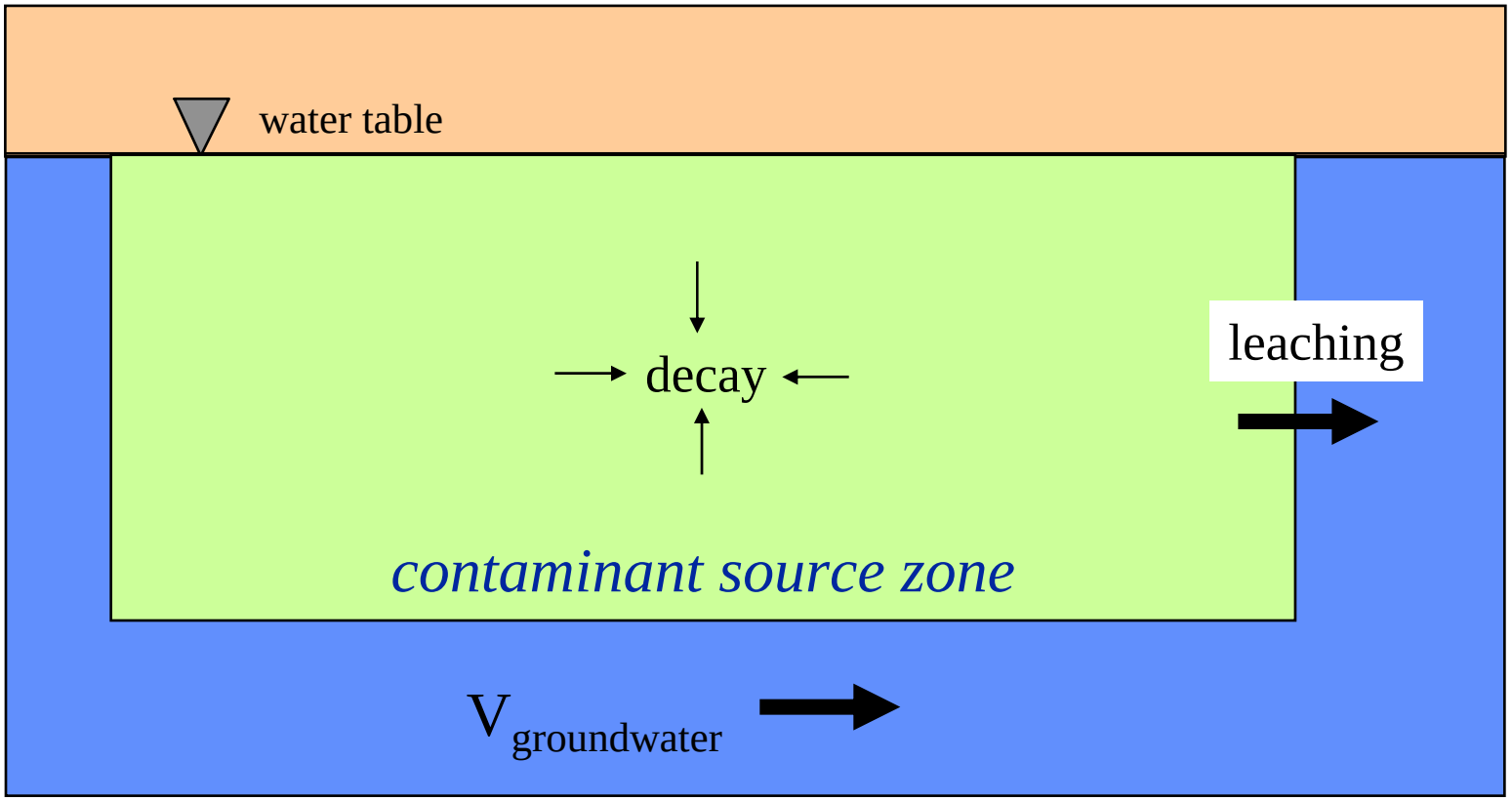
Contaminated Aquifer

"Source in Aquifer" Loss Routes



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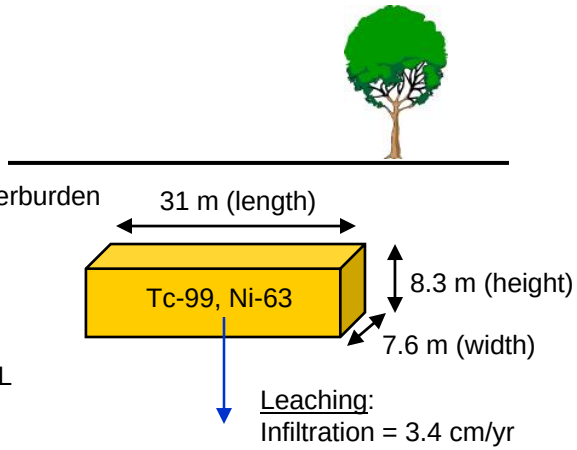
Source Exercise

- **Source Model:**
  - **Source in soil**
- **Options:**
  - **Only consider leaching and decay**
    - **Assume known infiltration through waste, but note computed pathway option for cover**
  - **1000-year simulation**
    - **Residual mass fraction for simulation = 0.01**
- **After running the model, right-click Source icon and view WFF and SCF graphical files**
- **See 'source.gid' for model solution**
- **See 'source.xls' for results and validation**

Assume no clean overburden

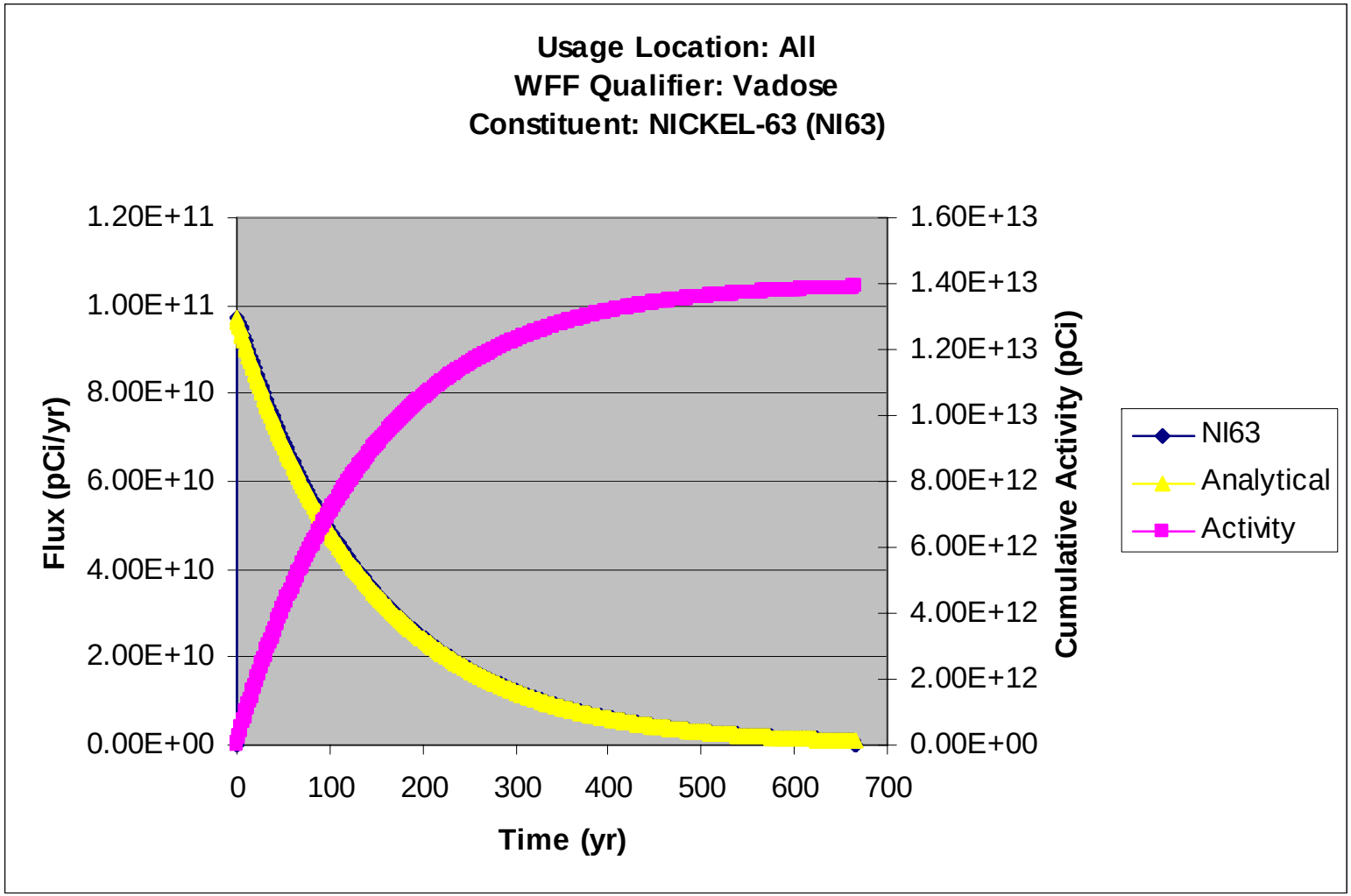


Tc-99:
Inventory = 16 Ci
Half-life = 2.12e5 yr
Solubility = 5e-3 mg/L
Kd = 0.5 mL/g

Ni-63:
Inventory = 13,000 Ci
Half-life = 100 yr
Solubility = 6.3 mg/L
Kd = 230 mL/g

Soil Properties:
Bulk density = 2385 kg/m^3
Total porosity = 0.1
Moisture content = 0.095
Average air temperature = 20C

Source Exercise Results



Vadose-Zone Transport Model

Vadose-Zone Module

- **<u>Vadose Zone Module</u> - simulates the movement of solutes through *partially saturated porous media***
- **Transport Mechanisms (for all groundwater models)**
  - **<u>Advection</u> - the transport of solutes due to the bulk movement of water**
  - **<u>Hydrodynamic Dispersion</u> - the combined effect of molecular diffusion and mechanical dispersion**
  - **<u>Degradation/Decay (i.e., persistence)</u> - removal of solute mass due to chemical transformations or radiological decay**
  - **<u>Retardation (i.e., mobility)</u> - reduction of the rate of solute movement due to adsorption/desorption on the surface of soil particles**

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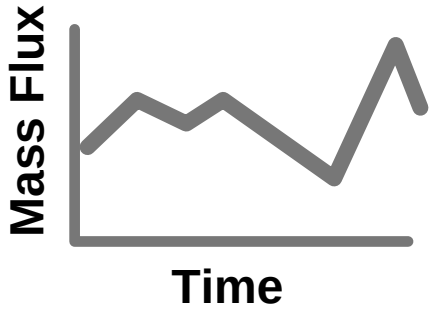
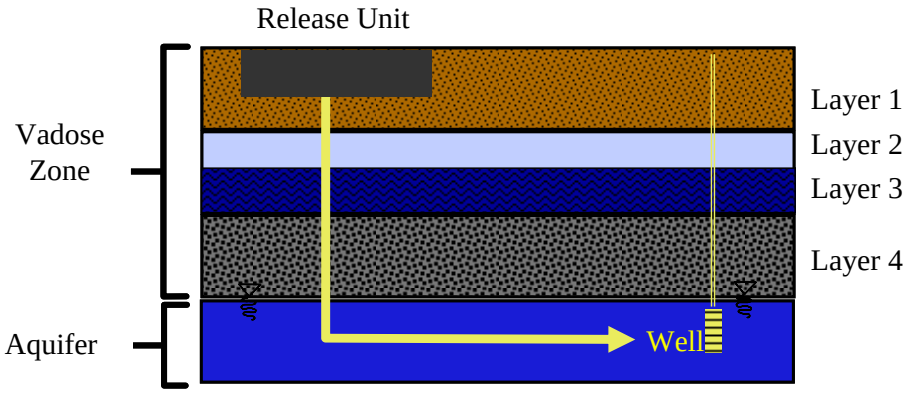
Vadose-Zone Module Features

- One-dimensional advection in a steady, uniform flow field
- One-dimensional hydrodynamic dispersion along the flow direction (i.e., longitudinal or x-direction)
- First order degradation/decay
- Adsorption/desorption is assumed to be linear and instantaneous, so retardation is described by a constant representing the ratio between the dissolved and sorbed concentrations (Kd)

Vadose-Zone Module Features (cont.)

- Decay products travel at the same rate as their parent
- Semi-analytical solution allows transient mass flux as input
- Heterogeneity can be simulated by subdividing the vadose zone into homogenous layers, and running the vadose zone module separately for each layer





Vadose-Zone Module Output

- **Volumetric water flux and time-varying, solute mass flux exiting the vadose zone layer (Water Flux File)**
- **A listing file showing**
  - **1) the input data actually read in by the model itself**
  - **2) intermediate calculation results (e.g., retardation factors, moisture content, dispersion coefficients, etc.)**
  - **3) a table of peak solute mass fluxes and the time of the peak (WLS file)**

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Vadose-Zone Module Output (cont.)

- **User can compute aqueous concentration exiting the layer by dividing the output contaminant flux by the water flux (both contained in the Water Flux File (WFF):**

$$\text{Concentration (mass/volume)} = \frac{\text{Contaminant Flux (mass/time)}}{\text{Water Flux (volume/time)}}$$

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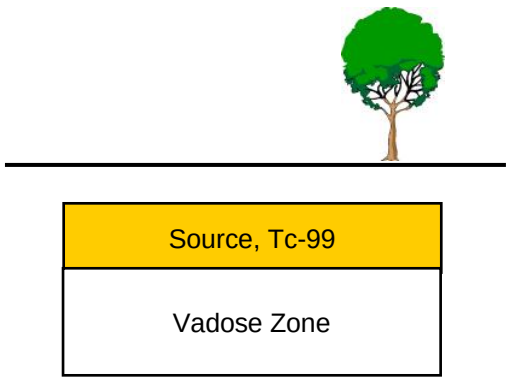
Vadose-Zone Exercise

- **Same source-term model as before ('source.gid')**
  - **Only consider Tc-99**
- **Add Vadose Zone module**
  - **Use parameter values as shown**
- **After running the model, right-click Vadose-Zone icon and view WFF graphical file**
- **See 'vadose.gid' for model solution**
- **See 'vadose.xls' for results and validation**

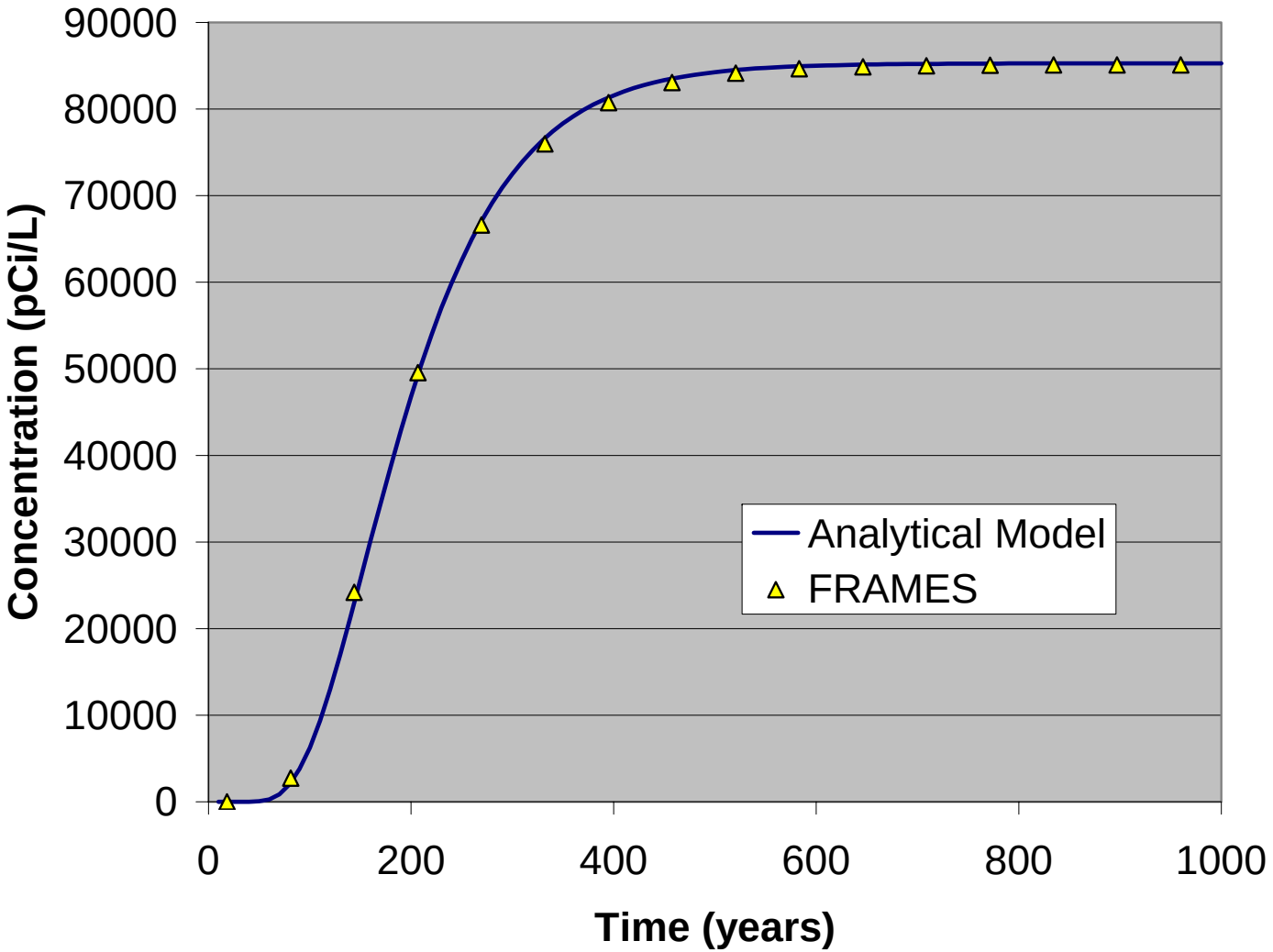


Tc-99:
Inventory = 16 Ci
Half-life = 2.12e5 yr
Solubility = 5e-3 mg/L
Kd = 0.5 mL/g
Specific activity = 0.017 Ci/g

Vadose-Zone Properties:
Composition: Sandy clay
pH = 7
Total porosity = 0.1
Field capacity = 0.02
Ksat = 1e-7 m/s
Thickness = 5 m
Longitudinal dispersivity = 0.5 m
Bulk density = 2385 kg/m^3

Vadose-Zone Exercise Results

Agenda



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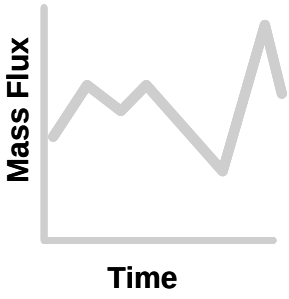
Aquifer Transport Model

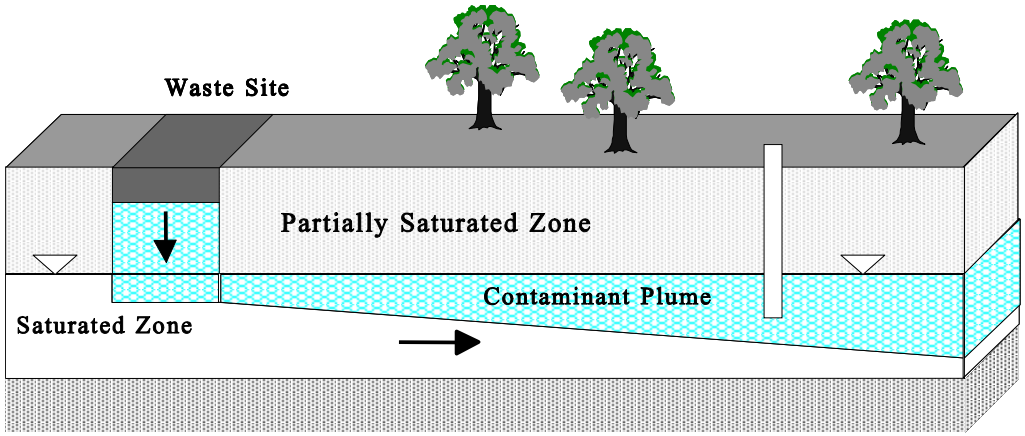
Aquifer Module Features

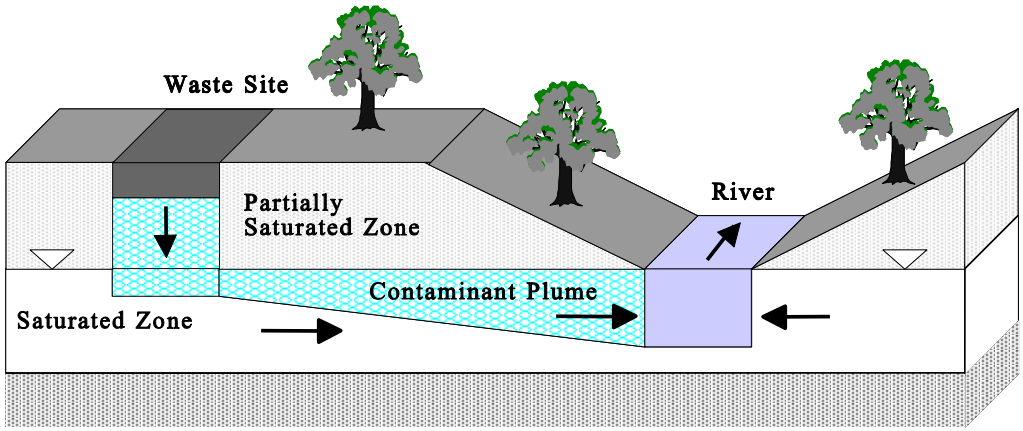
- One-dimensional advection in a steady, uniform flow field
- Three-dimensional hydrodynamic dispersion [longitudinal (x-direction), lateral (y-direction) and vertical (z-direction)]
- First order degradation/decay
- Adsorption/desorption is assumed to be linear and instantaneous, so retardation is described by a constant representing the ratio between the dissolved and sorbed concentrations (Kd)
- Decay products travel at the same rate as their parent
- Semi-analytical solution allows transient mass flux as input



Aquifer Module Output

- **Time-varying, solute concentrations (aqueous) at a specific point (i.e., an x,y,z location) when the aquifer module is connected to an exposure module (Water Concentration File)**
- **Volumetric water flux and time-varying solute mass flux exiting the aquifer when aquifer module is connected to surface water module (Water Flux File)**





Aquifer Module Output (Cont.)

- A listing file showing
  - 1) the input data actually read in by the model itself
  - 2) intermediate calculation results (e.g., retardation factors, dispersion coefficients, decay constants, etc.)
  - 3) a table of peak solute mass fluxes or concentrations and the time of the peak (WLS file)

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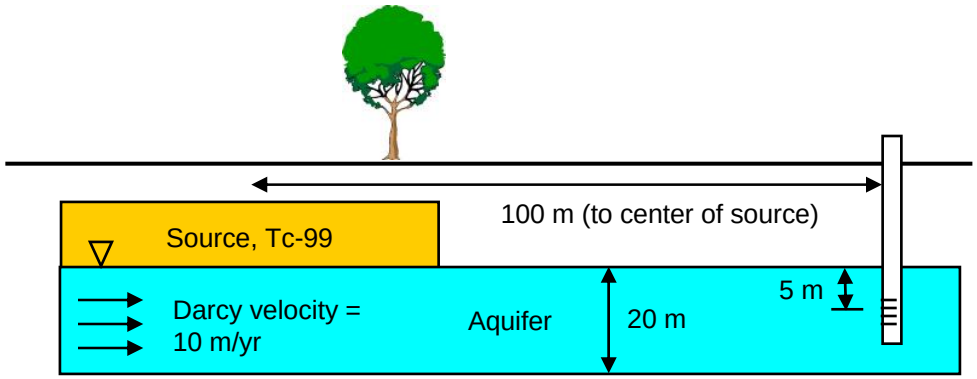
Aquifer Exercise #1

- **Same source-term model as before**
  - **Only consider Tc-99**
- **Add Aquifer module using parameters as shown**
- **See 'aquifer.gid' for model solution**
- **After running the model, right-click the aquifer icon and view WCF graphical file**
- **Vary parameters (e.g., longitudinal distance, distance to plume centerline, etc. to see the effect on the concentration**



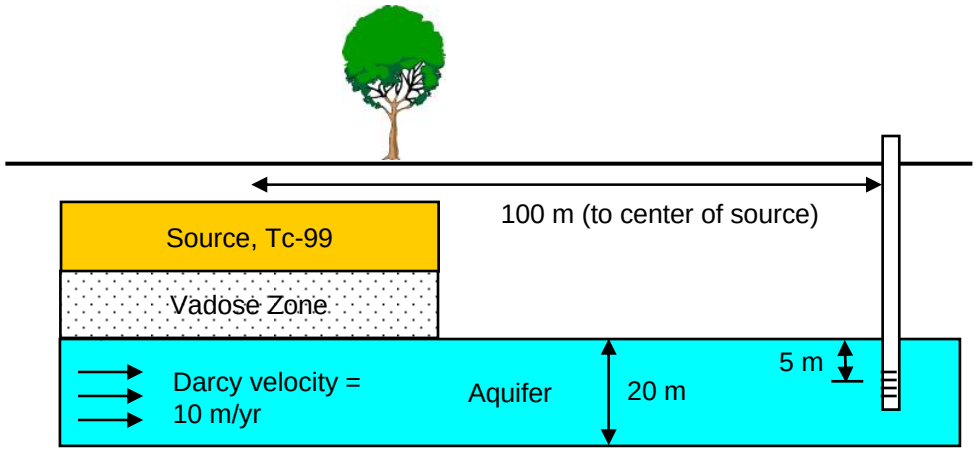
Tc-99:
Inventory = 16 Ci
Half-life = 2.12e5 yr
Solubility = 5e-3 mg/L
Kd = 0.5 mL/g
Specific activity = 0.017 Ci/g

Aquifer Properties:
Composition: Sandy clay
pH = 7
Percent of constituent entering aquifer = 100%
Total porosity = 0.1
Effective porosity = 0.1
Bulk density = 2385 kg/m3
Dispersivities: Allow FRAMES to estimate
Distance to plume centerline = 0 m

Exposure Pathways:
Need to add Exposure Pathways module and connect it to aquifer icon and constituent database, but it does not need to be populated at this point. This allows for specification of concentration location.

Aquifer Exercise #2

- **Repeat Exercise #1 using a vadose zone between the source and the aquifer**
  - **start with 'vadose.gid'**
- **Add Aquifer module using parameters as shown**
- **After running the model, right-click the aquifer icon and view WCF graphical file**
- **See 'aquifer2.gid' for model solution**

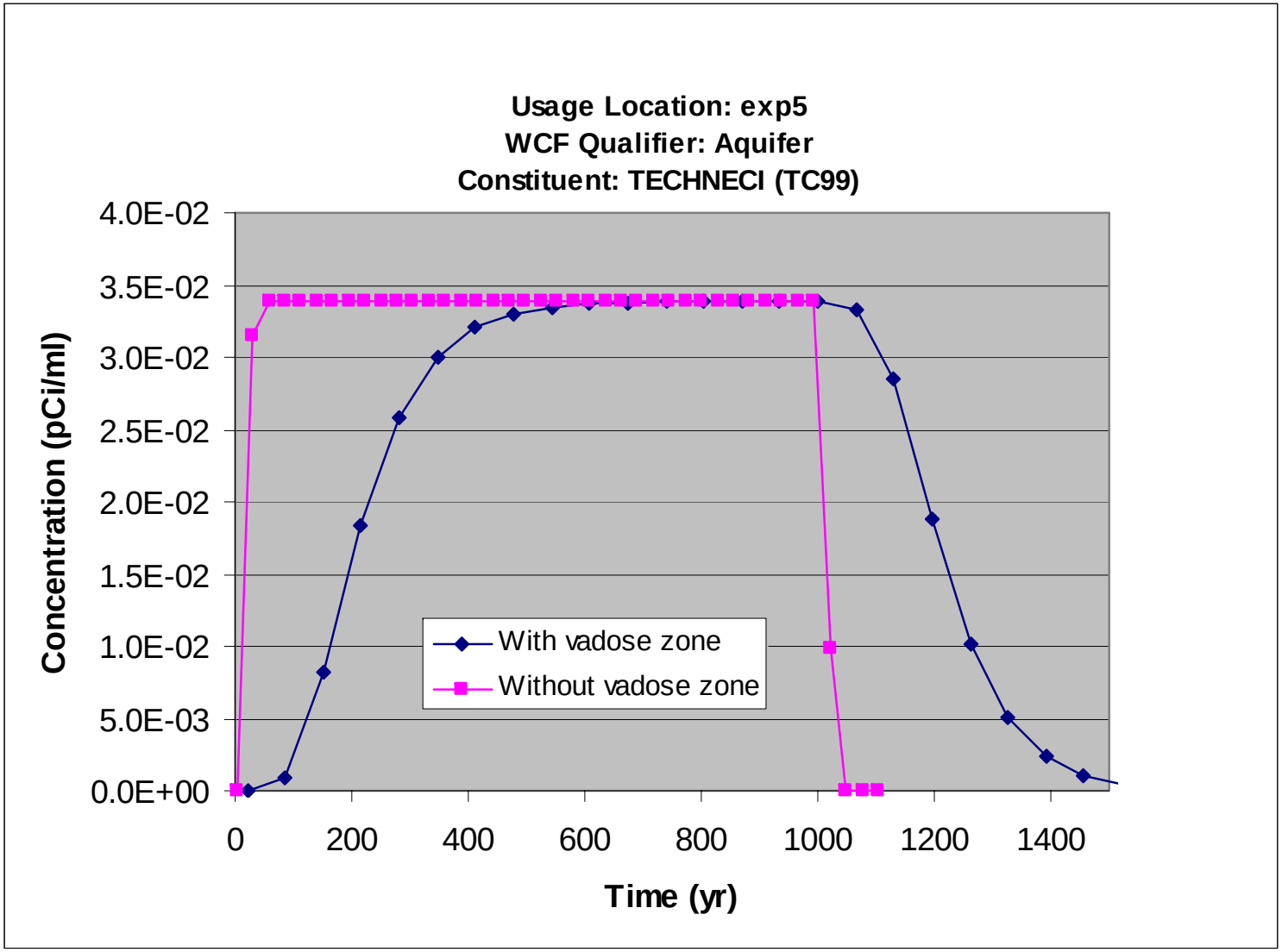


Tc-99:
Inventory = 16 Ci
Half-life = 2.12e5 yr
Solubility = 5e-3 mg/L
Kd = 0.5 mL/g
Specific activity = 0.017 Ci/g

Vadose-Zone Properties:
Composition: Sandy clay
pH = 7
Total porosity = 0.1
Field capacity = 0.02
Ksat = 1e-7 m/s
Thickness = 5 m
Longitudinal dispersivity = 0.5 m
Bulk density = 2385 kg/m^3

Aquifer Properties:
Composition: Sandy clay
pH = 7
Percent of constituent entering aquifer = 100%
Total porosity = 0.1
Effective porosity = 0.1
Bulk density = 2385 kg/m3
Dispersivities: Allow FRAMES to estimate
Distance to plume centerline = 0 m

Aquifer Exercise Results



Exposure Models

Exposure Pathways Model

Receptor Intake Model

Health Impacts Model

Exposure Models

- Converts constituent concentration (e.g., from WCF file) to average daily dose for exposed individuals
- Average daily dose is then used to estimate health impact
  - Lifetime risk of cancer incidence
  - Cancer fatality
- Exposure models contained in three modules
  - Exposure Pathways Model (constituent concentration)
  - Receptor Intake Model (intake)
  - Health Impacts Model (dose/risk)

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Exposure Pathways Module

- Calculates constituent concentrations for each exposure pathway (.epf file)
- For groundwater-transport pathway, exposure pathways include
  - Ingestion
    - Drinking water, vegetables, meat, milk
  - Dermal absorption
    - Shower water contact
  - Inhalation
    - Air while showering
- See MEPAS formulation for formulations and addition pathways

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Receptor Intake Module

- Uses constituent concentration (from .epf file) and calculates the intake of the constituent by the exposed individual based on input parameters
  - Individual's weight
  - Consumption rate
    - Water
    - Vegetables
    - Meat
    - Milk
  - Frequency and duration of shower
  - Exposure duration
- Output is the constituent intake for various pathways (.rif file)
  - Units of Bq for radiounuclides

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Health Impacts Module

- **Uses constituent intake (from .rif file) and calculates risk or dose**
  - **Lifetime cancer incidence**
  - **Cancer fatality**
  - **Cumulative dose during exposure period**

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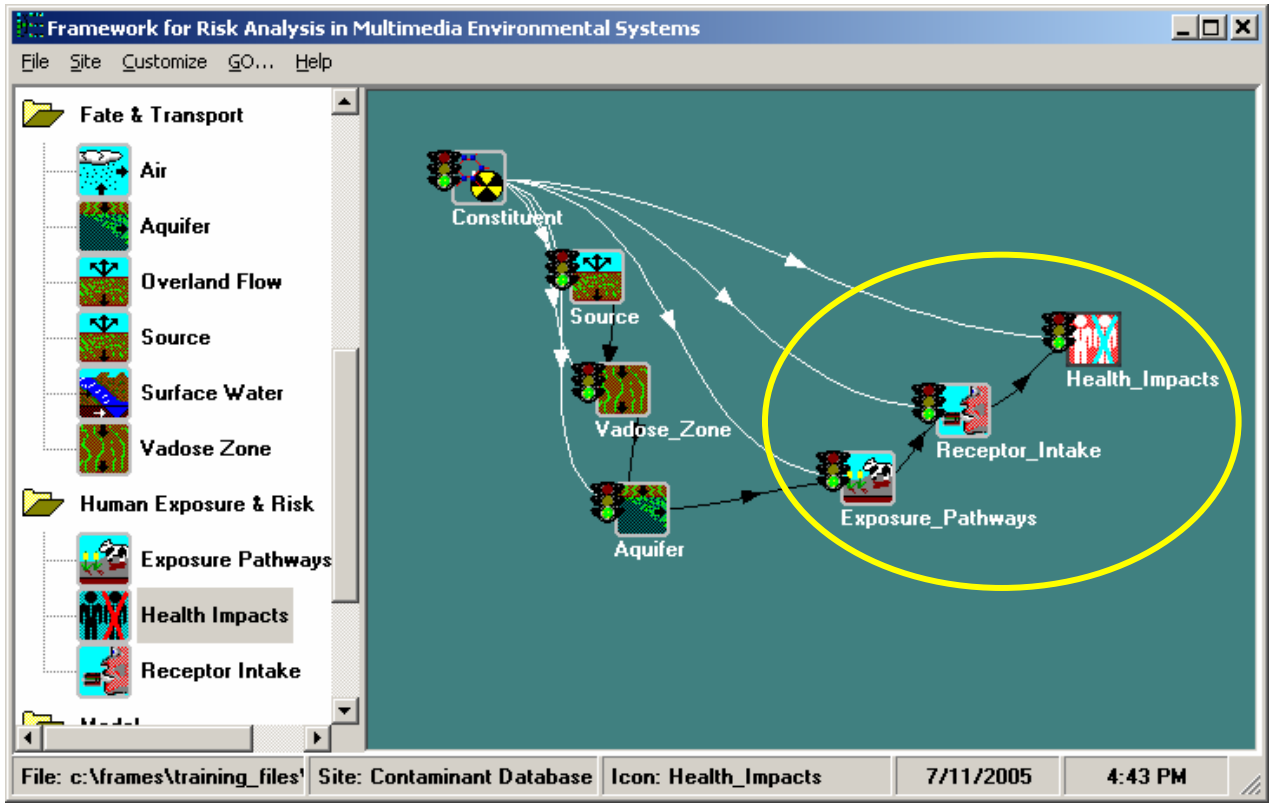
Exposure Exercise

- Using ‘aquifer2.gid,’ add the Exposure Pathways, Receptor Intake, and Health Impacts Modules
- Use the following screen images to populate the input parameters for each module
- See ‘exposure.gid’ for solution



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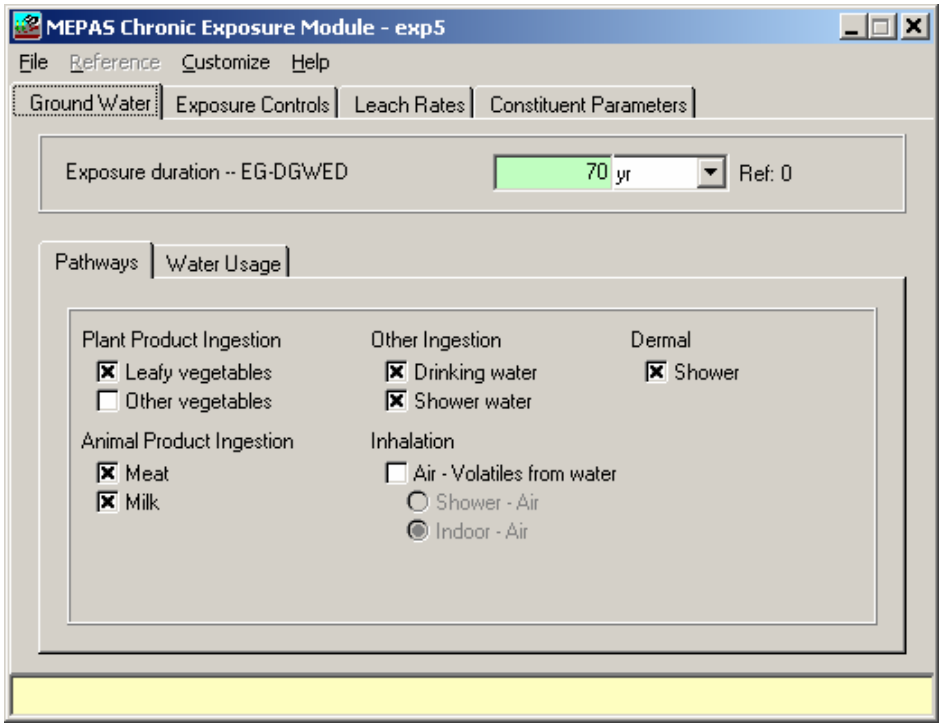
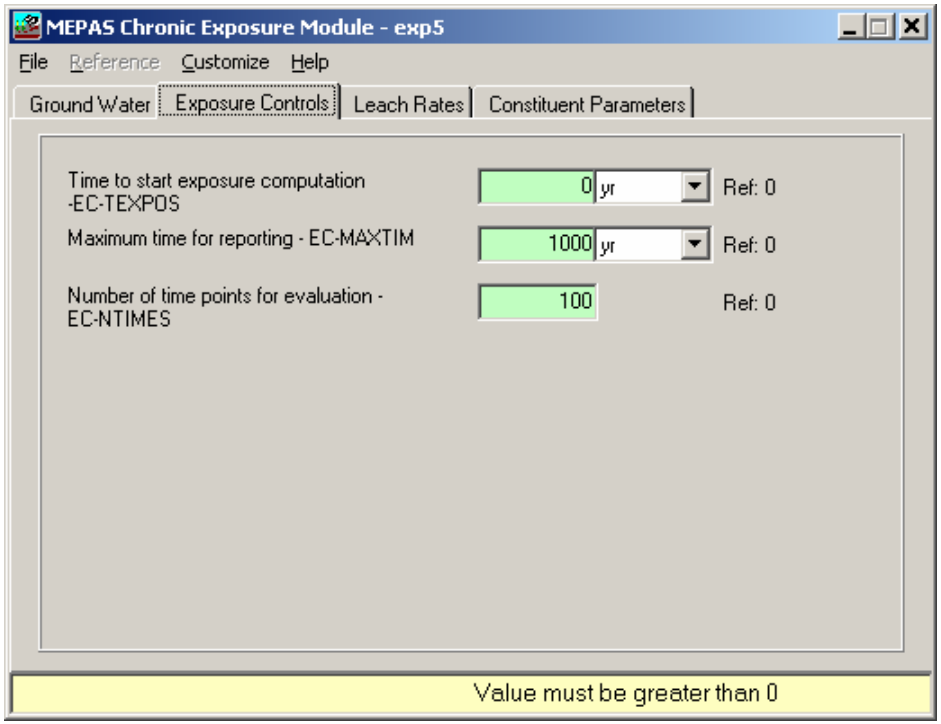
Exposure Pathways Exercise

Input Parameters

Ground Water Tab



Exposure Controls Tab



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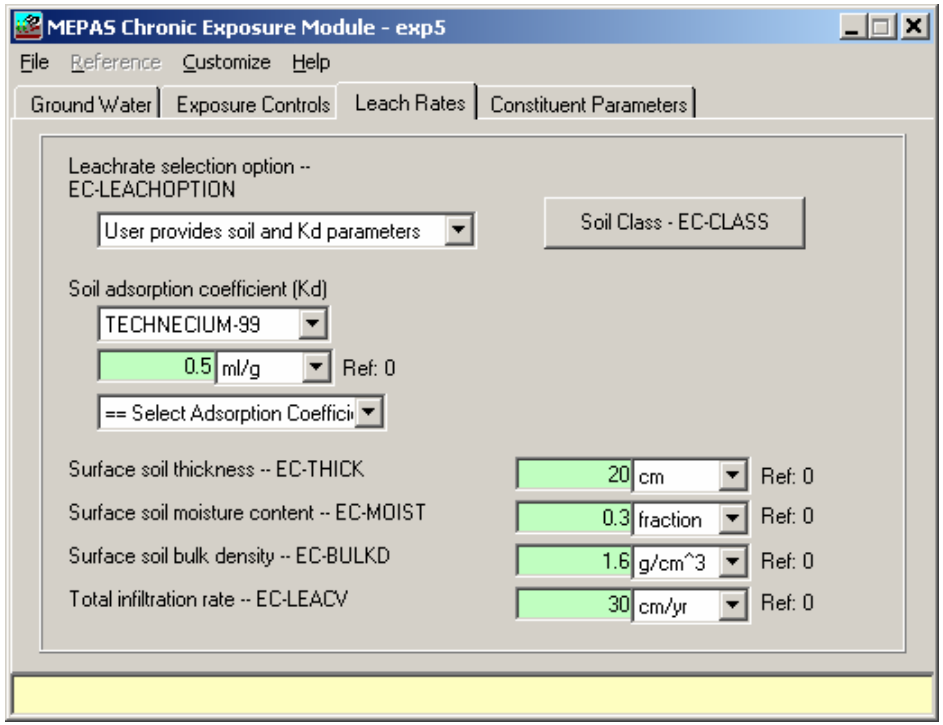
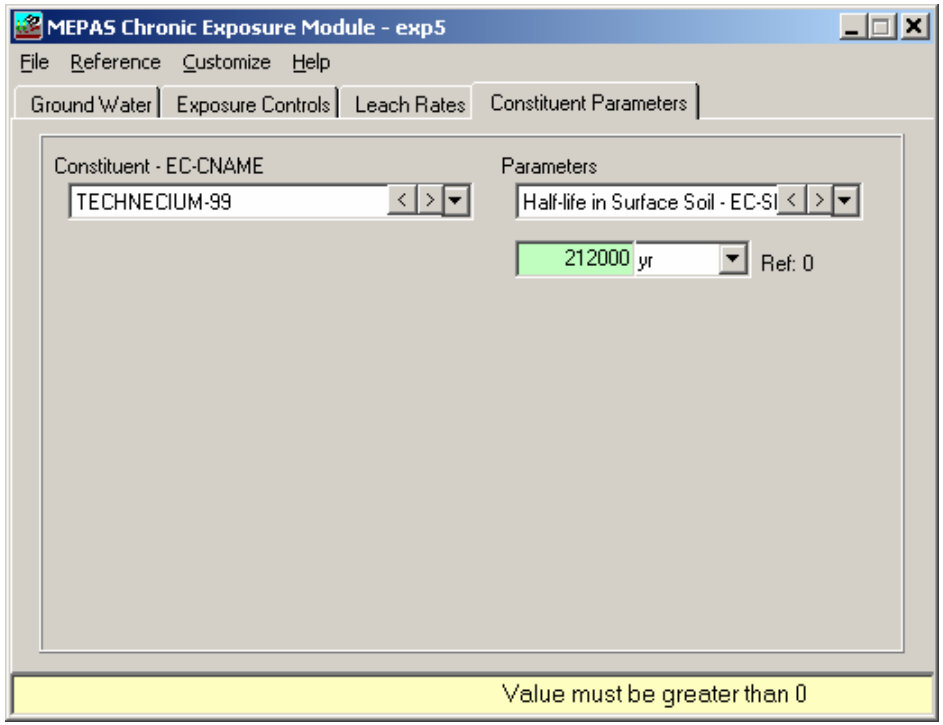
Exposure Pathways Exercise

Input Parameters (cont.)

Leach Rates Tab



Constituent Parameters Tab



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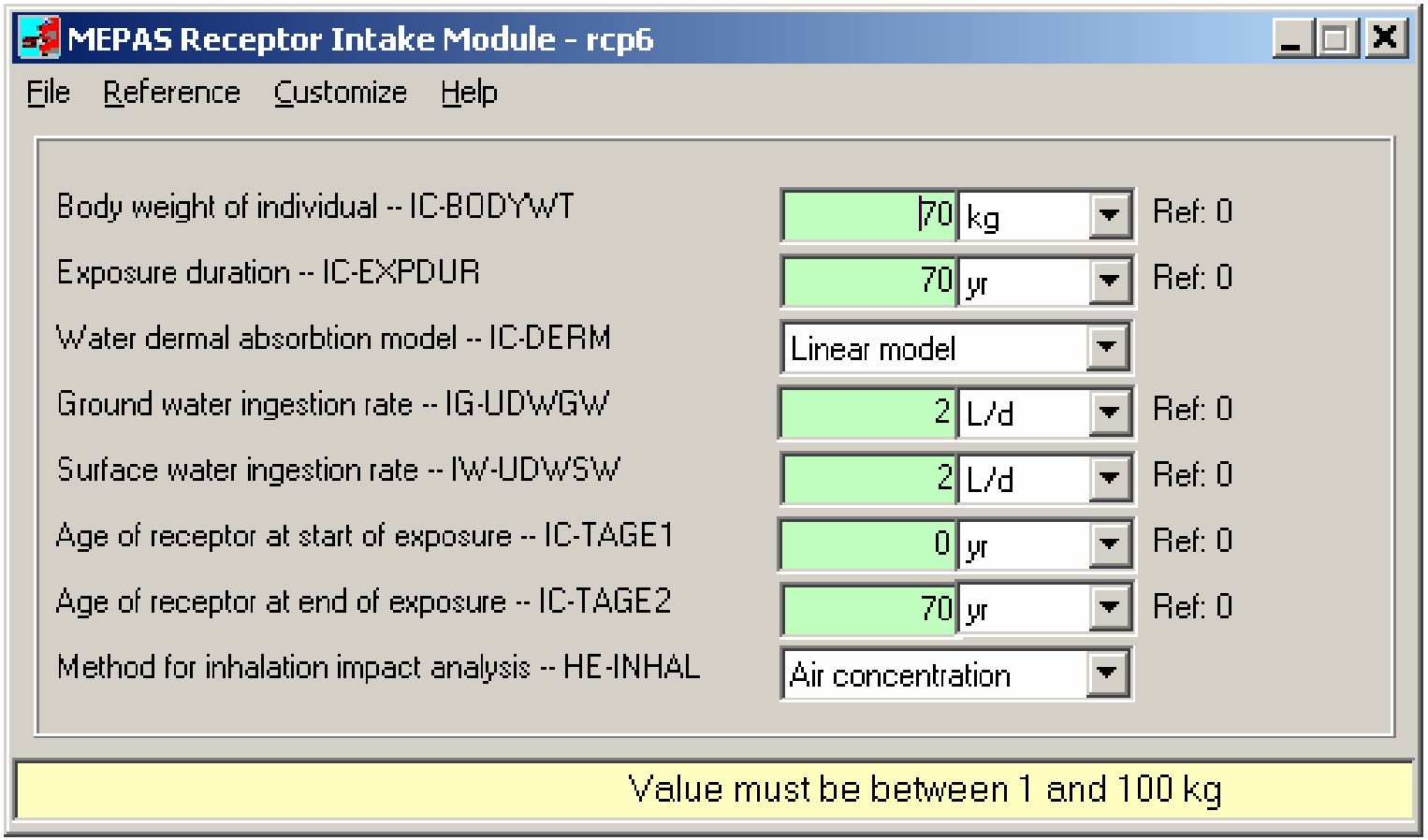
Receptor Intake Exercise

Input Parameters



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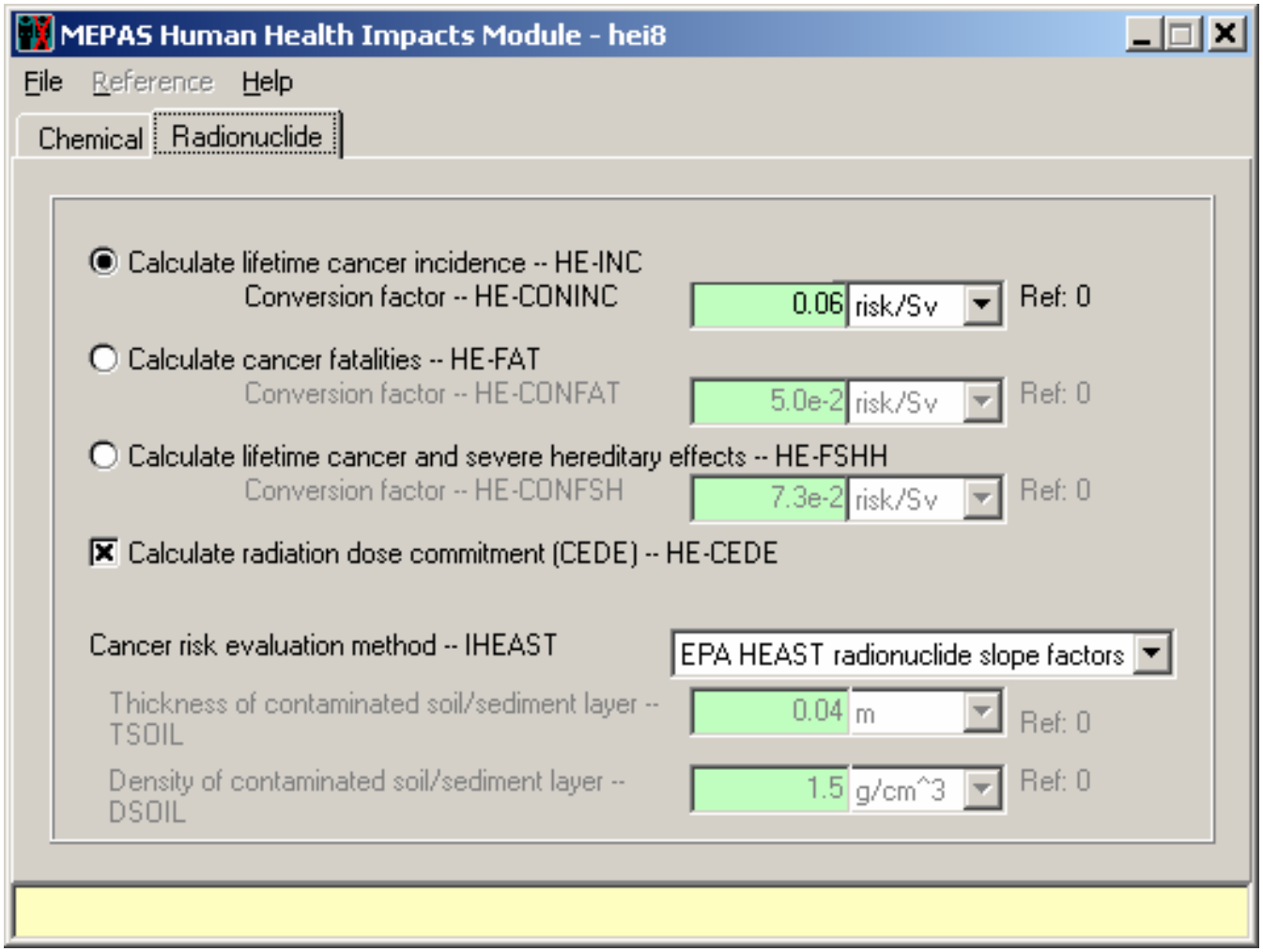
Health Impacts Exercise

Input Parameters



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Output from Exposure Modules

- **Right-click on exposure modules and view graphical files**
  - **EPF file from Exposure Pathways**
  - **RIF file from Receptor Intake**
  - **HIF file from Health Impacts**
- **To calculate annual dose (e.g., mSv/year), divide cumulative dose from HIF file by exposure duration in years (i.e., 70 years in our example)**

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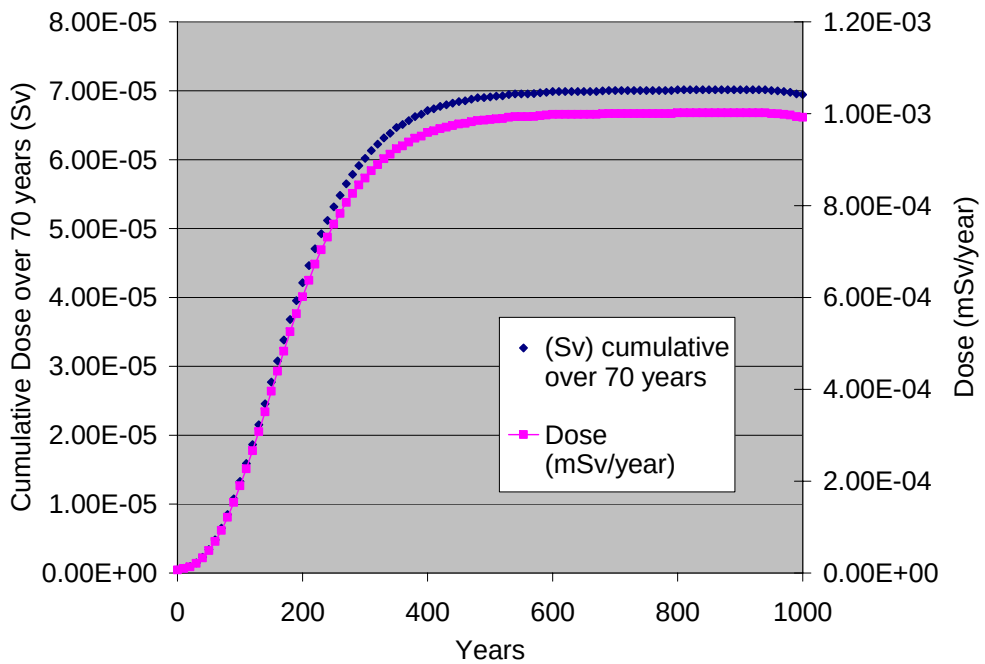
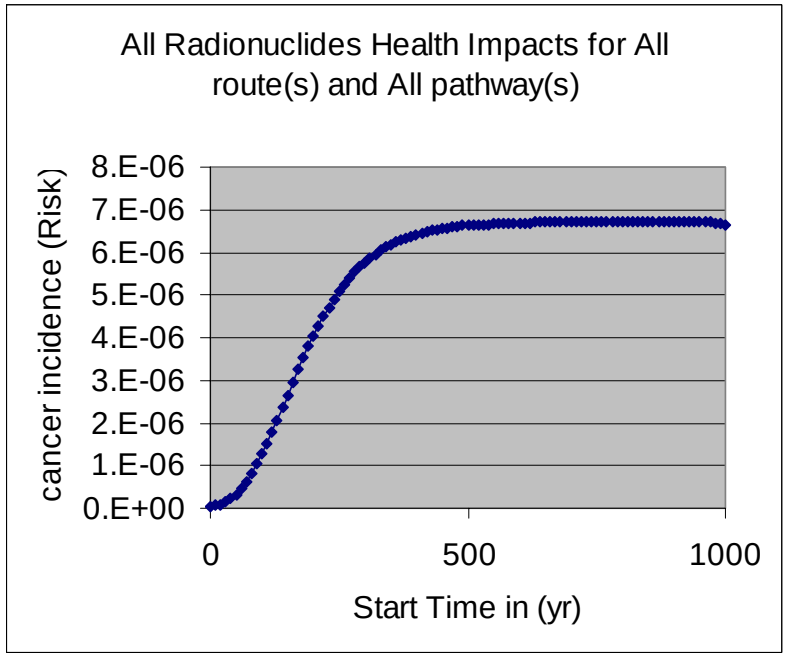
Exposure Exercise Results

Agenda

See ‘exposure.xls’ for results





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Sensitivity/Uncertainty Model

Overview

- The Sensitivity/Uncertainty module randomly samples input variables from parameter distributions and performs a Monte Carlo analysis
- Provides probabilistic analysis and statistical distributions of performance metrics to quantify uncertainty
- Can use results to determine sensitivity of performance metrics to various input parameters

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Features

- Latin-Hypercube Sampling Technique
- Multiple Parameter Distributions
  - Uniform, log uniform, normal, log normal
- Up to 70 Variables at one time
- Up to 500 iterations
- Monte Carlo: One Module or Multiple Modules in Sequence
- Cross Correlations
- Equations (Cross Correlation of Unity): Explicit Relationships
- Combination of Cross Correlation and Equation

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Using the Sensitivity Module

- Set up deterministic FRAMES analysis first, entering a value for each parameter required
- Run deterministic model to ensure no errors (all green lights)
- Add sensitivity module to main screen
  - Connect all modules that contain stochastic parameters to the sensitivity module
  - Right click sensitivity module and choose ‘General Info’
  - Select available model, click OK
  - Right click sensitivity module and choose ‘User Input’

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User Input for Sensitivity Module

- **Select variables of interest under 'Variables' tab**
  - **Highlight variable and add 'Alias' (8 characters, no symbols)**
- **Under 'Parameters' tab, specify distributions, correlations, and/or equations for each parameter**
- **Under 'Outputs' tab, select seed value, number of realizations, and output variables (metrics) to be preserved from each realization**
  - **Highlight variable and add 'Alias' (8 characters, no symbols)**

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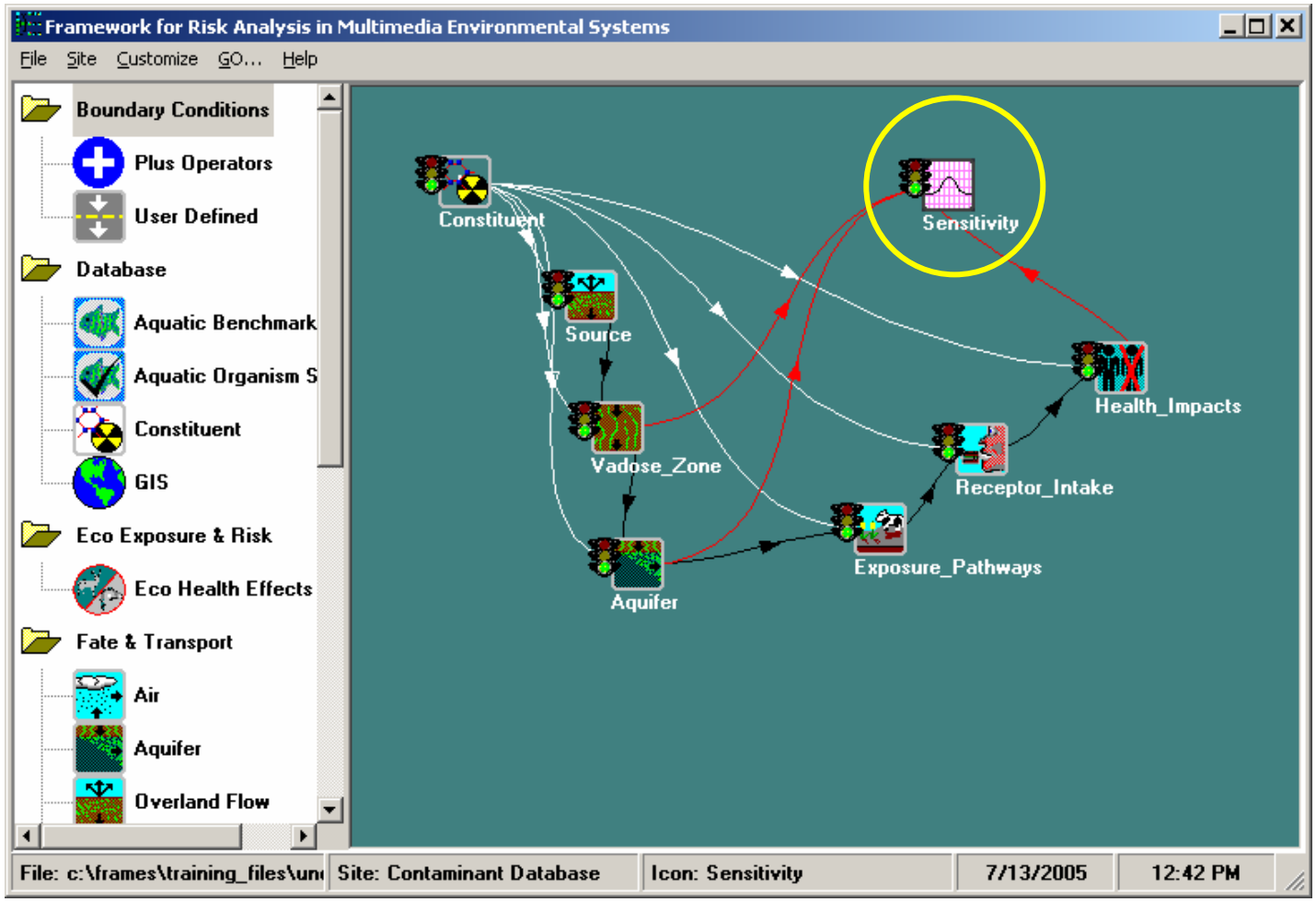
Sensitivity Exercise

- Add the sensitivity module to the existing ‘exposure.gid’ file as shown
- Save file as ‘uncert.gid’



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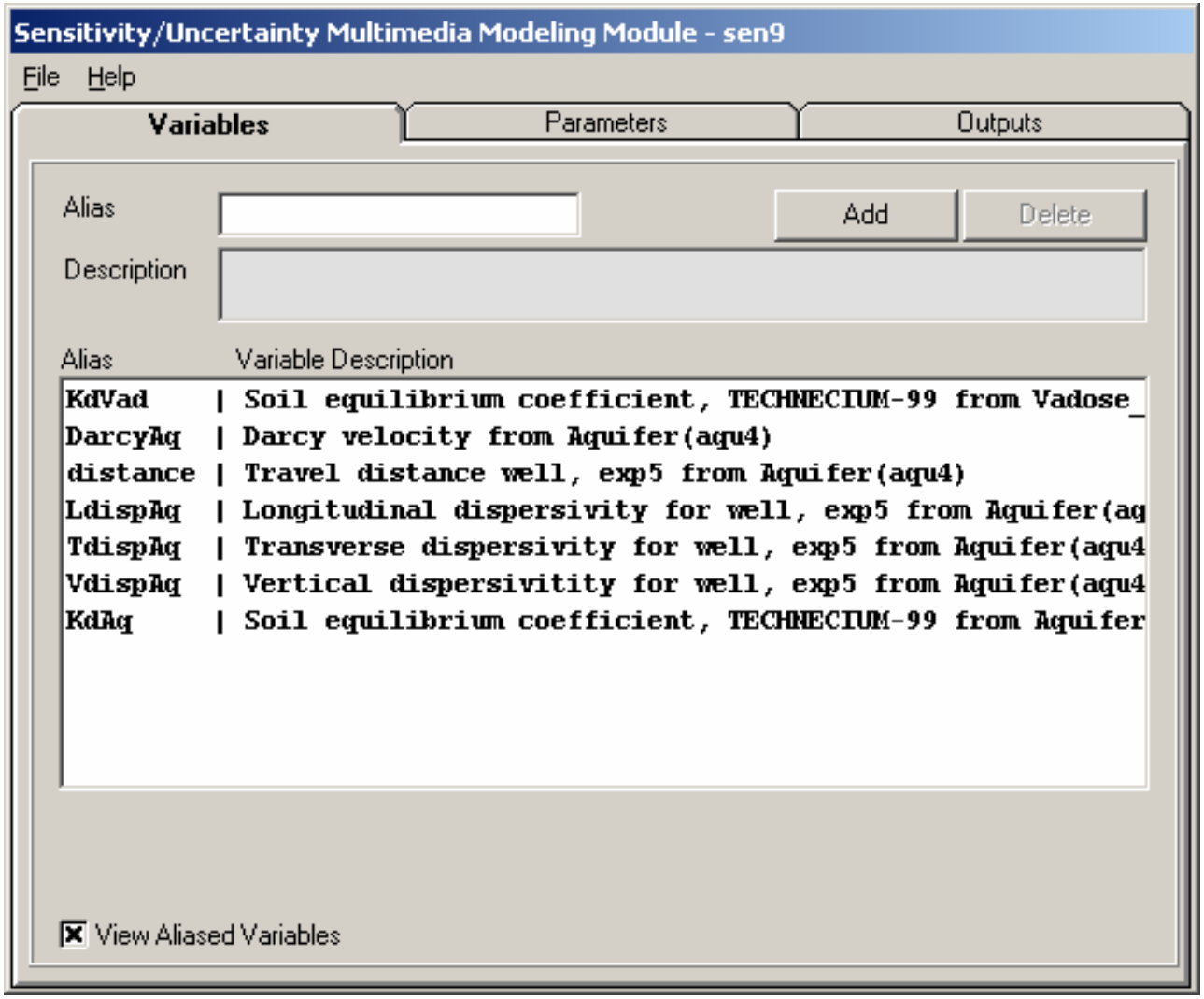
Sensitivity Exercise (cont.)

- **Select the variables as shown for stochastic analysis**
- **Assign the aliases as shown**



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Sensitivity Exercise (cont.)

- **Assign the following distributions or equations to each of the stochastic parameters**
  - **KdVad (ml/g): Log-uniform, Min = 0.01, Max = 1**
  - **DarcyAq (m/yr): Uniform, Min = 1, Max = 20**
  - **distance (m): Log-uniform, Min = 16, Max = 1000**
  - **LdispAq (m): Equation: distance*0.1**
  - **TdispAq (m): Equation: distance*0.1**
  - **VdispAq (m): Equation: distance*0.01**
  - **KdAq (ml/g): Log-uniform, Min = 0.01, Max = 1**
- **Assign the following correlations**
  - **KdVad and KdAq are positively correlated at 0.9**

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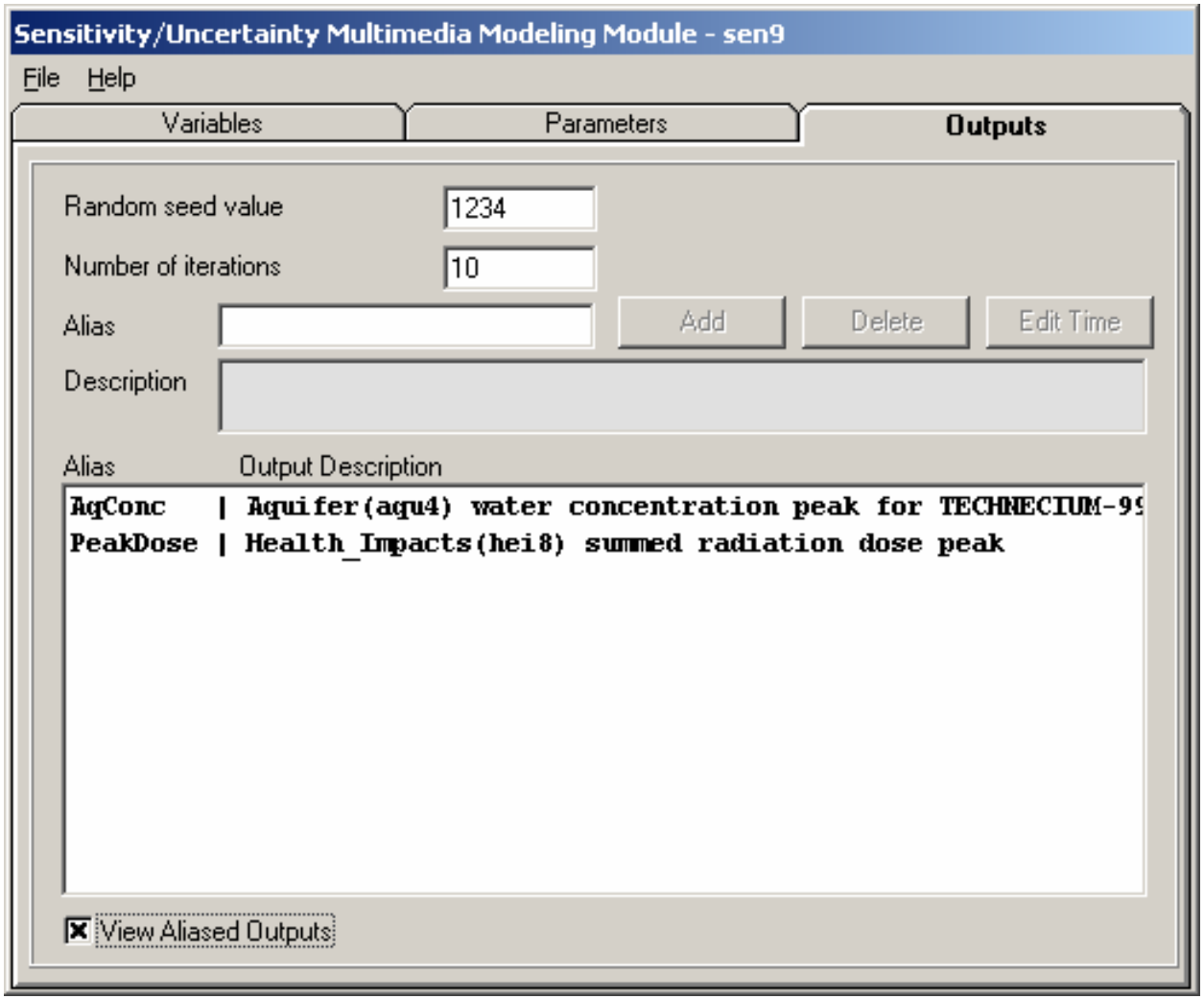
Sensitivity Exercise (cont.)

- Assign the seed value and number of iterations as shown
- Select the output variables and assign Aliases as shown
- Save and Exit
- Run the sensitivity module
- Open the ‘uncert.suf’ file in Excel



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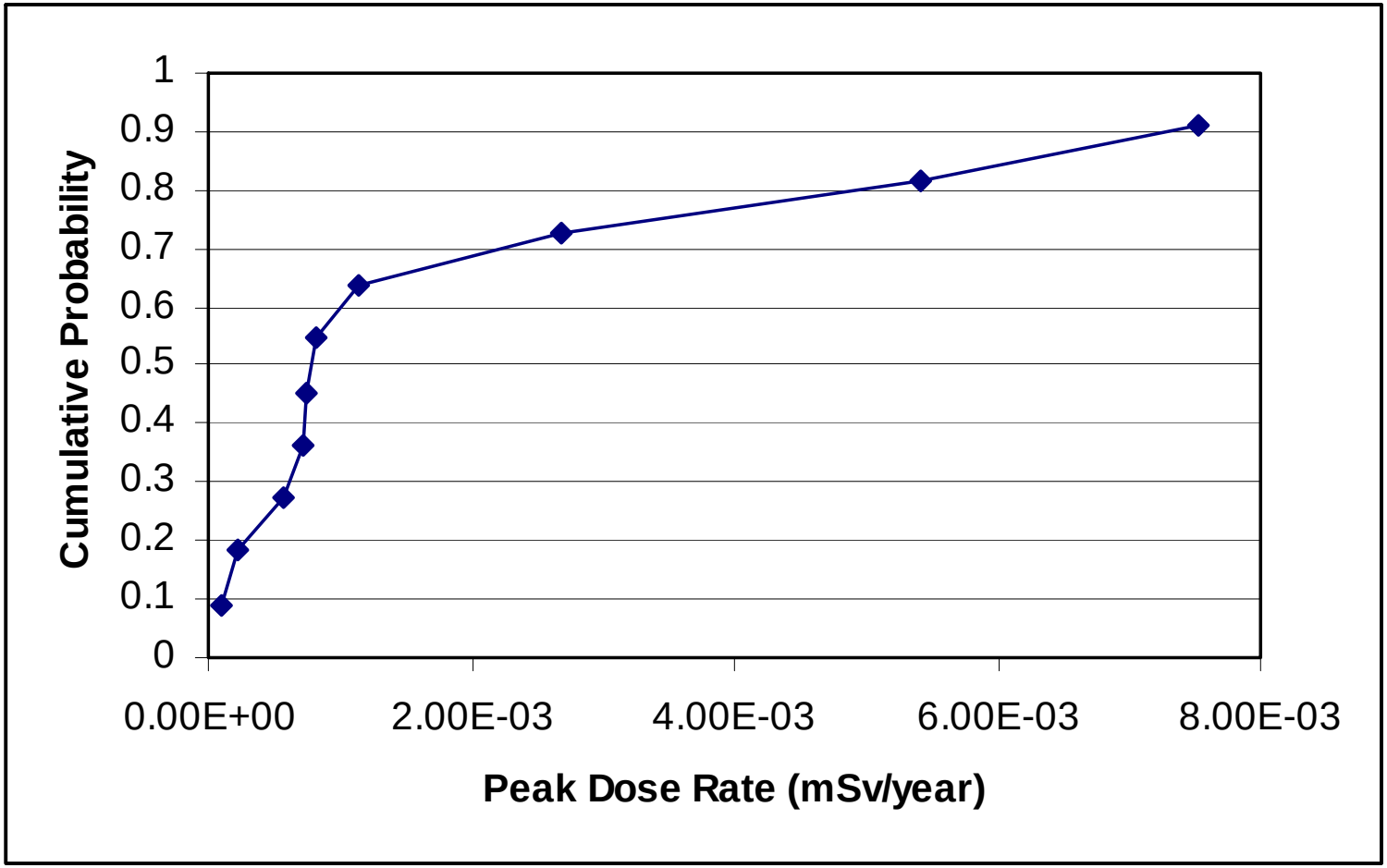
Sensitivity Exercise Results

Cumulative Probability Distribution of Peak Dose

See 'uncert.xls' for processed results



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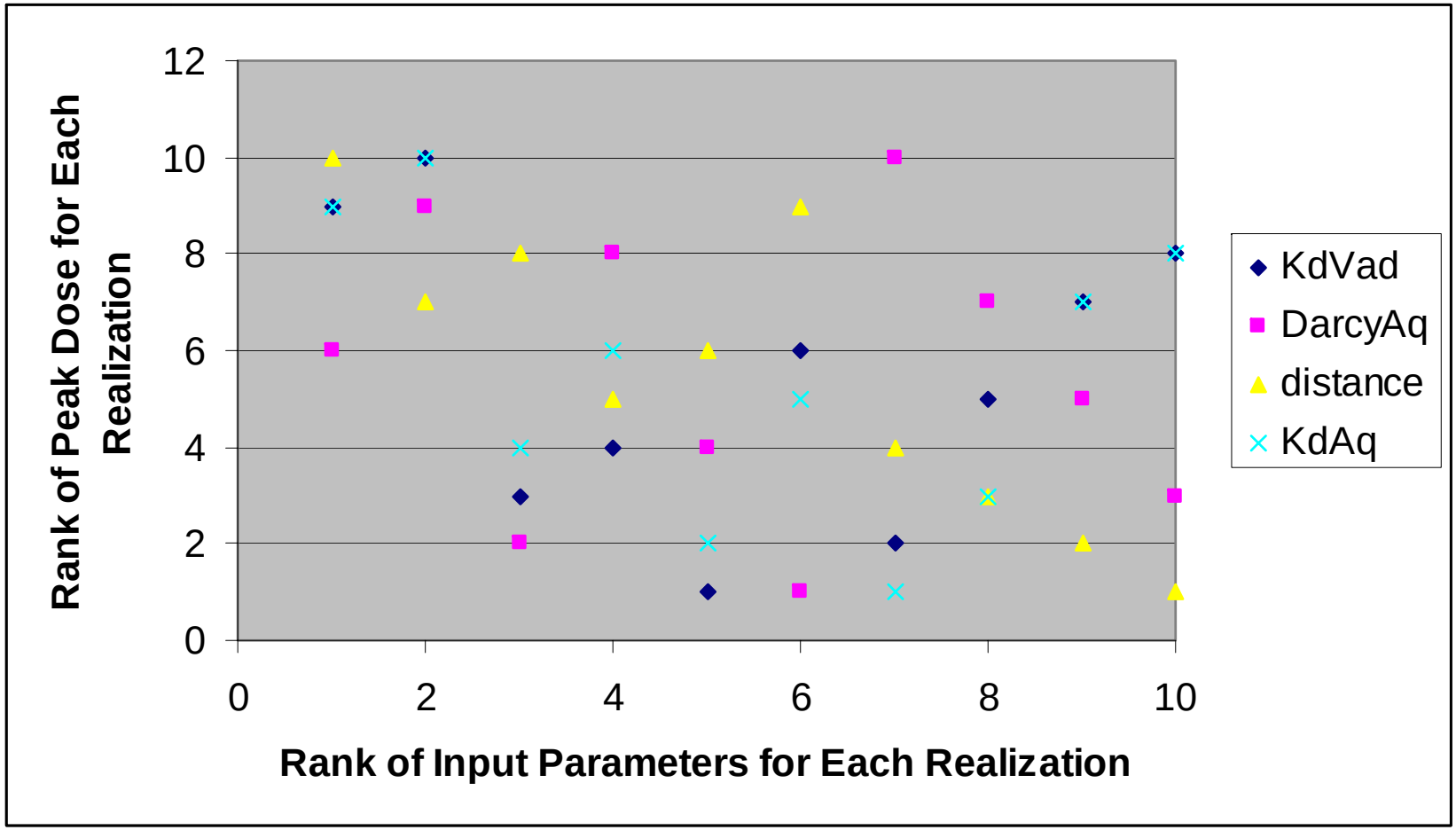
Sensitivity Exercise Results

Plot of Peak Dose vs. Input Parameter Value for Each Realization (Ranked)

See 'uncert.xls' for processed results



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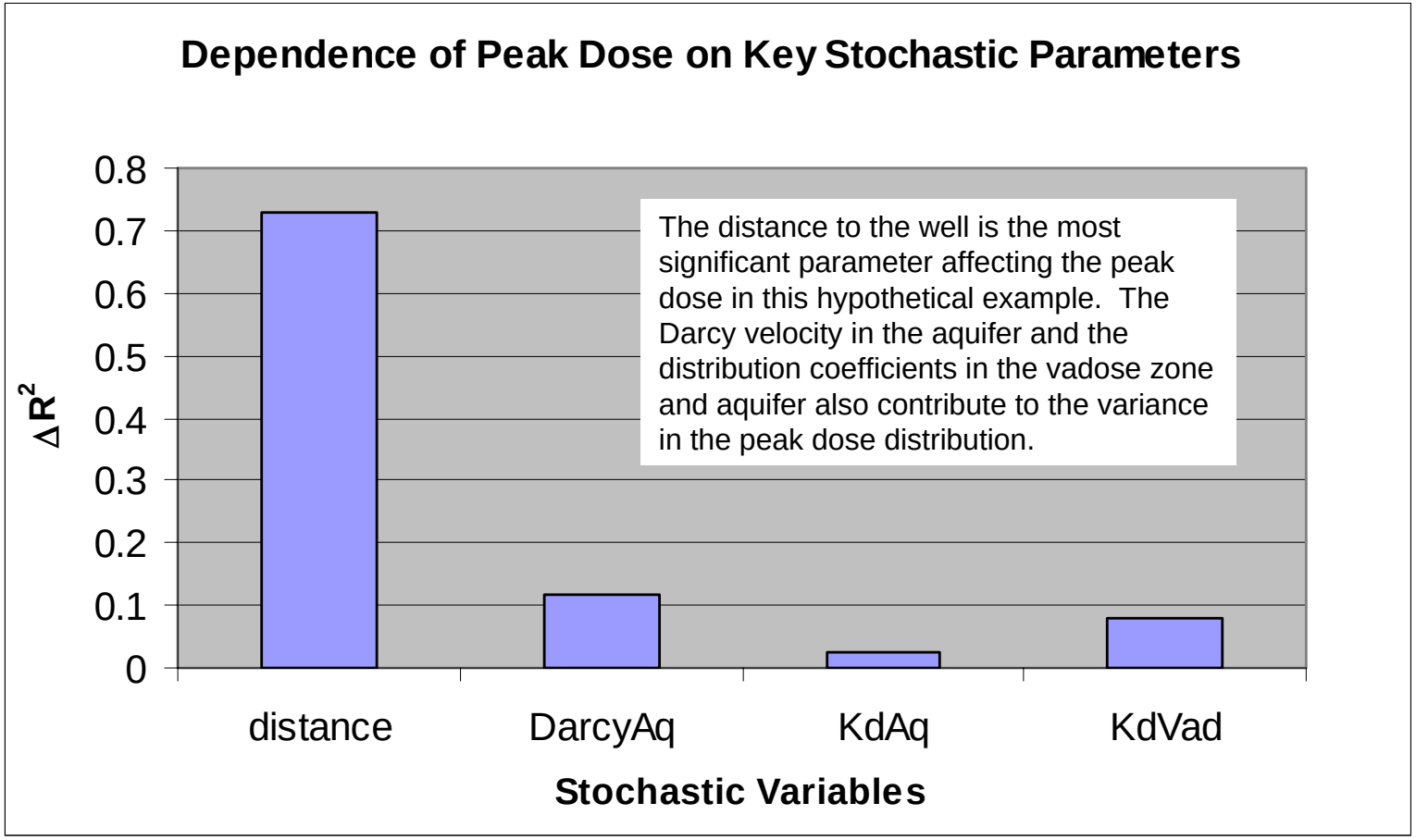
Sensitivity Exercise Results

Stepwise Linear Rank Regression

See 'uncert.xls' for processed results



The distance to the well is the most significant parameter affecting the peak dose in this hypothetical example. The Darcy velocity in the aquifer and the distribution coefficients in the vadose zone and aquifer also contribute to the variance in the peak dose distribution.

Adding Additional Modules

Linking Other Models to FRAMES

- Other computer codes can be linked to the FRAMES code for execution within the FRAMES model
- Linkage requires parameter and model output information to be passed between FRAMES and the other computer code (sub-program)
- Information must match the input/output specifications for FRAMES
- Executable file for other computer code is called sequentially for multiple realizations in the FRAMES code

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Linkage Structure and File Types

- The .DES file contains information on the sub-program being called and a list of parameters being passed between the sub-program and FRAMES
- A pre-processor program writes input files for the sub-program
- A post-processor program writes output from the sub-program into a file that is properly formatted for the FRAMES code
- A DOS batch file sequentially calls the pre-processor, the sub-program, and the post-processor

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Example Linkage: RAECOM

Agenda

- **The RAECOM computer code was linked to FRAMES for performance assessment of uranium mill tailings disposal***
- **RAECOM (Rogers et al., 1984**) simulates one-dimensional ^{222}Rn diffusion through a multi-layered landfill cover and calculates flux at the top of the cover (limited to 20 pCi/m^2/s by U.S. regulations)**
- **RAECOM was coupled to the Sensitivity module in FRAMES to perform probabilistic analyses with parameter uncertainty**

*Ho, C.K., B.W. Arnold, J.R. Cochran, and R.Y. Taira, 2002, *Development of a Risk-Based Probabilistic Performance-Assessment Method for Long-Term Cover Systems – 2nd Edition*, SAND2002-3131, Sandia National Laboratories, Albuquerque, NM.

** Rogers, V.C., K.K. Nielson, and D.R. Kalkwarf, 1984, Radon attenuation handbook for uranium mill tailings cover design, NUREG/CR-3533, U.S. Nuclear Regulatory Commission,Washington, D.C.

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U.S. Environmental Protection Agency

EPA On-line Tools for Site Assessment Calculation

Estimated Henry's Law Constant

Estimated Henry's Law Constants

Background: Henry's Law Constants characterize the equilibrium distribution of dilute concentrations of volatile, soluble chemicals between gas and liquid. For this calculator, the liquid is water. Temperature-dependence is calculated by two methods: one developed by the EPA Office of Solid Waste and Emergency Response and the other published in the journal *Ground Water* and written by John Washington in 1996. Background information on each method is given on a separate page.

Special background information on methyl *tert*-butyl ether (MTBE) is available

Notes:
1) Chemicals are only included if there is data for the temperature-dependence calculation. Henry's Constants for many petroleum hydrocarbons and oxygenated additives are available from a data set of estimated properties. For other chemicals see the chemical properties page.
2) The unit choices for Henry's constants include atm-m^3/mol, atm, and two separate dimensionless values. These are listed below.
3) Previously the calculator contained some single-temperature values. These have been eliminated from the calculation but are available for reference.

Inputs

Example Data | Calculate | Clear

Save Data | Recall Data | Go Back

Title		
Date		Current Date
Chemical	(PCE) tetrachloroethene or perchloroethene	
Desired Temperature	15	°C Temperature Map

Results

Henry's Constant Estimates in units of	Hcc	at 15.0 C
OSWER Method	0.441 dimensionless	
Washington (1996) Method	0.415 dimensionless	
Washington (1996) Method		

Notes: Value calculated using thermodynamic data reported in Washington, J.W. 1996. Ground Water. Vol. 34. pp. 709-718.

Unit Choices for the Henry's Law Constant

H_{cc} = Concentration/Concentration	(dimensionless--volumetric basis)[1]
H_{yx} = Mole Fraction Y / Mole Fraction X	(dimensionless)
H_{px} = Partial Pressure / Mole Fraction X	(atmospheres)
H_{pc} = Partial Pressure / Solubility	(atm m^3/mol)

[1]The dimensionless form based on concentrations (volumetric basic) is the most commonly used of the dimensionless values. See Staudinger and Roberts, 1996, A Critical Review of Henry's Law Constants for Environmental Applications, in Critical Reviews in Environmental Science and Technology, 26(3):205-297 for more information on various units (specifically page 292).

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URL: http://www.epa.gov/athens/learn2model/part-two/onsite/esthenry.htm

sen14 122
2
Sensitivity/Uncertainty Module for FRAMES
Beta Test version
14 2

ThickSrc	Thickness of waste zone from src2 (cm)
Length	Length of waste zone from src2 (cm)
Width	Width of waste zone from src2 (cm)
rhob	Bulk density of soil from src2 (g/cm^3)
MoistSrc	Moisture content from src2 (fraction)
porosity	Total porosity from src2 (fraction)
PbKd1	Equilibrium coefficients (kd), Lead, time # 1 from src2 (ml/g)
PbKd2	Equilibrium coefficients (kd), Lead, time # 2 from src2 (ml/g)
Darcy1	Darcy Vadose rate, time # 1 from src2 (cm/yr)
Darcy2	Darcy Vadose rate, time # 2 from src2 (cm/yr)
porVad	Soil total porosity from vad3 (percent)
KsatVad	Soil hydraulic conductivity from vad3 (cm/day)
rhobVad	Soil bulk density from vad3 (g/cm^3)
PbKdVad	Soil equilibrium coefficient, Lead from vad3 (ml/g)
waterflow.a	vad3 water yr
PbFlux.all.'	vad3 total (yr

100

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	PbKd1	PbKd2	Darcy1	Darcy2
1	3.08E+02	7.01E+03	2.97E+03	1.64E+00	2.16E-01	3.44E-01	3.36E+03	3362	1.71E-01	0.17085
2	3.94E+02	6.77E+03	6.37E+03	1.70E+00	8.99E-02	3.73E-01	5.21E+02	520.69	7.52E-02	0.075197
3	7.34E+02	1.08E+04	1.41E+03	1.77E+00	1.38E-01	4.05E-01	5.53E+02	553.4	1.09E-01	0.10857
4	3.77E+02	2.97E+03	3.30E+03	1.55E+00	1.31E-01	3.46E-01	6.26E+02	626.29	1.18E-01	0.11791
5	3.40E+02	3.39E+03	7.52E+03	1.54E+00	1.68E-01	3.87E-01	2.17E+03	2174.5	1.45E-01	0.1451
6	4.79E+02	9.04E+03	4.14E+03	1.67E+00	9.28E-02	3.65E-01	3.85E+02	384.86	1.16E-01	0.11565
7	7.05E+02	8.27E+03	8.77E+03	1.48E+00	7.93E-02	3.24E-01	2.97E+02	296.68	7.01E-02	0.070133
8	3.81E+02	8.45E+03	1.99E+03	1.47E+00	1.42E-01	3.58E-01	5.90E+02	590.11	1.14E-01	0.11421
9	6.15E+02	1.25E+04	1.63E+03	1.49E+00	9.56E-02	3.91E-01	9.07E+02	906.92	6.58E-02	0.065807
10	4.04E+02	1.47E+03	3.17E+03	1.68E+00	1.47E-01	3.38E-01	4.12E+02	412.08	1.20E-01	0.11985
11	5.40E+02	1.14E+04	1.77E+03	1.77E+00	1.77E-01	3.82E-01	9.31E+02	930.91	1.65E-01	0.1652
12	6.65E+02	4.45E+03	7.81E+03	1.50E+00	1.11E-01	4.22E-01	2.03E+03	2027.5	1.40E-01	0.14009
13	6.53E+02	6.49E+03	7.24E+03	1.68E+00	1.58E-01	3.05E-01	8.16E+02	815.68	1.24E-01	0.12398
14	4.45E+02	1.20E+04	1.36E+03	1.84E+00	2.00E-01	3.55E-01	2.79E+02	278.68	1.36E-01	0.13591
15	7.27E+02	1.18E+04	6.79E+03	1.72E+00	8.37E-02	3.49E-01	3.11E+03	3109.2	1.02E-01	0.10202
16	3.13E+02	1.10E+04	5.90E+03	1.72E+00	7.43E-02	3.62E-01	1.87E+03	1868.1	4.72E-02	0.047183
17	5.93E+02	1.07E+04	4.31E+03	1.63E+00	1.66E-01	4.29E-01	7.53E+02	753.14	1.31E-01	0.13056
18	3.34E+02	4.07E+03	7.18E+03	1.48E+00	1.72E-01	3.18E-01	3.67E+02	366.65	1.51E-01	0.15109
19	7.74E+02	7.56E+03	5.13E+03	1.69E+00	1.20E-01	4.30E-01	3.09E+02	308.97	9.79E-02	0.097853
20	5.75E+02	6.18E+03	2.46E+03	1.65E+00	1.81E-01	3.51E-01	1.83E+03	1834.1	1.26E-01	0.12626
21	5.15E+02	9.00E+03	1.94E+03	1.82E+00	5.76E-02	3.85E-01	7.63E+02	762.75	4.08E-02	0.040838
22	4.72E+02	8.78E+03	6.69E+03	1.75E+00	1.50E-01	3.09E-01	4.28E+02	428.47	1.55E-01	0.15474
23	6.49E+02	4.95E+03	4.70E+03	1.73E+00	8.42E-02	4.13E-01	1.02E+03	1015.3	8.91E-02	0.08908
24	8.15E+02	1.26E+04	6.97E+03	1.57E+00	1.37E-01	3.31E-01	2.31E+03	2307.6	8.73E-02	0.087282
25	5.55E+02	1.24E+04	1.51E+03	1.50E+00	2.23E-01	3.90E-01	1.30E+03	1302.5	1.74E-01	0.17424
26	5.81E+02	1.11E+04	8.90E+03	1.51E+00	7.35E-02	4.25E-01	1.13E+03	1126.3	5.68E-02	0.056793
27	6.78E+02	1.22E+04	8.85E+03	1.78E+00	1.03E-01	3.80E-01	2.96E+03	2963.8	7.95E-02	0.079511
28	7.79E+02	9.62E+03	6.21E+03	1.62E+00	1.83E-01	3.72E-01	4.22E+03	4223	1.59E-01	0.15919
29	6.32E+02	1.05E+04	8.09E+03	1.56E+00	1.99E-01	3.07E-01	4.40E+02	439.85	1.75E-01	0.17454
30	4.88E+02	1.01E+04	5.38E+03	1.53E+00	2.21E-01	3.94E-01	3.27E+03	3270.5	1.64E-01	0.16437
31	7.85E+02	1.02E+03	5.73E+03	1.83E+00	1.44E-01	4.25E-01	1.94E+03	1944.6	1.34E-01	0.13378
32	5.86E+02	5.33E+03	6.27E+03	1.61E+00	1.93E-01	3.68E-01	4.79E+02	478.57	1.78E-01	0.17753
33	5.11E+02	7.34E+03	7.16E+02	1.57E+00	1.18E-01	4.36E-01	9.96E+02	996.03	7.65E-02	0.076469
34	4.02E+02	6.25E+03	2.32E+03	1.66E+00	7.02E-02	4.38E-01	2.53E+03	2530.7	5.34E-02	0.05335
35	3.62E+02	9.24E+03	1.87E+03	1.71E+00	1.28E-01	4.27E-01	3.11E+02	310.78	9.58E-02	0.095775
36	6.77E+02	9.45E+03	1.20E+03	1.54E+00	2.03E-01	3.34E-01	1.19E+03	1185.1	1.86E-01	0.18641
37	8.07E+02	1.14E+04	3.49E+03	1.79E+00	1.54E-01	4.10E-01	3.53E+03	3534.8	1.32E-01	0.13156
38	8.22E+02	1.42E+03	5.07E+03	1.61E+00	1.09E-01	3.39E-01	2.87E+03	2872.3	8.10E-02	0.080954
39	4.51E+02	7.36E+03	4.87E+03	1.79E+00	7.62E-02	3.83E-01	7.32E+02	731.83	6.48E-02	0.064767
40	4.09E+02	1.04E+04	7.97E+03	1.58E+00	1.16E-01	4.08E-01	3.56E+02	356.22	6.99E-02	0.069933
41	5.61E+02	5.64E+03	9.38E+02	1.54E+00	2.06E-01	3.28E-01	4.08E+02	407.5	1.82E-01	0.18173
42	3.21E+02	2.04E+03	6.85E+03	1.52E+00	1.96E-01	4.44E-01	1.41E+03	1407.9	1.83E-01	0.18339
43	6.95E+02	5.05E+03	3.94E+03	1.64E+00	1.91E-01	3.78E-01	8.54E+02	854.2	1.88E-01	0.18832
44	5.74E+02	4.72E+03	3.59E+02	1.53E+00	1.72E-01	4.42E-01	2.40E+03	2395.7	1.61E-01	0.16133
45	5.96E+02	3.21E+03	5.54E+03	1.81E+00	1.40E-01	3.49E-01	2.21E+03	2208.5	7.93E-02	0.079307
46	6.46E+02	5.74E+03	7.04E+03	1.52E+00	2.14E-01	3.53E-01	1.06E+03	1056.4	1.68E-01	0.16784
47	6.68E+02	3.57E+03	2.60E+03	1.80E+00	1.76E-01	3.84E-01	4.08E+03	4078.2	1.57E-01	0.15723
48	6.23E+02	1.24E+03	6.07E+03	1.67E+00	1.30E-01	3.93E-01	1.26E+03	1261.7	1.49E-01	0.14912
49	7.91E+02	5.21E+03	2.64E+03	1.70E+00	1.61E-01	3.60E-01	4.01E+03	4007.9	8.39E-02	0.083945
50	6.28E+02	3.06E+03	2.21E+03	1.49E+00	1.63E-01	4.18E-01	4.61E+02	460.62	8.52E-02	0.085231
51	3.66E+02	1.10E+03	3.42E+03	1.79E+00	6.04E-02	4.00E-01	3.14E+03	3139.1	4.55E-02	0.045535
52	4.38E+02	4.58E+03	7.65E+03	1.56E+00	6.56E-02	3.96E-01	4.25E+03	4247.8	6.10E-02	0.061016
53	3.87E+02	1.68E+03	8.22E+03	1.83E+00	1.17E-01	3.76E-01	1.48E+03	1476.9	1.07E-01	0.10716
54	6.89E+02	1.16E+04	2.34E+03	1.60E+00	1.68E-01	3.75E-01	6.50E+02	649.81	1.43E-01	0.14333
55	3.27E+02	6.63E+03	1.16E+03	1.59E+00	8.10E-02	3.15E-01	3.60E+03	3604.5	5.95E-02	0.059512
56	4.19E+02	8.56E+03	4.09E+03	1.85E+00	1.95E-01	3.35E-01	1.10E+03	1103.9	1.71E-01	0.17139
57	7.96E+02	6.44E+03	7.61E+02	1.71E+00	6.95E-02	4.34E-01	6.64E+02	663.75	6.29E-02	0.062866
58	7.46E+02	1.28E+04	3.71E+03	1.70E+00	1.75E-01	4.14E-01	2.89E+02	288.63	1.63E-01	0.16335

realizations	ThickSrc	Length	Width	rhob	MoistSrc	porosity	PbKd1	PbKd2	Darcy1	Darcy2
59	5.44E+02	3.67E+03	6.64E+03	1.83E+00	1.48E-01	3.63E-01	8.37E+02	836.78	1.28E-01	0.12794
60	4.94E+02	7.80E+03	4.80E+03	1.75E+00	1.05E-01	3.03E-01	5.75E+02	574.55	9.22E-02	0.09218
61	5.38E+02	3.83E+03	9.03E+03	1.77E+00	2.17E-01	3.33E-01	3.82E+03	3823.9	1.85E-01	0.18525
62	4.46E+02	7.64E+03	3.88E+03	1.56E+00	2.20E-01	3.25E-01	2.64E+03	2636.5	1.92E-01	0.19201
63	3.89E+02	3.94E+02	2.72E+03	1.76E+00	2.24E-01	4.05E-01	1.61E+03	1606.6	1.91E-01	0.19129
64	3.41E+02	9.99E+03	6.51E+03	1.61E+00	1.88E-01	3.98E-01	5.65E+02	565.17	1.78E-01	0.17796
65	3.49E+02	1.29E+04	4.43E+03	1.84E+00	8.75E-02	3.67E-01	9.60E+02	960.38	9.09E-02	0.090924
66	4.15E+02	5.29E+02	4.51E+03	1.67E+00	1.80E-01	4.33E-01	8.83E+02	882.76	1.43E-01	0.14298
67	7.40E+02	2.50E+03	4.26E+02	1.68E+00	1.46E-01	3.43E-01	3.40E+02	340.05	1.12E-01	0.11247
68	4.57E+02	8.11E+03	9.11E+03	1.65E+00	1.90E-01	4.37E-01	3.91E+02	391.42	1.38E-01	0.13799
69	5.25E+02	3.29E+03	5.02E+02	1.74E+00	1.56E-01	3.16E-01	2.44E+03	2435	1.01E-01	0.10064
70	7.60E+02	2.31E+03	6.48E+03	1.73E+00	1.01E-01	4.12E-01	2.06E+03	2063.6	6.69E-02	0.066861
71	4.83E+02	7.16E+03	8.46E+03	1.84E+00	8.68E-02	4.31E-01	6.97E+02	696.57	5.83E-02	0.05827
72	7.54E+02	1.91E+03	4.23E+03	1.51E+00	1.64E-01	3.30E-01	2.68E+03	2675.1	1.12E-01	0.11206
73	5.29E+02	2.67E+03	3.06E+03	1.50E+00	9.15E-02	3.22E-01	3.49E+03	3487.5	9.38E-02	0.093801
74	3.17E+02	8.74E+03	8.38E+03	1.52E+00	6.48E-02	3.47E-01	2.28E+03	2280.2	4.25E-02	0.042467
75	4.97E+02	6.92E+03	1.02E+03	1.76E+00	1.14E-01	3.42E-01	3.70E+03	3704.1	1.21E-01	0.12106
76	7.13E+02	9.79E+03	7.40E+03	1.82E+00	2.09E-01	4.42E-01	7.80E+02	780.2	1.69E-01	0.16939
77	4.69E+02	1.02E+04	5.97E+03	1.71E+00	1.24E-01	4.21E-01	1.54E+03	1539.7	1.35E-01	0.13529
78	5.66E+02	1.30E+04	2.93E+03	1.59E+00	2.13E-01	4.03E-01	2.92E+03	2916.8	1.51E-01	0.15084
79	7.17E+02	2.37E+03	5.91E+02	1.75E+00	5.37E-02	3.16E-01	3.23E+02	323.13	5.45E-02	0.054508
80	7.21E+02	5.90E+03	2.11E+03	1.48E+00	6.27E-02	4.17E-01	3.77E+02	376.99	3.93E-02	0.039317
81	3.70E+02	1.12E+04	3.76E+03	1.64E+00	9.77E-02	3.54E-01	2.78E+03	2782.8	7.46E-02	0.074583
82	8.11E+02	1.19E+04	8.57E+03	1.74E+00	1.87E-01	3.78E-01	1.15E+03	1147.8	1.58E-01	0.15758
83	7.99E+02	7.92E+03	8.68E+03	1.63E+00	1.52E-01	4.15E-01	1.58E+03	1575.9	1.41E-01	0.14098
84	4.29E+02	8.09E+03	5.82E+03	1.80E+00	2.11E-01	3.12E-01	1.03E+03	1033.6	1.80E-01	0.17988
85	7.44E+02	8.24E+02	8.26E+03	1.60E+00	1.56E-01	3.37E-01	2.77E+02	276.52	8.59E-02	0.085909
86	5.51E+02	4.18E+03	7.83E+03	1.69E+00	5.53E-02	4.08E-01	5.41E+02	541.09	3.75E-02	0.037457
87	7.70E+02	2.14E+03	1.62E+03	1.55E+00	6.70E-02	3.20E-01	1.77E+03	1768.6	5.06E-02	0.050649
88	6.04E+02	1.78E+03	5.61E+03	1.59E+00	1.13E-01	3.97E-01	1.37E+03	1369.6	9.94E-02	0.099365
89	6.17E+02	5.51E+03	9.01E+02	1.81E+00	1.27E-01	3.11E-01	6.89E+02	689.04	1.06E-01	0.10568
90	6.09E+02	2.85E+03	2.82E+03	1.73E+00	1.02E-01	4.40E-01	5.08E+02	508.37	1.04E-01	0.1039
91	4.65E+02	4.32E+03	7.28E+03	1.76E+00	9.71E-02	3.06E-01	1.23E+03	1233.5	7.20E-02	0.072031
92	6.84E+02	3.95E+03	5.30E+03	1.49E+00	7.77E-02	3.57E-01	1.95E+03	1949.2	5.13E-02	0.051327
93	4.26E+02	9.65E+03	3.39E+03	1.78E+00	1.07E-01	3.28E-01	1.35E+03	1345.3	4.92E-02	0.04915
94	3.54E+02	9.35E+03	5.46E+03	1.62E+00	1.22E-01	4.02E-01	1.73E+03	1725.8	1.53E-01	0.15341
95	7.00E+02	7.70E+02	8.08E+03	1.66E+00	1.85E-01	3.08E-01	4.91E+02	491.22	1.48E-01	0.14788
96	6.62E+02	1.08E+04	4.93E+03	1.63E+00	5.84E-02	3.22E-01	1.45E+03	1448	4.37E-02	0.043728
97	5.22E+02	6.47E+02	7.59E+03	1.81E+00	2.03E-01	4.20E-01	4.49E+02	448.61	1.22E-01	0.12209
98	6.37E+02	1.21E+04	4.62E+03	1.57E+00	1.34E-01	3.64E-01	1.66E+03	1661.8	1.09E-01	0.10931
99	5.05E+02	4.83E+03	5.20E+03	1.58E+00	1.32E-01	3.89E-01	3.35E+02	335.11	1.25E-01	0.12526
100	7.62E+02	6.03E+03	3.58E+03	1.65E+00	2.06E-01	3.71E-01	6.14E+02	613.83	1.89E-01	0.18872

realizations	porVad	KsatVad	rhobVad	PbKdVad	waterflow.all.Vadose water flux peak time
1	0.34435	2.67E+01	1.6419	3362	0
2	0.37263	8.61E+00	1.6997	520.69	0
3	0.40459	5.70E+00	1.7678	553.4	0
4	0.34572	2.50E+00	1.5496	626.29	0
5	0.38719	1.01E+01	1.5407	2174.5	0
6	0.36523	1.42E+01	1.6674	384.86	0
7	0.32407	9.20E+00	1.4795	296.68	0
8	0.35793	1.55E+02	1.4723	590.11	0
9	0.39137	3.50E+01	1.4907	906.92	0
10	0.33829	9.85E+00	1.6763	412.08	0
11	0.382	1.13E+01	1.7746	930.91	0
12	0.42241	3.17E+01	1.5043	2027.5	0
13	0.30456	1.25E+02	1.6826	815.68	0
14	0.35494	2.10E+01	1.8446	278.68	0
15	0.34906	6.15E+00	1.7219	3109.2	0
16	0.36157	1.68E+00	1.7183	1868.1	0
17	0.42922	2.36E+01	1.6322	753.14	0
18	0.31797	9.68E-01	1.4763	366.65	0
19	0.42961	2.90E+00	1.692	308.97	0
20	0.35078	6.17E+01	1.6534	1834.1	0
21	0.38506	1.82E+00	1.816	762.75	0
22	0.30939	3.20E+00	1.7482	428.47	0
23	0.41256	8.67E-01	1.7297	1015.3	0
24	0.33129	4.10E+01	1.5745	2307.6	0
25	0.39044	2.81E+01	1.5032	1302.5	0
26	0.42508	8.05E+00	1.5138	1126.3	0
27	0.37971	3.05E+01	1.7784	2963.8	0
28	0.37176	8.38E+01	1.6205	4223	0
29	0.30669	5.53E+00	1.5592	439.85	0
30	0.39444	4.48E+00	1.5274	3270.5	0
31	0.42462	4.78E+00	1.8344	1944.6	0
32	0.36781	4.82E+01	1.6104	478.57	0
33	0.43621	5.42E+01	1.5676	996.03	0
34	0.43802	2.45E+01	1.6587	2530.7	0
35	0.42707	1.20E+00	1.7085	310.78	0
36	0.33383	1.65E+00	1.5445	1185.1	0
37	0.41013	3.39E+01	1.7944	3534.8	0
38	0.33948	1.25E+01	1.6115	2872.3	0
39	0.3826	1.48E+01	1.786	731.83	0
40	0.4075	2.18E+01	1.5829	356.22	0
41	0.32764	4.07E-01	1.5367	407.5	0
42	0.44366	2.81E+00	1.5241	1407.9	0
43	0.37762	2.24E+00	1.6392	854.2	0
44	0.44206	5.82E+00	1.5323	2395.7	0
45	0.34947	1.62E+01	1.8132	2208.5	0
46	0.35318	3.94E+01	1.5195	1056.4	0
47	0.38401	4.27E+01	1.8002	4078.2	0
48	0.39326	4.58E+01	1.6747	1261.7	0
49	0.36048	3.79E+00	1.7022	4007.9	0
50	0.41802	5.22E+00	1.4874	460.62	0
51	0.39964	5.24E+01	1.791	3139.1	0
52	0.39557	1.81E+01	1.5555	4247.8	0
53	0.37612	5.19E-01	1.8307	1476.9	0
54	0.37454	2.89E+01	1.6019	649.81	0
55	0.31487	1.48E+02	1.5939	3604.5	0
56	0.3352	1.13E+02	1.8463	1103.9	0
57	0.43368	7.67E-01	1.7098	663.75	0
58	0.41441	1.35E+01	1.6969	288.63	0

realizations	porVad	KsatVad	rhobVad	PbKdVad	waterflow.all.Vadose water flux peak time
59	0.36255	3.47E+00	1.8268	836.78	0
60	0.30319	1.17E+01	1.7454	574.55	0
61	0.33316	2.13E+00	1.7733	3823.9	0
62	0.32493	7.21E+01	1.5637	2636.5	0
63	0.40519	1.57E+01	1.7621	1606.6	0
64	0.39831	8.42E+00	1.605	565.17	0
65	0.36682	1.05E+01	1.8392	960.38	0
66	0.43311	2.00E+01	1.6686	882.76	0
67	0.34313	6.40E+01	1.6847	340.05	0
68	0.43664	2.58E+01	1.652	391.42	0
69	0.31647	1.09E+01	1.742	2435	0
70	0.4119	2.72E+00	1.7275	2063.6	0
71	0.43098	5.71E+01	1.8377	696.57	0
72	0.32955	2.38E+00	1.5082	2675.1	0
73	0.32233	4.35E+00	1.4985	3487.5	0
74	0.34684	6.48E+00	1.5168	2280.2	0
75	0.34194	4.91E+00	1.7587	3704.1	0
76	0.44221	1.30E+01	1.8227	780.2	0
77	0.42087	3.37E+00	1.7149	1539.7	0
78	0.403	6.57E-01	1.5889	2916.8	0
79	0.31594	1.01E+02	1.7516	323.13	0
80	0.41693	1.77E+01	1.4836	376.99	0
81	0.35448	4.01E+00	1.6365	2782.8	0
82	0.37798	4.24E+00	1.7362	1147.8	0
83	0.41515	6.87E+00	1.625	1575.9	0
84	0.31211	3.72E+00	1.8022	1033.6	0
85	0.33672	1.36E+01	1.5965	276.52	0
86	0.40818	9.24E+01	1.6871	541.09	0
87	0.31977	1.51E+00	1.5527	1768.6	0
88	0.39688	2.26E+01	1.586	1369.6	0
89	0.31134	1.98E+00	1.806	689.04	0
90	0.44044	3.72E+01	1.7335	508.37	0
91	0.30607	9.51E+00	1.7645	1233.5	0
92	0.35741	1.40E+00	1.4934	1949.2	0
93	0.32789	1.16E+00	1.7818	1345.3	0
94	0.40198	6.60E+00	1.616	1725.8	0
95	0.3081	1.67E+01	1.66	491.22	0
96	0.3217	7.81E+00	1.6293	1448	0
97	0.41963	7.34E+00	1.8107	448.61	0
98	0.36404	7.63E+00	1.5703	1661.8	0
99	0.38891	7.45E+01	1.5782	335.11	0
100	0.37052	1.90E+01	1.6453	613.83	0

realizations	waterflow.all.Vadose water flux peak value	PbFlux.all.Vadose total constituent flux peak time
1	3.559	500.025
2	3.245	500.025
3	1.652	500.025
4	1.156	500.025
5	3.697	500.025
6	4.333	500.025
7	5.086	500.025
8	1.922	500.025
9	1.34	500.025
10	0.5583	500.025
11	3.331	500.025
12	4.875	500.025
13	5.818	500.025
14	2.217	500.025
15	8.165	500.025
16	3.058	500.025
17	6.013	500.025
18	4.419	500.025
19	3.796	500.025
20	1.921	500.025
21	0.7143	500.025
22	9.097	500.025
23	2.073	500.025
24	7.666	500.025
25	3.262	500.025
26	5.593	500.025
27	8.597	500.025
28	9.514	500.025
29	14.83	500.025
30	8.931	500.025
31	0.7813	500.025
32	5.932	500.025
33	0.4012	500.025
34	0.7732	500.025
35	1.654	500.025
36	2.112	500.025
37	5.231	500.025
38	0.5838	500.025
39	2.317	500.025
40	5.782	500.025
41	0.9623	500.025
42	2.562	500.025
43	3.75	500.025
44	0.2736	500.025
45	1.409	500.025
46	6.789	500.025
47	1.458	500.025
48	1.122	500.025
49	1.155	500.025
50	0.5755	500.025
51	0.1718	500.025
52	2.137	500.025
53	1.478	500.025
54	3.886	500.025
55	0.4579	500.025
56	5.997	500.025
57	0.3079	500.025
58	7.753	500.025

realizations	waterflow.all.Vadose water flux peak value	PbFlux.all.Vadose total constituent flux peak time
59	3.115	500.025
60	3.446	500.025
61	6.404	500.025
62	5.695	500.025
63	0.2051	500.025
64	11.57	500.025
65	5.197	500.025
66	0.3407	500.025
67	0.1198	500.025
68	10.2	500.025
69	0.1665	500.025
70	1.001	500.025
71	3.54	500.025
72	0.9059	500.025
73	0.7669	500.025
74	3.103	500.025
75	0.8533	500.025
76	12.28	500.025
77	8.229	500.025
78	5.746	500.025
79	0.07623	500.025
80	0.4911	500.025
81	3.138	500.025
82	16.05	500.025
83	9.692	500.025
84	8.461	500.025
85	0.5842	500.025
86	1.231	500.025
87	0.176	500.025
88	0.9921	500.025
89	0.524	500.025
90	0.8337	500.025
91	2.263	500.025
92	1.078	500.025
93	1.613	500.025
94	7.831	500.025
95	0.9203	500.025
96	2.334	500.025
97	0.5991	500.025
98	6.105	500.025
99	3.147	500.025
100	4.076	500.025

realizations	PbFlux.all.Vadose total constituent flux peak value
1	1.22E-43
2	1.22E-43
3	1.22E-43
4	1.22E-43
5	1.22E-43
6	1.22E-43
7	1.22E-43
8	1.22E-43
9	1.22E-43
10	1.22E-43
11	1.22E-43
12	1.22E-43
13	1.22E-43
14	1.22E-43
15	1.22E-43
16	1.22E-43
17	1.22E-43
18	1.22E-43
19	1.22E-43
20	1.22E-43
21	1.22E-43
22	1.22E-43
23	1.22E-43
24	1.22E-43
25	1.22E-43
26	1.22E-43
27	1.22E-43
28	1.22E-43
29	1.22E-43
30	1.22E-43
31	1.22E-43
32	1.22E-43
33	1.22E-43
34	1.22E-43
35	1.22E-43
36	1.22E-43
37	1.22E-43
38	1.22E-43
39	1.22E-43
40	1.22E-43
41	1.22E-43
42	1.22E-43
43	1.22E-43
44	1.22E-43
45	1.22E-43
46	1.22E-43
47	1.22E-43
48	1.22E-43
49	1.22E-43
50	1.22E-43
51	1.22E-43
52	1.22E-43
53	1.22E-43
54	1.22E-43
55	1.22E-43
56	1.22E-43
57	1.22E-43
58	1.22E-43

realizations	PbFlux.all.Vadose total constituent flux peak value
59	1.22E-43
60	1.22E-43
61	1.22E-43
62	1.22E-43
63	1.22E-43
64	1.22E-43
65	1.22E-43
66	1.22E-43
67	1.22E-43
68	1.22E-43
69	1.22E-43
70	1.22E-43
71	1.22E-43
72	1.22E-43
73	1.22E-43
74	1.22E-43
75	1.22E-43
76	1.22E-43
77	1.22E-43
78	1.22E-43
79	1.22E-43
80	1.22E-43
81	1.22E-43
82	1.22E-43
83	1.22E-43
84	1.22E-43
85	1.22E-43
86	1.22E-43
87	1.22E-43
88	1.22E-43
89	1.22E-43
90	1.22E-43
91	1.22E-43
92	1.22E-43
93	1.22E-43
94	1.22E-43
95	1.22E-43
96	1.22E-43
97	1.22E-43
98	1.22E-43
99	1.22E-43
100	1.22E-43

Technical Factsheet on: LEAD

List of Contaminants

As part of the Drinking Water and Health pages, this fact sheet is part of a larger publication:
National Primary Drinking Water Regulations

Drinking Water Standards

MCLG: zero
Action Level: > 0.015 mg/L in more than 10 percent of tap water samples
HAL(child): none

Health Effects Summary

Acute: Lead can cause a variety of adverse health effects in humans. At relatively low levels of exposure, these effects may include interference with red blood cell chemistry, delays in normal physical and mental development in babies and young children, slight deficits in the attention span, hearing, and learning abilities of children, and slight increases in the blood pressure of some adults. It appears that some of these effects, particularly changes in the levels of certain blood enzymes and in aspects of children's neurobehavioral development, may occur at blood lead levels so low as to be essentially without a threshold.

Chronic: Chronic exposure to lead has been linked to cerebrovascular and kidney disease in humans.

Cancer: Lead has the potential to cause cancer from a lifetime exposure at levels above the action level.

Usage Patterns

Lead is the fifth most important metal in the USA economy in terms of consumption. Of this approximately 85% of the primary lead is produced domestically and 40-50% is recovered and recycled. Eighty eight percent of the lead mined in the US comes from seven mines in the New Lead Belt in southeastern Missouri; the rest coming from eight mines in Colorado, Idaho, and Utah. Three of the six USA lead smelters are from this region, the others are located in Idaho, Montana, and Texas.

Release Patterns

Lead occurs in drinking water from two sources: (1) Lead in raw water supplies, i.e., source water or distributed water, and (2) corrosion of plumbing materials in the water distribution system (corrosion by-products). Most lead contamination is from corrosion by-products.

Occurrence in Source Water and Distributed Water. Based on a variety of water quality surveys, EPA now estimates that approximately 600 groundwater systems and about 215 surface suppliers may have water leaving the treatment plant with lead levels greater than 0.005 mg/L These two sources together indicate that less than 1 percent of the public water systems in the United States have water entering the distribution system with lead levels greater than 0.005 mg/L. These systems serve less than 3 percent of people that

receive their drinking water from public water systems.

From 1987 to 1993, according to the Toxics Release Inventory lead compound releases to land and water totalled nearly 144 million lbs., almost all of which was to land. These releases were primarily from lead and copper smelting industries. The largest releases occurred in Missouri, Arizona and Montana. The largest direct releases to water occurred in Ohio.

Occurrence as a Corrosion By-Product. Lead in drinking water results primarily from corrosion of materials located throughout the distribution system containing lead and copper and from lead and copper plumbing materials used to plumb public- and privately-owned structures connected to the distribution system. The amount of lead in drinking water attributable to corrosion by-products depends on a number of factors, including the amount and age of lead and copper bearing materials susceptible to corrosion, how long the water is in contact with the lead containing surfaces, and how corrosive the water in the system is toward these materials.

The potential sources of lead corrosion by-products found in drinking water can include: Water service mains (rarely), lead goosenecks or pigtails, lead service lines and interior household pipes, lead solders and fluxes used to connect copper pipes, alloys containing lead, including some faucets made of brass or bronze.

Most public water systems serve at least some buildings with lead solder and/or lead service lines. EPA estimates that there are about 10 million lead service lines/connections. About 20 percent of all public water systems have some lead service lines/connections within their distribution system.

The amount of lead in drinking water depends heavily on the corrosivity of the water. All water is corrosive to metal plumbing materials to some degree, even water termed noncorrosive or water treated to make it less corrosive. The corrosivity of water to lead is influenced by water quality parameters such as pH, total alkalinity, dissolved inorganic carbonate, calcium, and hardness. Galvanic corrosion of lead into water also occurs with lead-soldered copper pipes, due to differences in the electrochemical potential of the two metals. Grounding of household electrical systems to plumbing may also exacerbate galvanic corrosion.

Environmental Fate

Lead may enter the environment during its mining, ore processing, smelting, refining use, recycling or disposal. The initial means of entry is via the atmosphere. Lead may also enter the atmosphere from the weathering of soil and volcanos, but these sources are minor compared with anthropogenic ones.

Lead will be retained in the upper 2-5 cm of soil, especially soils with at least 5% organic matter or a pH 5 or above. Leaching is not important under normal conditions. It is expected to slowly undergo speciation to the more insoluble sulfate, sulfide, oxide, and phosphate salts.

Lead enters water from atmospheric fallout, runoff or wastewater; little is transferred from natural ores. Metallic lead is attacked by pure water in the presence of oxygen, but if the water contains carbonates and silicates, protective films are formed preventing further attack. That which dissolves tends to form ligands. Lead is effectively removed from the water column to the sediment by adsorption to organic matter and clay minerals, precipitation as insoluble salt, and reaction with hydrous iron and manganese oxide. Under most circumstances, adsorption predominates.

Lake sediment microorganisms are able to directly methylate certain inorganic lead compounds. Under appropriate conditions, dissolution due to anaerobic microbial action may be significant in subsurface environments. The mean percentage removal of lead during the activated sludge process was 82% and was almost entirely due to the removal of the insoluble fraction by adsorption onto the sludge floc and to a much lesser extent,

precipitation.

The most stable form of lead in natural water is a function of the ions present, the pH, and the redox potential. In oxidizing systems, the least soluble common forms are probably the carbonate, hydroxide, and hydroxycarbonate. In reduced systems where sulfur is present, PbS is the stable solid. The solubility of Pb is 10 ppb above pH 8, while near pH 6.5 the solubility can approach or exceed 100 ppb. Pb(0) and Pb(+2) can be oxidatively methylated by naturally occurring compounds such as methyl iodide and glycine betaine. This can result in the dissolution of lead already bound to sediment or particulate matter.

Lead does not appear to bioconcentrate significantly in fish but does in some shellfish such as mussels. Evidence suggests that lead uptake in fish is localized in the mucous on the epidermis, the dermis, and scales so that the availability in edible portions do not pose a human health danger.

Chemical/Physical Properties

CAS Number: 7439-92-1

Color/ Form/Odor: Bluish-white, silvery, gray metal, lustrous when freshly cut.

Soil sorption coefficient: N/A; Low mobility in most soils, lowest at neutral pH and high organic matter.

Common Ores: sulfide-Galena; oxide-Lanarkite; carbonate-Cerrusite; sulfate-Anglesite

Bioconcentration Factor: Log BCFs for fish, 1.65; shellfish, 3.4

Solubilities:

acetate- 443 g/L at 20 deg C
arsenate- insoluble in cold water
carbonate- 0.0011 g/L at 20 deg C
chloride- 10 g/L cold water
chromate- 0.2 mg/L
nitrate- 376.5 g/L at 0 deg C
oxide- 0.05 g/L at 20 deg C
dioxide- insoluble
phosphate- insoluble
sulfate- 0.4 g/L
sulfide- insoluble
tetraethyl- 0.29 mg/L at 25 deg C
thiocyanate- 0.5 g/L at 20 deg C
thiosulfate- 0.3 g/L cold water

Other Regulatory Information

Monitoring:	**For Lead**	**For Water Quality Parameters**	
&$160;	At Home Taps	Within the Distribution System	At Entry to the Distribution System
Monitoring Period			
Initial	Every 6 months	Every 6 months	Every 6 months
After corrosion control installation	Every 6 months	Every 6 months	Every 2 weeks
Reduced monitoring			
- Conditional	Once a year	Every 6 months	Every 2 weeks
- Final	Every 3 years	Every 3 years	Every 2 weeks

Analysis

Reference Source	**Method Number**
EPA 800/4-83-043	239.2; 200.8; 200.9

Treatment/Best Available Technologies

Source water: Ion exchange; lime softening; reverse osmosis; coagulation/filtration

Corrosion Control: pH and alkalinity adjustment; calcium adjustment; silica- or phosphate-based corrosion inhibition

Toxics Release Inventory - Water and Land Releases, 1987-93 (in pounds)

	Water	Land
TOTALS	**970,827**	**143,058,771**
Top Twelve States *		
MO	4,408	40,656,278
AZ	771	23,240,625
MT	0	20,822,517
UT	4,600	11,881,000
TX	1,988	11,515,211
OH	127,990	5,196,522
IN	62,894	4,851,940
TN	7,140	2,095,489
IL	26,601	1,930,000
WI	1,310	1,350,960
MN	0	1,313,895
NM	0	1,060,880
Major Industries*		
Lead smelting, refining	31,423	68,996,819
Copper smelting	5,371	34,942,505
Steelworks, blast furn.	379,849	18,149,696
Storage batteries	0	1,867,292
China plumbing fixtures	1,310	1,350,960
Iron foundries	10,021	1,274,777
Copper mining	0	1,240,000

* State/Industry totals only include facilities with releases greater than 100,000 lbs.

For Additional Information:

EPA can provide further regulatory and other general information:
EPA Safe Drinking Water Hotline - 800/426-4791

Other sources of toxicological and environmental fate data include:
Toxic Substance Control Act Information Line - 202/554-1404
Toxics Release Inventory, National Library of Medicine - 301/496-6531
Agency for Toxic Substances and Disease Registry - 404/639-6000

List of Contaminants

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Last updated on Tuesday, November 21st, 2006
URL: http://www.epa.gov/safewater/dwh/t-ioc/lead.html

This worksheet calculates the transient advection, dispersion, and decay of PCE in the vadose zone. PCE is transported in both the aqueous and vapor phases. Local thermodynamic equilibrium is assumed so that the partitioning of tritium between the aqueous and gas phases can be expressed using Henry's Law. The half-life of PCE ranges from 9 months (EPA fact sheet) to infinity. This solution is derived in Jury et al., 1983, J. Env. Qual., 12, 558-564 and in Jury et al., 1990, WRR, 26(1), 13-20.

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Input parameters and distributions:

Define number of realizations: $n := 100$ Molecular weight of PCE: $MW := 165.83$

$i := 1..n$

Total porosity: $\phi := \mathrm{runif}(n, .302, .445)$ $\mathrm{median}(\phi) = 0.378$

Moisture Content: $\theta_w := \mathrm{runif}(n, .053, .225)$

Gas Content: $a := \phi - \theta_w$ $\max(a) = 0.38$

Henry's Constant: $K_H := 0.42$ This is Cg/Cliq

(EPA online calculator: www.epa.gov/athens/learn2model/part-two/onsite/esthenry.htm)

Adsorption partition coefficient: $\log K_d := \mathrm{runif}(n, -1.4, .3)$ $K_{d_i} := \frac{10^{\log K_{d_i}}}{1000} \cdot m^3 \cdot kg^{-1}$

Liquid-Phase Diffusion Coefficient: $D_w := 9.2 \cdot 10^{-10} \cdot \frac{m^2}{s}$

Gas-Phase Diffusion Coefficient: $D_g := 9.5 \cdot 10^{-6} \cdot \frac{m^2}{s}$

See Reid et al. (1987), pp. 587, 598

Half-life: $\log\_t_{half} := \mathrm{runif}(n, 7.4, 17.5)$

$t_{half_i} := 10^{\log\_t_{half_i}} \cdot s$ $\mathrm{median}(t_{half}) = 4.202 \times 10^{12}\, s$

$\min(t_{half}) = 2.563 \times 10^{7}\, s$

Bulk density: $\rho_b := \mathrm{runif}(n, 1470, 1850) \cdot kg \cdot m^{-3}$ $\mathrm{median}(\rho_b) = 1.691 \times 10^{3}\, kg\, m^{-3}$

Gas Concentration: $ppb := \mathrm{runif}(n, 5900, 5900 \cdot 10)$

Waste zone length: $length := 430 \cdot .3048 \cdot m$

Waste zone width: $width := 300 \cdot .3048 \cdot m$

Minimum length and width is determined by size of pit 33 (10'x10')

Maximum length and width is determined by extent of MWL.

Waste zone thickness: $L := runif(n, 10 \cdot .3048, 27 \cdot .3048) \cdot m$ $\quad mean(L) = 5.697\,m$

Distance to water table: $d_{wt} := runif(n, 461 \cdot .3048, 495 \cdot .3048) \cdot m$

Thickness of clean overburden: $L_c := runif(n, 0 \cdot .3048, 16 \cdot .3048) \cdot m$

6 to 16 feet nominal; 0 minimum is due to erosion

Darcy Infiltration: $q := runif\left(n, 1.18 \cdot 10^{-11}, 6.12 \cdot 10^{-11}\right) \cdot \frac{m}{s}$

Surface boundary-layer thickness: $d_{BL} := runif(n, 0.001, 1) \cdot m$

Tortuosity Factor: $\varepsilon_w := runif(n, 0.001, 1)$

(lower bound from Millington 1959; upper bound is physical limit) $\varepsilon_g := runif(n, 0.1, 1)$

US Environmental Protection Agency. 1988. Federal guidance report no. 11: limiting values of radionuclide intake and air concentration and dose conversion factors for inhalation, submersion, and ingestion, Eckerman, K.F., A.B. Wolbarst, and A.C.B. Richardson, Washington, DC: US Environmental Protection Agency. Report No.: EPA-5201/1-88-020.

Input Parameter Distributions for sensitivity analyses:

$K_d =$

	1
1	$3.327 \cdot 10^{-4}$

$m^3\,kg^{-1}$

$\phi =$

	1
1	0.302

$L =$

	1
1	5.184

m

$\theta_w =$

	1
1	0.128

$L_c =$

	1
1	0.364

m

$q =$

	1
1	$1.915 \cdot 10^{-11}$

$m\,s^{-1}$

$d_{wt} =$

	1
1	146.778

m

$d_{BL} =$

	1
1	0.05

m

$\varepsilon_w =$

	1
1	0.773

$\varepsilon_g =$

	1
1	0.637

$t_{half} =$

	1
1	$5.269 \cdot 10^{14}$
2	$2.568 \cdot 10^{14}$

s

$ppb =$

	1
1	$4.911 \cdot 10^{4}$

Calculated Parameters

Volume of waste zone: $V_i := length \cdot width \cdot L_i$

$Cgas_i := \frac{ppb_i}{10^9} \cdot 0.8$ partial pressure of PCE in atmospheres (where 0.8 is the atmospheric pressure in Albuquerque)

$C_{o_i} := \frac{Cgas_i}{0.01} \cdot \frac{MW}{1000} \cdot kg \cdot m^{-3}$

$max(Cgas) = 4.717 \times 10^{-5}$ 0.01 is Henry's constant in atm-m^3/mol

$max(C_o) = 7.822 \times 10^{-4}\, kg\, m^{-3}$

$inventory_i := C_{o_i} \cdot V_i$

$max(inventory) = 69.564\, kg$

$min(inventory) = 5.041\, kg$

Retardation factor: $R_{L_i} := \rho_{b_i} \cdot K_{d_i} + \theta_{w_i} + a_i \cdot K_H$

Effective Diffusion Coefficient: $D_{E_i} := \frac{\left(\varepsilon_{w_i} \cdot D_w + \varepsilon_{g_i} \cdot K_H \cdot D_g\right)}{R_{L_i}}$

Effective Velocity: $V_{E_i} := \frac{q_i}{R_{L_i}}$

Decay constant: $\mu_i := \frac{\ln(2)}{t_{half_i}}$

$\mu =$

	1
1	$1.316 \cdot 10^{-15}$
2	$2.699 \cdot 10^{-15}$

s^{-1}

Surface mass-transfer coefficient: $H_{E_i} := \frac{D_g}{d_{BL_i}} \cdot \frac{K_H}{R_{L_i}}$

Note: $R_L/K_H = R_G$

Concentration at water table as a function of time:

$ntimes := 100$

$j := 1 .. ntimes$

$nyears := 1000$

$nsec := nyears \cdot 365.25 \cdot 24 \cdot 3600$

The d_{wt} parameter can be assigned a constant value ($d_{wt,i}$) to simulate concentrations at different depths.

Time: $t_j := \frac{j}{ntimes} \cdot nsec \cdot s$ $\quad erfc(x) := 1 - erf(x)$ $\quad d_{wt} =$

	1
1	146.778
2	144.257

m

Parameters for system with clean overburden plus source thickness

$$exp1_{i,j} := if\left[\frac{\left[H_{E_i}\cdot\left(H_{E_i} + V_{E_i}\right)\cdot t_j + \left(H_{E_i} + V_{E_i}\right)\cdot d_{wt_i}\right]}{D_{E_i}} > 700, 700, \frac{\left[H_{E_i}\cdot\left(H_{E_i} + V_{E_i}\right)\cdot t_j + \left(H_{E_i} + V_{E_i}\right)\cdot d_{wt_i}\right]}{D_{E_i}}\right]$$

$$exp2_i := if\left[\frac{H_{E_i}\cdot\left(L_i + L_{c_i}\right)}{D_{E_i}} > 700, 700, \frac{H_{E_i}\cdot\left(L_i + L_{c_i}\right)}{D_{E_i}}\right] \qquad exp3_i := if\left(\frac{V_{E_i}\cdot d_{wt_i}}{D_{E_i}} > 700, 700, \frac{V_{E_i}\cdot d_{wt_i}}{D_{E_i}}\right)$$

$$A1_{i,j} := erfc\left[\frac{d_{wt_i} - \left(L_i + L_{c_i}\right) - V_{E_i}\cdot t_j}{\sqrt{4\cdot D_{E_i}\cdot t_j}}\right] \qquad A2_{i,j} := erfc\left(\frac{d_{wt_i} - V_{E_i}\cdot t_j}{\sqrt{4\cdot D_{E_i}\cdot t_j}}\right)$$

$$A4_{i,j} := erfc\left(\frac{d_{wt_i} + V_{E_i}\cdot t_j}{\sqrt{4\cdot D_{E_i}\cdot t_j}}\right) \qquad A5_{i,j} := exp\left(exp1_{i,j}\right) \qquad A3_{i,j} := erfc\left[\frac{d_{wt_i} + \left(L_i + L_{c_i}\right) + V_{E_i}\cdot t_j}{\sqrt{4\cdot D_{E_i}\cdot t_j}}\right]$$

$$A6_{i,j} := erfc\left[\frac{d_{wt_i} + \left(2\cdot H_{E_i} + V_{E_i}\right)\cdot t_j}{\sqrt{4\cdot D_{E_i}\cdot t_j}}\right] \qquad A7_{i,j} := erfc\left[\frac{d_{wt_i} + \left(L_i + L_{c_i}\right) + \left(2\cdot H_{E_i} + V_{E_i}\right)\cdot t_j}{\sqrt{4\cdot D_{E_i}\cdot t_j}}\right]$$

Parameters for clean overburden alone:

$$exp2c_i := if\left(\frac{H_{E_i}\cdot L_{c_i}}{D_{E_i}} > 700, 700, \frac{H_{E_i}\cdot L_{c_i}}{D_{E_i}}\right)$$

$$A1c_{i,j} := erfc\left(\frac{d_{wt_i} - L_{c_i} - V_{E_i}\cdot t_j}{\sqrt{4\cdot D_{E_i}\cdot t_j}}\right) \qquad A3c_{i,j} := erfc\left(\frac{d_{wt_i} + L_{c_i} + V_{E_i}\cdot t_j}{\sqrt{4\cdot D_{E_i}\cdot t_j}}\right)$$

$$A7c_{i,j} := \mathrm{erfc}\left[\frac{d_{wt_i} + L_{c_i} + \left(2\cdot H_{E_i} + V_{E_i}\right)\cdot t_j}{\sqrt{4\cdot D_{E_i}\cdot t_j}}\right]$$

Concentration with just clean overburden:

$$C_{Tc_{i,j}} := 0.5\cdot C_{o_i}\cdot \exp\left(-\mu_i\cdot t_j\right)\cdot\left[\begin{array}{l} A1c_{i,j} - A2_{i,j} + \left(1 + \frac{V_{E_i}}{H_{E_i}}\right)\cdot \exp\left(\exp3_i\right)\cdot\left(A3c_{i,j} - A4_{i,j}\right) \ldots \\ + \left(2 + \frac{V_{E_i}}{H_{E_i}}\right)\cdot A5_{i,j}\cdot\left(A6_{i,j} - \exp\left(\exp2c_i\right)\cdot A7c_{i,j}\right) \end{array}\right]$$

Concentration with clean overburden plus source thickness:

$$C_{Tt_{i,j}} := 0.5\cdot C_{o_i}\cdot \exp\left(-\mu_i\cdot t_j\right)\cdot\left[\begin{array}{l} A1_{i,j} - A2_{i,j} + \left(1 + \frac{V_{E_i}}{H_{E_i}}\right)\cdot \exp\left(\exp3_i\right)\cdot\left(A3_{i,j} - A4_{i,j}\right) \ldots \\ + \left(2 + \frac{V_{E_i}}{H_{E_i}}\right)\cdot A5_{i,j}\cdot\left(A6_{i,j} - \exp\left(\exp2_i\right)\cdot A7_{i,j}\right) \end{array}\right]$$

Combined concentration using superposition (Jury et al., 1990, WRR, 26(1), 13-20).

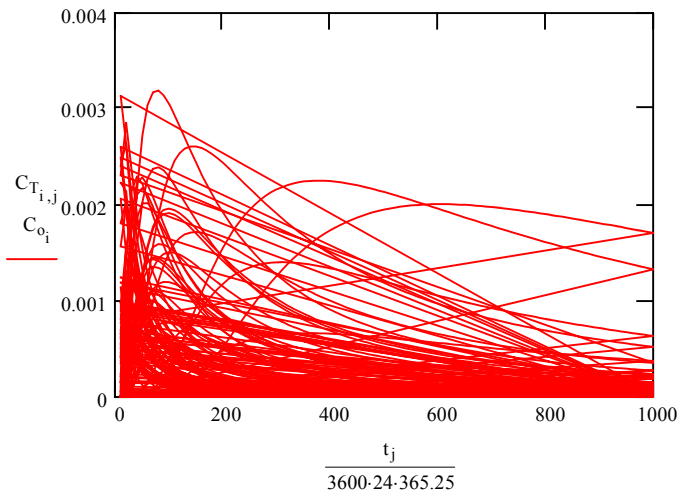
$$C_{T_{i,j}} := C_{Tt_{i,j}} - C_{Tc_{i,j}}$$

$$C_{T_{i,j}} := \mathrm{if}\left(C_{T_{i,j}} < 0, 0, C_{T_{i,j}}\right)$$

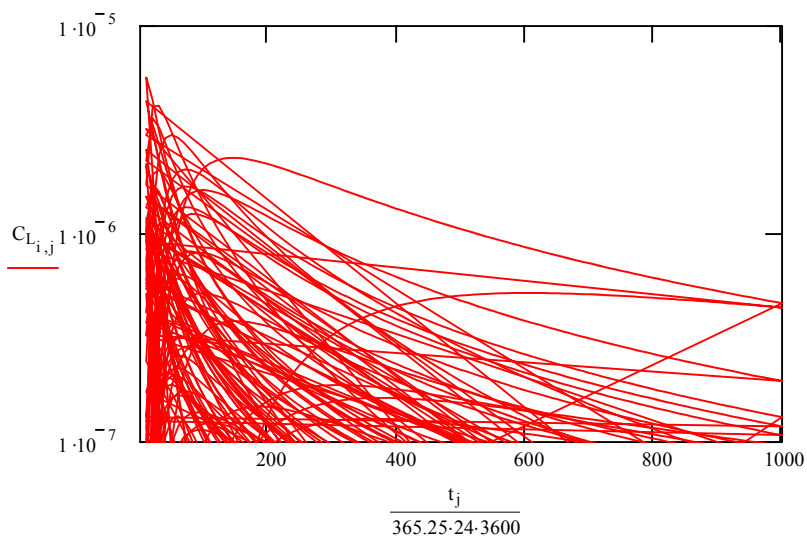
$$\max\left(C_T\right) = 1.732\times 10^{-6}\,\mathrm{kg\,m^{-3}}$$

$$\max\left(C_{Tt}\right) = 1.987\times 10^{-6}\,\mathrm{kg\,m^{-3}}$$

$$\max\left(C_{Tc}\right) = 3.323\times 10^{-7}\,\mathrm{kg\,m^{-3}}$$



$$C_{L_{i,j}} := \frac{C_{T_{i,j}}}{R_{L_i}}$$



$$\max(C_L) = 5.639 \times 10^{-6}\,\mathrm{kg\,m^{-3}}$$

$$\mathrm{median}(C_L) = 2.868 \times 10^{-8}\,\mathrm{kg\,m^{-3}}$$

$$C_{L\_\mu g\_L_{i,j}} := C_{L_{i,j}} \cdot 10^6$$

$$\max(C_{L\_\mu g\_L}) = 5.639\,\mathrm{kg\,m^{-3}}$$

This is the concentration in ppb

$$t_j := \frac{j}{ntimes} \cdot 10 \cdot 3600 \cdot 24 \cdot 365.25 \cdot s$$

0.134	0.504
4.349	3.161
$2.243 \cdot 10^{-3}$	0.176

$C_{L\_\mu g\_L}$

Calculate surface flux as a function of time

Parameters for source plus clean overburden:

$$J1_{i,j} := \mathrm{erfc}\left(\frac{V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right) \qquad J2_{i,j} := \mathrm{erfc}\left(\frac{L_i + L_{c_i} + V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right)$$

$$J3_{i,j} := \mathrm{if}\left[\frac{H_{E_i} \cdot \left(H_{E_i} + V_{E_i}\right) \cdot t_j}{D_{E_i}} > 700, 700, \frac{H_{E_i} \cdot \left(H_{E_i} + V_{E_i}\right) \cdot t_j}{D_{E_i}}\right]$$

$$J4_i := \mathrm{if}\left[\frac{H_{E_i} \cdot \left(L_i + L_{c_i}\right)}{D_{E_i}} > 700, 700, \frac{H_{E_i} \cdot \left(L_i + L_{c_i}\right)}{D_{E_i}}\right]$$

$$J5_{i,j} := \mathrm{erfc}\left[\frac{\left(L_i + L_{c_i}\right) + \left(2 \cdot H_{E_i} + V_{E_i}\right) \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right] \qquad J6_{i,j} := \mathrm{erfc}\left[\frac{\left(2 \cdot H_{E_i} + V_{E_i}\right) \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right]$$

Parameters for clean overburden only:

$$J2c_{i,j} := \mathrm{erfc}\left(\frac{L_{c_i} + V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right)$$

$$J4c_i := \mathrm{if}\left[\frac{H_{E_i} \cdot \left(L_{c_i}\right)}{D_{E_i}} > 700, 700, \frac{H_{E_i} \cdot \left(L_{c_i}\right)}{D_{E_i}}\right]$$

$$J5c_{i,j} := \mathrm{erfc}\left[\frac{\left(L_{c_i}\right) + \left(2 \cdot H_{E_i} + V_{E_i}\right) \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right]$$

Surface flux with both source and clean overburden:

$$Jst_{i,j} := 0.5 \cdot C_{o_i} \cdot \exp(-\mu_i \cdot t_j) \cdot \left[V_{E_i} \cdot (J1_{i,j} - J2_{i,j}) + (2 \cdot H_{E_i} + V_{E_i}) \cdot \exp(J3_{i,j}) \cdot (\exp(J4_i) \cdot J5_{i,j} - J6_{i,j}) \right]$$

Surface flux with just clean overburden:

$$Jsc_{i,j} := 0.5 \cdot C_{o_i} \cdot \exp(-\mu_i \cdot t_j) \cdot \left[V_{E_i} \cdot (J1_{i,j} - J2c_{i,j}) + (2 \cdot H_{E_i} + V_{E_i}) \cdot \exp(J3_{i,j}) \cdot (\exp(J4c_i) \cdot J5c_{i,j} - J6_{i,j}) \right]$$

Combined concentration using superposition (Jury et al., 1990, WRR, 26(1), 13-20).

$$Js_{i,j} := Jst_{i,j} - Jsc_{i,j}$$

This is the downward total flux at the surface. The volatilization flux is equal to the negative of this value.

$$Js_{i,j} := \text{if}(Js_{i,j} > 0, 0, -Js_{i,j})$$

$$\text{mean}(Jst) = -5.018 \times 10^{-13}\ \text{kg m}^{-2}\ \text{s}^{-1}$$

$$\text{mean}(Jsc) = -1.951 \times 10^{-13}\ \text{kg m}^{-2}\ \text{s}^{-1}$$

$$Js\_ng\_m2\_min_{i,j} := Js_{i,j} \cdot 10^{12} \cdot 60$$

Surface flux in ng/m^2/min

$$\max(Js) = 3.694 \times 10^{-10}\ \text{kg m}^{-2}\ \text{s}^{-1}$$

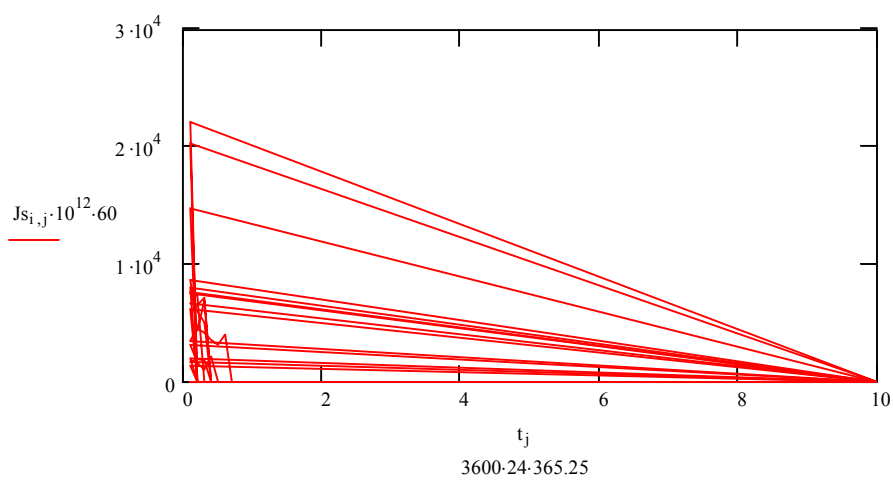
$$\min(Js) = 0\ \text{kg m}^{-2}\ \text{s}^{-1}$$

$$\max(Js\_ng\_m2\_min) = 2.216 \times 10^{4}\ \text{kg m}^{-2}\ \text{s}^{-1}$$

0	0
0	0
0	0

Js_ng_m2_min

This is the surface volatilization flux to the atmosphere



Calculate atmospheric concentration and dose to an individual inhaling the air directly above the waste site.

Average wind speed (m/s): $v_{wind} := 3.63 \cdot m \cdot s^{-1}$

(from average of SNL Site Environmental Monitoring Reports 1990-1996)

Vertical atmospheric mixing length (m): $L_v := 2 \cdot m$

(conservative value to encompass volume most likely occupied by the average human, Yu, C. et al., 1993, Data Collection Handbook to Support Modeling the Impacts of Radioactive Material in Soil, ANL/EAIS-8, Argonne National Laboratory, Argonne, Illinois.)

$length = 131.064\,m$ $\quad$ $width = 91.44\,m$

Lateral atmospheric mixing distance (m): $L_h := if(length < width, length, width)$

(the lateral atmospheric mixing distance is conservatively estimated as the minimum of either the length or width of the waste zone)

$L_h = 91.44\,m$

Flow rate of air in mixing volume: $Q_{wind} := v_{wind} \cdot L_v \cdot L_h$

PCE concentration in atmosphere (kg/m^3): $C_{atm_{i,j}} := \frac{Js_{i,j} \cdot length \cdot width}{Q_{wind}}$

$\max(C_{atm}) = 6.669 \times 10^{-9}\,kg\,m^{-3}$

Inhalation rate: $I := \frac{20}{24 \cdot 3600} \cdot m^3 \cdot s^{-1}$ $\quad$ $I = 2.315 \times 10^{-4}\,m^3\,s^{-1}$

(20 m^3/day from U.S. EPA 1991, U.S. Environmental Protection Agency. Human health evaluation manual, supplemental guidance: "Standard default exposure factors". OSWER Directive 9285.6-03.

Receptor Intake: $Intake_{i,j} := C_{atm_{i,j}} \cdot I$ This is the receptor intake in kg/s

0	0
0	0
$5.119 \cdot 10^{-10}$	$5.837 \cdot 10^{-10}$

C_{atm}

This worksheet calculates the steady-state advection, diffusion and decay of radon-222 in the vadose zone. Radon-222 is transported by diffusion in both the aqueous and vapor phases and by advection (Darcy infiltration) in the aqueous phase. Local thermodynamic equilibrium is assumed so that the partitioning of radon between the aqueous and gas phases can be expressed using a constant partitioning coefficient. Radon-222 undergoes radioactive decay with a half-life of 3.82 days. This solution is derived from first principles.

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This worksheet solves the radon transport in a three-region vadose zone: (1) a clean overburden region, (2) a source region with radon-222 generation from radium-226, and (3) a clean region beneath the source region.

Radon-222 inhalation dose factor (rem/pCi): $DCF_{222} := 1.44 \cdot 10^{-8}$

from FRAMES (Federal Guidance Report #11, EPA/520/1-88-020, Eckerman, 1988)

Input parameters:

Define number of realizations: $n := 100$

$i := 1 .. n$

Total porosity: $\phi := \text{runif}(n, .302, .445)$

Moisture Content: $\theta_w := \text{runif}(n, .053, .225)$

Gas Content: $\theta_{g_i} := \phi_i - \theta_{w_i}$

Water/gas partition coefficient (20C): $k := 0.26$ From Rogers et al. (1984)

This is equal to Cw/Cg

Radon-222 Half-life (3.82 days): $t_{half} := 3.82 \cdot 24 \cdot 3600 \cdot s$

Radium-226 Inventory (Ci): $Ci\_226 := 6$

Specific Activity of radium-226 (Ci/g): $SA_{226} := 0.99$

Specific Activity of radon-222 (Ci/g): $SA_{222} := 1.54 \cdot 10^5$

Waste zone length: $length := runif(n, 10 \cdot .3048, 430 \cdot .3048) \cdot m$

Waste zone width: $width := runif(n, 10 \cdot .3048, 300 \cdot .3048) \cdot m$

Waste zone thickness: $L_s := runif(n, 10 \cdot .3048, 27 \cdot .3048) \cdot m$

L = 22 ft

from maps of MWL

Thickness of clean overburden: $L_1 := runif(n, 0 \cdot .3048, 16 \cdot .3048) \cdot m$

Distance to bottom of waste zone: $L_2 := L_1 + L_s$

Distance from bottom of waste zone to aquifer: $L_3 := runif(n, 133, 143) \cdot m$

Darcy Infiltration:

q = 10^(-11) m/s $q := runif\left(n, 1.18 \cdot 10^{-11}, 6.12 \cdot 10^{-11}\right) \cdot \frac{m}{s}$

$$\lambda_{226} := \frac{\ln(2)}{1600 \cdot 365.25 \cdot 24 \cdot 3600} \cdot s^{-1}$$

$$\lambda_{226} = 1.373 \times 10^{-11} s^{-1}$$

Calculated Parameters

Volume of waste zone: $V_i := length_i \cdot width_i \cdot L_{s_i}$

Decay constant: $\lambda_{222} := \frac{\ln(2)}{t_{half}}$ $\lambda_{222} = 2.1 \times 10^{-6} s^{-1}$

Emanation factor for sealed source: $logE := runif(n, -6, 0)$

This accounts for the containment of the radium-226. Ranges from 1E-12 (calibrated to ~1 pCi/m^2/s) to 1 (no containment)

$E_i := 10^{logE_i}$

In the previous version I used the decay constant for radon-222, but I should have used the decay constant for radium-226, as shown in the Qi term below.

Radon volumetric generation: $Q_i := \frac{E_i \cdot Ci\_226}{SA_{226} \cdot 1000} \cdot \frac{\lambda_{226}}{V_i} \cdot kg$

Liquid saturation, S: $S_i := \frac{\theta_{w_i}}{\phi_i}$

Effective diffusion coefficient: $D_{eff_i} := \frac{0.07}{10^4} \cdot e^{-4 \cdot \left[S_i - S_i \cdot (\phi_i)^2 + (S_i)^5 \right]} \cdot \frac{m^2}{s}$

(for both liquid and gas phases, Rogers et al., 1984, NUREG/CR-3533)

Solution:

$$r_{1_i} := \frac{k \cdot q_i + \sqrt{(k \cdot q_i)^2 + 4 \cdot D_{eff_i} \cdot \lambda_{222} \cdot \left(\theta_{g_i} + k \cdot \theta_{w_i}\right)}}{2 \cdot D_{eff_i}}$$

$$r_{2_i} := \frac{k \cdot q_i - \sqrt{(k \cdot q_i)^2 + 4 \cdot D_{eff_i} \cdot \lambda_{222} \cdot \left(\theta_{g_i} + k \cdot \theta_{w_i}\right)}}{2 \cdot D_{eff_i}}$$

$$Q_{source_i} := \frac{Q_i}{\lambda_{222} \cdot \left(\theta_{g_i} + k \cdot \theta_{w_i}\right)}$$

$$c_{3_i} := \frac{r_{2_i} \cdot Q_{source_i}}{e^{r_{1_i} \cdot L_{2_i}} \cdot \left(r_{1_i} - r_{2_i}\right)} \qquad c_{2_i} := \frac{c_{3_i} \cdot e^{r_{1_i} \cdot L_{1_i}} \cdot \left(r_{1_i} - r_{2_i}\right) - r_{2_i} \cdot Q_{source_i}}{e^{r_{1_i} \cdot L_{1_i}} \cdot \left(r_{2_i} - r_{1_i}\right)}$$

$$c_{4_i} := \frac{c_{2_i} \cdot \left(e^{r_{2_i} \cdot L_{1_i}} - e^{r_{1_i} \cdot L_{1_i}}\right) - c_{3_i} \cdot e^{r_{1_i} \cdot L_{1_i}} - Q_{source_i}}{e^{r_{2_i} \cdot L_{1_i}}}$$

$$c_{6_i} := \frac{c_{3_i} \cdot e^{r_{1_i} \cdot L_{2_i}} + c_{4_i} \cdot e^{r_{2_i} \cdot L_{2_i}} + Q_{source_i}}{e^{r_{2_i} \cdot L_{2_i}}}$$

Combined Gas Concentration:

$ntot := 100$

$j := 1 .. ntot$

$x_j := \frac{j}{ntot} \cdot L3_i$

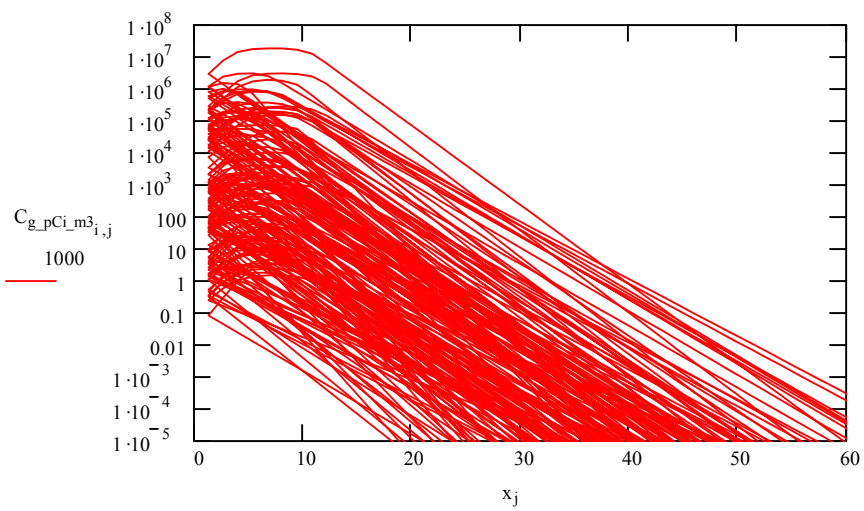
x_j denotes the spatial position, whereas "i" denotes the realization number.

$$C_{g_{i,j}} := if\left[x_j < L1_i, c2_i \cdot \left(e^{r2_i \cdot x_j} - e^{r1_i \cdot x_j}\right), if\left(x_j < L2_i, c3_i \cdot e^{r1_i \cdot x_j} + c4_i \cdot e^{r2_i \cdot x_j} + Q_{source_i}, c6_i \cdot e^{r2_i \cdot x_j}\right)\right]$$

Gas concentration in pCi/m^3

$$C_{g\_pCi\_m3_{i,j}} := C_{g_{i,j}} \cdot 1000 \cdot SA_{222} \cdot 10^{12}$$

Below is a plot of the surface gas concentration in pCi/L as a function of depth for 100 realizations



1.351
2.701
4.052
5.403

x

358.725	927.806	$2.036 \cdot 10^3$
$1.835 \cdot 10^8$	$4.972 \cdot 10^8$	$1.161 \cdot 10^9$
$2.139 \cdot 10^6$	$5.712 \cdot 10^6$	$1.312 \cdot 10^7$
$4.475 \cdot 10^4$	$7.776 \cdot 10^4$	$8.443 \cdot 10^4$

$C_{g\_pCi\_m3}$

Surface Gas Flux of Radon-222 (pCi/m²/s):

$$q_{s_i} := D_{eff_i} \cdot c_{2_i} \cdot \left(r_{2_i} - r_{1_i}\right) \cdot 1000 \cdot SA_{222} \cdot 10^{12}$$

Water Flux (pCi/s):

$$q_{w_i} := q_i \cdot length_i \cdot width_i \cdot k \cdot c_{6_i} \cdot e^{r_{2_i} \cdot L_{3_i}} \cdot 1000 \cdot SA_{222} \cdot 10^{12}$$

Aquifer Concentration (pCi/L):

$$C_{w_i} := \frac{q_{w_i}}{q_i \cdot length_i \cdot width_i \cdot 1000}$$

Output:

q_s
$3.44 \cdot 10^{-4}$
150.686
2.289
0.051
28.888

C_w
0
0
0
0
0

Input:

ϕ
0.302
0.33
0.386
0.352

θ_w
0.128
0.152
0.161
0.14

L_1
3.969
3.971
4.379
1.314

L_s
3.765
5.9
5.449
4.606
4.823

E
$2.803 \cdot 10^{-6}$
0.308
0.034
$4.077 \cdot 10^{-6}$
0.012

137.123
139.011
137.758
142.513
141.349

L_3

$1.419 \cdot 10^{-6}$
$1.238 \cdot 10^{-6}$
$1.604 \cdot 10^{-6}$
$1.675 \cdot 10^{-6}$

D_{eff}

$4.167 \cdot 10^{-11}$
$2.965 \cdot 10^{-11}$
$6.002 \cdot 10^{-11}$

q

$1.832 \cdot 10^{4}$
$3.775 \cdot 10^{3}$
$2.331 \cdot 10^{4}$

V

length =

	1
1	72.486
2	9.936
3	70.214
4	15.168

m

width =

	1
1	67.125
2	64.394
3	60.935

m

This worksheet calculates the transient advection, dispersion, and decay of tritium in the vadose zone. Tritiated water is transported in both the aqueous and vapor phases. Local thermodynamic equilibrium is assumed so that the partitioning of tritium between the aqueous and gas phases can be expressed using Henry's Law. Tritium undergoes radioactive decay with a half-life of 12.3 years. This solution is derived in Jury et al., 1983, J. Env. Qual., 12, 558-564 and in Jury et al., 1990, WRR, 26(1), 13-20.

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8/8/05, 9/16/05

Input parameters and distributions:

Define number of realizations: $n := 100$

$i := 1..n$

Total porosity: $\phi := \mathrm{runif}(n, .302, .445)$ $\quad \mathrm{median}(\phi) = 0.378$

Moisture Content: $\theta_w := \mathrm{runif}(n, .053, .225)$

Gas Content: $a := \phi - \theta_w$ $\quad \max(a) = 0.38$

Henry's Constant: $K_H := 17 \cdot 10^{-6}$

Adsorption partition coefficient: $K_d := 0 \cdot \frac{m^3}{kg}$

Liquid-Phase Diffusion Coefficient: $D_w := 2.26 \cdot 10^{-9} \cdot \frac{m^2}{s}$ See Smiles et al. 1995

Gas-Phase Diffusion Coefficient: $D_g := 2.57 \cdot 10^{-5} \cdot \frac{m^2}{s}$

Half-life: $t_{half} := 12.3 \cdot 365.25 \cdot 24 \cdot 3600 \cdot s$

Bulk density: $\rho_b := \mathrm{runif}(n, 1.47, 1.85) \cdot kg \cdot m^{-3}$ $\quad \mathrm{median}(\rho_b) = 1.621\, kg\, m^{-3}$

Inventory (Ci/Specific Activity/1000 g/kg): $Ci := \mathrm{runif}(n, 2400, 4800)$

Estimated initial inventory = 2400 Ci $\quad \mathrm{mean}(Ci) = 3.556 \times 10^3$

Specific Activity (Ci/g): $SA := 9700$

Waste zone length: $length := runif(n, 10 \cdot .3048, 430 \cdot .3048) \cdot m$ $mean(length) = 73.205\,m$

Waste zone width: $width := runif(n, 10 \cdot .3048, 300 \cdot .3048) \cdot m$ $mean(width) = 48.092\,m$

Minimum length and width is determined by size of pit 33 (10'x10')

Maximum length and width is determined by extent of MWL.

Waste zone thickness:
L = 22 ft $L := runif(n, 10 \cdot .3048, 27 \cdot .3048) \cdot m$ $mean(L) = 5.697\,m$

Distance to water table: $d_{wt} := runif(n, 461 \cdot .3048, 495 \cdot .3048) \cdot m$

Thickness of clean overburden: $L_c := runif(n, 0 \cdot .3048, 16 \cdot .3048) \cdot m$

6 to 16 feet nominal; 0 minimum is due to erosion

Darcy Infiltration: $q := runif\left(n, 1.18 \cdot 10^{-11}, 6.12 \cdot 10^{-11}\right) \cdot \frac{m}{s}$

Surface boundary-layer thickness: $d_{BL} := runif(n, 0.001, 1) \cdot m$

Tortuosity Factor: $\varepsilon_w := runif(n, 0.001, 1)$

(lower bound from Millington 1959; upper bound is physical limit) $\varepsilon_g := runif(n, 0.1, 1)$

Tritiated water inhalation dose conversion factor (rem/pCi): $DCF_{tritium} := 6.4 \cdot 10^{-11}$

US Environmental Protection Agency. 1988. Federal guidance report no. 11: limiting values of radionuclide intake and air concentration and dose conversion factors for inhalation, submersion, and ingestion, Eckerman, K.F., A.B. Wolbarst, and A.C.B. Richardson, Washington, DC: US Environmental Protection Agency. Report No.: EPA-5201/1-88-020.

Input Parameter Distributions for sensitivity analyses:

$A_i := length_i \cdot width_i$

$A =$

	1
1	$1.557 \cdot 10^3$
2	$5.514 \cdot 10^3$
3	$5.14 \cdot 10^3$

m^2

$\theta_w =$

	1
1	0.128
2	0.152
3	0.161
4	0.14

$Ci =$

	1
1	$4.14 \cdot 10^3$
2	$4.066 \cdot 10^3$
3	$3.972 \cdot 10^3$

$\varepsilon_w =$

	1
1	0.773
2	0.321
3	0.146

$\varepsilon_g =$

	1
1	0.637
2	0.885
3	0.313
4	0.311

$L_c =$

	1
1	0.364
2	4.461
3	3.684

m

$d_{wt} =$

	1
1	146.778
2	144.257
3	150.627

m

$q =$

	1
1	$1.915 \cdot 10^{-11}$
2	$1.731 \cdot 10^{-11}$

$m\,s^{-1}$

$\phi =$

	1
1	0.302
2	0.33
3	0.386

$d_{BL} =$

	1
1	0.05
2	0.118
3	0.74
4	$5.411 \cdot 10^{-3}$
5	0.956

m

$L =$

	1
1	5.184
2	6.162
3	5.513
4	7.977

m

Calculated Parameters

Initial mass in kilograms: $M_{o_i} := \frac{Ci_i}{SA \cdot 1000} \cdot kg$

Volume of waste zone: $V_i := length_i \cdot width_i \cdot L_i$

Source Concentration (Total): $C_{o_i} := \frac{M_{o_i}}{V_i}$

Retardation factor: $R_{L_i} := \rho_{b_i} \cdot K_d + \theta_{w_i} + a_i \cdot K_H$

Effective Diffusion Coefficient: $D_{E_i} := \frac{\left(\varepsilon_{w_i} \cdot D_w + \varepsilon_{g_i} \cdot K_H \cdot D_g\right)}{R_{L_i}}$

Effective Velocity: $V_{E_i} := \frac{q_i}{R_{L_i}}$

Decay constant: $\mu := \frac{\ln(2)}{t_{half}}$ $\mu = 1.786 \times 10^{-9}\, s^{-1}$

Surface mass-transfer coefficient: $H_{E_i} := \frac{D_g}{d_{BL_i}} \cdot \frac{K_H}{R_{L_i}}$

The d_{wt} parameter can be assigned a constant value ($d_{wt,i}$) to simulate concentrations at different depths.

Note: $R_L/K_H = R_G$

$d_{wt} =$

	1
1	146.778
2	144.257
3	150.627
4	149.796
5	150.394
6	142.603

m

Concentration at water table as a function of time:

$ntimes := 100$ $nyears := 1000$

$j := 1 .. ntimes$ $\qquad$ $nsec := nyears \cdot 365.25 \cdot 24 \cdot 3600$

Time: $\qquad t_j := \frac{j}{ntimes} \cdot nsec \cdot s$ $\qquad$ $erfc(x) := 1 - erf(x)$

Parameters for system with clean overburden plus source thickness

$$exp1_{i,j} := if\left[\frac{\left[H_{E_i} \cdot \left(H_{E_i} + V_{E_i}\right) \cdot t_j + \left(H_{E_i} + V_{E_i}\right) \cdot d_{wt_i}\right]}{D_{E_i}} > 700, 700, \frac{\left[H_{E_i} \cdot \left(H_{E_i} + V_{E_i}\right) \cdot t_j + \left(H_{E_i} + V_{E_i}\right) \cdot d_{wt_i}\right]}{D_{E_i}}\right]$$

$$exp2_i := if\left[\frac{H_{E_i} \cdot \left(L_i + L_{c_i}\right)}{D_{E_i}} > 700, 700, \frac{H_{E_i} \cdot \left(L_i + L_{c_i}\right)}{D_{E_i}}\right] \qquad exp3_i := if\left(\frac{V_{E_i} \cdot d_{wt_i}}{D_{E_i}} > 700, 700, \frac{V_{E_i} \cdot d_{wt_i}}{D_{E_i}}\right)$$

$$A1_{i,j} := erfc\left[\frac{d_{wt_i} - \left(L_i + L_{c_i}\right) - V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right] \qquad A2_{i,j} := erfc\left(\frac{d_{wt_i} - V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right)$$

$$A3_{i,j} := erfc\left[\frac{d_{wt_i} + \left(L_i + L_{c_i}\right) + V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right] \qquad A4_{i,j} := erfc\left(\frac{d_{wt_i} + V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right) \qquad A5_{i,j} := exp\left(exp1_{i,j}\right)$$

$$A6_{i,j} := erfc\left[\frac{d_{wt_i} + \left(2 \cdot H_{E_i} + V_{E_i}\right) \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right] \qquad A7_{i,j} := erfc\left[\frac{d_{wt_i} + \left(L_i + L_{c_i}\right) + \left(2 \cdot H_{E_i} + V_{E_i}\right) \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right]$$

Parameters for clean overburden alone:

$$exp2c_i := if\left(\frac{H_{E_i} \cdot L_{c_i}}{D_{E_i}} > 700, 700, \frac{H_{E_i} \cdot L_{c_i}}{D_{E_i}}\right)$$

$$A1c_{i,j} := erfc\left(\frac{d_{wt_i} - L_{c_i} - V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right) \qquad A3c_{i,j} := erfc\left(\frac{d_{wt_i} + L_{c_i} + V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right)$$

$$A7c_{i,j} := erfc\left[\frac{d_{wt_i} + L_{c_i} + \left(2 \cdot H_{E_i} + V_{E_i}\right) \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right]$$

Concentration with just clean overburden:

$$C_{Tc_{i,j}} := 0.5 \cdot C_{o_i} \cdot \exp(-\mu \cdot t_j) \cdot \left[A1c_{i,j} - A2_{i,j} + \left(1 + \frac{V_{E_i}}{H_{E_i}}\right) \cdot \exp(\exp3_i) \cdot (A3c_{i,j} - A4_{i,j}) \ldots + \left(2 + \frac{V_{E_i}}{H_{E_i}}\right) \cdot A5_{i,j} \cdot (A6_{i,j} - \exp(\exp2c_i) \cdot A7c_{i,j}) \right]$$

Concentration with clean overburden plus source thickness:

$$C_{Tt_{i,j}} := 0.5 \cdot C_{o_i} \cdot \exp(-\mu \cdot t_j) \cdot \left[A1_{i,j} - A2_{i,j} + \left(1 + \frac{V_{E_i}}{H_{E_i}}\right) \cdot \exp(\exp3_i) \cdot (A3_{i,j} - A4_{i,j}) \ldots + \left(2 + \frac{V_{E_i}}{H_{E_i}}\right) \cdot A5_{i,j} \cdot (A6_{i,j} - \exp(\exp2_i) \cdot A7_{i,j}) \right]$$

Combined concentration using superposition (Jury et al., 1990, WRR, 26(1), 13-20).

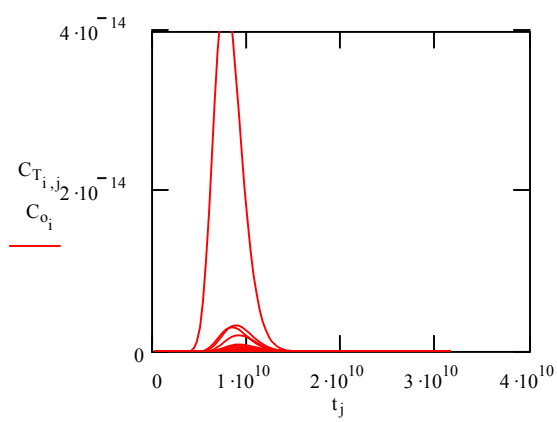
$$C_{T_{i,j}} := C_{Tt_{i,j}} - C_{Tc_{i,j}}$$

$$C_{T_{i,j}} := \text{if}\left(C_{T_{i,j}} < 0, 0, C_{T_{i,j}}\right)$$

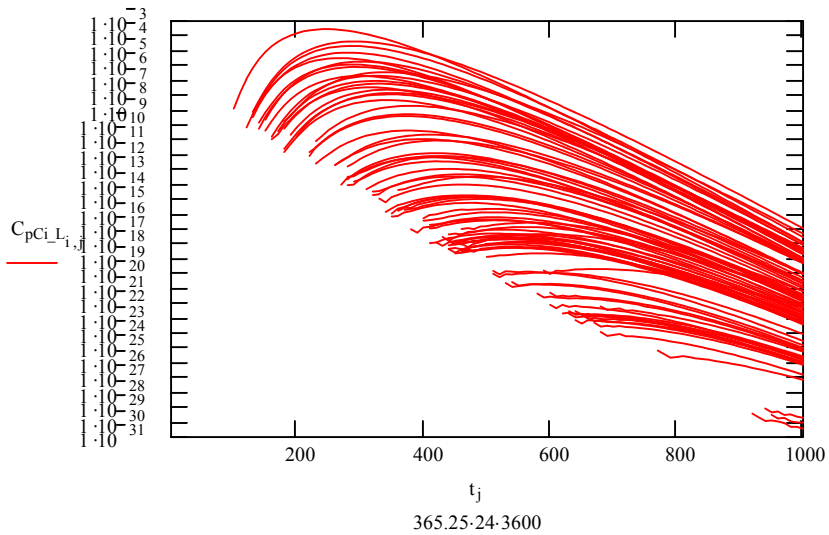
$$\max(C_T) = 1.582 \times 10^{-21}\ \text{kg m}^{-3}$$

$$\max(C_{Tt}) = 2.045 \times 10^{-21}\ \text{kg m}^{-3}$$

$$\max(C_{Tc}) = 4.624 \times 10^{-22}\ \text{kg m}^{-3}$$



$$C_{L_{i,j}} := \frac{C_{T_{i,j}}}{R_{L_i}} \qquad C_{pCi\_L_{i,j}} := C_{L_{i,j}} \cdot \frac{1000 \cdot SA \cdot 10^{12}}{1000}$$



$$\max(C_{pCi\_L}) = 2.764 \times 10^{-4}\,kg\,m^{-3}$$

$$\text{median}(C_{pCi\_L}) = 8.605 \times 10^{-25}\,kg\,m^{-3}$$

$$\text{mean}(C_{pCi\_L}) = 4.202 \times 10^{-7}\,kg\,m^{-3}$$

$C_{pCi\_L} =$

	1	2	3	4	5
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0

$kg\,m^{-3}$

Calculate surface flux as a function of time

Parameters for source plus clean overburden:

$$J1_{i,j} := \mathrm{erfc}\left(\frac{V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right) \qquad J2_{i,j} := \mathrm{erfc}\left(\frac{L_i + L_{c_i} + V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right)$$

$$J3_{i,j} := \mathrm{if}\left[\frac{H_{E_i} \cdot \left(H_{E_i} + V_{E_i}\right) \cdot t_j}{D_{E_i}} > 700, 700, \frac{H_{E_i} \cdot \left(H_{E_i} + V_{E_i}\right) \cdot t_j}{D_{E_i}}\right]$$

$$J4_i := \mathrm{if}\left[\frac{H_{E_i} \cdot \left(L_i + L_{c_i}\right)}{D_{E_i}} > 700, 700, \frac{H_{E_i} \cdot \left(L_i + L_{c_i}\right)}{D_{E_i}}\right]$$

$$J5_{i,j} := \mathrm{erfc}\left[\frac{\left(L_i + L_{c_i}\right) + \left(2 \cdot H_{E_i} + V_{E_i}\right) \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right] \qquad J6_{i,j} := \mathrm{erfc}\left[\frac{\left(2 \cdot H_{E_i} + V_{E_i}\right) \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right]$$

Parameters for clean overburden only:

$$J2c_{i,j} := \mathrm{erfc}\left(\frac{L_{c_i} + V_{E_i} \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right)$$

$$J4c_i := \mathrm{if}\left[\frac{H_{E_i} \cdot \left(L_{c_i}\right)}{D_{E_i}} > 700, 700, \frac{H_{E_i} \cdot \left(L_{c_i}\right)}{D_{E_i}}\right]$$

$$J5c_{i,j} := \mathrm{erfc}\left[\frac{\left(L_{c_i}\right) + \left(2 \cdot H_{E_i} + V_{E_i}\right) \cdot t_j}{\sqrt{4 \cdot D_{E_i} \cdot t_j}}\right]$$

Surface flux with both source and clean overburden:

$$Jst_{i,j} := 0.5 \cdot C_{o_i} \cdot \exp(-\mu \cdot t_j) \cdot \left[V_{E_i} \cdot (J1_{i,j} - J2_{i,j}) + (2 \cdot H_{E_i} + V_{E_i}) \cdot \exp(J3_{i,j}) \cdot (\exp(J4_i) \cdot J5_{i,j} - J6_{i,j}) \right]$$

Surface flux with just clean overburden:

$$Jsc_{i,j} := 0.5 \cdot C_{o_i} \cdot \exp(-\mu \cdot t_j) \cdot \left[V_{E_i} \cdot (J1_{i,j} - J2c_{i,j}) + (2 \cdot H_{E_i} + V_{E_i}) \cdot \exp(J3_{i,j}) \cdot (\exp(J4c_i) \cdot J5c_{i,j} - J6_{i,j}) \right]$$

Combined concentration using superposition (Jury et al., 1990, WRR, 26(1), 13-20).

$$Js_{i,j} := Jst_{i,j} - Jsc_{i,j}$$

This is the downward total flux at the surface. The volatilization flux is equal to the negative of this value.

$$\min(Jst) = -1.106 \times 10^{-15}\,\mathrm{kg\,m^{-2}\,s^{-1}}$$

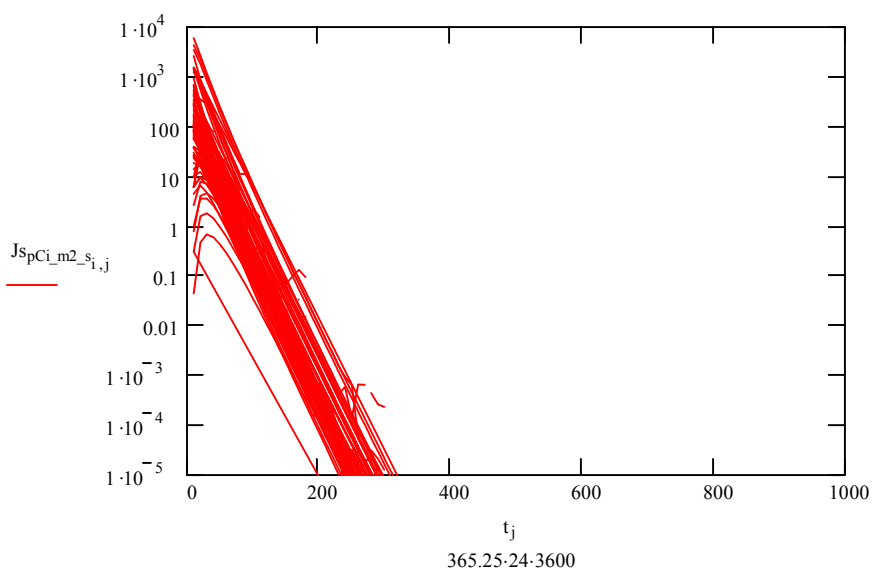
$$\mathrm{mean}(Jst) = -1.377 \times 10^{-18}\,\mathrm{kg\,m^{-2}\,s^{-1}}$$

$$\min(Jsc) = -6.688 \times 10^{-16}\,\mathrm{kg\,m^{-2}\,s^{-1}}$$

$$\mathrm{mean}(Jsc) = -6.954 \times 10^{-19}\,\mathrm{kg\,m^{-2}\,s^{-1}}$$

$$Js_{pCi\_m2\_s_{i,j}} := \mathrm{if}\left[Js_{i,j} > 0, 0, -\left(Js_{i,j} \cdot 1000 \cdot SA \cdot 10^{12}\right) \right]$$

This is the surface volatilization flux to the atmosphere in pCi/m^2/s.



$\max(Js_{pCi\_m2\_s}) = 5.872 \times 10^{3}\ kg\,m^{-2}\,s^{-1}$

$\mathrm{mean}(Js_{pCi\_m2\_s}) = 6.679\ kg\,m^{-2}\,s^{-1}$

$Js_{pCi\_m2\_s} =$

	1	2
1	0	0
2	0	0
3	0.984	3.566
4	0	0

$kg\,m^{-2}\,s^{-1}$

Calculate atmospheric concentration and dose to an individual inhaling the air directly above the waste site.

Average wind speed (m/s): $v_{wind} := 3.63 \cdot m \cdot s^{-1}$

(from average of SNL Site Environmental Monitoring Reports 1990-1996)

Vertical atmospheric mixing length (m): $L_v := 2 \cdot m$

(conservative value to encompass volume most likely occupied by the average human, Yu, C. et al., 1993, Data Collection Handbook to Support Modeling the Impacts of Radioactive Material in Soil, ANL/EAIS-8, Argonne National Laboratory, Argonne, Illinois.)

$length =$

	1
1	20.771
2	73.51
3	62.373

m

$width =$

	1
1	74.983
2	75.016

m

Lateral atmospheric mixing distance (m): $L_{h_i} := \mathrm{if}(length_i < width_i, length_i, width_i)$

(the lateral atmospheric mixing distance is conservatively estimated as the minimum of either the length or width of the waste zone)

Flow rate of air in mixing volume: $Q_{wind_i} := v_{wind} \cdot L_v \cdot L_{h_i}$

Tritium concentration in atmosphere (pCi/m^3):

$$C_{atm\_pCi\_m3_{i,j}} := \frac{Js_{pCi\_m2\_s_{i,j}} \cdot length_i \cdot width_i}{Q_{wind_i}}$$

$C_{atm\_pCi\_m3} =$

	1
1	0
2	0
3	11.168

$kg\,m^{-3}$

Inhalation rate:

$$I := \frac{20}{24 \cdot 3600} \cdot m^3 \cdot s^{-1} \qquad I = 2.315 \times 10^{-4}\, m^3\, s^{-1}$$

(20 m^3/day from U.S. EPA 1991, U.S. Environmental Protection Agency. Human health evaluation manual, supplemental guidance: "Standard default exposure factors". OSWER Directive 9285.6-03.

Receptor Intake:

$$Intake_{i,j} := C_{atm\_pCi\_m3_{i,j}} \cdot I$$

This is the receptor intake in pCi/s

Dose (mrem/year):

$$Dose_{mrem\_yr_{i,j}} := Intake_{i,j} \cdot DCF_{tritium} \cdot 1.5 \cdot 1000 \cdot 3600 \cdot 24 \cdot 365.25$$

(The dose conversion factor, DCF, is in units of rem/pCi; the 1.5 factor is used to account for dermal absorption)

$Dose_{mrem\_yr} =$

	1	2
1	0	0
2	0	0
3	$7.832 \cdot 10^{-3}$	0.028
4	0	0

$kg\,s^{-1}$

$$\max(Dose_{mrem\_yr}) = 18.02\, kg\, s^{-1}$$

$$mean(Dose_{mrem\_yr}) = 0.031\, kg\, s^{-1}$$

$L =$

	1
1	5.184
2	6.162
3	5.513
4	7.977
5	7.374
6	7.202
7	7.556

m

$d_{wt} =$

	1
1	146.778
2	144.257
3	150.627
4	149.796

m

Drinking Water and Health Basics
Frequently Asked Questions
Local Drinking Water Information
Drinking Water Standards
List of Contaminants & MCLs
Regulations & Guidance
Public Drinking Water Systems
Source Water Protection
Underground Injection Control
Data & Databases
Drinking Water Academy
Safe Drinking Water Act
National Drinking Water Advisory Council
Water Infrastructure Security

Technical Factsheet on: TETRACHLOROETHYLENE

List of Contaminants

As part of the Drinking Water and Health pages, this fact sheet is part of a larger publication:
National Primary Drinking Water Regulations

Drinking Water Standards

MCLG: zero mg/L
MCL: 0.005 mg/L
HAL(child): 1- to 10-day: 2 mg/L; Longer-term: 1 mg/L

Health Effects Summary

Acute: EPA has found tetrachloroethylene to potentially cause the following health effects from acute exposures at levels above the MCL: detrimental effects to liver, kidney, and central nervous system.

Drinking water levels which are considered "safe" for short-term exposures: For a 10-kg (22 lb.) child consuming 1 liter of water per day: a one- to ten-day exposure to 2 mg/L; upto a 7-year exposure to 1 mg/L.

Chronic: Tetrachloroethylene has the potential to cause the following health effects from long-term exposures at levels above the MCL: detrimental effects to liver, kidney, and central nervous system.

Cancer: There is some evidence that tetrachloroethylene may have the potential to cause cancer from a lifetime exposure at levels above the MCL.

Usage Patterns

Production of tetrachloroethylene has decreased: from 736 million lbs. in 1978 to 405 million lbs in 1986.

In 1989 it was estimated that industries consumed tetrachloroethylene as follows: Dry cleaning and textile processing, 50%; chemical intermediate (mostly fluorocarbon F-113), 28%; industrial metal cleaning, 9%; exports, 10%; other, 3%.

The greatest use of tetrachloroethylene is in the textile industry for processing, finishing, sizing, and as a component of aerosol dry-cleaning products.

Other uses include: an intermediate in the synthesis of fluorocarbons, an insulating/cooling fluid in electric transformers, in typewriter correction fluids, as veterinary medication against worms, once used as grain protectant/fumigant.

Release Patterns

Major releases of tetrachloroethylene are: via vaporization losses from dry cleaning and industrial metal cleaning; wastewater, particularly from metal finishing, laundries, aluminum forming, organic chemical/plastics manufacturing and municipal treatment plants. It is also

estimated that emissions account for approximately 90% of the tetrachloroethylene produced in the United States.

Water pollution can occur from tetrachloroethylene leaching from vinyl liners in asbestos-cement water pipelines for water distribution, and during chlorination water treatment, where it can be formed in small quantities.

From 1987 to 1993, according to EPA's Toxic Chemical Release Inventory, tetrachloroethylene releases to land and water totalled over 1 million lbs., of which about 75 percent was to land. These releases were primarily from alkali and chlorine industries which use tetrachloroethylene in making other chemicals. The largest releases occurred in Louisiana and South Carolina.

Environmental Fate

If PCE is released to soil, it will be subject to evaporation into the atmosphere and to leaching to the groundwater. Tetrachloroethylene was slightly adsorbed on sand and clay minerals. The Henry's adsorption coefficients were approximately in proportion to the organic content of the soil samples. Based on the reported and estimated Koc's (209 to 1685), tetrachloroethylene will be expected to exhibit low to medium mobility in soil and therefore may leach slowly to the groundwater.

There is evidence that slow biodegradation of PCE occurs under anaerobic conditions when the microorganisms have been acclimated. In experiments using continuous-flow laboratory methanogenic column with well acclimated mixed cultures and a 2-day detention time, there was an average PCE removal rate of 76%. Removal of 86% PCE occurred in a methanogenic biofilm column (8 weeks of activation followed by 9-12 weeks ofacclimation). In a microcosm containing muck from an aquifer recharge basin, 72.8% loss was observed in 21 days against 12-17% in controls. In one field ground water recharge project, degradation was observed in the 50 day recharge period.

If PCE is released to water, it will be subject to rapid volatilization with estimated half-lives ranging from <1 day to several weeks. Measured volatilization half-lives in a mesocosm simulating Narraganset Bay, RI were 11 days in winter, 25 days in spring, and 14 days in summer.

PCE will not be expected to significantly biodegrade in water or adsorb to sediment. PCE will not be expected to significantly hydrolyze in soil or water under normal environmental conditions (half-life 9 months at 25 deg C).

If PCE is released to the atmosphere, it will exist mainly in the gas-phase and it will be subject to photooxidation with estimates of degradation time scales ranging from an approximate half-life of 2 months to complete degradation in an hour. Some of the PCE in the atmosphere may be subject to washout in rain based on the solubility of PCE in water and the fact that PCE has been detected in rain.

Based on the reported and estimated BCF's, tetrachloroethylene will not be expected to significantly bioconcentrate in aquatic organisms. BCFs of 39 to 49 were measured in fish; a BCF of 226 was estimated from octanol water partition coefficient.

Major human exposure is from inhalation of contaminated urban air, especially near point sources such as dry cleaners, drinking contaminated water from contaminated aquifers and drinking water distributed in pipelines with vinyl liners, and inhalation of contaminated occupational atmospheres in metal degreasing and dry cleaning industries.

Chemical/Physical Properties

CAS Number: 127-18-4

Color/ Form/Odor: Colorless liquid with mildy sweet, chloroform-like odor; available in

many forms, from worm pills to dry-cleaning grades containing various stabilizers.

M.P.: -19 C B.P.: 121 C

Vapor Pressure: 18.47 mm Hg at 25 C

Octanol/Water Partition (Kow): Log Kow = 3.40

Density/Spec. Grav.: 1.62 at 20 C

Solubility: 0.15 g/L of water at 25 C; Slightly soluble in water

Soil sorption coefficient: Koc = 210 (exp.) to 238 (est.); low to moderate mobility in soil

Odor/Taste Thresholds: Taste threshold in water is 0.3 mg/L

Bioconcentration Factor: BCFs of 39 to 49 reported in fish; not expected to bioconcentrate in aquatic organisms.

Henry's Law Coefficient: N/A

Trade Names/Synonyms: Ethylene tetrachloride, Perchloroethylene, PCE, Ankilostin, Didakene, Fedal-un, Nema, Perclene, Persec, Tetlen, Tetracap, Tetraleno, Tetropil, Antisal 1, Dow-per, Perawin, Perchlor, Percosolv, Perk, Perklone, Tetraguer, Tetralex, Tetravec

Other Regulatory Information

Monitoring:

-- For Ground/Surface Water Sources:

Initial Frequency- 4 consecutive quarterly samples during initial compliance period (1993-1995)

Repeat Frequency- If no detects in initial samples GW systems must take annual samples during 1996-1998 compliance period and triennial samples thereafter; SW systems must take annual samples.

-- Triggers - Return to quarterly monitoring if detect at > 0.0005 mg/L, until primacy State determines otherwise

Analysis

Reference Source	Method Numbers
EPA 600/4-88-039	502.2; 524.2; 551

Treatment/Best Available Technologies: Granular Activated Charcoal and Packed Tower Aeration

Toxic Release Inventory - Releases to Water and Land, 1987 to 1993 (in pounds):

		Water	Land
TOTALS (in pounds)		**297,602**	**750,104**
Top Five States*			
LA	23,639	610,518	
SC	104,728	0	
NH	62,150	0	
NC	42,192	13,102	
IL	0	40,500	

TX	36,144	720
OH	0	32,170
IN	1,300	27,000
CO	0	11,000
IA	5,112	0

Major Industries*		
Alkalis, chlorine	63,472	611,242
Leather tanning,finishing	62,150	0
Cotton fabric finishing	51,577	0
Misc textile finishing	48,082	2,000
Knit outwear mills	45,808	0
Misc. apparel, access.	0	40,500
Transportation Equip.	3,750	27,000
Ammunition	0	20,575
Misc Chem. preparations	0	11,102
Petroleum refining	0	11,000
Ordnance, accessories	0	10,100

* Water/Land totals only include facilities with releases greater than a certain amount - usually 1000 to 10,000 lbs.

For Additional Information

EPA can provide further regulatory or other general information:
EPA Safe Drinking Water Hotline - 800/426-4791

Other sources of toxicological and environmental fate data include:
Toxic Substance Control Act Information Line - 202/554-1404
Toxics Release Inventory, National Library of Medicine - 301/496-6531
Agency for Toxic Substances and Disease Registry - 404/639-6000

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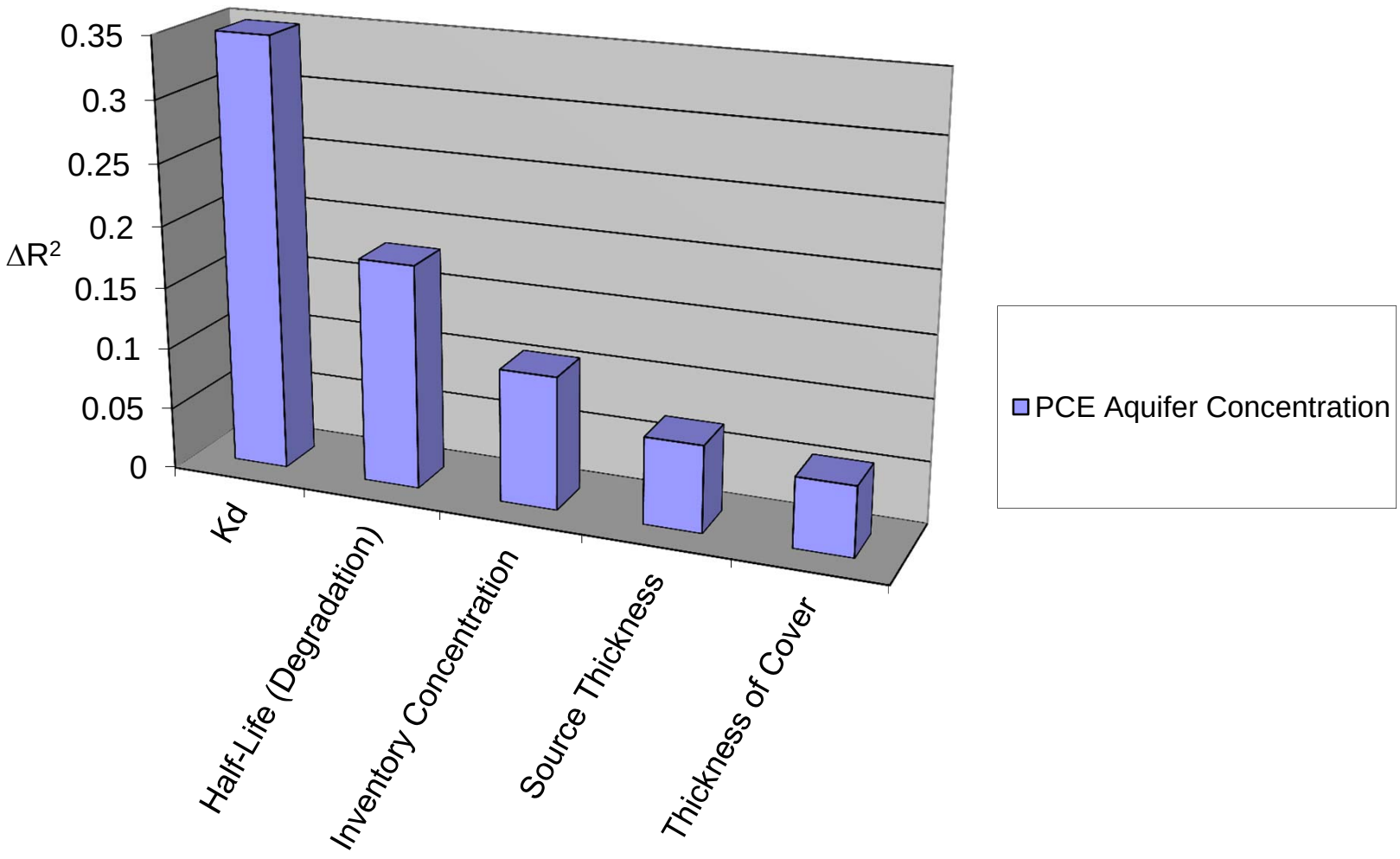
Last updated on Tuesday, November 21st, 2006
URL: http://www.epa.gov/OGWDW/dwh/t-voc/tetrachl.html


0.35
0.3
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ΔR2
0.15
0.1
0.05
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Kd
Half-Life (Degradation)
Inventory Concentration
Source Thickness
Thickness of Cover
PCE Aquifer Concentration

Delta R^2 for 100 Realizations

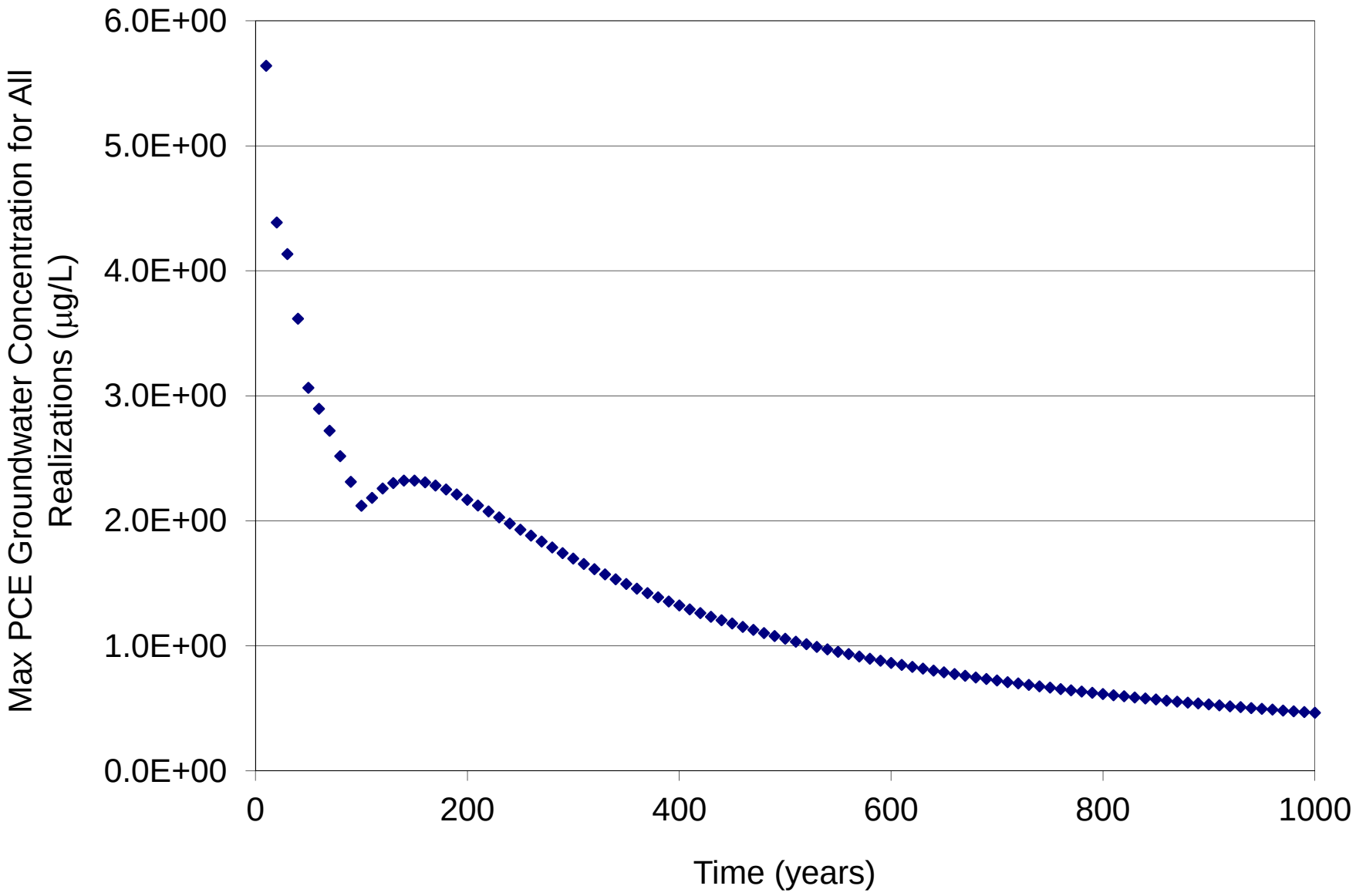
Input Parameter	PCE Aquifer Concentration
Kd	0.349436
Half-Life (Degradation)	0.181572
Inventory Concentration	0.107785
Source Thickness	0.070398
Thickness of Cover	0.056718

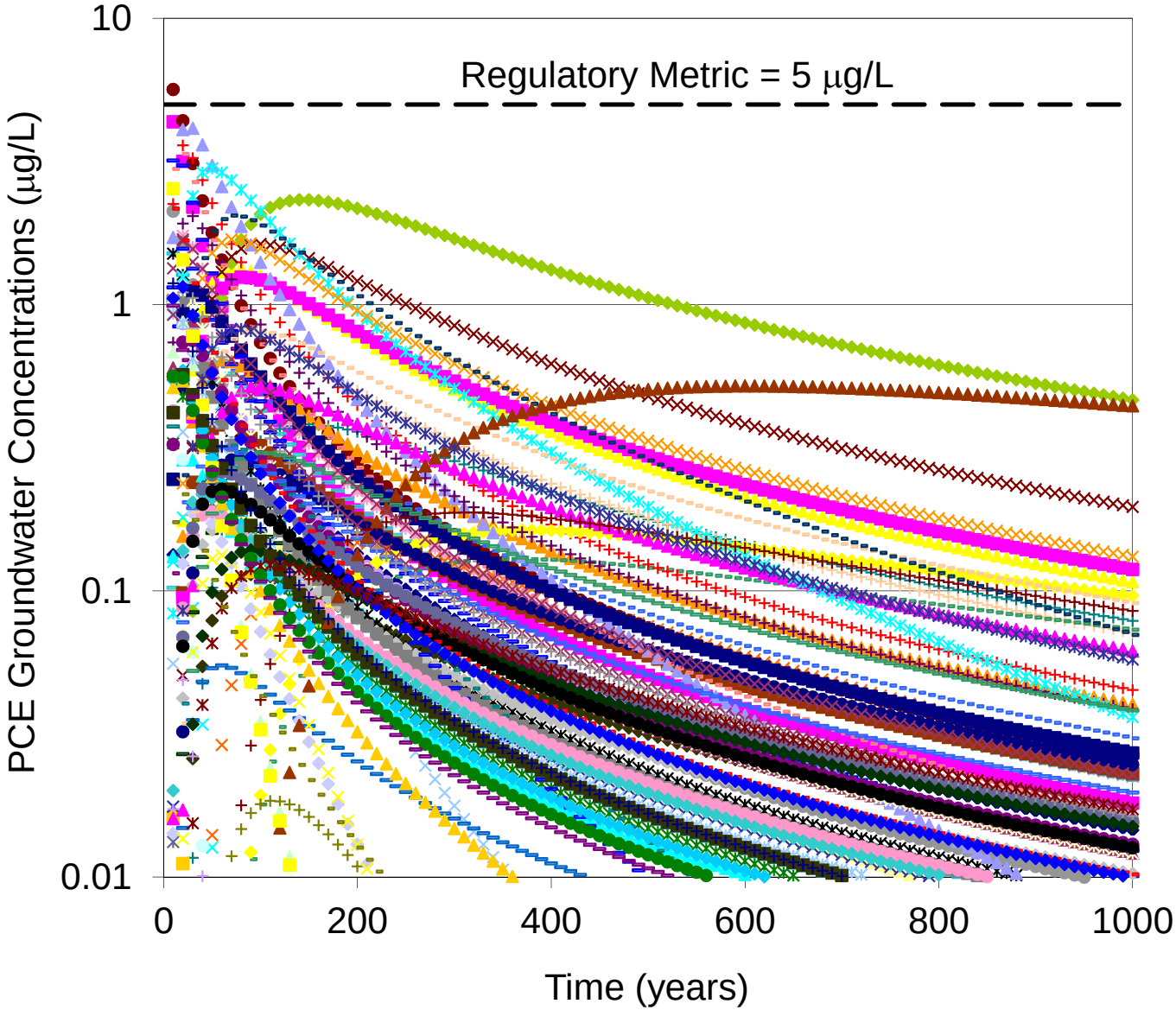
PCE Aquifer Concentration

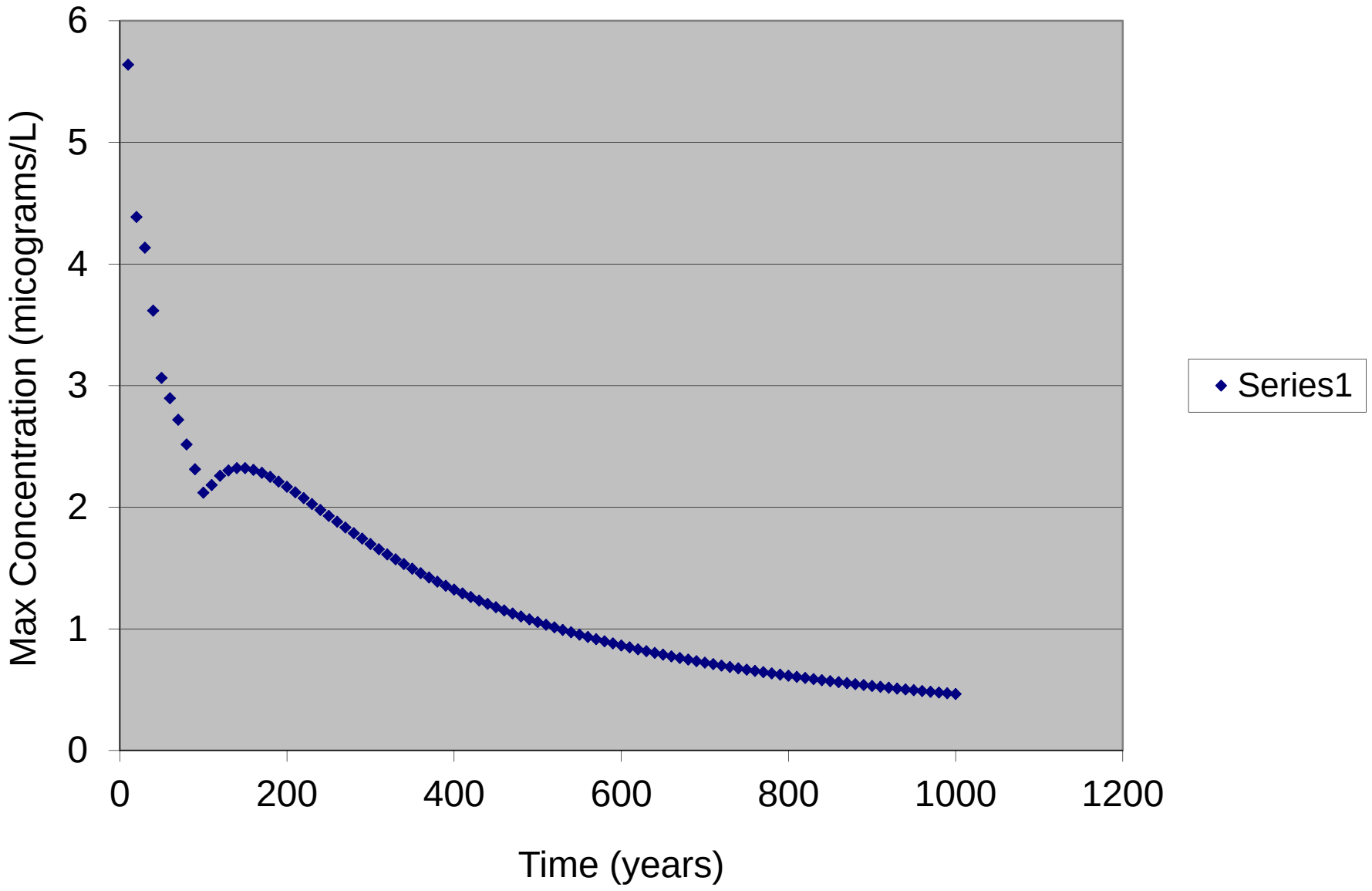
	Step	Multiple	Multiple	R-square	F - to	p-level	Variables	Semipart
Kd (m^3/kg)	1	0.591131	0.349436	0.349436	52.63852	0.000000	1	-0.529774
Half-Life of PCE (s)	2	0.728703	0.531008	0.181572	37.55399	0.000000	2	0.400464
PCE Inventory Gas Concentration (ppb)	3	0.799246	0.638794	0.107785	28.64680	0.000001	3	0.380914
Source Thickness (m)	4	0.842135	0.709192	0.070398	22.99738	0.000006	4	0.248988
Thickness of Clean Overburden (m)	5	0.875163	0.765910	0.056718	22.77535	0.000007	5	0.235848

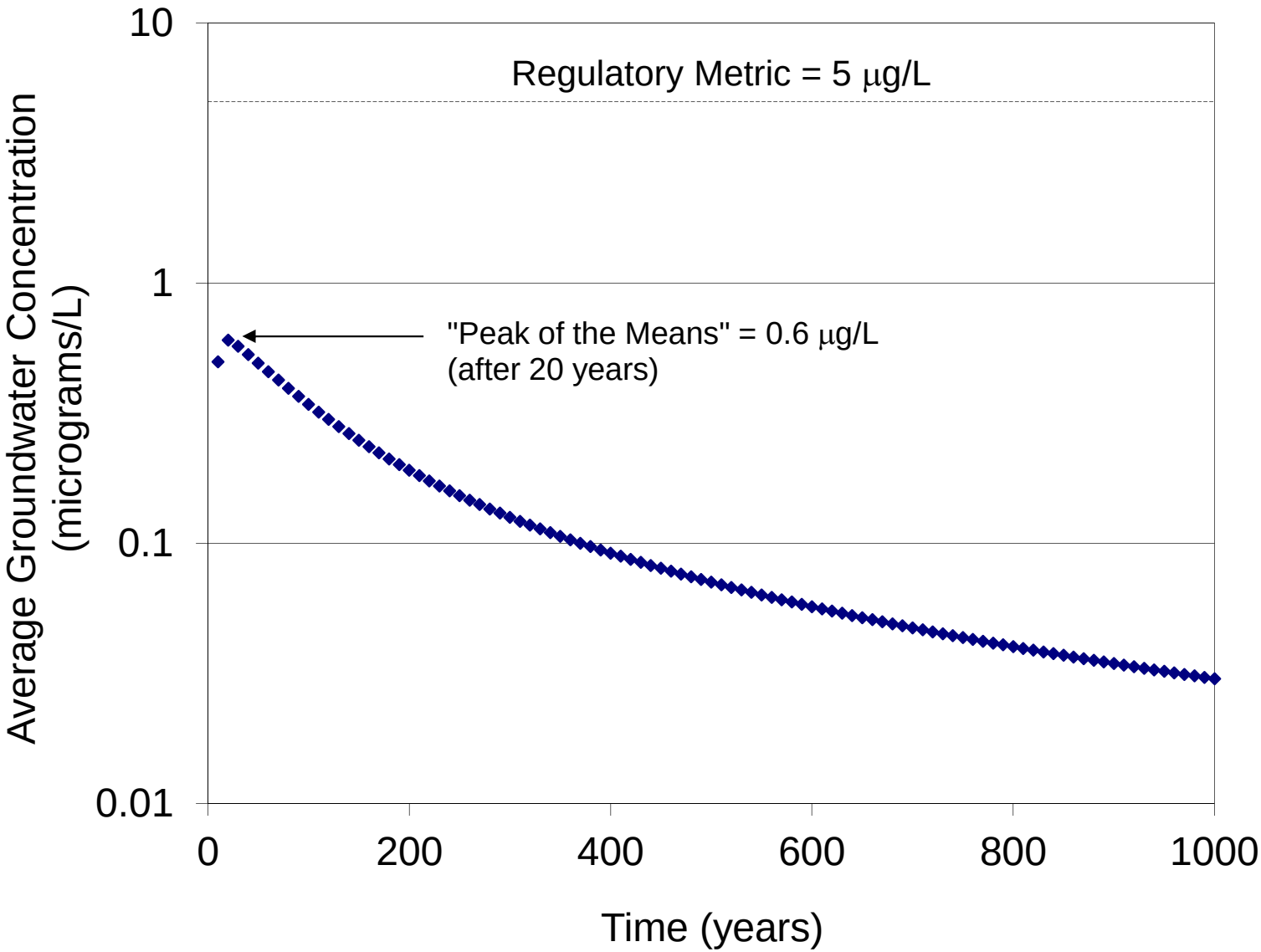
Run	Porosity	Moisture Content	Half-Life of PCE (s)	Kd (m^3/kg)	Source Thickness (m)	Distance to Water Table from Surface (m)	Thickness of Clean Overburden (m)	Infiltration (m/s)	Atmospheric boundary layer thickness (m)	Liquid-phase tortuosity coefficient	Gas-phase tortuosity coefficient
1	0.302	0.128	5.27E+14	3.33E-04	5.184	146.778	0.364	1.92E-11	5.00E-02	0.773	0.637
2	0.33	0.152	2.57E+14	4.91E-05	6.162	144.257	4.461	1.73E-11	1.18E-01	0.321	0.885
3	0.386	0.161	1.03E+14	3.10E-04	5.513	150.627	3.684	4.59E-11	7.40E-01	0.146	0.313
4	0.352	0.14	2.47E+08	5.77E-05	7.977	149.796	0.496	3.60E-11	5.41E-03	0.328	0.311
5	0.42	0.173	7.97E+07	1.31E-03	7.374	150.394	3.306	4.41E-11	9.56E-01	0.599	0.69
6	0.327	0.086	1.22E+12	7.07E-05	7.202	142.603	4.02	4.34E-11	7.51E-01	0.926	0.784
7	0.404	0.084	5.64E+14	1.53E-03	7.556	144.196	1.324	5.28E-11	6.79E-01	7.10E-01	0.56
8	0.345	0.132	1.85E+14	4.79E-05	7.914	143.528	4.245	5.52E-11	6.63E-01	0.073	0.478
9	0.315	0.07	1.44E+11	1.49E-04	7.936	141.545	4.734	5.93E-11	7.20E-02	0.016	0.986
10	0.323	0.069	8.03E+07	1.90E-04	3.709	147.864	1.076	4.77E-11	8.61E-01	0.997	0.12
11	0.443	0.213	1.30E+09	1.62E-03	5.498	147.476	0.998	3.03E-11	8.89E-01	0.306	0.183
12	0.319	0.207	3.44E+10	3.22E-04	3.186	140.573	0.941	5.39E-11	1.53E-01	0.136	0.385
13	0.303	0.092	3.52E+09	6.01E-04	5.405	146.779	4.666	4.85E-11	5.74E-01	0.188	0.849
14	0.378	0.124	1.97E+12	1.10E-04	3.753	143.525	3.603	2.34E-11	1.76E-01	0.378	0.545
15	0.388	0.161	6.96E+11	3.12E-04	4.151	148.253	3.315	5.05E-11	8.34E-01	0.678	0.928
16	0.326	0.131	3.31E+13	1.90E-04	7.179	149.966	4.493	3.96E-11	8.59E-01	0.708	0.201
17	0.366	0.156	2.82E+11	3.94E-04	6.46	146.792	4.118	1.79E-11	9.83E-01	0.124	0.476
18	0.31	0.2	8.14E+15	5.79E-04	7.097	148.64	0.514	3.22E-11	7.09E-01	0.731	0.996
19	0.414	0.16	4.96E+13	2.19E-04	7.411	146.136	4.407	2.03E-11	8.16E-01	0.229	0.127
20	0.376	0.15	8.71E+07	4.10E-05	5.632	144.603	4.354	2.37E-11	9.74E-01	0.135	0.207
21	0.427	0.085	1.32E+16	4.19E-04	3.44	141.569	4.666	2.29E-11	3.15E-01	0.457	0.406
22	0.439	0.148	3.12E+10	3.81E-04	4.894	140.797	1.617	4.63E-11	2.06E-01	0.613	0.118
23	0.379	0.095	4.68E+07	9.51E-05	5.171	143.196	4.328	4.36E-11	9.48E-01	0.613	0.803
24	0.368	0.157	2.24E+11	4.05E-05	4.592	142.882	2.113	2.81E-11	2.51E-01	0.289	0.799
25	0.425	0.154	5.17E+07	5.49E-05	6.908	149.448	1.303	2.76E-11	8.66E-01	0.858	0.653
26	0.413	0.138	1.16E+16	1.13E-03	3.35	141.006	2.574	1.99E-11	2.07E-01	0.158	0.148
27	0.445	0.18	2.88E+11	9.52E-04	4.908	141.095	3.873	2.55E-11	7.54E-01	0.963	0.728
28	0.389	0.16	3.78E+13	5.96E-04	3.871	141.394	2.373	2.35E-11	3.75E-01	0.585	0.358
29	0.34	0.191	1.75E+16	3.17E-04	3.731	150.488	2.726	4.27E-11	6.31E-01	0.069	0.397
30	0.422	0.152	2.57E+13	6.96E-05	3.988	149.618	1.693	4.06E-11	7.37E-01	0.399	0.559
31	0.356	0.21	2.58E+15	6.88E-04	4.339	144.691	4.444	4.70E-11	3.89E-01	0.735	0.95
32	0.399	0.178	2.32E+13	4.50E-05	4.846	147.337	1.797	4.71E-11	9.80E-01	0.597	0.875
33	0.303	0.168	1.41E+13	4.96E-04	6.493	150.308	1.03	4.64E-11	3.28E-01	0.564	0.946
34	0.341	0.107	1.57E+14	5.56E-05	7.88	140.536	0.245	1.80E-11	6.28E-01	0.207	0.376
35	0.386	0.106	3.19E+07	1.63E-03	3.593	141.025	1.213	3.06E-11	4.91E-01	0.18	0.483
36	0.422	0.072	7.08E+10	1.17E-04	5.939	144.886	0.707	5.45E-11	2.69E-01	0.321	0.644
37	0.371	0.199	1.54E+15	1.86E-03	7.686	146.772	2.966	3.63E-11	6.60E-02	0.835	0.249
38	0.408	0.08	1.53E+16	1.25E-04	7.568	144.807	0.96	4.50E-11	4.55E-01	0.856	0.144
39	0.367	0.067	5.35E+14	1.68E-04	5.06	146.97	3.715	2.91E-11	6.47E-01	0.444	0.552
40	0.408	0.163	2.68E+16	9.37E-05	6.53	140.563	3.104	4.96E-11	2.67E-01	0.049	0.114
41	0.388	0.147	6.45E+12	1.02E-04	4.506	144.6	0.851	1.18E-11	6.25E-01	0.301	0.583
42	0.407	0.123	1.90E+15	1.36E-03	8.137	143.796	4.697	4.88E-11	1.03E-01	2.22E-01	0.864
43	0.384	0.133	2.48E+09	1.36E-03	6.13	149.358	0.963	5.10E-11	4.98E-01	0.29	0.414
44	0.324	0.079	2.84E+15	5.45E-05	3.732	142.561	0.231	4.76E-11	7.04E-01	0.872	0.205
45	0.363	0.18	9.40E+15	7.80E-05	6.16	145.374	0.176	3.84E-11	3.73E-01	0.843	0.594
46	0.376	0.195	5.62E+13	8.30E-04	4.889	145.003	0.402	1.68E-11	9.61E-01	0.586	0.789
47	0.409	0.203	4.28E+13	9.08E-05	5.527	144.853	2.775	1.66E-11	4.55E-01	0.447	0.926
48	0.326	0.105	8.55E+09	4.04E-05	7.961	146.528	1.067	1.98E-11	5.21E-01	0.818	0.288
49	0.372	0.075	2.29E+15	6.22E-05	8.139	144.009	1.485	4.49E-11	7.91E-01	9.65E-01	0.503
50	0.402	0.188	4.08E+14	1.35E-04	5.709	150.369	2.006	5.57E-11	7.38E-01	0.089	0.887
51	0.323	0.158	1.67E+08	4.63E-05	7.701	144.851	1.228	3.99E-11	5.30E-02	0.577	0.585
52	0.322	0.065	1.09E+16	8.35E-05	4.74	148.562	2.481	1.73E-11	9.91E-01	0.593	0.325
53	0.401	0.165	3.20E+10	7.26E-05	6.006	142.08	4.818	4.80E-11	6.44E-01	0.581	0.679
54	0.363	0.071	1.50E+12	1.27E-03	4.852	141.418	0.594	3.59E-11	9.01E-01	0.789	0.958
55	0.44	0.092	2.18E+09	8.56E-05	4.552	145.402	3.448	5.14E-11	9.15E-01	0.882	0.231
56	0.324	0.211	2.82E+17	4.98E-04	7.83	143.961	1.437	2.90E-11	4.80E-01	0.968	0.873
57	0.419	0.167	8.73E+13	1.40E-03	7.23	146.881	2.561	6.11E-11	7.58E-01	0.419	0.767
58	0.329	0.138	1.44E+09	1.47E-03	6.606	143.422	2.522	5.86E-11	7.45E-01	0.359	0.826
59	0.419	0.138	1.50E+10	7.18E-05	7.021	145.063	4.044	4.29E-11	3.64E-01	0.318	0.206
60	0.324	0.141	7.47E+15	3.70E-04	6.788	142.803	0.505	1.90E-11	8.22E-01	0.782	0.948
61	0.407	0.171	1.41E+11	1.60E-03	4.818	145.891	4.617	3.44E-11	4.35E-01	0.062	0.283
62	0.342	0.157	5.61E+09	3.83E-04	5.557	140.589	2.311	1.42E-11	8.30E-02	0.398	0.278
63	0.4	0.054	5.49E+09	1.08E-04	7.391	148.498	4.481	4.85E-11	6.26E-01	0.446	0.785
64	0.405	0.07	1.61E+17	1.57E-04	5.849	150.557	1.781	4.40E-11	3.27E-01	0.569	0.959
65	0.32	0.201	4.28E+07	8.95E-04	5.995	149.881	3.217	2.34E-11	4.85E-01	0.607	0.671
66	0.421	0.182	8.58E+08	5.24E-05	6.364	142.82	2.474	6.09E-11	5.62E-01	0.376	0.481
67	0.376	0.118	3.12E+07	4.02E-04	6.986	145.471	1.365	5.59E-11	6.97E-01	0.906	0.455

68	0.363	0.148	8.00E+13	8.63E-05	3.867	144.808	3.859	5.59E-11	4.02E-01	0.812	0.79
69	0.438	0.217	3.86E+11	4.96E-04	7.123	149.234	4.185	4.22E-11	8.89E-01	0.948	0.723
70	0.381	0.083	2.07E+08	4.24E-04	5.319	144.943	2.262	4.79E-11	6.07E-01	0.198	0.549
71	0.369	0.076	2.90E+14	2.24E-04	5.671	148.129	2.156	4.92E-11	8.02E-01	0.514	0.175
72	0.423	0.217	1.10E+14	1.88E-04	3.402	141.36	1.849	3.18E-11	8.15E-01	0.825	0.264
73	0.367	0.058	6.43E+12	4.04E-04	8.137	149.29	2.719	4.72E-11	8.20E-02	0.691	0.659
74	0.443	0.063	8.82E+07	1.64E-03	6.237	144.24	4.08	5.56E-11	9.83E-01	0.397	0.981
75	0.408	0.076	1.06E+10	1.85E-04	4.952	141.491	0.047	3.13E-11	5.00E-01	0.983	0.983
76	0.33	0.202	1.32E+16	8.22E-05	7.504	142.465	0.198	3.59E-11	5.68E-01	0.254	0.15
77	0.422	0.177	1.92E+08	3.77E-04	4.301	149.978	1.248	4.94E-11	8.62E-01	0.681	0.473
78	0.374	0.056	3.67E+14	4.64E-04	3.312	143.729	3.451	2.84E-11	9.90E-01	0.951	0.458
79	0.306	0.175	1.35E+16	4.84E-05	3.942	144.052	0.649	2.96E-11	4.03E-01	0.272	0.372
80	0.384	0.09	2.29E+10	1.10E-04	4.189	143.335	4.178	1.58E-11	3.99E-01	0.203	0.147
81	0.378	0.082	8.20E+13	1.32E-03	7.125	142.3	1.065	6.11E-11	9.31E-01	0.171	0.637
82	0.423	0.112	5.88E+15	6.89E-04	3.482	141.191	1.528	3.14E-11	2.78E-01	0.722	0.401
83	0.396	0.116	1.61E+16	1.86E-04	3.755	150.5	2.959	3.23E-11	5.26E-01	0.557	0.93
84	0.422	0.191	4.14E+16	1.37E-03	5.963	145.14	4.66	2.51E-11	9.17E-01	0.996	0.123
85	0.318	0.144	7.01E+11	1.82E-04	6.324	142.371	1.887	2.29E-11	4.90E-02	0.599	0.672
86	0.347	0.19	9.46E+10	1.59E-04	5.399	145.405	1.156	4.35E-11	2.89E-01	0.526	0.193
87	0.343	0.078	5.25E+11	7.36E-04	4.778	143.089	2.889	5.52E-11	2.59E-01	0.833	0.64
88	0.322	0.122	2.56E+07	7.20E-04	4.512	143.388	0.081	3.21E-11	3.53E-01	0.552	0.119
89	0.421	0.076	1.63E+15	8.72E-05	7.573	149.036	4.471	5.94E-11	8.19E-01	6.36E-03	0.981
90	0.388	0.064	2.03E+08	5.71E-04	7.548	147.041	1.095	2.87E-11	3.23E-01	0.818	0.168
91	0.338	0.152	2.03E+14	1.68E-04	7.169	140.588	4.71	4.16E-11	9.61E-01	0.132	0.839
92	0.302	0.147	9.04E+08	6.11E-05	6.338	143.513	1.949	5.60E-11	9.34E-01	0.382	0.913
93	0.417	0.107	7.76E+07	8.82E-05	6.13	149.419	1.635	2.34E-11	1.04E-01	0.066	0.739
94	0.332	0.192	3.87E+07	5.17E-04	4.055	147.845	3.05	3.81E-11	2.28E-01	0.017	0.653
95	0.381	0.102	8.73E+13	5.87E-04	4.248	150.058	1.414	3.99E-11	1.92E-01	0.37	0.349
96	0.318	0.207	4.29E+16	5.44E-05	4.287	141.482	4.383	3.70E-11	8.97E-01	0.231	0.654
97	0.41	0.181	5.76E+11	4.44E-05	5.156	141.308	1.6	5.98E-11	5.50E-02	0.747	0.855
98	0.38	0.115	7.08E+09	1.33E-04	4.46	144.491	2.245	4.65E-11	7.20E-01	0.44	0.681
99	0.364	0.092	1.01E+14	6.96E-05	5.014	145.851	2.013	1.69E-11	5.48E-01	0.827	0.963
100	0.402	0.092	4.27E+07	5.19E-05	4.118	141.971	0.59	3.48E-11	1.10E-01	0.321	0.146


Max PCE Groundwater Concentration for All Realizations (µg/L)
6.0E+00
5.0E+00
4.0E+00
3.0E+00
2.0E+00
1.0E+00
0.0E+00
0
200
400
600
800
1000
Time (years)


Regulatory Metric = 5 μg/L
PCE Groundwater Concentrations (μg/L)
10
1
0.1
0.01
0
200
400
600
800
1000
Time (years)


Max Concentration (micograms/L)
6
5
4
3
2
1
0
0
200
400
600
800
1000
1200
Time (years)
Series1


10
1
0.1
0.01
Average Groundwater Concentration
(micrograms/L)
Regulatory Metric = 5 μg/L
"Peak of the Means" = 0.6 μg/L
(after 20 years)
0
200
400
600
800
1000
Time (years)

PCE Concentration (micrograms/L) in Groundwater for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
1	0.133516	0.503949	0.604738	0.583331	0.529218	0.471627	0.419065	0.373357	0.334229	0.300834	0.272265	0.247706	0.226474	0.208006	0.191847	0.177627	0.165044	0.153853	0.143853	0.134875
2	4.34937	3.16144	2.18925	1.60398	1.23377	0.984919	0.808982	0.679471	0.580991	0.504098	0.44273	0.392841	0.351643	0.317159	0.287955	0.262966	0.241389	0.222605	0.206134	0.191597
3	0.002243	0.176242	0.591762	0.958022	1.18712	1.30292	1.34373	1.33888	1.30762	1.26194	1.20917	1.15E+00	1.10E+00	1.04E+00	9.92E-01	9.43E-01	8.97E-01	8.53E-01	8.13E-01	7.75E-01
4	0.126079	0.180338	0.086919	0.034144	0.012683	0.00464	1.70E-03	6.22E-04	2.29E-04	8.50E-05	3.17E-05	1.19E-05	4.48E-06	1.70E-06	6.45E-07	2.46E-07	9.45E-08	3.63E-08	1.40E-08	5.42E-09
5	6.08E-07	2.29E-05	9.88E-06	1.46E-06	1.44E-07	1.17E-08	8.60E-10	5.95E-11	3.97E-12	2.58E-13	1.65E-14	1.05E-15	6.59E-17	4.13E-18	2.57E-19	1.60E-20	9.95E-22	6.17E-23	3.83E-24	2.37E-25
6	5.63903	4.38661	3.1072	2.30228	1.78276	1.42944	1.17771	0.99141	0.849173	0.737768	0.648636	5.76E-01	5.16E-01	4.66E-01	4.23E-01	3.86E-01	3.55E-01	3.27E-01	3.03E-01	2.82E-01
7	3.39E-08	5.60E-04	0.011665	0.047448	0.102496	0.163153	0.21958	0.267222	0.304965	0.333409	0.353819	0.367602	0.376067	0.380343	0.381364	3.80E-01	3.77E-01	3.72E-01	3.66E-01	3.59E-01
8	0.838946	1.03831	0.859772	0.689002	0.559305	0.462833	0.390047	0.333978	0.289885	0.254554	0.225769	0.201972	0.182046	0.16517	0.150733	1.38E-01	1.27E-01	1.18E-01	1.10E-01	1.02E-01
9	1.51007	1.26895	0.921811	0.691279	0.538892	0.433841	0.358342	0.302127	0.259019	0.225145	0.197974	0.175797	0.157424	0.142004	0.128917	0.117697	0.107995	0.099537	0.092113	0.085555
10	5.02E-08	1.08E-05	8.17E-06	1.61E-06	1.90E-07	1.75E-08	1.41E-09	1.05E-10	7.49E-12	5.15E-13	3.47E-14	2.30E-15	1.50E-16	9.78E-18	6.32E-19	4.07E-20	2.61E-21	1.67E-22	1.07E-23	6.81E-25
11	0	3.66E-14	1.75E-09	3.38E-07	7.05E-06	4.84E-05	1.77E-04	4.37E-04	8.35E-04	1.33E-03	0.001874	0.002391	0.002836	0.00318	0.00341	0.003526	0.003542	0.003473	0.003338	0.003155
12	0.003262	0.070417	0.15064	0.193436	0.207841	0.206905	0.198613	0.187211	0.174855	0.162612	0.150983	0.140175	1.30E-01	1.21E-01	1.13E-01	1.05E-01	9.86E-02	9.24E-02	8.67E-02	8.16E-02
13	0.055599	0.358323	0.496138	0.498921	0.452853	0.395476	0.340274	0.291376	0.249452	0.213975	0.184083	0.158896	0.137628	0.119612	0.104294	0.09122	0.080018	0.070385	0.06207	0.054869
14	1.04402	1.74119	1.59126	1.33943	1.11975	0.944899	0.807473	0.698639	0.611321	0.540283	0.481711	0.432821	0.391555	0.356373	0.326104	0.299851	0.27691	0.256731	2.39E-01	2.23E-01
15	0.425181	0.857685	0.835194	0.725632	0.618203	0.528258	0.455463	0.396692	0.348887	3.10E-01	2.77E-01	2.49E-01	2.26E-01	2.06E-01	1.89E-01	1.74E-01	1.61E-01	1.49E-01	1.39E-01	1.30E-01
16	8.89E-04	0.087861	0.32265	0.547766	0.69901	0.782686	0.818958	0.824983	0.812659	0.789701	0.760978	0.729521	0.697196	0.665134	0.634003	0.604176	0.575844	0.549081	0.523889	0.500229
17	0.009947	0.2041	0.436172	0.562696	0.608109	0.609036	0.588189	0.557775	0.524089	0.490295	0.457921	0.427639	0.399676	0.374031	0.35059	0.329192	0.309658	0.29181	0.275481	0.260518
18	0.102508	0.540805	0.726804	0.742159	0.696784	0.635332	0.573839	0.517567	0.467775	0.42427	0.386389	0.353375	0.324514	0.299181	0.276845	0.257061	0.239456	0.223722	0.209601	1.97E-01
19	4.86E-07	0.004718	0.084979	0.32438	0.676625	1.05367	1.39699	1.68175	1.90359	2.06781	2.1831	2.25856	2.30241	2.32163	2.32188	2.30772	2.28275	2.24977	2.211	2.16813
20	0.016211	0.01114	1.43E-03	1.29E-04	1.03E-05	7.92E-07	5.95E-08	4.44E-09	3.31E-10	2.46E-11	1.84E-12	1.38E-13	1.03E-14	7.79E-16	5.88E-17	4.46E-18	3.38E-19	2.58E-20	1.97E-21	1.51E-22
21	0.004645	0.155156	0.38975	0.545207	0.618677	0.640255	0.633109	0.611209	0.582439	0.551139	0.51965	0.489197	4.60E-01	4.33E-01	4.08E-01	3.85E-01	3.64E-01	3.44E-01	3.26E-01	3.10E-01
22	8.03E-12	7.10E-06	5.56E-04	0.004378	0.014017	0.028944	0.046821	0.065296	0.082722	0.098182	0.111296	0.122024	0.130509	1.37E-01	1.42E-01	1.45E-01	1.47E-01	1.48E-01	1.48E-01	1.47E-01
23	0.013257	1.12E-04	7.74E-07	5.47E-09	4.00E-11	3.02E-13	2.33E-15	1.83E-17	1.47E-19	1.19E-21	9.75E-24	8.07E-26	6.74E-28	5.66E-30	4.79E-32	4.08E-34	3.49E-36	2.99E-38	2.58E-40	2.23E-42
24	2.12016	1.65227	1.16997	0.86634	0.670364	0.537102	0.442181	0.371945	0.318335	0.276357	0.24278	0.215436	0.192825	0.173877	0.157815	0.144061	0.132177	0.121827	0.112748	0.104732
25	0.004314	7.73E-05	9.28E-07	1.08E-08	1.28E-10	1.54E-12	1.88E-14	2.34E-16	2.96E-18	3.78E-20	4.88E-22	6.36E-24	8.34E-26	1.10E-27	1.46E-29	1.95E-31	2.62E-33	3.53E-35	4.77E-37	6.47E-39
26	0.00E+00	1.20E-10	4.26E-07	2.31E-05	2.38E-04	1.08E-03	0.003059	0.006531	0.011546	0.017921	0.025342	0.03345	0.041908	0.05043	0.05879	0.06682	0.074404	8.15E-02	8.80E-02	9.39E-02
27	4.22E-04	0.026871	0.084074	0.131335	0.159241	0.172216	0.175711	0.173637	0.168469	0.161705	0.154235	0.146581	0.139044	0.131787	0.124897	0.118411	0.112338	0.106668	0.101384	0.096464
28	1.23E-05	0.004599	0.025934	0.054383	0.078692	0.095768	0.106327	0.111966	0.114156	0.114023	0.112372	0.10976	0.106568	0.103053	0.099389	9.57E-02	9.20E-02	8.85E-02	8.50E-02	8.17E-02
29	0.003165	0.098258	0.239256	0.329078	0.369495	0.379627	0.373422	0.359068	0.341096	0.32195	0.302925	0.284676	0.26751	0.251539	0.236773	0.223165	0.210644	0.199126	0.188527	0.178763
30	0.600663	0.969691	0.876131	0.733219	0.61083	0.514262	0.43875	0.379154	0.33146	0.29273	0.260844	0.23426	0.211843	0.192746	0.176328	0.162096	0.149666	0.138738	0.12907	0.120469
31	0.017616	0.12804	0.192125	0.207434	0.20142	0.187842	0.172422	0.157412	0.143619	1.31E-01	1.20E-01	1.11E-01	1.02E-01	9.44E-02	8.76E-02	8.16E-02	7.62E-02	7.13E-02	6.70E-02	6.30E-02
32	1.50483	1.27079	0.92484	0.694591	0.542252	0.437166	0.361603	0.30531	2.62E-01	2.28E-01	2.01E-01	1.79E-01	1.60E-01	1.45E-01	1.32E-01	1.20E-01	1.11E-01	1.02E-01	9.46E-02	8.80E-02
33	0.089565	0.39284	0.4962	0.491167	0.452597	0.407563	0.364846	0.326872	0.293889	0.265445	0.24092	0.219707	0.201277	1.85E-01	1.71E-01	1.59E-01	1.48E-01	1.38E-01	1.29E-01	1.21E-01
34	2.24686	3.60354	3.25074	2.71869	2.26409	1.90575	1.62569	1.40475	1.22796	1.08443	0.966276	0.867779	0.784728	0.713983	0.653164	0.600444	0.554404	0.513925	0.478115	0.446258
35	2.68E-12	8.72E-11	2.26E-12	1.04E-14	2.45E-17	4.19E-20	6.01E-23	7.75E-26	9.34E-29	1.08E-31	1.20E-34	1.31E-37	1.41E-40	1.49E-43	1.57E-46	1.64E-49	1.70E-52	1.76E-55	1.81E-58	1.86E-61
36	1.14654	1.56528	1.33471	1.08348	0.885185	0.734861	0.620162	0.531156	0.460808	0.404238	0.358029	0.319757	0.287666	0.260461	0.237172	0.217063	0.199563	0.184226	0.170698	0.158697
37	0.00E+00	9.79E-11	3.56E-07	2.04E-05	2.21E-04	1.04E-03	0.003067	0.006736	0.012197	0.019316	2.78E-02	3.72E-02	4.72E-02	5.75E-02	6.77E-02	7.76E-02	8.71E-02	9.61E-02	1.04E-01	1.12E-01
38	5.79E-04	0.094465	0.405177	0.741507	0.989009	1.14011	1.2178	1.24576	1.24184	1.21825	1.18306	1.14147	1.09683	1.05126	1.01E+00	9.62E-01	9.20E-01	8.80E-01	8.41E-01	8.05E-01
39	0.131524	0.286767	0.286842	0.252655	0.217066	0.18655	0.161519	0.141132	0.124446	0.110666	0.099171	0.089485	0.081246	0.074176	0.06806	0.06273	0.058054	0.053925	0.05026	4.70E-02
40	1.07E-04	0.050643	0.315304	0.697909	1.04472	1.30135	1.4695	1.56749	1.61439	1.62572	1.61298	1.58438	1.54568	1.50086	1.45268	1.40301	1.35312	1.30386	1.2558	1.20928
41	0.327179	0.476352	0.415773	0.341984	0.281954	0.235739	0.200129	0.172304	0.150194	0.132337	0.117698	0.105536	0.095309	0.086617	0.07916	0.072707	0.06708	0.062139	0.057773	0.053894
42	3.59E-04	0.032221	0.115478	0.194	0.246148	0.274627	0.286653	0.288252	0.283568	2.75E-01	2.65E-01	2.54E-01	2.43E-01	2.31E-01	2.20E-01	2.10E-01	2.00E-01	1.91E-01	1.82E-01	1.74E-01
43	1.52E-11	5.13E-06	2.75E-04	1.72E-03	0.004626	0.008285	0.011829	0.014718	0.016756	0.017963	0.01846	0.018399	0.017928	0.017172	0.016233	0.015189	0.014098	0.013001	0.011928	0.010898
44	0.115216	0.639936	0.87316	0.898045	0.846678	0.774122	0.700544	0.632749	0.572504	0.51971	0.473642	0.433425	0.398221	0.367287	3.40E-01	3.16E-01	2.94E-01	2.75E-01	2.58E-01	2.42E-01
45	0.374616	0.525306	0.452857	0.370199	0.304097	0.253632	0.214947	0.184822	0.160945	0.141697	0.125942	0.112868	0.101885	0.092559	0.084563	0.077647	0.071621	0.066331	0.061659	0.057509
46	1.29E-03	0.042179	0.104379	0.144665	0.163154	0.168114	0.165703	0.159575	0.151764	0.143378	0.135007	0.126953	0.11936	0.112284	0.105734	0.099691	0.094125	0.089002	8.43E-02	7.99E-02
47	1.02775	1.01237	0.775852	0.598002	0.474187	0.386299	0.321923	0.273339	0.235705	0.205896	0.181832	0.162087	0.145655	0.13181	0.12002	0.109882	0.10109	0.093409	0.086651	8.07E-02
48	1.71506	4.08241	4.13385	3.61701	3.06361	2.5859	2.19419	1.87641	1.61785	1.4059	1.23057	1.08418	0.960886	0.85617	0.766555	0.689322	0.622333	0.563886	5.13E-01	4.67E-01
49	1.33733	1.69094	1.4091	1.13264	0.921064	0.763075	0.643597	0.551413	0.478836	0.420631	3.73E-01	3.34E-01	3.01E-01	2.73E-01	2.49E-01	2.29E-01	2.11E-01	1.95E-01	1.81E-01	1.69E-01
50	0.998542	1.24519	1.0324	0.827677	0.671987	0.556119	0.468679	0.401311	0.34833	0.305874	0.271283	0.242687	0.218741	0.198461	0.181111	0.166137	0.153107	0.141689	0.131617	0.12268

51	0.99673	0.287127	0.061065	0.01289	0.002785	6.16E-04	1.39E-04	3.21E-05	7.49E-06	1.77E-06	4.24E-07	1.02E-07	2.48E-08	6.08E-09	1.50E-09	3.71E-10	9.23E-11	2.31E-11	5.78E-12	1.46E-12
52	0.7373	1.91905	2.03527	1.84576	1.61371	1.40308	1.22494	1.07702	0.954292	0.851913	7.66E-01	6.93E-01	6.30E-01	5.77E-01	5.30E-01	4.89E-01	4.53E-01	4.22E-01	3.93E-01	3.68E-01
53	2.98031	3.35759	2.68095	2.10237	1.67992	1.37247	1.14387	0.969656	0.833828	0.725767	0.638273	0.56634	0.506407	0.455885	0.412853	0.375863	0.343807	0.315821	0.291226	0.269481
54	5.06E-04	0.014837	0.035381	0.048135	0.053684	0.054903	0.053824	0.051623	0.048939	0.046115	0.04333	4.07E-02	3.82E-02	3.59E-02	3.37E-02	3.18E-02	3.00E-02	2.83E-02	2.68E-02	2.54E-02
55	0.01419	0.124554	0.186054	0.190595	0.172257	0.148099	0.124641	0.103975	0.086485	0.071941	0.059937	0.050051	0.041907	0.035186	0.029624	0.025009	2.12E-02	1.80E-02	1.53E-02	1.30E-02
56	0.245029	0.926618	1.11526	1.07786	0.979146	0.873401	0.776598	0.692261	0.619973	0.55822	0.505351	0.459877	0.420544	0.386319	0.356362	0.329991	0.306651	0.285889	0.267331	0.250669
57	3.86E-05	0.017165	0.104375	0.228141	0.338857	0.419859	0.472291	0.502315	0.516163	0.518828	0.513982	5.04E-01	4.91E-01	4.77E-01	4.61E-01	4.45E-01	4.29E-01	4.13E-01	3.98E-01	3.83E-01
58	5.55E-05	0.013627	0.061056	0.106044	0.129075	0.133119	0.125764	0.112974	0.098421	0.084096	0.070955	5.94E-02	4.94E-02	4.10E-02	3.39E-02	2.80E-02	2.31E-02	1.90E-02	1.57E-02	1.30E-02
59	0.083346	1.25282	2.38979	2.89236	2.99167	2.89652	2.71981	2.51667	2.31289	2.1199	1.94217	1.78077	1.63523	1.50E+00	1.39E+00	1.28E+00	1.19E+00	1.10E+00	1.02E+00	9.52E-01
60	0.324477	0.738178	0.748366	0.663528	0.572294	0.493111	0.427731	0.374258	0.330362	0.29403	0.263671	0.238056	0.216243	0.197508	0.181289	0.167144	0.154727	0.143759	0.134017	0.125318
61	0.00E+00	4.39E-09	4.74E-06	1.45E-04	1.06E-03	0.003854	0.009374	0.017815	0.028785	0.041587	0.055454	0.069702	0.083781	0.097289	0.109955	0.121614	0.132183	0.141639	0.149998	0.157304
62	3.81E-04	0.040374	0.145636	0.23956	0.295016	0.318279	0.32064	0.31086	0.29464	0.275455	0.255343	0.235466	0.216453	0.19862	0.182096	0.166901	0.152997	0.140311	0.128756	0.118241
63	3.1849	3.05968	2.2658	1.68307	1.28475	1.00696	0.807083	0.65895	0.546314	0.458778	0.389471	0.333716	0.288243	0.250712	2.19E-01	1.93E-01	1.71E-01	1.52E-01	1.35E-01	1.21E-01
64	0.544401	0.587375	0.463987	0.363077	0.290527	0.238114	0.199291	0.169763	0.146758	0.128457	0.113631	0.10143	0.091253	0.082662	0.075332	0.069021	6.35E-02	5.87E-02	5.45E-02	5.08E-02
65	8.83E-07	8.79E-07	2.29E-08	2.54E-10	2.05E-12	1.43E-14	9.21E-17	5.68E-19	3.42E-21	2.02E-23	1.19E-25	6.90E-28	4.00E-30	2.31E-32	1.33E-34	7.70E-37	4.44E-39	2.56E-41	1.48E-43	8.52E-46
66	0.683114	0.87237	0.615583	0.400857	0.259438	0.169553	0.112238	0.075234	0.051005	0.034928	0.024131	0.016801	0.011778	0.008307	0.005891	0.004198	0.003004	2.16E-03	1.56E-03	1.13E-03
67	1.62E-05	2.31E-07	4.04E-10	4.44E-13	4.17E-16	3.66E-19	3.11E-22	2.61E-25	2.17E-28	1.80E-31	1.50E-34	1.24E-37	1.03E-40	8.61E-44	7.19E-47	6.01E-50	5.04E-53	4.23E-56	3.56E-59	3.01E-62
68	0.929798	0.862018	0.647357	0.493916	0.389267	0.315829	0.26243	0.222337	0.191398	0.166964	0.147286	0.131169	0.117778	0.10651	9.69E-02	8.87E-02	8.16E-02	7.53E-02	6.99E-02	6.50E-02
69	0.007109	0.086911	0.155937	0.184262	0.188901	0.182652	0.172029	0.160098	0.148253	0.13709	0.12683	0.117515	0.109105	0.101529	0.094704	0.088547	0.082984	0.077945	0.073369	0.069203
70	0.017266	0.048841	0.026399	0.010081	0.003438	1.12E-03	3.60E-04	1.15E-04	3.64E-05	1.16E-05	3.70E-06	1.18E-06	3.80E-07	1.22E-07	3.95E-08	1.28E-08	4.16E-09	1.35E-09	4.42E-10	1.45E-10
71	9.97E-05	0.034386	0.189508	0.393233	0.565593	0.685667	0.759218	0.797895	0.81226	0.810335	0.797819	0.778645	0.755486	0.730144	0.703827	0.677333	0.651186	0.625718	0.601134	0.577552
72	0.002273	0.077604	0.194714	0.271773	0.30782	0.318087	0.314171	0.30302	0.288536	0.272856	0.257129	0.241949	0.227606	0.214217	0.201804	0.190339	0.179771	0.170035	0.161063	0.152789
73	0.020066	0.138223	0.203945	0.218393	0.21103	0.196169	0.179651	0.163728	0.149181	0.136187	0.124688	1.15E-01	1.06E-01	9.77E-02	9.06E-02	8.43E-02	7.87E-02	7.37E-02	6.92E-02	6.51E-02
74	1.95E-05	2.49E-04	8.84E-05	1.35E-05	1.51E-06	1.45E-07	1.30E-08	1.11E-09	9.27E-11	7.62E-12	6.19E-13	5.00E-14	4.02E-15	3.23E-16	2.59E-17	2.07E-18	1.66E-19	1.33E-20	1.06E-21	8.50E-23
75	0.513348	0.541012	0.418129	0.320302	0.250964	0.201435	0.165118	0.137761	0.116648	0.100008	8.67E-02	7.58E-02	6.68E-02	5.92E-02	5.29E-02	4.75E-02	4.28E-02	3.88E-02	3.52E-02	3.22E-02
76	0.003237	0.237031	0.772794	1.23132	1.51064	1.64675	1.68996	1.67754	1.63355	1.57275	1.50404	1.43271	1.36E+00	1.29E+00	1.23E+00	1.17E+00	1.11E+00	1.05E+00	1.00E+00	9.55E-01
77	1.23E-03	0.009738	0.007018	0.002969	1.04E-03	3.37E-04	1.05E-04	3.20E-05	9.66E-06	2.90E-06	8.70E-07	2.61E-07	7.82E-08	2.35E-08	7.05E-09	2.12E-09	6.40E-10	1.93E-10	5.85E-11	1.77E-11
78	0.002299	0.068828	0.165844	0.226985	0.254138	0.260622	0.256028	0.245949	2.33E-01	2.20E-01	2.07E-01	1.95E-01	1.83E-01	1.72E-01	1.62E-01	1.52E-01	1.44E-01	1.36E-01	1.29E-01	1.22E-01
79	0.575036	1.1016	1.05365	0.907253	0.76884	0.65471	0.563143	0.489636	0.430085	0.381282	0.340812	0.306876	0.278124	0.253532	0.232318	0.213875	0.197727	0.183498	0.170884	0.159643
80	0.002829	0.253725	0.885285	1.45423	1.81093	1.98786	2.04476	2.02853	1.97029	1.8895	1.79804	1.70301	1.60862	1.51724	1.43017	1.34802	1.271	1.19907	1.13205	1.06968
81	1.21E-05	0.0077	0.05246	0.121191	0.185988	0.235476	0.268971	0.289358	0.299979	0.303665	0.302567	0.298251	2.92E-01	2.84E-01	2.76E-01	2.67E-01	2.58E-01	2.49E-01	2.40E-01	2.31E-01
82	1.99E-05	0.006415	0.034165	0.069538	0.098794	0.118754	0.130677	0.136684	0.138625	0.13788	1.35E-01	1.32E-01	1.28E-01	1.23E-01	1.19E-01	1.14E-01	1.10E-01	1.05E-01	1.01E-01	9.69E-02
83	0.41952	0.567789	0.483782	0.393179	0.321846	0.267812	0.226588	0.194589	0.169287	0.148926	0.132284	0.118489	0.106911	0.097088	0.088672	0.081397	0.07506	0.069501	0.064593	0.060234
84	0	0.00E+00	6.22E-11	4.39E-08	2.20E-06	2.92E-05	1.82E-04	7.02E-04	1.98E-03	0.004488	0.008664	0.014849	0.023231	3.38E-02	4.66E-02	6.13E-02	7.77E-02	9.55E-02	1.14E-01	1.34E-01
85	0.921318	1.66474	1.56271	1.33307	1.1233	0.952873	0.81729	0.709054	0.621718	0.550359	0.491326	0.441919	0.400124	0.364426	0.333666	0.306951	2.84E-01	2.63E-01	2.45E-01	2.29E-01
86	7.51E-04	0.085195	0.320239	0.547033	0.699017	0.782327	0.817528	0.822138	0.80829	0.78383	0.753696	0.720947	0.687459	0.654361	0.622313	0.591678	0.562636	0.53525	0.509515	0.48538
87	0.002367	0.063945	0.148999	0.200537	0.222255	0.22636	0.221254	0.211724	0.200355	0.188515	0.176907	0.165872	1.56E-01	1.46E-01	1.37E-01	1.29E-01	1.22E-01	1.15E-01	1.09E-01	1.03E-01
88	0.00E+00	8.34E-16	1.25E-16	6.04E-19	7.56E-22	4.87E-25	2.16E-28	7.60E-32	2.30E-35	6.31E-39	1.60E-42	3.86E-46	8.94E-50	2.00E-53	4.38E-57	9.41E-61	1.99E-64	4.15E-68	8.56E-72	1.75E-75
89	2.16476	1.67617	1.18563	0.87796	0.679642	0.544868	0.448893	0.377884	0.323681	0.281235	0.247279	0.219621	0.196745	0.177571	0.161314	0.147389	1.35E-01	1.25E-01	1.16E-01	1.08E-01
90	1.49E-11	4.18E-06	1.13E-04	3.07E-04	3.40E-04	2.42E-04	1.35E-04	6.46E-05	2.81E-05	1.15E-05	4.47E-06	1.68E-06	6.17E-07	2.22E-07	7.89E-08	2.77E-08	9.62E-09	3.32E-09	1.14E-09	3.89E-10
91	1.05112	1.15364	0.91749	0.720528	0.577827	0.474295	0.397395	0.338791	0.293068	0.256652	0.227126	0.202811	0.182515	0.165373	0.150743	0.138141	0.127194	0.117616	0.109179	0.101702
92	2.5369	1.43335	0.776494	0.44583	0.268931	0.168422	0.108548	0.071548	0.048015	0.032698	0.022541	0.0157	0.011031	0.00781	0.005567	0.003991	0.002876	2.08E-03	1.51E-03	1.10E-03
93	0.01602	1.05E-03	4.95E-05	2.31E-06	1.10E-07	5.40E-09	2.69E-10	1.37E-11	7.04E-13	3.67E-14	1.94E-15	1.03E-16	5.52E-18	2.98E-19	1.62E-20	8.83E-22	4.84E-23	2.67E-24	1.47E-25	8.18E-27
94	7.42E-06	4.29E-07	2.97E-09	1.29E-11	4.77E-14	1.65E-16	5.52E-19	1.82E-21	5.97E-24	1.95E-26	6.36E-29	2.08E-31	6.80E-34	2.23E-36	7.31E-39	2.41E-41	7.93E-44	2.62E-46	8.68E-49	2.88E-51
95	1.35E-06	0.001796	0.015429	0.039924	0.065532	0.086745	0.102266	0.112648	0.118942	0.122177	0.123198	0.122654	1.21E-01	1.19E-01	1.16E-01	1.13E-01	1.09E-01	1.06E-01	1.03E-01	9.93E-02
96	0.560882	0.55524	0.426296	0.328884	0.260938	0.212655	0.177265	0.150542	0.129835	0.113429	1.00E-01	8.93E-02	8.03E-02	7.26E-02	6.61E-02	6.06E-02	5.57E-02	5.15E-02	4.78E-02	4.45E-02
97	1.18593	0.958355	0.687157	0.512174	0.397973	0.319813	0.263901	0.2224	0.190648	0.165739	0.145784	0.129513	0.116042	0.104743	0.095157	0.086942	0.079839	0.073649	0.068215	0.063415
98	0.173653	0.217351	0.176743	0.138175	0.109146	0.087781	0.071846	0.059722	0.050309	0.042866	0.036886	0.032011	0.027987	2.46E-02	2.18E-02	1.94E-02	1.73E-02	1.56E-02	1.40E-02	1.27E-02
99	0.990761	0.694976	0.475429	0.346191	0.265298	0.211261	0.173213	0.145287	0.124099	0.107584	0.094421	0.083733	0.074915	0.067539	0.061298	5.60E-02	5.14E-02	4.73E-02	4.38E-02	4.07E-02
100	6.23E-05	8.41E-06	1.10E-07	8.54E-10	5.55E-12	3.34E-14	1.93E-16	1.10E-18	6.20E-21	3.48E-23	1.95E-25	1.09E-27	6.10E-30	3.42E-32	1.92E-34	1.08E-36	6.09E-39	3.44E-41	1.95E-43	1.10E-45
Max value	**5.64E+00**	**4.39E+00**	**4.13E+00**	**3.62E+00**	**3.06E+00**	**2.90E+00**	**2.72E+00**	**2.52E+00**	**2.31E+00**	**2.12E+00**	**2.18E+00**	**2.26E+00**	**2.30E+00**	**2.32E+00**	**2.32E+00**	**2.31E+00**	**2.28E+00**	**2.25E+00**	**2.21E+00**	**2.17E+00**
Average	0.49932	0.603982	0.572156	0.53165	0.493247	0.4576	0.424745	0.39467	0.36729	0.342451	0.319961	0.299606	0.281174	0.264464	0.249289	0.235481	0.22289	0.211381	0.200837	0.191154

210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420
0.126783	1.19E-01	1.13E-01	1.07E-01	1.01E-01	9.61E-02	9.14E-02	8.71E-02	8.32E-02	7.95E-02	7.60E-02	7.29E-02	6.99E-02	6.71E-02	6.45E-02	6.21E-02	5.98E-02	5.76E-02	5.56E-02	5.37E-02	5.19E-02	5.02E-02
0.17869	0.167169	0.156834	0.14752	0.139093	0.131438	0.12446	0.118078	0.112223	0.106837	0.101867	0.097271	0.093011	0.089052	0.085367	0.081928	0.078715	0.075706	0.072884	0.070233	0.067739	0.065389
7.39E-01	7.06E-01	6.75E-01	6.46E-01	6.19E-01	5.94E-01	5.70E-01	5.48E-01	5.27E-01	5.07E-01	4.88E-01	4.71E-01	4.54E-01	4.39E-01	4.24E-01	4.10E-01	3.97E-01	3.84E-01	3.72E-01	3.61E-01	3.50E-01	3.40E-01
2.10E-09	8.17E-10	3.18E-10	1.24E-10	4.86E-11	1.90E-11	7.48E-12	2.94E-12	1.16E-12	4.56E-13	1.80E-13	7.12E-14	2.82E-14	1.12E-14	4.43E-15	1.76E-15	6.99E-16	2.78E-16	1.11E-16	4.41E-17	1.76E-17	7.03E-18
1.47E-26	9.11E-28	5.65E-29	3.50E-30	2.17E-31	1.35E-32	8.37E-34	5.20E-35	3.23E-36	2.01E-37	1.25E-38	7.79E-40	4.85E-41	3.02E-42	1.89E-43	1.18E-44	7.34E-46	4.58E-47	2.86E-48	1.79E-49	1.12E-50	7.00E-52
2.63E-01	2.46E-01	2.31E-01	2.17E-01	2.05E-01	1.93E-01	1.83E-01	1.74E-01	1.65E-01	1.57E-01	1.50E-01	1.43E-01	1.37E-01	1.31E-01	1.26E-01	1.20E-01	1.16E-01	1.11E-01	1.07E-01	1.03E-01	9.96E-02	9.61E-02
3.52E-01	3.45E-01	3.37E-01	3.29E-01	3.21E-01	3.14E-01	3.06E-01	2.98E-01	2.91E-01	2.84E-01	2.77E-01	2.70E-01	2.63E-01	2.57E-01	2.50E-01	2.44E-01	2.38E-01	2.33E-01	2.27E-01	2.22E-01	2.17E-01	2.12E-01
9.55E-02	8.95E-02	8.42E-02	7.93E-02	7.49E-02	7.09E-02	6.73E-02	6.39E-02	6.08E-02	5.80E-02	5.53E-02	5.29E-02	5.06E-02	4.85E-02	4.66E-02	4.47E-02	4.30E-02	4.14E-02	3.99E-02	3.84E-02	3.71E-02	3.58E-02
0.079727	0.074522	0.06985	0.065638	0.061825	0.058361	0.055202	0.052313	0.049662	0.047222	0.044972	0.042891	0.040961	0.039169	0.037501	0.035944	0.03449	0.033128	0.031851	0.030652	0.029524	2.85E-02
4.34E-26	2.77E-27	1.76E-28	1.12E-29	7.14E-31	4.55E-32	2.90E-33	1.85E-34	1.18E-35	7.49E-37	4.78E-38	3.05E-39	1.94E-40	1.24E-41	7.92E-43	5.06E-44	3.23E-45	2.06E-46	1.32E-47	8.44E-49	5.40E-50	3.46E-51
0.00294	0.002706	0.002465	0.002226	0.001994	1.77E-03	1.57E-03	1.38E-03	1.21E-03	1.05E-03	9.16E-04	7.93E-04	6.85E-04	5.90E-04	5.07E-04	4.35E-04	3.72E-04	3.18E-04	2.71E-04	2.31E-04	1.96E-04	1.67E-04
7.68E-02	7.25E-02	6.85E-02	6.48E-02	6.14E-02	5.83E-02	5.54E-02	5.27E-02	5.01E-02	4.78E-02	4.56E-02	4.36E-02	4.17E-02	3.99E-02	3.82E-02	3.67E-02	3.52E-02	3.38E-02	3.25E-02	3.12E-02	3.00E-02	2.89E-02
0.048613	0.04316	0.038395	0.034219	0.03055	0.027319	0.024467	0.021944	0.019709	0.017724	1.60E-02	1.44E-02	1.30E-02	1.17E-02	1.06E-02	9.60E-03	8.69E-03	7.88E-03	7.15E-03	6.50E-03	5.90E-03	5.37E-03
2.09E-01	1.96E-01	1.84E-01	1.74E-01	1.65E-01	1.56E-01	1.48E-01	1.41E-01	1.34E-01	1.28E-01	1.22E-01	1.17E-01	1.12E-01	1.07E-01	1.03E-01	9.88E-02	9.50E-02	9.15E-02	8.82E-02	8.50E-02	8.21E-02	7.93E-02
1.22E-01	1.14E-01	1.08E-01	1.02E-01	9.61E-02	9.11E-02	8.65E-02	8.23E-02	7.83E-02	7.47E-02	7.14E-02	6.83E-02	6.54E-02	6.27E-02	6.02E-02	5.79E-02	5.57E-02	5.36E-02	5.16E-02	4.98E-02	4.81E-02	4.65E-02
0.478034	0.457227	0.437721	0.419432	0.402275	0.386169	0.371038	0.35681	3.43E-01	3.31E-01	3.19E-01	3.08E-01	2.97E-01	2.87E-01	2.78E-01	2.69E-01	2.60E-01	2.52E-01	2.44E-01	2.37E-01	2.30E-01	2.23E-01
0.246779	0.234142	0.222493	0.211736	0.201781	0.192551	0.183978	0.176	0.168563	0.161618	0.155123	0.149037	0.143328	0.137964	0.132917	0.128161	0.123675	0.119437	0.11543	0.111635	0.108039	0.104627
1.85E-01	1.75E-01	1.65E-01	1.57E-01	1.49E-01	1.41E-01	1.35E-01	1.28E-01	1.23E-01	1.17E-01	1.12E-01	1.08E-01	1.03E-01	9.93E-02	9.55E-02	9.20E-02	8.86E-02	8.55E-02	8.25E-02	7.97E-02	7.71E-02	7.46E-02
2.12249	2.0751	2.02676	1.97807	1.92949	1.88137	1.83397	1.78748	1.74E+00	1.70E+00	1.65E+00	1.61E+00	1.57E+00	1.53E+00	1.49E+00	1.46E+00	1.42E+00	1.39E+00	1.35E+00	1.32E+00	1.29E+00	1.26E+00
1.15E-23	8.87E-25	6.82E-26	5.26E-27	4.06E-28	3.14E-29	2.44E-30	1.89E-31	1.47E-32	1.14E-33	8.89E-35	6.93E-36	5.41E-37	4.23E-38	3.31E-39	2.59E-40	2.03E-41	1.59E-42	1.25E-43	9.80E-45	7.70E-46	6.06E-47
2.94E-01	2.80E-01	2.67E-01	2.54E-01	2.43E-01	2.32E-01	2.23E-01	2.13E-01	2.05E-01	1.97E-01	1.89E-01	1.82E-01	1.75E-01	1.69E-01	1.63E-01	1.58E-01	1.52E-01	1.47E-01	1.42E-01	1.38E-01	1.34E-01	1.30E-01
1.46E-01	1.45E-01	1.43E-01	1.40E-01	1.38E-01	1.35E-01	1.33E-01	1.30E-01	1.27E-01	1.24E-01	1.21E-01	1.18E-01	1.15E-01	1.13E-01	1.10E-01	1.07E-01	1.04E-01	1.02E-01	9.93E-02	9.68E-02	9.43E-02	9.20E-02
1.94E-44	1.69E-46	1.47E-48	1.29E-50	1.13E-52	9.96E-55	8.78E-57	7.75E-59	6.85E-61	6.07E-63	5.38E-65	4.78E-67	4.25E-69	3.79E-71	3.38E-73	3.02E-75	2.70E-77	2.41E-79	2.16E-81	1.94E-83	1.74E-85	1.56E-87
0.097613	0.091257	0.085554	0.080415	0.075764	0.071539	0.067688	0.064166	0.060935	0.057962	0.05522	0.052684	0.050334	0.04815	0.046118	0.044222	0.04245	0.040791	0.039236	0.037775	0.036401	0.035106
8.80E-41	1.20E-42	1.64E-44	2.25E-46	3.10E-48	4.27E-50	5.89E-52	8.15E-54	1.13E-55	1.57E-57	2.18E-59	3.03E-61	4.22E-63	5.88E-65	8.21E-67	1.15E-68	1.61E-70	2.25E-72	3.16E-74	4.43E-76	6.22E-78	8.75E-80
9.93E-02	1.04E-01	1.08E-01	1.12E-01	1.15E-01	1.18E-01	1.21E-01	1.23E-01	1.24E-01	1.26E-01	1.27E-01	1.28E-01	1.28E-01	1.29E-01	1.29E-01	1.29E-01	1.29E-01	1.29E-01	1.29E-01	1.28E-01	1.28E-01	1.27E-01
0.091883	0.087617	0.083641	0.079932	7.65E-02	7.32E-02	7.02E-02	6.74E-02	6.47E-02	6.22E-02	5.99E-02	5.76E-02	5.56E-02	5.36E-02	5.17E-02	5.00E-02	4.83E-02	4.67E-02	4.52E-02	4.38E-02	4.25E-02	4.12E-02
7.85E-02	7.55E-02	7.26E-02	6.99E-02	6.73E-02	6.49E-02	6.26E-02	6.04E-02	5.83E-02	5.63E-02	5.44E-02	5.26E-02	5.09E-02	4.93E-02	4.78E-02	4.63E-02	4.49E-02	4.36E-02	4.23E-02	4.11E-02	4.00E-02	3.89E-02
0.169758	1.61E-01	1.54E-01	1.47E-01	1.40E-01	1.34E-01	1.28E-01	1.23E-01	1.18E-01	1.13E-01	1.09E-01	1.05E-01	1.01E-01	9.71E-02	9.37E-02	9.05E-02	8.74E-02	8.45E-02	8.18E-02	7.92E-02	7.67E-02	7.44E-02
0.112778	0.105868	0.099634	0.093986	0.08885	0.084164	0.079875	0.075937	0.072311	0.068965	0.065868	0.062995	0.060325	0.057838	0.055517	5.33E-02	5.13E-02	4.94E-02	4.76E-02	4.59E-02	4.43E-02	4.28E-02
5.94E-02	5.62E-02	5.32E-02	5.05E-02	4.79E-02	4.56E-02	4.35E-02	4.15E-02	3.97E-02	3.80E-02	3.64E-02	3.49E-02	3.35E-02	3.23E-02	3.10E-02	2.99E-02	2.88E-02	2.78E-02	2.69E-02	2.60E-02	2.51E-02	2.43E-02
8.21E-02	7.68E-02	7.21E-02	6.79E-02	6.40E-02	6.05E-02	5.73E-02	5.44E-02	5.17E-02	4.93E-02	4.70E-02	4.49E-02	4.29E-02	4.11E-02	3.94E-02	3.78E-02	3.63E-02	3.50E-02	3.37E-02	3.24E-02	3.13E-02	3.02E-02
1.14E-01	1.07E-01	1.01E-01	9.59E-02	9.10E-02	8.64E-02	8.23E-02	7.84E-02	7.49E-02	7.16E-02	6.85E-02	6.57E-02	6.30E-02	6.05E-02	5.82E-02	5.60E-02	5.39E-02	5.20E-02	5.02E-02	4.85E-02	4.69E-02	4.53E-02
0.417773	3.92E-01	3.69E-01	3.48E-01	3.29E-01	3.12E-01	2.96E-01	2.81E-01	2.68E-01	2.56E-01	2.44E-01	2.33E-01	2.24E-01	2.14E-01	2.06E-01	1.98E-01	1.90E-01	1.83E-01	1.76E-01	1.70E-01	1.64E-01	1.59E-01
1.91E-64	1.96E-67	2.00E-70	2.04E-73	2.09E-76	2.13E-79	2.17E-82	2.21E-85	2.26E-88	2.30E-91	2.35E-94	2.39E-97	########	########	########	########	########	########	########	########	########	########
0.147994	0.138402	0.129768	0.121964	1.15E-01	1.08E-01	1.03E-01	9.71E-02	9.22E-02	8.76E-02	8.34E-02	7.95E-02	7.59E-02	7.25E-02	6.94E-02	6.64E-02	6.37E-02	6.11E-02	5.87E-02	5.64E-02	5.43E-02	5.23E-02
1.19E-01	1.25E-01	1.31E-01	1.36E-01	1.41E-01	1.45E-01	1.48E-01	1.51E-01	1.54E-01	1.56E-01	1.58E-01	1.59E-01	1.61E-01	1.61E-01	1.62E-01	1.62E-01	1.63E-01	1.63E-01	1.63E-01	1.62E-01	1.62E-01	1.61E-01
7.71E-01	7.39E-01	7.08E-01	6.80E-01	6.53E-01	6.28E-01	6.04E-01	5.81E-01	5.60E-01	5.40E-01	5.21E-01	5.03E-01	4.86E-01	4.70E-01	4.55E-01	4.40E-01	4.27E-01	4.13E-01	4.01E-01	3.89E-01	3.78E-01	3.67E-01
4.41E-02	4.14E-02	3.90E-02	3.69E-02	3.49E-02	3.31E-02	3.14E-02	2.99E-02	2.85E-02	2.72E-02	2.60E-02	2.49E-02	2.38E-02	2.29E-02	2.20E-02	2.11E-02	2.03E-02	1.96E-02	1.89E-02	1.82E-02	1.76E-02	1.70E-02
1.16452	1.12162	1.08063	1.04153	1.00431	0.968886	0.935206	0.903187	0.87275	0.843812	0.816293	0.790115	7.65E-01	7.41E-01	7.19E-01	6.97E-01	6.77E-01	6.57E-01	6.38E-01	6.21E-01	6.03E-01	5.87E-01
0.050427	0.047316	0.044511	0.041972	0.039664	0.03756	0.035635	0.033869	0.032243	0.030743	0.029356	0.02807	0.026874	0.025761	0.024723	2.38E-02	2.28E-02	2.20E-02	2.12E-02	2.04E-02	1.97E-02	1.91E-02
1.66E-01	1.59E-01	1.52E-01	1.45E-01	1.40E-01	1.34E-01	1.29E-01	1.24E-01	1.19E-01	1.15E-01	1.11E-01	1.07E-01	1.03E-01	9.95E-02	9.62E-02	9.30E-02	9.01E-02	8.73E-02	8.46E-02	8.20E-02	7.96E-02	7.73E-02
9.92E-03	9.01E-03	8.16E-03	7.38E-03	6.67E-03	6.01E-03	5.42E-03	4.88E-03	4.39E-03	3.94E-03	3.54E-03	3.18E-03	2.86E-03	2.57E-03	2.30E-03	2.07E-03	1.86E-03	1.67E-03	1.50E-03	1.34E-03	1.20E-03	1.08E-03
2.28E-01	2.15E-01	2.03E-01	1.93E-01	1.83E-01	1.74E-01	1.66E-01	1.58E-01	1.51E-01	1.44E-01	1.38E-01	1.33E-01	1.27E-01	1.22E-01	1.18E-01	1.13E-01	1.09E-01	1.05E-01	1.02E-01	9.82E-02	9.49E-02	9.19E-02
0.053802	0.050476	0.047478	0.044764	0.042299	0.040052	0.037996	0.03611	0.034375	0.032774	0.031293	2.99E-02	2.86E-02	2.75E-02	2.64E-02	2.53E-02	2.43E-02	2.34E-02	2.26E-02	2.18E-02	2.10E-02	2.03E-02
7.59E-02	7.22E-02	6.88E-02	6.56E-02	6.27E-02	5.99E-02	5.73E-02	5.50E-02	5.27E-02	5.06E-02	4.87E-02	4.69E-02	4.51E-02	4.35E-02	4.20E-02	4.05E-02	3.92E-02	3.79E-02	3.66E-02	3.55E-02	3.44E-02	3.33E-02
7.53E-02	7.06E-02	6.63E-02	6.24E-02	5.89E-02	5.57E-02	5.28E-02	5.01E-02	4.77E-02	4.54E-02	4.34E-02	4.14E-02	3.96E-02	3.80E-02	3.64E-02	3.50E-02	3.36E-02	3.23E-02	3.11E-02	3.00E-02	2.90E-02	2.80E-02
4.27E-01	3.92E-01	3.60E-01	3.32E-01	3.06E-01	2.83E-01	2.62E-01	2.43E-01	2.26E-01	2.10E-01	1.96E-01	1.83E-01	1.71E-01	1.60E-01	1.49E-01	1.40E-01	1.31E-01	1.23E-01	1.16E-01	1.09E-01	1.03E-01	9.68E-02
1.58E-01	1.48E-01	1.39E-01	1.31E-01	1.24E-01	1.17E-01	1.11E-01	1.06E-01	1.01E-01	9.60E-02	9.16E-02	8.76E-02	8.38E-02	8.04E-02	7.71E-02	7.41E-02	7.12E-02	6.85E-02	6.60E-02	6.37E-02	6.15E-02	5.94E-02
0.114708	0.10756	1.01E-01	9.53E-02	9.00E-02	8.52E-02	8.08E-02	7.68E-02	7.31E-02	6.96E-02	6.65E-02	6.35E-02	6.08E-02	5.83E-02	5.59E-02	5.37E-02	5.16E-02	4.97E-02	4.79E-02	4.62E-02	4.46E-02	4.30E-02

3.68E-13	9.31E-14	2.36E-14	6.02E-15	1.54E-15	3.93E-16	1.01E-16	2.58E-17	6.64E-18	1.71E-18	4.41E-19	1.14E-19	2.95E-20	7.63E-21	1.98E-21	5.13E-22	1.33E-22	3.47E-23	9.03E-24	2.35E-24	6.14E-25	1.60E-25
3.45E-01	3.25E-01	3.06E-01	2.90E-01	2.74E-01	2.60E-01	2.47E-01	2.35E-01	2.24E-01	2.14E-01	2.05E-01	1.96E-01	1.88E-01	1.80E-01	1.73E-01	1.67E-01	1.60E-01	1.55E-01	1.49E-01	1.44E-01	1.39E-01	1.34E-01
0.25015	0.23288	0.217379	0.203408	0.190767	0.179288	0.168829	0.15927	0.150507	0.142453	0.135032	0.128177	1.22E-01	1.16E-01	1.10E-01	1.05E-01	1.01E-01	9.62E-02	9.20E-02	8.81E-02	8.45E-02	8.10E-02
2.41E-02	2.29E-02	2.18E-02	2.08E-02	1.98E-02	1.90E-02	1.81E-02	1.74E-02	1.67E-02	1.60E-02	1.54E-02	1.48E-02	1.42E-02	1.37E-02	1.32E-02	1.28E-02	1.23E-02	1.19E-02	1.15E-02	1.12E-02	1.08E-02	1.05E-02
1.11E-02	9.52E-03	8.16E-03	7.01E-03	6.03E-03	5.19E-03	4.48E-03	3.87E-03	3.35E-03	2.90E-03	2.52E-03	2.19E-03	1.90E-03	1.65E-03	1.44E-03	1.25E-03	1.09E-03	9.55E-04	8.35E-04	7.30E-04	6.39E-04	5.59E-04
0.235647	0.222051	0.209701	0.198444	0.188151	0.178711	0.170029	0.162024	0.154624	1.48E-01	1.41E-01	1.35E-01	1.30E-01	1.25E-01	1.20E-01	1.15E-01	1.11E-01	1.07E-01	1.03E-01	9.99E-02	9.65E-02	9.34E-02
3.68E-01	3.55E-01	3.42E-01	3.29E-01	3.17E-01	3.06E-01	2.95E-01	2.85E-01	2.75E-01	2.66E-01	2.58E-01	2.49E-01	2.41E-01	2.34E-01	2.27E-01	2.20E-01	2.13E-01	2.07E-01	2.01E-01	1.96E-01	1.90E-01	1.85E-01
1.07E-02	8.83E-03	7.29E-03	6.02E-03	4.98E-03	4.12E-03	3.41E-03	2.83E-03	2.34E-03	1.94E-03	1.61E-03	1.34E-03	1.11E-03	9.27E-04	7.72E-04	6.42E-04	5.35E-04	4.46E-04	3.72E-04	3.11E-04	2.59E-04	2.17E-04
8.89E-01	8.30E-01	7.77E-01	7.29E-01	6.84E-01	6.44E-01	6.06E-01	5.71E-01	5.39E-01	5.10E-01	4.82E-01	4.57E-01	4.33E-01	4.11E-01	3.90E-01	3.71E-01	3.53E-01	3.36E-01	3.20E-01	3.05E-01	2.91E-01	2.78E-01
0.117515	0.110484	0.104124	9.83E-02	9.31E-02	8.83E-02	8.39E-02	7.98E-02	7.61E-02	7.26E-02	6.94E-02	6.64E-02	6.36E-02	6.11E-02	5.86E-02	5.64E-02	5.43E-02	5.23E-02	5.04E-02	4.86E-02	4.70E-02	4.54E-02
0.163618	0.169011	0.173556	0.17733	0.180404	0.182848	0.184727	0.186101	0.187026	0.187553	0.187727	0.18759	0.187178	0.186527	0.185665	0.184619	0.183415	0.182072	0.180611	0.179048	0.177399	0.175677
0.108675	0.09997	0.092045	8.48E-02	7.82E-02	7.22E-02	6.68E-02	6.17E-02	5.71E-02	5.29E-02	4.91E-02	4.55E-02	4.23E-02	3.93E-02	3.65E-02	3.40E-02	3.17E-02	2.95E-02	2.75E-02	2.57E-02	2.40E-02	2.24E-02
1.09E-01	9.77E-02	8.82E-02	7.98E-02	7.24E-02	6.58E-02	5.99E-02	5.47E-02	5.00E-02	4.58E-02	4.20E-02	3.85E-02	3.54E-02	3.26E-02	3.01E-02	2.77E-02	2.56E-02	2.37E-02	2.19E-02	2.03E-02	1.88E-02	1.75E-02
4.75E-02	4.45E-02	4.18E-02	3.94E-02	3.72E-02	3.52E-02	3.33E-02	3.17E-02	3.01E-02	2.87E-02	2.74E-02	2.62E-02	2.50E-02	2.40E-02	2.30E-02	2.21E-02	2.12E-02	2.04E-02	1.97E-02	1.90E-02	1.83E-02	1.77E-02
4.92E-48	2.84E-50	1.64E-52	9.51E-55	5.51E-57	3.19E-59	1.85E-61	1.07E-63	6.24E-66	3.63E-68	2.11E-70	1.23E-72	7.16E-75	4.18E-77	2.44E-79	1.42E-81	8.31E-84	4.85E-86	2.84E-88	1.66E-90	9.72E-93	5.70E-95
8.17E-04	5.94E-04	4.34E-04	3.17E-04	2.32E-04	1.70E-04	1.25E-04	9.24E-05	6.82E-05	5.04E-05	3.73E-05	2.76E-05	2.05E-05	1.52E-05	1.13E-05	8.45E-06	6.30E-06	4.70E-06	3.51E-06	2.62E-06	1.96E-06	1.47E-06
2.54E-65	2.15E-68	1.82E-71	1.55E-74	1.32E-77	1.12E-80	9.56E-84	8.16E-87	6.97E-90	5.97E-93	5.11E-96	4.39E-99	########	########	########	########	########	########	########	########	########	########
6.07E-02	5.68E-02	5.34E-02	5.03E-02	4.74E-02	4.48E-02	4.25E-02	4.03E-02	3.84E-02	3.65E-02	3.49E-02	3.33E-02	3.19E-02	3.05E-02	2.93E-02	2.81E-02	2.70E-02	2.60E-02	2.50E-02	2.41E-02	2.33E-02	2.25E-02
0.065401	0.061921	5.87E-02	5.58E-02	5.31E-02	5.06E-02	4.83E-02	4.61E-02	4.41E-02	4.23E-02	4.05E-02	3.89E-02	3.74E-02	3.60E-02	3.46E-02	3.34E-02	3.22E-02	3.10E-02	3.00E-02	2.90E-02	2.80E-02	2.71E-02
4.74E-11	1.56E-11	5.13E-12	1.69E-12	5.59E-13	1.85E-13	6.13E-14	2.03E-14	6.76E-15	2.25E-15	7.49E-16	2.50E-16	8.34E-17	2.79E-17	9.32E-18	3.12E-18	1.05E-18	3.51E-19	1.18E-19	3.96E-20	1.33E-20	4.48E-21
0.555028	0.53358	5.13E-01	4.94E-01	4.76E-01	4.58E-01	4.42E-01	4.26E-01	4.11E-01	3.97E-01	3.84E-01	3.71E-01	3.59E-01	3.48E-01	3.37E-01	3.27E-01	3.17E-01	3.07E-01	2.99E-01	2.90E-01	2.82E-01	2.74E-01
0.14515	0.138089	0.131551	0.125489	1.20E-01	1.15E-01	1.10E-01	1.05E-01	1.01E-01	9.69E-02	9.32E-02	8.97E-02	8.64E-02	8.33E-02	8.04E-02	7.76E-02	7.50E-02	7.25E-02	7.02E-02	6.80E-02	6.59E-02	6.39E-02
6.13E-02	5.80E-02	5.49E-02	5.20E-02	4.94E-02	4.71E-02	4.48E-02	4.28E-02	4.09E-02	3.92E-02	3.75E-02	3.60E-02	3.46E-02	3.32E-02	3.20E-02	3.08E-02	2.97E-02	2.86E-02	2.77E-02	2.67E-02	2.59E-02	2.50E-02
6.82E-24	5.47E-25	4.39E-26	3.53E-27	2.83E-28	2.28E-29	1.84E-30	1.48E-31	1.19E-32	9.63E-34	7.78E-35	6.29E-36	5.09E-37	4.12E-38	3.33E-39	2.70E-40	2.19E-41	1.78E-42	1.44E-43	1.17E-44	9.53E-46	7.75E-47
2.94E-02	2.70E-02	2.49E-02	2.29E-02	2.12E-02	1.97E-02	1.83E-02	1.70E-02	1.58E-02	1.48E-02	1.38E-02	1.29E-02	1.21E-02	1.14E-02	1.07E-02	1.01E-02	9.47E-03	8.93E-03	8.42E-03	7.96E-03	7.52E-03	7.12E-03
9.11E-01	8.69E-01	8.31E-01	7.95E-01	7.61E-01	7.30E-01	7.01E-01	6.73E-01	6.47E-01	6.23E-01	6.00E-01	5.78E-01	5.58E-01	5.38E-01	5.20E-01	5.03E-01	4.87E-01	4.71E-01	4.56E-01	4.43E-01	4.29E-01	4.17E-01
5.38E-12	1.63E-12	4.98E-13	1.52E-13	4.63E-14	1.42E-14	4.34E-15	1.33E-15	4.08E-16	1.25E-16	3.85E-17	1.18E-17	3.65E-18	1.13E-18	3.47E-19	1.07E-19	3.31E-20	1.03E-20	3.17E-21	9.83E-22	3.05E-22	9.45E-23
1.16E-01	1.10E-01	1.05E-01	1.00E-01	9.55E-02	9.13E-02	8.74E-02	8.37E-02	8.03E-02	7.71E-02	7.41E-02	7.13E-02	6.87E-02	6.62E-02	6.39E-02	6.17E-02	5.96E-02	5.76E-02	5.57E-02	5.40E-02	5.23E-02	5.07E-02
0.149576	0.140519	0.132335	0.124913	1.18E-01	1.12E-01	1.06E-01	1.01E-01	9.64E-02	9.19E-02	8.78E-02	8.40E-02	8.05E-02	7.72E-02	7.41E-02	7.13E-02	6.86E-02	6.60E-02	6.37E-02	6.14E-02	5.93E-02	5.73E-02
1.01168	0.957729	0.907539	0.860815	0.817284	0.776691	0.738801	0.703396	0.670277	0.639264	0.610189	0.582903	0.557268	0.533158	0.510459	0.489067	0.468885	0.449828	0.431816	0.414775	0.398639	0.383347
2.23E-01	2.15E-01	2.07E-01	2.00E-01	1.93E-01	1.86E-01	1.80E-01	1.74E-01	1.68E-01	1.63E-01	1.57E-01	1.52E-01	1.48E-01	1.43E-01	1.39E-01	1.35E-01	1.31E-01	1.27E-01	1.23E-01	1.20E-01	1.17E-01	1.14E-01
9.31E-02	8.94E-02	8.60E-02	8.27E-02	7.96E-02	7.66E-02	7.38E-02	7.12E-02	6.87E-02	6.63E-02	6.41E-02	6.20E-02	5.99E-02	5.80E-02	5.62E-02	5.45E-02	5.28E-02	5.12E-02	4.97E-02	4.83E-02	4.70E-02	4.57E-02
0.056342	0.052851	0.049705	0.046859	0.044273	0.041917	0.039761	3.78E-02	3.60E-02	3.43E-02	3.27E-02	3.13E-02	3.00E-02	2.87E-02	2.76E-02	2.65E-02	2.55E-02	2.45E-02	2.36E-02	2.28E-02	2.20E-02	2.12E-02
1.54E-01	1.75E-01	1.95E-01	2.15E-01	2.35E-01	2.55E-01	2.74E-01	2.92E-01	3.09E-01	3.26E-01	3.42E-01	3.57E-01	3.71E-01	3.85E-01	3.97E-01	4.09E-01	4.20E-01	4.31E-01	4.40E-01	4.49E-01	4.57E-01	4.65E-01
2.14E-01	2.01E-01	1.89E-01	1.78E-01	1.69E-01	1.60E-01	1.52E-01	1.44E-01	1.37E-01	1.31E-01	1.25E-01	1.20E-01	1.15E-01	1.10E-01	1.05E-01	1.01E-01	9.74E-02	9.38E-02	9.04E-02	8.72E-02	8.41E-02	8.13E-02
0.462772	0.441604	0.421787	0.403228	0.385838	0.369532	0.354231	0.339859	0.326347	0.313631	0.301653	0.290357	0.279695	0.26962	0.260092	0.25107	0.242521	0.234411	0.226712	0.219395	0.212437	0.205812
9.77E-02	9.28E-02	8.83E-02	8.41E-02	8.03E-02	7.67E-02	7.34E-02	7.02E-02	6.73E-02	6.46E-02	6.21E-02	5.97E-02	5.75E-02	5.53E-02	5.34E-02	5.15E-02	4.97E-02	4.81E-02	4.65E-02	4.50E-02	4.36E-02	4.22E-02
3.56E-79	7.18E-83	1.44E-86	2.89E-90	5.75E-94	1.14E-97	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.00E-01	9.39E-02	8.81E-02	8.29E-02	7.82E-02	7.39E-02	7.00E-02	6.64E-02	6.31E-02	6.01E-02	5.73E-02	5.47E-02	5.23E-02	5.01E-02	4.80E-02	4.61E-02	4.43E-02	4.26E-02	4.10E-02	3.95E-02	3.81E-02	3.68E-02
1.32E-10	4.49E-11	1.52E-11	5.12E-12	1.72E-12	5.80E-13	1.95E-13	6.53E-14	2.19E-14	7.33E-15	2.46E-15	8.21E-16	2.75E-16	9.19E-17	3.07E-17	1.03E-17	3.43E-18	1.15E-18	3.83E-19	1.28E-19	4.27E-20	1.43E-20
0.095038	0.089071	0.083701	0.078849	0.074447	0.070439	0.066778	6.34E-02	6.03E-02	5.75E-02	5.49E-02	5.24E-02	5.02E-02	4.81E-02	4.61E-02	4.43E-02	4.26E-02	4.10E-02	3.95E-02	3.81E-02	3.67E-02	3.55E-02
8.08E-04	5.94E-04	4.37E-04	3.23E-04	2.39E-04	1.77E-04	1.32E-04	9.82E-05	7.33E-05	5.47E-05	4.10E-05	3.07E-05	2.31E-05	1.73E-05	1.30E-05	9.83E-06	7.41E-06	5.60E-06	4.23E-06	3.20E-06	2.42E-06	1.84E-06
4.55E-28	2.54E-29	1.42E-30	7.98E-32	4.49E-33	2.53E-34	1.43E-35	8.08E-37	4.58E-38	2.60E-39	1.48E-40	8.41E-42	4.79E-43	2.74E-44	1.56E-45	8.94E-47	5.12E-48	2.93E-49	1.68E-50	9.67E-52	5.56E-53	3.20E-54
9.56E-54	3.18E-56	1.06E-58	3.54E-61	1.18E-63	3.97E-66	1.33E-68	4.47E-71	1.50E-73	5.05E-76	1.70E-78	5.74E-81	1.94E-83	6.55E-86	2.21E-88	7.50E-91	2.54E-93	8.61E-96	2.92E-98	########	########	########
9.60E-02	9.28E-02	8.98E-02	8.68E-02	8.39E-02	8.12E-02	7.86E-02	7.60E-02	7.36E-02	7.13E-02	6.91E-02	6.70E-02	6.50E-02	6.31E-02	6.13E-02	5.95E-02	5.79E-02	5.62E-02	5.47E-02	5.32E-02	5.18E-02	5.05E-02
4.15E-02	3.89E-02	3.65E-02	3.44E-02	3.25E-02	3.07E-02	2.91E-02	2.76E-02	2.63E-02	2.50E-02	2.39E-02	2.28E-02	2.18E-02	2.09E-02	2.01E-02	1.93E-02	1.85E-02	1.78E-02	1.72E-02	1.65E-02	1.60E-02	1.54E-02
0.05915	0.05534	0.051921	0.048837	0.046046	0.043509	0.041196	0.039079	0.037137	0.035349	3.37E-02	3.22E-02	3.08E-02	2.94E-02	2.82E-02	2.71E-02	2.60E-02	2.50E-02	2.41E-02	2.32E-02	2.24E-02	2.16E-02
1.15E-02	1.04E-02	9.52E-03	8.70E-03	7.97E-03	7.32E-03	6.73E-03	6.20E-03	5.72E-03	5.29E-03	4.89E-03	4.54E-03	4.21E-03	3.91E-03	3.64E-03	3.39E-03	3.16E-03	2.95E-03	2.76E-03	2.58E-03	2.41E-03	2.26E-03
3.80E-02	3.55E-02	3.33E-02	3.13E-02	2.95E-02	2.79E-02	2.64E-02	2.51E-02	2.38E-02	2.27E-02	2.16E-02	2.06E-02	1.97E-02	1.89E-02	1.81E-02	1.74E-02	1.67E-02	1.61E-02	1.55E-02	1.49E-02	1.44E-02	1.39E-02
6.26E-48	3.56E-50	2.03E-52	1.15E-54	6.59E-57	3.77E-59	2.16E-61	1.24E-63	7.10E-66	4.08E-68	2.34E-70	1.35E-72	7.78E-75	4.49E-77	2.59E-79	1.50E-81	8.65E-84	5.00E-86	2.90E-88	1.68E-90	9.73E-93	5.65E-95
2.12E+00	**2.08E+00**	**2.03E+00**	**1.98E+00**	**1.93E+00**	**1.88E+00**	**1.83E+00**	**1.79E+00**	**1.74E+00**	**1.70E+00**	**1.65E+00**	**1.61E+00**	**1.57E+00**	**1.53E+00**	**1.49E+00**	**1.46E+00**	**1.42E+00**	**1.39E+00**	**1.35E+00**	**1.32E+00**	**1.29E+00**	**1.26E+00**
0.182241	0.174018	0.166413	0.159364	0.152818	0.146725	0.141043	0.135734	0.130764	0.126104	0.121726	0.117608	0.113726	0.110064	0.106602	0.103326	0.100222	0.097277	0.094479	0.091819	0.089286	0.086872

430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640
4.86E-02	4.71E-02	4.56E-02	4.42E-02	4.29E-02	4.17E-02	4.05E-02	3.93E-02	3.83E-02	3.72E-02	3.62E-02	3.53E-02	3.44E-02	3.35E-02	3.27E-02	3.19E-02	3.11E-02	3.04E-02	2.97E-02	2.90E-02	2.84E-02	2.77E-02
6.32E-02	6.11E-02	5.91E-02	5.72E-02	5.54E-02	5.38E-02	5.21E-02	5.06E-02	4.92E-02	4.78E-02	4.65E-02	4.52E-02	4.40E-02	4.28E-02	4.17E-02	4.07E-02	3.97E-02	3.87E-02	3.78E-02	3.69E-02	3.60E-02	3.52E-02
3.30E-01	3.21E-01	3.12E-01	3.03E-01	2.95E-01	2.88E-01	2.80E-01	2.73E-01	2.66E-01	2.60E-01	2.53E-01	2.47E-01	2.41E-01	2.36E-01	2.30E-01	2.25E-01	2.20E-01	2.15E-01	2.11E-01	2.06E-01	2.02E-01	1.98E-01
2.81E-18	1.12E-18	4.49E-19	1.80E-19	7.19E-20	2.88E-20	1.16E-20	4.63E-21	1.86E-21	7.47E-22	3.00E-22	1.21E-22	4.85E-23	1.95E-23	7.85E-24	3.16E-24	1.27E-24	5.13E-25	2.07E-25	8.34E-26	3.36E-26	1.36E-26
4.38E-53	2.74E-54	1.72E-55	1.08E-56	6.75E-58	4.24E-59	2.66E-60	1.67E-61	1.05E-62	6.58E-64	4.13E-65	2.60E-66	1.63E-67	1.03E-68	6.46E-70	4.06E-71	2.56E-72	1.61E-73	1.01E-74	6.39E-76	4.02E-77	2.54E-78
9.28E-02	8.97E-02	8.68E-02	8.40E-02	8.14E-02	7.89E-02	7.66E-02	7.43E-02	7.22E-02	7.01E-02	6.82E-02	6.63E-02	6.45E-02	6.28E-02	6.12E-02	5.96E-02	5.81E-02	5.67E-02	5.53E-02	5.40E-02	5.27E-02	5.15E-02
2.07E-01	2.02E-01	1.98E-01	1.94E-01	1.89E-01	1.85E-01	1.81E-01	1.78E-01	1.74E-01	1.70E-01	1.67E-01	1.64E-01	1.60E-01	1.57E-01	1.54E-01	1.51E-01	1.48E-01	1.46E-01	1.43E-01	1.40E-01	1.38E-01	1.35E-01
3.46E-02	3.35E-02	3.24E-02	3.14E-02	3.05E-02	2.96E-02	2.87E-02	2.79E-02	2.71E-02	2.63E-02	2.56E-02	2.49E-02	2.43E-02	2.36E-02	2.30E-02	2.24E-02	2.19E-02	2.14E-02	2.09E-02	2.04E-02	1.99E-02	1.94E-02
2.75E-02	2.65E-02	2.56E-02	2.48E-02	2.40E-02	2.32E-02	2.25E-02	2.18E-02	2.11E-02	2.05E-02	1.99E-02	1.93E-02	1.88E-02	1.83E-02	1.78E-02	1.73E-02	1.69E-02	1.64E-02	1.60E-02	1.56E-02	1.52E-02	1.48E-02
2.21E-52	1.42E-53	9.08E-55	5.82E-56	3.73E-57	2.39E-58	1.53E-59	9.85E-61	6.32E-62	4.06E-63	2.61E-64	1.68E-65	1.08E-66	6.92E-68	4.45E-69	2.86E-70	1.84E-71	1.19E-72	7.63E-74	4.91E-75	3.16E-76	2.04E-77
1.42E-04	1.20E-04	1.02E-04	8.60E-05	7.27E-05	6.14E-05	5.19E-05	4.38E-05	3.69E-05	3.11E-05	2.62E-05	2.21E-05	1.86E-05	1.57E-05	1.32E-05	1.11E-05	9.32E-06	7.83E-06	6.58E-06	5.53E-06	4.65E-06	3.90E-06
2.79E-02	2.69E-02	2.59E-02	2.50E-02	2.42E-02	2.34E-02	2.26E-02	2.18E-02	2.11E-02	2.05E-02	1.98E-02	1.92E-02	1.86E-02	1.81E-02	1.75E-02	1.70E-02	1.65E-02	1.60E-02	1.56E-02	1.51E-02	1.47E-02	1.43E-02
4.89E-03	4.45E-03	4.06E-03	3.70E-03	3.37E-03	3.08E-03	2.81E-03	2.57E-03	2.35E-03	2.15E-03	1.97E-03	1.80E-03	1.65E-03	1.51E-03	1.39E-03	1.27E-03	1.17E-03	1.07E-03	9.84E-04	9.03E-04	8.30E-04	7.63E-04
7.67E-02	7.42E-02	7.18E-02	6.96E-02	6.75E-02	6.55E-02	6.36E-02	6.17E-02	6.00E-02	5.83E-02	5.67E-02	5.52E-02	5.38E-02	5.24E-02	5.11E-02	4.98E-02	4.86E-02	4.74E-02	4.63E-02	4.52E-02	4.41E-02	4.31E-02
4.49E-02	4.35E-02	4.21E-02	4.08E-02	3.95E-02	3.83E-02	3.72E-02	3.62E-02	3.51E-02	3.42E-02	3.32E-02	3.23E-02	3.15E-02	3.07E-02	2.99E-02	2.91E-02	2.84E-02	2.77E-02	2.71E-02	2.64E-02	2.58E-02	2.52E-02
2.17E-01	2.11E-01	2.05E-01	1.99E-01	1.94E-01	1.89E-01	1.84E-01	1.80E-01	1.75E-01	1.71E-01	1.67E-01	1.63E-01	1.59E-01	1.55E-01	1.52E-01	1.49E-01	1.45E-01	1.42E-01	1.39E-01	1.36E-01	1.33E-01	1.31E-01
0.101386	0.098304	0.095372	0.092578	0.089915	0.087374	0.084947	0.082627	0.080408	0.078285	0.07625	0.0743	0.072429	0.070634	0.068909	0.067251	0.065657	0.064124	0.062647	0.061224	0.059853	0.058531
7.22E-02	7.00E-02	6.78E-02	6.58E-02	6.39E-02	6.20E-02	6.03E-02	5.86E-02	5.70E-02	5.55E-02	5.40E-02	5.27E-02	5.13E-02	5.00E-02	4.88E-02	4.76E-02	4.65E-02	4.54E-02	4.44E-02	4.34E-02	4.24E-02	4.15E-02
1.23E+00	1.21E+00	1.18E+00	1.15E+00	1.13E+00	1.10E+00	1.08E+00	1.06E+00	1.03E+00	1.01E+00	9.92E-01	9.72E-01	9.52E-01	9.34E-01	9.15E-01	8.98E-01	8.81E-01	8.64E-01	8.48E-01	8.32E-01	8.17E-01	8.02E-01
4.77E-48	3.75E-49	2.96E-50	2.33E-51	1.84E-52	1.45E-53	1.15E-54	9.06E-56	7.17E-57	5.67E-58	4.49E-59	3.55E-60	2.81E-61	2.23E-62	1.77E-63	1.40E-64	1.11E-65	8.82E-67	7.00E-68	5.56E-69	4.42E-70	3.51E-71
1.26E-01	1.22E-01	1.19E-01	1.15E-01	1.12E-01	1.09E-01	1.06E-01	1.03E-01	1.01E-01	9.82E-02	9.58E-02	9.34E-02	9.12E-02	8.90E-02	8.69E-02	8.49E-02	8.30E-02	8.12E-02	7.94E-02	7.76E-02	7.60E-02	7.44E-02
8.96E-02	8.74E-02	8.52E-02	8.31E-02	8.10E-02	7.90E-02	7.70E-02	7.52E-02	7.33E-02	7.15E-02	6.98E-02	6.81E-02	6.65E-02	6.49E-02	6.33E-02	6.18E-02	6.04E-02	5.90E-02	5.76E-02	5.63E-02	5.50E-02	5.37E-02
1.40E-89	1.26E-91	1.13E-93	1.02E-95	9.21E-98	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
0.033885	0.032732	0.031641	0.030608	0.029629	0.0287	0.027817	0.026978	0.026179	0.025417	0.024691	0.023998	0.023336	2.27E-02	2.21E-02	2.15E-02	2.10E-02	2.04E-02	1.99E-02	1.94E-02	1.90E-02	1.85E-02
1.23E-81	1.73E-83	2.44E-85	3.44E-87	4.86E-89	6.86E-91	9.69E-93	1.37E-94	1.94E-96	2.74E-98	########	########	########	########	########	########	########	########	########	########	########	########
1.26E-01	1.26E-01	1.25E-01	1.24E-01	1.23E-01	1.22E-01	1.21E-01	1.20E-01	1.19E-01	1.18E-01	1.17E-01	1.16E-01	1.15E-01	1.14E-01	1.13E-01	1.12E-01	1.11E-01	1.10E-01	1.09E-01	1.07E-01	1.06E-01	1.05E-01
4.00E-02	3.88E-02	3.77E-02	3.66E-02	3.56E-02	3.46E-02	3.37E-02	3.28E-02	3.20E-02	3.11E-02	3.04E-02	2.96E-02	2.89E-02	2.82E-02	2.75E-02	2.69E-02	2.63E-02	2.57E-02	2.51E-02	2.45E-02	2.40E-02	2.35E-02
3.78E-02	3.68E-02	3.58E-02	3.49E-02	3.40E-02	3.32E-02	3.24E-02	3.16E-02	3.08E-02	3.01E-02	2.94E-02	2.87E-02	2.81E-02	2.75E-02	2.69E-02	2.63E-02	2.57E-02	2.52E-02	2.47E-02	2.42E-02	2.37E-02	2.32E-02
7.22E-02	7.01E-02	6.81E-02	6.61E-02	6.43E-02	6.26E-02	6.09E-02	5.93E-02	5.78E-02	5.63E-02	5.49E-02	5.35E-02	5.22E-02	5.10E-02	4.98E-02	4.87E-02	4.75E-02	4.65E-02	4.55E-02	4.45E-02	4.35E-02	4.26E-02
4.14E-02	4.01E-02	3.88E-02	3.76E-02	3.65E-02	3.54E-02	3.43E-02	3.34E-02	3.24E-02	3.15E-02	3.07E-02	2.99E-02	2.91E-02	2.83E-02	2.76E-02	2.69E-02	2.63E-02	2.56E-02	2.50E-02	2.44E-02	2.39E-02	2.33E-02
2.35E-02	2.28E-02	2.21E-02	2.15E-02	2.09E-02	2.03E-02	1.97E-02	1.92E-02	1.86E-02	1.81E-02	1.77E-02	1.72E-02	1.68E-02	1.64E-02	1.60E-02	1.56E-02	1.52E-02	1.49E-02	1.45E-02	1.42E-02	1.39E-02	1.36E-02
2.92E-02	2.82E-02	2.73E-02	2.64E-02	2.56E-02	2.48E-02	2.41E-02	2.34E-02	2.27E-02	2.21E-02	2.15E-02	2.09E-02	2.03E-02	1.98E-02	1.93E-02	1.88E-02	1.83E-02	1.79E-02	1.75E-02	1.70E-02	1.67E-02	1.63E-02
4.39E-02	4.25E-02	4.12E-02	4.00E-02	3.88E-02	3.77E-02	3.66E-02	3.56E-02	3.46E-02	3.37E-02	3.28E-02	3.19E-02	3.11E-02	3.03E-02	2.96E-02	2.89E-02	2.82E-02	2.75E-02	2.69E-02	2.63E-02	2.57E-02	2.51E-02
1.54E-01	1.49E-01	1.44E-01	1.39E-01	1.35E-01	1.31E-01	1.27E-01	1.24E-01	1.20E-01	1.17E-01	1.14E-01	1.11E-01	1.08E-01	1.05E-01	1.02E-01	9.98E-02	9.73E-02	9.50E-02	9.28E-02	9.06E-02	8.85E-02	8.65E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
5.04E-02	4.86E-02	4.69E-02	4.53E-02	4.38E-02	4.24E-02	4.10E-02	3.97E-02	3.84E-02	3.73E-02	3.61E-02	3.51E-02	3.40E-02	3.31E-02	3.21E-02	3.12E-02	3.04E-02	2.95E-02	2.87E-02	2.80E-02	2.73E-02	2.65E-02
1.61E-01	1.60E-01	1.59E-01	1.58E-01	1.57E-01	1.56E-01	1.55E-01	1.54E-01	1.53E-01	1.52E-01	1.51E-01	1.49E-01	1.48E-01	1.47E-01	1.46E-01	1.44E-01	1.43E-01	1.42E-01	1.40E-01	1.39E-01	1.38E-01	1.36E-01
3.57E-01	3.47E-01	3.38E-01	3.29E-01	3.20E-01	3.12E-01	3.04E-01	2.97E-01	2.89E-01	2.82E-01	2.76E-01	2.69E-01	2.63E-01	2.57E-01	2.51E-01	2.46E-01	2.40E-01	2.35E-01	2.30E-01	2.25E-01	2.21E-01	2.16E-01
1.64E-02	1.59E-02	1.54E-02	1.49E-02	1.45E-02	1.41E-02	1.37E-02	1.33E-02	1.29E-02	1.25E-02	1.22E-02	1.19E-02	1.16E-02	1.13E-02	1.10E-02	1.07E-02	1.05E-02	1.02E-02	9.97E-03	9.74E-03	9.52E-03	9.31E-03
5.71E-01	5.56E-01	5.42E-01	5.28E-01	5.15E-01	5.02E-01	4.90E-01	4.78E-01	4.67E-01	4.56E-01	4.46E-01	4.36E-01	4.26E-01	4.17E-01	4.08E-01	3.99E-01	3.91E-01	3.82E-01	3.75E-01	3.67E-01	3.60E-01	3.53E-01
1.84E-02	1.78E-02	1.73E-02	1.67E-02	1.62E-02	1.57E-02	1.53E-02	1.48E-02	1.44E-02	1.40E-02	1.36E-02	1.33E-02	1.29E-02	1.26E-02	1.23E-02	1.20E-02	1.17E-02	1.14E-02	1.11E-02	1.09E-02	1.06E-02	1.04E-02
7.51E-02	7.30E-02	7.10E-02	6.91E-02	6.73E-02	6.55E-02	6.38E-02	6.22E-02	6.07E-02	5.92E-02	5.78E-02	5.64E-02	5.51E-02	5.38E-02	5.26E-02	5.14E-02	5.03E-02	4.92E-02	4.81E-02	4.71E-02	4.61E-02	4.52E-02
9.71E-04	8.72E-04	7.83E-04	7.03E-04	6.31E-04	5.67E-04	5.09E-04	4.58E-04	4.11E-04	3.70E-04	3.32E-04	2.99E-04	2.69E-04	2.42E-04	2.17E-04	1.95E-04	1.76E-04	1.58E-04	1.42E-04	1.28E-04	1.15E-04	1.04E-04
8.89E-02	8.62E-02	8.36E-02	8.11E-02	7.87E-02	7.64E-02	7.43E-02	7.22E-02	7.02E-02	6.84E-02	6.66E-02	6.49E-02	6.32E-02	6.16E-02	6.01E-02	5.87E-02	5.73E-02	5.59E-02	5.46E-02	5.34E-02	5.22E-02	5.11E-02
1.96E-02	1.90E-02	1.84E-02	1.78E-02	1.73E-02	1.68E-02	1.63E-02	1.58E-02	1.54E-02	1.49E-02	1.45E-02	1.41E-02	1.38E-02	1.34E-02	1.31E-02	1.27E-02	1.24E-02	1.21E-02	1.18E-02	1.16E-02	1.13E-02	1.10E-02
3.23E-02	3.14E-02	3.05E-02	2.96E-02	2.88E-02	2.80E-02	2.73E-02	2.66E-02	2.59E-02	2.52E-02	2.46E-02	2.40E-02	2.34E-02	2.29E-02	2.23E-02	2.18E-02	2.13E-02	2.08E-02	2.04E-02	1.99E-02	1.95E-02	1.91E-02
2.70E-02	2.61E-02	2.53E-02	2.45E-02	2.37E-02	2.30E-02	2.23E-02	2.17E-02	2.11E-02	2.05E-02	1.99E-02	1.94E-02	1.89E-02	1.84E-02	1.79E-02	1.75E-02	1.70E-02	1.66E-02	1.62E-02	1.58E-02	1.55E-02	1.51E-02
9.13E-02	8.62E-02	8.14E-02	7.69E-02	7.27E-02	6.88E-02	6.51E-02	6.16E-02	5.84E-02	5.54E-02	5.25E-02	4.99E-02	4.73E-02	4.50E-02	4.27E-02	4.06E-02	3.87E-02	3.68E-02	3.50E-02	3.33E-02	3.18E-02	3.03E-02
5.74E-02	5.55E-02	5.37E-02	5.21E-02	5.05E-02	4.90E-02	4.75E-02	4.61E-02	4.48E-02	4.36E-02	4.24E-02	4.13E-02	4.02E-02	3.91E-02	3.81E-02	3.72E-02	3.63E-02	3.54E-02	3.45E-02	3.37E-02	3.30E-02	3.22E-02
4.16E-02	4.03E-02	3.90E-02	3.77E-02	3.66E-02	3.55E-02	3.44E-02	3.35E-02	3.25E-02	3.16E-02	3.07E-02	2.99E-02	2.91E-02	2.84E-02	2.76E-02	2.70E-02	2.63E-02	2.57E-02	2.50E-02	2.45E-02	2.39E-02	2.33E-02

4.18E-26	1.09E-26	2.86E-27	7.49E-28	1.96E-28	5.14E-29	1.35E-29	3.54E-30	9.30E-31	2.44E-31	6.42E-32	1.69E-32	4.44E-33	1.17E-33	3.08E-34	8.12E-35	2.14E-35	5.64E-36	1.49E-36	3.93E-37	1.04E-37	2.74E-38
1.30E-01	1.26E-01	1.22E-01	1.18E-01	1.15E-01	1.11E-01	1.08E-01	1.05E-01	1.02E-01	9.93E-02	9.66E-02	9.41E-02	9.17E-02	8.93E-02	8.71E-02	8.50E-02	8.29E-02	8.09E-02	7.90E-02	7.72E-02	7.55E-02	7.38E-02
7.78E-02	7.47E-02	7.18E-02	6.91E-02	6.65E-02	6.41E-02	6.18E-02	5.96E-02	5.75E-02	5.55E-02	5.36E-02	5.18E-02	5.01E-02	4.85E-02	4.69E-02	4.54E-02	4.40E-02	4.27E-02	4.14E-02	4.01E-02	3.89E-02	3.78E-02
1.02E-02	9.88E-03	9.59E-03	9.32E-03	9.06E-03	8.81E-03	8.58E-03	8.35E-03	8.13E-03	7.92E-03	7.72E-03	7.53E-03	7.35E-03	7.17E-03	7.00E-03	6.84E-03	6.68E-03	6.53E-03	6.39E-03	6.25E-03	6.11E-03	5.98E-03
4.90E-04	4.30E-04	3.77E-04	3.31E-04	2.91E-04	2.56E-04	2.25E-04	1.98E-04	1.74E-04	1.53E-04	1.35E-04	1.19E-04	1.05E-04	9.27E-05	8.18E-05	7.22E-05	6.38E-05	5.64E-05	4.98E-05	4.41E-05	3.90E-05	3.45E-05
9.04E-02	8.75E-02	8.48E-02	8.23E-02	7.98E-02	7.75E-02	7.53E-02	7.32E-02	7.12E-02	6.93E-02	6.74E-02	6.57E-02	6.40E-02	6.24E-02	6.08E-02	5.94E-02	5.79E-02	5.66E-02	5.53E-02	5.40E-02	5.28E-02	5.16E-02
1.80E-01	1.75E-01	1.71E-01	1.66E-01	1.62E-01	1.58E-01	1.54E-01	1.51E-01	1.47E-01	1.44E-01	1.40E-01	1.37E-01	1.34E-01	1.31E-01	1.28E-01	1.26E-01	1.23E-01	1.20E-01	1.18E-01	1.15E-01	1.13E-01	1.11E-01
1.81E-04	1.51E-04	1.27E-04	1.06E-04	8.87E-05	7.43E-05	6.23E-05	5.22E-05	4.38E-05	3.67E-05	3.08E-05	2.59E-05	2.17E-05	1.82E-05	1.53E-05	1.29E-05	1.08E-05	9.11E-06	7.67E-06	6.45E-06	5.43E-06	4.57E-06
2.66E-01	2.54E-01	2.43E-01	2.33E-01	2.23E-01	2.13E-01	2.05E-01	1.96E-01	1.88E-01	1.81E-01	1.74E-01	1.67E-01	1.60E-01	1.54E-01	1.48E-01	1.43E-01	1.38E-01	1.32E-01	1.28E-01	1.23E-01	1.19E-01	1.14E-01
4.39E-02	4.25E-02	4.12E-02	3.99E-02	3.87E-02	3.76E-02	3.65E-02	3.55E-02	3.45E-02	3.35E-02	3.26E-02	3.18E-02	3.09E-02	3.02E-02	2.94E-02	2.87E-02	2.80E-02	2.73E-02	2.67E-02	2.61E-02	2.55E-02	2.49E-02
0.173894	0.17206	0.170186	0.168279	0.166348	0.164398	0.162435	1.60E-01	1.58E-01	1.57E-01	1.55E-01	1.53E-01	1.51E-01	1.49E-01	1.47E-01	1.45E-01	1.43E-01	1.41E-01	1.39E-01	1.37E-01	1.36E-01	1.34E-01
2.09E-02	1.95E-02	1.83E-02	1.71E-02	1.60E-02	1.50E-02	1.41E-02	1.32E-02	1.24E-02	1.16E-02	1.09E-02	1.02E-02	9.60E-03	9.02E-03	8.48E-03	7.97E-03	7.50E-03	7.06E-03	6.64E-03	6.25E-03	5.89E-03	5.55E-03
1.62E-02	1.51E-02	1.40E-02	1.31E-02	1.22E-02	1.13E-02	1.06E-02	9.86E-03	9.20E-03	8.60E-03	8.04E-03	7.51E-03	7.03E-03	6.58E-03	6.16E-03	5.77E-03	5.41E-03	5.07E-03	4.76E-03	4.46E-03	4.19E-03	3.93E-03
1.71E-02	1.65E-02	1.60E-02	1.55E-02	1.50E-02	1.46E-02	1.41E-02	1.37E-02	1.33E-02	1.30E-02	1.26E-02	1.23E-02	1.20E-02	1.16E-02	1.13E-02	1.11E-02	1.08E-02	1.05E-02	1.03E-02	1.00E-02	9.80E-03	9.58E-03
3.34E-97	1.96E-99	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.10E-06	8.26E-07	6.20E-07	4.65E-07	3.50E-07	2.63E-07	1.98E-07	1.49E-07	1.12E-07	8.45E-08	6.37E-08	4.80E-08	3.63E-08	2.74E-08	2.07E-08	1.56E-08	1.18E-08	8.94E-09	6.76E-09	5.12E-09	3.87E-09	2.93E-09
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
2.17E-02	2.10E-02	2.03E-02	1.97E-02	1.91E-02	1.85E-02	1.79E-02	1.74E-02	1.69E-02	1.64E-02	1.60E-02	1.56E-02	1.51E-02	1.48E-02	1.44E-02	1.40E-02	1.37E-02	1.33E-02	1.30E-02	1.27E-02	1.24E-02	1.21E-02
2.63E-02	2.55E-02	2.47E-02	2.40E-02	2.33E-02	2.26E-02	2.20E-02	2.14E-02	2.08E-02	2.03E-02	1.97E-02	1.92E-02	1.87E-02	1.83E-02	1.78E-02	1.74E-02	1.70E-02	1.66E-02	1.62E-02	1.58E-02	1.55E-02	1.51E-02
1.51E-21	5.08E-22	1.71E-22	5.77E-23	1.95E-23	6.58E-24	2.22E-24	7.51E-25	2.54E-25	8.60E-26	2.91E-26	9.86E-27	3.34E-27	1.13E-27	3.84E-28	1.30E-28	4.42E-29	1.50E-29	5.10E-30	1.73E-30	5.89E-31	2.00E-31
2.67E-01	2.60E-01	2.53E-01	2.46E-01	2.40E-01	2.34E-01	2.28E-01	2.23E-01	2.17E-01	2.12E-01	2.07E-01	2.02E-01	1.98E-01	1.94E-01	1.89E-01	1.85E-01	1.81E-01	1.77E-01	1.74E-01	1.70E-01	1.67E-01	1.63E-01
6.20E-02	6.02E-02	5.84E-02	5.68E-02	5.52E-02	5.37E-02	5.23E-02	5.09E-02	4.96E-02	4.84E-02	4.72E-02	4.60E-02	4.49E-02	4.38E-02	4.28E-02	4.18E-02	4.09E-02	3.99E-02	3.91E-02	3.82E-02	3.74E-02	3.66E-02
2.42E-02	2.35E-02	2.28E-02	2.21E-02	2.15E-02	2.08E-02	2.03E-02	1.97E-02	1.92E-02	1.87E-02	1.82E-02	1.77E-02	1.73E-02	1.68E-02	1.64E-02	1.60E-02	1.57E-02	1.53E-02	1.49E-02	1.46E-02	1.43E-02	1.40E-02
6.31E-48	5.13E-49	4.18E-50	3.41E-51	2.78E-52	2.27E-53	1.85E-54	1.51E-55	1.23E-56	1.01E-57	8.22E-59	6.72E-60	5.50E-61	4.50E-62	3.68E-63	3.01E-64	2.47E-65	2.02E-66	1.66E-67	1.36E-68	1.11E-69	9.12E-71
6.74E-03	6.38E-03	6.05E-03	5.74E-03	5.45E-03	5.18E-03	4.92E-03	4.68E-03	4.46E-03	4.24E-03	4.04E-03	3.86E-03	3.68E-03	3.51E-03	3.35E-03	3.20E-03	3.06E-03	2.92E-03	2.79E-03	2.67E-03	2.56E-03	2.45E-03
4.05E-01	3.93E-01	3.82E-01	3.72E-01	3.62E-01	3.52E-01	3.43E-01	3.34E-01	3.26E-01	3.18E-01	3.10E-01	3.03E-01	2.95E-01	2.89E-01	2.82E-01	2.76E-01	2.70E-01	2.64E-01	2.58E-01	2.52E-01	2.47E-01	2.42E-01
2.93E-23	9.11E-24	2.83E-24	8.80E-25	2.74E-25	8.52E-26	2.65E-26	8.27E-27	2.58E-27	8.03E-28	2.51E-28	7.82E-29	2.44E-29	7.63E-30	2.38E-30	7.45E-31	2.33E-31	7.29E-32	2.28E-32	7.14E-33	2.23E-33	7.00E-34
4.92E-02	4.77E-02	4.64E-02	4.51E-02	4.38E-02	4.26E-02	4.15E-02	4.04E-02	3.93E-02	3.83E-02	3.74E-02	3.65E-02	3.56E-02	3.47E-02	3.39E-02	3.31E-02	3.24E-02	3.17E-02	3.10E-02	3.03E-02	2.96E-02	2.90E-02
5.54E-02	5.36E-02	5.19E-02	5.03E-02	4.88E-02	4.74E-02	4.60E-02	4.47E-02	4.34E-02	4.22E-02	4.11E-02	4.00E-02	3.90E-02	3.80E-02	3.70E-02	3.61E-02	3.52E-02	3.44E-02	3.36E-02	3.28E-02	3.20E-02	3.13E-02
0.368841	0.355072	0.34199	3.30E-01	3.18E-01	3.06E-01	2.96E-01	2.85E-01	2.76E-01	2.66E-01	2.57E-01	2.49E-01	2.41E-01	2.33E-01	2.26E-01	2.18E-01	2.12E-01	2.05E-01	1.99E-01	1.93E-01	1.87E-01	1.81E-01
1.11E-01	1.08E-01	1.05E-01	1.02E-01	9.97E-02	9.73E-02	9.49E-02	9.27E-02	9.05E-02	8.84E-02	8.64E-02	8.45E-02	8.26E-02	8.08E-02	7.91E-02	7.74E-02	7.58E-02	7.42E-02	7.27E-02	7.12E-02	6.98E-02	6.84E-02
4.44E-02	4.32E-02	4.21E-02	4.10E-02	3.99E-02	3.89E-02	3.80E-02	3.70E-02	3.61E-02	3.53E-02	3.45E-02	3.37E-02	3.29E-02	3.22E-02	3.15E-02	3.08E-02	3.01E-02	2.95E-02	2.89E-02	2.83E-02	2.77E-02	2.72E-02
2.05E-02	1.99E-02	1.92E-02	1.86E-02	1.81E-02	1.75E-02	1.70E-02	1.65E-02	1.60E-02	1.56E-02	1.52E-02	1.48E-02	1.44E-02	1.40E-02	1.37E-02	1.33E-02	1.30E-02	1.27E-02	1.24E-02	1.21E-02	1.18E-02	1.15E-02
4.72E-01	4.78E-01	4.84E-01	4.89E-01	4.94E-01	4.98E-01	5.02E-01	5.05E-01	5.08E-01	5.11E-01	5.13E-01	5.15E-01	5.16E-01	5.18E-01	5.19E-01	5.19E-01	5.20E-01	5.20E-01	5.20E-01	5.20E-01	5.19E-01	5.19E-01
7.86E-02	7.60E-02	7.36E-02	7.13E-02	6.91E-02	6.71E-02	6.51E-02	6.32E-02	6.14E-02	5.97E-02	5.81E-02	5.65E-02	5.50E-02	5.36E-02	5.22E-02	5.09E-02	4.97E-02	4.85E-02	4.73E-02	4.62E-02	4.51E-02	4.41E-02
2.00E-01	1.93E-01	1.88E-01	1.82E-01	1.77E-01	1.72E-01	1.67E-01	1.63E-01	1.58E-01	1.54E-01	1.50E-01	1.46E-01	1.42E-01	1.39E-01	1.35E-01	1.32E-01	1.29E-01	1.26E-01	1.23E-01	1.20E-01	1.17E-01	1.14E-01
4.09E-02	3.97E-02	3.85E-02	3.74E-02	3.64E-02	3.54E-02	3.44E-02	3.35E-02	3.26E-02	3.18E-02	3.10E-02	3.02E-02	2.94E-02	2.87E-02	2.80E-02	2.74E-02	2.67E-02	2.61E-02	2.55E-02	2.50E-02	2.44E-02	2.39E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
3.56E-02	3.44E-02	3.33E-02	3.22E-02	3.12E-02	3.03E-02	2.94E-02	2.85E-02	2.77E-02	2.69E-02	2.62E-02	2.54E-02	2.48E-02	2.41E-02	2.35E-02	2.29E-02	2.23E-02	2.18E-02	2.13E-02	2.08E-02	2.03E-02	1.98E-02
4.76E-21	1.59E-21	5.32E-22	1.78E-22	5.93E-23	1.98E-23	6.63E-24	2.21E-24	7.40E-25	2.47E-25	8.27E-26	2.77E-26	9.25E-27	3.09E-27	1.04E-27	3.46E-28	1.16E-28	3.88E-29	1.30E-29	4.34E-30	1.45E-30	4.87E-31
3.43E-02	3.32E-02	3.21E-02	3.11E-02	3.01E-02	2.92E-02	2.84E-02	2.75E-02	2.68E-02	2.60E-02	2.53E-02	2.46E-02	2.40E-02	2.33E-02	2.27E-02	2.22E-02	2.16E-02	2.11E-02	2.06E-02	2.01E-02	1.97E-02	1.92E-02
1.39E-06	1.06E-06	8.03E-07	6.11E-07	4.64E-07	3.53E-07	2.69E-07	2.05E-07	1.56E-07	1.19E-07	9.11E-08	6.96E-08	5.32E-08	4.07E-08	3.11E-08	2.38E-08	1.82E-08	1.39E-08	1.07E-08	8.19E-09	6.28E-09	4.82E-09
1.84E-55	1.06E-56	6.11E-58	3.53E-59	2.04E-60	1.18E-61	6.80E-63	3.93E-64	2.28E-65	1.32E-66	7.64E-68	4.43E-69	2.57E-70	1.49E-71	8.65E-73	5.02E-74	2.92E-75	1.69E-76	9.85E-78	5.73E-79	3.34E-80	1.94E-81
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
4.92E-02	4.79E-02	4.67E-02	4.56E-02	4.45E-02	4.34E-02	4.24E-02	4.14E-02	4.05E-02	3.95E-02	3.87E-02	3.78E-02	3.70E-02	3.62E-02	3.54E-02	3.47E-02	3.40E-02	3.33E-02	3.26E-02	3.20E-02	3.14E-02	3.07E-02
1.49E-02	1.44E-02	1.39E-02	1.35E-02	1.31E-02	1.27E-02	1.23E-02	1.20E-02	1.16E-02	1.13E-02	1.10E-02	1.07E-02	1.04E-02	1.01E-02	9.88E-03	9.63E-03	9.39E-03	9.16E-03	8.94E-03	8.73E-03	8.53E-03	8.33E-03
2.08E-02	2.01E-02	1.95E-02	1.89E-02	1.83E-02	1.77E-02	1.72E-02	1.67E-02	1.62E-02	1.57E-02	1.53E-02	1.49E-02	1.45E-02	1.41E-02	1.37E-02	1.34E-02	1.30E-02	1.27E-02	1.24E-02	1.21E-02	1.18E-02	1.15E-02
2.12E-03	1.98E-03	1.86E-03	1.75E-03	1.64E-03	1.55E-03	1.46E-03	1.37E-03	1.29E-03	1.22E-03	1.15E-03	1.08E-03	1.02E-03	9.66E-04	9.13E-04	8.63E-04	8.16E-04	7.72E-04	7.31E-04	6.92E-04	6.56E-04	6.21E-04
1.34E-02	1.30E-02	1.25E-02	1.21E-02	1.18E-02	1.14E-02	1.11E-02	1.07E-02	1.04E-02	1.01E-02	9.85E-03	9.58E-03	9.33E-03	9.08E-03	8.85E-03	8.62E-03	8.41E-03	8.20E-03	8.00E-03	7.81E-03	7.63E-03	7.45E-03
3.28E-97	1.90E-99	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.23E+00	**1.21E+00**	**1.18E+00**	**1.15E+00**	**1.13E+00**	**1.10E+00**	**1.08E+00**	**1.06E+00**	**1.03E+00**	**1.01E+00**	**9.92E-01**	**9.72E-01**	**9.52E-01**	**9.34E-01**	**9.15E-01**	**8.98E-01**	**8.81E-01**	**8.64E-01**	**8.48E-01**	**8.32E-01**	**8.17E-01**	**8.02E-01**
0.084569	0.08237	0.080268	0.078257	0.076331	0.074486	0.072716	0.071018	0.069386	0.067818	0.06631	0.064859	0.063461	0.062114	0.060815	0.059561	0.058352	0.057183	0.056054	0.054962	0.053906	0.052884

650	660	670	680	690	700	710	720	730	740	750	760	770	780	790	800	810	820	830	840	850	860
2.71E-02	2.65E-02	2.60E-02	2.54E-02	2.49E-02	2.44E-02	2.39E-02	2.34E-02	2.30E-02	2.25E-02	2.21E-02	2.17E-02	2.13E-02	2.09E-02	2.05E-02	2.01E-02	1.98E-02	1.94E-02	1.91E-02	1.88E-02	1.85E-02	1.82E-02
3.44E-02	3.36E-02	3.29E-02	3.22E-02	3.15E-02	3.08E-02	3.02E-02	2.96E-02	2.90E-02	2.84E-02	2.78E-02	2.73E-02	2.68E-02	2.62E-02	2.58E-02	2.53E-02	2.48E-02	2.44E-02	2.39E-02	2.35E-02	2.31E-02	2.27E-02
1.94E-01	1.90E-01	1.86E-01	1.82E-01	1.79E-01	1.75E-01	1.72E-01	1.69E-01	1.66E-01	1.63E-01	1.60E-01	1.57E-01	1.54E-01	1.52E-01	1.49E-01	1.46E-01	1.44E-01	1.42E-01	1.39E-01	1.37E-01	1.35E-01	1.33E-01
5.48E-27	2.21E-27	8.94E-28	3.61E-28	1.46E-28	5.90E-29	2.39E-29	9.65E-30	3.90E-30	1.58E-30	6.40E-31	2.59E-31	1.05E-31	4.25E-32	1.72E-32	6.98E-33	2.83E-33	1.15E-33	4.65E-34	1.89E-34	7.65E-35	3.11E-35
1.60E-79	1.01E-80	6.36E-82	4.01E-83	2.53E-84	1.60E-85	1.01E-86	6.37E-88	4.02E-89	2.54E-90	1.60E-91	1.01E-92	6.41E-94	4.05E-95	2.56E-96	1.62E-97	1.02E-98	########	########	########	########	########
5.03E-02	4.92E-02	4.81E-02	4.71E-02	4.61E-02	4.51E-02	4.41E-02	4.32E-02	4.23E-02	4.15E-02	4.07E-02	3.99E-02	3.91E-02	3.84E-02	3.76E-02	3.69E-02	3.62E-02	3.56E-02	3.49E-02	3.43E-02	3.37E-02	3.31E-02
1.33E-01	1.31E-01	1.28E-01	1.26E-01	1.24E-01	1.22E-01	1.20E-01	1.18E-01	1.16E-01	1.14E-01	1.12E-01	1.10E-01	1.09E-01	1.07E-01	1.05E-01	1.04E-01	1.02E-01	1.01E-01	9.92E-02	9.78E-02	9.63E-02	9.50E-02
1.90E-02	1.86E-02	1.82E-02	1.78E-02	1.74E-02	1.71E-02	1.67E-02	1.64E-02	1.60E-02	1.57E-02	1.54E-02	1.51E-02	1.48E-02	1.46E-02	1.43E-02	1.40E-02	1.38E-02	1.35E-02	1.33E-02	1.30E-02	1.28E-02	1.26E-02
1.45E-02	1.41E-02	1.38E-02	1.35E-02	1.32E-02	1.29E-02	1.26E-02	1.23E-02	1.21E-02	1.18E-02	1.16E-02	1.13E-02	1.11E-02	1.09E-02	1.06E-02	1.04E-02	1.02E-02	1.00E-02	9.83E-03	9.64E-03	9.46E-03	9.28E-03
1.31E-78	8.46E-80	5.45E-81	3.51E-82	2.27E-83	1.46E-84	9.43E-86	6.08E-87	3.93E-88	2.53E-89	1.64E-90	1.06E-91	6.82E-93	4.40E-94	2.85E-95	1.84E-96	1.19E-97	7.68E-99	########	########	########	########
3.28E-06	2.75E-06	2.31E-06	1.94E-06	1.63E-06	1.36E-06	1.14E-06	9.60E-07	8.05E-07	6.76E-07	5.67E-07	4.75E-07	3.98E-07	3.34E-07	2.80E-07	2.35E-07	1.97E-07	1.65E-07	1.38E-07	1.16E-07	9.72E-08	8.15E-08
1.39E-02	1.35E-02	1.32E-02	1.28E-02	1.25E-02	1.22E-02	1.19E-02	1.16E-02	1.13E-02	1.10E-02	1.07E-02	1.05E-02	1.02E-02	9.96E-03	9.72E-03	9.49E-03	9.27E-03	9.05E-03	8.84E-03	8.64E-03	8.45E-03	8.25E-03
7.01E-04	6.45E-04	5.93E-04	5.46E-04	5.03E-04	4.63E-04	4.26E-04	3.93E-04	3.62E-04	3.34E-04	3.08E-04	2.84E-04	2.62E-04	2.41E-04	2.23E-04	2.06E-04	1.90E-04	1.75E-04	1.62E-04	1.49E-04	1.38E-04	1.28E-04
4.22E-02	4.12E-02	4.04E-02	3.95E-02	3.87E-02	3.78E-02	3.71E-02	3.63E-02	3.56E-02	3.49E-02	3.42E-02	3.36E-02	3.29E-02	3.23E-02	3.17E-02	3.11E-02	3.06E-02	3.00E-02	2.95E-02	2.90E-02	2.85E-02	2.80E-02
2.47E-02	2.41E-02	2.36E-02	2.31E-02	2.26E-02	2.21E-02	2.17E-02	2.12E-02	2.08E-02	2.04E-02	2.00E-02	1.96E-02	1.92E-02	1.88E-02	1.85E-02	1.82E-02	1.78E-02	1.75E-02	1.72E-02	1.69E-02	1.66E-02	1.63E-02
1.28E-01	1.25E-01	1.23E-01	1.20E-01	1.18E-01	1.16E-01	1.14E-01	1.12E-01	1.10E-01	1.08E-01	1.06E-01	1.04E-01	1.02E-01	1.00E-01	9.85E-02	9.69E-02	9.53E-02	9.37E-02	9.22E-02	9.07E-02	8.92E-02	8.78E-02
0.057256	0.056024	0.054835	5.37E-02	5.26E-02	5.15E-02	5.05E-02	4.95E-02	4.85E-02	4.75E-02	4.66E-02	4.57E-02	4.49E-02	4.40E-02	4.32E-02	4.25E-02	4.17E-02	4.10E-02	4.02E-02	3.95E-02	3.88E-02	3.82E-02
4.06E-02	3.97E-02	3.88E-02	3.80E-02	3.73E-02	3.65E-02	3.58E-02	3.51E-02	3.44E-02	3.37E-02	3.31E-02	3.25E-02	3.19E-02	3.13E-02	3.07E-02	3.02E-02	2.96E-02	2.91E-02	2.86E-02	2.81E-02	2.77E-02	2.72E-02
7.88E-01	7.74E-01	7.61E-01	7.47E-01	7.35E-01	7.22E-01	7.10E-01	6.98E-01	6.87E-01	6.76E-01	6.65E-01	6.54E-01	6.44E-01	6.34E-01	6.24E-01	6.15E-01	6.05E-01	5.96E-01	5.87E-01	5.79E-01	5.70E-01	5.62E-01
2.79E-72	2.22E-73	1.76E-74	1.40E-75	1.12E-76	8.90E-78	7.08E-79	5.64E-80	4.49E-81	3.58E-82	2.86E-83	2.28E-84	1.82E-85	1.45E-86	1.16E-87	9.22E-89	7.36E-90	5.87E-91	4.69E-92	3.75E-93	2.99E-94	2.39E-95
7.28E-02	7.13E-02	6.99E-02	6.85E-02	6.71E-02	6.58E-02	6.46E-02	6.33E-02	6.22E-02	6.10E-02	5.99E-02	5.88E-02	5.78E-02	5.67E-02	5.57E-02	5.48E-02	5.38E-02	5.29E-02	5.21E-02	5.12E-02	5.04E-02	4.96E-02
5.25E-02	5.13E-02	5.02E-02	4.91E-02	4.80E-02	4.69E-02	4.59E-02	4.49E-02	4.39E-02	4.30E-02	4.21E-02	4.12E-02	4.03E-02	3.94E-02	3.86E-02	3.78E-02	3.70E-02	3.63E-02	3.55E-02	3.48E-02	3.41E-02	3.34E-02
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1.81E-02	1.76E-02	1.72E-02	1.69E-02	1.65E-02	1.61E-02	1.58E-02	1.54E-02	1.51E-02	1.48E-02	1.45E-02	1.42E-02	1.39E-02	1.36E-02	1.34E-02	1.31E-02	1.28E-02	1.26E-02	1.24E-02	1.21E-02	1.19E-02	1.17E-02
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1.04E-01	1.03E-01	1.02E-01	1.01E-01	1.00E-01	9.90E-02	9.80E-02	9.70E-02	9.60E-02	9.50E-02	9.40E-02	9.30E-02	9.21E-02	9.11E-02	9.02E-02	8.92E-02	8.83E-02	8.74E-02	8.65E-02	8.57E-02	8.48E-02	8.39E-02
2.30E-02	2.25E-02	2.20E-02	2.16E-02	2.12E-02	2.07E-02	2.03E-02	1.99E-02	1.95E-02	1.92E-02	1.88E-02	1.85E-02	1.81E-02	1.78E-02	1.75E-02	1.72E-02	1.69E-02	1.66E-02	1.63E-02	1.60E-02	1.57E-02	1.55E-02
2.27E-02	2.23E-02	2.19E-02	2.15E-02	2.11E-02	2.07E-02	2.03E-02	1.99E-02	1.96E-02	1.92E-02	1.89E-02	1.86E-02	1.82E-02	1.79E-02	1.76E-02	1.73E-02	1.71E-02	1.68E-02	1.65E-02	1.63E-02	1.60E-02	1.58E-02
4.17E-02	4.08E-02	4.00E-02	3.92E-02	3.84E-02	3.77E-02	3.70E-02	3.63E-02	3.56E-02	3.49E-02	3.43E-02	3.37E-02	3.30E-02	3.25E-02	3.19E-02	3.13E-02	3.08E-02	3.03E-02	2.98E-02	2.93E-02	2.88E-02	2.83E-02
2.28E-02	2.23E-02	2.18E-02	2.14E-02	2.09E-02	2.05E-02	2.01E-02	1.97E-02	1.93E-02	1.89E-02	1.85E-02	1.82E-02	1.78E-02	1.75E-02	1.72E-02	1.68E-02	1.65E-02	1.62E-02	1.60E-02	1.57E-02	1.54E-02	1.52E-02
1.33E-02	1.30E-02	1.27E-02	1.25E-02	1.22E-02	1.20E-02	1.17E-02	1.15E-02	1.13E-02	1.11E-02	1.09E-02	1.07E-02	1.05E-02	1.03E-02	1.01E-02	9.91E-03	9.74E-03	9.57E-03	9.40E-03	9.24E-03	9.09E-03	8.94E-03
1.59E-02	1.55E-02	1.52E-02	1.49E-02	1.46E-02	1.42E-02	1.40E-02	1.37E-02	1.34E-02	1.31E-02	1.29E-02	1.26E-02	1.24E-02	1.21E-02	1.19E-02	1.17E-02	1.15E-02	1.13E-02	1.11E-02	1.09E-02	1.07E-02	1.05E-02
2.46E-02	2.40E-02	2.35E-02	2.30E-02	2.26E-02	2.21E-02	2.17E-02	2.12E-02	2.08E-02	2.04E-02	2.00E-02	1.96E-02	1.93E-02	1.89E-02	1.86E-02	1.82E-02	1.79E-02	1.76E-02	1.73E-02	1.70E-02	1.67E-02	1.64E-02
8.46E-02	8.27E-02	8.09E-02	7.92E-02	7.75E-02	7.59E-02	7.44E-02	7.29E-02	7.14E-02	7.00E-02	6.87E-02	6.73E-02	6.61E-02	6.48E-02	6.36E-02	6.25E-02	6.14E-02	6.03E-02	5.92E-02	5.82E-02	5.72E-02	5.62E-02
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2.59E-02	2.52E-02	2.46E-02	2.40E-02	2.34E-02	2.29E-02	2.23E-02	2.18E-02	2.13E-02	2.08E-02	2.04E-02	1.99E-02	1.95E-02	1.90E-02	1.86E-02	1.82E-02	1.78E-02	1.75E-02	1.71E-02	1.68E-02	1.64E-02	1.61E-02
1.35E-01	1.34E-01	1.32E-01	1.31E-01	1.30E-01	1.29E-01	1.27E-01	1.26E-01	1.25E-01	1.24E-01	1.22E-01	1.21E-01	1.20E-01	1.19E-01	1.18E-01	1.16E-01	1.15E-01	1.14E-01	1.13E-01	1.12E-01	1.11E-01	1.10E-01
2.12E-01	2.08E-01	2.04E-01	2.00E-01	1.96E-01	1.92E-01	1.89E-01	1.85E-01	1.82E-01	1.79E-01	1.75E-01	1.72E-01	1.69E-01	1.66E-01	1.64E-01	1.61E-01	1.58E-01	1.56E-01	1.53E-01	1.51E-01	1.48E-01	1.46E-01
9.10E-03	8.90E-03	8.71E-03	8.53E-03	8.35E-03	8.18E-03	8.01E-03	7.85E-03	7.69E-03	7.54E-03	7.40E-03	7.26E-03	7.12E-03	6.99E-03	6.86E-03	6.74E-03	6.62E-03	6.50E-03	6.38E-03	6.27E-03	6.17E-03	6.06E-03
3.46E-01	3.39E-01	3.33E-01	3.26E-01	3.20E-01	3.15E-01	3.09E-01	3.03E-01	2.98E-01	2.93E-01	2.88E-01	2.83E-01	2.78E-01	2.73E-01	2.69E-01	2.64E-01	2.60E-01	2.56E-01	2.52E-01	2.48E-01	2.44E-01	2.40E-01
1.01E-02	9.91E-03	9.69E-03	9.48E-03	9.28E-03	9.09E-03	8.90E-03	8.72E-03	8.55E-03	8.38E-03	8.22E-03	8.06E-03	7.91E-03	7.76E-03	7.61E-03	7.47E-03	7.34E-03	7.21E-03	7.08E-03	6.96E-03	6.84E-03	6.72E-03
4.43E-02	4.34E-02	4.25E-02	4.17E-02	4.09E-02	4.01E-02	3.94E-02	3.87E-02	3.79E-02	3.73E-02	3.66E-02	3.59E-02	3.53E-02	3.47E-02	3.41E-02	3.35E-02	3.30E-02	3.24E-02	3.19E-02	3.14E-02	3.09E-02	3.04E-02
9.36E-05	8.43E-05	7.59E-05	6.84E-05	6.16E-05	5.55E-05	5.01E-05	4.51E-05	4.07E-05	3.67E-05	3.31E-05	2.98E-05	2.69E-05	2.43E-05	2.19E-05	1.98E-05	1.78E-05	1.61E-05	1.45E-05	1.31E-05	1.18E-05	1.07E-05
5.00E-02	4.89E-02	4.79E-02	4.69E-02	4.59E-02	4.50E-02	4.41E-02	4.32E-02	4.24E-02	4.15E-02	4.08E-02	4.00E-02	3.92E-02	3.85E-02	3.78E-02	3.72E-02	3.65E-02	3.59E-02	3.52E-02	3.46E-02	3.41E-02	3.35E-02
1.08E-02	1.06E-02	1.03E-02	1.01E-02	9.89E-03	9.69E-03	9.49E-03	9.30E-03	9.11E-03	8.93E-03	8.76E-03	8.59E-03	8.43E-03	8.27E-03	8.11E-03	7.97E-03	7.82E-03	7.68E-03	7.55E-03	7.42E-03	7.29E-03	7.16E-03
1.87E-02	1.83E-02	1.79E-02	1.76E-02	1.72E-02	1.69E-02	1.66E-02	1.63E-02	1.60E-02	1.57E-02	1.54E-02	1.51E-02	1.48E-02	1.46E-02	1.43E-02	1.41E-02	1.38E-02	1.36E-02	1.34E-02	1.31E-02	1.29E-02	1.27E-02
1.48E-02	1.44E-02	1.41E-02	1.38E-02	1.35E-02	1.33E-02	1.30E-02	1.27E-02	1.25E-02	1.22E-02	1.20E-02	1.17E-02	1.15E-02	1.13E-02	1.11E-02	1.09E-02	1.07E-02	1.05E-02	1.03E-02	1.01E-02	9.95E-03	9.78E-03
2.88E-02	2.75E-02	2.62E-02	2.50E-02	2.39E-02	2.28E-02	2.18E-02	2.08E-02	1.99E-02	1.90E-02	1.82E-02	1.74E-02	1.66E-02	1.59E-02	1.52E-02	1.45E-02	1.39E-02	1.33E-02	1.28E-02	1.22E-02	1.17E-02	1.12E-02
3.15E-02	3.08E-02	3.01E-02	2.95E-02	2.89E-02	2.83E-02	2.77E-02	2.71E-02	2.66E-02	2.60E-02	2.55E-02	2.50E-02	2.46E-02	2.41E-02	2.37E-02	2.32E-02	2.28E-02	2.24E-02	2.20E-02	2.16E-02	2.12E-02	2.09E-02
2.28E-02	2.23E-02	2.18E-02	2.14E-02	2.09E-02	2.05E-02	2.01E-02	1.96E-02	1.93E-02	1.89E-02	1.85E-02	1.81E-02	1.78E-02	1.75E-02	1.71E-02	1.68E-02	1.65E-02	1.62E-02	1.59E-02	1.57E-02	1.54E-02	1.51E-02

7.24E-39	1.91E-39	5.06E-40	1.34E-40	3.54E-41	9.36E-42	2.48E-42	6.56E-43	1.74E-43	4.61E-44	1.22E-44	3.23E-45	8.58E-46	2.27E-46	6.03E-47	1.60E-47	4.25E-48	1.13E-48	2.99E-49	7.95E-50	2.11E-50	5.61E-51
7.22E-02	7.06E-02	6.91E-02	6.76E-02	6.62E-02	6.48E-02	6.35E-02	6.23E-02	6.10E-02	5.98E-02	5.87E-02	5.76E-02	5.65E-02	5.55E-02	5.44E-02	5.35E-02	5.25E-02	5.16E-02	5.07E-02	4.98E-02	4.89E-02	4.81E-02
3.67E-02	3.56E-02	3.46E-02	3.36E-02	3.27E-02	3.18E-02	3.09E-02	3.01E-02	2.93E-02	2.85E-02	2.78E-02	2.70E-02	2.63E-02	2.57E-02	2.50E-02	2.44E-02	2.38E-02	2.32E-02	2.26E-02	2.21E-02	2.16E-02	2.11E-02
5.86E-03	5.73E-03	5.62E-03	5.50E-03	5.39E-03	5.29E-03	5.18E-03	5.08E-03	4.99E-03	4.89E-03	4.80E-03	4.72E-03	4.63E-03	4.55E-03	4.47E-03	4.39E-03	4.31E-03	4.24E-03	4.17E-03	4.10E-03	4.03E-03	3.97E-03
3.05E-05	2.70E-05	2.39E-05	2.12E-05	1.88E-05	1.66E-05	1.48E-05	1.31E-05	1.16E-05	1.03E-05	9.14E-06	8.11E-06	7.20E-06	6.40E-06	5.68E-06	5.05E-06	4.49E-06	3.99E-06	3.55E-06	3.15E-06	2.80E-06	2.49E-06
5.05E-02	4.94E-02	4.83E-02	4.73E-02	4.64E-02	4.54E-02	4.45E-02	4.36E-02	4.28E-02	4.19E-02	4.11E-02	4.04E-02	3.96E-02	3.89E-02	3.82E-02	3.75E-02	3.68E-02	3.62E-02	3.55E-02	3.49E-02	3.43E-02	3.38E-02
1.09E-01	1.07E-01	1.05E-01	1.03E-01	1.01E-01	9.89E-02	9.71E-02	9.54E-02	9.37E-02	9.20E-02	9.04E-02	8.89E-02	8.74E-02	8.59E-02	8.45E-02	8.31E-02	8.18E-02	8.04E-02	7.92E-02	7.79E-02	7.67E-02	7.55E-02
3.85E-06	3.24E-06	2.73E-06	2.30E-06	1.94E-06	1.64E-06	1.38E-06	1.17E-06	9.84E-07	8.30E-07	7.01E-07	5.92E-07	5.00E-07	4.22E-07	3.57E-07	3.01E-07	2.55E-07	2.15E-07	1.82E-07	1.54E-07	1.30E-07	1.10E-07
1.10E-01	1.06E-01	1.03E-01	9.92E-02	9.58E-02	9.26E-02	8.95E-02	8.65E-02	8.36E-02	8.08E-02	7.82E-02	7.56E-02	7.32E-02	7.09E-02	6.86E-02	6.64E-02	6.43E-02	6.23E-02	6.04E-02	5.85E-02	5.67E-02	5.50E-02
2.43E-02	2.38E-02	2.33E-02	2.28E-02	2.23E-02	2.19E-02	2.14E-02	2.10E-02	2.06E-02	2.02E-02	1.98E-02	1.94E-02	1.90E-02	1.87E-02	1.83E-02	1.80E-02	1.77E-02	1.74E-02	1.71E-02	1.68E-02	1.65E-02	1.62E-02
1.32E-01	1.30E-01	1.29E-01	1.27E-01	1.25E-01	1.24E-01	1.22E-01	1.20E-01	1.19E-01	1.17E-01	1.16E-01	1.14E-01	1.13E-01	1.11E-01	1.10E-01	1.09E-01	1.07E-01	1.06E-01	1.05E-01	1.03E-01	1.02E-01	1.01E-01
5.23E-03	4.93E-03	4.64E-03	4.38E-03	4.13E-03	3.90E-03	3.68E-03	3.47E-03	3.28E-03	3.09E-03	2.92E-03	2.76E-03	2.61E-03	2.47E-03	2.33E-03	2.20E-03	2.08E-03	1.97E-03	1.87E-03	1.77E-03	1.67E-03	1.58E-03
3.69E-03	3.47E-03	3.26E-03	3.07E-03	2.89E-03	2.72E-03	2.56E-03	2.41E-03	2.27E-03	2.13E-03	2.01E-03	1.89E-03	1.79E-03	1.68E-03	1.59E-03	1.50E-03	1.41E-03	1.33E-03	1.26E-03	1.19E-03	1.12E-03	1.06E-03
9.36E-03	9.15E-03	8.95E-03	8.76E-03	8.58E-03	8.40E-03	8.22E-03	8.06E-03	7.89E-03	7.74E-03	7.59E-03	7.44E-03	7.30E-03	7.16E-03	7.03E-03	6.90E-03	6.77E-03	6.65E-03	6.53E-03	6.42E-03	6.31E-03	6.20E-03
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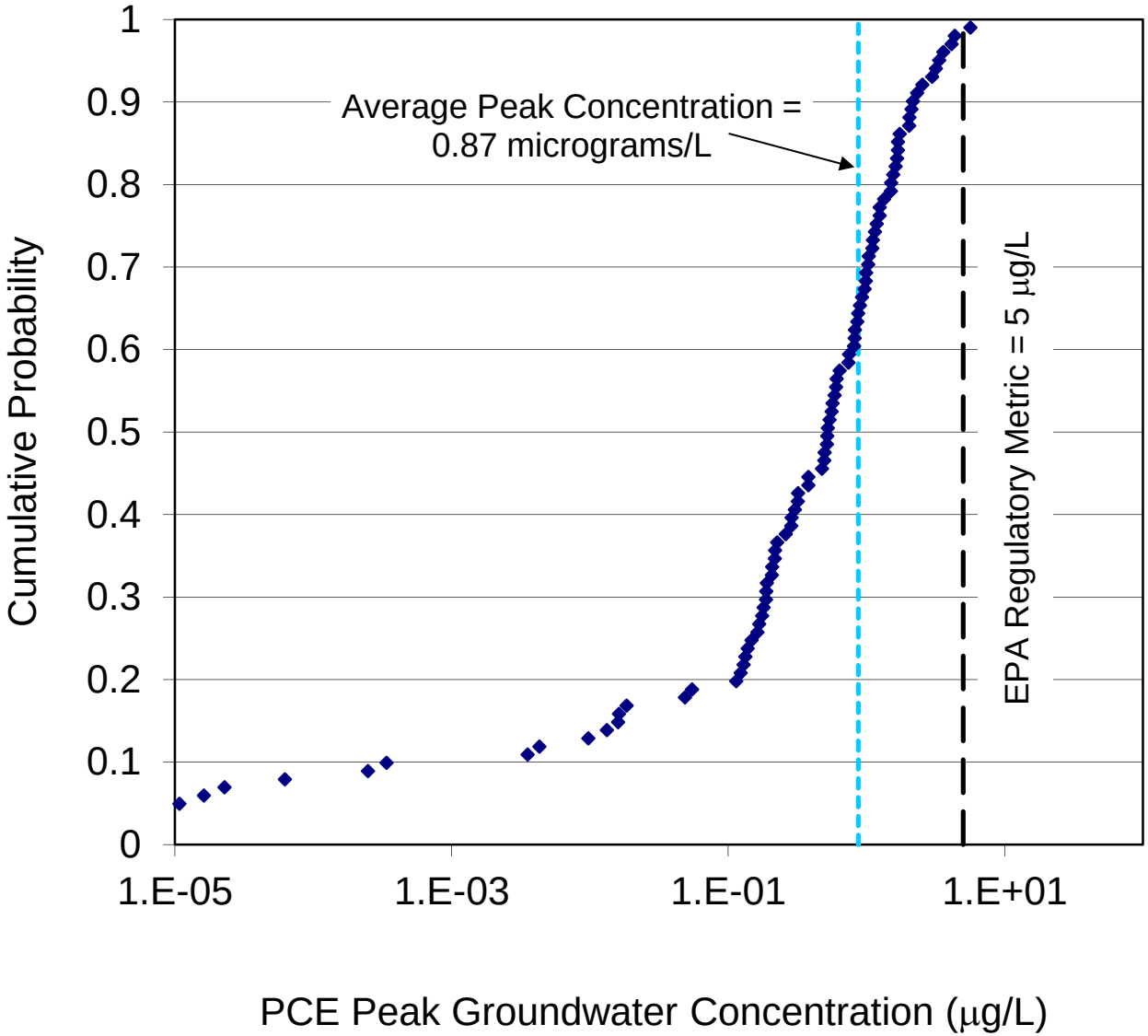
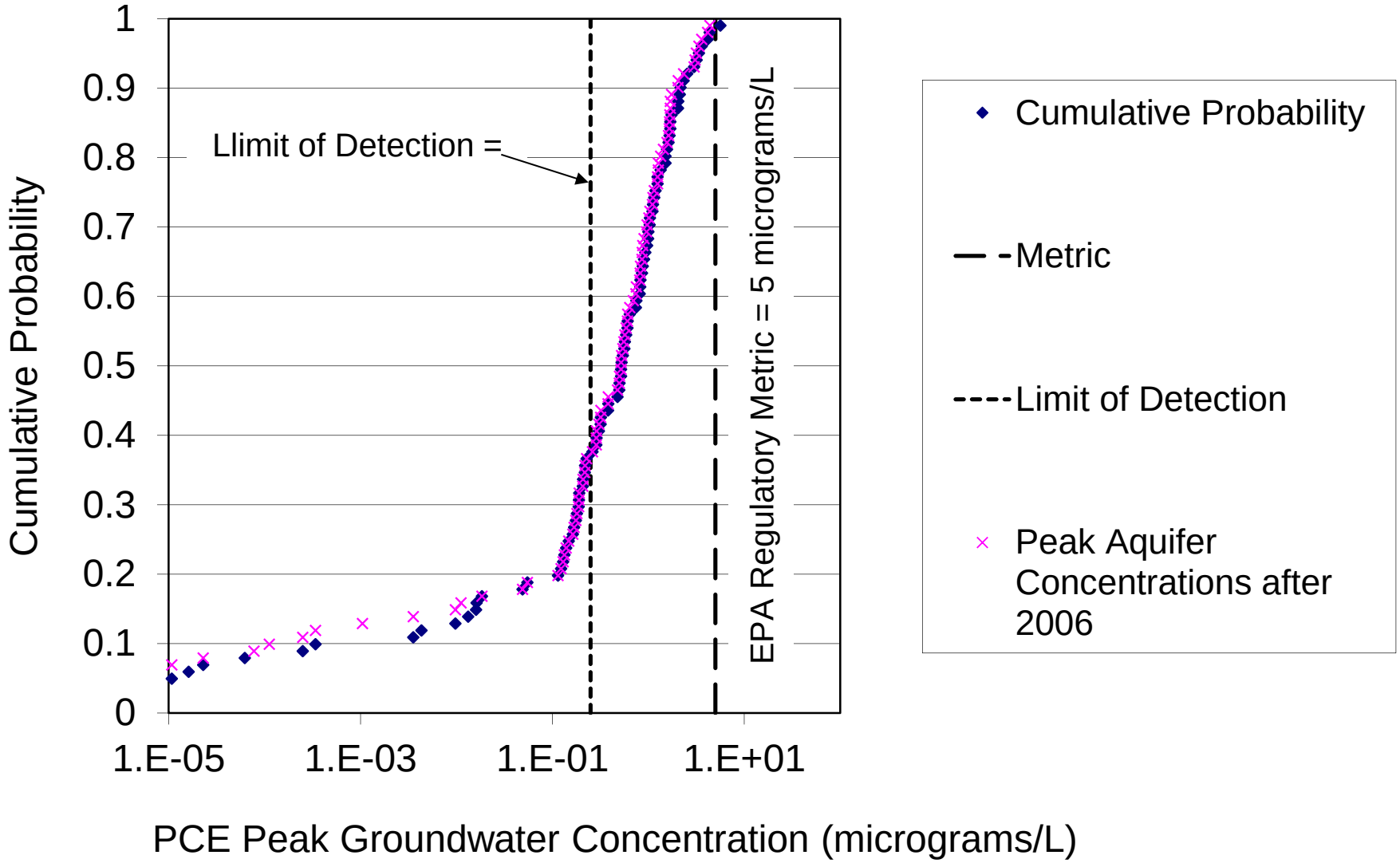
2.22E-09	1.69E-09	1.28E-09	9.69E-10	7.35E-10	5.58E-10	4.23E-10	3.22E-10	2.44E-10	1.86E-10	1.41E-10	1.07E-10	8.15E-11	6.20E-11	4.71E-11	3.59E-11	2.73E-11	2.08E-11	1.58E-11	1.20E-11	9.17E-12	6.99E-12
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.19E-02	1.16E-02	1.13E-02	1.11E-02	1.09E-02	1.06E-02	1.04E-02	1.02E-02	9.99E-03	9.79E-03	9.60E-03	9.41E-03	9.23E-03	9.06E-03	8.89E-03	8.73E-03	8.57E-03	8.41E-03	8.26E-03	8.12E-03	7.98E-03	7.84E-03
1.48E-02	1.45E-02	1.42E-02	1.39E-02	1.36E-02	1.33E-02	1.30E-02	1.28E-02	1.25E-02	1.23E-02	1.20E-02	1.18E-02	1.16E-02	1.14E-02	1.12E-02	1.10E-02	1.08E-02	1.06E-02	1.04E-02	1.02E-02	1.00E-02	9.87E-03
6.80E-32	2.31E-32	7.88E-33	2.68E-33	9.13E-34	3.11E-34	1.06E-34	3.61E-35	1.23E-35	4.19E-36	1.43E-36	4.88E-37	1.66E-37	5.68E-38	1.94E-38	6.62E-39	2.26E-39	7.72E-40	2.64E-40	9.01E-41	3.08E-41	1.05E-41
1.60E-01	1.57E-01	1.54E-01	1.51E-01	1.48E-01	1.46E-01	1.43E-01	1.40E-01	1.38E-01	1.35E-01	1.33E-01	1.31E-01	1.29E-01	1.26E-01	1.24E-01	1.22E-01	1.20E-01	1.18E-01	1.16E-01	1.15E-01	1.13E-01	1.11E-01
3.58E-02	3.51E-02	3.44E-02	3.37E-02	3.30E-02	3.24E-02	3.18E-02	3.12E-02	3.06E-02	3.00E-02	2.95E-02	2.89E-02	2.84E-02	2.79E-02	2.74E-02	2.70E-02	2.65E-02	2.60E-02	2.56E-02	2.52E-02	2.48E-02	2.44E-02
1.37E-02	1.34E-02	1.31E-02	1.28E-02	1.26E-02	1.23E-02	1.21E-02	1.18E-02	1.16E-02	1.14E-02	1.12E-02	1.09E-02	1.07E-02	1.06E-02	1.04E-02	1.02E-02	1.00E-02	9.83E-03	9.66E-03	9.49E-03	9.33E-03	9.18E-03
7.48E-72	6.14E-73	5.04E-74	4.14E-75	3.40E-76	2.79E-77	2.29E-78	1.88E-79	1.55E-80	1.27E-81	1.05E-82	8.60E-84	7.08E-85	5.82E-86	4.79E-87	3.94E-88	3.25E-89	2.67E-90	2.20E-91	1.81E-92	1.49E-93	1.23E-94
2.34E-03	2.24E-03	2.15E-03	2.06E-03	1.98E-03	1.90E-03	1.82E-03	1.75E-03	1.68E-03	1.61E-03	1.54E-03	1.48E-03	1.43E-03	1.37E-03	1.32E-03	1.27E-03	1.22E-03	1.17E-03	1.13E-03	1.09E-03	1.05E-03	1.01E-03
2.37E-01	2.32E-01	2.28E-01	2.23E-01	2.19E-01	2.15E-01	2.11E-01	2.07E-01	2.03E-01	1.99E-01	1.96E-01	1.92E-01	1.89E-01	1.85E-01	1.82E-01	1.79E-01	1.76E-01	1.73E-01	1.70E-01	1.68E-01	1.65E-01	1.62E-01
2.19E-34	6.87E-35	2.15E-35	6.75E-36	2.12E-36	6.64E-37	2.08E-37	6.54E-38	2.05E-38	6.45E-39	2.03E-39	6.37E-40	2.00E-40	6.29E-41	1.98E-41	6.22E-42	1.96E-42	6.15E-43	1.94E-43	6.09E-44	1.92E-44	6.03E-45
2.84E-02	2.78E-02	2.73E-02	2.67E-02	2.62E-02	2.57E-02	2.52E-02	2.47E-02	2.42E-02	2.38E-02	2.33E-02	2.29E-02	2.25E-02	2.21E-02	2.17E-02	2.13E-02	2.10E-02	2.06E-02	2.03E-02	1.99E-02	1.96E-02	1.93E-02
3.06E-02	2.99E-02	2.93E-02	2.87E-02	2.81E-02	2.75E-02	2.69E-02	2.64E-02	2.59E-02	2.54E-02	2.49E-02	2.44E-02	2.39E-02	2.35E-02	2.31E-02	2.26E-02	2.22E-02	2.18E-02	2.15E-02	2.11E-02	2.07E-02	2.04E-02
1.76E-01	1.71E-01	1.66E-01	1.61E-01	1.56E-01	1.52E-01	1.48E-01	1.43E-01	1.40E-01	1.36E-01	1.32E-01	1.28E-01	1.25E-01	1.22E-01	1.18E-01	1.15E-01	1.12E-01	1.09E-01	1.07E-01	1.04E-01	1.01E-01	9.86E-02
6.71E-02	6.58E-02	6.46E-02	6.34E-02	6.22E-02	6.11E-02	6.00E-02	5.89E-02	5.79E-02	5.69E-02	5.59E-02	5.49E-02	5.40E-02	5.31E-02	5.22E-02	5.14E-02	5.05E-02	4.97E-02	4.90E-02	4.82E-02	4.74E-02	4.67E-02
2.66E-02	2.61E-02	2.56E-02	2.51E-02	2.46E-02	2.42E-02	2.37E-02	2.33E-02	2.29E-02	2.25E-02	2.21E-02	2.17E-02	2.13E-02	2.10E-02	2.06E-02	2.03E-02	2.00E-02	1.96E-02	1.93E-02	1.90E-02	1.87E-02	1.84E-02
1.13E-02	1.10E-02	1.08E-02	1.06E-02	1.03E-02	1.01E-02	9.91E-03	9.71E-03	9.52E-03	9.33E-03	9.15E-03	8.97E-03	8.80E-03	8.64E-03	8.48E-03	8.32E-03	8.17E-03	8.03E-03	7.89E-03	7.75E-03	7.61E-03	7.48E-03
5.18E-01	5.17E-01	5.16E-01	5.15E-01	5.14E-01	5.12E-01	5.11E-01	5.09E-01	5.07E-01	5.05E-01	5.03E-01	5.01E-01	4.99E-01	4.97E-01	4.95E-01	4.93E-01	4.91E-01	4.88E-01	4.86E-01	4.84E-01	4.81E-01	4.79E-01
4.31E-02	4.21E-02	4.12E-02	4.03E-02	3.95E-02	3.86E-02	3.78E-02	3.71E-02	3.63E-02	3.56E-02	3.49E-02	3.42E-02	3.36E-02	3.29E-02	3.23E-02	3.17E-02	3.11E-02	3.06E-02	3.00E-02	2.95E-02	2.90E-02	2.85E-02
1.12E-01	1.09E-01	1.07E-01	1.05E-01	1.02E-01	1.00E-01	9.81E-02	9.61E-02	9.41E-02	9.22E-02	9.03E-02	8.85E-02	8.68E-02	8.51E-02	8.34E-02	8.18E-02	8.03E-02	7.88E-02	7.73E-02	7.59E-02	7.45E-02	7.31E-02
2.34E-02	2.29E-02	2.24E-02	2.20E-02	2.15E-02	2.11E-02	2.07E-02	2.03E-02	1.99E-02	1.95E-02	1.91E-02	1.88E-02	1.84E-02	1.81E-02	1.78E-02	1.75E-02	1.71E-02	1.68E-02	1.66E-02	1.63E-02	1.60E-02	1.57E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.94E-02	1.89E-02	1.85E-02	1.81E-02	1.77E-02	1.73E-02	1.70E-02	1.66E-02	1.63E-02	1.60E-02	1.57E-02	1.54E-02	1.51E-02	1.48E-02	1.45E-02	1.42E-02	1.40E-02	1.37E-02	1.35E-02	1.32E-02	1.30E-02	1.28E-02
1.63E-31	5.46E-32	1.83E-32	6.12E-33	2.05E-33	6.88E-34	2.30E-34	7.72E-35	2.59E-35	8.68E-36	2.91E-36	9.76E-37	3.27E-37	1.10E-37	3.68E-38	1.23E-38	4.14E-39	1.39E-39	4.67E-40	1.57E-40	5.26E-41	1.76E-41
1.88E-02	1.84E-02	1.80E-02	1.76E-02	1.72E-02	1.68E-02	1.65E-02	1.62E-02	1.58E-02	1.55E-02	1.52E-02	1.49E-02	1.46E-02	1.44E-02	1.41E-02	1.38E-02	1.36E-02	1.33E-02	1.31E-02	1.29E-02	1.27E-02	1.24E-02
3.70E-09	2.84E-09	2.18E-09	1.67E-09	1.29E-09	9.88E-10	7.60E-10	5.84E-10	4.49E-10	3.46E-10	2.66E-10	2.05E-10	1.58E-10	1.21E-10	9.36E-11	7.21E-11	5.56E-11	4.28E-11	3.30E-11	2.55E-11	1.97E-11	1.52E-11
1.13E-82	6.58E-84	3.84E-85	2.24E-86	1.30E-87	7.60E-89	4.43E-90	2.59E-91	1.51E-92	8.82E-94	5.15E-95	3.01E-96	1.76E-97	1.03E-98	########	########	########	########	########	########	########	########
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
3.02E-02	2.96E-02	2.90E-02	2.85E-02	2.80E-02	2.75E-02	2.70E-02	2.65E-02	2.61E-02	2.56E-02	2.52E-02	2.48E-02	2.43E-02	2.39E-02	2.36E-02	2.32E-02	2.28E-02	2.24E-02	2.21E-02	2.18E-02	2.14E-02	2.11E-02
8.14E-03	7.96E-03	7.79E-03	7.62E-03	7.46E-03	7.30E-03	7.15E-03	7.01E-03	6.87E-03	6.73E-03	6.60E-03	6.47E-03	6.35E-03	6.23E-03	6.11E-03	6.00E-03	5.89E-03	5.78E-03	5.68E-03	5.58E-03	5.48E-03	5.39E-03
1.13E-02	1.10E-02	1.08E-02	1.05E-02	1.03E-02	1.01E-02	9.87E-03	9.66E-03	9.46E-03	9.27E-03	9.09E-03	8.91E-03	8.73E-03	8.56E-03	8.40E-03	8.24E-03	8.09E-03	7.94E-03	7.80E-03	7.66E-03	7.52E-03	7.39E-03
5.89E-04	5.58E-04	5.29E-04	5.02E-04	4.77E-04	4.53E-04	4.30E-04	4.08E-04	3.88E-04	3.69E-04	3.51E-04	3.33E-04	3.17E-04	3.02E-04	2.87E-04	2.73E-04	2.60E-04	2.48E-04	2.36E-04	2.25E-04	2.14E-04	2.04E-04
7.29E-03	7.12E-03	6.97E-03	6.81E-03	6.67E-03	6.53E-03	6.39E-03	6.26E-03	6.13E-03	6.01E-03	5.89E-03	5.78E-03	5.67E-03	5.56E-03	5.46E-03	5.36E-03	5.26E-03	5.16E-03	5.07E-03	4.98E-03	4.89E-03	4.81E-03
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
7.88E-01	**7.74E-01**	**7.61E-01**	**7.47E-01**	**7.35E-01**	**7.22E-01**	**7.10E-01**	**6.98E-01**	**6.87E-01**	**6.76E-01**	**6.65E-01**	**6.54E-01**	**6.44E-01**	**6.34E-01**	**6.24E-01**	**6.15E-01**	**6.05E-01**	**5.96E-01**	**5.87E-01**	**5.79E-01**	**5.70E-01**	**5.62E-01**
0.051895	0.050936	0.050007	0.049107	0.048234	0.047386	0.046564	0.045765	0.044989	0.044235	0.043503	0.04279	0.042097	0.041423	0.040767	0.040128	0.039505	0.038899	0.038308	0.037732	0.037171	0.036623

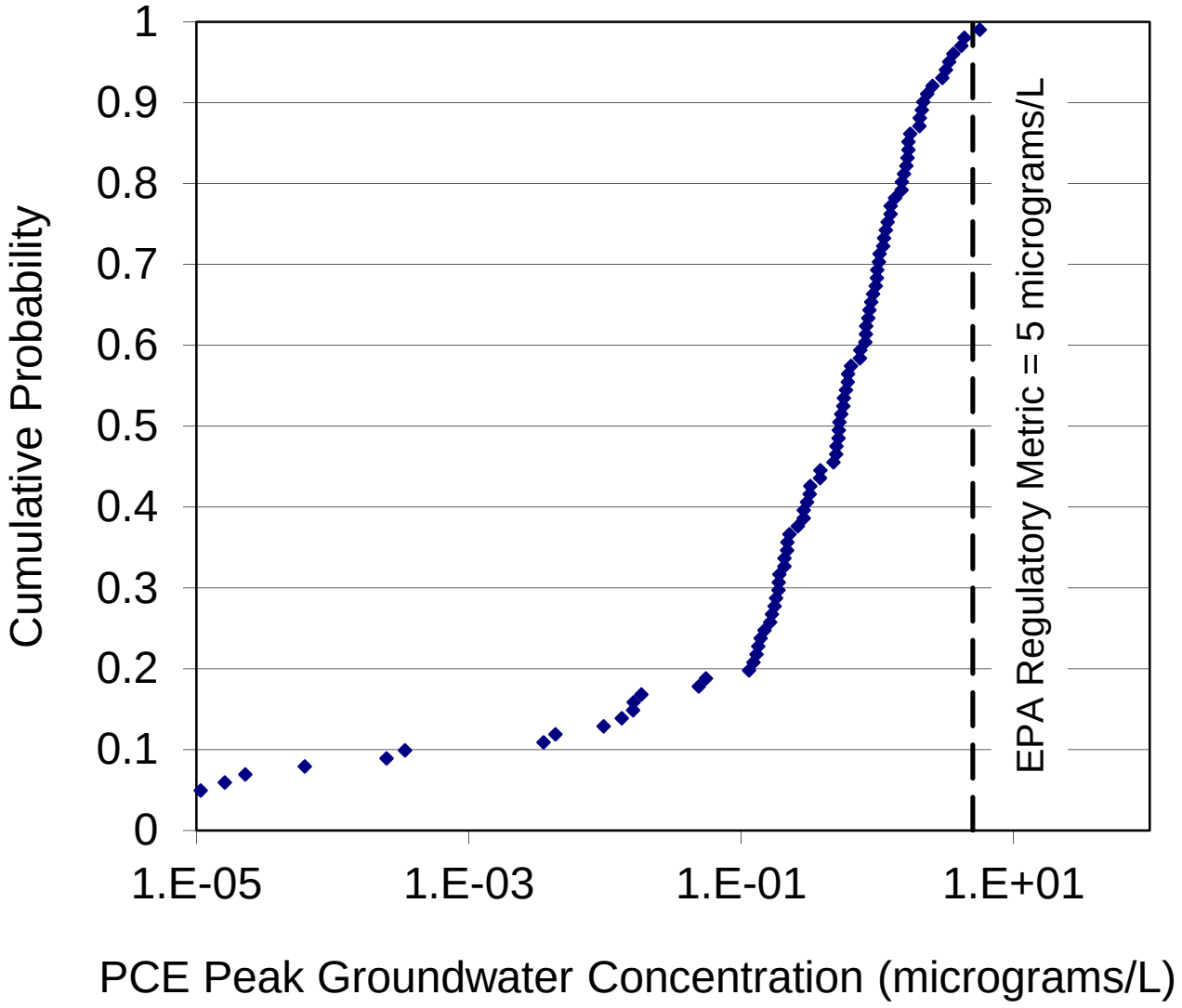
870	880	890	900	910	920	930	940	950	960	970	980	990	1000	Max Concentration (µg/L)	Max Concentration after 2006 (µg/L)	Number of realizations with peak concentration greater than 1 ug/L)	Regulatory Metric Time
1.78E-02	1.76E-02	1.73E-02	1.70E-02	1.67E-02	1.65E-02	1.62E-02	1.60E-02	1.57E-02	1.55E-02	1.52E-02	1.50E-02	1.48E-02	1.46E-02	6.05E-01	6.05E-01	3.00E+01	0.00E+00
2.23E-02	2.19E-02	2.16E-02	2.12E-02	2.09E-02	2.05E-02	2.02E-02	1.99E-02	1.96E-02	1.93E-02	1.90E-02	1.87E-02	1.84E-02	1.82E-02	4.35E+00	3.16E+00		1.00E+03
1.31E-01	1.29E-01	1.27E-01	1.25E-01	1.23E-01	1.21E-01	1.19E-01	1.17E-01	1.16E-01	1.14E-01	1.12E-01	1.11E-01	1.09E-01	1.08E-01	1.34E+00	1.34E+00		
1.26E-35	5.12E-36	2.08E-36	8.44E-37	3.43E-37	1.39E-37	5.65E-38	2.30E-38	9.34E-39	3.80E-39	1.54E-39	6.27E-40	2.55E-40	1.04E-40	1.80E-01	1.80E-01		
########	########	########	########	########	########	########	########	########	########	########	########	2.76E-120	1.75E-121	2.29E-05	2.29E-05		
3.26E-02	3.20E-02	3.15E-02	3.10E-02	3.04E-02	2.99E-02	2.95E-02	2.90E-02	2.85E-02	2.81E-02	2.77E-02	2.72E-02	2.68E-02	2.64E-02	5.64E+00	4.39E+00		
9.36E-02	9.23E-02	9.10E-02	8.97E-02	8.85E-02	8.73E-02	8.61E-02	8.49E-02	8.38E-02	8.27E-02	8.16E-02	8.06E-02	7.95E-02	7.85E-02	3.81E-01	3.81E-01		
1.24E-02	1.22E-02	1.20E-02	1.18E-02	1.16E-02	1.14E-02	1.12E-02	1.11E-02	1.09E-02	1.07E-02	1.06E-02	1.04E-02	1.02E-02	1.01E-02	1.04E+00	1.04E+00		
9.11E-03	8.94E-03	8.78E-03	8.62E-03	8.47E-03	8.32E-03	8.18E-03	8.04E-03	7.90E-03	7.77E-03	7.64E-03	7.51E-03	7.39E-03	7.27E-03	1.51E+00	1.27E+00		
########	########	########	########	########	########	########	########	########	########	########	########	4.70E-119	3.05E-120	1.08E-05	1.08E-05		
6.83E-08	5.73E-08	4.80E-08	4.02E-08	3.37E-08	2.83E-08	2.37E-08	1.98E-08	1.66E-08	1.39E-08	1.17E-08	9.79E-09	8.21E-09	6.88E-09	3.54E-03	3.54E-03		
8.07E-03	7.89E-03	7.72E-03	7.55E-03	7.39E-03	7.23E-03	7.07E-03	6.92E-03	6.78E-03	6.63E-03	6.50E-03	6.36E-03	6.23E-03	6.10E-03	2.08E-01	2.08E-01		
1.18E-04	1.09E-04	1.01E-04	9.32E-05	8.62E-05	7.98E-05	7.38E-05	6.83E-05	6.32E-05	5.85E-05	5.42E-05	5.01E-05	4.64E-05	4.30E-05	4.99E-01	4.99E-01		
2.75E-02	2.70E-02	2.66E-02	2.62E-02	2.57E-02	2.53E-02	2.49E-02	2.45E-02	2.42E-02	2.38E-02	2.34E-02	2.31E-02	2.27E-02	2.24E-02	1.74E+00	1.74E+00		
1.60E-02	1.58E-02	1.55E-02	1.52E-02	1.50E-02	1.47E-02	1.45E-02	1.43E-02	1.41E-02	1.38E-02	1.36E-02	1.34E-02	1.32E-02	1.30E-02	8.58E-01	8.58E-01		
8.64E-02	8.51E-02	8.38E-02	8.25E-02	8.13E-02	8.01E-02	7.89E-02	7.77E-02	7.66E-02	7.55E-02	7.44E-02	7.34E-02	7.24E-02	7.14E-02	8.25E-01	8.25E-01		
3.75E-02	3.69E-02	3.63E-02	3.57E-02	3.51E-02	3.46E-02	3.40E-02	3.35E-02	3.30E-02	3.25E-02	3.20E-02	3.15E-02	3.10E-02	3.05E-02	6.09E-01	6.09E-01		
2.67E-02	2.63E-02	2.59E-02	2.55E-02	2.51E-02	2.47E-02	2.43E-02	2.39E-02	2.36E-02	2.32E-02	2.29E-02	2.25E-02	2.22E-02	2.19E-02	7.42E-01	7.42E-01		
5.54E-01	5.46E-01	5.39E-01	5.31E-01	5.24E-01	5.16E-01	5.09E-01	5.03E-01	4.96E-01	4.89E-01	4.83E-01	4.77E-01	4.71E-01	4.65E-01	2.32E+00	2.32E+00		
1.91E-96	1.53E-97	1.22E-98	########	########	########	########	########	########	########	########	########	1.31E-109	1.05E-110	1.62E-02	1.11E-02		
4.88E-02	4.80E-02	4.72E-02	4.65E-02	4.58E-02	4.51E-02	4.44E-02	4.38E-02	4.31E-02	4.25E-02	4.19E-02	4.13E-02	4.07E-02	4.01E-02	6.40E-01	6.40E-01		
3.27E-02	3.21E-02	3.14E-02	3.08E-02	3.02E-02	2.96E-02	2.90E-02	2.85E-02	2.79E-02	2.74E-02	2.69E-02	2.64E-02	2.59E-02	2.54E-02	1.48E-01	1.48E-01		
########	########	########	########	########	########	########	########	########	########	########	########	7.03E-204	6.44E-206	1.33E-02	1.12E-04		
1.15E-02	1.13E-02	1.11E-02	1.09E-02	1.07E-02	1.05E-02	1.03E-02	1.02E-02	1.00E-02	9.84E-03	9.68E-03	9.52E-03	9.37E-03	9.23E-03	2.12E+00	1.65E+00		
########	########	########	########	########	########	########	########	########	########	########	########	4.89E-185	7.02E-187	4.31E-03	7.73E-05		
8.31E-02	8.23E-02	8.15E-02	8.06E-02	7.98E-02	7.91E-02	7.83E-02	7.75E-02	7.68E-02	7.60E-02	7.53E-02	7.45E-02	7.38E-02	7.31E-02	1.29E-01	1.29E-01		
1.52E-02	1.50E-02	1.47E-02	1.45E-02	1.43E-02	1.40E-02	1.38E-02	1.36E-02	1.34E-02	1.32E-02	1.30E-02	1.28E-02	1.26E-02	1.24E-02	1.76E-01	1.76E-01		
1.55E-02	1.53E-02	1.51E-02	1.48E-02	1.46E-02	1.44E-02	1.42E-02	1.40E-02	1.38E-02	1.36E-02	1.34E-02	1.32E-02	1.30E-02	1.29E-02	1.14E-01	1.14E-01		
2.79E-02	2.74E-02	2.70E-02	2.66E-02	2.62E-02	2.58E-02	2.54E-02	2.50E-02	2.47E-02	2.43E-02	2.39E-02	2.36E-02	2.33E-02	2.29E-02	3.80E-01	3.80E-01		
1.49E-02	1.46E-02	1.44E-02	1.42E-02	1.39E-02	1.37E-02	1.35E-02	1.33E-02	1.31E-02	1.29E-02	1.27E-02	1.25E-02	1.23E-02	1.21E-02	9.70E-01	9.70E-01		
8.79E-03	8.65E-03	8.51E-03	8.38E-03	8.24E-03	8.12E-03	7.99E-03	7.87E-03	7.75E-03	7.64E-03	7.52E-03	7.41E-03	7.31E-03	7.20E-03	2.07E-01	2.07E-01		
1.03E-02	1.01E-02	9.98E-03	9.81E-03	9.66E-03	9.50E-03	9.35E-03	9.20E-03	9.06E-03	8.92E-03	8.78E-03	8.65E-03	8.52E-03	8.39E-03	1.50E+00	1.27E+00		
1.62E-02	1.59E-02	1.56E-02	1.54E-02	1.52E-02	1.49E-02	1.47E-02	1.45E-02	1.42E-02	1.40E-02	1.38E-02	1.36E-02	1.34E-02	1.32E-02	4.96E-01	4.96E-01		
5.53E-02	5.43E-02	5.34E-02	5.26E-02	5.17E-02	5.09E-02	5.01E-02	4.93E-02	4.86E-02	4.78E-02	4.71E-02	4.64E-02	4.57E-02	4.50E-02	3.60E+00	3.60E+00		
########	########	########	########	########	########	########	########	########	########	########	########	1.32E-297	1.46E-300	8.72E-11	8.72E-11		
1.58E-02	1.55E-02	1.52E-02	1.49E-02	1.46E-02	1.43E-02	1.40E-02	1.38E-02	1.35E-02	1.33E-02	1.30E-02	1.28E-02	1.26E-02	1.23E-02	1.57E+00	1.57E+00		
1.09E-01	1.08E-01	1.07E-01	1.06E-01	1.05E-01	1.04E-01	1.03E-01	1.02E-01	1.01E-01	9.97E-02	9.88E-02	9.79E-02	9.70E-02	9.61E-02	1.63E-01	1.63E-01		
1.44E-01	1.41E-01	1.39E-01	1.37E-01	1.35E-01	1.33E-01	1.31E-01	1.29E-01	1.27E-01	1.26E-01	1.24E-01	1.22E-01	1.20E-01	1.19E-01	1.25E+00	1.25E+00		
5.96E-03	5.86E-03	5.77E-03	5.67E-03	5.58E-03	5.49E-03	5.41E-03	5.32E-03	5.24E-03	5.16E-03	5.08E-03	5.01E-03	4.94E-03	4.86E-03	2.87E-01	2.87E-01		
2.37E-01	2.33E-01	2.30E-01	2.26E-01	2.23E-01	2.20E-01	2.16E-01	2.13E-01	2.10E-01	2.07E-01	2.05E-01	2.02E-01	1.99E-01	1.96E-01	1.63E+00	1.63E+00		
6.61E-03	6.50E-03	6.39E-03	6.29E-03	6.18E-03	6.09E-03	5.99E-03	5.90E-03	5.80E-03	5.72E-03	5.63E-03	5.54E-03	5.46E-03	5.38E-03	4.76E-01	4.76E-01		
2.99E-02	2.95E-02	2.90E-02	2.86E-02	2.81E-02	2.77E-02	2.73E-02	2.69E-02	2.65E-02	2.61E-02	2.58E-02	2.54E-02	2.51E-02	2.47E-02	2.88E-01	2.88E-01		
9.66E-06	8.73E-06	7.88E-06	7.12E-06	6.43E-06	5.81E-06	5.25E-06	4.75E-06	4.29E-06	3.88E-06	3.51E-06	3.17E-06	2.87E-06	2.59E-06	1.85E-02	1.85E-02		
3.29E-02	3.24E-02	3.19E-02	3.14E-02	3.09E-02	3.04E-02	2.99E-02	2.95E-02	2.90E-02	2.86E-02	2.82E-02	2.77E-02	2.73E-02	2.69E-02	8.98E-01	8.98E-01		
7.04E-03	6.93E-03	6.81E-03	6.70E-03	6.59E-03	6.49E-03	6.39E-03	6.29E-03	6.19E-03	6.09E-03	6.00E-03	5.91E-03	5.82E-03	5.74E-03	5.25E-01	5.25E-01		
1.25E-02	1.23E-02	1.21E-02	1.19E-02	1.17E-02	1.16E-02	1.14E-02	1.12E-02	1.11E-02	1.09E-02	1.07E-02	1.06E-02	1.04E-02	1.03E-02	1.68E-01	1.68E-01		
9.62E-03	9.46E-03	9.30E-03	9.15E-03	9.00E-03	8.85E-03	8.71E-03	8.58E-03	8.44E-03	8.31E-03	8.19E-03	8.06E-03	7.94E-03	7.83E-03	1.03E+00	1.01E+00		
1.08E-02	1.03E-02	9.90E-03	9.49E-03	9.10E-03	8.73E-03	8.38E-03	8.04E-03	7.72E-03	7.41E-03	7.11E-03	6.83E-03	6.56E-03	6.30E-03	4.13E+00	4.13E+00		
2.05E-02	2.02E-02	1.99E-02	1.95E-02	1.92E-02	1.89E-02	1.86E-02	1.83E-02	1.80E-02	1.78E-02	1.75E-02	1.72E-02	1.70E-02	1.67E-02	1.69E+00	1.69E+00		
1.49E-02	1.46E-02	1.44E-02	1.41E-02	1.39E-02	1.37E-02	1.35E-02	1.33E-02	1.31E-02	1.29E-02	1.27E-02	1.25E-02	1.23E-02	1.21E-02	1.25E+00	1.25E+00		

1.49E-51	3.96E-52	1.05E-52	2.80E-53	7.44E-54	1.98E-54	5.26E-55	1.40E-55	3.73E-56	9.92E-57	2.64E-57	7.03E-58	1.87E-58	4.98E-59	9.97E-01	2.87E-01
4.73E-02	4.65E-02	4.58E-02	4.50E-02	4.43E-02	4.36E-02	4.29E-02	4.23E-02	4.16E-02	4.10E-02	4.04E-02	3.98E-02	3.92E-02	3.86E-02	2.04E+00	2.04E+00
2.06E-02	2.01E-02	1.96E-02	1.92E-02	1.87E-02	1.83E-02	1.79E-02	1.75E-02	1.71E-02	1.67E-02	1.64E-02	1.60E-02	1.57E-02	1.53E-02	3.36E+00	3.36E+00
3.90E-03	3.84E-03	3.78E-03	3.72E-03	3.66E-03	3.60E-03	3.55E-03	3.50E-03	3.44E-03	3.39E-03	3.34E-03	3.29E-03	3.25E-03	3.20E-03	5.49E-02	5.49E-02
2.22E-06	1.97E-06	1.76E-06	1.56E-06	1.39E-06	1.24E-06	1.10E-06	9.84E-07	8.76E-07	7.81E-07	6.96E-07	6.20E-07	5.53E-07	4.93E-07	1.91E-01	1.91E-01
3.32E-02	3.27E-02	3.21E-02	3.16E-02	3.11E-02	3.06E-02	3.02E-02	2.97E-02	2.92E-02	2.88E-02	2.84E-02	2.79E-02	2.75E-02	2.71E-02	1.12E+00	1.12E+00
7.44E-02	7.32E-02	7.21E-02	7.11E-02	7.00E-02	6.90E-02	6.80E-02	6.71E-02	6.61E-02	6.52E-02	6.43E-02	6.34E-02	6.25E-02	6.17E-02	5.19E-01	5.19E-01
9.31E-08	7.88E-08	6.67E-08	5.64E-08	4.78E-08	4.04E-08	3.42E-08	2.90E-08	2.46E-08	2.08E-08	1.76E-08	1.49E-08	1.27E-08	1.07E-08	1.33E-01	1.33E-01
5.33E-02	5.17E-02	5.01E-02	4.86E-02	4.72E-02	4.58E-02	4.45E-02	4.32E-02	4.19E-02	4.07E-02	3.95E-02	3.84E-02	3.73E-02	3.62E-02	2.99E+00	2.99E+00
1.59E-02	1.57E-02	1.54E-02	1.52E-02	1.49E-02	1.47E-02	1.45E-02	1.42E-02	1.40E-02	1.38E-02	1.36E-02	1.34E-02	1.32E-02	1.30E-02	7.48E-01	7.48E-01
9.95E-02	9.82E-02	9.70E-02	9.58E-02	9.47E-02	9.35E-02	9.24E-02	9.13E-02	9.02E-02	8.91E-02	8.81E-02	8.70E-02	8.60E-02	8.50E-02	1.88E-01	1.88E-01
1.50E-03	1.42E-03	1.34E-03	1.27E-03	1.20E-03	1.14E-03	1.08E-03	1.02E-03	9.71E-04	9.20E-04	8.73E-04	8.27E-04	7.85E-04	7.44E-04	3.21E-01	3.21E-01
1.00E-03	9.46E-04	8.94E-04	8.45E-04	7.99E-04	7.56E-04	7.15E-04	6.76E-04	6.39E-04	6.05E-04	5.73E-04	5.42E-04	5.13E-04	4.86E-04	3.18E+00	3.06E+00
6.10E-03	5.99E-03	5.90E-03	5.80E-03	5.70E-03	5.61E-03	5.52E-03	5.44E-03	5.35E-03	5.27E-03	5.19E-03	5.11E-03	5.04E-03	4.96E-03	5.87E-01	5.87E-01
########	########	########	########	########	########	########	########	########	########	########	########	5.57E-222	3.31E-224	8.83E-07	8.79E-07
5.32E-12	4.06E-12	3.09E-12	2.36E-12	1.80E-12	1.37E-12	1.05E-12	7.97E-13	6.08E-13	4.64E-13	3.54E-13	2.70E-13	2.07E-13	1.58E-13	8.72E-01	8.72E-01
########	########	########	########	########	########	########	########	########	########	########	########	0.00E+00	0.00E+00	1.62E-05	2.31E-07
7.71E-03	7.58E-03	7.45E-03	7.33E-03	7.21E-03	7.10E-03	6.98E-03	6.87E-03	6.77E-03	6.66E-03	6.56E-03	6.46E-03	6.37E-03	6.27E-03	9.30E-01	8.62E-01
9.70E-03	9.54E-03	9.39E-03	9.23E-03	9.08E-03	8.94E-03	8.80E-03	8.66E-03	8.52E-03	8.39E-03	8.27E-03	8.14E-03	8.02E-03	7.90E-03	1.89E-01	1.89E-01
3.60E-42	1.23E-42	4.20E-43	1.44E-43	4.92E-44	1.68E-44	5.76E-45	1.97E-45	6.75E-46	2.31E-46	7.91E-47	2.71E-47	9.28E-48	3.18E-48	4.88E-02	4.88E-02
1.09E-01	1.08E-01	1.06E-01	1.04E-01	1.03E-01	1.01E-01	9.99E-02	9.85E-02	9.71E-02	9.57E-02	9.44E-02	9.31E-02	9.18E-02	9.05E-02	8.12E-01	8.12E-01
2.40E-02	2.36E-02	2.32E-02	2.29E-02	2.25E-02	2.22E-02	2.19E-02	2.15E-02	2.12E-02	2.09E-02	2.06E-02	2.03E-02	2.00E-02	1.97E-02	3.18E-01	3.18E-01
9.03E-03	8.88E-03	8.74E-03	8.60E-03	8.46E-03	8.33E-03	8.20E-03	8.08E-03	7.96E-03	7.84E-03	7.72E-03	7.61E-03	7.50E-03	7.39E-03	2.18E-01	2.18E-01
1.01E-95	8.36E-97	6.89E-98	5.68E-99	########	########	########	########	########	########	########	########	1.01E-108	8.30E-110	2.49E-04	2.49E-04
9.69E-04	9.34E-04	9.00E-04	8.67E-04	8.35E-04	8.05E-04	7.76E-04	7.48E-04	7.22E-04	6.96E-04	6.72E-04	6.48E-04	6.25E-04	6.04E-04	5.41E-01	5.41E-01
1.60E-01	1.57E-01	1.55E-01	1.52E-01	1.50E-01	1.48E-01	1.46E-01	1.43E-01	1.41E-01	1.39E-01	1.37E-01	1.35E-01	1.34E-01	1.32E-01	1.69E+00	1.69E+00
1.90E-45	5.98E-46	1.88E-46	5.94E-47	1.87E-47	5.89E-48	1.86E-48	5.86E-49	1.85E-49	5.82E-50	1.84E-50	5.79E-51	1.83E-51	5.76E-52	9.74E-03	9.74E-03
1.90E-02	1.87E-02	1.84E-02	1.81E-02	1.78E-02	1.76E-02	1.73E-02	1.70E-02	1.68E-02	1.65E-02	1.63E-02	1.61E-02	1.58E-02	1.56E-02	2.61E-01	2.61E-01
2.00E-02	1.97E-02	1.94E-02	1.91E-02	1.88E-02	1.85E-02	1.82E-02	1.79E-02	1.76E-02	1.73E-02	1.71E-02	1.68E-02	1.66E-02	1.63E-02	1.10E+00	1.10E+00
9.62E-02	9.38E-02	9.15E-02	8.92E-02	8.70E-02	8.49E-02	8.29E-02	8.09E-02	7.89E-02	7.71E-02	7.53E-02	7.35E-02	7.18E-02	7.01E-02	2.04E+00	2.04E+00
4.60E-02	4.53E-02	4.46E-02	4.40E-02	4.33E-02	4.27E-02	4.21E-02	4.15E-02	4.09E-02	4.03E-02	3.98E-02	3.92E-02	3.87E-02	3.82E-02	3.04E-01	3.04E-01
1.81E-02	1.79E-02	1.76E-02	1.73E-02	1.71E-02	1.68E-02	1.66E-02	1.63E-02	1.61E-02	1.59E-02	1.57E-02	1.54E-02	1.52E-02	1.50E-02	1.39E-01	1.39E-01
7.36E-03	7.24E-03	7.12E-03	7.00E-03	6.89E-03	6.78E-03	6.67E-03	6.57E-03	6.46E-03	6.37E-03	6.27E-03	6.18E-03	6.08E-03	5.99E-03	5.68E-01	5.68E-01
4.76E-01	4.74E-01	4.71E-01	4.69E-01	4.66E-01	4.64E-01	4.61E-01	4.58E-01	4.56E-01	4.53E-01	4.51E-01	4.48E-01	4.45E-01	4.43E-01	5.20E-01	5.20E-01
2.80E-02	2.75E-02	2.71E-02	2.66E-02	2.62E-02	2.58E-02	2.53E-02	2.49E-02	2.45E-02	2.42E-02	2.38E-02	2.34E-02	2.31E-02	2.27E-02	1.66E+00	1.66E+00
7.18E-02	7.06E-02	6.93E-02	6.81E-02	6.69E-02	6.58E-02	6.47E-02	6.36E-02	6.25E-02	6.15E-02	6.04E-02	5.95E-02	5.85E-02	5.76E-02	8.22E-01	8.22E-01
1.55E-02	1.52E-02	1.50E-02	1.47E-02	1.45E-02	1.43E-02	1.41E-02	1.38E-02	1.36E-02	1.34E-02	1.32E-02	1.30E-02	1.28E-02	1.27E-02	2.26E-01	2.26E-01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.34E-16	8.34E-16
1.26E-02	1.24E-02	1.21E-02	1.19E-02	1.18E-02	1.16E-02	1.14E-02	1.12E-02	1.10E-02	1.09E-02	1.07E-02	1.05E-02	1.04E-02	1.02E-02	2.16E+00	1.68E+00
5.92E-42	1.99E-42	6.68E-43	2.24E-43	7.53E-44	2.53E-44	8.50E-45	2.86E-45	9.60E-46	3.23E-46	1.08E-46	3.64E-47	1.22E-47	4.12E-48	3.40E-04	3.40E-04
1.22E-02	1.20E-02	1.18E-02	1.16E-02	1.14E-02	1.13E-02	1.11E-02	1.09E-02	1.07E-02	1.06E-02	1.04E-02	1.03E-02	1.01E-02	9.95E-03	1.15E+00	1.15E+00
1.17E-11	9.04E-12	6.98E-12	5.39E-12	4.16E-12	3.21E-12	2.48E-12	1.92E-12	1.48E-12	1.15E-12	8.86E-13	6.85E-13	5.30E-13	4.10E-13	2.54E+00	1.43E+00
########	########	########	########	########	########	########	########	########	########	########	########	1.36E-124	7.99E-126	1.60E-02	1.05E-03
########	########	########	########	########	########	########	########	########	########	########	########	4.22E-246	1.46E-248	7.42E-06	4.29E-07
2.08E-02	2.05E-02	2.02E-02	1.99E-02	1.96E-02	1.93E-02	1.90E-02	1.88E-02	1.85E-02	1.83E-02	1.80E-02	1.78E-02	1.75E-02	1.73E-02	1.23E-01	1.23E-01
5.30E-03	5.21E-03	5.12E-03	5.04E-03	4.96E-03	4.88E-03	4.80E-03	4.73E-03	4.65E-03	4.58E-03	4.51E-03	4.44E-03	4.38E-03	4.31E-03	5.61E-01	5.55E-01
7.26E-03	7.14E-03	7.02E-03	6.90E-03	6.78E-03	6.67E-03	6.56E-03	6.46E-03	6.35E-03	6.25E-03	6.16E-03	6.06E-03	5.97E-03	5.88E-03	1.19E+00	9.58E-01
1.95E-04	1.86E-04	1.77E-04	1.69E-04	1.61E-04	1.54E-04	1.47E-04	1.40E-04	1.34E-04	1.27E-04	1.22E-04	1.16E-04	1.11E-04	1.06E-04	2.17E-01	2.17E-01
4.73E-03	4.65E-03	4.57E-03	4.50E-03	4.42E-03	4.35E-03	4.28E-03	4.21E-03	4.15E-03	4.08E-03	4.02E-03	3.96E-03	3.90E-03	3.84E-03	9.91E-01	6.95E-01
########	########	########	########	########	########	########	########	########	########	########	########	3.48E-222	2.06E-224	6.23E-05	8.41E-06
5.54E-01	**5.46E-01**	**5.39E-01**	**5.31E-01**	**5.24E-01**	**5.16E-01**	**5.09E-01**	**5.03E-01**	**4.96E-01**	**4.89E-01**	**4.83E-01**	**4.77E-01**	**4.71E-01**	**4.65E-01**	**5.639E+00**	**4.387E+00**
0.036089	0.035568	0.035059	0.034563	0.034078	0.033604	0.033141	0.032689	0.032248	0.031816	0.031393	0.03098	0.030576018	0.030180711		

Regulatory Metric (ppb)
5.00E+00
5.00E+00


Cumulative Probability
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1.E-05
1.E-03
1.E-01
1.E+01
PCE Peak Groundwater Concentration (μg/L)
Average Peak Concentration =
0.87 micrograms/L
EPA Regulatory Metric = 5 μg/L


Cumulative Probability
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Llimit of Detection =
EPA Regulatory Metric = 5 micrograms/L
1.E-05
1.E-03
1.E-01
1.E+01
PCE Peak Groundwater Concentration (micrograms/L)
Cumulative Probability
Metric
Limit of Detection
Peak Aquifer Concentrations after 2006

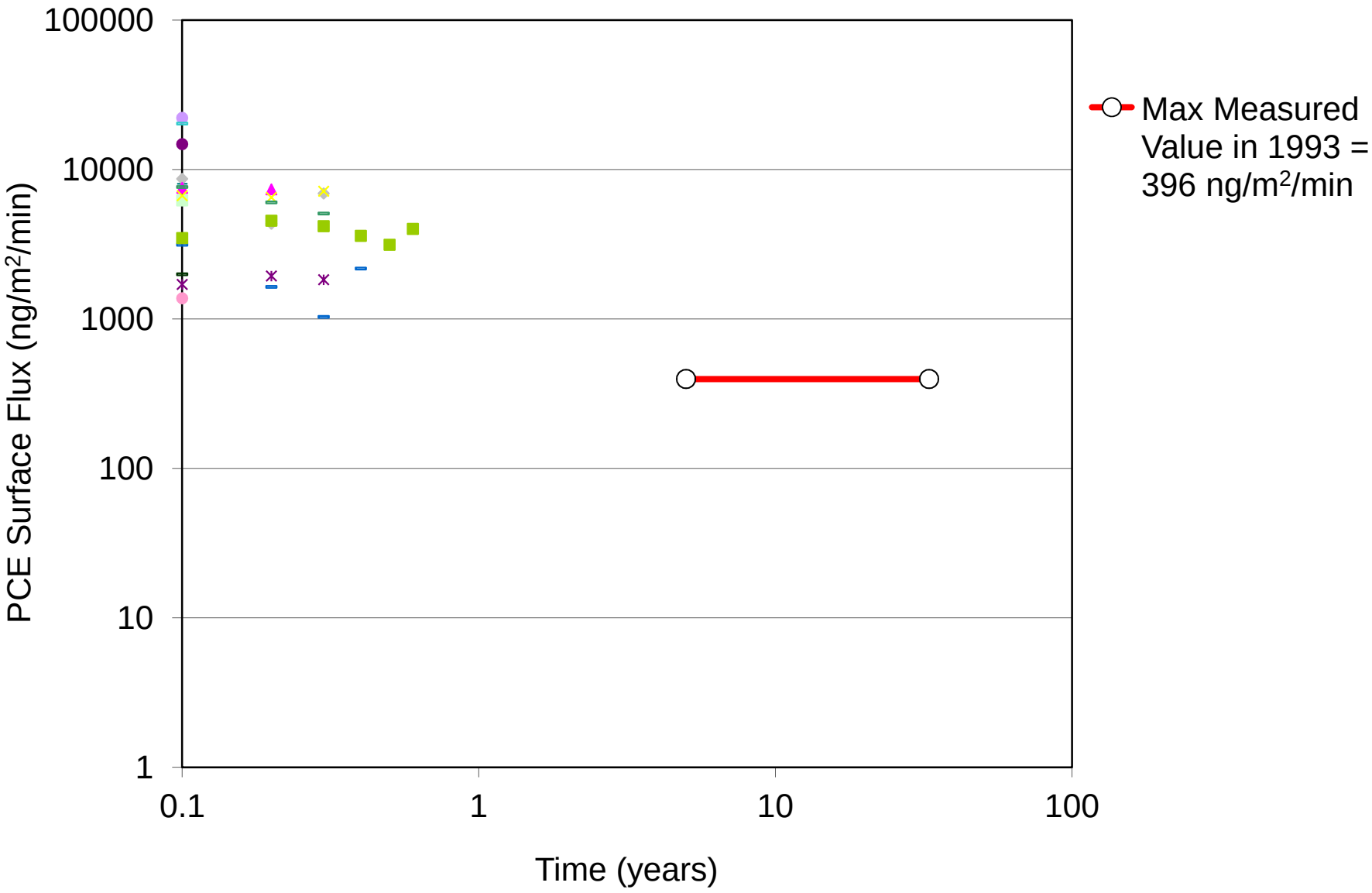

1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Cumulative Probability
1.E-05
1.E-03
1.E-01
1.E+01
PCE Peak Groundwater Concentration (micrograms/L)
EPA Regulatory Metric = 5 micrograms/L

Max Aquifer Concentration (micrograms/L)	Max Aquifer Concentration after 2006 (micrograms/L)	Rank	CDF
8.34E-16	8.34E-16	1	0.009901
8.72E-11	8.72E-11	2	0.019802
8.83E-07	2.31E-07	3	0.029703
7.42E-06	4.29E-07	4	0.039604
1.08E-05	8.79E-07	5	0.049505
1.62E-05	8.41E-06	6	0.059406
2.29E-05	1.08E-05	7	0.069307
6.23E-05	2.29E-05	8	0.079208
2.49E-04	7.73E-05	9	0.089109
3.40E-04	1.12E-04	10	0.09901
3.54E-03	2.49E-04	11	0.108911
4.31E-03	3.40E-04	12	0.118812
9.74E-03	1.05E-03	13	0.128713
1.33E-02	3.54E-03	14	0.138614
1.60E-02	9.74E-03	15	0.148515
1.62E-02	1.11E-02	16	0.158416
1.85E-02	1.85E-02	17	0.168317
4.88E-02	4.88E-02	18	0.178218
5.49E-02	5.49E-02	19	0.188119
1.14E-01	1.14E-01	20	0.19802
1.23E-01	1.23E-01	21	0.207921
1.29E-01	1.29E-01	22	0.217822
1.33E-01	1.33E-01	23	0.227723
1.39E-01	1.39E-01	24	0.237624
1.48E-01	1.48E-01	25	0.247525
1.63E-01	1.63E-01	26	0.257426
1.68E-01	1.68E-01	27	0.267327
1.76E-01	1.76E-01	28	0.277228
1.80E-01	1.80E-01	29	0.287129
1.88E-01	1.88E-01	30	0.29703
1.89E-01	1.89E-01	31	0.306931
1.91E-01	1.91E-01	32	0.316832
2.07E-01	2.07E-01	33	0.326733
2.08E-01	2.08E-01	34	0.336634
2.17E-01	2.17E-01	35	0.346535
2.18E-01	2.18E-01	36	0.356436
2.26E-01	2.26E-01	37	0.366337
2.61E-01	2.61E-01	38	0.376238
2.87E-01	2.87E-01	39	0.386139
2.88E-01	2.87E-01	40	0.39604
3.04E-01	2.88E-01	41	0.405941

Concentration Metric (micrograms/L)	CDF	Average Aquifer Concentration (ppb)	Limit of Detection (ppb)
5.00E+00	0	8.74E-01	0.25
5.00E+00	1	8.74E-01	0.25

3.18E-01	3.04E-01	42	0.415842
3.21E-01	3.18E-01	43	0.425743
3.80E-01	3.21E-01	44	0.435644
3.81E-01	3.80E-01	45	0.445545
4.76E-01	3.81E-01	46	0.455446
4.96E-01	4.76E-01	47	0.465347
4.99E-01	4.96E-01	48	0.475248
5.19E-01	4.99E-01	49	0.485149
5.20E-01	5.19E-01	50	0.49505
5.25E-01	5.20E-01	51	0.50495
5.41E-01	5.25E-01	52	0.514851
5.61E-01	5.41E-01	53	0.524752
5.68E-01	5.55E-01	54	0.534653
5.87E-01	5.68E-01	55	0.544554
6.05E-01	5.87E-01	56	0.554455
6.09E-01	6.05E-01	57	0.564356
6.40E-01	6.09E-01	58	0.574257
7.42E-01	6.40E-01	59	0.584158
7.48E-01	6.95E-01	60	0.594059
8.12E-01	7.42E-01	61	0.60396
8.22E-01	7.48E-01	62	0.613861
8.25E-01	8.12E-01	63	0.623762
8.58E-01	8.22E-01	64	0.633663
8.72E-01	8.25E-01	65	0.643564
8.98E-01	8.58E-01	66	0.653465
9.30E-01	8.62E-01	67	0.663366
9.70E-01	8.72E-01	68	0.673267
9.91E-01	8.98E-01	69	0.683168
9.97E-01	9.58E-01	70	0.693069
1.03E+00	9.70E-01	71	0.70297
1.04E+00	1.01E+00	72	0.712871
1.10E+00	1.04E+00	73	0.722772
1.12E+00	1.10E+00	74	0.732673
1.15E+00	1.12E+00	75	0.742574
1.19E+00	1.15E+00	76	0.752475
1.25E+00	1.25E+00	77	0.762376
1.25E+00	1.25E+00	78	0.772277
1.34E+00	1.27E+00	79	0.782178
1.50E+00	1.27E+00	80	0.792079
1.51E+00	1.34E+00	81	0.80198
1.57E+00	1.43E+00	82	0.811881
1.63E+00	1.57E+00	83	0.821782
1.66E+00	1.63E+00	84	0.831683
1.69E+00	1.65E+00	85	0.841584
1.69E+00	1.66E+00	86	0.851485

1.74E+00	1.68E+00	87	0.861386
2.04E+00	1.69E+00	88	0.871287
2.04E+00	1.69E+00	89	0.881188
2.12E+00	1.74E+00	90	0.891089
2.16E+00	2.04E+00	91	0.90099
2.32E+00	2.04E+00	92	0.910891
2.54E+00	2.32E+00	93	0.920792
2.99E+00	2.99E+00	94	0.930693
3.18E+00	3.06E+00	95	0.940594
3.36E+00	3.16E+00	96	0.950495
3.60E+00	3.36E+00	97	0.960396
4.13E+00	3.60E+00	98	0.970297
4.35E+00	4.13E+00	99	0.980198
5.64E+00	4.39E+00	100	0.990099


100000
10000
1000
100
10
1
PCE Surface Flux (ng/m2/min)
0.1
1
10
100
Time (years)
Max Measured Value in 1993 = 396 ng/m2/min

Peak PCE Surface Flux (ng/m^2/min) for Different Times (years) and Realizations

Realization	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1701.39	1940.03	1832.04	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
7	8040.18	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11	6210.42	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
12	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
15	22164.9	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	20323.5	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
20	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
21	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	1995.46	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00

37	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	8674.41	4348.54	6915.4	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
52	0.00E+00	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
54	3.14E+03	1636.63	1034.21	2170.89	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
55	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	7546.2	7383.58	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
58	6693.85	6501.28	7150.32	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
60	14805.3	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
61	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
69	1376.65	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73	0.00E+00	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
74	3473.88	4536.7	4184.44	3599.68	3138.27	4010.19	0	0	0	0	0	0	0	0.00E+00
75	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
76	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00

77	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	7638.39	6025.04	5081.28	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
82	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
86	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
87	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
96	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
98	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
99	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max value	**2.22E+04**	**7.38E+03**	**7.15E+03**	**3.60E+03**	**3.14E+03**	**4.01E+03**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

3	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4	4.1	4.2	4.3	4.4
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

4.5	4.6	4.7	4.8	4.9	5	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

6	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7	7.1	7.2	7.3	7.4
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

7.5	7.6	7.7	7.8	7.9	8	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

9	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10	Peak Surface PCE Flux (ng/m^2/min)
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.67E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**2.216E+04**

Peak PCE Surface Flux (ng/m^2/min) for Different Times (years) and Realizations

Realization	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	4.48E+03	2.83E+03	2.57E+03	2.29E+03	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
7	1.07E+04	7.30E+03	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11	6.48E+03	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
12	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
15	9.08E+03	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	7.52E+03	0	0	0	0	0	0	0	0	0	0	0	0	0
18	1.96E+04	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
20	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
21	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	4.22E+03	3.91E+03	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00

37	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	8.46E+03	4.07E+03	6.90E+03	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
52	0.00E+00	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
54	3.08E+03	1.51E+03	924.531	2.18E+03	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
55	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	1.38E+04	1.01E+04	8.84E+03	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
58	1.18E+04	7.16E+03	7.28E+03	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
60	1.36E+04	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
61	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
69	2.42E+03	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73	0.00E+00	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
74	1.26E+04	7.39E+03	4.88E+03	3.48E+03	2.62E+03	2.19E+03	4.74E+03	0	0	0	0	0	0	0.00E+00
75	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
76	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00

77	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	8.72E+03	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	8.97E+03	5.90E+03	5.41E+03	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
82	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
86	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
87	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
91	1.13E+04	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
96	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
98	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
99	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max value	**1.96E+04**	**1.01E+04**	**8.84E+03**	**3.48E+03**	**2.62E+03**	**2.19E+03**	**4.74E+03**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

3	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4	4.1	4.2	4.3	4.4
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

4.5	4.6	4.7	4.8	4.9	5	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

6	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7	7.1	7.2	7.3	7.4
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

7.5	7.6	7.7	7.8	7.9	8	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**

9	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10	Peak Surface PCE Flux (ng/m^2/min)
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.48E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.48E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.08E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.52E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.46E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.72E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.97E+03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**1.959E+04**

The following are data reported in Peace et al. (2002; SAND2002-2997)

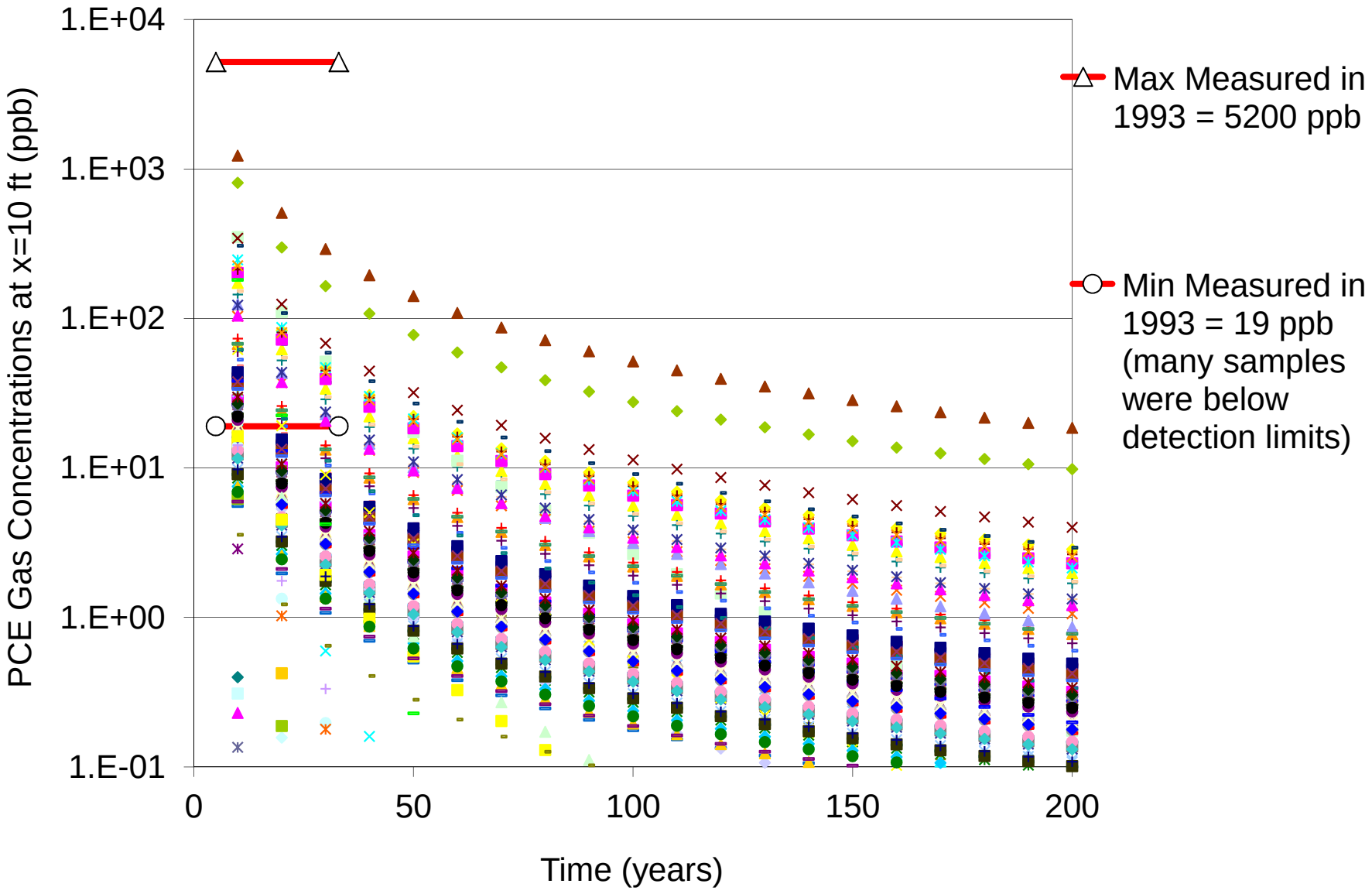
Surface Flux ng/m^2/min	Time
396.2	5
396.2	33

Concentration at x=10 ft (ppb) in 1993

Min	Max	Time
19	5.20E+03	5
19	5.20E+03	33

Concentration at x=30 ft (ppb) in 1993

Min	Max	
19	5900	5
19	5900	33


1.E+04
1.E+03
1.E+02
1.E+01
1.E+00
1.E-01
PCE Gas Concentrations at x=10 ft (ppb)
0
50
100
150
200
Time (years)
Max Measured in 1993 = 5200 ppb
Min Measured in 1993 = 19 ppb (many samples were below detection limits)

PCE Gas Concentration (ppb) at x=10 ft for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130
1	2.32E+01	8.22E+00	4.48E+00	2.91E+00	2.08E+00	1.58E+00	1.26E+00	1.03E+00	8.63E-01	7.37E-01	6.38E-01	5.60E-01	4.97E-01
2	2.84E+01	1.01E+01	5.49E+00	3.57E+00	2.55E+00	1.94E+00	1.54E+00	1.26E+00	1.06E+00	9.02E-01	7.82E-01	6.86E-01	6.09E-01
3	1.73E+02	6.22E+01	3.40E+01	2.21E+01	1.58E+01	1.21E+01	9.58E+00	7.84E+00	6.57E+00	5.61E+00	4.87E+00	4.27E+00	3.79E+00
4	1.81E+01	2.65E+00	5.97E-01	1.60E-01	4.73E-02	1.49E-02	4.87E-03	1.64E-03	5.69E-04	2.00E-04	7.17E-05	2.60E-05	9.50E-06
5	2.87E+00	6.68E-02	2.36E-03	9.88E-05	4.55E-06	2.23E-07	1.14E-08	6.00E-10	3.23E-11	1.78E-12	9.89E-14	5.58E-15	3.18E-16
6	4.26E+01	1.51E+01	8.22E+00	5.33E+00	3.81E+00	2.90E+00	2.30E+00	1.88E+00	1.57E+00	1.34E+00	1.16E+00	1.02E+00	9.00E-01
7	1.44E+02	5.24E+01	2.88E+01	1.88E+01	1.35E+01	1.03E+01	8.15E+00	6.68E+00	5.60E+00	4.78E+00	4.15E+00	3.64E+00	3.23E+00
8	1.59E+01	5.66E+00	3.09E+00	2.00E+00	1.43E+00	1.09E+00	8.65E-01	7.08E-01	5.93E-01	5.06E-01	4.38E-01	3.84E-01	3.41E-01
9	1.35E+01	4.77E+00	2.60E+00	1.68E+00	1.20E+00	9.15E-01	7.25E-01	5.92E-01	4.96E-01	4.23E-01	3.66E-01	3.20E-01	2.84E-01
10	6.70E+00	1.57E-01	5.62E-03	2.40E-04	1.13E-05	5.64E-07	2.94E-08	1.58E-09	8.68E-11	4.86E-12	2.77E-13	1.59E-14	9.28E-16
11	3.51E+02	1.10E+02	5.15E+01	2.85E+01	1.73E+01	1.12E+01	7.50E+00	5.20E+00	3.68E+00	2.66E+00	1.95E+00	1.45E+00	1.08E+00
12	1.96E+01	6.91E+00	3.74E+00	2.42E+00	1.72E+00	1.30E+00	1.02E+00	8.33E-01	6.94E-01	5.89E-01	5.07E-01	4.42E-01	3.90E-01
13	3.23E+01	1.08E+01	5.56E+00	3.40E+00	2.29E+00	1.63E+00	1.22E+00	9.38E-01	7.39E-01	5.92E-01	4.83E-01	3.98E-01	3.32E-01
14	3.62E+01	1.28E+01	6.98E+00	4.54E+00	3.25E+00	2.47E+00	1.96E+00	1.60E+00	1.34E+00	1.15E+00	9.95E-01	8.73E-01	7.74E-01
15	2.09E+01	7.39E+00	4.02E+00	2.61E+00	1.87E+00	1.42E+00	1.12E+00	9.18E-01	7.69E-01	6.55E-01	5.67E-01	4.97E-01	4.41E-01
16	1.14E+02	4.13E+01	2.26E+01	1.47E+01	1.06E+01	8.05E+00	6.40E+00	5.24E+00	4.39E+00	3.75E+00	3.25E+00	2.86E+00	2.53E+00
17	5.31E+01	1.90E+01	1.04E+01	6.76E+00	4.84E+00	3.68E+00	2.92E+00	2.39E+00	2.00E+00	1.71E+00	1.48E+00	1.30E+00	1.15E+00
18	3.44E+01	1.22E+01	6.66E+00	4.33E+00	3.10E+00	2.36E+00	1.87E+00	1.53E+00	1.28E+00	1.09E+00	9.48E-01	8.31E-01	7.37E-01
19	8.08E+02	2.99E+02	1.65E+02	1.08E+02	7.76E+01	5.92E+01	4.71E+01	3.86E+01	3.24E+01	2.77E+01	2.40E+01	2.11E+01	1.87E+01
20	1.46E+01	4.23E-01	1.88E-02	9.92E-04	5.77E-05	3.57E-06	2.30E-07	1.53E-08	1.04E-09	7.23E-11	5.09E-12	3.63E-13	2.61E-14
21	6.78E+01	2.43E+01	1.33E+01	8.63E+00	6.19E+00	4.71E+00	3.74E+00	3.06E+00	2.57E+00	2.19E+00	1.90E+00	1.67E+00	1.48E+00
22	1.03E+02	3.72E+01	2.03E+01	1.31E+01	9.35E+00	7.08E+00	5.58E+00	4.54E+00	3.78E+00	3.21E+00	2.76E+00	2.41E+00	2.12E+00
23	1.35E-01	4.46E-04	2.26E-06	1.36E-08	9.05E-11	6.39E-13	4.71E-15	3.58E-17	2.79E-19	2.21E-21	1.78E-23	1.45E-25	1.20E-27
24	1.61E+01	5.70E+00	3.10E+00	2.01E+00	1.44E+00	1.09E+00	8.65E-01	7.07E-01	5.92E-01	5.05E-01	4.37E-01	3.83E-01	3.39E-01
25	7.80E-02	4.02E-04	3.18E-06	3.01E-08	3.13E-10	3.46E-12	4.00E-14	4.76E-16	5.80E-18	7.20E-20	9.08E-22	1.16E-23	1.49E-25
26	1.84E+02	6.76E+01	3.73E+01	2.44E+01	1.75E+01	1.34E+01	1.06E+01	8.71E+00	7.31E+00	6.24E+00	5.42E+00	4.76E+00	4.22E+00
27	2.29E+01	8.22E+00	4.49E+00	2.92E+00	2.09E+00	1.59E+00	1.26E+00	1.03E+00	8.65E-01	7.38E-01	6.40E-01	5.61E-01	4.97E-01
28	2.29E+01	8.19E+00	4.48E+00	2.91E+00	2.09E+00	1.59E+00	1.26E+00	1.03E+00	8.65E-01	7.39E-01	6.41E-01	5.62E-01	4.99E-01
29	3.68E+01	1.31E+01	7.14E+00	4.64E+00	3.32E+00	2.53E+00	2.00E+00	1.64E+00	1.37E+00	1.17E+00	1.02E+00	8.93E-01	7.91E-01
30	1.87E+01	6.60E+00	3.59E+00	2.33E+00	1.67E+00	1.27E+00	1.00E+00	8.20E-01	6.87E-01	5.85E-01	5.07E-01	4.44E-01	3.94E-01
31	1.16E+01	4.15E+00	2.26E+00	1.47E+00	1.05E+00	8.02E-01	6.37E-01	5.21E-01	4.37E-01	3.73E-01	3.23E-01	2.84E-01	2.52E-01
32	1.30E+01	4.58E+00	2.49E+00	1.61E+00	1.15E+00	8.72E-01	6.90E-01	5.63E-01	4.71E-01	4.01E-01	3.46E-01	3.03E-01	2.68E-01
33	2.05E+01	7.29E+00	3.97E+00	2.58E+00	1.85E+00	1.41E+00	1.12E+00	9.13E-01	7.65E-01	6.53E-01	5.66E-01	4.96E-01	4.40E-01
34	7.34E+01	2.60E+01	1.42E+01	9.21E+00	6.59E+00	5.01E+00	3.98E+00	3.26E+00	2.73E+00	2.33E+00	2.02E+00	1.77E+00	1.57E+00
35	3.57E-02	1.33E-05	7.62E-09	5.18E-12	3.88E-15	3.08E-18	2.56E-21	2.19E-24	1.91E-27	1.71E-30	1.55E-33	1.42E-36	1.31E-39

36	2.65E+01	9.34E+00	5.07E+00	3.28E+00	2.34E+00	1.77E+00	1.40E+00	1.14E+00	9.55E-01	8.12E-01	7.02E-01	6.14E-01	5.42E-01
37	2.15E+02	8.32E+01	4.67E+01	3.08E+01	2.22E+01	1.70E+01	1.36E+01	1.11E+01	9.35E+00	8.00E+00	6.95E+00	6.11E+00	5.42E+00
38	2.01E+02	7.22E+01	3.95E+01	2.57E+01	1.84E+01	1.40E+01	1.11E+01	9.11E+00	7.63E+00	6.52E+00	5.65E+00	4.96E+00	4.40E+00
39	7.61E+00	2.70E+00	1.47E+00	9.56E-01	6.84E-01	5.21E-01	4.13E-01	3.38E-01	2.83E-01	2.42E-01	2.09E-01	1.84E-01	1.63E-01
40	3.44E+02	1.24E+02	6.83E+01	4.45E+01	3.19E+01	2.43E+01	1.93E+01	1.58E+01	1.33E+01	1.13E+01	9.83E+00	8.63E+00	7.65E+00
41	8.57E+00	3.03E+00	1.65E+00	1.07E+00	7.67E-01	5.83E-01	4.63E-01	3.79E-01	3.17E-01	2.71E-01	2.35E-01	2.06E-01	1.82E-01
42	4.08E+01	1.48E+01	8.15E+00	5.32E+00	3.81E+00	2.91E+00	2.31E+00	1.89E+00	1.59E+00	1.36E+00	1.18E+00	1.03E+00	9.16E-01
43	3.11E+01	1.03E+01	5.17E+00	3.08E+00	2.02E+00	1.41E+00	1.03E+00	7.70E-01	5.91E-01	4.62E-01	3.67E-01	2.95E-01	2.39E-01
44	4.44E+01	1.57E+01	8.54E+00	5.55E+00	3.96E+00	3.01E+00	2.39E+00	1.95E+00	1.63E+00	1.39E+00	1.21E+00	1.06E+00	9.37E-01
45	9.04E+00	3.20E+00	1.74E+00	1.13E+00	8.09E-01	6.15E-01	4.88E-01	3.99E-01	3.34E-01	2.85E-01	2.47E-01	2.17E-01	1.92E-01
46	1.72E+01	6.12E+00	3.33E+00	2.17E+00	1.55E+00	1.18E+00	9.36E-01	7.66E-01	6.42E-01	5.48E-01	4.75E-01	4.17E-01	3.70E-01
47	1.23E+01	4.35E+00	2.37E+00	1.54E+00	1.10E+00	8.38E-01	6.65E-01	5.44E-01	4.56E-01	3.89E-01	3.37E-01	2.96E-01	2.62E-01
48	1.25E+02	4.32E+01	2.30E+01	1.45E+01	1.01E+01	7.52E+00	5.82E+00	4.64E+00	3.79E+00	3.15E+00	2.66E+00	2.28E+00	1.97E+00
49	2.65E+01	9.38E+00	5.10E+00	3.31E+00	2.37E+00	1.80E+00	1.43E+00	1.17E+00	9.78E-01	8.34E-01	7.22E-01	6.33E-01	5.61E-01
50	1.84E+01	6.51E+00	3.54E+00	2.30E+00	1.64E+00	1.25E+00	9.88E-01	8.08E-01	6.76E-01	5.76E-01	4.99E-01	4.37E-01	3.87E-01
51	1.39E+01	1.34E+00	1.97E-01	3.45E-02	6.68E-03	1.37E-03	2.95E-04	6.52E-05	1.48E-05	3.41E-06	7.98E-07	1.89E-07	4.54E-08
52	6.01E+01	2.13E+01	1.16E+01	7.54E+00	5.40E+00	4.11E+00	3.26E+00	2.67E+00	2.23E+00	1.91E+00	1.65E+00	1.45E+00	1.28E+00
53	4.81E+01	1.70E+01	9.17E+00	5.92E+00	4.20E+00	3.18E+00	2.50E+00	2.03E+00	1.69E+00	1.43E+00	1.23E+00	1.07E+00	9.45E-01
54	5.56E+00	1.97E+00	1.08E+00	6.99E-01	5.00E-01	3.80E-01	3.02E-01	2.47E-01	2.07E-01	1.76E-01	1.53E-01	1.34E-01	1.19E-01
55	1.66E+01	5.34E+00	2.63E+00	1.55E+00	1.00E+00	6.89E-01	4.94E-01	3.66E-01	2.77E-01	2.14E-01	1.68E-01	1.33E-01	1.07E-01
56	4.37E+01	1.55E+01	8.48E+00	5.51E+00	3.94E+00	3.00E+00	2.38E+00	1.95E+00	1.63E+00	1.39E+00	1.21E+00	1.06E+00	9.40E-01
57	1.04E+02	3.77E+01	2.06E+01	1.35E+01	9.64E+00	7.34E+00	5.83E+00	4.78E+00	4.00E+00	3.42E+00	2.96E+00	2.60E+00	2.31E+00
58	6.20E+01	1.92E+01	9.02E+00	5.05E+00	3.11E+00	2.03E+00	1.39E+00	9.76E-01	7.03E-01	5.16E-01	3.84E-01	2.90E-01	2.21E-01
59	2.47E+02	8.71E+01	4.70E+01	3.01E+01	2.13E+01	1.60E+01	1.25E+01	1.01E+01	8.33E+00	7.01E+00	5.99E+00	5.18E+00	4.53E+00
60	2.10E+01	7.45E+00	4.06E+00	2.64E+00	1.89E+00	1.44E+00	1.14E+00	9.32E-01	7.80E-01	6.66E-01	5.77E-01	5.06E-01	4.49E-01
61	2.13E+02	8.07E+01	4.49E+01	2.95E+01	2.12E+01	1.62E+01	1.29E+01	1.05E+01	8.85E+00	7.55E+00	6.54E+00	5.74E+00	5.09E+00
62	6.18E+01	2.13E+01	1.12E+01	7.00E+00	4.82E+00	3.53E+00	2.70E+00	2.12E+00	1.71E+00	1.41E+00	1.17E+00	9.90E-01	8.45E-01
63	3.82E+01	1.30E+01	6.81E+00	4.25E+00	2.92E+00	2.14E+00	1.63E+00	1.28E+00	1.03E+00	8.44E-01	7.02E-01	5.92E-01	5.04E-01
64	7.51E+00	2.66E+00	1.45E+00	9.40E-01	6.72E-01	5.11E-01	4.05E-01	3.32E-01	2.78E-01	2.37E-01	2.05E-01	1.80E-01	1.60E-01
65	3.10E-01	6.71E-04	2.21E-06	8.69E-09	3.75E-11	1.72E-13	8.25E-16	4.07E-18	2.06E-20	1.06E-22	5.54E-25	2.93E-27	1.57E-29
66	2.32E+01	6.36E+00	2.69E+00	1.35E+00	7.49E-01	4.41E-01	2.71E-01	1.72E-01	1.12E-01	7.38E-02	4.95E-02	3.36E-02	2.31E-02
67	5.18E-02	1.65E-05	8.03E-09	4.66E-12	2.98E-15	2.02E-18	1.43E-21	1.04E-24	7.81E-28	5.95E-31	4.60E-34	3.60E-37	2.85E-40
68	9.84E+00	3.48E+00	1.90E+00	1.23E+00	8.80E-01	6.69E-01	5.30E-01	4.34E-01	3.63E-01	3.10E-01	2.68E-01	2.35E-01	2.09E-01
69	1.31E+01	4.69E+00	2.56E+00	1.67E+00	1.19E+00	9.08E-01	7.20E-01	5.89E-01	4.94E-01	4.21E-01	3.65E-01	3.20E-01	2.84E-01
70	1.42E+01	1.76E+00	3.33E-01	7.51E-02	1.87E-02	4.94E-03	1.36E-03	3.88E-04	1.13E-04	3.35E-05	1.01E-05	3.07E-06	9.47E-07
71	1.53E+02	5.46E+01	2.99E+01	1.94E+01	1.39E+01	1.06E+01	8.41E+00	6.89E+00	5.77E+00	4.93E+00	4.27E+00	3.75E+00	3.33E+00
72	3.38E+01	1.20E+01	6.55E+00	4.26E+00	3.05E+00	2.32E+00	1.84E+00	1.51E+00	1.26E+00	1.08E+00	9.33E-01	8.19E-01	7.26E-01
73	1.16E+01	4.13E+00	2.25E+00	1.47E+00	1.05E+00	7.99E-01	6.34E-01	5.19E-01	4.35E-01	3.72E-01	3.22E-01	2.83E-01	2.51E-01
74	6.21E+00	1.88E-01	8.61E-03	4.70E-04	2.82E-05	1.80E-06	1.19E-07	8.19E-09	5.75E-10	4.11E-11	2.98E-12	2.19E-13	1.63E-14
75	7.49E+00	2.60E+00	1.38E+00	8.79E-01	6.16E-01	4.58E-01	3.56E-01	2.85E-01	2.34E-01	1.95E-01	1.66E-01	1.42E-01	1.23E-01

76	2.25E+02	8.03E+01	4.39E+01	2.85E+01	2.04E+01	1.56E+01	1.23E+01	1.01E+01	8.47E+00	7.23E+00	6.27E+00	5.50E+00	4.88E+00
77	9.04E+00	1.03E+00	1.79E-01	3.72E-02	8.52E-03	2.07E-03	5.26E-04	1.38E-04	3.69E-05	1.01E-05	2.80E-06	7.85E-07	2.23E-07
78	2.61E+01	9.32E+00	5.08E+00	3.31E+00	2.37E+00	1.80E+00	1.43E+00	1.17E+00	9.81E-01	8.37E-01	7.26E-01	6.37E-01	5.65E-01
79	2.61E+01	9.25E+00	5.04E+00	3.27E+00	2.34E+00	1.78E+00	1.41E+00	1.15E+00	9.67E-01	8.25E-01	7.15E-01	6.27E-01	5.56E-01
80	3.06E+02	1.09E+02	5.89E+01	3.80E+01	2.70E+01	2.03E+01	1.60E+01	1.30E+01	1.08E+01	9.12E+00	7.83E+00	6.81E+00	5.98E+00
81	6.77E+01	2.43E+01	1.33E+01	8.67E+00	6.21E+00	4.73E+00	3.75E+00	3.07E+00	2.58E+00	2.20E+00	1.91E+00	1.67E+00	1.48E+00
82	2.69E+01	9.57E+00	5.22E+00	3.40E+00	2.43E+00	1.85E+00	1.47E+00	1.20E+00	1.01E+00	8.61E-01	7.46E-01	6.55E-01	5.81E-01
83	9.12E+00	3.23E+00	1.76E+00	1.14E+00	8.16E-01	6.21E-01	4.92E-01	4.03E-01	3.37E-01	2.88E-01	2.49E-01	2.19E-01	1.94E-01
84	1.23E+03	5.09E+02	2.92E+02	1.95E+02	1.42E+02	1.09E+02	8.71E+01	7.17E+01	6.04E+01	5.17E+01	4.50E+01	3.96E+01	3.52E+01
85	3.78E+01	1.34E+01	7.30E+00	4.74E+00	3.39E+00	2.58E+00	2.05E+00	1.68E+00	1.40E+00	1.20E+00	1.04E+00	9.12E-01	8.08E-01
86	1.23E+02	4.36E+01	2.37E+01	1.54E+01	1.10E+01	8.36E+00	6.62E+00	5.41E+00	4.52E+00	3.85E+00	3.33E+00	2.92E+00	2.58E+00
87	2.21E+01	7.88E+00	4.30E+00	2.79E+00	2.00E+00	1.52E+00	1.21E+00	9.88E-01	8.28E-01	7.07E-01	6.12E-01	5.37E-01	4.76E-01
88	5.40E-02	3.84E-06	4.14E-10	5.31E-14	7.50E-18	1.12E-21	1.76E-25	2.84E-29	4.68E-33	7.88E-37	1.34E-40	2.32E-44	4.06E-48
89	1.55E+01	5.49E+00	2.98E+00	1.94E+00	1.38E+00	1.05E+00	8.33E-01	6.80E-01	5.69E-01	4.85E-01	4.20E-01	3.68E-01	3.26E-01
90	1.81E+02	2.25E+01	4.21E+00	9.36E-01	2.28E-01	5.93E-02	1.60E-02	4.47E-03	1.27E-03	3.71E-04	1.09E-04	3.27E-05	9.86E-06
91	1.60E+01	5.70E+00	3.10E+00	2.02E+00	1.44E+00	1.10E+00	8.69E-01	7.11E-01	5.96E-01	5.08E-01	4.40E-01	3.86E-01	3.42E-01
92	1.63E+01	4.52E+00	1.92E+00	9.79E-01	5.48E-01	3.27E-01	2.03E-01	1.30E-01	8.52E-02	5.70E-02	3.86E-02	2.65E-02	1.84E-02
93	2.30E-01	4.86E-03	1.58E-04	6.10E-06	2.60E-07	1.18E-08	5.57E-10	2.71E-11	1.35E-12	6.89E-14	3.56E-15	1.86E-16	9.82E-18
94	2.47E-02	3.09E-05	5.91E-08	1.35E-10	3.39E-13	9.06E-16	2.52E-18	7.25E-21	2.13E-23	6.39E-26	1.94E-28	5.99E-31	1.86E-33
95	2.98E+01	1.06E+01	5.81E+00	3.78E+00	2.71E+00	2.06E+00	1.64E+00	1.34E+00	1.12E+00	9.59E-01	8.31E-01	7.30E-01	6.47E-01
96	6.92E+00	2.45E+00	1.33E+00	8.67E-01	6.20E-01	4.71E-01	3.73E-01	3.05E-01	2.56E-01	2.18E-01	1.89E-01	1.66E-01	1.47E-01
97	9.79E+00	3.46E+00	1.89E+00	1.22E+00	8.75E-01	6.66E-01	5.28E-01	4.32E-01	3.62E-01	3.09E-01	2.67E-01	2.35E-01	2.08E-01
98	3.57E+00	1.23E+00	6.46E-01	4.07E-01	2.82E-01	2.08E-01	1.60E-01	1.27E-01	1.03E-01	8.49E-02	7.13E-02	6.06E-02	5.20E-02
99	5.97E+00	2.11E+00	1.15E+00	7.46E-01	5.33E-01	4.06E-01	3.22E-01	2.63E-01	2.20E-01	1.88E-01	1.63E-01	1.43E-01	1.27E-01
100	3.99E-01	8.48E-04	2.77E-06	1.08E-08	4.61E-11	2.10E-13	9.98E-16	4.89E-18	2.45E-20	1.25E-22	6.51E-25	3.42E-27	1.82E-29
Max value	**1.23E+03**	**5.09E+02**	**2.92E+02**	**1.95E+02**	**1.42E+02**	**1.09E+02**	**8.71E+01**	**7.17E+01**	**6.04E+01**	**5.17E+01**	**4.50E+01**	**3.96E+01**	**3.52E+01**

140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
4.45E-01	4.01E-01	3.64E-01	3.32E-01	3.05E-01	2.81E-01	2.60E-01	2.42E-01	2.26E-01	2.11E-01	1.98E-01	1.86E-01	1.76E-01	1.66E-01	1.57E-01
5.45E-01	4.91E-01	4.46E-01	4.07E-01	3.73E-01	3.44E-01	3.19E-01	2.96E-01	2.76E-01	2.58E-01	2.42E-01	2.28E-01	2.15E-01	2.03E-01	1.92E-01
3.39E+00	3.05E+00	2.77E+00	2.53E+00	2.32E+00	2.14E+00	1.98E+00	1.84E+00	1.72E+00	1.61E+00	1.51E+00	1.42E+00	1.34E+00	1.26E+00	1.20E+00
3.51E-06	1.31E-06	4.89E-07	1.84E-07	6.99E-08	2.66E-08	1.02E-08	3.90E-09	1.50E-09	5.79E-10	2.24E-10	8.70E-11	3.39E-11	1.32E-11	5.16E-12
1.83E-17	1.06E-18	6.19E-20	3.64E-21	2.15E-22	1.27E-23	7.57E-25	4.52E-26	2.71E-27	1.63E-28	9.83E-30	5.94E-31	3.60E-32	2.19E-33	1.33E-34
8.04E-01	7.24E-01	6.57E-01	5.99E-01	5.49E-01	5.05E-01	4.67E-01	4.34E-01	4.04E-01	3.78E-01	3.54E-01	3.32E-01	3.13E-01	2.95E-01	2.79E-01
2.89E+00	2.61E+00	2.37E+00	2.16E+00	1.98E+00	1.83E+00	1.69E+00	1.57E+00	1.47E+00	1.37E+00	1.29E+00	1.21E+00	1.14E+00	1.08E+00	1.02E+00
3.04E-01	2.74E-01	2.49E-01	2.27E-01	2.08E-01	1.92E-01	1.78E-01	1.65E-01	1.54E-01	1.44E-01	1.35E-01	1.27E-01	1.19E-01	1.13E-01	1.07E-01
2.54E-01	2.28E-01	2.07E-01	1.89E-01	1.73E-01	1.59E-01	1.47E-01	1.36E-01	1.27E-01	1.19E-01	1.11E-01	1.04E-01	9.82E-02	9.27E-02	8.76E-02
5.45E-17	3.23E-18	1.92E-19	1.15E-20	6.94E-22	4.20E-23	2.55E-24	1.56E-25	9.53E-27	5.85E-28	3.60E-29	2.22E-30	1.38E-31	8.53E-33	5.30E-34
8.19E-01	6.24E-01	4.79E-01	3.69E-01	2.86E-01	2.23E-01	1.75E-01	1.37E-01	1.08E-01	8.54E-02	6.77E-02	5.38E-02	4.28E-02	3.42E-02	2.73E-02
3.46E-01	3.10E-01	2.80E-01	2.54E-01	2.31E-01	2.12E-01	1.95E-01	1.80E-01	1.67E-01	1.55E-01	1.45E-01	1.35E-01	1.27E-01	1.19E-01	1.12E-01
2.79E-01	2.36E-01	2.01E-01	1.73E-01	1.49E-01	1.29E-01	1.12E-01	9.80E-02	8.59E-02	7.55E-02	6.65E-02	5.88E-02	5.21E-02	4.62E-02	4.11E-02
6.92E-01	6.24E-01	5.66E-01	5.17E-01	4.75E-01	4.38E-01	4.05E-01	3.76E-01	3.51E-01	3.28E-01	3.08E-01	2.90E-01	2.73E-01	2.58E-01	2.44E-01
3.94E-01	3.55E-01	3.21E-01	2.93E-01	2.69E-01	2.47E-01	2.29E-01	2.12E-01	1.98E-01	1.85E-01	1.73E-01	1.63E-01	1.53E-01	1.44E-01	1.37E-01
2.27E+00	2.04E+00	1.86E+00	1.69E+00	1.55E+00	1.43E+00	1.33E+00	1.23E+00	1.15E+00	1.08E+00	1.00938	0.949336	0.895003	0.845651	0.800664
1.03E+00	9.26E-01	8.40E-01	7.66E-01	7.03E-01	6.48E-01	5.99E-01	5.56E-01	5.18E-01	4.85E-01	4.54E-01	4.27E-01	4.02E-01	3.80E-01	3.59E-01
6.59E-01	5.94E-01	5.39E-01	4.92E-01	4.51E-01	4.16E-01	3.85E-01	3.58E-01	3.33E-01	3.12E-01	2.92E-01	2.75E-01	2.59E-01	2.45E-01	2.32E-01
1.67E+01	1.51E+01	1.37E+01	1.25E+01	1.15E+01	1.06E+01	9.82E+00	9.13E+00	8.51748	7.96914	7.47718	7.03381	6.63257	6.26805	5.93572
1.90E-15	1.39E-16	1.03E-17	7.61E-19	5.67E-20	4.25E-21	3.19E-22	2.41E-23	1.83E-24	1.39E-25	1.06E-26	8.08E-28	6.19E-29	4.75E-30	3.65E-31
1.32E+00	1.19E+00	1.08E+00	9.90E-01	9.08E-01	8.37E-01	7.75E-01	7.21E-01	6.72E-01	6.29E-01	5.90E-01	5.55E-01	5.23E-01	4.94E-01	4.68E-01
1.89E+00	1.69E+00	1.52E+00	1.38E+00	1.26E+00	1.15E+00	1.06E+00	9.78E-01	9.06E-01	8.42E-01	7.84E-01	7.32E-01	6.86E-01	6.43E-01	6.05E-01
9.93E-30	8.32E-32	7.01E-34	5.95E-36	5.07E-38	4.34E-40	3.73E-42	3.22E-44	2.79E-46	2.42E-48	2.11E-50	1.84E-52	1.62E-54	1.42E-56	1.25E-58
3.03E-01	2.73E-01	2.47E-01	2.25E-01	2.07E-01	1.90E-01	1.76E-01	1.63E-01	1.52E-01	1.42E-01	1.33E-01	1.25E-01	1.18E-01	1.11E-01	1.05E-01
1.94E-27	2.55E-29	3.36E-31	4.47E-33	5.96E-35	7.99E-37	1.08E-38	1.45E-40	1.97E-42	2.68E-44	3.66E-46	5.01E-48	6.87E-50	9.44E-52	1.30E-53
3.78E+00	3.41E+00	3.09E+00	2.83E+00	2.59E+00	2.39E+00	2.22E+00	2.06E+00	1.92E+00	1.80E+00	1.69E+00	1.59E+00	1.50E+00	1.41E+00	1.34E+00
4.45E-01	4.01E-01	3.63E-01	3.32E-01	3.04E-01	2.80E-01	2.59E-01	2.41E-01	2.24E-01	2.10E-01	1.97E-01	1.85E-01	1.74E-01	1.64E-01	1.55E-01
4.46E-01	4.02E-01	3.65E-01	3.33E-01	3.06E-01	2.82E-01	2.61E-01	2.43E-01	2.27E-01	2.12E-01	1.99E-01	1.87E-01	1.76E-01	1.67E-01	1.58E-01
7.08E-01	6.38E-01	5.79E-01	5.29E-01	4.85E-01	4.47E-01	4.14E-01	3.85E-01	3.59E-01	3.35E-01	3.15E-01	2.96E-01	2.79E-01	2.63E-01	2.49E-01
3.52E-01	3.17E-01	2.87E-01	2.62E-01	2.40E-01	2.21E-01	2.04E-01	1.90E-01	1.77E-01	1.65E-01	1.55E-01	1.45E-01	1.37E-01	1.29E-01	1.22E-01
2.25E-01	2.03E-01	1.84E-01	1.68E-01	1.54E-01	1.42E-01	1.32E-01	1.22E-01	1.14E-01	1.07E-01	1.00E-01	9.42E-02	8.88E-02	8.39E-02	7.94E-02
2.39E-01	2.15E-01	1.95E-01	1.77E-01	1.62E-01	1.49E-01	1.38E-01	1.28E-01	1.19E-01	1.11E-01	1.03E-01	9.70E-02	9.12E-02	8.59E-02	8.11E-02
3.94E-01	3.55E-01	3.22E-01	2.94E-01	2.70E-01	2.49E-01	2.30E-01	2.14E-01	1.99E-01	1.86E-01	1.75E-01	1.64E-01	1.55E-01	1.46E-01	1.39E-01
1.40E+00	1.27E+00	1.15E+00	1.05E+00	9.61E-01	8.86E-01	8.20E-01	7.62E-01	7.11E-01	6.64E-01	6.23E-01	5.86E-01	5.52E-01	5.22E-01	4.94E-01
1.23E-42	1.16E-45	1.10E-48	1.04E-51	1.00E-54	9.65E-58	9.33E-61	9.06E-64	8.82E-67	8.62E-70	8.45E-73	8.30E-76	8.17E-79	8.07E-82	7.98E-85

4.83E-01	4.34E-01	3.93E-01	3.57E-01	3.27E-01	3.00E-01	2.77E-01	2.56E-01	2.38E-01	2.22E-01	2.07E-01	1.94E-01	1.83E-01	1.72E-01	1.62E-01
4.86E+00	4.38E+00	3.98E+00	3.64E+00	3.34E+00	3.08E+00	2.86E+00	2.65E+00	2.48E+00	2.32E+00	2.18E+00	2.05E+00	1.93E+00	1.82E+00	1.73E+00
3.94E+00	3.55E+00	3.22E+00	2.94E+00	2.70E+00	2.49E+00	2.30E+00	2.14E+00	2.00E+00	1.87E+00	1.75E+00	1.65E+00	1.55E+00	1.47E+00	1.39E+00
1.46E-01	1.31E-01	1.19E-01	1.09E-01	9.98E-02	9.20E-02	8.52E-02	7.92E-02	7.38E-02	6.90E-02	6.47E-02	6.09E-02	5.74E-02	5.42E-02	5.13E-02
6.85E+00	6.18E+00	5.61E+00	5.12E+00	4.70E+00	4.33E+00	4.01E+00	3.73E+00	3.48E+00	3.26E+00	3.05409	2.87274	2.70865	2.55959	2.4237
1.63E-01	1.47E-01	1.33E-01	1.22E-01	1.12E-01	1.03E-01	9.54E-02	8.86E-02	8.26E-02	7.72E-02	7.24E-02	6.81E-02	6.42E-02	6.06E-02	5.74E-02
8.20E-01	7.40E-01	6.72E-01	6.13E-01	5.63E-01	5.19E-01	4.81E-01	4.47E-01	4.17E-01	3.90E-01	3.66E-01	3.44E-01	3.25E-01	3.07E-01	2.90E-01
1.96E-01	1.62E-01	1.34E-01	1.12E-01	9.44E-02	7.97E-02	6.76E-02	5.75E-02	4.91E-02	4.20E-02	3.61E-02	3.11E-02	2.68E-02	2.32E-02	2.01E-02
8.37E-01	7.54E-01	6.84E-01	6.23E-01	5.72E-01	5.26E-01	4.87E-01	4.52E-01	4.21E-01	3.93E-01	3.68E-01	3.46E-01	3.26E-01	3.08E-01	2.91E-01
1.72E-01	1.55E-01	1.40E-01	1.28E-01	1.17E-01	1.08E-01	1.00E-01	9.30E-02	8.67E-02	8.10E-02	7.60E-02	7.14E-02	6.73E-02	6.35E-02	6.01E-02
3.31E-01	2.98E-01	2.71E-01	2.47E-01	2.27E-01	2.09E-01	1.93E-01	1.80E-01	1.68E-01	1.57E-01	1.47E-01	1.38E-01	1.30E-01	1.23E-01	1.16E-01
2.35E-01	2.12E-01	1.92E-01	1.75E-01	1.61E-01	1.48E-01	1.37E-01	1.28E-01	1.19E-01	1.11E-01	1.04E-01	9.81E-02	9.24E-02	8.73E-02	8.27E-02
1.72E+00	1.51E+00	1.34E+00	1.19E+00	1.06E+00	9.55E-01	8.62E-01	7.81E-01	7.09E-01	6.47E-01	5.91E-01	5.42E-01	4.98E-01	4.59E-01	4.23E-01
5.01E-01	4.52E-01	4.09E-01	3.73E-01	3.42E-01	3.15E-01	2.92E-01	2.71E-01	2.52E-01	2.36E-01	2.21E-01	2.08E-01	1.96E-01	1.85E-01	1.75E-01
3.46E-01	3.11E-01	2.82E-01	2.57E-01	2.36E-01	2.17E-01	2.01E-01	1.86E-01	1.73E-01	1.62E-01	1.52E-01	1.42E-01	1.34E-01	1.26E-01	1.20E-01
1.10E-08	2.67E-09	6.56E-10	1.62E-10	4.02E-11	1.00E-11	2.50E-12	6.29E-13	1.59E-13	4.01E-14	1.02E-14	2.58E-15	6.58E-16	1.68E-16	4.30E-17
1.15E+00	1.04E+00	9.40E-01	8.58E-01	7.87E-01	7.25E-01	6.71E-01	6.24E-01	5.81E-01	5.44E-01	5.10E-01	4.79E-01	4.52E-01	4.27E-01	4.04E-01
8.39E-01	7.51E-01	6.77E-01	6.13E-01	5.59E-01	5.11E-01	4.70E-01	4.34E-01	4.01E-01	3.73E-01	3.47E-01	3.24E-01	3.03E-01	2.84E-01	2.67E-01
1.06E-01	9.57E-02	8.69E-02	7.93E-02	7.27E-02	6.70E-02	6.20E-02	5.76E-02	5.37E-02	5.02E-02	4.70E-02	4.42E-02	4.17E-02	3.94E-02	3.72E-02
8.63E-02	7.04E-02	5.77E-02	4.77E-02	3.95E-02	3.30E-02	2.76E-02	2.32E-02	1.95E-02	1.65E-02	1.40E-02	1.19E-02	1.02E-02	8.68E-03	7.43E-03
8.41E-01	7.58E-01	6.88E-01	6.28E-01	5.77E-01	5.32E-01	4.92E-01	4.57E-01	4.26E-01	3.99E-01	3.74E-01	3.52E-01	3.32E-01	3.13E-01	2.97E-01
2.07E+00	1.86E+00	1.69E+00	1.54E+00	1.42E+00	1.31E+00	1.21E+00	1.12E+00	1.05E+00	9.80E-01	9.19E-01	8.64E-01	8.15E-01	7.70E-01	7.29E-01
1.70E-01	1.31E-01	1.02E-01	8.04E-02	6.34E-02	5.02E-02	3.99E-02	3.19E-02	2.55E-02	2.05E-02	1.65E-02	1.34E-02	1.08E-02	8.79E-03	7.15E-03
4.00E+00	3.55E+00	3.18E+00	2.86E+00	2.59E+00	2.35E+00	2.14E+00	1.96E+00	1.81E+00	1.66E+00	1.54E+00	1.43E+00	1.33E+00	1.23E+00	1.15E+00
4.01E-01	3.62E-01	3.28E-01	3.00E-01	2.75E-01	2.53E-01	2.35E-01	2.18E-01	2.03E-01	1.90E-01	1.78E-01	1.67E-01	1.58E-01	1.49E-01	1.41E-01
4.55E+00	4.10E+00	3.72E+00	3.39E+00	3.11E+00	2.86E+00	2.65E+00	2.46E+00	2.28939	2.13897	2.00407	1.88254	1.77259	1.67275	1.58177
7.27E-01	6.30E-01	5.50E-01	4.83E-01	4.27E-01	3.78E-01	3.37E-01	3.01E-01	2.70E-01	2.43E-01	2.19E-01	1.98E-01	1.80E-01	1.64E-01	1.49E-01
4.33E-01	3.75E-01	3.27E-01	2.87E-01	2.53E-01	2.24E-01	1.99E-01	1.77E-01	1.59E-01	1.43E-01	1.29E-01	1.16E-01	1.05E-01	9.54E-02	8.67E-02
1.43E-01	1.29E-01	1.17E-01	1.06E-01	9.77E-02	9.00E-02	8.33E-02	7.74E-02	7.21E-02	6.74E-02	6.32E-02	5.94E-02	5.60E-02	5.29E-02	5.00E-02
8.46E-32	4.60E-34	2.52E-36	1.39E-38	7.67E-41	4.26E-43	2.38E-45	1.33E-47	7.50E-50	4.23E-52	2.39E-54	1.36E-56	7.71E-59	4.39E-61	2.51E-63
1.60E-02	1.12E-02	7.86E-03	5.56E-03	3.95E-03	2.82E-03	2.02E-03	1.45E-03	1.05E-03	7.61E-04	5.53E-04	4.03E-04	2.94E-04	2.15E-04	1.58E-04
2.28E-43	1.83E-46	1.48E-49	1.21E-52	9.89E-56	8.14E-59	6.72E-62	5.58E-65	4.64E-68	3.87E-71	3.24E-74	2.72E-77	2.29E-80	1.93E-83	1.63E-86
1.86E-01	1.68E-01	1.52E-01	1.39E-01	1.27E-01	1.17E-01	1.09E-01	1.01E-01	9.40E-02	8.78E-02	8.23E-02	7.74E-02	7.29E-02	6.88E-02	6.51E-02
2.54E-01	2.29E-01	2.07E-01	1.89E-01	1.73E-01	1.60E-01	1.48E-01	1.37E-01	1.28E-01	1.20E-01	1.12E-01	1.05E-01	9.92E-02	9.37E-02	8.87E-02
2.94E-07	9.22E-08	2.91E-08	9.23E-09	2.94E-09	9.43E-10	3.03E-10	9.79E-11	3.17E-11	1.03E-11	3.36E-12	1.10E-12	3.60E-13	1.18E-13	3.88E-14
2.97E+00	2.68E+00	2.43E+00	2.22E+00	2.04E+00	1.88E+00	1.74E+00	1.62E+00	1.50815	1.41E+00	1.32E+00	1.24E+00	1.17E+00	1.11E+00	1.05E+00
6.49E-01	5.85E-01	5.31E-01	4.85E-01	4.45E-01	4.10E-01	3.80E-01	3.53E-01	3.29E-01	3.08E-01	2.89E-01	2.71E-01	2.56E-01	2.42E-01	2.29E-01
2.24E-01	2.02E-01	1.84E-01	1.68E-01	1.54E-01	1.42E-01	1.31E-01	1.22E-01	1.14E-01	1.07E-01	1.00E-01	9.41E-02	8.87E-02	8.38E-02	7.93E-02
1.22E-15	9.19E-17	6.98E-18	5.33E-19	4.10E-20	3.16E-21	2.45E-22	1.91E-23	1.49E-24	1.16E-25	9.15E-27	7.20E-28	5.68E-29	4.49E-30	3.56E-31
1.08E-01	9.53E-02	8.47E-02	7.57E-02	6.79E-02	6.13E-02	5.55E-02	5.05E-02	4.61E-02	4.22E-02	3.87E-02	3.56E-02	3.29E-02	3.04E-02	2.82E-02

4.36E+00	3.94E+00	3.57E+00	3.26E+00	2.99E+00	2.76E+00	2.55E+00	2.37E+00	2.21E+00	2.07E+00	1.94E+00	1.83E+00	1.72E+00	1.63E+00	1.54E+00
6.37E-08	1.84E-08	5.33E-09	1.56E-09	4.57E-10	1.35E-10	3.99E-11	1.19E-11	3.54E-12	1.06E-12	3.17E-13	9.55E-14	2.88E-14	8.70E-15	2.63E-15
5.05E-01	4.55E-01	4.13E-01	3.77E-01	3.46E-01	3.19E-01	2.95E-01	2.75E-01	2.56E-01	2.39E-01	2.25E-01	2.11E-01	1.99E-01	1.88E-01	1.78E-01
4.97E-01	4.48E-01	4.06E-01	3.71E-01	3.40E-01	3.13E-01	2.90E-01	2.69E-01	2.51E-01	2.35E-01	2.20E-01	2.07E-01	1.95E-01	1.84E-01	1.74E-01
5.30E+00	4.73E+00	4.26E+00	3.85E+00	3.50E+00	3.20E+00	2.93E+00	2.69997	2.4941	2.31108	2.14756	2.00081	1.86856	1.74893	1.64033
1.33E+00	1.20E+00	1.09E+00	9.91E-01	9.09E-01	8.38E-01	7.76E-01	7.21E-01	6.72E-01	6.29E-01	5.90E-01	5.55E-01	5.23E-01	4.94E-01	4.67E-01
5.20E-01	4.69E-01	4.25E-01	3.88E-01	3.56E-01	3.29E-01	3.04E-01	2.83E-01	2.64E-01	2.47E-01	2.31E-01	2.18E-01	2.05E-01	1.94E-01	1.84E-01
1.73E-01	1.56E-01	1.42E-01	1.29E-01	1.19E-01	1.09E-01	1.01E-01	9.40E-02	8.76E-02	8.19E-02	7.68E-02	7.22E-02	6.80E-02	6.42E-02	6.08E-02
3.15E+01	2.85E+01	2.59E+01	2.37E+01	2.17E+01	2.01E+01	1.86E+01	1.73E+01	1.61E+01	1.51E+01	1.42E+01	1.33E+01	1.26E+01	1.19E+01	1.13E+01
7.23E-01	6.52E-01	5.91E-01	5.40E-01	4.95E-01	4.57E-01	4.23E-01	3.93E-01	3.66E-01	3.42E-01	3.21E-01	3.02E-01	2.85E-01	2.69E-01	2.54E-01
2.30E+00	2.07E+00	1.88E+00	1.71E+00	1.57E+00	1.44E+00	1.33E+00	1.23E+00	1.1472	1.07062	1.002	0.940219	0.884368	0.833682	0.787519
4.26E-01	3.84E-01	3.48E-01	3.18E-01	2.92E-01	2.69E-01	2.49E-01	2.31E-01	2.15E-01	2.01E-01	1.89E-01	1.78E-01	1.67E-01	1.58E-01	1.50E-01
7.15E-52	1.27E-55	2.27E-59	4.08E-63	7.37E-67	1.34E-70	2.44E-74	4.47E-78	8.20E-82	1.51E-85	2.79E-89	5.17E-93	9.59E-97	########	########
2.91E-01	2.62E-01	2.37E-01	2.16E-01	1.98E-01	1.82E-01	1.69E-01	1.56E-01	1.46E-01	1.36E-01	1.27E-01	1.20E-01	1.13E-01	1.06E-01	1.00E-01
3.00E-06	9.21E-07	2.85E-07	8.84E-08	2.76E-08	8.66E-09	2.73E-09	8.63E-10	2.74E-10	8.72E-11	2.78E-11	8.91E-12	2.86E-12	9.19E-13	2.96E-13
3.06E-01	2.75E-01	2.50E-01	2.28E-01	2.09E-01	1.93E-01	1.78E-01	1.65E-01	1.54E-01	1.44E-01	1.35E-01	1.27E-01	1.20E-01	1.13E-01	1.07E-01
1.29E-02	9.11E-03	6.47E-03	4.62E-03	3.32E-03	2.40E-03	1.74E-03	1.26E-03	9.22E-04	6.75E-04	4.95E-04	3.65E-04	2.69E-04	1.99E-04	1.47E-04
5.23E-19	2.81E-20	1.52E-21	8.26E-23	4.52E-24	2.48E-25	1.37E-26	7.57E-28	4.21E-29	2.34E-30	1.31E-31	7.34E-33	4.12E-34	2.32E-35	1.31E-36
5.85E-36	1.85E-38	5.90E-41	1.89E-43	6.09E-46	1.97E-48	6.40E-51	2.09E-53	6.83E-56	2.24E-58	7.38E-61	2.44E-63	8.06E-66	2.67E-68	8.88E-71
5.79E-01	5.22E-01	4.74E-01	4.33E-01	3.97E-01	3.66E-01	3.39E-01	3.15E-01	2.94E-01	2.75E-01	2.58E-01	2.43E-01	2.29E-01	2.16E-01	2.05E-01
1.31E-01	1.18E-01	1.07E-01	9.77E-02	8.96E-02	8.25E-02	7.63E-02	7.09E-02	6.60E-02	6.17E-02	5.78E-02	5.43E-02	5.12E-02	4.83E-02	4.57E-02
1.86E-01	1.68E-01	1.52E-01	1.39E-01	1.27E-01	1.17E-01	1.09E-01	1.01E-01	9.40E-02	8.79E-02	8.24E-02	7.74E-02	7.30E-02	6.89E-02	6.52E-02
4.51E-02	3.94E-02	3.46E-02	3.06E-02	2.72E-02	2.43E-02	2.18E-02	1.96E-02	1.77E-02	1.60E-02	1.46E-02	1.33E-02	1.21E-02	1.11E-02	1.02E-02
1.13E-01	1.02E-01	9.25E-02	8.44E-02	7.75E-02	7.14E-02	6.60E-02	6.13E-02	5.72E-02	5.34E-02	5.01E-02	4.71E-02	4.44E-02	4.19E-02	3.97E-02
9.73E-32	5.25E-34	2.85E-36	1.56E-38	8.57E-41	4.73E-43	2.62E-45	1.46E-47	8.14E-50	4.56E-52	2.56E-54	1.44E-56	8.14E-59	4.60E-61	2.61E-63
3.15E+01	**2.85E+01**	**2.59E+01**	**2.37E+01**	**2.17E+01**	**2.01E+01**	**1.86E+01**	**1.73E+01**	**1.61E+01**	**1.51E+01**	**1.42E+01**	**1.33E+01**	**1.26E+01**	**1.19E+01**	**1.13E+01**

290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
1.49E-01	1.42E-01	1.35E-01	1.29E-01	1.23E-01	1.17E-01	1.12E-01	1.08E-01	1.03E-01	9.94E-02	9.56E-02	9.20E-02	8.87E-02	8.55E-02	8.26E-02
1.82E-01	1.73E-01	1.65E-01	1.57E-01	1.50E-01	1.44E-01	1.38E-01	1.32E-01	1.27E-01	1.22E-01	1.17E-01	1.13E-01	1.08E-01	1.05E-01	1.01E-01
1.13E+00	1.08E+00	1.03E+00	9.78E-01	9.33E-01	8.92E-01	8.54E-01	8.19E-01	7.85E-01	7.55E-01	7.26E-01	6.98E-01	6.73E-01	6.49E-01	6.26E-01
2.02E-12	7.93E-13	3.11E-13	1.23E-13	4.83E-14	1.91E-14	7.53E-15	2.98E-15	1.18E-15	4.68E-16	1.86E-16	7.38E-17	2.93E-17	1.17E-17	4.65E-18
8.12E-36	4.96E-37	3.04E-38	1.86E-39	1.14E-40	7.02E-42	4.32E-43	2.66E-44	1.64E-45	1.01E-46	6.27E-48	3.88E-49	2.40E-50	1.49E-51	9.24E-53
2.65E-01	2.51E-01	2.39E-01	2.27E-01	2.17E-01	2.07E-01	1.98E-01	1.89E-01	1.82E-01	1.74E-01	1.67E-01	1.61E-01	1.55E-01	1.49E-01	1.44E-01
9.69E-01	9.21E-01	8.77E-01	8.36E-01	7.98E-01	7.63E-01	7.31E-01	7.00E-01	6.72E-01	6.46E-01	6.21E-01	5.98E-01	5.76E-01	5.55E-01	5.36E-01
1.01E-01	9.59E-02	9.13E-02	8.69E-02	8.30E-02	7.93E-02	7.58E-02	7.26E-02	6.97E-02	6.69E-02	6.43E-02	6.18E-02	5.95E-02	5.74E-02	5.53E-02
8.30E-02	7.88E-02	7.49E-02	7.13E-02	6.79E-02	6.49E-02	6.20E-02	5.93E-02	5.68E-02	5.45E-02	5.24E-02	5.03E-02	4.84E-02	4.66E-02	4.49E-02
3.30E-35	2.06E-36	1.29E-37	8.05E-39	5.05E-40	3.17E-41	1.99E-42	1.25E-43	7.89E-45	4.97E-46	3.14E-47	1.98E-48	1.25E-49	7.94E-51	5.03E-52
2.19E-02	1.76E-02	1.41E-02	1.14E-02	9.19E-03	7.42E-03	6.00E-03	4.86E-03	3.94E-03	3.20E-03	2.60E-03	2.11E-03	1.72E-03	1.40E-03	1.14E-03
1.05E-01	9.95E-02	9.41E-02	8.92E-02	8.46E-02	8.04E-02	7.64E-02	7.28E-02	6.94E-02	6.63E-02	6.33E-02	6.06E-02	5.80E-02	5.56E-02	5.33E-02
3.66E-02	3.27E-02	2.93E-02	2.62E-02	2.35E-02	2.11E-02	1.90E-02	1.71E-02	1.54E-02	1.39E-02	1.26E-02	1.14E-02	1.03E-02	9.33E-03	8.46E-03
2.32E-01	2.20E-01	2.09E-01	2.00E-01	1.91E-01	1.82E-01	1.74E-01	1.67E-01	1.60E-01	1.54E-01	1.48E-01	1.43E-01	1.37E-01	1.32E-01	1.28E-01
1.29E-01	1.23E-01	1.17E-01	1.11E-01	1.06E-01	1.01E-01	9.68E-02	9.27E-02	8.89E-02	8.53E-02	8.19E-02	7.87E-02	7.58E-02	7.30E-02	7.03E-02
7.60E-01	7.22E-01	6.87E-01	6.55E-01	6.25E-01	5.98E-01	5.72E-01	5.49E-01	5.26E-01	5.06E-01	4.86E-01	4.68E-01	4.51E-01	4.35E-01	4.20E-01
3.41E-01	3.23E-01	3.08E-01	2.93E-01	2.80E-01	2.67E-01	2.55E-01	2.45E-01	2.35E-01	2.25E-01	2.16E-01	2.08E-01	2.00E-01	1.93E-01	1.86E-01
2.20E-01	2.09E-01	1.99E-01	1.89E-01	1.81E-01	1.73E-01	1.65E-01	1.58E-01	1.52E-01	1.46E-01	1.40E-01	1.35E-01	1.30E-01	1.25E-01	1.21E-01
5.63E+00	5.35E+00	5.10E+00	4.86E+00	4.64E+00	4.44E+00	4.25E+00	4.07E+00	3.91E+00	3.76E+00	3.61E+00	3.48E+00	3.35E+00	3.23E+00	3.12E+00
2.81E-32	2.17E-33	1.68E-34	1.30E-35	1.01E-36	7.84E-38	6.09E-39	4.74E-40	3.70E-41	2.89E-42	2.25E-43	1.76E-44	1.38E-45	1.08E-46	8.47E-48
4.44E-01	4.22E-01	4.02E-01	3.83E-01	3.66E-01	3.50E-01	3.35E-01	3.21E-01	3.08E-01	2.96E-01	2.85E-01	2.74E-01	2.64E-01	2.55E-01	2.46E-01
5.70E-01	5.38E-01	5.09E-01	4.82E-01	4.57E-01	4.34E-01	4.12E-01	3.92E-01	3.74E-01	3.57E-01	3.41E-01	3.26E-01	3.12E-01	2.99E-01	2.86E-01
1.10E-60	9.69E-63	8.57E-65	7.59E-67	6.73E-69	5.97E-71	5.31E-73	4.73E-75	4.21E-77	3.76E-79	3.36E-81	3.00E-83	2.69E-85	2.41E-87	2.16E-89
9.95E-02	9.44E-02	8.98E-02	8.55E-02	8.15E-02	7.78E-02	7.44E-02	7.12E-02	6.83E-02	6.55E-02	6.29E-02	6.05E-02	5.82E-02	5.61E-02	5.40E-02
1.79E-55	2.48E-57	3.43E-59	4.75E-61	6.60E-63	9.18E-65	1.28E-66	1.78E-68	2.49E-70	3.47E-72	4.86E-74	6.80E-76	9.53E-78	1.34E-79	1.88E-81
1.27E+00	1.21E+00	1.15E+00	1.10E+00	1.05E+00	1.00E+00	9.59E-01	9.19E-01	8.82E-01	8.48E-01	8.15E-01	7.85E-01	7.57E-01	7.30E-01	7.04E-01
1.47E-01	1.40E-01	1.33E-01	1.27E-01	1.21E-01	1.16E-01	1.11E-01	1.06E-01	1.02E-01	9.75E-02	9.37E-02	9.01E-02	8.68E-02	8.36E-02	8.06E-02
1.50E-01	1.42E-01	1.35E-01	1.29E-01	1.23E-01	1.18E-01	1.13E-01	1.08E-01	1.04E-01	9.97E-02	9.59E-02	9.23E-02	8.90E-02	8.58E-02	8.28E-02
2.37E-01	2.25E-01	2.14E-01	2.04E-01	1.95E-01	1.86E-01	1.78E-01	1.71E-01	1.64E-01	1.57E-01	1.51E-01	1.46E-01	1.40E-01	1.35E-01	1.30E-01
1.16E-01	1.10E-01	1.04E-01	9.95E-02	9.49E-02	9.06E-02	8.66E-02	8.29E-02	7.95E-02	7.63E-02	7.33E-02	7.05E-02	6.78E-02	6.53E-02	6.30E-02
7.53E-02	7.16E-02	6.81E-02	6.49E-02	6.20E-02	5.93E-02	5.67E-02	5.44E-02	5.22E-02	5.01E-02	4.82E-02	4.64E-02	4.47E-02	4.31E-02	4.16E-02
7.67E-02	7.27E-02	6.90E-02	6.56E-02	6.24E-02	5.95E-02	5.68E-02	5.43E-02	5.19E-02	4.97E-02	4.77E-02	4.58E-02	4.40E-02	4.23E-02	4.07E-02
1.31E-01	1.25E-01	1.19E-01	1.13E-01	1.08E-01	1.03E-01	9.89E-02	9.48E-02	9.09E-02	8.73E-02	8.39E-02	8.08E-02	7.78E-02	7.50E-02	7.24E-02
4.68E-01	4.45E-01	4.23E-01	4.04E-01	3.85E-01	3.68E-01	3.52E-01	3.38E-01	3.24E-01	3.11E-01	2.99E-01	2.88E-01	2.77E-01	2.67E-01	2.58E-01
7.90E-88	7.85E-91	7.80E-94	7.77E-97	########	########	########	########	########	########	########	########	########	########	########

1.53E-01	1.45E-01	1.38E-01	1.31E-01	1.24E-01	1.19E-01	1.13E-01	1.08E-01	1.03E-01	9.88E-02	9.47E-02	9.08E-02	8.72E-02	8.38E-02	8.06E-02
1.64E+00	1.56E+00	1.48E+00	1.42E+00	1.35E+00	1.29E+00	1.24E+00	1.19E+00	1.14E+00	1.09E+00	1.05E+00	1.01E+00	9.77E-01	9.43E-01	9.10E-01
1.32E+00	1.25E+00	1.19E+00	1.14E+00	1.09E+00	1.04E+00	9.94E-01	9.53E-01	9.14E-01	8.78E-01	8.44E-01	8.13E-01	7.83E-01	7.55E-01	7.29E-01
4.86E-02	4.62E-02	4.40E-02	4.19E-02	4.00E-02	3.82E-02	3.66E-02	3.51E-02	3.37E-02	3.23E-02	3.11E-02	2.99E-02	2.88E-02	2.78E-02	2.68E-02
2.29942	2.1854	2.08E+00	1.98E+00	1.89E+00	1.81E+00	1.73E+00	1.66E+00	1.60E+00	1.53E+00	1.47E+00	1.42E+00	1.37E+00	1.32E+00	1.27E+00
5.44E-02	5.17E-02	4.92E-02	4.69E-02	4.48E-02	4.28E-02	4.10E-02	3.92E-02	3.76E-02	3.62E-02	3.48E-02	3.35E-02	3.22E-02	3.11E-02	3.00E-02
2.76E-01	2.62E-01	2.49E-01	2.38E-01	2.27E-01	2.17E-01	2.08E-01	1.99E-01	1.91E-01	1.84E-01	1.77E-01	1.70E-01	1.64E-01	1.58E-01	1.53E-01
1.75E-02	1.52E-02	1.32E-02	1.16E-02	1.01E-02	8.84E-03	7.75E-03	6.80E-03	5.97E-03	5.25E-03	4.63E-03	4.08E-03	3.60E-03	3.17E-03	2.80E-03
2.76E-01	2.62E-01	2.49E-01	2.37E-01	2.26E-01	2.16E-01	2.06E-01	1.98E-01	1.89E-01	1.82E-01	1.75E-01	1.68E-01	1.62E-01	1.56E-01	1.50E-01
5.70E-02	5.41E-02	5.15E-02	4.91E-02	4.68E-02	4.47E-02	4.28E-02	4.10E-02	3.93E-02	3.77E-02	3.63E-02	3.49E-02	3.36E-02	3.24E-02	3.12E-02
1.10E-01	1.05E-01	9.99E-02	9.53E-02	9.09E-02	8.69E-02	8.32E-02	7.97E-02	7.65E-02	7.35E-02	7.07E-02	6.80E-02	6.55E-02	6.32E-02	6.10E-02
7.84E-02	7.45E-02	7.09E-02	6.76E-02	6.45E-02	6.17E-02	5.90E-02	5.66E-02	5.43E-02	5.21E-02	5.01E-02	4.83E-02	4.65E-02	4.48E-02	4.33E-02
3.91E-01	3.62E-01	3.36E-01	3.12E-01	2.91E-01	2.71E-01	2.53E-01	2.36E-01	2.21E-01	2.07E-01	1.94E-01	1.82E-01	1.71E-01	1.60E-01	1.51E-01
1.65E-01	1.57E-01	1.49E-01	1.42E-01	1.36E-01	1.30E-01	1.24E-01	1.19E-01	1.14E-01	1.09E-01	1.05E-01	1.01E-01	9.71E-02	9.36E-02	9.02E-02
1.13E-01	1.07E-01	1.02E-01	9.72E-02	9.27E-02	8.85E-02	8.46E-02	8.09E-02	7.75E-02	7.44E-02	7.14E-02	6.86E-02	6.60E-02	6.36E-02	6.13E-02
1.10E-17	2.83E-18	7.29E-19	1.88E-19	4.85E-20	1.25E-20	3.24E-21	8.40E-22	2.18E-22	5.66E-23	1.47E-23	3.82E-24	9.96E-25	2.60E-25	6.77E-26
3.83E-01	3.64E-01	3.46E-01	3.30E-01	3.15E-01	3.01E-01	2.88E-01	2.76E-01	2.65E-01	2.55E-01	2.45E-01	2.35E-01	2.27E-01	2.19E-01	2.11E-01
2.52E-01	2.37E-01	2.24E-01	2.12E-01	2.01E-01	1.91E-01	1.81E-01	1.73E-01	1.64E-01	1.57E-01	1.50E-01	1.43E-01	1.37E-01	1.31E-01	1.25E-01
3.53E-02	3.35E-02	3.19E-02	3.04E-02	2.90E-02	2.77E-02	2.65E-02	2.54E-02	2.44E-02	2.34E-02	2.25E-02	2.16E-02	2.08E-02	2.01E-02	1.94E-02
6.37E-03	5.47E-03	4.71E-03	4.06E-03	3.50E-03	3.03E-03	2.62E-03	2.27E-03	1.97E-03	1.71E-03	1.49E-03	1.30E-03	1.13E-03	9.84E-04	8.58E-04
2.81E-01	2.67E-01	2.54E-01	2.43E-01	2.32E-01	2.21E-01	2.12E-01	2.03E-01	1.95E-01	1.87E-01	1.80E-01	1.73E-01	1.67E-01	1.61E-01	1.55E-01
6.91E-01	6.57E-01	6.25E-01	5.96E-01	5.69E-01	5.44E-01	5.21E-01	4.99E-01	4.79E-01	4.60E-01	4.42E-01	4.26E-01	4.10E-01	3.96E-01	3.82E-01
5.83E-03	4.76E-03	3.89E-03	3.19E-03	2.61E-03	2.15E-03	1.77E-03	1.45E-03	1.20E-03	9.90E-04	8.18E-04	6.76E-04	5.60E-04	4.64E-04	3.85E-04
1.08E+00	1.01E+00	9.46E-01	8.89E-01	8.37E-01	7.88E-01	7.44E-01	7.03E-01	6.65E-01	6.29E-01	5.96E-01	5.66E-01	5.37E-01	5.11E-01	4.86E-01
1.34E-01	1.27E-01	1.21E-01	1.15E-01	1.10E-01	1.05E-01	1.01E-01	9.64E-02	9.25E-02	8.88E-02	8.54E-02	8.22E-02	7.92E-02	7.63E-02	7.36E-02
1.49857	1.42228	1.3521	1.28739	1.22756	1.17211	1.12062	1.07269	1.03E+00	9.86E-01	9.47E-01	9.11E-01	8.76E-01	8.44E-01	8.13E-01
1.36E-01	1.24E-01	1.14E-01	1.04E-01	9.58E-02	8.81E-02	8.11E-02	7.48E-02	6.90E-02	6.38E-02	5.90E-02	5.46E-02	5.06E-02	4.70E-02	4.36E-02
7.90E-02	7.21E-02	6.59E-02	6.03E-02	5.53E-02	5.08E-02	4.67E-02	4.30E-02	3.96E-02	3.65E-02	3.37E-02	3.12E-02	2.89E-02	2.67E-02	2.48E-02
4.74E-02	4.50E-02	4.29E-02	4.08E-02	3.90E-02	3.72E-02	3.56E-02	3.41E-02	3.27E-02	3.14E-02	3.02E-02	2.91E-02	2.80E-02	2.70E-02	2.60E-02
1.43E-65	8.22E-68	4.72E-70	2.71E-72	1.56E-74	9.00E-77	5.19E-79	3.00E-81	1.74E-83	1.01E-85	5.83E-88	3.39E-90	1.97E-92	1.14E-94	6.65E-97
1.16E-04	8.52E-05	6.28E-05	4.64E-05	3.43E-05	2.54E-05	1.88E-05	1.40E-05	1.04E-05	7.72E-06	5.75E-06	4.29E-06	3.20E-06	2.39E-06	1.79E-06
1.38E-89	1.17E-92	9.93E-96	8.44E-99	########	########	########	########	########	########	########	########	########	########	########
6.17E-02	5.86E-02	5.57E-02	5.31E-02	5.07E-02	4.84E-02	4.63E-02	4.43E-02	4.25E-02	4.08E-02	3.92E-02	3.77E-02	3.63E-02	3.50E-02	3.38E-02
8.40E-02	7.98E-02	7.59E-02	7.23E-02	6.90E-02	6.59E-02	6.31E-02	6.04E-02	5.79E-02	5.56E-02	5.34E-02	5.14E-02	4.95E-02	4.77E-02	4.60E-02
1.28E-14	4.23E-15	1.40E-15	4.63E-16	1.54E-16	5.10E-17	1.70E-17	5.65E-18	1.89E-18	6.29E-19	2.10E-19	7.03E-20	2.35E-20	7.89E-21	2.65E-21
9.95E-01	9.45E-01	9.00E-01	8.58E-01	8.19E-01	7.83E-01	7.49E-01	7.18E-01	6.89E-01	6.62E-01	6.37E-01	6.13E-01	5.90E-01	5.69E-01	5.49E-01
2.17E-01	2.06E-01	1.96E-01	1.87E-01	1.78E-01	1.71E-01	1.63E-01	1.56E-01	1.50E-01	1.44E-01	1.39E-01	1.33E-01	1.29E-01	1.24E-01	1.20E-01
7.53E-02	7.15E-02	6.81E-02	6.49E-02	6.20E-02	5.93E-02	5.67E-02	5.44E-02	5.22E-02	5.02E-02	4.82E-02	4.64E-02	4.47E-02	4.32E-02	4.17E-02
2.83E-32	2.25E-33	1.79E-34	1.43E-35	1.14E-36	9.14E-38	7.32E-39	5.88E-40	4.72E-41	3.79E-42	3.05E-43	2.46E-44	1.98E-45	1.60E-46	1.29E-47
2.61E-02	2.43E-02	2.26E-02	2.11E-02	1.97E-02	1.85E-02	1.73E-02	1.62E-02	1.52E-02	1.43E-02	1.35E-02	1.27E-02	1.20E-02	1.13E-02	1.07E-02

1.46E+00	1.39E+00	1.32E+00	1.26E+00	1.20E+00	1.15E+00	1.10E+00	1.05E+00	1.01E+00	9.72E-01	9.35E-01	9.00E-01	8.67E-01	8.36E-01	8.07E-01
7.99E-16	2.43E-16	7.39E-17	2.25E-17	6.89E-18	2.11E-18	6.45E-19	1.98E-19	6.06E-20	1.86E-20	5.73E-21	1.76E-21	5.44E-22	1.68E-22	5.18E-23
1.69E-01	1.60E-01	1.53E-01	1.46E-01	1.39E-01	1.33E-01	1.27E-01	1.22E-01	1.17E-01	1.12E-01	1.08E-01	1.04E-01	1.00E-01	9.66E-02	9.32E-02
1.65E-01	1.57E-01	1.49E-01	1.42E-01	1.36E-01	1.30E-01	1.24E-01	1.19E-01	1.14E-01	1.10E-01	1.05E-01	1.01E-01	9.76E-02	9.41E-02	9.08E-02
1.54141	1.45105	1.37E+00	1.29E+00	1.22E+00	1.16E+00	1.10E+00	1.04E+00	9.91E-01	9.43E-01	8.98E-01	8.56E-01	8.17E-01	7.81E-01	7.47E-01
4.43E-01	4.21E-01	4.01E-01	3.82E-01	3.65E-01	3.49E-01	3.34E-01	3.20E-01	3.07E-01	2.95E-01	2.83E-01	2.73E-01	2.63E-01	2.53E-01	2.44E-01
1.74E-01	1.66E-01	1.58E-01	1.50E-01	1.43E-01	1.37E-01	1.31E-01	1.26E-01	1.21E-01	1.16E-01	1.12E-01	1.07E-01	1.04E-01	9.99E-02	9.64E-02
5.76E-02	5.47E-02	5.21E-02	4.96E-02	4.73E-02	4.52E-02	4.33E-02	4.15E-02	3.98E-02	3.82E-02	3.67E-02	3.53E-02	3.40E-02	3.28E-02	3.16E-02
1.07E+01	1.02E+01	9.69E+00	9.24E+00	8.83E+00	8.44E+00	8.09E+00	7.75E+00	7.44E+00	7.15E+00	6.88E+00	6.63E+00	6.39E+00	6.16E+00	5.95E+00
2.41E-01	2.29E-01	2.18E-01	2.08E-01	1.99E-01	1.90E-01	1.82E-01	1.74E-01	1.67E-01	1.60E-01	1.54E-01	1.48E-01	1.43E-01	1.38E-01	1.33E-01
0.745337	7.07E-01	6.71E-01	6.38E-01	6.08E-01	5.80E-01	5.54E-01	5.30E-01	5.07E-01	4.86E-01	4.66E-01	4.48E-01	4.31E-01	4.14E-01	3.99E-01
1.42E-01	1.35E-01	1.28E-01	1.22E-01	1.17E-01	1.11E-01	1.07E-01	1.02E-01	9.80E-02	9.41E-02	9.04E-02	8.70E-02	8.38E-02	8.08E-02	7.79E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
9.50E-02	9.02E-02	8.57E-02	8.15E-02	7.77E-02	7.42E-02	7.09E-02	6.78E-02	6.50E-02	6.23E-02	5.98E-02	5.75E-02	5.53E-02	5.33E-02	5.13E-02
9.55E-14	3.09E-14	1.00E-14	3.25E-15	1.05E-15	3.43E-16	1.12E-16	3.64E-17	1.19E-17	3.89E-18	1.27E-18	4.17E-19	1.37E-19	4.48E-20	1.47E-20
1.01E-01	9.62E-02	9.15E-02	8.71E-02	8.31E-02	7.94E-02	7.60E-02	7.28E-02	6.98E-02	6.70E-02	6.44E-02	6.19E-02	5.96E-02	5.74E-02	5.54E-02
1.09E-04	8.14E-05	6.07E-05	4.53E-05	3.38E-05	2.53E-05	1.90E-05	1.42E-05	1.07E-05	8.03E-06	6.04E-06	4.55E-06	3.43E-06	2.59E-06	1.95E-06
7.39E-38	4.18E-39	2.37E-40	1.35E-41	7.66E-43	4.36E-44	2.49E-45	1.42E-46	8.12E-48	4.64E-49	2.66E-50	1.53E-51	8.75E-53	5.03E-54	2.89E-55
2.96E-73	9.86E-76	3.29E-78	1.10E-80	3.69E-83	1.24E-85	4.16E-88	1.40E-90	4.72E-93	1.59E-95	5.37E-98	########	########	########	########
1.94E-01	1.85E-01	1.76E-01	1.68E-01	1.60E-01	1.53E-01	1.46E-01	1.40E-01	1.35E-01	1.29E-01	1.24E-01	1.20E-01	1.15E-01	1.11E-01	1.07E-01
4.33E-02	4.11E-02	3.91E-02	3.73E-02	3.55E-02	3.39E-02	3.25E-02	3.11E-02	2.98E-02	2.86E-02	2.75E-02	2.64E-02	2.54E-02	2.45E-02	2.36E-02
6.18E-02	5.87E-02	5.59E-02	5.33E-02	5.08E-02	4.86E-02	4.65E-02	4.45E-02	4.27E-02	4.10E-02	3.94E-02	3.79E-02	3.65E-02	3.52E-02	3.40E-02
9.34E-03	8.59E-03	7.92E-03	7.31E-03	6.76E-03	6.26E-03	5.80E-03	5.39E-03	5.01E-03	4.66E-03	4.34E-03	4.05E-03	3.77E-03	3.53E-03	3.30E-03
3.76E-02	3.57E-02	3.40E-02	3.24E-02	3.09E-02	2.95E-02	2.82E-02	2.71E-02	2.60E-02	2.49E-02	2.39E-02	2.30E-02	2.22E-02	2.14E-02	2.06E-02
1.48E-65	8.43E-68	4.81E-70	2.74E-72	1.57E-74	8.98E-77	5.14E-79	2.95E-81	1.70E-83	9.75E-86	5.62E-88	3.24E-90	1.87E-92	1.08E-94	6.23E-97
1.07E+01	**1.02E+01**	**9.69E+00**	**9.24E+00**	**8.83E+00**	**8.44E+00**	**8.09E+00**	**7.75E+00**	**7.44E+00**	**7.15E+00**	**6.88E+00**	**6.63E+00**	**6.39E+00**	**6.16E+00**	**5.95E+00**

440	450	460	470	480	490	500	510	520	530	540	550	560	570	580
7.98E-02	7.71E-02	7.46E-02	7.22E-02	7.00E-02	6.79E-02	6.58E-02	6.39E-02	6.21E-02	6.03E-02	5.86E-02	5.70E-02	5.55E-02	5.41E-02	5.27E-02
9.75E-02	9.43E-02	9.12E-02	8.83E-02	8.56E-02	8.30E-02	8.05E-02	7.81E-02	7.59E-02	7.37E-02	7.17E-02	6.97E-02	6.79E-02	6.61E-02	6.44E-02
6.05E-01	5.85E-01	5.66E-01	5.47E-01	5.30E-01	5.14E-01	4.99E-01	4.84E-01	4.70E-01	4.57E-01	4.44E-01	4.32E-01	4.20E-01	4.09E-01	3.98E-01
1.86E-18	7.40E-19	2.96E-19	1.18E-19	4.72E-20	1.89E-20	7.57E-21	3.03E-21	1.22E-21	4.87E-22	1.96E-22	7.85E-23	3.15E-23	1.27E-23	5.10E-24
5.74E-54	3.57E-55	2.22E-56	1.38E-57	8.60E-59	5.36E-60	3.34E-61	2.08E-62	1.30E-63	8.13E-65	5.08E-66	3.18E-67	1.99E-68	1.24E-69	7.79E-71
1.39E-01	1.34E-01	1.29E-01	1.25E-01	1.21E-01	1.17E-01	1.14E-01	1.10E-01	1.07E-01	1.04E-01	1.01E-01	9.78E-02	9.50E-02	9.24E-02	8.99E-02
5.18E-01	5.01E-01	4.84E-01	4.69E-01	4.54E-01	4.40E-01	4.27E-01	4.15E-01	4.03E-01	3.91E-01	3.80E-01	3.70E-01	3.60E-01	3.51E-01	3.42E-01
5.34E-02	5.16E-02	4.99E-02	4.83E-02	4.67E-02	4.53E-02	4.39E-02	4.26E-02	4.13E-02	4.01E-02	3.90E-02	3.79E-02	3.69E-02	3.59E-02	3.49E-02
4.33E-02	4.18E-02	4.04E-02	3.91E-02	3.78E-02	3.66E-02	3.54E-02	3.43E-02	3.33E-02	3.23E-02	3.14E-02	3.05E-02	2.96E-02	2.88E-02	2.80E-02
3.19E-53	2.02E-54	1.28E-55	8.16E-57	5.19E-58	3.30E-59	2.10E-60	1.34E-61	8.54E-63	5.45E-64	3.48E-65	2.22E-66	1.42E-67	9.06E-69	5.79E-70
9.32E-04	7.62E-04	6.22E-04	5.09E-04	4.17E-04	3.41E-04	2.80E-04	2.29E-04	1.88E-04	1.54E-04	1.27E-04	1.04E-04	8.57E-05	7.05E-05	5.80E-05
5.11E-02	4.91E-02	4.72E-02	4.54E-02	4.37E-02	4.21E-02	4.06E-02	3.92E-02	3.78E-02	3.65E-02	3.52E-02	3.41E-02	3.29E-02	3.19E-02	3.08E-02
7.68E-03	6.97E-03	6.34E-03	5.77E-03	5.25E-03	4.78E-03	4.36E-03	3.97E-03	3.62E-03	3.31E-03	3.02E-03	2.76E-03	2.53E-03	2.31E-03	2.11E-03
1.24E-01	1.19E-01	1.15E-01	1.12E-01	1.08E-01	1.05E-01	1.02E-01	9.88E-02	9.60E-02	9.32E-02	9.07E-02	8.82E-02	8.58E-02	8.35E-02	8.14E-02
6.79E-02	6.55E-02	6.33E-02	6.12E-02	5.92E-02	5.74E-02	5.56E-02	5.39E-02	5.22E-02	5.07E-02	4.92E-02	4.78E-02	4.65E-02	4.52E-02	4.40E-02
4.06E-01	3.92E-01	3.79E-01	3.67E-01	3.56E-01	3.45E-01	3.34E-01	3.25E-01	3.15E-01	3.06E-01	2.98E-01	2.90E-01	2.82E-01	2.74E-01	2.67E-01
1.80E-01	1.74E-01	1.68E-01	1.62E-01	1.57E-01	1.52E-01	1.48E-01	1.43E-01	1.39E-01	1.35E-01	1.31E-01	1.27E-01	1.24E-01	1.21E-01	1.17E-01
1.17E-01	1.13E-01	1.09E-01	1.06E-01	1.02E-01	9.91E-02	9.61E-02	9.32E-02	9.05E-02	8.79E-02	8.54E-02	8.31E-02	8.08E-02	7.87E-02	7.66E-02
3.01E+00	2.91E+00	2.82E+00	2.73E+00	2.65E+00	2.57E+00	2.49E+00	2.42E+00	2.35E+00	2.28E+00	2.22E+00	2.16E+00	2.10E+00	2.04E+00	1.99E+00
6.65E-49	5.22E-50	4.10E-51	3.23E-52	2.54E-53	2.00E-54	1.58E-55	1.24E-56	9.80E-58	7.73E-59	6.11E-60	4.83E-61	3.82E-62	3.02E-63	2.39E-64
2.38E-01	2.30E-01	2.22E-01	2.15E-01	2.08E-01	2.02E-01	1.96E-01	1.90E-01	1.85E-01	1.80E-01	1.75E-01	1.70E-01	1.65E-01	1.61E-01	1.57E-01
2.75E-01	2.64E-01	2.53E-01	2.44E-01	2.34E-01	2.26E-01	2.17E-01	2.10E-01	2.02E-01	1.95E-01	1.88E-01	1.82E-01	1.76E-01	1.70E-01	1.64E-01
1.94E-91	1.74E-93	1.56E-95	1.40E-97	1.26E-99	########	########	########	########	########	########	########	########	########	########
5.21E-02	5.03E-02	4.86E-02	4.70E-02	4.55E-02	4.41E-02	4.27E-02	4.14E-02	4.01E-02	3.89E-02	3.78E-02	3.67E-02	3.57E-02	3.47E-02	3.38E-02
2.64E-83	3.70E-85	5.21E-87	7.34E-89	1.03E-90	1.46E-92	2.06E-94	2.90E-96	4.10E-98	########	########	########	########	########	########
6.81E-01	6.58E-01	6.37E-01	6.17E-01	5.97E-01	5.79E-01	5.62E-01	5.46E-01	5.30E-01	5.15E-01	5.01E-01	4.87E-01	4.74E-01	4.62E-01	4.50E-01
7.78E-02	7.52E-02	7.27E-02	7.03E-02	6.81E-02	6.59E-02	6.39E-02	6.20E-02	6.02E-02	5.84E-02	5.68E-02	5.52E-02	5.37E-02	5.22E-02	5.08E-02
8.00E-02	7.74E-02	7.48E-02	7.25E-02	7.02E-02	6.81E-02	6.60E-02	6.41E-02	6.22E-02	6.05E-02	5.88E-02	5.72E-02	5.57E-02	5.42E-02	5.28E-02
1.26E-01	1.22E-01	1.18E-01	1.14E-01	1.10E-01	1.07E-01	1.04E-01	1.01E-01	9.78E-02	9.50E-02	9.24E-02	8.99E-02	8.74E-02	8.51E-02	8.29E-02
6.08E-02	5.87E-02	5.67E-02	5.48E-02	5.30E-02	5.14E-02	4.98E-02	4.82E-02	4.68E-02	4.54E-02	4.41E-02	4.28E-02	4.17E-02	4.05E-02	3.94E-02
4.02E-02	3.88E-02	3.76E-02	3.64E-02	3.52E-02	3.42E-02	3.31E-02	3.22E-02	3.12E-02	3.03E-02	2.95E-02	2.87E-02	2.79E-02	2.72E-02	2.65E-02
3.92E-02	3.77E-02	3.64E-02	3.51E-02	3.39E-02	3.28E-02	3.17E-02	3.07E-02	2.97E-02	2.88E-02	2.79E-02	2.70E-02	2.62E-02	2.55E-02	2.47E-02
6.99E-02	6.76E-02	6.54E-02	6.33E-02	6.13E-02	5.94E-02	5.76E-02	5.59E-02	5.43E-02	5.27E-02	5.13E-02	4.99E-02	4.85E-02	4.72E-02	4.60E-02
2.49E-01	2.41E-01	2.33E-01	2.26E-01	2.18E-01	2.12E-01	2.05E-01	1.99E-01	1.93E-01	1.88E-01	1.83E-01	1.78E-01	1.73E-01	1.68E-01	1.64E-01
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########

7.75E-02	7.47E-02	7.20E-02	6.95E-02	6.70E-02	6.48E-02	6.26E-02	6.05E-02	5.86E-02	5.67E-02	5.49E-02	5.33E-02	5.16E-02	5.01E-02	4.86E-02
8.79E-01	8.50E-01	8.23E-01	7.97E-01	7.72E-01	7.49E-01	7.26E-01	7.05E-01	6.85E-01	6.66E-01	6.47E-01	6.30E-01	6.13E-01	5.97E-01	5.82E-01
7.04E-01	6.81E-01	6.59E-01	6.38E-01	6.18E-01	5.99E-01	5.81E-01	5.64E-01	5.48E-01	5.32E-01	5.17E-01	5.03E-01	4.90E-01	4.77E-01	4.64E-01
2.59E-02	2.50E-02	2.42E-02	2.34E-02	2.27E-02	2.20E-02	2.13E-02	2.07E-02	2.01E-02	1.95E-02	1.90E-02	1.84E-02	1.79E-02	1.75E-02	1.70E-02
1.23E+00	1.19E+00	1.15E+00	1.11E+00	1.08E+00	1.05E+00	1.02E+00	9.85E-01	9.57E-01	9.30E-01	9.04E-01	8.80E-01	8.56E-01	8.34E-01	8.12E-01
2.90E-02	2.80E-02	2.71E-02	2.62E-02	2.54E-02	2.46E-02	2.38E-02	2.31E-02	2.25E-02	2.18E-02	2.12E-02	2.06E-02	2.01E-02	1.95E-02	1.90E-02
1.48E-01	1.43E-01	1.38E-01	1.34E-01	1.29E-01	1.26E-01	1.22E-01	1.18E-01	1.15E-01	1.12E-01	1.08E-01	1.06E-01	1.03E-01	1.00E-01	9.75E-02
2.48E-03	2.19E-03	1.94E-03	1.72E-03	1.53E-03	1.36E-03	1.20E-03	1.07E-03	9.51E-04	8.46E-04	7.53E-04	6.71E-04	5.98E-04	5.33E-04	4.75E-04
1.45E-01	1.40E-01	1.35E-01	1.31E-01	1.26E-01	1.22E-01	1.19E-01	1.15E-01	1.12E-01	1.08E-01	1.05E-01	1.02E-01	9.93E-02	9.65E-02	9.39E-02
3.02E-02	2.91E-02	2.82E-02	2.73E-02	2.64E-02	2.56E-02	2.48E-02	2.41E-02	2.33E-02	2.27E-02	2.20E-02	2.14E-02	2.08E-02	2.03E-02	1.97E-02
5.89E-02	5.69E-02	5.51E-02	5.33E-02	5.16E-02	5.00E-02	4.85E-02	4.71E-02	4.57E-02	4.44E-02	4.32E-02	4.20E-02	4.09E-02	3.98E-02	3.88E-02
4.18E-02	4.04E-02	3.91E-02	3.78E-02	3.66E-02	3.55E-02	3.44E-02	3.34E-02	3.24E-02	3.15E-02	3.06E-02	2.98E-02	2.90E-02	2.82E-02	2.75E-02
1.42E-01	1.34E-01	1.26E-01	1.19E-01	1.12E-01	1.06E-01	1.00E-01	9.50E-02	9.00E-02	8.52E-02	8.07E-02	7.65E-02	7.26E-02	6.89E-02	6.54E-02
8.71E-02	8.41E-02	8.13E-02	7.86E-02	7.61E-02	7.37E-02	7.14E-02	6.92E-02	6.72E-02	6.52E-02	6.33E-02	6.15E-02	5.98E-02	5.82E-02	5.66E-02
5.91E-02	5.71E-02	5.51E-02	5.33E-02	5.15E-02	4.99E-02	4.83E-02	4.68E-02	4.54E-02	4.40E-02	4.27E-02	4.15E-02	4.03E-02	3.92E-02	3.81E-02
1.77E-26	4.62E-27	1.21E-27	3.16E-28	8.28E-29	2.17E-29	5.69E-30	1.49E-30	3.92E-31	1.03E-31	2.70E-32	7.11E-33	1.87E-33	4.92E-34	1.30E-34
2.04E-01	1.97E-01	1.90E-01	1.84E-01	1.79E-01	1.73E-01	1.68E-01	1.63E-01	1.58E-01	1.54E-01	1.49E-01	1.45E-01	1.41E-01	1.37E-01	1.34E-01
1.20E-01	1.15E-01	1.11E-01	1.06E-01	1.02E-01	9.85E-02	9.48E-02	9.14E-02	8.81E-02	8.49E-02	8.20E-02	7.92E-02	7.65E-02	7.39E-02	7.15E-02
1.87E-02	1.81E-02	1.75E-02	1.69E-02	1.64E-02	1.59E-02	1.54E-02	1.49E-02	1.45E-02	1.41E-02	1.37E-02	1.33E-02	1.29E-02	1.26E-02	1.23E-02
7.50E-04	6.55E-04	5.73E-04	5.01E-04	4.39E-04	3.85E-04	3.38E-04	2.96E-04	2.60E-04	2.28E-04	2.01E-04	1.77E-04	1.55E-04	1.37E-04	1.20E-04
1.50E-01	1.45E-01	1.40E-01	1.36E-01	1.32E-01	1.28E-01	1.24E-01	1.20E-01	1.17E-01	1.13E-01	1.10E-01	1.07E-01	1.04E-01	1.01E-01	9.88E-02
3.69E-01	3.57E-01	3.45E-01	3.34E-01	3.23E-01	3.14E-01	3.04E-01	2.95E-01	2.87E-01	2.78E-01	2.71E-01	2.63E-01	2.56E-01	2.49E-01	2.43E-01
3.19E-04	2.65E-04	2.20E-04	1.83E-04	1.53E-04	1.27E-04	1.06E-04	8.83E-05	7.36E-05	6.15E-05	5.13E-05	4.29E-05	3.59E-05	3.00E-05	2.51E-05
4.63E-01	4.41E-01	4.20E-01	4.01E-01	3.83E-01	3.66E-01	3.50E-01	3.35E-01	3.20E-01	3.07E-01	2.94E-01	2.82E-01	2.70E-01	2.59E-01	2.49E-01
7.11E-02	6.87E-02	6.65E-02	6.43E-02	6.23E-02	6.04E-02	5.85E-02	5.68E-02	5.51E-02	5.36E-02	5.21E-02	5.06E-02	4.92E-02	4.79E-02	4.67E-02
7.85E-01	7.57E-01	7.32E-01	7.07E-01	6.84E-01	6.63E-01	6.42E-01	6.22E-01	6.03E-01	5.85E-01	5.68E-01	5.52E-01	5.37E-01	5.22E-01	5.08E-01
4.05E-02	3.77E-02	3.50E-02	3.26E-02	3.04E-02	2.84E-02	2.65E-02	2.47E-02	2.31E-02	2.16E-02	2.02E-02	1.89E-02	1.77E-02	1.65E-02	1.55E-02
2.30E-02	2.13E-02	1.98E-02	1.84E-02	1.71E-02	1.60E-02	1.49E-02	1.39E-02	1.29E-02	1.21E-02	1.13E-02	1.05E-02	9.82E-03	9.18E-03	8.59E-03
2.51E-02	2.43E-02	2.35E-02	2.27E-02	2.20E-02	2.13E-02	2.07E-02	2.00E-02	1.95E-02	1.89E-02	1.84E-02	1.79E-02	1.74E-02	1.69E-02	1.65E-02
3.88E-99	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.34E-06	1.00E-06	7.49E-07	5.62E-07	4.21E-07	3.16E-07	2.38E-07	1.79E-07	1.34E-07	1.01E-07	7.61E-08	5.73E-08	4.32E-08	3.26E-08	2.46E-08
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
3.26E-02	3.15E-02	3.04E-02	2.94E-02	2.85E-02	2.76E-02	2.68E-02	2.59E-02	2.52E-02	2.44E-02	2.38E-02	2.31E-02	2.24E-02	2.18E-02	2.13E-02
4.44E-02	4.29E-02	4.15E-02	4.01E-02	3.88E-02	3.76E-02	3.65E-02	3.54E-02	3.43E-02	3.33E-02	3.24E-02	3.15E-02	3.06E-02	2.98E-02	2.90E-02
8.88E-22	2.98E-22	1.00E-22	3.37E-23	1.13E-23	3.82E-24	1.29E-24	4.35E-25	1.47E-25	4.95E-26	1.67E-26	5.65E-27	1.91E-27	6.46E-28	2.19E-28
5.31E-01	5.13E-01	4.96E-01	4.80E-01	4.65E-01	4.51E-01	4.37E-01	4.24E-01	4.12E-01	4.00E-01	3.89E-01	3.79E-01	3.68E-01	3.59E-01	3.49E-01
1.15E-01	1.12E-01	1.08E-01	1.04E-01	1.01E-01	9.81E-02	9.51E-02	9.23E-02	8.96E-02	8.71E-02	8.47E-02	8.23E-02	8.01E-02	7.80E-02	7.60E-02
4.02E-02	3.89E-02	3.76E-02	3.64E-02	3.53E-02	3.42E-02	3.32E-02	3.22E-02	3.13E-02	3.04E-02	2.96E-02	2.88E-02	2.80E-02	2.73E-02	2.66E-02
1.05E-48	8.46E-50	6.85E-51	5.55E-52	4.50E-53	3.65E-54	2.97E-55	2.41E-56	1.96E-57	1.59E-58	1.30E-59	1.05E-60	8.59E-62	7.00E-63	5.71E-64
1.01E-02	9.54E-03	9.03E-03	8.56E-03	8.11E-03	7.70E-03	7.31E-03	6.94E-03	6.59E-03	6.27E-03	5.97E-03	5.68E-03	5.41E-03	5.15E-03	4.91E-03

7.79E-01	7.53E-01	7.29E-01	7.06E-01	6.84E-01	6.63E-01	6.43E-01	6.24E-01	6.06E-01	5.89E-01	5.72E-01	5.57E-01	5.42E-01	5.27E-01	5.14E-01
1.60E-23	4.94E-24	1.53E-24	4.74E-25	1.47E-25	4.55E-26	1.41E-26	4.38E-27	1.36E-27	4.23E-28	1.32E-28	4.09E-29	1.27E-29	3.97E-30	1.24E-30
9.00E-02	8.70E-02	8.42E-02	8.15E-02	7.89E-02	7.65E-02	7.42E-02	7.20E-02	6.99E-02	6.79E-02	6.60E-02	6.42E-02	6.25E-02	6.08E-02	5.93E-02
8.76E-02	8.47E-02	8.19E-02	7.92E-02	7.67E-02	7.43E-02	7.21E-02	6.99E-02	6.79E-02	6.59E-02	6.41E-02	6.23E-02	6.06E-02	5.90E-02	5.74E-02
7.14E-01	6.84E-01	6.56E-01	6.29E-01	6.03E-01	5.79E-01	5.57E-01	5.35E-01	5.15E-01	4.96E-01	4.77E-01	4.60E-01	4.44E-01	4.28E-01	4.13E-01
2.36E-01	2.28E-01	2.21E-01	2.14E-01	2.07E-01	2.01E-01	1.95E-01	1.89E-01	1.83E-01	1.78E-01	1.73E-01	1.68E-01	1.64E-01	1.59E-01	1.55E-01
9.31E-02	9.00E-02	8.71E-02	8.43E-02	8.17E-02	7.92E-02	7.69E-02	7.46E-02	7.24E-02	7.04E-02	6.85E-02	6.66E-02	6.48E-02	6.31E-02	6.15E-02
3.05E-02	2.95E-02	2.85E-02	2.76E-02	2.67E-02	2.59E-02	2.51E-02	2.44E-02	2.37E-02	2.30E-02	2.23E-02	2.17E-02	2.11E-02	2.05E-02	2.00E-02
5.75E+00	5.56E+00	5.38E+00	5.21E+00	5.05E+00	4.89E+00	4.75E+00	4.61E+00	4.48E+00	4.35E+00	4.23E+00	4.12E+00	4.01E+00	3.90E+00	3.80E+00
1.28E-01	1.24E-01	1.20E-01	1.16E-01	1.13E-01	1.09E-01	1.06E-01	1.03E-01	9.97E-02	9.69E-02	9.42E-02	9.16E-02	8.91E-02	8.68E-02	8.45E-02
3.85E-01	3.71E-01	3.58E-01	3.46E-01	3.34E-01	3.23E-01	3.13E-01	3.03E-01	2.94E-01	2.85E-01	2.76E-01	2.68E-01	2.60E-01	2.53E-01	2.46E-01
7.53E-02	7.27E-02	7.03E-02	6.81E-02	6.59E-02	6.39E-02	6.19E-02	6.01E-02	5.83E-02	5.67E-02	5.51E-02	5.35E-02	5.21E-02	5.07E-02	4.94E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
4.95E-02	4.78E-02	4.61E-02	4.46E-02	4.31E-02	4.17E-02	4.04E-02	3.91E-02	3.79E-02	3.68E-02	3.57E-02	3.47E-02	3.37E-02	3.28E-02	3.18E-02
4.84E-21	1.59E-21	5.24E-22	1.73E-22	5.69E-23	1.88E-23	6.20E-24	2.05E-24	6.76E-25	2.24E-25	7.40E-26	2.45E-26	8.11E-27	2.69E-27	8.90E-28
5.35E-02	5.17E-02	4.99E-02	4.83E-02	4.68E-02	4.53E-02	4.39E-02	4.26E-02	4.13E-02	4.01E-02	3.90E-02	3.79E-02	3.68E-02	3.58E-02	3.49E-02
1.48E-06	1.12E-06	8.46E-07	6.41E-07	4.86E-07	3.69E-07	2.80E-07	2.12E-07	1.61E-07	1.23E-07	9.33E-08	7.10E-08	5.41E-08	4.12E-08	3.14E-08
1.66E-56	9.58E-58	5.52E-59	3.18E-60	1.84E-61	1.06E-62	6.13E-64	3.54E-65	2.05E-66	1.19E-67	6.87E-69	3.98E-70	2.31E-71	1.34E-72	7.77E-74
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.04E-01	1.00E-01	9.71E-02	9.40E-02	9.11E-02	8.83E-02	8.57E-02	8.32E-02	8.08E-02	7.85E-02	7.63E-02	7.43E-02	7.23E-02	7.04E-02	6.86E-02
2.28E-02	2.20E-02	2.13E-02	2.06E-02	1.99E-02	1.93E-02	1.87E-02	1.81E-02	1.76E-02	1.71E-02	1.66E-02	1.61E-02	1.57E-02	1.53E-02	1.49E-02
3.28E-02	3.17E-02	3.07E-02	2.97E-02	2.87E-02	2.78E-02	2.70E-02	2.62E-02	2.54E-02	2.47E-02	2.40E-02	2.33E-02	2.27E-02	2.21E-02	2.15E-02
3.08E-03	2.89E-03	2.70E-03	2.54E-03	2.38E-03	2.23E-03	2.10E-03	1.97E-03	1.85E-03	1.75E-03	1.64E-03	1.55E-03	1.46E-03	1.38E-03	1.30E-03
1.99E-02	1.92E-02	1.86E-02	1.80E-02	1.74E-02	1.69E-02	1.64E-02	1.59E-02	1.54E-02	1.50E-02	1.46E-02	1.41E-02	1.38E-02	1.34E-02	1.30E-02
3.60E-99	########	########	########	########	########	########	########	########	########	########	########	########	########	########
5.75E+00	**5.56E+00**	**5.38E+00**	**5.21E+00**	**5.05E+00**	**4.89E+00**	**4.75E+00**	**4.61E+00**	**4.48E+00**	**4.35E+00**	**4.23E+00**	**4.12E+00**	**4.01E+00**	**3.90E+00**	**3.80E+00**

590	600	610	620	630	640	650	660	670	680	690	700	710	720	730
5.13E-02	5.01E-02	4.88E-02	4.77E-02	4.65E-02	4.54E-02	4.44E-02	4.34E-02	4.24E-02	4.15E-02	4.06E-02	3.97E-02	3.89E-02	3.81E-02	3.73E-02
6.27E-02	6.12E-02	5.97E-02	5.82E-02	5.68E-02	5.55E-02	5.42E-02	5.30E-02	5.18E-02	5.07E-02	4.96E-02	4.85E-02	4.75E-02	4.65E-02	4.55E-02
3.88E-01	3.79E-01	3.69E-01	3.60E-01	3.52E-01	3.43E-01	3.35E-01	3.28E-01	3.20E-01	3.13E-01	3.06E-01	3.00E-01	2.93E-01	2.87E-01	2.81E-01
2.05E-24	8.25E-25	3.32E-25	1.34E-25	5.39E-26	2.17E-26	8.76E-27	3.53E-27	1.43E-27	5.76E-28	2.32E-28	9.39E-29	3.79E-29	1.53E-29	6.20E-30
4.88E-72	3.06E-73	1.92E-74	1.20E-75	7.55E-77	4.74E-78	2.97E-79	1.87E-80	1.17E-81	7.38E-83	4.64E-84	2.92E-85	1.84E-86	1.16E-87	7.28E-89
8.75E-02	8.52E-02	8.30E-02	8.09E-02	7.89E-02	7.69E-02	7.50E-02	7.32E-02	7.15E-02	6.98E-02	6.82E-02	6.67E-02	6.52E-02	6.37E-02	6.23E-02
3.33E-01	3.25E-01	3.17E-01	3.09E-01	3.02E-01	2.95E-01	2.88E-01	2.81E-01	2.75E-01	2.69E-01	2.63E-01	2.57E-01	2.52E-01	2.47E-01	2.41E-01
3.40E-02	3.31E-02	3.23E-02	3.15E-02	3.07E-02	3.00E-02	2.93E-02	2.86E-02	2.79E-02	2.73E-02	2.67E-02	2.61E-02	2.55E-02	2.50E-02	2.44E-02
2.72E-02	2.65E-02	2.58E-02	2.52E-02	2.45E-02	2.39E-02	2.33E-02	2.28E-02	2.22E-02	2.17E-02	2.12E-02	2.07E-02	2.02E-02	1.98E-02	1.93E-02
3.71E-71	2.37E-72	1.52E-73	9.73E-75	6.23E-76	3.99E-77	2.56E-78	1.64E-79	1.05E-80	6.77E-82	4.34E-83	2.79E-84	1.79E-85	1.15E-86	7.40E-88
4.77E-05	3.93E-05	3.24E-05	2.67E-05	2.20E-05	1.82E-05	1.50E-05	1.24E-05	1.02E-05	8.44E-06	6.98E-06	5.77E-06	4.77E-06	3.94E-06	3.26E-06
2.99E-02	2.89E-02	2.80E-02	2.72E-02	2.64E-02	2.56E-02	2.48E-02	2.41E-02	2.34E-02	2.28E-02	2.21E-02	2.15E-02	2.09E-02	2.04E-02	1.98E-02
1.94E-03	1.77E-03	1.63E-03	1.49E-03	1.37E-03	1.25E-03	1.15E-03	1.06E-03	9.71E-04	8.92E-04	8.20E-04	7.53E-04	6.93E-04	6.37E-04	5.87E-04
7.93E-02	7.73E-02	7.54E-02	7.36E-02	7.18E-02	7.01E-02	6.85E-02	6.69E-02	6.54E-02	6.40E-02	6.26E-02	6.12E-02	5.99E-02	5.87E-02	5.74E-02
4.28E-02	4.17E-02	4.06E-02	3.96E-02	3.86E-02	3.76E-02	3.67E-02	3.58E-02	3.50E-02	3.42E-02	3.34E-02	3.26E-02	3.19E-02	3.12E-02	3.05E-02
2.61E-01	2.54E-01	2.48E-01	2.42E-01	2.36E-01	2.30E-01	2.25E-01	2.20E-01	2.15E-01	2.10E-01	2.06E-01	2.01E-01	1.97E-01	1.93E-01	1.89E-01
1.14E-01	1.11E-01	1.08E-01	1.06E-01	1.03E-01	1.01E-01	9.83E-02	9.60E-02	9.37E-02	9.16E-02	8.95E-02	8.75E-02	8.56E-02	8.38E-02	8.20E-02
7.46E-02	7.27E-02	7.09E-02	6.92E-02	6.75E-02	6.59E-02	6.43E-02	6.29E-02	6.14E-02	6.00E-02	5.87E-02	5.74E-02	5.62E-02	5.50E-02	5.39E-02
1.94E+00	1.89E+00	1.85E+00	1.80E+00	1.76E+00	1.72E+00	1.68E+00	1.64E+00	1.60E+00	1.57E+00	1.53E+00	1.50E+00	1.47E+00	1.44E+00	1.41E+00
1.89E-65	1.50E-66	1.19E-67	9.40E-69	7.46E-70	5.91E-71	4.69E-72	3.72E-73	2.96E-74	2.35E-75	1.87E-76	1.48E-77	1.18E-78	9.38E-80	7.47E-81
1.53E-01	1.49E-01	1.45E-01	1.42E-01	1.39E-01	1.35E-01	1.32E-01	1.29E-01	1.26E-01	1.24E-01	1.21E-01	1.18E-01	1.16E-01	1.13E-01	1.11E-01
1.59E-01	1.54E-01	1.49E-01	1.45E-01	1.40E-01	1.36E-01	1.32E-01	1.28E-01	1.24E-01	1.21E-01	1.17E-01	1.14E-01	1.11E-01	1.08E-01	1.05E-01
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
3.29E-02	3.20E-02	3.12E-02	3.04E-02	2.96E-02	2.89E-02	2.82E-02	2.75E-02	2.69E-02	2.62E-02	2.56E-02	2.50E-02	2.45E-02	2.39E-02	2.34E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
4.38E-01	4.28E-01	4.17E-01	4.07E-01	3.97E-01	3.88E-01	3.79E-01	3.71E-01	3.62E-01	3.54E-01	3.47E-01	3.39E-01	3.32E-01	3.25E-01	3.19E-01
4.95E-02	4.82E-02	4.70E-02	4.58E-02	4.47E-02	4.36E-02	4.26E-02	4.16E-02	4.06E-02	3.97E-02	3.88E-02	3.79E-02	3.71E-02	3.63E-02	3.55E-02
5.15E-02	5.02E-02	4.90E-02	4.78E-02	4.67E-02	4.56E-02	4.45E-02	4.35E-02	4.25E-02	4.16E-02	4.07E-02	3.98E-02	3.90E-02	3.82E-02	3.74E-02
8.08E-02	7.87E-02	7.68E-02	7.49E-02	7.31E-02	7.14E-02	6.97E-02	6.81E-02	6.66E-02	6.51E-02	6.37E-02	6.23E-02	6.10E-02	5.97E-02	5.84E-02
3.84E-02	3.74E-02	3.64E-02	3.55E-02	3.46E-02	3.37E-02	3.29E-02	3.21E-02	3.14E-02	3.06E-02	2.99E-02	2.93E-02	2.86E-02	2.80E-02	2.74E-02
2.58E-02	2.52E-02	2.45E-02	2.39E-02	2.34E-02	2.28E-02	2.23E-02	2.18E-02	2.13E-02	2.08E-02	2.04E-02	1.99E-02	1.95E-02	1.91E-02	1.87E-02
2.40E-02	2.33E-02	2.27E-02	2.21E-02	2.15E-02	2.09E-02	2.03E-02	1.98E-02	1.93E-02	1.88E-02	1.83E-02	1.79E-02	1.75E-02	1.70E-02	1.66E-02
4.48E-02	4.37E-02	4.26E-02	4.16E-02	4.06E-02	3.96E-02	3.87E-02	3.78E-02	3.69E-02	3.61E-02	3.53E-02	3.45E-02	3.38E-02	3.31E-02	3.24E-02
1.60E-01	1.56E-01	1.52E-01	1.48E-01	1.44E-01	1.41E-01	1.38E-01	1.35E-01	1.32E-01	1.29E-01	1.26E-01	1.23E-01	1.20E-01	1.18E-01	1.15E-01
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4.72E-02	4.59E-02	4.46E-02	4.33E-02	4.22E-02	4.10E-02	3.99E-02	3.89E-02	3.79E-02	3.69E-02	3.60E-02	3.51E-02	3.42E-02	3.34E-02	3.26E-02
5.67E-01	5.53E-01	5.39E-01	5.26E-01	5.14E-01	5.02E-01	4.90E-01	4.79E-01	4.69E-01	4.58E-01	4.48E-01	4.39E-01	4.30E-01	4.21E-01	4.12E-01
4.53E-01	4.41E-01	4.30E-01	4.20E-01	4.10E-01	4.00E-01	3.91E-01	3.82E-01	3.74E-01	3.65E-01	3.57E-01	3.50E-01	3.42E-01	3.35E-01	3.28E-01
1.66E-02	1.62E-02	1.58E-02	1.54E-02	1.50E-02	1.46E-02	1.43E-02	1.40E-02	1.37E-02	1.34E-02	1.31E-02	1.28E-02	1.25E-02	1.22E-02	1.20E-02
7.92E-01	7.72E-01	7.53E-01	7.35E-01	7.17E-01	7.01E-01	6.84E-01	6.69E-01	6.54E-01	6.40E-01	6.26E-01	6.12E-01	5.99E-01	5.87E-01	5.75E-01
1.85E-02	1.81E-02	1.76E-02	1.72E-02	1.68E-02	1.64E-02	1.60E-02	1.56E-02	1.53E-02	1.49E-02	1.46E-02	1.43E-02	1.40E-02	1.37E-02	1.34E-02
9.50E-02	9.26E-02	9.04E-02	8.82E-02	8.61E-02	8.41E-02	8.22E-02	8.03E-02	7.85E-02	7.68E-02	7.51E-02	7.35E-02	7.20E-02	7.05E-02	6.90E-02
4.24E-04	3.78E-04	3.38E-04	3.02E-04	2.70E-04	2.41E-04	2.16E-04	1.93E-04	1.73E-04	1.54E-04	1.38E-04	1.24E-04	1.11E-04	9.95E-05	8.92E-05
9.14E-02	8.90E-02	8.68E-02	8.46E-02	8.24E-02	8.04E-02	7.85E-02	7.66E-02	7.48E-02	7.30E-02	7.14E-02	6.97E-02	6.82E-02	6.67E-02	6.52E-02
1.92E-02	1.87E-02	1.83E-02	1.78E-02	1.74E-02	1.70E-02	1.66E-02	1.62E-02	1.58E-02	1.54E-02	1.51E-02	1.48E-02	1.44E-02	1.41E-02	1.38E-02
3.78E-02	3.68E-02	3.59E-02	3.50E-02	3.42E-02	3.34E-02	3.26E-02	3.19E-02	3.11E-02	3.04E-02	2.98E-02	2.91E-02	2.85E-02	2.79E-02	2.73E-02
2.68E-02	2.61E-02	2.55E-02	2.48E-02	2.42E-02	2.37E-02	2.31E-02	2.26E-02	2.21E-02	2.16E-02	2.11E-02	2.07E-02	2.02E-02	1.98E-02	1.94E-02
6.21E-02	5.90E-02	5.61E-02	5.34E-02	5.08E-02	4.83E-02	4.60E-02	4.38E-02	4.17E-02	3.98E-02	3.79E-02	3.62E-02	3.45E-02	3.29E-02	3.14E-02
5.51E-02	5.37E-02	5.23E-02	5.10E-02	4.97E-02	4.85E-02	4.74E-02	4.62E-02	4.51E-02	4.41E-02	4.31E-02	4.21E-02	4.12E-02	4.03E-02	3.94E-02
3.71E-02	3.61E-02	3.52E-02	3.43E-02	3.34E-02	3.26E-02	3.18E-02	3.10E-02	3.02E-02	2.95E-02	2.88E-02	2.82E-02	2.75E-02	2.69E-02	2.63E-02
3.41E-35	8.99E-36	2.37E-36	6.25E-37	1.65E-37	4.35E-38	1.15E-38	3.04E-39	8.02E-40	2.12E-40	5.61E-41	1.48E-41	3.92E-42	1.04E-42	2.75E-43
1.30E-01	1.27E-01	1.24E-01	1.21E-01	1.18E-01	1.15E-01	1.13E-01	1.10E-01	1.07E-01	1.05E-01	1.03E-01	1.00E-01	9.83E-02	9.63E-02	9.42E-02
6.91E-02	6.69E-02	6.48E-02	6.27E-02	6.08E-02	5.89E-02	5.71E-02	5.54E-02	5.38E-02	5.22E-02	5.07E-02	4.92E-02	4.78E-02	4.65E-02	4.52E-02
1.19E-02	1.16E-02	1.13E-02	1.11E-02	1.08E-02	1.05E-02	1.03E-02	1.00E-02	9.81E-03	9.59E-03	9.37E-03	9.17E-03	8.97E-03	8.78E-03	8.59E-03
1.06E-04	9.36E-05	8.25E-05	7.28E-05	6.42E-05	5.67E-05	5.01E-05	4.42E-05	3.91E-05	3.46E-05	3.06E-05	2.70E-05	2.39E-05	2.12E-05	1.88E-05
9.63E-02	9.39E-02	9.15E-02	8.93E-02	8.72E-02	8.51E-02	8.31E-02	8.12E-02	7.94E-02	7.77E-02	7.60E-02	7.43E-02	7.27E-02	7.12E-02	6.97E-02
2.37E-01	2.31E-01	2.25E-01	2.20E-01	2.14E-01	2.09E-01	2.04E-01	2.00E-01	1.95E-01	1.91E-01	1.87E-01	1.83E-01	1.79E-01	1.75E-01	1.71E-01
2.10E-05	1.76E-05	1.48E-05	1.24E-05	1.04E-05	8.71E-06	7.31E-06	6.13E-06	5.15E-06	4.33E-06	3.64E-06	3.06E-06	2.57E-06	2.16E-06	1.82E-06
2.39E-01	2.30E-01	2.21E-01	2.12E-01	2.04E-01	1.97E-01	1.89E-01	1.82E-01	1.76E-01	1.69E-01	1.63E-01	1.58E-01	1.52E-01	1.47E-01	1.42E-01
4.55E-02	4.43E-02	4.32E-02	4.22E-02	4.11E-02	4.02E-02	3.92E-02	3.83E-02	3.74E-02	3.66E-02	3.58E-02	3.50E-02	3.43E-02	3.35E-02	3.28E-02
4.94E-01	4.81E-01	4.68E-01	4.56E-01	4.45E-01	4.34E-01	4.23E-01	4.13E-01	4.03E-01	3.94E-01	3.85E-01	3.76E-01	3.67E-01	3.59E-01	3.51E-01
1.45E-02	1.36E-02	1.28E-02	1.20E-02	1.13E-02	1.06E-02	9.94E-03	9.34E-03	8.79E-03	8.26E-03	7.78E-03	7.32E-03	6.89E-03	6.49E-03	6.11E-03
8.04E-03	7.53E-03	7.05E-03	6.61E-03	6.19E-03	5.81E-03	5.45E-03	5.11E-03	4.80E-03	4.51E-03	4.23E-03	3.98E-03	3.74E-03	3.52E-03	3.31E-03
1.60E-02	1.56E-02	1.52E-02	1.48E-02	1.45E-02	1.41E-02	1.38E-02	1.35E-02	1.32E-02	1.29E-02	1.26E-02	1.23E-02	1.20E-02	1.18E-02	1.15E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.85E-08	1.40E-08	1.06E-08	7.99E-09	6.04E-09	4.57E-09	3.45E-09	2.61E-09	1.98E-09	1.50E-09	1.14E-09	8.60E-10	6.52E-10	4.94E-10	3.75E-10
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
2.07E-02	2.02E-02	1.97E-02	1.92E-02	1.87E-02	1.82E-02	1.78E-02	1.74E-02	1.70E-02	1.66E-02	1.62E-02	1.59E-02	1.55E-02	1.52E-02	1.48E-02
2.82E-02	2.75E-02	2.68E-02	2.61E-02	2.55E-02	2.49E-02	2.43E-02	2.37E-02	2.32E-02	2.26E-02	2.21E-02	2.16E-02	2.12E-02	2.07E-02	2.03E-02
7.41E-29	2.51E-29	8.51E-30	2.88E-30	9.78E-31	3.32E-31	1.13E-31	3.82E-32	1.30E-32	4.41E-33	1.50E-33	5.10E-34	1.73E-34	5.90E-35	2.01E-35
3.40E-01	3.32E-01	3.24E-01	3.16E-01	3.08E-01	3.01E-01	2.94E-01	2.87E-01	2.81E-01	2.74E-01	2.68E-01	2.63E-01	2.57E-01	2.52E-01	2.46E-01
7.40E-02	7.21E-02	7.03E-02	6.86E-02	6.70E-02	6.54E-02	6.39E-02	6.24E-02	6.10E-02	5.96E-02	5.83E-02	5.71E-02	5.58E-02	5.47E-02	5.35E-02
2.59E-02	2.52E-02	2.46E-02	2.40E-02	2.35E-02	2.29E-02	2.24E-02	2.19E-02	2.14E-02	2.09E-02	2.05E-02	2.00E-02	1.96E-02	1.92E-02	1.88E-02
4.66E-65	3.80E-66	3.10E-67	2.53E-68	2.07E-69	1.69E-70	1.38E-71	1.13E-72	9.26E-74	7.57E-75	6.20E-76	5.08E-77	4.16E-78	3.41E-79	2.79E-80
4.68E-03	4.47E-03	4.26E-03	4.07E-03	3.89E-03	3.72E-03	3.55E-03	3.40E-03	3.25E-03	3.11E-03	2.98E-03	2.85E-03	2.73E-03	2.62E-03	2.51E-03

5.01E-01	4.88E-01	4.76E-01	4.64E-01	4.53E-01	4.43E-01	4.32E-01	4.22E-01	4.13E-01	4.04E-01	3.95E-01	3.86E-01	3.78E-01	3.70E-01	3.63E-01
3.85E-31	1.20E-31	3.75E-32	1.17E-32	3.65E-33	1.14E-33	3.56E-34	1.11E-34	3.48E-35	1.09E-35	3.41E-36	1.07E-36	3.34E-37	1.04E-37	3.27E-38
5.78E-02	5.63E-02	5.49E-02	5.36E-02	5.23E-02	5.11E-02	4.99E-02	4.87E-02	4.76E-02	4.66E-02	4.55E-02	4.46E-02	4.36E-02	4.27E-02	4.18E-02
5.59E-02	5.45E-02	5.31E-02	5.18E-02	5.06E-02	4.94E-02	4.82E-02	4.71E-02	4.60E-02	4.50E-02	4.40E-02	4.30E-02	4.21E-02	4.12E-02	4.03E-02
3.99E-01	3.85E-01	3.72E-01	3.59E-01	3.48E-01	3.36E-01	3.25E-01	3.15E-01	3.05E-01	2.95E-01	2.86E-01	2.77E-01	2.69E-01	2.61E-01	2.53E-01
1.51E-01	1.47E-01	1.44E-01	1.40E-01	1.37E-01	1.34E-01	1.31E-01	1.28E-01	1.25E-01	1.22E-01	1.19E-01	1.17E-01	1.14E-01	1.12E-01	1.09E-01
5.99E-02	5.84E-02	5.70E-02	5.56E-02	5.43E-02	5.30E-02	5.18E-02	5.06E-02	4.95E-02	4.84E-02	4.73E-02	4.63E-02	4.53E-02	4.44E-02	4.35E-02
1.95E-02	1.90E-02	1.85E-02	1.81E-02	1.76E-02	1.72E-02	1.68E-02	1.64E-02	1.60E-02	1.57E-02	1.53E-02	1.50E-02	1.47E-02	1.43E-02	1.40E-02
3.71E+00	3.62E+00	3.53E+00	3.44E+00	3.36E+00	3.28E+00	3.21E+00	3.14E+00	3.07E+00	3.00E+00	2.93E+00	2.87E+00	2.81E+00	2.75E+00	2.70E+00
8.23E-02	8.03E-02	7.83E-02	7.63E-02	7.45E-02	7.27E-02	7.11E-02	6.94E-02	6.78E-02	6.63E-02	6.49E-02	6.35E-02	6.21E-02	6.08E-02	5.95E-02
2.39E-01	2.32E-01	2.26E-01	2.20E-01	2.14E-01	2.09E-01	2.04E-01	1.98E-01	1.94E-01	1.89E-01	1.84E-01	1.80E-01	1.76E-01	1.72E-01	1.68E-01
4.81E-02	4.69E-02	4.57E-02	4.46E-02	4.35E-02	4.24E-02	4.14E-02	4.05E-02	3.96E-02	3.87E-02	3.78E-02	3.70E-02	3.62E-02	3.54E-02	3.47E-02
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3.10E-02	3.02E-02	2.94E-02	2.86E-02	2.79E-02	2.72E-02	2.65E-02	2.58E-02	2.52E-02	2.46E-02	2.40E-02	2.35E-02	2.29E-02	2.24E-02	2.19E-02
2.95E-28	9.79E-29	3.25E-29	1.08E-29	3.58E-30	1.19E-30	3.96E-31	1.32E-31	4.38E-32	1.46E-32	4.85E-33	1.61E-33	5.37E-34	1.79E-34	5.97E-35
3.40E-02	3.31E-02	3.23E-02	3.15E-02	3.07E-02	2.99E-02	2.92E-02	2.85E-02	2.79E-02	2.72E-02	2.66E-02	2.60E-02	2.55E-02	2.49E-02	2.44E-02
2.39E-08	1.83E-08	1.39E-08	1.06E-08	8.12E-09	6.21E-09	4.74E-09	3.62E-09	2.77E-09	2.12E-09	1.62E-09	1.24E-09	9.51E-10	7.28E-10	5.58E-10
4.51E-75	2.62E-76	1.52E-77	8.84E-79	5.14E-80	2.99E-81	1.74E-82	1.01E-83	5.90E-85	3.44E-86	2.00E-87	1.17E-88	6.80E-90	3.97E-91	2.31E-92
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
6.68E-02	6.52E-02	6.36E-02	6.20E-02	6.05E-02	5.91E-02	5.78E-02	5.65E-02	5.52E-02	5.40E-02	5.28E-02	5.17E-02	5.06E-02	4.95E-02	4.85E-02
1.45E-02	1.41E-02	1.37E-02	1.34E-02	1.30E-02	1.27E-02	1.24E-02	1.21E-02	1.18E-02	1.16E-02	1.13E-02	1.11E-02	1.08E-02	1.06E-02	1.03E-02
2.09E-02	2.04E-02	1.99E-02	1.94E-02	1.89E-02	1.85E-02	1.81E-02	1.76E-02	1.72E-02	1.68E-02	1.65E-02	1.61E-02	1.58E-02	1.54E-02	1.51E-02
1.22E-03	1.16E-03	1.09E-03	1.03E-03	9.76E-04	9.23E-04	8.73E-04	8.26E-04	7.82E-04	7.41E-04	7.02E-04	6.65E-04	6.30E-04	5.98E-04	5.67E-04
1.27E-02	1.24E-02	1.21E-02	1.18E-02	1.15E-02	1.12E-02	1.09E-02	1.07E-02	1.04E-02	1.02E-02	9.97E-03	9.75E-03	9.54E-03	9.34E-03	9.14E-03
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3.71E+00	**3.62E+00**	**3.53E+00**	**3.44E+00**	**3.36E+00**	**3.28E+00**	**3.21E+00**	**3.14E+00**	**3.07E+00**	**3.00E+00**	**2.93E+00**	**2.87E+00**	**2.81E+00**	**2.75E+00**	**2.70E+00**

740	750	760	770	780	790	800	810	820	830	840	850	860	870	880
3.65E-02	3.58E-02	3.51E-02	3.44E-02	3.38E-02	3.31E-02	3.25E-02	3.19E-02	3.13E-02	3.07E-02	3.02E-02	2.97E-02	2.92E-02	2.86E-02	2.82E-02
4.46E-02	4.37E-02	4.29E-02	4.20E-02	4.12E-02	4.04E-02	3.97E-02	3.89E-02	3.82E-02	3.75E-02	3.69E-02	3.62E-02	3.56E-02	3.50E-02	3.44E-02
2.75E-01	2.70E-01	2.65E-01	2.59E-01	2.54E-01	2.49E-01	2.45E-01	2.40E-01	2.36E-01	2.31E-01	2.27E-01	2.23E-01	2.19E-01	2.15E-01	2.12E-01
2.51E-30	1.01E-30	4.10E-31	1.66E-31	6.72E-32	2.72E-32	1.10E-32	4.46E-33	1.81E-33	7.32E-34	2.97E-34	1.20E-34	4.88E-35	1.98E-35	8.03E-36
4.58E-90	2.89E-91	1.82E-92	1.15E-93	7.23E-95	4.56E-96	2.88E-97	1.81E-98	1.14E-99	########	########	########	########	########	########
6.10E-02	5.97E-02	5.84E-02	5.72E-02	5.60E-02	5.49E-02	5.38E-02	5.27E-02	5.17E-02	5.07E-02	4.97E-02	4.88E-02	4.79E-02	4.70E-02	4.61E-02
2.37E-01	2.32E-01	2.27E-01	2.23E-01	2.19E-01	2.14E-01	2.10E-01	2.06E-01	2.03E-01	1.99E-01	1.95E-01	1.92E-01	1.89E-01	1.85E-01	1.82E-01
2.39E-02	2.34E-02	2.30E-02	2.25E-02	2.20E-02	2.16E-02	2.12E-02	2.08E-02	2.04E-02	2.00E-02	1.96E-02	1.93E-02	1.89E-02	1.86E-02	1.82E-02
1.89E-02	1.85E-02	1.81E-02	1.77E-02	1.74E-02	1.70E-02	1.67E-02	1.63E-02	1.60E-02	1.57E-02	1.54E-02	1.51E-02	1.48E-02	1.45E-02	1.43E-02
4.76E-89	3.06E-90	1.97E-91	1.27E-92	8.16E-94	5.26E-95	3.38E-96	2.18E-97	1.40E-98	########	########	########	########	########	########
2.70E-06	2.24E-06	1.85E-06	1.53E-06	1.27E-06	1.05E-06	8.72E-07	7.23E-07	6.00E-07	4.97E-07	4.13E-07	3.42E-07	2.84E-07	2.36E-07	1.96E-07
1.93E-02	1.88E-02	1.83E-02	1.78E-02	1.74E-02	1.69E-02	1.65E-02	1.61E-02	1.57E-02	1.53E-02	1.49E-02	1.46E-02	1.42E-02	1.39E-02	1.36E-02
5.40E-04	4.97E-04	4.58E-04	4.22E-04	3.88E-04	3.58E-04	3.30E-04	3.04E-04	2.81E-04	2.59E-04	2.39E-04	2.20E-04	2.04E-04	1.88E-04	1.74E-04
5.63E-02	5.51E-02	5.40E-02	5.30E-02	5.20E-02	5.10E-02	5.00E-02	4.91E-02	4.82E-02	4.73E-02	4.64E-02	4.56E-02	4.48E-02	4.40E-02	4.33E-02
2.98E-02	2.92E-02	2.86E-02	2.80E-02	2.74E-02	2.69E-02	2.63E-02	2.58E-02	2.53E-02	2.48E-02	2.43E-02	2.39E-02	2.34E-02	2.30E-02	2.26E-02
1.85E-01	1.81E-01	1.78E-01	1.74E-01	1.71E-01	1.68E-01	1.64E-01	1.61E-01	1.58E-01	1.56E-01	1.53E-01	1.50E-01	1.47E-01	1.45E-01	1.42E-01
8.03E-02	7.86E-02	7.70E-02	7.54E-02	7.39E-02	7.24E-02	7.10E-02	6.96E-02	6.83E-02	6.70E-02	6.58E-02	6.46E-02	6.34E-02	6.22E-02	6.11E-02
5.27E-02	5.17E-02	5.06E-02	4.96E-02	4.86E-02	4.77E-02	4.68E-02	4.59E-02	4.50E-02	4.42E-02	4.34E-02	4.26E-02	4.19E-02	4.11E-02	4.04E-02
1.38E+00	1.35E+00	1.33E+00	1.30E+00	1.28E+00	1.25E+00	1.23E+00	1.21E+00	1.18E+00	1.16E+00	1.14E+00	1.12E+00	1.10E+00	1.08E+00	1.06E+00
5.94E-82	4.73E-83	3.77E-84	3.00E-85	2.39E-86	1.90E-87	1.52E-88	1.21E-89	9.64E-91	7.69E-92	6.14E-93	4.90E-94	3.91E-95	3.12E-96	2.49E-97
1.09E-01	1.07E-01	1.04E-01	1.02E-01	1.00E-01	9.86E-02	9.67E-02	9.49E-02	9.32E-02	9.15E-02	8.99E-02	8.83E-02	8.68E-02	8.53E-02	8.38E-02
1.02E-01	9.93E-02	9.66E-02	9.41E-02	9.17E-02	8.93E-02	8.70E-02	8.48E-02	8.27E-02	8.06E-02	7.86E-02	7.67E-02	7.48E-02	7.30E-02	7.13E-02
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2.29E-02	2.24E-02	2.20E-02	2.15E-02	2.11E-02	2.06E-02	2.02E-02	1.98E-02	1.94E-02	1.90E-02	1.87E-02	1.83E-02	1.80E-02	1.76E-02	1.73E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
3.12E-01	3.06E-01	3.00E-01	2.94E-01	2.89E-01	2.83E-01	2.78E-01	2.73E-01	2.68E-01	2.63E-01	2.58E-01	2.54E-01	2.49E-01	2.45E-01	2.41E-01
3.48E-02	3.40E-02	3.33E-02	3.27E-02	3.20E-02	3.14E-02	3.08E-02	3.02E-02	2.96E-02	2.90E-02	2.85E-02	2.80E-02	2.75E-02	2.70E-02	2.65E-02
3.66E-02	3.59E-02	3.52E-02	3.45E-02	3.38E-02	3.32E-02	3.26E-02	3.20E-02	3.14E-02	3.08E-02	3.03E-02	2.97E-02	2.92E-02	2.87E-02	2.82E-02
5.72E-02	5.61E-02	5.50E-02	5.39E-02	5.28E-02	5.18E-02	5.08E-02	4.99E-02	4.90E-02	4.81E-02	4.72E-02	4.63E-02	4.55E-02	4.47E-02	4.40E-02
2.68E-02	2.62E-02	2.56E-02	2.51E-02	2.46E-02	2.41E-02	2.36E-02	2.32E-02	2.27E-02	2.23E-02	2.18E-02	2.14E-02	2.10E-02	2.06E-02	2.02E-02
1.83E-02	1.80E-02	1.76E-02	1.72E-02	1.69E-02	1.66E-02	1.63E-02	1.60E-02	1.57E-02	1.54E-02	1.51E-02	1.48E-02	1.46E-02	1.43E-02	1.41E-02
1.62E-02	1.59E-02	1.55E-02	1.51E-02	1.48E-02	1.45E-02	1.41E-02	1.38E-02	1.35E-02	1.32E-02	1.29E-02	1.27E-02	1.24E-02	1.21E-02	1.19E-02
3.17E-02	3.11E-02	3.05E-02	2.99E-02	2.93E-02	2.87E-02	2.82E-02	2.76E-02	2.71E-02	2.66E-02	2.61E-02	2.57E-02	2.52E-02	2.48E-02	2.43E-02
1.13E-01	1.11E-01	1.08E-01	1.06E-01	1.04E-01	1.02E-01	1.00E-01	9.84E-02	9.66E-02	9.48E-02	9.31E-02	9.14E-02	8.98E-02	8.82E-02	8.67E-02
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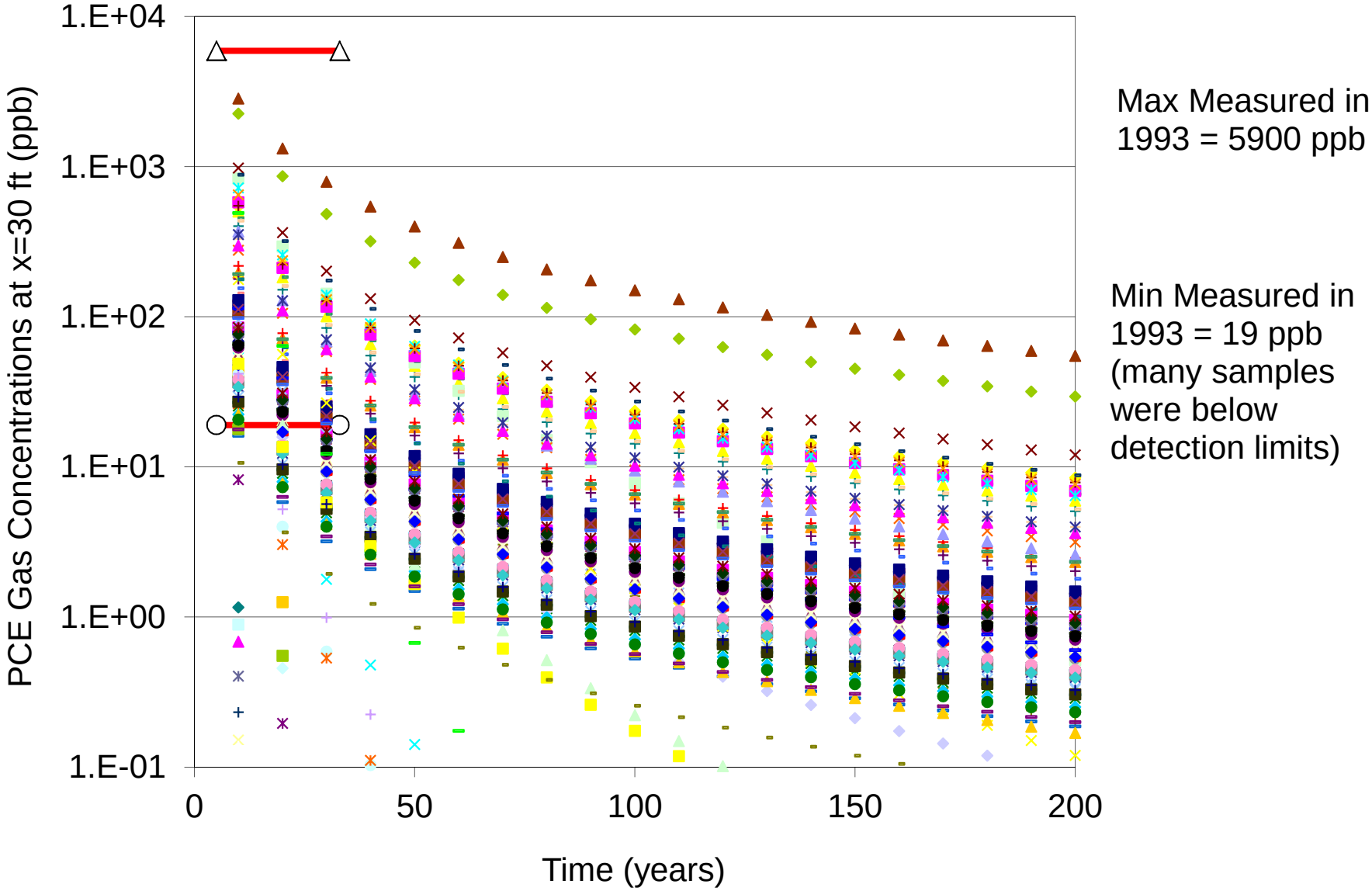
3.18E-02	3.10E-02	3.03E-02	2.96E-02	2.89E-02	2.83E-02	2.76E-02	2.70E-02	2.64E-02	2.59E-02	2.53E-02	2.48E-02	2.42E-02	2.37E-02	2.32E-02
4.04E-01	3.96E-01	3.88E-01	3.80E-01	3.73E-01	3.66E-01	3.59E-01	3.53E-01	3.46E-01	3.40E-01	3.34E-01	3.28E-01	3.22E-01	3.17E-01	3.12E-01
3.22E-01	3.15E-01	3.09E-01	3.03E-01	2.97E-01	2.91E-01	2.86E-01	2.80E-01	2.75E-01	2.70E-01	2.65E-01	2.61E-01	2.56E-01	2.52E-01	2.47E-01
1.17E-02	1.15E-02	1.13E-02	1.10E-02	1.08E-02	1.06E-02	1.04E-02	1.02E-02	1.00E-02	9.85E-03	9.67E-03	9.49E-03	9.33E-03	9.16E-03	9.00E-03
5.63E-01	5.52E-01	5.41E-01	5.31E-01	5.20E-01	5.10E-01	5.01E-01	4.92E-01	4.83E-01	4.74E-01	4.65E-01	4.57E-01	4.49E-01	4.42E-01	4.34E-01
1.31E-02	1.28E-02	1.26E-02	1.23E-02	1.21E-02	1.19E-02	1.16E-02	1.14E-02	1.12E-02	1.10E-02	1.08E-02	1.06E-02	1.04E-02	1.02E-02	1.01E-02
6.76E-02	6.63E-02	6.50E-02	6.37E-02	6.25E-02	6.13E-02	6.02E-02	5.90E-02	5.80E-02	5.69E-02	5.59E-02	5.49E-02	5.40E-02	5.30E-02	5.21E-02
8.00E-05	7.18E-05	6.44E-05	5.78E-05	5.19E-05	4.66E-05	4.19E-05	3.76E-05	3.38E-05	3.04E-05	2.73E-05	2.46E-05	2.21E-05	1.99E-05	1.79E-05
6.38E-02	6.25E-02	6.12E-02	5.99E-02	5.87E-02	5.75E-02	5.63E-02	5.52E-02	5.41E-02	5.31E-02	5.21E-02	5.11E-02	5.01E-02	4.92E-02	4.83E-02
1.35E-02	1.33E-02	1.30E-02	1.27E-02	1.25E-02	1.22E-02	1.20E-02	1.18E-02	1.15E-02	1.13E-02	1.11E-02	1.09E-02	1.07E-02	1.05E-02	1.03E-02
2.68E-02	2.62E-02	2.57E-02	2.52E-02	2.47E-02	2.42E-02	2.38E-02	2.33E-02	2.29E-02	2.25E-02	2.21E-02	2.17E-02	2.13E-02	2.09E-02	2.06E-02
1.90E-02	1.86E-02	1.82E-02	1.79E-02	1.75E-02	1.72E-02	1.69E-02	1.65E-02	1.62E-02	1.59E-02	1.57E-02	1.54E-02	1.51E-02	1.48E-02	1.46E-02
3.00E-02	2.87E-02	2.74E-02	2.62E-02	2.50E-02	2.39E-02	2.29E-02	2.19E-02	2.09E-02	2.00E-02	1.92E-02	1.84E-02	1.76E-02	1.68E-02	1.61E-02
3.86E-02	3.78E-02	3.70E-02	3.62E-02	3.55E-02	3.48E-02	3.41E-02	3.34E-02	3.28E-02	3.21E-02	3.15E-02	3.09E-02	3.04E-02	2.98E-02	2.93E-02
2.57E-02	2.52E-02	2.46E-02	2.41E-02	2.36E-02	2.31E-02	2.27E-02	2.22E-02	2.18E-02	2.13E-02	2.09E-02	2.05E-02	2.01E-02	1.97E-02	1.94E-02
7.28E-44	1.93E-44	5.11E-45	1.35E-45	3.59E-46	9.51E-47	2.52E-47	6.69E-48	1.78E-48	4.71E-49	1.25E-49	3.32E-50	8.82E-51	2.34E-51	6.22E-52
9.23E-02	9.04E-02	8.86E-02	8.69E-02	8.52E-02	8.35E-02	8.19E-02	8.04E-02	7.89E-02	7.74E-02	7.60E-02	7.46E-02	7.33E-02	7.20E-02	7.08E-02
4.39E-02	4.27E-02	4.16E-02	4.05E-02	3.94E-02	3.83E-02	3.73E-02	3.64E-02	3.54E-02	3.45E-02	3.37E-02	3.28E-02	3.20E-02	3.12E-02	3.05E-02
8.41E-03	8.24E-03	8.07E-03	7.91E-03	7.75E-03	7.60E-03	7.46E-03	7.31E-03	7.17E-03	7.04E-03	6.91E-03	6.78E-03	6.66E-03	6.54E-03	6.43E-03
1.66E-05	1.47E-05	1.30E-05	1.16E-05	1.03E-05	9.09E-06	8.06E-06	7.15E-06	6.35E-06	5.64E-06	5.00E-06	4.44E-06	3.95E-06	3.51E-06	3.12E-06
6.83E-02	6.69E-02	6.56E-02	6.43E-02	6.31E-02	6.19E-02	6.07E-02	5.95E-02	5.84E-02	5.74E-02	5.63E-02	5.53E-02	5.44E-02	5.34E-02	5.25E-02
1.68E-01	1.65E-01	1.61E-01	1.58E-01	1.55E-01	1.52E-01	1.49E-01	1.46E-01	1.44E-01	1.41E-01	1.39E-01	1.36E-01	1.34E-01	1.31E-01	1.29E-01
1.53E-06	1.29E-06	1.09E-06	9.15E-07	7.71E-07	6.49E-07	5.47E-07	4.62E-07	3.89E-07	3.28E-07	2.77E-07	2.34E-07	1.97E-07	1.67E-07	1.41E-07
1.37E-01	1.32E-01	1.28E-01	1.23E-01	1.19E-01	1.15E-01	1.11E-01	1.08E-01	1.04E-01	1.01E-01	9.76E-02	9.45E-02	9.15E-02	8.86E-02	8.58E-02
3.22E-02	3.15E-02	3.09E-02	3.02E-02	2.97E-02	2.91E-02	2.85E-02	2.80E-02	2.75E-02	2.70E-02	2.65E-02	2.60E-02	2.55E-02	2.51E-02	2.46E-02
3.44E-01	3.36E-01	3.29E-01	3.22E-01	3.16E-01	3.09E-01	3.03E-01	2.97E-01	2.91E-01	2.85E-01	2.80E-01	2.74E-01	2.69E-01	2.64E-01	2.59E-01
5.76E-03	5.43E-03	5.12E-03	4.83E-03	4.55E-03	4.30E-03	4.05E-03	3.83E-03	3.61E-03	3.41E-03	3.22E-03	3.05E-03	2.88E-03	2.72E-03	2.57E-03
3.11E-03	2.93E-03	2.75E-03	2.59E-03	2.44E-03	2.30E-03	2.17E-03	2.04E-03	1.93E-03	1.82E-03	1.71E-03	1.61E-03	1.52E-03	1.44E-03	1.36E-03
1.13E-02	1.11E-02	1.08E-02	1.06E-02	1.04E-02	1.02E-02	1.00E-02	9.82E-03	9.63E-03	9.45E-03	9.28E-03	9.11E-03	8.94E-03	8.78E-03	8.63E-03
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
2.84E-10	2.16E-10	1.64E-10	1.24E-10	9.44E-11	7.17E-11	5.45E-11	4.14E-11	3.15E-11	2.39E-11	1.82E-11	1.38E-11	1.05E-11	8.02E-12	6.10E-12
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.45E-02	1.42E-02	1.39E-02	1.37E-02	1.34E-02	1.31E-02	1.29E-02	1.26E-02	1.24E-02	1.21E-02	1.19E-02	1.17E-02	1.15E-02	1.13E-02	1.11E-02
1.98E-02	1.94E-02	1.90E-02	1.86E-02	1.83E-02	1.79E-02	1.75E-02	1.72E-02	1.69E-02	1.66E-02	1.63E-02	1.60E-02	1.57E-02	1.54E-02	1.51E-02
6.83E-36	2.33E-36	7.92E-37	2.70E-37	9.20E-38	3.13E-38	1.07E-38	3.64E-39	1.24E-39	4.24E-40	1.45E-40	4.94E-41	1.69E-41	5.75E-42	1.97E-42
2.41E-01	2.37E-01	2.32E-01	2.27E-01	2.23E-01	2.19E-01	2.14E-01	2.10E-01	2.07E-01	2.03E-01	1.99E-01	1.96E-01	1.92E-01	1.89E-01	1.86E-01
5.24E-02	5.14E-02	5.03E-02	4.93E-02	4.84E-02	4.74E-02	4.65E-02	4.57E-02	4.48E-02	4.40E-02	4.32E-02	4.24E-02	4.17E-02	4.09E-02	4.02E-02
1.84E-02	1.80E-02	1.77E-02	1.73E-02	1.70E-02	1.67E-02	1.64E-02	1.61E-02	1.58E-02	1.55E-02	1.52E-02	1.49E-02	1.47E-02	1.44E-02	1.42E-02
2.29E-81	1.88E-82	1.54E-83	1.27E-84	1.04E-85	8.53E-87	7.00E-88	5.75E-89	4.72E-90	3.88E-91	3.19E-92	2.62E-93	2.16E-94	1.77E-95	1.46E-96
2.40E-03	2.30E-03	2.21E-03	2.12E-03	2.03E-03	1.95E-03	1.87E-03	1.80E-03	1.73E-03	1.66E-03	1.60E-03	1.53E-03	1.48E-03	1.42E-03	1.36E-03

3.55E-01	3.48E-01	3.41E-01	3.35E-01	3.28E-01	3.22E-01	3.16E-01	3.10E-01	3.04E-01	2.99E-01	2.93E-01	2.88E-01	2.83E-01	2.78E-01	2.73E-01
1.03E-38	3.21E-39	1.01E-39	3.16E-40	9.91E-41	3.11E-41	9.75E-42	3.06E-42	9.61E-43	3.02E-43	9.48E-44	2.98E-44	9.36E-45	2.94E-45	9.24E-46
4.10E-02	4.01E-02	3.93E-02	3.86E-02	3.78E-02	3.71E-02	3.64E-02	3.57E-02	3.50E-02	3.44E-02	3.38E-02	3.32E-02	3.26E-02	3.20E-02	3.15E-02
3.95E-02	3.87E-02	3.79E-02	3.71E-02	3.64E-02	3.57E-02	3.50E-02	3.43E-02	3.37E-02	3.30E-02	3.24E-02	3.18E-02	3.13E-02	3.07E-02	3.02E-02
2.46E-01	2.39E-01	2.32E-01	2.25E-01	2.18E-01	2.12E-01	2.06E-01	2.01E-01	1.95E-01	1.90E-01	1.85E-01	1.80E-01	1.75E-01	1.70E-01	1.66E-01
1.07E-01	1.05E-01	1.03E-01	1.01E-01	9.89E-02	9.70E-02	9.52E-02	9.34E-02	9.16E-02	8.99E-02	8.83E-02	8.67E-02	8.52E-02	8.37E-02	8.23E-02
4.26E-02	4.18E-02	4.09E-02	4.01E-02	3.94E-02	3.86E-02	3.79E-02	3.72E-02	3.65E-02	3.58E-02	3.52E-02	3.46E-02	3.40E-02	3.34E-02	3.28E-02
1.37E-02	1.35E-02	1.32E-02	1.29E-02	1.27E-02	1.24E-02	1.22E-02	1.19E-02	1.17E-02	1.15E-02	1.13E-02	1.11E-02	1.09E-02	1.07E-02	1.05E-02
2.64E+00	2.59E+00	2.54E+00	2.49E+00	2.44E+00	2.40E+00	2.35E+00	2.31E+00	2.27E+00	2.22E+00	2.19E+00	2.15E+00	2.11E+00	2.07E+00	2.04E+00
5.83E-02	5.71E-02	5.60E-02	5.49E-02	5.38E-02	5.28E-02	5.18E-02	5.08E-02	4.99E-02	4.89E-02	4.81E-02	4.72E-02	4.64E-02	4.55E-02	4.48E-02
1.64E-01	1.60E-01	1.57E-01	1.53E-01	1.50E-01	1.47E-01	1.44E-01	1.41E-01	1.38E-01	1.35E-01	1.32E-01	1.30E-01	1.27E-01	1.25E-01	1.22E-01
3.39E-02	3.33E-02	3.26E-02	3.19E-02	3.13E-02	3.07E-02	3.01E-02	2.95E-02	2.90E-02	2.84E-02	2.79E-02	2.74E-02	2.69E-02	2.64E-02	2.60E-02
########	########	########	########	########	########	########	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.14E-02	2.10E-02	2.05E-02	2.01E-02	1.96E-02	1.92E-02	1.88E-02	1.85E-02	1.81E-02	1.77E-02	1.74E-02	1.70E-02	1.67E-02	1.64E-02	1.61E-02
1.99E-35	6.63E-36	2.21E-36	7.38E-37	2.46E-37	8.22E-38	2.74E-38	9.16E-39	3.06E-39	1.02E-39	3.42E-40	1.14E-40	3.82E-41	1.28E-41	4.27E-42
2.39E-02	2.34E-02	2.29E-02	2.24E-02	2.20E-02	2.15E-02	2.11E-02	2.07E-02	2.03E-02	1.99E-02	1.95E-02	1.92E-02	1.88E-02	1.85E-02	1.82E-02
4.27E-10	3.28E-10	2.51E-10	1.93E-10	1.48E-10	1.13E-10	8.70E-11	6.68E-11	5.13E-11	3.94E-11	3.02E-11	2.32E-11	1.78E-11	1.37E-11	1.05E-11
1.35E-93	7.88E-95	4.60E-96	2.69E-97	1.57E-98	########	########	########	########	########	########	########	########	########	########
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
4.75E-02	4.66E-02	4.57E-02	4.48E-02	4.39E-02	4.31E-02	4.23E-02	4.15E-02	4.07E-02	4.00E-02	3.93E-02	3.86E-02	3.79E-02	3.73E-02	3.66E-02
1.01E-02	9.92E-03	9.71E-03	9.51E-03	9.32E-03	9.13E-03	8.95E-03	8.78E-03	8.61E-03	8.44E-03	8.28E-03	8.13E-03	7.98E-03	7.83E-03	7.69E-03
1.48E-02	1.45E-02	1.42E-02	1.39E-02	1.36E-02	1.34E-02	1.31E-02	1.29E-02	1.26E-02	1.24E-02	1.22E-02	1.19E-02	1.17E-02	1.15E-02	1.13E-02
5.38E-04	5.10E-04	4.84E-04	4.60E-04	4.37E-04	4.15E-04	3.94E-04	3.75E-04	3.56E-04	3.39E-04	3.22E-04	3.06E-04	2.91E-04	2.77E-04	2.64E-04
8.95E-03	8.76E-03	8.58E-03	8.41E-03	8.24E-03	8.08E-03	7.93E-03	7.77E-03	7.63E-03	7.49E-03	7.35E-03	7.21E-03	7.08E-03	6.96E-03	6.83E-03
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
2.64E+00	**2.59E+00**	**2.54E+00**	**2.49E+00**	**2.44E+00**	**2.40E+00**	**2.35E+00**	**2.31E+00**	**2.27E+00**	**2.22E+00**	**2.19E+00**	**2.15E+00**	**2.11E+00**	**2.07E+00**	**2.04E+00**

890	900	910	920	930	940	950	960	970	980	990	1000	Max PCE Gas Concentration at x=10 ft (ppb)
2.77E-02	2.72E-02	2.68E-02	2.63E-02	2.59E-02	2.55E-02	2.51E-02	2.47E-02	2.43E-02	2.40E-02	2.36E-02	2.32E-02	2.32E+01
3.38E-02	3.32E-02	3.27E-02	3.21E-02	3.16E-02	3.11E-02	3.06E-02	3.01E-02	2.97E-02	2.92E-02	2.88E-02	2.83E-02	2.84E+01
2.08E-01	2.05E-01	2.01E-01	1.98E-01	1.95E-01	1.92E-01	1.88E-01	1.86E-01	1.83E-01	1.80E-01	1.77E-01	1.74E-01	1.73E+02
3.26E-36	1.32E-36	5.37E-37	2.18E-37	8.85E-38	3.59E-38	1.46E-38	5.93E-39	2.41E-39	9.80E-40	3.98E-40	1.62E-40	1.81E+01
########	########	########	########	########	########	########	########	########	########	########	########	2.87E+00
4.53E-02	4.44E-02	4.37E-02	4.29E-02	4.21E-02	4.14E-02	4.07E-02	4.00E-02	3.93E-02	3.87E-02	3.80E-02	3.74E-02	4.26E+01
1.79E-01	1.76E-01	1.73E-01	1.70E-01	1.68E-01	1.65E-01	1.62E-01	1.60E-01	1.57E-01	1.55E-01	1.52E-01	1.50E-01	1.44E+02
1.79E-02	1.76E-02	1.73E-02	1.70E-02	1.67E-02	1.64E-02	1.62E-02	1.59E-02	1.57E-02	1.54E-02	1.52E-02	1.49E-02	1.59E+01
1.40E-02	1.37E-02	1.35E-02	1.33E-02	1.30E-02	1.28E-02	1.26E-02	1.24E-02	1.21E-02	1.19E-02	1.17E-02	1.15E-02	1.35E+01
########	########	########	########	########	########	########	########	########	########	########	########	6.70E+00
1.63E-07	1.35E-07	1.12E-07	9.33E-08	7.75E-08	6.44E-08	5.36E-08	4.45E-08	3.70E-08	3.08E-08	2.56E-08	2.13E-08	3.51E+02
1.33E-02	1.30E-02	1.27E-02	1.24E-02	1.21E-02	1.18E-02	1.16E-02	1.13E-02	1.11E-02	1.08E-02	1.06E-02	1.04E-02	1.96E+01
1.60E-04	1.48E-04	1.37E-04	1.26E-04	1.17E-04	1.08E-04	9.99E-05	9.24E-05	8.54E-05	7.90E-05	7.31E-05	6.77E-05	3.23E+01
4.25E-02	4.18E-02	4.11E-02	4.04E-02	3.98E-02	3.91E-02	3.85E-02	3.79E-02	3.73E-02	3.67E-02	3.62E-02	3.56E-02	3.62E+01
2.22E-02	2.18E-02	2.14E-02	2.10E-02	2.06E-02	2.03E-02	1.99E-02	1.96E-02	1.92E-02	1.89E-02	1.86E-02	1.83E-02	2.09E+01
1.40E-01	1.38E-01	1.35E-01	1.33E-01	1.31E-01	1.29E-01	1.27E-01	1.25E-01	1.23E-01	1.21E-01	1.19E-01	1.17E-01	1.14E+02
6.00E-02	5.90E-02	5.80E-02	5.70E-02	5.60E-02	5.51E-02	5.41E-02	5.33E-02	5.24E-02	5.15E-02	5.07E-02	4.99E-02	5.31E+01
3.97E-02	3.90E-02	3.84E-02	3.77E-02	3.71E-02	3.65E-02	3.59E-02	3.53E-02	3.47E-02	3.42E-02	3.37E-02	3.31E-02	3.44E+01
1.05E+00	1.03E+00	1.01E+00	9.96E-01	9.80E-01	9.64E-01	9.49E-01	9.34E-01	9.20E-01	9.06E-01	8.92E-01	8.79E-01	8.08E+02
1.99E-98	1.59E-99	########	########	########	########	########	########	########	########	########	########	1.46E+01
8.24E-02	8.10E-02	7.97E-02	7.84E-02	7.71E-02	7.59E-02	7.47E-02	7.35E-02	7.24E-02	7.13E-02	7.02E-02	6.91E-02	6.78E+01
6.96E-02	6.80E-02	6.64E-02	6.48E-02	6.34E-02	6.19E-02	6.05E-02	5.91E-02	5.78E-02	5.65E-02	5.53E-02	5.41E-02	1.03E+02
########	########	########	########	########	########	########	########	########	########	########	########	1.35E-01
1.70E-02	1.67E-02	1.64E-02	1.61E-02	1.58E-02	1.56E-02	1.53E-02	1.50E-02	1.48E-02	1.45E-02	1.43E-02	1.41E-02	1.61E+01
########	########	########	########	########	########	########	########	########	########	########	########	7.80E-02
2.37E-01	2.33E-01	2.29E-01	2.25E-01	2.22E-01	2.18E-01	2.15E-01	2.11E-01	2.08E-01	2.05E-01	2.02E-01	1.99E-01	1.84E+02
2.60E-02	2.56E-02	2.51E-02	2.47E-02	2.43E-02	2.39E-02	2.35E-02	2.31E-02	2.27E-02	2.23E-02	2.20E-02	2.16E-02	2.29E+01
2.77E-02	2.73E-02	2.68E-02	2.64E-02	2.60E-02	2.55E-02	2.51E-02	2.47E-02	2.44E-02	2.40E-02	2.36E-02	2.33E-02	2.29E+01
4.32E-02	4.25E-02	4.18E-02	4.11E-02	4.04E-02	3.97E-02	3.91E-02	3.85E-02	3.79E-02	3.73E-02	3.67E-02	3.61E-02	3.68E+01
1.99E-02	1.95E-02	1.92E-02	1.88E-02	1.85E-02	1.82E-02	1.79E-02	1.76E-02	1.73E-02	1.70E-02	1.67E-02	1.64E-02	1.87E+01
1.38E-02	1.36E-02	1.34E-02	1.32E-02	1.30E-02	1.27E-02	1.25E-02	1.23E-02	1.22E-02	1.20E-02	1.18E-02	1.16E-02	1.16E+01
1.17E-02	1.14E-02	1.12E-02	1.10E-02	1.07E-02	1.05E-02	1.03E-02	1.01E-02	9.94E-03	9.75E-03	9.56E-03	9.38E-03	1.30E+01
2.39E-02	2.35E-02	2.31E-02	2.27E-02	2.24E-02	2.20E-02	2.17E-02	2.13E-02	2.10E-02	2.06E-02	2.03E-02	2.00E-02	2.05E+01
8.52E-02	8.38E-02	8.23E-02	8.10E-02	7.96E-02	7.83E-02	7.71E-02	7.59E-02	7.47E-02	7.35E-02	7.24E-02	7.12E-02	7.34E+01
########	########	########	########	########	########	########	########	########	########	########	0.00E+00	3.57E-02

2.28E-02	2.23E-02	2.19E-02	2.14E-02	2.10E-02	2.06E-02	2.02E-02	1.98E-02	1.94E-02	1.90E-02	1.87E-02	1.83E-02	2.65E+01
3.06E-01	3.01E-01	2.96E-01	2.91E-01	2.87E-01	2.82E-01	2.78E-01	2.73E-01	2.69E-01	2.65E-01	2.61E-01	2.57E-01	2.15E+02
2.43E-01	2.39E-01	2.35E-01	2.31E-01	2.28E-01	2.24E-01	2.20E-01	2.17E-01	2.14E-01	2.10E-01	2.07E-01	2.04E-01	2.01E+02
8.85E-03	8.70E-03	8.55E-03	8.41E-03	8.27E-03	8.14E-03	8.00E-03	7.88E-03	7.75E-03	7.63E-03	7.51E-03	7.40E-03	7.61E+00
4.27E-01	4.20E-01	4.13E-01	4.06E-01	3.99E-01	3.93E-01	3.87E-01	3.81E-01	3.75E-01	3.69E-01	3.63E-01	3.58E-01	3.44E+02
9.88E-03	9.71E-03	9.55E-03	9.39E-03	9.24E-03	9.09E-03	8.94E-03	8.80E-03	8.66E-03	8.52E-03	8.39E-03	8.26E-03	8.57E+00
5.13E-02	5.04E-02	4.96E-02	4.88E-02	4.80E-02	4.72E-02	4.65E-02	4.58E-02	4.50E-02	4.44E-02	4.37E-02	4.30E-02	4.08E+01
1.61E-05	1.45E-05	1.30E-05	1.17E-05	1.06E-05	9.53E-06	8.58E-06	7.73E-06	6.97E-06	6.28E-06	5.66E-06	5.11E-06	3.11E+01
4.74E-02	4.66E-02	4.57E-02	4.49E-02	4.42E-02	4.34E-02	4.27E-02	4.19E-02	4.12E-02	4.05E-02	3.99E-02	3.92E-02	4.44E+01
1.02E-02	9.97E-03	9.80E-03	9.64E-03	9.47E-03	9.32E-03	9.16E-03	9.01E-03	8.87E-03	8.73E-03	8.59E-03	8.45E-03	9.04E+00
2.02E-02	1.99E-02	1.95E-02	1.92E-02	1.89E-02	1.86E-02	1.83E-02	1.80E-02	1.77E-02	1.75E-02	1.72E-02	1.69E-02	1.72E+01
1.43E-02	1.41E-02	1.39E-02	1.36E-02	1.34E-02	1.32E-02	1.30E-02	1.28E-02	1.26E-02	1.24E-02	1.22E-02	1.20E-02	1.23E+01
1.54E-02	1.48E-02	1.42E-02	1.36E-02	1.30E-02	1.25E-02	1.20E-02	1.15E-02	1.10E-02	1.06E-02	1.02E-02	9.76E-03	1.25E+02
2.87E-02	2.82E-02	2.77E-02	2.73E-02	2.68E-02	2.63E-02	2.59E-02	2.54E-02	2.50E-02	2.46E-02	2.42E-02	2.38E-02	2.65E+01
1.90E-02	1.87E-02	1.83E-02	1.80E-02	1.77E-02	1.73E-02	1.70E-02	1.67E-02	1.65E-02	1.62E-02	1.59E-02	1.56E-02	1.84E+01
1.65E-52	4.39E-53	1.17E-53	3.10E-54	8.26E-55	2.20E-55	5.84E-56	1.55E-56	4.13E-57	1.10E-57	2.93E-58	7.80E-59	1.39E+01
6.95E-02	6.84E-02	6.72E-02	6.61E-02	6.50E-02	6.39E-02	6.29E-02	6.19E-02	6.09E-02	6.00E-02	5.90E-02	5.81E-02	6.01E+01
2.97E-02	2.90E-02	2.83E-02	2.77E-02	2.70E-02	2.64E-02	2.58E-02	2.52E-02	2.46E-02	2.40E-02	2.35E-02	2.30E-02	4.81E+01
6.32E-03	6.21E-03	6.10E-03	6.00E-03	5.90E-03	5.80E-03	5.70E-03	5.61E-03	5.52E-03	5.43E-03	5.35E-03	5.26E-03	5.56E+00
2.77E-06	2.46E-06	2.19E-06	1.95E-06	1.73E-06	1.54E-06	1.37E-06	1.22E-06	1.08E-06	9.66E-07	8.60E-07	7.65E-07	1.66E+01
5.16E-02	5.07E-02	4.99E-02	4.91E-02	4.83E-02	4.75E-02	4.67E-02	4.60E-02	4.53E-02	4.46E-02	4.39E-02	4.32E-02	4.37E+01
1.27E-01	1.25E-01	1.23E-01	1.21E-01	1.19E-01	1.17E-01	1.15E-01	1.13E-01	1.11E-01	1.10E-01	1.08E-01	1.06E-01	1.04E+02
1.19E-07	1.00E-07	8.48E-08	7.16E-08	6.05E-08	5.12E-08	4.33E-08	3.66E-08	3.09E-08	2.62E-08	2.21E-08	1.87E-08	6.20E+01
8.32E-02	8.06E-02	7.81E-02	7.57E-02	7.34E-02	7.12E-02	6.91E-02	6.70E-02	6.50E-02	6.31E-02	6.12E-02	5.94E-02	2.47E+02
2.42E-02	2.38E-02	2.34E-02	2.30E-02	2.26E-02	2.22E-02	2.19E-02	2.15E-02	2.12E-02	2.09E-02	2.05E-02	2.02E-02	2.10E+01
2.55E-01	2.50E-01	2.45E-01	2.41E-01	2.37E-01	2.33E-01	2.29E-01	2.25E-01	2.21E-01	2.17E-01	2.14E-01	2.10E-01	2.13E+02
2.43E-03	2.30E-03	2.18E-03	2.06E-03	1.95E-03	1.84E-03	1.74E-03	1.65E-03	1.56E-03	1.48E-03	1.40E-03	1.33E-03	6.18E+01
1.28E-03	1.21E-03	1.14E-03	1.08E-03	1.02E-03	9.63E-04	9.10E-04	8.60E-04	8.13E-04	7.69E-04	7.27E-04	6.87E-04	3.82E+01
8.48E-03	8.33E-03	8.19E-03	8.05E-03	7.92E-03	7.78E-03	7.66E-03	7.53E-03	7.41E-03	7.29E-03	7.18E-03	7.07E-03	7.51E+00
########	########	########	########	########	########	########	########	########	########	########	########	3.10E-01
4.64E-12	3.54E-12	2.69E-12	2.05E-12	1.56E-12	1.19E-12	9.07E-13	6.92E-13	5.27E-13	4.02E-13	3.06E-13	2.34E-13	2.32E+01
########	########	########	########	########	########	########	########	########	0.00E+00	0.00E+00	0.00E+00	5.18E-02
1.09E-02	1.07E-02	1.05E-02	1.03E-02	1.01E-02	9.96E-03	9.80E-03	9.64E-03	9.48E-03	9.33E-03	9.18E-03	9.03E-03	9.84E+00
1.48E-02	1.46E-02	1.43E-02	1.41E-02	1.38E-02	1.36E-02	1.34E-02	1.32E-02	1.29E-02	1.27E-02	1.25E-02	1.23E-02	1.31E+01
6.71E-43	2.29E-43	7.84E-44	2.68E-44	9.15E-45	3.13E-45	1.07E-45	3.66E-46	1.25E-46	4.28E-47	1.46E-47	5.01E-48	1.42E+01
1.82E-01	1.79E-01	1.76E-01	1.73E-01	1.71E-01	1.68E-01	1.65E-01	1.62E-01	1.60E-01	1.57E-01	1.55E-01	1.53E-01	1.53E+02
3.95E-02	3.89E-02	3.82E-02	3.76E-02	3.70E-02	3.64E-02	3.58E-02	3.52E-02	3.47E-02	3.41E-02	3.36E-02	3.31E-02	3.38E+01
1.39E-02	1.37E-02	1.35E-02	1.33E-02	1.30E-02	1.28E-02	1.26E-02	1.24E-02	1.22E-02	1.21E-02	1.19E-02	1.17E-02	1.16E+01
1.20E-97	9.88E-99	########	########	########	########	########	########	########	########	########	########	6.21E+00
1.31E-03	1.26E-03	1.21E-03	1.17E-03	1.13E-03	1.08E-03	1.04E-03	1.00E-03	9.68E-04	9.32E-04	8.99E-04	8.66E-04	7.49E+00

2.69E-01	2.64E-01	2.60E-01	2.55E-01	2.51E-01	2.47E-01	2.43E-01	2.39E-01	2.36E-01	2.32E-01	2.28E-01	2.25E-01	2.25E+02
2.91E-46	9.14E-47	2.87E-47	9.04E-48	2.84E-48	8.95E-49	2.82E-49	8.87E-50	2.79E-50	8.79E-51	2.77E-51	8.72E-52	9.04E+00
3.09E-02	3.04E-02	2.99E-02	2.94E-02	2.89E-02	2.85E-02	2.80E-02	2.76E-02	2.71E-02	2.67E-02	2.63E-02	2.59E-02	2.61E+01
2.97E-02	2.91E-02	2.86E-02	2.82E-02	2.77E-02	2.72E-02	2.68E-02	2.64E-02	2.59E-02	2.55E-02	2.51E-02	2.47E-02	2.61E+01
1.61E-01	1.57E-01	1.53E-01	1.49E-01	1.45E-01	1.42E-01	1.38E-01	1.35E-01	1.31E-01	1.28E-01	1.25E-01	1.22E-01	3.06E+02
8.08E-02	7.95E-02	7.81E-02	7.68E-02	7.56E-02	7.44E-02	7.32E-02	7.20E-02	7.09E-02	6.98E-02	6.87E-02	6.76E-02	6.77E+01
3.23E-02	3.17E-02	3.12E-02	3.07E-02	3.02E-02	2.97E-02	2.92E-02	2.88E-02	2.83E-02	2.79E-02	2.75E-02	2.71E-02	2.69E+01
1.03E-02	1.01E-02	9.97E-03	9.80E-03	9.64E-03	9.48E-03	9.32E-03	9.17E-03	9.02E-03	8.88E-03	8.74E-03	8.60E-03	9.12E+00
2.00E+00	1.97E+00	1.94E+00	1.91E+00	1.88E+00	1.85E+00	1.82E+00	1.79E+00	1.76E+00	1.73E+00	1.71E+00	1.68E+00	1.23E+03
4.40E-02	4.32E-02	4.25E-02	4.18E-02	4.11E-02	4.05E-02	3.98E-02	3.92E-02	3.86E-02	3.80E-02	3.74E-02	3.68E-02	3.78E+01
1.20E-01	1.18E-01	1.15E-01	1.13E-01	1.11E-01	1.09E-01	1.07E-01	1.05E-01	1.03E-01	1.01E-01	9.97E-02	9.80E-02	1.23E+02
2.55E-02	2.51E-02	2.47E-02	2.43E-02	2.38E-02	2.35E-02	2.31E-02	2.27E-02	2.23E-02	2.20E-02	2.16E-02	2.13E-02	2.21E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.40E-02
1.58E-02	1.55E-02	1.52E-02	1.49E-02	1.46E-02	1.44E-02	1.41E-02	1.39E-02	1.36E-02	1.34E-02	1.32E-02	1.29E-02	1.55E+01
1.43E-42	4.77E-43	1.60E-43	5.35E-44	1.79E-44	5.99E-45	2.01E-45	6.72E-46	2.25E-46	7.54E-47	2.53E-47	8.46E-48	1.81E+02
1.78E-02	1.75E-02	1.72E-02	1.69E-02	1.66E-02	1.64E-02	1.61E-02	1.58E-02	1.56E-02	1.53E-02	1.51E-02	1.48E-02	1.60E+01
8.10E-12	6.23E-12	4.79E-12	3.68E-12	2.83E-12	2.18E-12	1.68E-12	1.29E-12	9.94E-13	7.65E-13	5.89E-13	4.53E-13	1.63E+01
########	########	########	########	########	########	########	########	########	########	########	########	2.30E-01
########	########	########	########	########	########	########	########	########	########	########	########	2.47E-02
3.60E-02	3.54E-02	3.48E-02	3.42E-02	3.37E-02	3.32E-02	3.26E-02	3.21E-02	3.16E-02	3.11E-02	3.07E-02	3.02E-02	2.98E+01
7.55E-03	7.42E-03	7.29E-03	7.16E-03	7.04E-03	6.92E-03	6.80E-03	6.69E-03	6.58E-03	6.47E-03	6.37E-03	6.26E-03	6.92E+00
1.11E-02	1.09E-02	1.07E-02	1.06E-02	1.04E-02	1.02E-02	1.00E-02	9.88E-03	9.72E-03	9.57E-03	9.42E-03	9.27E-03	9.79E+00
2.51E-04	2.39E-04	2.28E-04	2.17E-04	2.07E-04	1.97E-04	1.88E-04	1.79E-04	1.71E-04	1.63E-04	1.55E-04	1.48E-04	3.57E+00
6.71E-03	6.60E-03	6.48E-03	6.37E-03	6.27E-03	6.16E-03	6.06E-03	5.96E-03	5.87E-03	5.77E-03	5.68E-03	5.59E-03	5.97E+00
########	########	########	########	########	########	########	########	########	########	########	########	3.99E-01
2.00E+00	**1.97E+00**	**1.94E+00**	**1.91E+00**	**1.88E+00**	**1.85E+00**	**1.82E+00**	**1.79E+00**	**1.76E+00**	**1.73E+00**	**1.71E+00**	**1.68E+00**	**1.23E+03**


1.E+04
1.E+03
1.E+02
1.E+01
1.E+00
1.E-01
PCE Gas Concentrations at x=30 ft (ppb)
0
50
100
150
200
Time (years)
Max Measured in 1993 = 5900 ppb
Min Measured in 1993 = 19 ppb (many samples were below detection limits)

PCE Concentration (ppb) at x=30 ft for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130
1	6.84E+01	2.45E+01	1.34E+01	8.69E+00	6.23E+00	4.74E+00	3.76E+00	3.08E+00	2.58E+00	2.21E+00	1.91E+00	1.68E+00	1.49E+00
2	8.48E+01	3.01E+01	1.64E+01	1.07E+01	7.65E+00	5.82E+00	4.62E+00	3.78E+00	3.17E+00	2.71E+00	2.35E+00	2.06E+00	1.83E+00
3	5.02E+02	1.83E+02	1.01E+02	6.58E+01	4.72E+01	3.60E+01	2.86E+01	2.35E+01	1.97E+01	1.68E+01	1.46E+01	1.28E+01	1.14E+01
4	5.35E+01	7.90E+00	1.78E+00	4.79E-01	1.41E-01	4.45E-02	1.46E-02	4.92E-03	1.70E-03	6.00E-04	2.15E-04	7.78E-05	2.85E-05
5	8.20E+00	1.96E-01	6.96E-03	2.93E-04	1.35E-05	6.64E-07	3.40E-08	1.79E-09	9.66E-11	5.31E-12	2.96E-13	1.67E-14	9.53E-16
6	1.27E+02	4.52E+01	2.47E+01	1.60E+01	1.15E+01	8.72E+00	6.92E+00	5.66E+00	4.74E+00	4.05E+00	3.51E+00	3.08E+00	2.73E+00
7	4.01E+02	1.51E+02	8.41E+01	5.52E+01	3.98E+01	3.04E+01	2.42E+01	1.98E+01	1.67E+01	1.42E+01	1.24E+01	1.09E+01	9.64E+00
8	4.74E+01	1.69E+01	9.24E+00	6.01E+00	4.31E+00	3.28E+00	2.60E+00	2.13E+00	1.78E+00	1.52E+00	1.32E+00	1.16E+00	1.03E+00
9	4.01E+01	1.43E+01	7.77E+00	5.05E+00	3.61E+00	2.74E+00	2.17E+00	1.78E+00	1.49E+00	1.27E+00	1.10E+00	9.62E-01	8.52E-01
10	1.89E+01	4.57E-01	1.65E-02	7.10E-04	3.35E-05	1.68E-06	8.75E-08	4.71E-09	2.59E-10	1.45E-11	8.28E-13	4.77E-14	2.78E-15
11	8.33E+02	2.93E+02	1.43E+02	8.05E+01	4.95E+01	3.22E+01	2.17E+01	1.51E+01	1.08E+01	7.79E+00	5.72E+00	4.25E+00	3.19E+00
12	5.70E+01	2.04E+01	1.11E+01	7.20E+00	5.13E+00	3.88E+00	3.06E+00	2.49E+00	2.08E+00	1.76E+00	1.52E+00	1.32E+00	1.17E+00
13	9.50E+01	3.22E+01	1.66E+01	1.01E+01	6.84E+00	4.89E+00	3.65E+00	2.81E+00	2.21E+00	1.78E+00	1.45E+00	1.19E+00	9.95E-01
14	1.07E+02	3.83E+01	2.09E+01	1.36E+01	9.72E+00	7.40E+00	5.87E+00	4.81E+00	4.03E+00	3.44E+00	2.98E+00	2.62E+00	2.32E+00
15	6.19E+01	2.21E+01	1.20E+01	7.83E+00	5.60E+00	4.26E+00	3.38E+00	2.77E+00	2.32E+00	1.98E+00	1.71E+00	1.50E+00	1.33E+00
16	3.30E+02	1.21E+02	6.70E+01	4.38E+01	3.15E+01	2.40E+01	1.91E+01	1.57E+01	1.31E+01	1.12E+01	9.74E+00	8.55E+00	7.59E+00
17	1.55E+02	5.62E+01	3.09E+01	2.01E+01	1.44E+01	1.10E+01	8.73E+00	7.15E+00	5.99E+00	5.11E+00	4.43E+00	3.89E+00	3.45E+00
18	1.02E+02	3.64E+01	1.99E+01	1.29E+01	9.28E+00	7.06E+00	5.61E+00	4.59E+00	3.85E+00	3.29E+00	2.85E+00	2.50E+00	2.22E+00
19	2.25E+03	8.63E+02	4.83E+02	3.18E+02	2.29E+02	1.75E+02	1.40E+02	1.15E+02	9.64E+01	8.24E+01	7.15E+01	6.29E+01	5.58E+01
20	4.28E+01	1.26E+00	5.59E-02	2.96E-03	1.72E-04	1.07E-05	6.89E-07	4.58E-08	3.12E-09	2.17E-10	1.53E-11	1.09E-12	7.84E-14
21	1.97E+02	7.16E+01	3.94E+01	2.57E+01	1.84E+01	1.41E+01	1.12E+01	9.15E+00	7.67E+00	6.56E+00	5.69E+00	4.99E+00	4.43E+00
22	2.78E+02	1.06E+02	5.86E+01	3.83E+01	2.74E+01	2.08E+01	1.65E+01	1.34E+01	1.12E+01	9.52E+00	8.21E+00	7.16E+00	6.31E+00
23	4.04E-01	1.34E-03	6.77E-06	4.09E-08	2.72E-10	1.93E-12	1.42E-14	1.08E-16	8.43E-19	6.69E-21	5.39E-23	4.40E-25	3.63E-27
24	4.81E+01	1.71E+01	9.29E+00	6.03E+00	4.31E+00	3.28E+00	2.60E+00	2.12E+00	1.78E+00	1.52E+00	1.31E+00	1.15E+00	1.02E+00
25	2.32E-01	1.20E-03	9.54E-06	9.03E-08	9.41E-10	1.04E-11	1.20E-13	1.43E-15	1.75E-17	2.17E-19	2.74E-21	3.50E-23	4.52E-25
26	4.53E+02	1.84E+02	1.05E+02	6.96E+01	5.05E+01	3.88E+01	3.10E+01	2.55E+01	2.14E+01	1.84E+01	1.60E+01	1.40E+01	1.25E+01
27	6.61E+01	2.42E+01	1.33E+01	8.68E+00	6.23E+00	4.75E+00	3.77E+00	3.09E+00	2.59E+00	2.21E+00	1.91E+00	1.68E+00	1.49E+00
28	6.53E+01	2.39E+01	1.32E+01	8.62E+00	6.19E+00	4.72E+00	3.75E+00	3.08E+00	2.58E+00	2.21E+00	1.91E+00	1.68E+00	1.49E+00
29	1.07E+02	3.87E+01	2.12E+01	1.38E+01	9.91E+00	7.55E+00	6.00E+00	4.91E+00	4.12E+00	3.52E+00	3.05E+00	2.68E+00	2.38E+00
30	5.55E+01	1.97E+01	1.08E+01	7.00E+00	5.01E+00	3.81E+00	3.02E+00	2.47E+00	2.07E+00	1.77E+00	1.53E+00	1.35E+00	1.19E+00
31	3.42E+01	1.23E+01	6.74E+00	4.39E+00	3.15E+00	2.40E+00	1.91E+00	1.56E+00	1.31E+00	1.12E+00	9.69E-01	8.51E-01	7.55E-01
32	3.88E+01	1.37E+01	7.49E+00	4.86E+00	3.48E+00	2.64E+00	2.10E+00	1.71E+00	1.44E+00	1.22E+00	1.06E+00	9.30E-01	8.24E-01
33	6.06E+01	2.17E+01	1.19E+01	7.72E+00	5.53E+00	4.21E+00	3.34E+00	2.74E+00	2.29E+00	1.96E+00	1.70E+00	1.49E+00	1.32E+00
34	2.18E+02	7.77E+01	4.24E+01	2.76E+01	1.98E+01	1.50E+01	1.19E+01	9.77E+00	8.19E+00	6.99E+00	6.06E+00	5.32E+00	4.72E+00
35	9.83E-02	3.84E-05	2.22E-08	1.52E-11	1.14E-14	9.12E-18	7.58E-21	6.49E-24	5.69E-27	5.08E-30	4.60E-33	4.22E-36	3.92E-39

36	7.87E+01	2.79E+01	1.52E+01	9.84E+00	7.02E+00	5.33E+00	4.21E+00	3.44E+00	2.87E+00	2.45E+00	2.11E+00	1.85E+00	1.63E+00
37	5.42E+02	2.27E+02	1.31E+02	8.80E+01	6.42E+01	4.94E+01	3.96E+01	3.26E+01	2.75E+01	2.35E+01	2.05E+01	1.80E+01	1.60E+01
38	5.79E+02	2.12E+02	1.17E+02	7.63E+01	5.48E+01	4.18E+01	3.32E+01	2.72E+01	2.28E+01	1.95E+01	1.69E+01	1.48E+01	1.32E+01
39	2.25E+01	8.06E+00	4.40E+00	2.86E+00	2.05E+00	1.56E+00	1.24E+00	1.01E+00	8.50E-01	7.26E-01	6.29E-01	5.52E-01	4.90E-01
40	9.78E+02	3.63E+02	2.01E+02	1.32E+02	9.48E+01	7.23E+01	5.75E+01	4.72E+01	3.96E+01	3.38E+01	2.94E+01	2.58E+01	2.29E+01
41	2.55E+01	9.06E+00	4.94E+00	3.21E+00	2.30E+00	1.75E+00	1.39E+00	1.14E+00	9.53E-01	8.14E-01	7.05E-01	6.19E-01	5.49E-01
42	1.17E+02	4.36E+01	2.41E+01	1.58E+01	1.14E+01	8.66E+00	6.89E+00	5.65E+00	4.74E+00	4.05E+00	3.52E+00	3.09E+00	2.74E+00
43	8.51E+01	2.95E+01	1.50E+01	9.04E+00	5.96E+00	4.17E+00	3.04E+00	2.28E+00	1.76E+00	1.37E+00	1.09E+00	8.78E-01	7.13E-01
44	1.31E+02	4.67E+01	2.55E+01	1.66E+01	1.19E+01	9.05E+00	7.18E+00	5.88E+00	4.93E+00	4.21E+00	3.65E+00	3.20E+00	2.84E+00
45	2.69E+01	9.56E+00	5.22E+00	3.39E+00	2.43E+00	1.85E+00	1.47E+00	1.20E+00	1.01E+00	8.59E-01	7.44E-01	6.53E-01	5.79E-01
46	5.00E+01	1.81E+01	9.90E+00	6.45E+00	4.63E+00	3.52E+00	2.80E+00	2.29E+00	1.92E+00	1.64E+00	1.42E+00	1.25E+00	1.11E+00
47	3.66E+01	1.30E+01	7.10E+00	4.62E+00	3.30E+00	2.51E+00	2.00E+00	1.63E+00	1.37E+00	1.17E+00	1.01E+00	8.89E-01	7.89E-01
48	3.70E+02	1.29E+02	6.86E+01	4.35E+01	3.04E+01	2.25E+01	1.74E+01	1.39E+01	1.14E+01	9.47E+00	8.00E+00	6.84E+00	5.92E+00
49	7.87E+01	2.80E+01	1.53E+01	9.95E+00	7.12E+00	5.42E+00	4.30E+00	3.52E+00	2.95E+00	2.52E+00	2.18E+00	1.91E+00	1.70E+00
50	5.48E+01	1.95E+01	1.06E+01	6.91E+00	4.94E+00	3.76E+00	2.98E+00	2.44E+00	2.05E+00	1.75E+00	1.51E+00	1.33E+00	1.18E+00
51	4.15E+01	3.99E+00	5.89E-01	1.03E-01	2.00E-02	4.12E-03	8.83E-04	1.95E-04	4.43E-05	1.02E-05	2.39E-06	5.68E-07	1.36E-07
52	1.78E+02	6.36E+01	3.47E+01	2.26E+01	1.62E+01	1.23E+01	9.77E+00	8.00E+00	6.71E+00	5.73E+00	4.96E+00	4.36E+00	3.86E+00
53	1.43E+02	5.07E+01	2.75E+01	1.77E+01	1.26E+01	9.54E+00	7.52E+00	6.11E+00	5.09E+00	4.31E+00	3.71E+00	3.24E+00	2.85E+00
54	1.61E+01	5.83E+00	3.19E+00	2.08E+00	1.49E+00	1.14E+00	9.03E-01	7.39E-01	6.20E-01	5.29E-01	4.59E-01	4.03E-01	3.57E-01
55	4.86E+01	1.58E+01	7.84E+00	4.62E+00	3.00E+00	2.06E+00	1.48E+00	1.10E+00	8.32E-01	6.43E-01	5.04E-01	4.00E-01	3.21E-01
56	1.29E+02	4.62E+01	2.53E+01	1.65E+01	1.18E+01	8.98E+00	7.13E+00	5.84E+00	4.90E+00	4.18E+00	3.63E+00	3.18E+00	2.82E+00
57	2.98E+02	1.10E+02	6.09E+01	3.99E+01	2.87E+01	2.19E+01	1.74E+01	1.43E+01	1.20E+01	1.02E+01	8.87E+00	7.79E+00	6.91E+00
58	1.77E+02	5.61E+01	2.66E+01	1.50E+01	9.24E+00	6.05E+00	4.14E+00	2.91E+00	2.10E+00	1.54E+00	1.15E+00	8.67E-01	6.61E-01
59	7.20E+02	2.58E+02	1.40E+02	8.98E+01	6.35E+01	4.77E+01	3.74E+01	3.02E+01	2.49E+01	2.10E+01	1.79E+01	1.55E+01	1.36E+01
60	6.22E+01	2.22E+01	1.21E+01	7.90E+00	5.65E+00	4.30E+00	3.42E+00	2.80E+00	2.34E+00	2.00E+00	1.74E+00	1.52E+00	1.35E+00
61	5.48E+02	2.23E+02	1.28E+02	8.49E+01	6.16E+01	4.73E+01	3.77E+01	3.10E+01	2.61E+01	2.23E+01	1.93E+01	1.70E+01	1.51E+01
62	1.78E+02	6.25E+01	3.31E+01	2.08E+01	1.43E+01	1.05E+01	8.04E+00	6.34E+00	5.11E+00	4.20E+00	3.51E+00	2.96E+00	2.53E+00
63	1.14E+02	3.90E+01	2.04E+01	1.28E+01	8.78E+00	6.42E+00	4.90E+00	3.85E+00	3.10E+00	2.54E+00	2.12E+00	1.79E+00	1.52E+00
64	2.24E+01	7.96E+00	4.34E+00	2.82E+00	2.02E+00	1.54E+00	1.22E+00	9.97E-01	8.36E-01	7.14E-01	6.18E-01	5.43E-01	4.81E-01
65	8.92E-01	1.97E-03	6.55E-06	2.58E-08	1.12E-10	5.14E-13	2.46E-15	1.22E-17	6.15E-20	3.17E-22	1.66E-24	8.77E-27	4.69E-29
66	6.87E+01	1.90E+01	8.04E+00	4.05E+00	2.25E+00	1.33E+00	8.16E-01	5.17E-01	3.36E-01	2.22E-01	1.49E-01	1.02E-01	6.98E-02
67	1.51E-01	4.88E-05	2.39E-08	1.39E-11	8.89E-15	6.04E-18	4.28E-21	3.13E-24	2.34E-27	1.79E-30	1.38E-33	1.08E-36	8.57E-40
68	2.93E+01	1.04E+01	5.68E+00	3.69E+00	2.64E+00	2.01E+00	1.60E+00	1.31E+00	1.09E+00	9.34E-01	8.10E-01	7.11E-01	6.30E-01
69	3.84E+01	1.39E+01	7.63E+00	4.98E+00	3.57E+00	2.72E+00	2.16E+00	1.77E+00	1.48E+00	1.26E+00	1.09E+00	9.61E-01	8.52E-01
70	4.17E+01	5.21E+00	9.91E-01	2.24E-01	5.59E-02	1.48E-02	4.08E-03	1.16E-03	3.39E-04	1.00E-04	3.03E-05	9.24E-06	2.85E-06
71	4.37E+02	1.60E+02	8.83E+01	5.77E+01	4.14E+01	3.16E+01	2.51E+01	2.06E+01	1.73E+01	1.47E+01	1.28E+01	1.12E+01	9.96E+00
72	9.81E+01	3.55E+01	1.94E+01	1.27E+01	9.09E+00	6.93E+00	5.50E+00	4.51E+00	3.78E+00	3.23E+00	2.80E+00	2.46E+00	2.18E+00
73	3.40E+01	1.23E+01	6.72E+00	4.38E+00	3.14E+00	2.39E+00	1.90E+00	1.55E+00	1.30E+00	1.11E+00	9.65E-01	8.48E-01	7.52E-01
74	1.78E+01	5.51E-01	2.55E-02	1.39E-03	8.39E-05	5.36E-06	3.57E-07	2.45E-08	1.72E-09	1.23E-10	8.92E-12	6.56E-13	4.87E-14
75	2.23E+01	7.77E+00	4.15E+00	2.64E+00	1.85E+00	1.38E+00	1.07E+00	8.59E-01	7.05E-01	5.90E-01	5.01E-01	4.30E-01	3.74E-01

76	6.49E+02	2.36E+02	1.30E+02	8.48E+01	6.09E+01	4.64E+01	3.69E+01	3.02E+01	2.53E+01	2.16E+01	1.88E+01	1.65E+01	1.46E+01
77	2.64E+01	3.04E+00	5.33E-01	1.11E-01	2.55E-02	6.21E-03	1.58E-03	4.13E-04	1.11E-04	3.03E-05	8.41E-06	2.36E-06	6.70E-07
78	7.60E+01	2.75E+01	1.51E+01	9.85E+00	7.06E+00	5.38E+00	4.27E+00	3.50E+00	2.94E+00	2.51E+00	2.17E+00	1.91E+00	1.69E+00
79	7.75E+01	2.76E+01	1.51E+01	9.80E+00	7.01E+00	5.34E+00	4.24E+00	3.47E+00	2.91E+00	2.48E+00	2.15E+00	1.89E+00	1.67E+00
80	8.82E+02	3.20E+02	1.74E+02	1.13E+02	8.03E+01	6.06E+01	4.77E+01	3.87E+01	3.22E+01	2.72E+01	2.34E+01	2.04E+01	1.79E+01
81	1.92E+02	7.10E+01	3.92E+01	2.57E+01	1.84E+01	1.41E+01	1.12E+01	9.17E+00	7.69E+00	6.57E+00	5.70E+00	5.01E+00	4.44E+00
82	7.66E+01	2.80E+01	1.54E+01	1.01E+01	7.22E+00	5.51E+00	4.38E+00	3.59E+00	3.01E+00	2.57E+00	2.23E+00	1.96E+00	1.74E+00
83	2.71E+01	9.65E+00	5.26E+00	3.42E+00	2.45E+00	1.86E+00	1.48E+00	1.21E+00	1.01E+00	8.66E-01	7.51E-01	6.59E-01	5.84E-01
84	2.84E+03	1.32E+03	7.92E+02	5.41E+02	4.00E+02	3.10E+02	2.50E+02	2.07E+02	1.75E+02	1.50E+02	1.31E+02	1.16E+02	1.03E+02
85	1.12E+02	4.00E+01	2.18E+01	1.42E+01	1.02E+01	7.73E+00	6.14E+00	5.02E+00	4.21E+00	3.59E+00	3.11E+00	2.73E+00	2.42E+00
86	3.53E+02	1.28E+02	7.03E+01	4.58E+01	3.28E+01	2.49E+01	1.98E+01	1.61E+01	1.35E+01	1.15E+01	9.96E+00	8.73E+00	7.73E+00
87	6.42E+01	2.33E+01	1.28E+01	8.32E+00	5.97E+00	4.54E+00	3.61E+00	2.96E+00	2.48E+00	2.12E+00	1.83E+00	1.61E+00	1.43E+00
88	1.38E-01	1.06E-05	1.18E-09	1.53E-13	2.18E-17	3.29E-21	5.16E-25	8.35E-29	1.38E-32	2.33E-36	3.98E-40	6.88E-44	1.20E-47
89	4.63E+01	1.65E+01	8.97E+00	5.83E+00	4.17E+00	3.17E+00	2.52E+00	2.06E+00	1.72E+00	1.47E+00	1.28E+00	1.12E+00	9.92E-01
90	4.90E+02	6.41E+01	1.22E+01	2.73E+00	6.71E-01	1.75E-01	4.74E-02	1.32E-02	3.78E-03	1.10E-03	3.25E-04	9.72E-05	2.94E-05
91	4.77E+01	1.70E+01	9.30E+00	6.05E+00	4.33E+00	3.30E+00	2.62E+00	2.14E+00	1.79E+00	1.53E+00	1.33E+00	1.17E+00	1.03E+00
92	4.87E+01	1.36E+01	5.80E+00	2.96E+00	1.66E+00	9.91E-01	6.17E-01	3.96E-01	2.60E-01	1.74E-01	1.19E-01	8.16E-02	5.68E-02
93	6.85E-01	1.45E-02	4.72E-04	1.83E-05	7.79E-07	3.53E-08	1.67E-09	8.14E-11	4.06E-12	2.07E-13	1.07E-14	5.58E-16	2.95E-17
94	7.23E-02	9.15E-05	1.76E-07	4.02E-10	1.01E-12	2.71E-15	7.54E-18	2.17E-20	6.38E-23	1.91E-25	5.82E-28	1.79E-30	5.58E-33
95	8.47E+01	3.11E+01	1.71E+01	1.12E+01	8.04E+00	6.13E+00	4.87E+00	3.99E+00	3.35E+00	2.86E+00	2.48E+00	2.18E+00	1.93E+00
96	2.06E+01	7.34E+00	4.00E+00	2.60E+00	1.86E+00	1.42E+00	1.12E+00	9.20E-01	7.71E-01	6.58E-01	5.70E-01	5.01E-01	4.44E-01
97	2.92E+01	1.04E+01	5.65E+00	3.67E+00	2.62E+00	2.00E+00	1.58E+00	1.30E+00	1.09E+00	9.27E-01	8.03E-01	7.05E-01	6.25E-01
98	1.06E+01	3.67E+00	1.94E+00	1.22E+00	8.48E-01	6.25E-01	4.81E-01	3.82E-01	3.10E-01	2.57E-01	2.16E-01	1.83E-01	1.58E-01
99	1.78E+01	6.32E+00	3.45E+00	2.24E+00	1.60E+00	1.22E+00	9.67E-01	7.92E-01	6.63E-01	5.66E-01	4.91E-01	4.31E-01	3.82E-01
100	1.16E+00	2.51E-03	8.22E-06	3.21E-08	1.38E-10	6.27E-13	2.98E-15	1.46E-17	7.34E-20	3.75E-22	1.95E-24	1.02E-26	5.44E-29
Max value	**2.84E+03**	**1.32E+03**	**7.92E+02**	**5.41E+02**	**4.00E+02**	**3.10E+02**	**2.50E+02**	**2.07E+02**	**1.75E+02**	**1.50E+02**	**1.31E+02**	**1.16E+02**	**1.03E+02**

140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
1.33E+00	1.20E+00	1.09E+00	9.96E-01	9.14E-01	8.43E-01	7.81E-01	7.26E-01	6.77E-01	6.33E-01	5.94E-01	5.59E-01	5.27E-01	4.98E-01	4.72E-01
1.63E+00	1.47E+00	1.34E+00	1.22E+00	1.12E+00	1.03E+00	9.57E-01	8.90E-01	0.829709	0.776185	0.728176	0.684918	0.645778	0.610228	0.577823
1.02E+01	9.16E+00	8.32E+00	7.60E+00	6.97E+00	6.43E+00	5.96E+00	5.54E+00	5.16E+00	4.83E+00	4.53E+00	4.26E+00	4.02E+00	3.80E+00	3.60E+00
1.05E-05	3.92E-06	1.47E-06	5.53E-07	2.09E-07	7.97E-08	3.05E-08	1.17E-08	4.50E-09	1.74E-09	6.72E-10	2.61E-10	1.02E-10	3.96E-11	1.55E-11
5.48E-17	3.18E-18	1.86E-19	1.09E-20	6.43E-22	3.81E-23	2.27E-24	1.36E-25	8.14E-27	4.89E-28	2.95E-29	1.79E-30	1.08E-31	6.57E-33	4.00E-34
2.44E+00	2.20E+00	1.99E+00	1.82E+00	1.67E+00	1.54E+00	1.42E+00	1.32E+00	1.23E+00	1.15E+00	1.08E+00	1.02E+00	9.57E-01	9.04E-01	8.56E-01
8.63E+00	7.79E+00	7.07E+00	6.46E+00	5.93E+00	5.47E+00	5.07E+00	4.71E+00	4.39E+00	4.11E+00	3.86E+00	3.63E+00	3.42E+00	3.24E+00	3.06E+00
9.19E-01	8.29E-01	7.52E-01	6.87E-01	6.30E-01	5.81E-01	5.38E-01	5.00E-01	4.66E-01	4.36E-01	4.09E-01	3.84E-01	3.62E-01	3.42E-01	3.24E-01
7.61E-01	6.85E-01	6.21E-01	5.66E-01	5.19E-01	4.78E-01	4.42E-01	4.10E-01	0.381701	0.356535	0.333974	0.313656	0.295282	0.278602	0.263406
1.63E-16	9.67E-18	5.77E-19	3.46E-20	2.08E-21	1.26E-22	7.67E-24	4.68E-25	2.87E-26	1.76E-27	1.08E-28	6.69E-30	4.14E-31	2.57E-32	1.60E-33
2.42E+00	1.84E+00	1.42E+00	1.09E+00	8.48E-01	6.61E-01	5.18E-01	4.07E-01	0.320683	0.25357	0.201061	0.159833	0.127359	0.101704	0.081382
1.04E+00	9.31E-01	8.39E-01	7.62E-01	6.95E-01	6.37E-01	5.86E-01	5.41E-01	5.01E-01	4.66E-01	4.34E-01	4.06E-01	3.80E-01	3.57E-01	3.36E-01
8.37E-01	7.09E-01	6.05E-01	5.19E-01	4.48E-01	3.88E-01	0.337617	0.294862	0.258398	0.227144	0.200237	0.176977	0.156795	0.139222	0.123873
2.08E+00	1.87E+00	1.70E+00	1.55E+00	1.42E+00	1.31E+00	1.22E+00	1.13E+00	1.05E+00	9.86E-01	9.25E-01	8.70E-01	8.20E-01	7.75E-01	7.33E-01
1.19E+00	1.07E+00	9.74E-01	8.89E-01	8.15E-01	7.51E-01	6.95E-01	6.46E-01	6.02E-01	5.63E-01	5.28E-01	4.96E-01	4.67E-01	4.41E-01	4.18E-01
6.79E+00	6.13E+00	5.56E+00	5.08E+00	4.66E+00	4.30E+00	3.98E+00	3.70E+00	3.45388	3.23142	3.03185	2.85199	2.68922	2.54136	2.40655
3.08E+00	2.78E+00	2.52E+00	2.30E+00	2.11E+00	1.94E+00	1.80E+00	1.67E+00	1.56E+00	1.45E+00	1.36393	1.28199	1.20786	1.14054	1.07919
1.98E+00	1.79E+00	1.62E+00	1.48E+00	1.36E+00	1.25456	1.16E+00	1.08E+00	1.01E+00	9.42E-01	8.83E-01	8.31E-01	7.83E-01	7.40E-01	7.01E-01
5.00E+01	4.51E+01	4.10E+01	3.74E+01	3.44E+01	3.17E+01	2.94E+01	2.73E+01	25.4829	23.8466	22.3782	21.0545	19.8563	18.7675	17.7747
5.70E-15	4.18E-16	3.08E-17	2.28E-18	1.70E-19	1.28E-20	9.60E-22	7.25E-23	5.49E-24	4.17E-25	3.18E-26	2.43E-27	1.86E-28	1.43E-29	1.10E-30
3.96E+00	3.58E+00	3.25E+00	2.96E+00	2.72E+00	2.51E+00	2.32E+00	2.16E+00	2.01E+00	1.89E+00	1.77E+00	1.66E+00	1.57E+00	1.48E+00	1.40E+00
5.61E+00	5.03E+00	4.54E+00	4.12E+00	3.75E+00	3.44E+00	3.16E+00	2.92E+00	2.71E+00	2.51E+00	2.34E+00	2.19E+00	2.05E+00	1.92E+00	1.81E+00
3.02E-29	2.53E-31	2.13E-33	1.81E-35	1.54E-37	1.32E-39	1.14E-41	9.85E-44	8.54E-46	7.42E-48	6.47E-50	5.66E-52	4.96E-54	4.36E-56	3.83E-58
9.12E-01	8.22E-01	7.45E-01	6.79E-01	6.23E-01	5.74E-01	0.530712	0.492718	0.459004	0.428925	0.401955	0.377664	0.355694	0.335746	0.31757
5.88E-27	7.71E-29	1.02E-30	1.35E-32	1.81E-34	2.43E-36	3.27E-38	4.42E-40	6.00E-42	8.17E-44	1.11E-45	1.53E-47	2.09E-49	2.88E-51	3.97E-53
1.12E+01	1.01E+01	9.17E+00	8.38E+00	7.70E+00	7.10E+00	6.58E+00	6.12E+00	5.71E+00	5.35E+00	5.02E+00	4.72E+00	4.46E+00	4.21E+00	3.99E+00
1.33E+00	1.20E+00	1.09E+00	9.94E-01	9.11E-01	8.40E-01	7.77E-01	0.721958	0.67286	0.629042	0.589741	5.54E-01	5.22E-01	4.93E-01	4.67E-01
1.33E+00	1.20E+00	1.09E+00	9.98E-01	9.16E-01	8.45E-01	7.83E-01	7.28E-01	6.79E-01	6.35E-01	5.96E-01	5.60E-01	5.28E-01	4.99E-01	4.73E-01
2.13E+00	1.92E+00	1.74E+00	1.59E+00	1.46E+00	1.34E+00	1.25E+00	1.16E+00	1.08E+00	1.01E+00	9.47E-01	8.91E-01	8.40E-01	7.94E-01	7.52E-01
1.07E+00	9.61E-01	8.72E-01	7.96E-01	7.31E-01	6.73E-01	6.23E-01	5.79E-01	0.539858	0.504836	0.473427	0.44513	0.41953	0.39628	0.37509
6.75E-01	6.09E-01	5.53E-01	5.05E-01	4.63E-01	4.27E-01	3.96E-01	3.68E-01	3.43E-01	3.21E-01	3.01E-01	2.83E-01	2.67E-01	2.52E-01	2.39E-01
7.37E-01	6.64E-01	6.02E-01	5.49E-01	5.03E-01	4.64E-01	4.29E-01	3.98E-01	3.71E-01	3.47E-01	3.25E-01	3.06E-01	2.88E-01	2.72E-01	2.57E-01
1.18E+00	1.07E+00	9.68E-01	8.84E-01	8.11E-01	7.48E-01	6.93E-01	6.44E-01	6.00E-01	5.62E-01	5.27E-01	4.95E-01	4.67E-01	4.41E-01	4.18E-01
4.22E+00	3.81E+00	3.46E+00	3.15E+00	2.90E+00	2.67E+00	2.47E+00	2.30E+00	2.14E+00	2.00E+00	1.88E+00	1.77E+00	1.67E+00	1.57E+00	1.49E+00
3.66E-42	3.45E-45	3.27E-48	3.12E-51	2.99E-54	2.88E-57	2.79E-60	2.71E-63	2.64E-66	2.58E-69	2.53E-72	2.49E-75	2.45E-78	2.42E-81	2.39E-84

1.46E+00	1.31E+00	1.19E+00	1.08E+00	0.986858	0.907017	0.837109	0.775491	0.720858	0.672154	0.628521	5.89E-01	5.54E-01	5.22E-01	4.92E-01
1.44E+01	1.30E+01	1.18E+01	1.08E+01	9.92E+00	9.15E+00	8.48E+00	7.89E+00	7.37E+00	6.90E+00	6.47E+00	6.09E+00	5.75E+00	5.44E+00	5.15E+00
1.18E+01	1.06E+01	9.66E+00	8.82E+00	8.09E+00	7.47E+00	6.91E+00	6.43E+00	5.99E+00	5.61E+00	5.26E+00	4.95E+00	4.67E+00	4.41E+00	4.18E+00
4.38E-01	3.95E-01	3.59E-01	3.28E-01	3.01E-01	2.77E-01	2.57E-01	2.39E-01	2.22E-01	2.08E-01	1.95E-01	1.84E-01	1.73E-01	1.64E-01	1.55E-01
2.05E+01	1.85E+01	1.68E+01	1.53E+01	1.41E+01	1.30E+01	1.20E+01	1.12E+01	1.04E+01	9.75E+00	9.15E+00	8.61E+00	8.12E+00	7.67E+00	7.27E+00
4.91E-01	4.43E-01	4.02E-01	3.67E-01	3.37E-01	3.10E-01	2.87E-01	2.67E-01	2.49E-01	2.33E-01	2.19E-01	2.05E-01	1.94E-01	0.183042	0.173301
2.45E+00	2.21E+00	2.01E+00	1.84E+00	1.69E+00	1.55E+00	1.44E+00	1.34E+00	1.25E+00	1.17E+00	1.10E+00	1.03E+00	9.73E-01	9.19E-01	8.70E-01
5.85E-01	4.83E-01	4.01E-01	3.36E-01	2.82E-01	2.38E-01	2.02E-01	1.72E-01	1.47E-01	1.26E-01	1.08E-01	9.31E-02	8.03E-02	6.95E-02	6.03E-02
2.54E+00	2.29E+00	2.08E+00	1.89E+00	1.74E+00	1.60E+00	1.48E+00	1.38E+00	1.28E+00	1.20E+00	1.13E+00	1.06E+00	9.99E-01	9.43E-01	8.93E-01
5.18E-01	4.67E-01	4.24E-01	3.87E-01	3.55E-01	3.27E-01	3.03E-01	2.82E-01	0.262559	0.245573	0.230338	0.216611	0.204192	0.192913	0.182632
9.92E-01	8.95E-01	8.12E-01	7.42E-01	6.81E-01	6.28E-01	5.81E-01	5.40E-01	5.04E-01	4.71E-01	4.42E-01	4.16E-01	3.92E-01	3.71E-01	3.51E-01
7.06E-01	6.36E-01	5.78E-01	5.27E-01	4.84E-01	4.46E-01	4.13E-01	3.84E-01	3.58E-01	3.35E-01	3.14E-01	2.96E-01	2.79E-01	2.63E-01	2.49E-01
5.16E+00	4.54E+00	4.01E+00	3.57E+00	3.20E+00	2.87E+00	2.59E+00	2.35E+00	2.13E+00	1.95E+00	1.78E+00	1.63E+00	1.50E+00	1.38E+00	1.27E+00
1.52E+00	1.37E+00	1.24E+00	1.13E+00	1.04E+00	9.59E-01	8.87E-01	8.25E-01	7.69E-01	7.19E-01	6.74E-01	6.34E-01	5.98E-01	5.64E-01	5.34E-01
1.05E+00	9.48E-01	8.60E-01	7.85E-01	7.20E-01	6.64E-01	6.14E-01	5.71E-01	0.532016	4.97E-01	4.66E-01	4.39E-01	4.13E-01	3.90E-01	3.69E-01
3.29E-08	8.03E-09	1.97E-09	4.86E-10	1.21E-10	3.00E-11	7.52E-12	1.89E-12	4.76E-13	1.20E-13	3.05E-14	7.76E-15	1.98E-15	5.05E-16	1.29E-16
3.46E+00	3.12E+00	2.83E+00	2.58E+00	2.37E+00	2.19E+00	2.02E+00	1.88E+00	1.75E+00	1.64E+00	1.54E+00	1.45E+00	1.36E+00	1.29E+00	1.22E+00
2.53E+00	2.27E+00	2.04E+00	1.85E+00	1.69E+00	1.55E+00	1.42277	1.31311	1.21603	1.12962	1.05234	0.982895	0.92024	0.863493	0.811913
3.19E-01	2.88E-01	2.61E-01	2.39E-01	2.19E-01	2.02E-01	1.87E-01	1.74E-01	1.62E-01	1.51E-01	1.42E-01	1.34E-01	1.26E-01	1.19E-01	1.13E-01
2.60E-01	2.12E-01	1.74E-01	1.44E-01	1.19E-01	9.94E-02	8.33E-02	7.00E-02	5.90E-02	4.99E-02	4.24E-02	3.60E-02	3.07E-02	2.63E-02	2.25E-02
2.53E+00	2.28E+00	2.07E+00	1.89E+00	1.73E+00	1.60E+00	1.48E+00	1.38E+00	1.28E+00	1.20E+00	1.1256	1.05872	0.998196	0.943224	0.893113
6.19E+00	5.58E+00	5.07E+00	4.63E+00	4.25E+00	3.92E+00	3.63E+00	3.37E+00	3.15E+00	2.94E+00	2.76E+00	2.60E+00	2.45E+00	2.31E+00	2.19E+00
5.08E-01	3.94E-01	3.07E-01	2.41E-01	1.90E-01	1.51E-01	1.20E-01	9.58E-02	7.67E-02	6.17E-02	4.97E-02	4.02E-02	3.26E-02	2.64E-02	2.15E-02
1.20E+01	1.06E+01	9.53E+00	8.57E+00	7.76E+00	7.05E+00	6.44E+00	5.90E+00	5.42E+00	5.00E+00	4.62E+00	4.28E+00	3.98E+00	3.71E+00	3.46E+00
1.21E+00	1.09E+00	9.89E-01	9.03E-01	8.29E-01	0.763973	0.707329	0.657345	0.612974	0.573372	5.38E-01	5.06E-01	4.77E-01	4.51E-01	4.27E-01
1.35E+01	1.22E+01	1.10E+01	1.01E+01	9.24E+00	8.52E+00	7.88E+00	7.32E+00	6.82E+00	6.37E+00	5.97E+00	5.61E+00	5.29E+00	4.99E+00	4.72E+00
2.17E+00	1.89E+00	1.65E+00	1.45E+00	1.28E+00	1.13E+00	1.01E+00	9.02E-01	8.09E-01	7.28E-01	6.57E-01	5.94E-01	5.39E-01	4.90E-01	4.46E-01
1.31E+00	1.13E+00	9.89E-01	8.67E-01	7.65E-01	6.78E-01	6.03E-01	5.38E-01	4.82E-01	4.33E-01	3.91E-01	3.53E-01	3.20E-01	2.90E-01	2.64E-01
4.31E-01	3.88E-01	3.52E-01	3.22E-01	2.95E-01	2.72E-01	2.52E-01	2.34E-01	2.18E-01	2.04E-01	1.91E-01	1.80E-01	1.70E-01	1.60E-01	1.52E-01
2.53E-31	1.38E-33	7.54E-36	4.15E-38	2.30E-40	1.28E-42	7.13E-45	4.00E-47	2.25E-49	1.27E-51	7.17E-54	4.07E-56	2.31E-58	1.32E-60	7.52E-63
4.84E-02	3.38E-02	2.38E-02	1.68E-02	1.20E-02	8.54E-03	6.13E-03	4.41E-03	3.19E-03	2.31E-03	1.68E-03	1.22E-03	8.94E-04	6.55E-04	4.80E-04
6.85E-43	5.51E-46	4.46E-49	3.64E-52	2.98E-55	2.45E-58	2.03E-61	1.68E-64	1.40E-67	1.17E-70	9.78E-74	8.21E-77	6.91E-80	5.83E-83	4.92E-86
5.64E-01	5.08E-01	4.61E-01	4.21E-01	3.86E-01	3.56E-01	3.30E-01	3.06E-01	2.86E-01	2.67E-01	2.50E-01	2.36E-01	2.22E-01	2.10E-01	1.99E-01
7.62E-01	6.87E-01	6.23E-01	5.69E-01	5.22E-01	4.81E-01	4.45E-01	4.13E-01	3.85E-01	3.60E-01	3.38E-01	3.17E-01	2.99E-01	2.82E-01	2.67E-01
8.85E-07	2.77E-07	8.75E-08	2.78E-08	8.86E-09	2.84E-09	9.14E-10	2.95E-10	9.57E-11	3.11E-11	1.01E-11	3.31E-12	1.09E-12	3.57E-13	1.17E-13
8.92E+00	8.04E+00	7.30E+00	6.67E+00	6.12E+00	5.65E+00	5.23E+00	4.85979	4.53258	4.24E+00	3.98E+00	3.74E+00	3.53E+00	3.33E+00	3.16E+00
1.95E+00	1.76E+00	1.60E+00	1.46E+00	1.34E+00	1.23E+00	1.14E+00	1.06E+00	0.990103	0.926219	0.868913	8.17E-01	7.71E-01	7.28E-01	6.89E-01
6.73E-01	6.07E-01	5.51E-01	5.03E-01	4.62E-01	4.26E-01	3.94E-01	3.66E-01	3.42E-01	3.20E-01	3.00E-01	2.82E-01	2.66E-01	2.51E-01	2.38E-01
3.65E-15	2.76E-16	2.09E-17	1.60E-18	1.23E-19	9.50E-21	7.36E-22	5.73E-23	4.47E-24	3.50E-25	2.75E-26	2.17E-27	1.71E-28	1.35E-29	1.07E-30
3.28E-01	2.89E-01	2.57E-01	2.30E-01	2.07E-01	1.87E-01	1.69E-01	1.54E-01	1.41E-01	1.29E-01	1.18E-01	1.09E-01	1.01E-01	9.31E-02	8.63E-02

1.31E+01	1.18E+01	1.07E+01	9.78E+00	8.98E+00	8.28E+00	7.67E+00	7.13E+00	6.65E+00	6.22E+00	5.84E+00	5.49E+00	5.18E+00	4.89E+00	4.63E+00
1.92E-07	5.54E-08	1.61E-08	4.70E-09	1.38E-09	4.07E-10	1.21E-10	3.59E-11	1.07E-11	3.20E-12	9.62E-13	2.89E-13	8.73E-14	2.64E-14	8.00E-15
1.52E+00	1.37E+00	1.24E+00	1.13E+00	1.04E+00	9.59E-01	8.88E-01	8.25E-01	7.70E-01	7.20E-01	6.76E-01	6.36E-01	5.99E-01	5.66E-01	5.36E-01
1.50E+00	1.35E+00	1.23E+00	1.12E+00	1.03E+00	9.46E-01	8.76E-01	8.14E-01	7.59E-01	7.10E-01	0.66608	6.26E-01	5.91E-01	5.58E-01	5.28E-01
1.59E+01	1.42E+01	1.27E+01	1.15E+01	1.05E+01	9.58E+00	8.78548	8.08905	7.47312	6.92545	6.43608	5.99684	5.60097	5.24281	4.91764
3.98E+00	3.59E+00	3.26E+00	2.97E+00	2.73E+00	2.52E+00	2.33E+00	2.17E+00	2.02E+00	1.89E+00	1.77E+00	1.67E+00	1.57E+00	1.49E+00	1.41E+00
1.55E+00	1.40E+00	1.27E+00	1.16E+00	1.07E+00	9.85E-01	9.12E-01	8.48E-01	7.91E-01	7.40E-01	6.94E-01	6.53E-01	6.16E-01	5.82E-01	5.51E-01
5.23E-01	4.71E-01	4.28E-01	3.90E-01	3.58E-01	0.330349	0.305834	0.284202	0.265	0.247862	0.232492	0.218643	0.206113	0.194733	1.84E-01
9.25E+01	8.36E+01	7.61E+01	6.97E+01	6.41E+01	5.92E+01	5.49E+01	5.11E+01	4.77E+01	4.47E+01	4.20E+01	3.95E+01	3.73E+01	3.53E+01	3.35E+01
2.17E+00	1.95E+00	1.77E+00	1.62E+00	1.49E+00	1.37E+00	1.27E+00	1.18E+00	1.10E+00	1.03E+00	9.63E-01	9.06E-01	8.54E-01	8.07E-01	7.63E-01
6.90E+00	6.21E+00	5.62E+00	5.12E+00	4.69E+00	4.32E+00	3.99E+00	3.70E+00	3.44191	3.21269	3.00724	2.82224	2.65498	2.50316	2.36488
1.28E+00	1.15E+00	1.04E+00	9.53E-01	8.75E-01	8.06E-01	7.46E-01	6.93E-01	6.46E-01	6.04E-01	5.67E-01	5.33E-01	5.02E-01	4.75E-01	4.49E-01
2.12E-51	3.77E-55	6.75E-59	1.21E-62	2.19E-66	3.99E-70	7.27E-74	1.33E-77	2.45E-81	4.51E-85	8.32E-89	1.54E-92	2.86E-96	########	########
8.87E-01	7.99E-01	7.25E-01	6.62E-01	6.07E-01	5.59E-01	5.18E-01	4.81E-01	4.48E-01	4.19E-01	3.93E-01	3.69E-01	3.48E-01	3.29E-01	3.11E-01
8.94E-06	2.75E-06	8.49E-07	2.64E-07	8.24E-08	2.59E-08	8.15E-09	2.58E-09	8.18E-10	2.61E-10	8.32E-11	2.66E-11	8.54E-12	2.75E-12	8.85E-13
9.24E-01	8.33E-01	7.56E-01	6.90E-01	6.33E-01	5.84E-01	5.41E-01	5.02E-01	4.68E-01	4.38E-01	4.11E-01	0.386298	0.364133	0.344001	3.26E-01
3.98E-02	2.82E-02	2.01E-02	1.44E-02	1.03E-02	0.007481	0.005433	0.003961	0.002897	0.002126	0.001564	0.001154	0.000853	0.000632	0.00047
1.57E-18	8.44E-20	4.56E-21	2.48E-22	1.36E-23	7.45E-25	4.11E-26	2.27E-27	1.26E-28	7.04E-30	3.93E-31	2.20E-32	1.24E-33	6.97E-35	3.93E-36
1.75E-35	5.55E-38	1.77E-40	5.67E-43	1.83E-45	5.91E-48	1.92E-50	6.26E-53	2.05E-55	6.73E-58	2.22E-60	7.31E-63	2.42E-65	8.03E-68	2.67E-70
1.73E+00	1.56E+00	1.42E+00	1.30E+00	1.19E+00	1.10E+00	1.02E+00	9.44E-01	8.81E-01	8.24E-01	7.73E-01	7.27E-01	6.86E-01	6.48E-01	6.14E-01
3.97E-01	3.58E-01	3.25E-01	2.96E-01	2.72E-01	2.51E-01	2.32E-01	2.16E-01	2.01E-01	1.88E-01	1.76E-01	1.66E-01	1.56E-01	1.48E-01	1.40E-01
5.59E-01	5.04E-01	4.57E-01	4.17E-01	3.83E-01	3.53E-01	3.26E-01	0.303202	0.282646	0.264301	0.247849	0.233027	0.219619	0.207442	0.196343
1.37E-01	1.19E-01	1.05E-01	9.30E-02	8.28E-02	7.40E-02	6.64E-02	5.98E-02	5.41E-02	4.90E-02	4.46E-02	4.06E-02	3.71E-02	3.40E-02	3.12E-02
3.42E-01	3.08E-01	2.80E-01	2.55E-01	2.34E-01	2.16E-01	2.00E-01	1.86E-01	1.73E-01	1.62E-01	1.52E-01	1.43E-01	1.35E-01	1.27E-01	1.20E-01
2.91E-31	1.57E-33	8.55E-36	4.68E-38	2.57E-40	1.42E-42	7.86E-45	4.38E-47	2.44E-49	1.37E-51	7.68E-54	4.33E-56	2.44E-58	1.38E-60	7.83E-63
9.25E+01	**8.36E+01**	**7.61E+01**	**6.97E+01**	**6.41E+01**	**5.92E+01**	**5.49E+01**	**5.11E+01**	**4.77E+01**	**4.47E+01**	**4.20E+01**	**3.95E+01**	**3.73E+01**	**3.53E+01**	**3.35E+01**

290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
4.47E-01	4.25E-01	4.05E-01	3.86E-01	3.69E-01	3.52E-01	3.37E-01	3.23E-01	3.10E-01	2.98E-01	2.87E-01	2.76E-01	2.66E-01	2.57E-01	2.48E-01
0.548187	0.520999	0.495986	0.472911	0.451571	4.32E-01	4.13E-01	3.96E-01	3.80E-01	3.65E-01	3.51E-01	3.38E-01	3.26E-01	3.14E-01	3.04E-01
3.41E+00	3.24E+00	3.09E+00	2.94E+00	2.81E+00	2.69E+00	2.57E+00	2.47E+00	2.37E+00	2.27E+00	2.19E+00	2.11E+00	2.03E+00	1.96E+00	1.89E+00
6.06E-12	2.38E-12	9.34E-13	3.68E-13	1.45E-13	5.72E-14	2.26E-14	8.94E-15	3.54E-15	1.40E-15	5.57E-16	2.21E-16	8.80E-17	3.50E-17	1.40E-17
2.44E-35	1.49E-36	9.13E-38	5.60E-39	3.43E-40	2.11E-41	1.30E-42	8.01E-44	4.94E-45	3.05E-46	1.89E-47	1.17E-48	7.24E-50	4.49E-51	2.78E-52
8.11E-01	7.71E-01	7.33E-01	6.99E-01	6.67E-01	6.37E-01	6.10E-01	5.84E-01	5.61E-01	5.38E-01	5.17E-01	4.98E-01	4.79E-01	4.62E-01	4.46E-01
2.91E+00	2.76E+00	2.63E+00	2.51E+00	2.40E+00	2.29E+00	2.19E+00	2.10E+00	2.02E+00	1.94E+00	1.87E+00	1.80E+00	1.73E+00	1.67E+00	1.61E+00
3.07E-01	2.92E-01	2.78E-01	2.65E-01	2.53E-01	2.42E-01	2.32E-01	2.22E-01	2.13E-01	2.05E-01	1.97E-01	1.89E-01	1.82E-01	1.76E-01	1.70E-01
0.249515	0.236779	0.225067	0.214269	0.204288	0.195041	0.186453	0.178463	1.71E-01	1.64E-01	1.58E-01	1.51E-01	1.46E-01	1.40E-01	1.35E-01
9.95E-35	6.21E-36	3.88E-37	2.43E-38	1.52E-39	9.56E-41	6.01E-42	3.78E-43	2.38E-44	1.50E-45	9.49E-47	6.00E-48	3.79E-49	2.40E-50	1.52E-51
0.065243	0.052397	4.21E-02	3.40E-02	2.74E-02	2.21E-02	1.79E-02	1.45E-02	1.18E-02	9.55E-03	7.76E-03	6.31E-03	5.14E-03	4.19E-03	3.41E-03
3.17E-01	2.99E-01	2.83E-01	2.68E-01	2.54E-01	2.42E-01	2.30E-01	2.19E-01	2.09E-01	1.99E-01	1.91E-01	1.82E-01	1.75E-01	1.67E-01	1.60E-01
0.110427	0.098616	8.82E-02	7.90E-02	7.09E-02	6.37E-02	5.73E-02	5.16E-02	4.66E-02	4.20E-02	3.80E-02	3.44E-02	3.11E-02	2.82E-02	2.56E-02
6.96E-01	6.61E-01	6.29E-01	6.00E-01	5.73E-01	5.48E-01	5.24E-01	5.03E-01	4.82E-01	4.63E-01	4.46E-01	4.29E-01	4.13E-01	3.99E-01	3.85E-01
3.96E-01	3.76E-01	3.58E-01	3.41E-01	3.25E-01	3.11E-01	2.98E-01	2.85E-01	2.73E-01	2.62E-01	2.52E-01	2.43E-01	2.34E-01	2.25E-01	2.17E-01
2.28E+00	2.17E+00	2.07E+00	1.97E+00	1.88E+00	1.80E+00	1.72E+00	1.65E+00	1.58E+00	1.52E+00	1.46E+00	1.41E+00	1.36E+00	1.31E+00	1.26E+00
1.02309	0.971634	0.924302	0.880646	8.40E-01	8.03E-01	7.68E-01	7.36E-01	7.06E-01	6.77E-01	6.51E-01	6.26E-01	6.03E-01	5.81E-01	5.61E-01
6.65E-01	6.32E-01	6.01E-01	5.73E-01	5.47E-01	5.23E-01	5.01E-01	4.80E-01	4.61E-01	4.43E-01	4.26E-01	4.10E-01	3.95E-01	3.81E-01	3.67E-01
1.69E+01	1.60E+01	1.53E+01	1.46E+01	1.39E+01	1.33E+01	1.27E+01	1.22E+01	1.17E+01	1.13E+01	1.08E+01	1.04E+01	1.00E+01	9.69E+00	9.36E+00
8.47E-32	6.54E-33	5.06E-34	3.92E-35	3.04E-36	2.36E-37	1.84E-38	1.43E-39	1.11E-40	8.70E-42	6.80E-43	5.32E-44	4.16E-45	3.26E-46	2.56E-47
1.33E+00	1.27E+00	1.21E+00	1.15E+00	1.10E+00	1.05E+00	1.00E+00	9.63E-01	9.25E-01	8.88E-01	8.54E-01	8.23E-01	7.93E-01	7.65E-01	7.38E-01
1.71E+00	1.61E+00	1.52E+00	1.44E+00	1.37E+00	1.30E+00	1.23E+00	1.18E+00	1.12E+00	1.07E+00	1.02E+00	9.76E-01	9.34E-01	8.95E-01	8.58E-01
3.38E-60	2.99E-62	2.64E-64	2.34E-66	2.08E-68	1.85E-70	1.65E-72	1.47E-74	1.31E-76	1.17E-78	1.04E-80	9.35E-83	8.37E-85	7.50E-87	6.73E-89
0.300953	0.285715	0.271701	0.258778	0.246831	2.36E-01	2.25E-01	2.16E-01	2.07E-01	1.99E-01	1.91E-01	1.84E-01	1.77E-01	1.70E-01	1.64E-01
5.47E-55	7.57E-57	1.05E-58	1.45E-60	2.02E-62	2.81E-64	3.92E-66	5.47E-68	7.63E-70	1.07E-71	1.49E-73	2.09E-75	2.93E-77	4.12E-79	5.78E-81
3.79E+00	3.60E+00	3.43E+00	3.27E+00	3.12E+00	2.99E+00	2.86E+00	2.74E+00	2.63E+00	2.53E+00	2.43E+00	2.34E+00	2.26E+00	2.18E+00	2.10E+00
4.42E-01	4.20E-01	4.00E-01	3.81E-01	3.63E-01	3.47E-01	3.32E-01	3.18E-01	3.05E-01	2.93E-01	2.82E-01	2.71E-01	2.61E-01	2.51E-01	2.43E-01
4.49E-01	4.26E-01	4.06E-01	3.87E-01	3.70E-01	3.54E-01	3.38E-01	3.24E-01	3.11E-01	2.99E-01	2.88E-01	2.77E-01	2.67E-01	2.58E-01	2.49E-01
7.13E-01	6.78E-01	6.45E-01	6.15E-01	5.87E-01	5.62E-01	5.38E-01	5.15E-01	4.95E-01	4.75E-01	4.57E-01	4.40E-01	4.24E-01	4.09E-01	3.95E-01
0.355713	0.337939	0.321588	0.306507	0.292561	0.279634	0.267626	2.56E-01	2.46E-01	2.36E-01	2.27E-01	2.19E-01	2.11E-01	2.03E-01	1.96E-01
2.27E-01	2.15E-01	2.05E-01	1.95E-01	1.87E-01	1.78E-01	1.71E-01	1.64E-01	1.57E-01	1.51E-01	1.45E-01	1.40E-01	1.35E-01	1.30E-01	1.25E-01
2.44E-01	2.31E-01	2.20E-01	2.10E-01	2.00E-01	1.91E-01	1.83E-01	1.75E-01	1.68E-01	1.61E-01	1.55E-01	1.49E-01	1.43E-01	1.38E-01	1.33E-01
3.96E-01	3.77E-01	3.59E-01	3.42E-01	3.26E-01	3.12E-01	2.99E-01	2.86E-01	2.75E-01	2.64E-01	2.54E-01	2.44E-01	2.36E-01	2.27E-01	2.19E-01
1.41E+00	1.34E+00	1.28E+00	1.22E+00	1.16E+00	1.11E+00	1.07E+00	1.02E+00	9.81E-01	9.42E-01	9.06E-01	8.72E-01	8.40E-01	8.10E-01	7.82E-01
2.37E-87	2.35E-90	2.34E-93	2.33E-96	2.32E-99	########	########	########	########	########	########	########	########	########	########

4.65E-01	4.41E-01	4.18E-01	3.98E-01	3.78E-01	3.61E-01	3.44E-01	3.29E-01	3.15E-01	3.01E-01	2.89E-01	2.77E-01	2.66E-01	2.56E-01	2.46E-01
4.89E+00	4.65E+00	4.43E+00	4.22E+00	4.03E+00	3.86E+00	3.69E+00	3.54E+00	3.40E+00	3.27E+00	3.14E+00	3.03E+00	2.92E+00	2.82E+00	2.72E+00
3.96E+00	3.77E+00	3.59E+00	3.42E+00	3.26E+00	3.12E+00	2.99E+00	2.87E+00	2.75E+00	2.64E+00	2.54E+00	2.45E+00	2.36E+00	2.27E+00	2.19E+00
1.47E-01	1.40E-01	1.33E-01	1.27E-01	1.21E-01	1.16E-01	1.11E-01	1.06E-01	1.02E-01	9.78E-02	9.41E-02	9.06E-02	8.73E-02	8.42E-02	8.12E-02
6.89E+00	6.55E+00	6.24E+00	5.95E+00	5.68E+00	5.43E+00	5.20E+00	4.99E+00	4.79E+00	4.60E+00	4.42E+00	4.26E+00	4.10E+00	3.96E+00	3.82E+00
0.164392	0.156219	0.148701	0.141765	0.135351	0.129405	0.123881	1.19E-01	1.14E-01	1.09E-01	1.05E-01	1.01E-01	9.76E-02	9.41E-02	9.09E-02
8.26E-01	7.85E-01	7.47E-01	7.13E-01	6.81E-01	6.51E-01	6.23E-01	5.98E-01	5.73E-01	5.51E-01	5.30E-01	5.10E-01	4.92E-01	4.74E-01	4.58E-01
5.23E-02	4.55E-02	3.97E-02	3.46E-02	3.03E-02	2.65E-02	2.32E-02	2.04E-02	1.79E-02	1.58E-02	1.39E-02	1.22E-02	1.08E-02	9.53E-03	8.42E-03
8.47E-01	8.04E-01	7.66E-01	7.30E-01	6.96E-01	6.66E-01	6.37E-01	6.11E-01	5.86E-01	5.63E-01	5.41E-01	5.20E-01	5.01E-01	4.83E-01	4.66E-01
0.17323	0.164605	0.156671	1.49E-01	1.43E-01	1.36E-01	1.30E-01	1.25E-01	1.20E-01	1.15E-01	1.11E-01	1.07E-01	1.03E-01	9.91E-02	9.56E-02
3.33E-01	3.16E-01	3.01E-01	2.87E-01	2.74E-01	2.62E-01	2.51E-01	2.41E-01	2.31E-01	2.22E-01	2.13E-01	2.05E-01	1.98E-01	1.91E-01	1.84E-01
2.36E-01	2.25E-01	2.14E-01	2.04E-01	1.95E-01	1.86E-01	1.78E-01	1.71E-01	1.64E-01	1.58E-01	1.52E-01	1.46E-01	1.41E-01	1.36E-01	1.31E-01
1.18E+00	1.09E+00	1.01E+00	9.41E-01	8.76E-01	8.17E-01	7.62E-01	7.12E-01	6.66E-01	6.24E-01	5.85E-01	5.49E-01	5.15E-01	4.84E-01	4.56E-01
5.07E-01	4.81E-01	4.58E-01	4.37E-01	4.17E-01	3.99E-01	3.81E-01	3.66E-01	3.51E-01	3.37E-01	3.24E-01	3.12E-01	3.00E-01	2.89E-01	2.79E-01
3.50E-01	3.33E-01	3.17E-01	3.02E-01	2.88E-01	2.75E-01	2.63E-01	2.52E-01	2.42E-01	2.32E-01	2.23E-01	2.15E-01	2.07E-01	2.00E-01	1.93E-01
3.31E-17	8.51E-18	2.19E-18	5.64E-19	1.46E-19	3.76E-20	9.74E-21	2.52E-21	6.55E-22	1.70E-22	4.42E-23	1.15E-23	2.99E-24	7.81E-25	2.04E-25
1.16E+00	1.10E+00	1.05E+00	9.99E-01	9.54E-01	9.12E-01	8.73E-01	8.37E-01	8.03E-01	7.71E-01	7.42E-01	7.14E-01	6.88E-01	6.63E-01	6.40E-01
0.764876	0.72185	0.682381	0.646077	6.13E-01	5.82E-01	5.53E-01	5.26E-01	5.02E-01	4.79E-01	4.57E-01	4.37E-01	4.18E-01	4.00E-01	3.84E-01
1.07E-01	1.02E-01	9.66E-02	9.21E-02	8.79E-02	8.40E-02	8.04E-02	7.71E-02	7.40E-02	7.11E-02	6.83E-02	6.58E-02	6.33E-02	6.11E-02	5.89E-02
1.93E-02	1.66E-02	1.43E-02	1.23E-02	1.06E-02	9.19E-03	7.96E-03	6.90E-03	5.99E-03	5.20E-03	4.53E-03	3.94E-03	3.43E-03	2.99E-03	2.61E-03
0.847283	8.05E-01	7.67E-01	7.31E-01	6.98E-01	6.67E-01	6.39E-01	6.12E-01	5.88E-01	5.65E-01	5.43E-01	5.23E-01	5.04E-01	4.86E-01	4.69E-01
2.08E+00	1.98E+00	1.88E+00	1.79E+00	1.71E+00	1.64E+00	1.57E+00	1.50E+00	1.44E+00	1.39E+00	1.33E+00	1.28E+00	1.24E+00	1.19E+00	1.15E+00
1.75E-02	1.43E-02	1.17E-02	9.59E-03	7.87E-03	6.47E-03	5.32E-03	4.38E-03	3.61E-03	2.98E-03	2.46E-03	2.04E-03	1.69E-03	1.40E-03	1.16E-03
3.24E+00	3.03E+00	2.84E+00	2.67E+00	2.51E+00	2.37E+00	2.24E+00	2.11E+00	2.00E+00	1.89E+00	1.79E+00	1.70E+00	1.62E+00	1.54E+00	1.46E+00
4.05E-01	3.85E-01	3.66E-01	3.49E-01	3.33E-01	3.19E-01	3.05E-01	2.92E-01	2.81E-01	2.69E-01	2.59E-01	2.49E-01	2.40E-01	2.32E-01	2.24E-01
4.47E+00	4.25E+00	4.04E+00	3.84E+00	3.67E+00	3.50E+00	3.35E+00	3.20E+00	3.07E+00	2.95E+00	2.83E+00	2.72E+00	2.62E+00	2.52E+00	2.43E+00
4.07E-01	3.72E-01	3.41E-01	3.13E-01	2.87E-01	2.64E-01	2.43E-01	2.24E-01	2.07E-01	1.91E-01	1.77E-01	1.64E-01	1.52E-01	1.41E-01	1.31E-01
2.41E-01	2.20E-01	2.01E-01	1.84E-01	1.69E-01	1.55E-01	1.43E-01	1.31E-01	1.21E-01	1.12E-01	1.03E-01	9.56E-02	8.85E-02	8.20E-02	7.61E-02
1.44E-01	1.37E-01	1.30E-01	1.24E-01	1.19E-01	1.13E-01	1.08E-01	1.04E-01	9.98E-02	9.58E-02	9.22E-02	8.87E-02	8.55E-02	8.24E-02	7.95E-02
4.30E-65	2.47E-67	1.42E-69	8.14E-72	4.68E-74	2.70E-76	1.56E-78	9.01E-81	5.21E-83	3.02E-85	1.75E-87	1.02E-89	5.90E-92	3.43E-94	2.00E-96
3.53E-04	2.60E-04	1.92E-04	1.42E-04	1.05E-04	7.76E-05	5.76E-05	4.28E-05	3.18E-05	2.37E-05	1.76E-05	1.32E-05	9.82E-06	7.34E-06	5.49E-06
4.17E-89	3.54E-92	3.00E-95	2.56E-98	########	########	########	########	########	########	########	########	########	########	########
1.88E-01	1.79E-01	1.70E-01	1.62E-01	1.55E-01	1.48E-01	1.42E-01	1.36E-01	1.30E-01	1.25E-01	1.20E-01	1.16E-01	1.12E-01	1.08E-01	1.04E-01
2.53E-01	2.41E-01	2.29E-01	2.18E-01	2.08E-01	1.99E-01	1.90E-01	1.82E-01	1.75E-01	1.68E-01	1.61E-01	1.55E-01	1.50E-01	1.44E-01	1.39E-01
3.87E-14	1.28E-14	4.23E-15	1.40E-15	4.65E-16	1.54E-16	5.14E-17	1.71E-17	5.71E-18	1.91E-18	6.37E-19	2.13E-19	7.14E-20	2.39E-20	8.03E-21
3.00E+00	2.85E+00	2.71E+00	2.58E+00	2.47E+00	2.36E+00	2.26E+00	2.17E+00	2.08E+00	2.00E+00	1.92E+00	1.85E+00	1.78E+00	1.72E+00	1.66E+00
6.54E-01	6.22E-01	5.92E-01	5.64E-01	5.39E-01	5.15E-01	4.93E-01	4.73E-01	4.54E-01	4.36E-01	4.19E-01	4.03E-01	3.89E-01	3.75E-01	3.62E-01
2.26E-01	2.15E-01	2.04E-01	1.95E-01	1.86E-01	1.78E-01	1.70E-01	1.63E-01	1.57E-01	1.51E-01	1.45E-01	1.39E-01	1.34E-01	1.30E-01	1.25E-01
8.51E-32	6.77E-33	5.40E-34	4.31E-35	3.44E-36	2.75E-37	2.21E-38	1.77E-39	1.42E-40	1.14E-41	9.21E-43	7.42E-44	5.99E-45	4.83E-46	3.91E-47
8.02E-02	7.47E-02	6.96E-02	6.50E-02	6.08E-02	5.69E-02	5.33E-02	5.01E-02	4.71E-02	4.43E-02	4.17E-02	3.93E-02	3.71E-02	3.50E-02	3.31E-02

4.39E+00	4.18E+00	3.98E+00	3.79E+00	3.62E+00	3.46E+00	3.31E+00	3.18E+00	3.05E+00	2.93E+00	2.82E+00	2.71E+00	2.61E+00	2.52E+00	2.43E+00
2.43E-15	7.38E-16	2.25E-16	6.86E-17	2.10E-17	6.41E-18	1.96E-18	6.02E-19	1.85E-19	5.68E-20	1.75E-20	5.39E-21	1.66E-21	5.13E-22	1.58E-22
5.09E-01	4.83E-01	4.60E-01	4.39E-01	4.19E-01	4.01E-01	3.84E-01	3.68E-01	3.53E-01	3.39E-01	3.26E-01	3.14E-01	3.02E-01	2.92E-01	2.82E-01
5.01E-01	4.76E-01	4.53E-01	4.32E-01	4.12E-01	3.94E-01	3.77E-01	3.62E-01	3.47E-01	3.34E-01	3.21E-01	3.09E-01	2.97E-01	2.87E-01	2.77E-01
4.62144	4.35082	4.10E+00	3.88E+00	3.67E+00	3.47E+00	3.29E+00	3.13E+00	2.97E+00	2.83E+00	2.69E+00	2.57E+00	2.45E+00	2.34E+00	2.24E+00
1.34E+00	1.27E+00	1.21E+00	1.15E+00	1.10E+00	1.05E+00	1.01E+00	9.66E-01	9.27E-01	8.91E-01	8.56E-01	8.24E-01	7.94E-01	7.66E-01	7.40E-01
5.23E-01	4.97E-01	4.73E-01	4.51E-01	4.31E-01	4.12E-01	3.94E-01	3.78E-01	3.63E-01	3.49E-01	3.35E-01	3.23E-01	3.11E-01	3.00E-01	2.90E-01
1.75E-01	1.66E-01	1.58E-01	1.51E-01	1.44E-01	1.38E-01	1.32E-01	1.26E-01	1.21E-01	1.16E-01	1.12E-01	1.08E-01	1.04E-01	1.00E-01	9.66E-02
3.18E+01	3.02E+01	2.88E+01	2.75E+01	2.62E+01	2.51E+01	2.40E+01	2.31E+01	2.21E+01	2.13E+01	2.05E+01	1.97E+01	1.90E+01	1.84E+01	1.77E+01
7.24E-01	6.88E-01	6.55E-01	6.24E-01	5.96E-01	5.70E-01	5.45E-01	5.22E-01	5.01E-01	4.81E-01	4.63E-01	4.45E-01	4.29E-01	4.14E-01	3.99E-01
2.2385	2.12265	2.01615	1.91798	1.82726	1.74322	1.6652	1.59262	1.52E+00	1.46E+00	1.40E+00	1.35E+00	1.30E+00	1.25E+00	1.20E+00
4.26E-01	4.05E-01	3.85E-01	3.67E-01	3.50E-01	3.35E-01	3.20E-01	3.07E-01	2.95E-01	2.83E-01	2.72E-01	2.62E-01	2.52E-01	2.43E-01	2.35E-01
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
2.95E-01	2.80E-01	2.67E-01	2.54E-01	2.42E-01	2.32E-01	2.22E-01	2.12E-01	2.04E-01	1.96E-01	1.88E-01	1.81E-01	1.74E-01	1.68E-01	1.62E-01
2.86E-13	9.24E-14	2.99E-14	9.71E-15	3.16E-15	1.03E-15	3.34E-16	1.09E-16	3.56E-17	1.16E-17	3.81E-18	1.25E-18	4.09E-19	1.34E-19	4.41E-20
3.09E-01	2.93E-01	2.79E-01	2.66E-01	2.54E-01	2.43E-01	2.33E-01	2.23E-01	2.14E-01	2.05E-01	1.98E-01	1.90E-01	1.83E-01	1.77E-01	1.70E-01
0.00035	0.000261	0.000195	0.000145	1.09E-04	8.17E-05	6.14E-05	4.61E-05	3.47E-05	2.62E-05	1.97E-05	1.49E-05	1.13E-05	8.52E-06	6.45E-06
2.22E-37	1.26E-38	7.13E-40	4.05E-41	2.30E-42	1.31E-43	7.48E-45	4.27E-46	2.44E-47	1.40E-48	8.00E-50	4.59E-51	2.63E-52	1.51E-53	8.70E-55
8.88E-73	2.96E-75	9.90E-78	3.31E-80	1.11E-82	3.72E-85	1.25E-87	4.21E-90	1.42E-92	4.78E-95	1.61E-97	########	########	########	########
5.82E-01	5.53E-01	5.27E-01	5.02E-01	4.80E-01	4.59E-01	4.39E-01	4.21E-01	4.04E-01	3.88E-01	3.73E-01	3.60E-01	3.47E-01	3.34E-01	3.23E-01
1.33E-01	1.26E-01	1.20E-01	1.14E-01	1.09E-01	1.04E-01	9.98E-02	9.56E-02	9.17E-02	8.81E-02	8.47E-02	8.15E-02	7.85E-02	7.57E-02	7.31E-02
0.186195	0.176886	1.68E-01	1.60E-01	1.53E-01	1.46E-01	1.40E-01	1.34E-01	1.29E-01	1.24E-01	1.19E-01	1.14E-01	1.10E-01	1.06E-01	1.02E-01
2.87E-02	2.64E-02	2.44E-02	2.25E-02	2.09E-02	1.93E-02	1.79E-02	1.67E-02	1.55E-02	1.44E-02	1.35E-02	1.26E-02	1.17E-02	1.10E-02	1.03E-02
1.14E-01	1.09E-01	1.03E-01	9.85E-02	9.40E-02	8.99E-02	8.60E-02	8.25E-02	7.91E-02	7.60E-02	7.31E-02	7.04E-02	6.78E-02	6.54E-02	6.31E-02
4.45E-65	2.53E-67	1.44E-69	8.24E-72	4.71E-74	2.70E-76	1.54E-78	8.87E-81	5.09E-83	2.93E-85	1.69E-87	9.72E-90	5.61E-92	3.24E-94	1.87E-96
3.18E+01	**3.02E+01**	**2.88E+01**	**2.75E+01**	**2.62E+01**	**2.51E+01**	**2.40E+01**	**2.31E+01**	**2.21E+01**	**2.13E+01**	**2.05E+01**	**1.97E+01**	**1.90E+01**	**1.84E+01**	**1.77E+01**

440	450	460	470	480	490	500	510	520	530	540	550	560	570	580
2.39E-01	2.31E-01	2.24E-01	2.17E-01	2.10E-01	2.04E-01	1.98E-01	1.92E-01	1.86E-01	1.81E-01	1.76E-01	1.71E-01	1.67E-01	1.62E-01	1.58E-01
2.93E-01	2.84E-01	2.74E-01	2.66E-01	2.57E-01	2.49E-01	2.42E-01	2.35E-01	2.28E-01	2.22E-01	2.16E-01	2.10E-01	2.04E-01	1.99E-01	1.94E-01
1.83E+00	1.76E+00	1.71E+00	1.65E+00	1.60E+00	1.55E+00	1.51E+00	1.46E+00	1.42E+00	1.38E+00	1.34E+00	1.31E+00	1.27E+00	1.24E+00	1.21E+00
5.57E-18	2.22E-18	8.87E-19	3.54E-19	1.42E-19	5.67E-20	2.27E-20	9.10E-21	3.65E-21	1.46E-21	5.87E-22	2.36E-22	9.46E-23	3.80E-23	1.53E-23
1.73E-53	1.07E-54	6.68E-56	4.16E-57	2.59E-58	1.62E-59	1.01E-60	6.29E-62	3.92E-63	2.45E-64	1.53E-65	9.58E-67	6.00E-68	3.75E-69	2.35E-70
4.31E-01	4.16E-01	4.02E-01	3.89E-01	3.77E-01	3.65E-01	3.54E-01	3.44E-01	3.34E-01	3.24E-01	3.15E-01	3.06E-01	2.98E-01	2.90E-01	2.82E-01
1.56E+00	1.51E+00	1.46E+00	1.41E+00	1.37E+00	1.32E+00	1.29E+00	1.25E+00	1.21E+00	1.18E+00	1.15E+00	1.11E+00	1.08E+00	1.06E+00	1.03E+00
1.64E-01	1.58E-01	1.53E-01	1.48E-01	1.44E-01	1.39E-01	1.35E-01	1.31E-01	1.27E-01	1.24E-01	1.20E-01	1.17E-01	1.14E-01	1.11E-01	1.08E-01
1.30E-01	1.26E-01	1.22E-01	1.18E-01	1.14E-01	1.10E-01	1.07E-01	1.03E-01	1.00E-01	9.73E-02	9.45E-02	9.18E-02	8.92E-02	8.67E-02	8.43E-02
9.65E-53	6.13E-54	3.89E-55	2.47E-56	1.57E-57	1.00E-58	6.38E-60	4.06E-61	2.59E-62	1.65E-63	1.06E-64	6.74E-66	4.31E-67	2.75E-68	1.76E-69
2.79E-03	2.28E-03	1.86E-03	1.52E-03	1.25E-03	1.02E-03	8.36E-04	6.85E-04	5.62E-04	4.62E-04	3.79E-04	3.12E-04	2.56E-04	2.11E-04	1.74E-04
1.54E-01	1.48E-01	1.42E-01	1.37E-01	1.32E-01	1.27E-01	1.22E-01	1.18E-01	1.14E-01	1.10E-01	1.06E-01	1.03E-01	9.94E-02	9.62E-02	9.31E-02
2.32E-02	2.11E-02	1.92E-02	1.74E-02	1.59E-02	1.45E-02	1.32E-02	1.20E-02	1.10E-02	1.00E-02	9.16E-03	8.37E-03	7.66E-03	7.00E-03	6.41E-03
3.72E-01	3.59E-01	3.48E-01	3.36E-01	3.26E-01	3.16E-01	3.06E-01	2.97E-01	2.89E-01	2.81E-01	2.73E-01	2.65E-01	2.58E-01	2.52E-01	2.45E-01
2.10E-01	2.03E-01	1.96E-01	1.90E-01	1.84E-01	1.78E-01	1.73E-01	1.67E-01	1.62E-01	1.58E-01	1.53E-01	1.49E-01	1.45E-01	1.41E-01	1.37E-01
1.22E+00	1.18E+00	1.14E+00	1.11E+00	1.07E+00	1.04E+00	1.01E+00	9.79E-01	9.51E-01	9.24E-01	8.98E-01	8.74E-01	8.51E-01	8.28E-01	8.07E-01
5.41E-01	5.23E-01	5.05E-01	4.89E-01	4.73E-01	4.59E-01	4.45E-01	4.31E-01	4.19E-01	4.06E-01	3.95E-01	3.84E-01	3.73E-01	3.63E-01	3.54E-01
3.55E-01	3.43E-01	3.32E-01	3.21E-01	3.11E-01	3.02E-01	2.93E-01	2.84E-01	2.76E-01	2.68E-01	2.61E-01	2.54E-01	2.47E-01	2.40E-01	2.34E-01
9.04E+00	8.74E+00	8.46E+00	8.19E+00	7.94E+00	7.69E+00	7.47E+00	7.25E+00	7.04E+00	6.84E+00	6.65E+00	6.47E+00	6.30E+00	6.13E+00	5.98E+00
2.01E-48	1.58E-49	1.24E-50	9.74E-52	7.67E-53	6.04E-54	4.76E-55	3.75E-56	2.96E-57	2.34E-58	1.85E-59	1.46E-60	1.15E-61	9.13E-63	7.22E-64
7.13E-01	6.89E-01	6.67E-01	6.46E-01	6.26E-01	6.07E-01	5.89E-01	5.71E-01	5.55E-01	5.39E-01	5.25E-01	5.10E-01	4.97E-01	4.84E-01	4.71E-01
8.23E-01	7.90E-01	7.59E-01	7.30E-01	7.02E-01	6.76E-01	6.52E-01	6.28E-01	6.06E-01	5.85E-01	5.65E-01	5.45E-01	5.27E-01	5.10E-01	4.93E-01
6.05E-91	5.43E-93	4.89E-95	4.40E-97	3.96E-99	########	########	########	########	########	########	########	########	########	########
1.58E-01	1.53E-01	1.48E-01	1.43E-01	1.38E-01	1.34E-01	1.30E-01	1.26E-01	1.22E-01	1.19E-01	1.15E-01	1.12E-01	1.09E-01	1.06E-01	1.03E-01
8.13E-83	1.14E-84	1.61E-86	2.27E-88	3.20E-90	4.51E-92	6.37E-94	8.99E-96	1.27E-97	1.80E-99	########	########	########	########	########
2.03E+00	1.97E+00	1.90E+00	1.84E+00	1.79E+00	1.73E+00	1.68E+00	1.63E+00	1.58E+00	1.54E+00	1.50E+00	1.46E+00	1.42E+00	1.38E+00	1.35E+00
2.34E-01	2.26E-01	2.19E-01	2.12E-01	2.05E-01	1.98E-01	1.92E-01	1.87E-01	1.81E-01	1.76E-01	1.71E-01	1.66E-01	1.62E-01	1.57E-01	1.53E-01
2.40E-01	2.32E-01	2.25E-01	2.18E-01	2.11E-01	2.04E-01	1.98E-01	1.92E-01	1.87E-01	1.82E-01	1.77E-01	1.72E-01	1.67E-01	1.63E-01	1.59E-01
3.81E-01	3.69E-01	3.57E-01	3.45E-01	3.34E-01	3.24E-01	3.15E-01	3.05E-01	2.96E-01	2.88E-01	2.80E-01	2.72E-01	2.65E-01	2.58E-01	2.52E-01
1.89E-01	1.83E-01	1.77E-01	1.71E-01	1.66E-01	1.61E-01	1.56E-01	1.51E-01	1.47E-01	1.43E-01	1.39E-01	1.35E-01	1.31E-01	1.28E-01	1.24E-01
1.21E-01	1.17E-01	1.13E-01	1.10E-01	1.06E-01	1.03E-01	1.00E-01	9.71E-02	9.43E-02	9.16E-02	8.91E-02	8.67E-02	8.44E-02	8.21E-02	8.00E-02
1.28E-01	1.24E-01	1.20E-01	1.16E-01	1.12E-01	1.09E-01	1.05E-01	1.02E-01	9.92E-02	9.63E-02	9.36E-02	9.09E-02	8.84E-02	8.60E-02	8.37E-02
2.12E-01	2.05E-01	1.98E-01	1.92E-01	1.86E-01	1.80E-01	1.75E-01	1.70E-01	1.65E-01	1.60E-01	1.56E-01	1.51E-01	1.47E-01	1.43E-01	1.40E-01
7.56E-01	7.30E-01	7.07E-01	6.84E-01	6.63E-01	6.43E-01	6.23E-01	6.05E-01	5.88E-01	5.71E-01	5.55E-01	5.40E-01	5.26E-01	5.12E-01	4.98E-01
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########

2.37E-01	2.28E-01	2.20E-01	2.13E-01	2.05E-01	1.98E-01	1.92E-01	1.86E-01	1.80E-01	1.74E-01	1.69E-01	1.64E-01	1.59E-01	1.54E-01	1.50E-01
2.63E+00	2.54E+00	2.46E+00	2.38E+00	2.31E+00	2.24E+00	2.17E+00	2.11E+00	2.05E+00	1.99E+00	1.94E+00	1.88E+00	1.83E+00	1.79E+00	1.74E+00
2.12E+00	2.05E+00	1.98E+00	1.92E+00	1.86E+00	1.80E+00	1.75E+00	1.70E+00	1.65E+00	1.60E+00	1.56E+00	1.52E+00	1.48E+00	1.44E+00	1.40E+00
7.85E-02	7.59E-02	7.34E-02	7.11E-02	6.88E-02	6.67E-02	6.47E-02	6.28E-02	6.10E-02	5.93E-02	5.77E-02	5.61E-02	5.46E-02	5.31E-02	5.18E-02
3.69E+00	3.57E+00	3.45E+00	3.35E+00	3.24E+00	3.14E+00	3.05E+00	2.96E+00	2.87E+00	2.79E+00	2.72E+00	2.64E+00	2.57E+00	2.51E+00	2.44E+00
8.78E-02	8.49E-02	8.21E-02	7.95E-02	7.70E-02	7.46E-02	7.24E-02	7.03E-02	6.82E-02	6.63E-02	6.45E-02	6.27E-02	6.10E-02	5.94E-02	5.79E-02
4.42E-01	4.28E-01	4.14E-01	4.01E-01	3.88E-01	3.77E-01	3.65E-01	3.55E-01	3.44E-01	3.35E-01	3.26E-01	3.17E-01	3.08E-01	3.00E-01	2.92E-01
7.45E-03	6.59E-03	5.84E-03	5.18E-03	4.59E-03	4.07E-03	3.62E-03	3.22E-03	2.86E-03	2.54E-03	2.26E-03	2.02E-03	1.80E-03	1.60E-03	1.43E-03
4.50E-01	4.35E-01	4.21E-01	4.07E-01	3.95E-01	3.82E-01	3.71E-01	3.60E-01	3.49E-01	3.39E-01	3.30E-01	3.21E-01	3.12E-01	3.04E-01	2.96E-01
9.24E-02	8.93E-02	8.64E-02	8.36E-02	8.10E-02	7.85E-02	7.62E-02	7.39E-02	7.18E-02	6.97E-02	6.78E-02	6.59E-02	6.42E-02	6.25E-02	6.08E-02
1.78E-01	1.72E-01	1.66E-01	1.61E-01	1.56E-01	1.51E-01	1.47E-01	1.43E-01	1.38E-01	1.35E-01	1.31E-01	1.27E-01	1.24E-01	1.21E-01	1.17E-01
1.26E-01	1.22E-01	1.18E-01	1.14E-01	1.11E-01	1.07E-01	1.04E-01	1.01E-01	9.83E-02	9.55E-02	9.29E-02	9.03E-02	8.79E-02	8.56E-02	8.34E-02
4.29E-01	4.04E-01	3.81E-01	3.60E-01	3.40E-01	3.21E-01	3.04E-01	2.87E-01	2.72E-01	2.58E-01	2.44E-01	2.32E-01	2.20E-01	2.08E-01	1.98E-01
2.70E-01	2.61E-01	2.52E-01	2.44E-01	2.36E-01	2.29E-01	2.22E-01	2.16E-01	2.09E-01	2.03E-01	1.98E-01	1.92E-01	1.87E-01	1.82E-01	1.77E-01
1.86E-01	1.80E-01	1.74E-01	1.68E-01	1.63E-01	1.58E-01	1.53E-01	1.48E-01	1.44E-01	1.40E-01	1.36E-01	1.32E-01	1.29E-01	1.25E-01	1.22E-01
5.32E-26	1.39E-26	3.63E-27	9.51E-28	2.49E-28	6.52E-29	1.71E-29	4.49E-30	1.18E-30	3.09E-31	8.13E-32	2.14E-32	5.63E-33	1.48E-33	3.90E-34
6.19E-01	5.98E-01	5.78E-01	5.60E-01	5.43E-01	5.26E-01	5.10E-01	4.95E-01	4.81E-01	4.67E-01	4.54E-01	4.42E-01	4.30E-01	4.19E-01	4.08E-01
3.68E-01	3.53E-01	3.40E-01	3.27E-01	3.14E-01	3.02E-01	2.91E-01	2.81E-01	2.71E-01	2.61E-01	2.52E-01	2.44E-01	2.36E-01	2.28E-01	2.20E-01
5.69E-02	5.50E-02	5.32E-02	5.15E-02	4.99E-02	4.84E-02	4.69E-02	4.55E-02	4.42E-02	4.29E-02	4.17E-02	4.06E-02	3.95E-02	3.85E-02	3.75E-02
2.28E-03	2.00E-03	1.75E-03	1.53E-03	1.34E-03	1.18E-03	1.03E-03	9.05E-04	7.95E-04	6.99E-04	6.14E-04	5.40E-04	4.76E-04	4.19E-04	3.69E-04
4.53E-01	4.38E-01	4.24E-01	4.10E-01	3.97E-01	3.85E-01	3.74E-01	3.63E-01	3.52E-01	3.42E-01	3.33E-01	3.24E-01	3.15E-01	3.07E-01	2.99E-01
1.11E+00	1.08E+00	1.04E+00	1.01E+00	9.76E-01	9.47E-01	9.18E-01	8.91E-01	8.66E-01	8.41E-01	8.18E-01	7.96E-01	7.75E-01	7.54E-01	7.35E-01
9.63E-04	8.00E-04	6.65E-04	5.53E-04	4.60E-04	3.84E-04	3.20E-04	2.67E-04	2.23E-04	1.86E-04	1.55E-04	1.30E-04	1.08E-04	9.08E-05	7.60E-05
1.39E+00	1.33E+00	1.26E+00	1.21E+00	1.15E+00	1.10E+00	1.05E+00	1.01E+00	9.64E-01	9.24E-01	8.85E-01	8.49E-01	8.14E-01	7.81E-01	7.50E-01
2.16E-01	2.09E-01	2.02E-01	1.96E-01	1.90E-01	1.84E-01	1.78E-01	1.73E-01	1.68E-01	1.63E-01	1.59E-01	1.54E-01	1.50E-01	1.46E-01	1.43E-01
2.35E+00	2.27E+00	2.19E+00	2.12E+00	2.05E+00	1.98E+00	1.92E+00	1.86E+00	1.81E+00	1.75E+00	1.70E+00	1.65E+00	1.61E+00	1.56E+00	1.52E+00
1.21E-01	1.13E-01	1.05E-01	9.78E-02	9.12E-02	8.50E-02	7.93E-02	7.41E-02	6.92E-02	6.47E-02	6.05E-02	5.66E-02	5.30E-02	4.96E-02	4.65E-02
7.06E-02	6.56E-02	6.10E-02	5.67E-02	5.28E-02	4.92E-02	4.58E-02	4.27E-02	3.99E-02	3.72E-02	3.48E-02	3.25E-02	3.04E-02	2.84E-02	2.66E-02
7.68E-02	7.43E-02	7.18E-02	6.95E-02	6.74E-02	6.53E-02	6.33E-02	6.15E-02	5.97E-02	5.80E-02	5.64E-02	5.48E-02	5.34E-02	5.20E-02	5.06E-02
1.16E-98	########	########	########	########	########	########	########	########	########	########	########	########	########	########
4.11E-06	3.08E-06	2.31E-06	1.73E-06	1.30E-06	9.75E-07	7.33E-07	5.51E-07	4.15E-07	3.12E-07	2.35E-07	1.77E-07	1.34E-07	1.01E-07	7.61E-08
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.00E-01	9.70E-02	9.38E-02	9.08E-02	8.80E-02	8.52E-02	8.27E-02	8.02E-02	7.79E-02	7.57E-02	7.36E-02	7.16E-02	6.96E-02	6.78E-02	6.60E-02
1.34E-01	1.30E-01	1.26E-01	1.21E-01	1.18E-01	1.14E-01	1.10E-01	1.07E-01	1.04E-01	1.01E-01	9.82E-02	9.54E-02	9.28E-02	9.03E-02	8.80E-02
2.69E-21	9.05E-22	3.04E-22	1.02E-22	3.45E-23	1.16E-23	3.92E-24	1.32E-24	4.46E-25	1.51E-25	5.09E-26	1.72E-26	5.82E-27	1.97E-27	6.67E-28
1.60E+00	1.55E+00	1.50E+00	1.45E+00	1.41E+00	1.36E+00	1.32E+00	1.28E+00	1.25E+00	1.21E+00	1.18E+00	1.15E+00	1.12E+00	1.09E+00	1.06E+00
3.50E-01	3.38E-01	3.27E-01	3.17E-01	3.07E-01	2.97E-01	2.88E-01	2.80E-01	2.72E-01	2.64E-01	2.57E-01	2.50E-01	2.43E-01	2.37E-01	2.31E-01
1.21E-01	1.17E-01	1.13E-01	1.09E-01	1.06E-01	1.03E-01	9.97E-02	9.68E-02	9.40E-02	9.14E-02	8.88E-02	8.64E-02	8.41E-02	8.19E-02	7.98E-02
3.16E-48	2.56E-49	2.07E-50	1.68E-51	1.36E-52	1.10E-53	8.97E-55	7.29E-56	5.92E-57	4.82E-58	3.92E-59	3.19E-60	2.60E-61	2.12E-62	1.73E-63
3.13E-02	2.97E-02	2.81E-02	2.66E-02	2.53E-02	2.40E-02	2.28E-02	2.17E-02	2.06E-02	1.96E-02	1.87E-02	1.78E-02	1.70E-02	1.62E-02	1.54E-02

2.35E+00	2.27E+00	2.20E+00	2.13E+00	2.06E+00	2.00E+00	1.94E+00	1.88E+00	1.83E+00	1.78E+00	1.73E+00	1.68E+00	1.64E+00	1.59E+00	1.55E+00
4.89E-23	1.51E-23	4.69E-24	1.45E-24	4.50E-25	1.40E-25	4.33E-26	1.35E-26	4.18E-27	1.30E-27	4.04E-28	1.26E-28	3.92E-29	1.22E-29	3.81E-30
2.72E-01	2.63E-01	2.54E-01	2.46E-01	2.39E-01	2.31E-01	2.24E-01	2.18E-01	2.12E-01	2.06E-01	2.00E-01	1.94E-01	1.89E-01	1.84E-01	1.80E-01
2.67E-01	2.58E-01	2.50E-01	2.42E-01	2.34E-01	2.27E-01	2.20E-01	2.14E-01	2.08E-01	2.02E-01	1.96E-01	1.91E-01	1.86E-01	1.81E-01	1.76E-01
2.14E+00	2.05E+00	1.97E+00	1.89E+00	1.81E+00	1.74E+00	1.67E+00	1.61E+00	1.55E+00	1.49E+00	1.43E+00	1.38E+00	1.33E+00	1.28E+00	1.24E+00
7.14E-01	6.91E-01	6.68E-01	6.47E-01	6.27E-01	6.08E-01	5.90E-01	5.72E-01	5.56E-01	5.40E-01	5.25E-01	5.11E-01	4.97E-01	4.84E-01	4.72E-01
2.80E-01	2.70E-01	2.62E-01	2.53E-01	2.46E-01	2.38E-01	2.31E-01	2.24E-01	2.18E-01	2.12E-01	2.06E-01	2.00E-01	1.95E-01	1.90E-01	1.85E-01
9.33E-02	9.02E-02	8.72E-02	8.45E-02	8.18E-02	7.93E-02	7.69E-02	7.47E-02	7.25E-02	7.04E-02	6.85E-02	6.66E-02	6.48E-02	6.31E-02	6.15E-02
1.71E+01	1.66E+01	1.60E+01	1.55E+01	1.50E+01	1.46E+01	1.42E+01	1.38E+01	1.34E+01	1.30E+01	1.26E+01	1.23E+01	1.20E+01	1.17E+01	1.14E+01
3.86E-01	3.73E-01	3.61E-01	3.49E-01	3.38E-01	3.28E-01	3.18E-01	3.08E-01	2.99E-01	2.91E-01	2.83E-01	2.75E-01	2.68E-01	2.61E-01	2.54E-01
1.16E+00	1.12E+00	1.08E+00	1.04E+00	1.01E+00	9.73E-01	9.42E-01	9.12E-01	8.84E-01	8.57E-01	8.31E-01	8.07E-01	7.84E-01	7.61E-01	7.40E-01
2.26E-01	2.19E-01	2.12E-01	2.05E-01	1.98E-01	1.92E-01	1.86E-01	1.81E-01	1.76E-01	1.71E-01	1.66E-01	1.61E-01	1.57E-01	1.53E-01	1.49E-01
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.56E-01	1.51E-01	1.46E-01	1.42E-01	1.37E-01	1.33E-01	1.29E-01	1.25E-01	1.21E-01	1.18E-01	1.14E-01	1.11E-01	1.08E-01	1.05E-01	1.03E-01
1.45E-20	4.77E-21	1.57E-21	5.17E-22	1.71E-22	5.63E-23	1.86E-23	6.13E-24	2.03E-24	6.70E-25	2.22E-25	7.34E-26	2.43E-26	8.05E-27	2.67E-27
1.65E-01	1.59E-01	1.54E-01	1.49E-01	1.44E-01	1.40E-01	1.36E-01	1.32E-01	1.28E-01	1.24E-01	1.21E-01	1.17E-01	1.14E-01	1.11E-01	1.08E-01
4.89E-06	3.71E-06	2.81E-06	2.14E-06	1.62E-06	1.23E-06	9.39E-07	7.15E-07	5.45E-07	4.15E-07	3.17E-07	2.42E-07	1.84E-07	1.41E-07	1.08E-07
5.01E-56	2.88E-57	1.66E-58	9.58E-60	5.53E-61	3.19E-62	1.84E-63	1.07E-64	6.17E-66	3.57E-67	2.07E-68	1.20E-69	6.95E-71	4.03E-72	2.34E-73
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
3.12E-01	3.01E-01	2.92E-01	2.82E-01	2.74E-01	2.65E-01	2.57E-01	2.50E-01	2.43E-01	2.36E-01	2.29E-01	2.23E-01	2.17E-01	2.11E-01	2.06E-01
7.06E-02	6.82E-02	6.60E-02	6.39E-02	6.19E-02	5.99E-02	5.81E-02	5.64E-02	5.48E-02	5.32E-02	5.17E-02	5.03E-02	4.90E-02	4.77E-02	4.64E-02
9.90E-02	9.57E-02	9.25E-02	8.95E-02	8.67E-02	8.40E-02	8.15E-02	7.91E-02	7.68E-02	7.46E-02	7.25E-02	7.05E-02	6.86E-02	6.67E-02	6.50E-02
9.60E-03	9.00E-03	8.44E-03	7.92E-03	7.44E-03	6.99E-03	6.57E-03	6.18E-03	5.82E-03	5.48E-03	5.16E-03	4.87E-03	4.59E-03	4.34E-03	4.09E-03
6.09E-02	5.89E-02	5.70E-02	5.52E-02	5.34E-02	5.18E-02	5.02E-02	4.87E-02	4.73E-02	4.60E-02	4.47E-02	4.35E-02	4.23E-02	4.12E-02	4.01E-02
1.08E-98	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.71E+01	**1.66E+01**	**1.60E+01**	**1.55E+01**	**1.50E+01**	**1.46E+01**	**1.42E+01**	**1.38E+01**	**1.34E+01**	**1.30E+01**	**1.26E+01**	**1.23E+01**	**1.20E+01**	**1.17E+01**	**1.14E+01**

590	600	610	620	630	640	650	660	670	680	690	700	710	720	730
1.54E-01	1.50E-01	1.47E-01	1.43E-01	1.40E-01	1.36E-01	1.33E-01	1.30E-01	1.27E-01	1.25E-01	1.22E-01	1.19E-01	1.17E-01	1.14E-01	1.12E-01
1.89E-01	1.84E-01	1.80E-01	1.75E-01	1.71E-01	1.67E-01	1.63E-01	1.60E-01	1.56E-01	1.53E-01	1.49E-01	1.46E-01	1.43E-01	1.40E-01	1.37E-01
1.17E+00	1.15E+00	1.12E+00	1.09E+00	1.06E+00	1.04E+00	1.02E+00	9.92E-01	9.70E-01	9.49E-01	9.28E-01	9.08E-01	8.89E-01	8.71E-01	8.53E-01
6.15E-24	2.48E-24	9.97E-25	4.01E-25	1.62E-25	6.52E-26	2.63E-26	1.06E-26	4.28E-27	1.73E-27	6.97E-28	2.82E-28	1.14E-28	4.60E-29	1.86E-29
1.47E-71	9.23E-73	5.79E-74	3.63E-75	2.28E-76	1.43E-77	8.99E-79	5.65E-80	3.55E-81	2.23E-82	1.40E-83	8.83E-85	5.56E-86	3.50E-87	2.20E-88
2.75E-01	2.68E-01	2.61E-01	2.55E-01	2.49E-01	2.43E-01	2.37E-01	2.32E-01	2.26E-01	2.21E-01	2.16E-01	2.11E-01	2.07E-01	2.02E-01	1.98E-01
1.00E+00	9.78E-01	9.54E-01	9.31E-01	9.09E-01	8.88E-01	8.67E-01	8.48E-01	8.29E-01	8.10E-01	7.93E-01	7.76E-01	7.60E-01	7.44E-01	7.28E-01
1.05E-01	1.03E-01	1.00E-01	9.76E-02	9.52E-02	9.30E-02	9.08E-02	8.87E-02	8.67E-02	8.48E-02	8.30E-02	8.12E-02	7.94E-02	7.78E-02	7.62E-02
8.21E-02	7.99E-02	7.78E-02	7.58E-02	7.39E-02	7.21E-02	7.03E-02	6.86E-02	6.70E-02	6.54E-02	6.39E-02	6.24E-02	6.10E-02	5.97E-02	5.84E-02
1.13E-70	7.21E-72	4.62E-73	2.96E-74	1.90E-75	1.22E-76	7.79E-78	5.00E-79	3.21E-80	2.06E-81	1.32E-82	8.50E-84	5.46E-85	3.51E-86	2.26E-87
1.43E-04	1.18E-04	9.70E-05	7.99E-05	6.59E-05	5.44E-05	4.49E-05	3.71E-05	3.06E-05	2.53E-05	2.09E-05	1.73E-05	1.43E-05	1.18E-05	9.78E-06
9.01E-02	8.73E-02	8.47E-02	8.21E-02	7.96E-02	7.73E-02	7.50E-02	7.29E-02	7.08E-02	6.88E-02	6.69E-02	6.50E-02	6.32E-02	6.15E-02	5.99E-02
5.87E-03	5.38E-03	4.93E-03	4.52E-03	4.15E-03	3.81E-03	3.49E-03	3.21E-03	2.95E-03	2.71E-03	2.49E-03	2.29E-03	2.11E-03	1.94E-03	1.78E-03
2.39E-01	2.33E-01	2.27E-01	2.22E-01	2.16E-01	2.11E-01	2.06E-01	2.02E-01	1.97E-01	1.93E-01	1.89E-01	1.85E-01	1.81E-01	1.77E-01	1.73E-01
1.34E-01	1.30E-01	1.27E-01	1.24E-01	1.21E-01	1.18E-01	1.15E-01	1.13E-01	1.10E-01	1.08E-01	1.05E-01	1.03E-01	1.01E-01	9.84E-02	9.64E-02
7.86E-01	7.67E-01	7.48E-01	7.30E-01	7.13E-01	6.96E-01	6.80E-01	6.65E-01	6.50E-01	6.35E-01	6.22E-01	6.08E-01	5.95E-01	5.83E-01	5.71E-01
3.44E-01	3.36E-01	3.27E-01	3.19E-01	3.11E-01	3.04E-01	2.96E-01	2.89E-01	2.83E-01	2.76E-01	2.70E-01	2.64E-01	2.58E-01	2.53E-01	2.47E-01
2.28E-01	2.22E-01	2.17E-01	2.12E-01	2.07E-01	2.02E-01	1.97E-01	1.93E-01	1.88E-01	1.84E-01	1.80E-01	1.76E-01	1.72E-01	1.69E-01	1.65E-01
5.83E+00	5.68E+00	5.54E+00	5.41E+00	5.28E+00	5.16E+00	5.04E+00	4.93E+00	4.82E+00	4.71E+00	4.61E+00	4.51E+00	4.41E+00	4.32E+00	4.23E+00
5.72E-65	4.53E-66	3.59E-67	2.85E-68	2.26E-69	1.79E-70	1.42E-71	1.13E-72	8.96E-74	7.12E-75	5.66E-76	4.50E-77	3.58E-78	2.84E-79	2.26E-80
4.59E-01	4.48E-01	4.37E-01	4.26E-01	4.16E-01	4.07E-01	3.97E-01	3.88E-01	3.80E-01	3.71E-01	3.63E-01	3.55E-01	3.48E-01	3.41E-01	3.34E-01
4.77E-01	4.62E-01	4.48E-01	4.34E-01	4.21E-01	4.08E-01	3.96E-01	3.84E-01	3.73E-01	3.62E-01	3.52E-01	3.42E-01	3.33E-01	3.23E-01	3.15E-01
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.00E-01	9.77E-02	9.52E-02	9.28E-02	9.05E-02	8.83E-02	8.62E-02	8.41E-02	8.22E-02	8.03E-02	7.84E-02	7.67E-02	7.50E-02	7.33E-02	7.18E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.31E+00	1.28E+00	1.25E+00	1.22E+00	1.19E+00	1.16E+00	1.13E+00	1.11E+00	1.08E+00	1.06E+00	1.04E+00	1.02E+00	9.94E-01	9.74E-01	9.54E-01
1.49E-01	1.45E-01	1.42E-01	1.38E-01	1.35E-01	1.31E-01	1.28E-01	1.25E-01	1.22E-01	1.20E-01	1.17E-01	1.14E-01	1.12E-01	1.09E-01	1.07E-01
1.55E-01	1.51E-01	1.47E-01	1.44E-01	1.40E-01	1.37E-01	1.34E-01	1.31E-01	1.28E-01	1.25E-01	1.22E-01	1.20E-01	1.17E-01	1.15E-01	1.12E-01
2.45E-01	2.39E-01	2.33E-01	2.28E-01	2.22E-01	2.17E-01	2.12E-01	2.07E-01	2.02E-01	1.98E-01	1.94E-01	1.90E-01	1.86E-01	1.82E-01	1.78E-01
1.21E-01	1.18E-01	1.15E-01	1.12E-01	1.10E-01	1.07E-01	1.04E-01	1.02E-01	9.97E-02	9.75E-02	9.53E-02	9.32E-02	9.12E-02	8.93E-02	8.74E-02
7.80E-02	7.60E-02	7.42E-02	7.24E-02	7.07E-02	6.90E-02	6.74E-02	6.59E-02	6.44E-02	6.30E-02	6.16E-02	6.03E-02	5.90E-02	5.78E-02	5.66E-02
8.15E-02	7.94E-02	7.74E-02	7.55E-02	7.36E-02	7.18E-02	7.01E-02	6.84E-02	6.68E-02	6.53E-02	6.38E-02	6.24E-02	6.10E-02	5.97E-02	5.84E-02
1.36E-01	1.33E-01	1.29E-01	1.26E-01	1.23E-01	1.20E-01	1.18E-01	1.15E-01	1.12E-01	1.10E-01	1.08E-01	1.05E-01	1.03E-01	1.01E-01	9.88E-02
4.86E-01	4.74E-01	4.62E-01	4.51E-01	4.40E-01	4.30E-01	4.20E-01	4.10E-01	4.01E-01	3.92E-01	3.84E-01	3.75E-01	3.67E-01	3.60E-01	3.52E-01
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########

1.45E-01	1.41E-01	1.37E-01	1.34E-01	1.30E-01	1.27E-01	1.23E-01	1.20E-01	1.17E-01	1.14E-01	1.11E-01	1.08E-01	1.06E-01	1.03E-01	1.01E-01
1.70E+00	1.65E+00	1.61E+00	1.57E+00	1.54E+00	1.50E+00	1.47E+00	1.43E+00	1.40E+00	1.37E+00	1.34E+00	1.31E+00	1.29E+00	1.26E+00	1.23E+00
1.37E+00	1.33E+00	1.30E+00	1.27E+00	1.24E+00	1.21E+00	1.18E+00	1.15E+00	1.13E+00	1.10E+00	1.08E+00	1.06E+00	1.03E+00	1.01E+00	9.91E-01
5.05E-02	4.92E-02	4.80E-02	4.68E-02	4.57E-02	4.46E-02	4.36E-02	4.26E-02	4.17E-02	4.07E-02	3.98E-02	3.90E-02	3.82E-02	3.74E-02	3.66E-02
2.38E+00	2.32E+00	2.26E+00	2.21E+00	2.16E+00	2.11E+00	2.06E+00	2.01E+00	1.97E+00	1.92E+00	1.88E+00	1.84E+00	1.80E+00	1.76E+00	1.73E+00
5.64E-02	5.50E-02	5.36E-02	5.23E-02	5.11E-02	4.99E-02	4.87E-02	4.76E-02	4.65E-02	4.55E-02	4.45E-02	4.36E-02	4.26E-02	4.18E-02	4.09E-02
2.85E-01	2.78E-01	2.71E-01	2.65E-01	2.58E-01	2.52E-01	2.47E-01	2.41E-01	2.36E-01	2.30E-01	2.25E-01	2.21E-01	2.16E-01	2.11E-01	2.07E-01
1.27E-03	1.14E-03	1.02E-03	9.07E-04	8.11E-04	7.25E-04	6.48E-04	5.80E-04	5.19E-04	4.65E-04	4.16E-04	3.73E-04	3.34E-04	3.00E-04	2.69E-04
2.88E-01	2.81E-01	2.74E-01	2.67E-01	2.61E-01	2.55E-01	2.49E-01	2.43E-01	2.37E-01	2.32E-01	2.27E-01	2.22E-01	2.17E-01	2.13E-01	2.08E-01
5.93E-02	5.78E-02	5.64E-02	5.50E-02	5.37E-02	5.24E-02	5.12E-02	5.00E-02	4.89E-02	4.78E-02	4.68E-02	4.58E-02	4.48E-02	4.39E-02	4.29E-02
1.14E-01	1.12E-01	1.09E-01	1.06E-01	1.04E-01	1.01E-01	9.89E-02	9.67E-02	9.45E-02	9.24E-02	9.04E-02	8.85E-02	8.66E-02	8.48E-02	8.31E-02
8.13E-02	7.92E-02	7.73E-02	7.54E-02	7.36E-02	7.19E-02	7.02E-02	6.86E-02	6.71E-02	6.56E-02	6.42E-02	6.28E-02	6.15E-02	6.02E-02	5.90E-02
1.88E-01	1.79E-01	1.70E-01	1.62E-01	1.54E-01	1.46E-01	1.39E-01	1.33E-01	1.27E-01	1.21E-01	1.15E-01	1.10E-01	1.05E-01	9.99E-02	9.54E-02
1.73E-01	1.68E-01	1.64E-01	1.60E-01	1.56E-01	1.53E-01	1.49E-01	1.46E-01	1.42E-01	1.39E-01	1.36E-01	1.33E-01	1.30E-01	1.28E-01	1.25E-01
1.19E-01	1.16E-01	1.13E-01	1.10E-01	1.07E-01	1.05E-01	1.02E-01	1.00E-01	9.78E-02	9.56E-02	9.35E-02	9.14E-02	8.94E-02	8.75E-02	8.57E-02
1.03E-34	2.71E-35	7.13E-36	1.88E-36	4.97E-37	1.31E-37	3.46E-38	9.14E-39	2.42E-39	6.39E-40	1.69E-40	4.47E-41	1.18E-41	3.13E-42	8.28E-43
3.98E-01	3.88E-01	3.78E-01	3.69E-01	3.60E-01	3.52E-01	3.44E-01	3.36E-01	3.28E-01	3.21E-01	3.14E-01	3.07E-01	3.01E-01	2.94E-01	2.88E-01
2.13E-01	2.07E-01	2.00E-01	1.94E-01	1.88E-01	1.82E-01	1.77E-01	1.72E-01	1.67E-01	1.62E-01	1.57E-01	1.53E-01	1.48E-01	1.44E-01	1.40E-01
3.65E-02	3.56E-02	3.47E-02	3.39E-02	3.30E-02	3.23E-02	3.15E-02	3.08E-02	3.01E-02	2.94E-02	2.88E-02	2.82E-02	2.76E-02	2.70E-02	2.64E-02
3.25E-04	2.87E-04	2.53E-04	2.23E-04	1.97E-04	1.74E-04	1.54E-04	1.36E-04	1.20E-04	1.06E-04	9.40E-05	8.32E-05	7.37E-05	6.52E-05	5.78E-05
2.91E-01	2.84E-01	2.77E-01	2.70E-01	2.64E-01	2.58E-01	2.52E-01	2.46E-01	2.41E-01	2.35E-01	2.30E-01	2.25E-01	2.21E-01	2.16E-01	2.12E-01
7.16E-01	6.98E-01	6.81E-01	6.65E-01	6.49E-01	6.34E-01	6.19E-01	6.05E-01	5.92E-01	5.78E-01	5.66E-01	5.54E-01	5.42E-01	5.31E-01	5.20E-01
6.36E-05	5.33E-05	4.47E-05	3.74E-05	3.14E-05	2.64E-05	2.21E-05	1.86E-05	1.56E-05	1.31E-05	1.10E-05	9.27E-06	7.79E-06	6.56E-06	5.52E-06
7.21E-01	6.92E-01	6.66E-01	6.40E-01	6.16E-01	5.93E-01	5.71E-01	5.50E-01	5.30E-01	5.11E-01	4.93E-01	4.75E-01	4.58E-01	4.42E-01	4.27E-01
1.39E-01	1.35E-01	1.32E-01	1.29E-01	1.26E-01	1.23E-01	1.20E-01	1.17E-01	1.15E-01	1.12E-01	1.10E-01	1.07E-01	1.05E-01	1.03E-01	1.01E-01
1.48E+00	1.44E+00	1.40E+00	1.37E+00	1.33E+00	1.30E+00	1.27E+00	1.24E+00	1.21E+00	1.18E+00	1.15E+00	1.13E+00	1.10E+00	1.08E+00	1.05E+00
4.36E-02	4.09E-02	3.83E-02	3.60E-02	3.38E-02	3.17E-02	2.98E-02	2.80E-02	2.63E-02	2.48E-02	2.33E-02	2.19E-02	2.07E-02	1.95E-02	1.83E-02
2.49E-02	2.33E-02	2.19E-02	2.05E-02	1.92E-02	1.81E-02	1.69E-02	1.59E-02	1.49E-02	1.40E-02	1.32E-02	1.24E-02	1.17E-02	1.10E-02	1.03E-02
4.93E-02	4.81E-02	4.69E-02	4.58E-02	4.47E-02	4.36E-02	4.26E-02	4.16E-02	4.07E-02	3.98E-02	3.89E-02	3.81E-02	3.73E-02	3.65E-02	3.57E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
5.75E-08	4.34E-08	3.28E-08	2.48E-08	1.88E-08	1.42E-08	1.08E-08	8.14E-09	6.17E-09	4.67E-09	3.54E-09	2.68E-09	2.04E-09	1.54E-09	1.17E-09
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
6.43E-02	6.27E-02	6.12E-02	5.97E-02	5.82E-02	5.69E-02	5.55E-02	5.43E-02	5.30E-02	5.19E-02	5.07E-02	4.96E-02	4.86E-02	4.75E-02	4.66E-02
8.57E-02	8.35E-02	8.14E-02	7.94E-02	7.74E-02	7.56E-02	7.38E-02	7.21E-02	7.04E-02	6.88E-02	6.73E-02	6.58E-02	6.44E-02	6.30E-02	6.17E-02
2.26E-28	7.65E-29	2.59E-29	8.80E-30	2.98E-30	1.01E-30	3.44E-31	1.17E-31	3.97E-32	1.35E-32	4.58E-33	1.56E-33	5.30E-34	1.80E-34	6.14E-35
1.03E+00	1.01E+00	9.81E-01	9.57E-01	9.34E-01	9.12E-01	8.91E-01	8.71E-01	8.51E-01	8.33E-01	8.15E-01	7.97E-01	7.80E-01	7.64E-01	7.48E-01
2.25E-01	2.19E-01	2.14E-01	2.09E-01	2.04E-01	1.99E-01	1.94E-01	1.90E-01	1.86E-01	1.82E-01	1.78E-01	1.74E-01	1.70E-01	1.67E-01	1.63E-01
7.78E-02	7.58E-02	7.40E-02	7.22E-02	7.05E-02	6.88E-02	6.72E-02	6.57E-02	6.42E-02	6.28E-02	6.15E-02	6.02E-02	5.89E-02	5.77E-02	5.65E-02
1.41E-64	1.15E-65	9.40E-67	7.68E-68	6.27E-69	5.13E-70	4.19E-71	3.43E-72	2.81E-73	2.30E-74	1.88E-75	1.54E-76	1.26E-77	1.04E-78	8.49E-80
1.47E-02	1.41E-02	1.34E-02	1.28E-02	1.23E-02	1.17E-02	1.12E-02	1.07E-02	1.03E-02	9.85E-03	9.44E-03	9.05E-03	8.67E-03	8.31E-03	7.98E-03

1.51E+00	1.47E+00	1.44E+00	1.40E+00	1.37E+00	1.34E+00	1.31E+00	1.28E+00	1.25E+00	1.22E+00	1.20E+00	1.17E+00	1.15E+00	1.12E+00	1.10E+00
1.19E-30	3.70E-31	1.16E-31	3.61E-32	1.13E-32	3.52E-33	1.10E-33	3.44E-34	1.08E-34	3.37E-35	1.05E-35	3.30E-36	1.03E-36	3.24E-37	1.02E-37
1.75E-01	1.71E-01	1.66E-01	1.62E-01	1.59E-01	1.55E-01	1.51E-01	1.48E-01	1.44E-01	1.41E-01	1.38E-01	1.35E-01	1.32E-01	1.30E-01	1.27E-01
1.72E-01	1.67E-01	1.63E-01	1.59E-01	1.56E-01	1.52E-01	1.48E-01	1.45E-01	1.42E-01	1.39E-01	1.36E-01	1.33E-01	1.30E-01	1.27E-01	1.24E-01
1.20E+00	1.16E+00	1.12E+00	1.08E+00	1.04E+00	1.01E+00	9.77E-01	9.46E-01	9.16E-01	8.87E-01	8.60E-01	8.34E-01	8.08E-01	7.84E-01	7.61E-01
4.60E-01	4.48E-01	4.37E-01	4.27E-01	4.16E-01	4.07E-01	3.97E-01	3.88E-01	3.79E-01	3.71E-01	3.63E-01	3.55E-01	3.48E-01	3.40E-01	3.33E-01
1.80E-01	1.76E-01	1.71E-01	1.67E-01	1.63E-01	1.59E-01	1.56E-01	1.52E-01	1.49E-01	1.46E-01	1.42E-01	1.39E-01	1.36E-01	1.34E-01	1.31E-01
5.99E-02	5.84E-02	5.70E-02	5.56E-02	5.42E-02	5.30E-02	5.17E-02	5.06E-02	4.94E-02	4.83E-02	4.73E-02	4.63E-02	4.53E-02	4.43E-02	4.34E-02
1.11E+01	1.08E+01	1.05E+01	1.03E+01	1.00E+01	9.81E+00	9.58E+00	9.37E+00	9.16E+00	8.96E+00	8.77E+00	8.58E+00	8.40E+00	8.23E+00	8.06E+00
2.47E-01	2.41E-01	2.35E-01	2.29E-01	2.24E-01	2.18E-01	2.13E-01	2.08E-01	2.04E-01	1.99E-01	1.95E-01	1.91E-01	1.87E-01	1.83E-01	1.79E-01
7.20E-01	7.00E-01	6.81E-01	6.63E-01	6.46E-01	6.29E-01	6.14E-01	5.98E-01	5.84E-01	5.69E-01	5.56E-01	5.43E-01	5.30E-01	5.18E-01	5.06E-01
1.45E-01	1.41E-01	1.38E-01	1.34E-01	1.31E-01	1.28E-01	1.25E-01	1.22E-01	1.19E-01	1.17E-01	1.14E-01	1.12E-01	1.09E-01	1.07E-01	1.05E-01
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
9.99E-02	9.74E-02	9.49E-02	9.26E-02	9.03E-02	8.82E-02	8.61E-02	8.41E-02	8.22E-02	8.03E-02	7.85E-02	7.68E-02	7.51E-02	7.35E-02	7.20E-02
8.85E-28	2.94E-28	9.74E-29	3.24E-29	1.07E-29	3.57E-30	1.19E-30	3.95E-31	1.31E-31	4.37E-32	1.45E-32	4.84E-33	1.61E-33	5.37E-34	1.79E-34
1.06E-01	1.03E-01	1.00E-01	9.79E-02	9.55E-02	9.33E-02	9.11E-02	8.90E-02	8.70E-02	8.51E-02	8.32E-02	8.14E-02	7.97E-02	7.80E-02	7.64E-02
8.23E-08	6.29E-08	4.81E-08	3.68E-08	2.82E-08	2.16E-08	1.66E-08	1.27E-08	9.73E-09	7.47E-09	5.73E-09	4.40E-09	3.38E-09	2.59E-09	1.99E-09
1.36E-74	7.89E-76	4.58E-77	2.66E-78	1.55E-79	9.01E-81	5.24E-82	3.05E-83	1.78E-84	1.04E-85	6.03E-87	3.52E-88	2.05E-89	1.20E-90	6.98E-92
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
2.01E-01	1.96E-01	1.91E-01	1.86E-01	1.82E-01	1.78E-01	1.74E-01	1.70E-01	1.66E-01	1.62E-01	1.59E-01	1.55E-01	1.52E-01	1.49E-01	1.46E-01
4.52E-02	4.41E-02	4.30E-02	4.19E-02	4.09E-02	4.00E-02	3.90E-02	3.81E-02	3.73E-02	3.64E-02	3.56E-02	3.49E-02	3.41E-02	3.34E-02	3.27E-02
6.33E-02	6.17E-02	6.02E-02	5.87E-02	5.73E-02	5.59E-02	5.46E-02	5.34E-02	5.21E-02	5.10E-02	4.98E-02	4.88E-02	4.77E-02	4.67E-02	4.57E-02
3.87E-03	3.65E-03	3.46E-03	3.27E-03	3.09E-03	2.93E-03	2.77E-03	2.63E-03	2.49E-03	2.36E-03	2.24E-03	2.12E-03	2.01E-03	1.91E-03	1.81E-03
3.91E-02	3.81E-02	3.72E-02	3.63E-02	3.54E-02	3.46E-02	3.38E-02	3.30E-02	3.23E-02	3.15E-02	3.09E-02	3.02E-02	2.95E-02	2.89E-02	2.83E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.11E+01	**1.08E+01**	**1.05E+01**	**1.03E+01**	**1.00E+01**	**9.81E+00**	**9.58E+00**	**9.37E+00**	**9.16E+00**	**8.96E+00**	**8.77E+00**	**8.58E+00**	**8.40E+00**	**8.23E+00**	**8.06E+00**

740	750	760	770	780	790	800	810	820	830	840	850	860	870	880
1.10E-01	1.08E-01	1.05E-01	1.03E-01	1.01E-01	9.95E-02	9.76E-02	9.58E-02	9.41E-02	9.24E-02	9.07E-02	8.91E-02	8.76E-02	8.61E-02	8.46E-02
1.34E-01	1.32E-01	1.29E-01	1.27E-01	1.24E-01	1.22E-01	1.20E-01	1.17E-01	1.15E-01	1.13E-01	1.11E-01	1.09E-01	1.07E-01	1.05E-01	1.04E-01
8.35E-01	8.19E-01	8.03E-01	7.87E-01	7.72E-01	7.57E-01	7.43E-01	7.29E-01	7.16E-01	7.03E-01	6.90E-01	6.78E-01	6.66E-01	6.55E-01	6.44E-01
7.52E-30	3.04E-30	1.23E-30	4.98E-31	2.01E-31	8.16E-32	3.30E-32	1.34E-32	5.42E-33	2.20E-33	8.91E-34	3.61E-34	1.46E-34	5.94E-35	2.41E-35
1.39E-89	8.74E-91	5.51E-92	3.47E-93	2.19E-94	1.38E-95	8.71E-97	5.49E-98	3.47E-99	########	########	########	########	########	########
1.94E-01	1.90E-01	1.86E-01	1.83E-01	1.79E-01	1.75E-01	1.72E-01	1.69E-01	1.66E-01	1.63E-01	1.60E-01	1.57E-01	1.54E-01	1.51E-01	1.49E-01
7.14E-01	7.00E-01	6.86E-01	6.72E-01	6.60E-01	6.47E-01	6.35E-01	6.23E-01	6.12E-01	6.01E-01	5.90E-01	5.80E-01	5.70E-01	5.60E-01	5.50E-01
7.46E-02	7.31E-02	7.16E-02	7.02E-02	6.89E-02	6.75E-02	6.63E-02	6.50E-02	6.38E-02	6.27E-02	6.15E-02	6.04E-02	5.94E-02	5.83E-02	5.73E-02
5.71E-02	5.59E-02	5.47E-02	5.35E-02	5.24E-02	5.14E-02	5.03E-02	4.93E-02	4.83E-02	4.74E-02	4.65E-02	4.56E-02	4.47E-02	4.39E-02	4.31E-02
1.45E-88	9.34E-90	6.01E-91	3.87E-92	2.49E-93	1.60E-94	1.03E-95	6.66E-97	4.29E-98	2.77E-99	########	########	########	########	########
8.09E-06	6.70E-06	5.55E-06	4.60E-06	3.81E-06	3.16E-06	2.62E-06	2.17E-06	1.80E-06	1.49E-06	1.24E-06	1.03E-06	8.52E-07	7.08E-07	5.88E-07
5.83E-02	5.68E-02	5.53E-02	5.39E-02	5.25E-02	5.12E-02	4.99E-02	4.87E-02	4.75E-02	4.63E-02	4.52E-02	4.41E-02	4.31E-02	4.21E-02	4.11E-02
1.64E-03	1.51E-03	1.39E-03	1.28E-03	1.18E-03	1.09E-03	1.01E-03	9.27E-04	8.55E-04	7.89E-04	7.28E-04	6.72E-04	6.20E-04	5.73E-04	5.29E-04
1.70E-01	1.66E-01	1.63E-01	1.60E-01	1.57E-01	1.54E-01	1.51E-01	1.48E-01	1.45E-01	1.43E-01	1.40E-01	1.38E-01	1.35E-01	1.33E-01	1.31E-01
9.44E-02	9.24E-02	9.05E-02	8.87E-02	8.70E-02	8.53E-02	8.36E-02	8.20E-02	8.05E-02	7.90E-02	7.75E-02	7.61E-02	7.47E-02	7.34E-02	7.21E-02
5.60E-01	5.48E-01	5.38E-01	5.27E-01	5.17E-01	5.07E-01	4.98E-01	4.88E-01	4.80E-01	4.71E-01	4.62E-01	4.54E-01	4.46E-01	4.39E-01	4.31E-01
2.42E-01	2.37E-01	2.32E-01	2.28E-01	2.23E-01	2.19E-01	2.14E-01	2.10E-01	2.06E-01	2.02E-01	1.99E-01	1.95E-01	1.91E-01	1.88E-01	1.85E-01
1.62E-01	1.59E-01	1.56E-01	1.53E-01	1.50E-01	1.47E-01	1.44E-01	1.41E-01	1.39E-01	1.36E-01	1.34E-01	1.31E-01	1.29E-01	1.27E-01	1.25E-01
4.15E+00	4.07E+00	3.99E+00	3.91E+00	3.83E+00	3.76E+00	3.69E+00	3.62E+00	3.56E+00	3.49E+00	3.43E+00	3.37E+00	3.31E+00	3.25E+00	3.20E+00
1.80E-81	1.43E-82	1.14E-83	9.10E-85	7.25E-86	5.78E-87	4.60E-88	3.67E-89	2.93E-90	2.33E-91	1.86E-92	1.49E-93	1.19E-94	9.47E-96	7.56E-97
3.27E-01	3.20E-01	3.14E-01	3.08E-01	3.02E-01	2.96E-01	2.91E-01	2.85E-01	2.80E-01	2.75E-01	2.70E-01	2.66E-01	2.61E-01	2.56E-01	2.52E-01
3.06E-01	2.98E-01	2.90E-01	2.82E-01	2.75E-01	2.68E-01	2.61E-01	2.55E-01	2.48E-01	2.42E-01	2.36E-01	2.30E-01	2.25E-01	2.19E-01	2.14E-01
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
7.02E-02	6.87E-02	6.73E-02	6.59E-02	6.46E-02	6.33E-02	6.21E-02	6.08E-02	5.97E-02	5.85E-02	5.74E-02	5.63E-02	5.53E-02	5.43E-02	5.33E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
9.35E-01	9.16E-01	8.98E-01	8.81E-01	8.64E-01	8.47E-01	8.32E-01	8.16E-01	8.01E-01	7.87E-01	7.73E-01	7.59E-01	7.46E-01	7.33E-01	7.21E-01
1.05E-01	1.03E-01	1.01E-01	9.86E-02	9.66E-02	9.47E-02	9.29E-02	9.11E-02	8.93E-02	8.77E-02	8.60E-02	8.44E-02	8.29E-02	8.14E-02	8.00E-02
1.10E-01	1.08E-01	1.06E-01	1.04E-01	1.02E-01	9.98E-02	9.80E-02	9.61E-02	9.44E-02	9.27E-02	9.10E-02	8.94E-02	8.79E-02	8.64E-02	8.49E-02
1.74E-01	1.71E-01	1.67E-01	1.64E-01	1.61E-01	1.58E-01	1.55E-01	1.52E-01	1.49E-01	1.47E-01	1.44E-01	1.41E-01	1.39E-01	1.37E-01	1.34E-01
8.56E-02	8.39E-02	8.22E-02	8.06E-02	7.90E-02	7.75E-02	7.60E-02	7.46E-02	7.32E-02	7.18E-02	7.05E-02	6.92E-02	6.80E-02	6.68E-02	6.56E-02
5.55E-02	5.44E-02	5.33E-02	5.23E-02	5.13E-02	5.03E-02	4.93E-02	4.84E-02	4.75E-02	4.67E-02	4.58E-02	4.50E-02	4.42E-02	4.35E-02	4.27E-02
5.72E-02	5.60E-02	5.48E-02	5.37E-02	5.26E-02	5.16E-02	5.06E-02	4.96E-02	4.86E-02	4.77E-02	4.68E-02	4.59E-02	4.51E-02	4.43E-02	4.35E-02
9.68E-02	9.48E-02	9.29E-02	9.11E-02	8.94E-02	8.77E-02	8.60E-02	8.44E-02	8.29E-02	8.14E-02	7.99E-02	7.85E-02	7.71E-02	7.58E-02	7.45E-02
3.45E-01	3.38E-01	3.32E-01	3.25E-01	3.19E-01	3.13E-01	3.07E-01	3.01E-01	2.96E-01	2.90E-01	2.85E-01	2.80E-01	2.75E-01	2.70E-01	2.66E-01
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9.84E-02	9.62E-02	9.40E-02	9.18E-02	8.98E-02	8.78E-02	8.59E-02	8.40E-02	8.22E-02	8.04E-02	7.88E-02	7.71E-02	7.55E-02	7.40E-02	7.25E-02
1.21E+00	1.18E+00	1.16E+00	1.14E+00	1.12E+00	1.10E+00	1.08E+00	1.06E+00	1.04E+00	1.02E+00	1.00E+00	9.82E-01	9.65E-01	9.49E-01	9.33E-01
9.71E-01	9.52E-01	9.33E-01	9.15E-01	8.97E-01	8.80E-01	8.64E-01	8.48E-01	8.32E-01	8.17E-01	8.03E-01	7.89E-01	7.75E-01	7.62E-01	7.49E-01
3.59E-02	3.51E-02	3.44E-02	3.38E-02	3.31E-02	3.25E-02	3.19E-02	3.13E-02	3.07E-02	3.02E-02	2.96E-02	2.91E-02	2.86E-02	2.81E-02	2.76E-02
1.69E+00	1.66E+00	1.63E+00	1.60E+00	1.56E+00	1.54E+00	1.51E+00	1.48E+00	1.45E+00	1.43E+00	1.40E+00	1.38E+00	1.35E+00	1.33E+00	1.31E+00
4.01E-02	3.93E-02	3.85E-02	3.77E-02	3.70E-02	3.63E-02	3.56E-02	3.49E-02	3.43E-02	3.37E-02	3.31E-02	3.25E-02	3.19E-02	3.14E-02	3.08E-02
2.03E-01	1.99E-01	1.95E-01	1.91E-01	1.88E-01	1.84E-01	1.81E-01	1.77E-01	1.74E-01	1.71E-01	1.68E-01	1.65E-01	1.62E-01	1.59E-01	1.57E-01
2.41E-04	2.16E-04	1.94E-04	1.74E-04	1.56E-04	1.40E-04	1.26E-04	1.13E-04	1.02E-04	9.16E-05	8.23E-05	7.40E-05	6.66E-05	5.99E-05	5.39E-05
2.04E-01	2.00E-01	1.96E-01	1.92E-01	1.88E-01	1.85E-01	1.81E-01	1.78E-01	1.74E-01	1.71E-01	1.68E-01	1.65E-01	1.62E-01	1.59E-01	1.56E-01
4.21E-02	4.12E-02	4.04E-02	3.96E-02	3.88E-02	3.81E-02	3.74E-02	3.67E-02	3.60E-02	3.53E-02	3.47E-02	3.41E-02	3.35E-02	3.29E-02	3.23E-02
8.14E-02	7.98E-02	7.82E-02	7.67E-02	7.52E-02	7.38E-02	7.24E-02	7.10E-02	6.97E-02	6.85E-02	6.72E-02	6.60E-02	6.49E-02	6.38E-02	6.27E-02
5.78E-02	5.66E-02	5.55E-02	5.44E-02	5.34E-02	5.23E-02	5.14E-02	5.04E-02	4.95E-02	4.86E-02	4.77E-02	4.69E-02	4.61E-02	4.53E-02	4.45E-02
9.11E-02	8.70E-02	8.31E-02	7.95E-02	7.60E-02	7.26E-02	6.95E-02	6.65E-02	6.36E-02	6.09E-02	5.83E-02	5.58E-02	5.34E-02	5.12E-02	4.90E-02
1.22E-01	1.20E-01	1.17E-01	1.15E-01	1.13E-01	1.11E-01	1.09E-01	1.07E-01	1.05E-01	1.03E-01	1.01E-01	9.90E-02	9.72E-02	9.55E-02	9.39E-02
8.39E-02	8.22E-02	8.05E-02	7.89E-02	7.74E-02	7.59E-02	7.44E-02	7.30E-02	7.16E-02	7.03E-02	6.90E-02	6.78E-02	6.66E-02	6.54E-02	6.42E-02
2.19E-43	5.81E-44	1.54E-44	4.08E-45	1.08E-45	2.87E-46	7.60E-47	2.02E-47	5.35E-48	1.42E-48	3.77E-49	1.00E-49	2.66E-50	7.06E-51	1.88E-51
2.82E-01	2.77E-01	2.71E-01	2.66E-01	2.61E-01	2.56E-01	2.51E-01	2.46E-01	2.42E-01	2.38E-01	2.33E-01	2.29E-01	2.25E-01	2.21E-01	2.17E-01
1.37E-01	1.33E-01	1.29E-01	1.26E-01	1.23E-01	1.20E-01	1.16E-01	1.14E-01	1.11E-01	1.08E-01	1.05E-01	1.03E-01	1.00E-01	9.77E-02	9.54E-02
2.59E-02	2.53E-02	2.48E-02	2.43E-02	2.39E-02	2.34E-02	2.30E-02	2.25E-02	2.21E-02	2.17E-02	2.13E-02	2.09E-02	2.06E-02	2.02E-02	1.99E-02
5.12E-05	4.54E-05	4.02E-05	3.57E-05	3.16E-05	2.81E-05	2.49E-05	2.21E-05	1.96E-05	1.74E-05	1.55E-05	1.38E-05	1.22E-05	1.09E-05	9.65E-06
2.07E-01	2.03E-01	1.99E-01	1.95E-01	1.91E-01	1.88E-01	1.84E-01	1.81E-01	1.78E-01	1.74E-01	1.71E-01	1.68E-01	1.65E-01	1.62E-01	1.60E-01
5.09E-01	4.99E-01	4.89E-01	4.80E-01	4.71E-01	4.62E-01	4.53E-01	4.45E-01	4.36E-01	4.29E-01	4.21E-01	4.13E-01	4.06E-01	3.99E-01	3.92E-01
4.64E-06	3.91E-06	3.29E-06	2.78E-06	2.34E-06	1.97E-06	1.66E-06	1.40E-06	1.18E-06	9.97E-07	8.41E-07	7.10E-07	6.00E-07	5.06E-07	4.28E-07
4.12E-01	3.98E-01	3.85E-01	3.72E-01	3.59E-01	3.48E-01	3.36E-01	3.25E-01	3.15E-01	3.04E-01	2.95E-01	2.85E-01	2.76E-01	2.68E-01	2.59E-01
9.87E-02	9.67E-02	9.48E-02	9.29E-02	9.11E-02	8.94E-02	8.77E-02	8.61E-02	8.45E-02	8.29E-02	8.14E-02	8.00E-02	7.86E-02	7.72E-02	7.59E-02
1.03E+00	1.01E+00	9.86E-01	9.66E-01	9.46E-01	9.26E-01	9.08E-01	8.90E-01	8.72E-01	8.55E-01	8.39E-01	8.23E-01	8.07E-01	7.92E-01	7.77E-01
1.73E-02	1.63E-02	1.54E-02	1.45E-02	1.37E-02	1.29E-02	1.22E-02	1.15E-02	1.08E-02	1.02E-02	9.67E-03	9.14E-03	8.63E-03	8.16E-03	7.71E-03
9.72E-03	9.16E-03	8.62E-03	8.12E-03	7.65E-03	7.21E-03	6.80E-03	6.41E-03	6.05E-03	5.71E-03	5.38E-03	5.08E-03	4.80E-03	4.53E-03	4.28E-03
3.50E-02	3.43E-02	3.36E-02	3.30E-02	3.23E-02	3.17E-02	3.11E-02	3.05E-02	3.00E-02	2.94E-02	2.89E-02	2.84E-02	2.79E-02	2.74E-02	2.69E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
8.90E-10	6.76E-10	5.13E-10	3.90E-10	2.96E-10	2.25E-10	1.71E-10	1.30E-10	9.90E-11	7.53E-11	5.73E-11	4.36E-11	3.32E-11	2.53E-11	1.93E-11
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
4.56E-02	4.47E-02	4.38E-02	4.29E-02	4.21E-02	4.13E-02	4.05E-02	3.97E-02	3.90E-02	3.83E-02	3.76E-02	3.69E-02	3.63E-02	3.56E-02	3.50E-02
6.04E-02	5.92E-02	5.79E-02	5.68E-02	5.57E-02	5.46E-02	5.35E-02	5.25E-02	5.15E-02	5.05E-02	4.96E-02	4.87E-02	4.78E-02	4.70E-02	4.61E-02
2.09E-35	7.12E-36	2.43E-36	8.27E-37	2.82E-37	9.61E-38	3.28E-38	1.12E-38	3.81E-39	1.30E-39	4.44E-40	1.52E-40	5.18E-41	1.77E-41	6.04E-42
7.33E-01	7.19E-01	7.04E-01	6.91E-01	6.77E-01	6.64E-01	6.52E-01	6.40E-01	6.28E-01	6.17E-01	6.06E-01	5.95E-01	5.85E-01	5.75E-01	5.65E-01
1.60E-01	1.57E-01	1.54E-01	1.51E-01	1.48E-01	1.45E-01	1.42E-01	1.39E-01	1.37E-01	1.34E-01	1.32E-01	1.30E-01	1.27E-01	1.25E-01	1.23E-01
5.53E-02	5.42E-02	5.32E-02	5.21E-02	5.11E-02	5.02E-02	4.92E-02	4.83E-02	4.74E-02	4.66E-02	4.57E-02	4.49E-02	4.41E-02	4.34E-02	4.26E-02
6.96E-81	5.71E-82	4.68E-83	3.85E-84	3.16E-85	2.59E-86	2.13E-87	1.75E-88	1.44E-89	1.18E-90	9.71E-92	7.99E-93	6.57E-94	5.40E-95	4.44E-96
7.65E-03	7.34E-03	7.05E-03	6.77E-03	6.50E-03	6.25E-03	6.00E-03	5.77E-03	5.55E-03	5.33E-03	5.13E-03	4.93E-03	4.75E-03	4.57E-03	4.40E-03

1.08E+00	1.05E+00	1.03E+00	1.01E+00	9.94E-01	9.75E-01	9.57E-01	9.39E-01	9.22E-01	9.05E-01	8.89E-01	8.74E-01	8.58E-01	8.43E-01	8.29E-01
3.18E-38	9.98E-39	3.13E-39	9.82E-40	3.08E-40	9.67E-41	3.04E-41	9.54E-42	3.00E-42	9.41E-43	2.96E-43	9.29E-44	2.92E-44	9.19E-45	2.89E-45
1.24E-01	1.22E-01	1.20E-01	1.17E-01	1.15E-01	1.13E-01	1.11E-01	1.09E-01	1.07E-01	1.05E-01	1.03E-01	1.01E-01	9.92E-02	9.75E-02	9.58E-02
1.22E-01	1.19E-01	1.17E-01	1.15E-01	1.13E-01	1.10E-01	1.08E-01	1.06E-01	1.04E-01	1.02E-01	1.01E-01	9.88E-02	9.71E-02	9.54E-02	9.37E-02
7.38E-01	7.17E-01	6.96E-01	6.76E-01	6.56E-01	6.38E-01	6.20E-01	6.03E-01	5.86E-01	5.70E-01	5.55E-01	5.40E-01	5.25E-01	5.11E-01	4.98E-01
3.27E-01	3.20E-01	3.14E-01	3.08E-01	3.02E-01	2.96E-01	2.90E-01	2.85E-01	2.80E-01	2.75E-01	2.70E-01	2.65E-01	2.60E-01	2.56E-01	2.52E-01
1.28E-01	1.26E-01	1.23E-01	1.21E-01	1.18E-01	1.16E-01	1.14E-01	1.12E-01	1.10E-01	1.08E-01	1.06E-01	1.04E-01	1.02E-01	1.01E-01	9.89E-02
4.25E-02	4.17E-02	4.08E-02	4.00E-02	3.93E-02	3.85E-02	3.78E-02	3.71E-02	3.64E-02	3.57E-02	3.51E-02	3.45E-02	3.39E-02	3.33E-02	3.27E-02
7.90E+00	7.74E+00	7.59E+00	7.44E+00	7.30E+00	7.16E+00	7.03E+00	6.90E+00	6.78E+00	6.65E+00	6.54E+00	6.42E+00	6.31E+00	6.20E+00	6.10E+00
1.75E-01	1.72E-01	1.68E-01	1.65E-01	1.62E-01	1.59E-01	1.56E-01	1.53E-01	1.50E-01	1.47E-01	1.44E-01	1.42E-01	1.39E-01	1.37E-01	1.34E-01
4.95E-01	4.84E-01	4.73E-01	4.63E-01	4.53E-01	4.43E-01	4.34E-01	4.25E-01	4.16E-01	4.08E-01	3.99E-01	3.92E-01	3.84E-01	3.76E-01	3.69E-01
1.02E-01	1.00E-01	9.84E-02	9.64E-02	9.45E-02	9.27E-02	9.09E-02	8.92E-02	8.75E-02	8.59E-02	8.43E-02	8.28E-02	8.13E-02	7.99E-02	7.85E-02
########	########	########	########	########	########	########	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.05E-02	6.91E-02	6.77E-02	6.63E-02	6.50E-02	6.37E-02	6.25E-02	6.13E-02	6.01E-02	5.90E-02	5.79E-02	5.69E-02	5.59E-02	5.49E-02	5.39E-02
5.97E-35	1.99E-35	6.64E-36	2.21E-36	7.39E-37	2.47E-37	8.23E-38	2.75E-38	9.18E-39	3.07E-39	1.02E-39	3.43E-40	1.15E-40	3.83E-41	1.28E-41
7.48E-02	7.33E-02	7.18E-02	7.04E-02	6.91E-02	6.77E-02	6.64E-02	6.52E-02	6.40E-02	6.28E-02	6.17E-02	6.06E-02	5.95E-02	5.85E-02	5.75E-02
1.53E-09	1.18E-09	9.04E-10	6.96E-10	5.35E-10	4.12E-10	3.17E-10	2.44E-10	1.88E-10	1.45E-10	1.11E-10	8.58E-11	6.61E-11	5.10E-11	3.93E-11
4.07E-93	2.38E-94	1.39E-95	8.11E-97	4.74E-98	2.77E-99	########	########	########	########	########	########	########	########	########
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
1.43E-01	1.40E-01	1.37E-01	1.35E-01	1.32E-01	1.30E-01	1.27E-01	1.25E-01	1.23E-01	1.20E-01	1.18E-01	1.16E-01	1.14E-01	1.12E-01	1.10E-01
3.20E-02	3.14E-02	3.08E-02	3.01E-02	2.96E-02	2.90E-02	2.84E-02	2.79E-02	2.74E-02	2.69E-02	2.64E-02	2.59E-02	2.55E-02	2.50E-02	2.46E-02
4.48E-02	4.39E-02	4.30E-02	4.21E-02	4.13E-02	4.05E-02	3.97E-02	3.90E-02	3.83E-02	3.75E-02	3.69E-02	3.62E-02	3.56E-02	3.49E-02	3.43E-02
1.72E-03	1.64E-03	1.55E-03	1.48E-03	1.40E-03	1.33E-03	1.27E-03	1.21E-03	1.15E-03	1.09E-03	1.04E-03	9.91E-04	9.44E-04	8.99E-04	8.56E-04
2.78E-02	2.72E-02	2.67E-02	2.61E-02	2.56E-02	2.51E-02	2.47E-02	2.42E-02	2.37E-02	2.33E-02	2.29E-02	2.25E-02	2.21E-02	2.17E-02	2.13E-02
########	########	########	########	########	########	########	########	########	########	########	########	########	########	########
7.90E+00	**7.74E+00**	**7.59E+00**	**7.44E+00**	**7.30E+00**	**7.16E+00**	**7.03E+00**	**6.90E+00**	**6.78E+00**	**6.65E+00**	**6.54E+00**	**6.42E+00**	**6.31E+00**	**6.20E+00**	**6.10E+00**

890	900	910	920	930	940	950	960	970	980	990	1000	Max PCE Gas Concentration at x=30 ft (ppb)
8.32E-02	8.18E-02	8.05E-02	7.92E-02	7.79E-02	7.66E-02	7.54E-02	7.43E-02	7.31E-02	7.20E-02	7.09E-02	6.98E-02	6.84E+01
1.02E-01	1.00E-01	9.85E-02	9.69E-02	9.53E-02	9.38E-02	9.23E-02	9.09E-02	8.95E-02	8.81E-02	8.68E-02	8.55E-02	8.48E+01
6.33E-01	6.22E-01	6.12E-01	6.02E-01	5.92E-01	5.83E-01	5.73E-01	5.65E-01	5.56E-01	5.47E-01	5.39E-01	5.31E-01	5.02E+02
9.78E-36	3.97E-36	1.61E-36	6.54E-37	2.66E-37	1.08E-37	4.38E-38	1.78E-38	7.23E-39	2.94E-39	1.19E-39	4.86E-40	5.35E+01
########	########	########	########	########	########	########	########	########	########	########	########	8.20E+00
1.46E-01	1.43E-01	1.41E-01	1.39E-01	1.36E-01	1.34E-01	1.32E-01	1.30E-01	1.28E-01	1.26E-01	1.24E-01	1.22E-01	1.27E+02
5.41E-01	5.32E-01	5.23E-01	5.15E-01	5.06E-01	4.98E-01	4.90E-01	4.83E-01	4.75E-01	4.68E-01	4.61E-01	4.54E-01	4.01E+02
5.63E-02	5.54E-02	5.45E-02	5.36E-02	5.27E-02	5.18E-02	5.10E-02	5.02E-02	4.94E-02	4.87E-02	4.79E-02	4.72E-02	4.74E+01
4.23E-02	4.15E-02	4.08E-02	4.00E-02	3.93E-02	3.87E-02	3.80E-02	3.73E-02	3.67E-02	3.61E-02	3.55E-02	3.49E-02	4.01E+01
########	########	########	########	########	########	########	########	########	########	########	########	1.89E+01
4.88E-07	4.05E-07	3.37E-07	2.80E-07	2.33E-07	1.93E-07	1.61E-07	1.34E-07	1.11E-07	9.24E-08	7.69E-08	6.40E-08	8.33E+02
4.02E-02	3.92E-02	3.83E-02	3.75E-02	3.66E-02	3.58E-02	3.50E-02	3.43E-02	3.35E-02	3.28E-02	3.21E-02	3.14E-02	5.70E+01
4.89E-04	4.52E-04	4.17E-04	3.86E-04	3.57E-04	3.30E-04	3.05E-04	2.82E-04	2.61E-04	2.41E-04	2.23E-04	2.07E-04	9.50E+01
1.28E-01	1.26E-01	1.24E-01	1.22E-01	1.20E-01	1.18E-01	1.16E-01	1.14E-01	1.13E-01	1.11E-01	1.09E-01	1.08E-01	1.07E+02
7.08E-02	6.96E-02	6.84E-02	6.73E-02	6.61E-02	6.50E-02	6.40E-02	6.29E-02	6.19E-02	6.09E-02	6.00E-02	5.90E-02	6.19E+01
4.24E-01	4.17E-01	4.10E-01	4.03E-01	3.97E-01	3.90E-01	3.84E-01	3.78E-01	3.72E-01	3.67E-01	3.61E-01	3.56E-01	3.30E+02
1.81E-01	1.78E-01	1.75E-01	1.72E-01	1.69E-01	1.66E-01	1.64E-01	1.61E-01	1.58E-01	1.56E-01	1.53E-01	1.51E-01	1.55E+02
1.23E-01	1.20E-01	1.18E-01	1.17E-01	1.15E-01	1.13E-01	1.11E-01	1.09E-01	1.08E-01	1.06E-01	1.04E-01	1.03E-01	1.02E+02
3.15E+00	3.09E+00	3.04E+00	2.99E+00	2.95E+00	2.90E+00	2.85E+00	2.81E+00	2.76E+00	2.72E+00	2.68E+00	2.64E+00	2.25E+03
6.04E-98	4.83E-99	########	########	########	########	########	########	########	########	########	########	4.28E+01
2.48E-01	2.44E-01	2.40E-01	2.36E-01	2.32E-01	2.28E-01	2.25E-01	2.21E-01	2.18E-01	2.14E-01	2.11E-01	2.08E-01	1.97E+02
2.09E-01	2.04E-01	1.99E-01	1.95E-01	1.90E-01	1.86E-01	1.82E-01	1.78E-01	1.74E-01	1.70E-01	1.66E-01	1.62E-01	2.78E+02
########	########	########	########	########	########	########	########	########	########	########	########	4.04E-01
5.24E-02	5.14E-02	5.05E-02	4.97E-02	4.88E-02	4.80E-02	4.72E-02	4.64E-02	4.56E-02	4.49E-02	4.41E-02	4.34E-02	4.81E+01
########	########	########	########	########	########	########	########	########	########	########	########	2.32E-01
7.09E-01	6.97E-01	6.86E-01	6.75E-01	6.64E-01	6.53E-01	6.43E-01	6.33E-01	6.23E-01	6.14E-01	6.04E-01	5.95E-01	4.53E+02
7.86E-02	7.72E-02	7.59E-02	7.46E-02	7.33E-02	7.21E-02	7.09E-02	6.97E-02	6.86E-02	6.75E-02	6.64E-02	6.54E-02	6.61E+01
8.35E-02	8.21E-02	8.07E-02	7.94E-02	7.81E-02	7.69E-02	7.57E-02	7.45E-02	7.33E-02	7.22E-02	7.11E-02	7.01E-02	6.53E+01
1.32E-01	1.30E-01	1.28E-01	1.26E-01	1.23E-01	1.22E-01	1.20E-01	1.18E-01	1.16E-01	1.14E-01	1.12E-01	1.11E-01	1.07E+02
6.45E-02	6.34E-02	6.23E-02	6.13E-02	6.03E-02	5.93E-02	5.83E-02	5.74E-02	5.65E-02	5.56E-02	5.47E-02	5.39E-02	5.55E+01
4.20E-02	4.13E-02	4.06E-02	4.00E-02	3.93E-02	3.87E-02	3.81E-02	3.75E-02	3.69E-02	3.63E-02	3.58E-02	3.53E-02	3.42E+01
4.27E-02	4.19E-02	4.12E-02	4.05E-02	3.98E-02	3.91E-02	3.85E-02	3.78E-02	3.72E-02	3.66E-02	3.60E-02	3.54E-02	3.88E+01
7.32E-02	7.20E-02	7.08E-02	6.96E-02	6.85E-02	6.74E-02	6.63E-02	6.53E-02	6.43E-02	6.33E-02	6.23E-02	6.14E-02	6.06E+01
2.61E-01	2.57E-01	2.53E-01	2.48E-01	2.44E-01	2.41E-01	2.37E-01	2.33E-01	2.29E-01	2.26E-01	2.22E-01	2.19E-01	2.18E+02
########	########	########	########	########	########	########	########	########	########	########	0.00E+00	9.83E-02

7.10E-02	6.96E-02	6.82E-02	6.69E-02	6.56E-02	6.44E-02	6.31E-02	6.20E-02	6.08E-02	5.97E-02	5.86E-02	5.75E-02	7.87E+01
9.17E-01	9.02E-01	8.87E-01	8.73E-01	8.59E-01	8.45E-01	8.32E-01	8.19E-01	8.06E-01	7.94E-01	7.82E-01	7.70E-01	5.42E+02
7.36E-01	7.24E-01	7.12E-01	7.00E-01	6.89E-01	6.78E-01	6.67E-01	6.57E-01	6.47E-01	6.37E-01	6.27E-01	6.18E-01	5.79E+02
2.71E-02	2.67E-02	2.62E-02	2.58E-02	2.54E-02	2.50E-02	2.46E-02	2.42E-02	2.38E-02	2.35E-02	2.31E-02	2.28E-02	2.25E+01
1.28E+00	1.26E+00	1.24E+00	1.22E+00	1.20E+00	1.18E+00	1.16E+00	1.15E+00	1.13E+00	1.11E+00	1.09E+00	1.08E+00	9.78E+02
3.03E-02	2.98E-02	2.93E-02	2.88E-02	2.84E-02	2.79E-02	2.75E-02	2.70E-02	2.66E-02	2.62E-02	2.58E-02	2.54E-02	2.55E+01
1.54E-01	1.51E-01	1.49E-01	1.46E-01	1.44E-01	1.42E-01	1.40E-01	1.37E-01	1.35E-01	1.33E-01	1.31E-01	1.29E-01	1.17E+02
4.85E-05	4.37E-05	3.93E-05	3.54E-05	3.19E-05	2.87E-05	2.59E-05	2.33E-05	2.10E-05	1.90E-05	1.71E-05	1.54E-05	8.51E+01
1.54E-01	1.51E-01	1.49E-01	1.46E-01	1.44E-01	1.41E-01	1.39E-01	1.37E-01	1.35E-01	1.33E-01	1.30E-01	1.28E-01	1.31E+02
3.18E-02	3.12E-02	3.07E-02	3.02E-02	2.97E-02	2.92E-02	2.88E-02	2.83E-02	2.79E-02	2.74E-02	2.70E-02	2.66E-02	2.69E+01
6.16E-02	6.06E-02	5.96E-02	5.86E-02	5.77E-02	5.67E-02	5.58E-02	5.50E-02	5.41E-02	5.33E-02	5.25E-02	5.17E-02	5.00E+01
4.37E-02	4.30E-02	4.23E-02	4.16E-02	4.09E-02	4.03E-02	3.96E-02	3.90E-02	3.84E-02	3.78E-02	3.72E-02	3.67E-02	3.66E+01
4.70E-02	4.50E-02	4.32E-02	4.14E-02	3.97E-02	3.81E-02	3.65E-02	3.50E-02	3.36E-02	3.23E-02	3.10E-02	2.97E-02	3.70E+02
9.23E-02	9.07E-02	8.92E-02	8.77E-02	8.62E-02	8.48E-02	8.35E-02	8.21E-02	8.09E-02	7.96E-02	7.84E-02	7.72E-02	7.87E+01
6.31E-02	6.20E-02	6.10E-02	6.00E-02	5.90E-02	5.80E-02	5.70E-02	5.61E-02	5.52E-02	5.44E-02	5.35E-02	5.27E-02	5.48E+01
4.98E-52	1.32E-52	3.52E-53	9.36E-54	2.49E-54	6.62E-55	1.76E-55	4.69E-56	1.25E-56	3.32E-57	8.83E-58	2.35E-58	4.15E+01
2.14E-01	2.10E-01	2.07E-01	2.03E-01	2.00E-01	1.97E-01	1.94E-01	1.91E-01	1.88E-01	1.85E-01	1.82E-01	1.79E-01	1.78E+02
9.31E-02	9.10E-02	8.88E-02	8.68E-02	8.48E-02	8.28E-02	8.10E-02	7.91E-02	7.74E-02	7.56E-02	7.40E-02	7.24E-02	1.43E+02
1.95E-02	1.92E-02	1.89E-02	1.86E-02	1.83E-02	1.80E-02	1.77E-02	1.74E-02	1.71E-02	1.68E-02	1.66E-02	1.63E-02	1.61E+01
8.58E-06	7.63E-06	6.79E-06	6.04E-06	5.37E-06	4.78E-06	4.26E-06	3.79E-06	3.37E-06	3.00E-06	2.67E-06	2.38E-06	4.86E+01
1.57E-01	1.54E-01	1.52E-01	1.49E-01	1.47E-01	1.45E-01	1.42E-01	1.40E-01	1.38E-01	1.36E-01	1.34E-01	1.32E-01	1.29E+02
3.86E-01	3.79E-01	3.73E-01	3.67E-01	3.61E-01	3.55E-01	3.50E-01	3.44E-01	3.39E-01	3.34E-01	3.29E-01	3.24E-01	2.98E+02
3.61E-07	3.05E-07	2.58E-07	2.18E-07	1.84E-07	1.56E-07	1.32E-07	1.11E-07	9.42E-08	7.97E-08	6.74E-08	5.71E-08	1.77E+02
2.51E-01	2.43E-01	2.36E-01	2.29E-01	2.22E-01	2.15E-01	2.09E-01	2.02E-01	1.96E-01	1.91E-01	1.85E-01	1.80E-01	7.20E+02
7.46E-02	7.34E-02	7.22E-02	7.10E-02	6.98E-02	6.87E-02	6.76E-02	6.65E-02	6.55E-02	6.45E-02	6.35E-02	6.26E-02	6.22E+01
7.63E-01	7.49E-01	7.36E-01	7.23E-01	7.10E-01	6.98E-01	6.86E-01	6.74E-01	6.63E-01	6.51E-01	6.41E-01	6.30E-01	5.48E+02
7.29E-03	6.90E-03	6.53E-03	6.17E-03	5.84E-03	5.53E-03	5.23E-03	4.96E-03	4.69E-03	4.44E-03	4.21E-03	3.99E-03	1.78E+02
4.04E-03	3.82E-03	3.61E-03	3.41E-03	3.22E-03	3.05E-03	2.88E-03	2.72E-03	2.58E-03	2.44E-03	2.31E-03	2.18E-03	1.14E+02
2.65E-02	2.60E-02	2.56E-02	2.52E-02	2.47E-02	2.43E-02	2.40E-02	2.36E-02	2.32E-02	2.28E-02	2.25E-02	2.22E-02	2.24E+01
########	########	########	########	########	########	########	########	########	########	########	########	8.92E-01
1.47E-11	1.12E-11	8.51E-12	6.49E-12	4.95E-12	3.77E-12	2.88E-12	2.19E-12	1.67E-12	1.28E-12	9.74E-13	7.43E-13	6.87E+01
########	########	########	########	########	########	########	########	########	0.00E+00	0.00E+00	0.00E+00	1.51E-01
3.44E-02	3.38E-02	3.33E-02	3.27E-02	3.22E-02	3.17E-02	3.12E-02	3.07E-02	3.02E-02	2.97E-02	2.92E-02	2.88E-02	2.93E+01
4.53E-02	4.46E-02	4.38E-02	4.31E-02	4.23E-02	4.16E-02	4.09E-02	4.03E-02	3.96E-02	3.90E-02	3.84E-02	3.78E-02	3.84E+01
2.06E-42	7.05E-43	2.41E-43	8.24E-44	2.82E-44	9.63E-45	3.29E-45	1.13E-45	3.86E-46	1.32E-46	4.52E-47	1.55E-47	4.17E+01
5.55E-01	5.46E-01	5.37E-01	5.28E-01	5.20E-01	5.11E-01	5.03E-01	4.95E-01	4.88E-01	4.80E-01	4.73E-01	4.66E-01	4.37E+02
1.21E-01	1.19E-01	1.17E-01	1.15E-01	1.13E-01	1.11E-01	1.10E-01	1.08E-01	1.06E-01	1.05E-01	1.03E-01	1.01E-01	9.81E+01
4.19E-02	4.12E-02	4.05E-02	3.99E-02	3.92E-02	3.86E-02	3.80E-02	3.74E-02	3.68E-02	3.63E-02	3.57E-02	3.52E-02	3.40E+01
3.66E-97	3.01E-98	2.48E-99	########	########	########	########	########	########	########	########	########	1.78E+01
4.23E-03	4.08E-03	3.93E-03	3.78E-03	3.64E-03	3.51E-03	3.38E-03	3.26E-03	3.15E-03	3.03E-03	2.93E-03	2.82E-03	2.23E+01

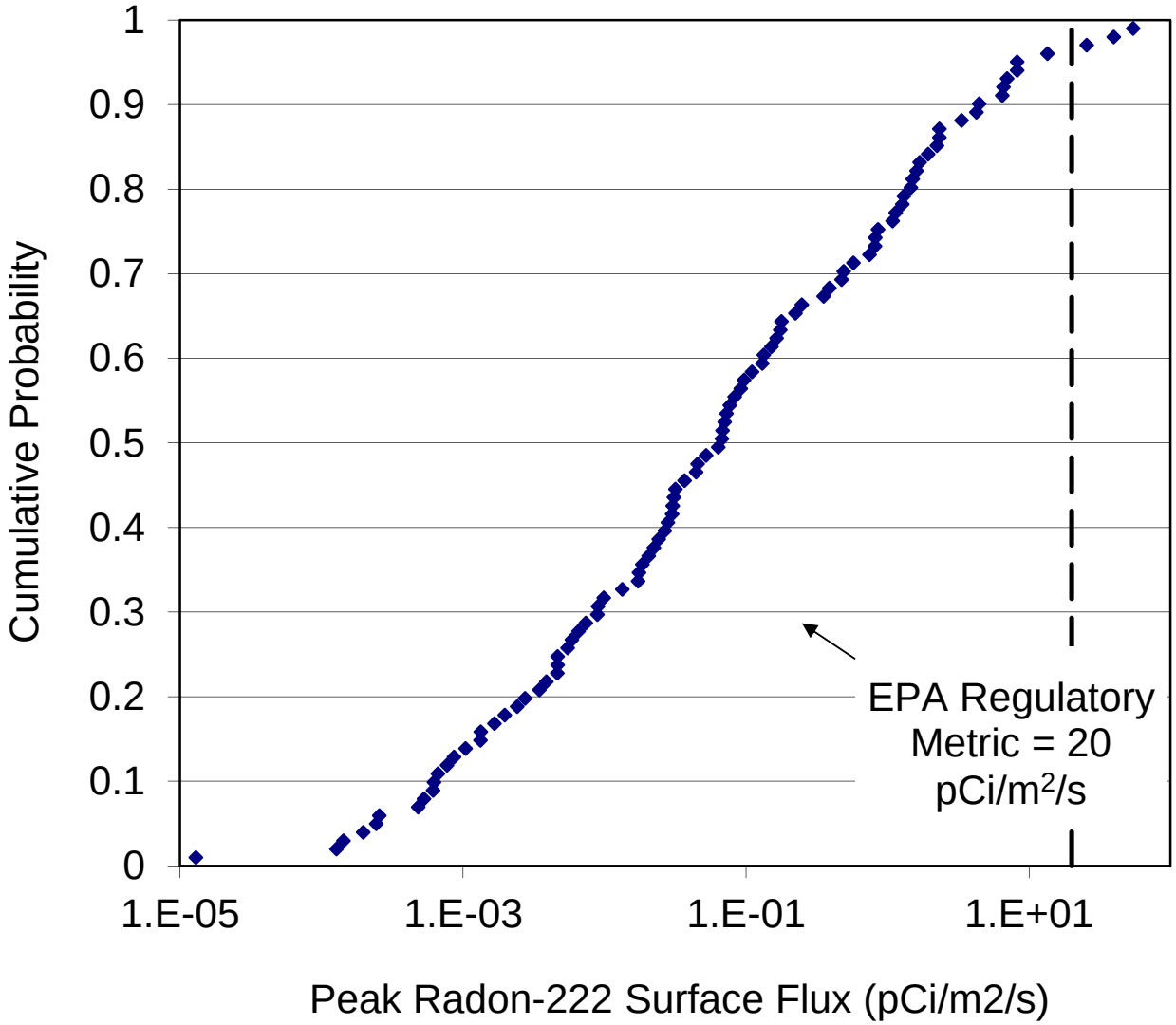
8.15E-01	8.02E-01	7.88E-01	7.75E-01	7.63E-01	7.51E-01	7.39E-01	7.27E-01	7.16E-01	7.05E-01	6.94E-01	6.84E-01	6.49E+02
9.09E-46	2.86E-46	9.00E-47	2.83E-47	8.91E-48	2.81E-48	8.84E-49	2.78E-49	8.77E-50	2.76E-50	8.70E-51	2.74E-51	2.64E+01
9.42E-02	9.26E-02	9.11E-02	8.96E-02	8.82E-02	8.68E-02	8.54E-02	8.41E-02	8.27E-02	8.15E-02	8.02E-02	7.90E-02	7.60E+01
9.22E-02	9.06E-02	8.91E-02	8.76E-02	8.62E-02	8.48E-02	8.35E-02	8.21E-02	8.09E-02	7.96E-02	7.84E-02	7.72E-02	7.75E+01
4.85E-01	4.72E-01	4.60E-01	4.48E-01	4.37E-01	4.26E-01	4.15E-01	4.05E-01	3.95E-01	3.85E-01	3.76E-01	3.66E-01	8.82E+02
2.47E-01	2.43E-01	2.39E-01	2.35E-01	2.31E-01	2.28E-01	2.24E-01	2.21E-01	2.17E-01	2.14E-01	2.11E-01	2.07E-01	1.92E+02
9.72E-02	9.56E-02	9.40E-02	9.25E-02	9.10E-02	8.95E-02	8.81E-02	8.68E-02	8.54E-02	8.41E-02	8.28E-02	8.16E-02	7.66E+01
3.21E-02	3.16E-02	3.11E-02	3.06E-02	3.01E-02	2.96E-02	2.91E-02	2.86E-02	2.82E-02	2.78E-02	2.73E-02	2.69E-02	2.71E+01
6.00E+00	5.90E+00	5.80E+00	5.71E+00	5.62E+00	5.53E+00	5.44E+00	5.36E+00	5.27E+00	5.19E+00	5.11E+00	5.04E+00	2.84E+03
1.32E-01	1.30E-01	1.28E-01	1.26E-01	1.24E-01	1.22E-01	1.20E-01	1.18E-01	1.16E-01	1.14E-01	1.12E-01	1.11E-01	1.12E+02
3.62E-01	3.55E-01	3.48E-01	3.42E-01	3.36E-01	3.30E-01	3.24E-01	3.18E-01	3.12E-01	3.07E-01	3.01E-01	2.96E-01	3.53E+02
7.72E-02	7.58E-02	7.46E-02	7.33E-02	7.21E-02	7.09E-02	6.98E-02	6.87E-02	6.76E-02	6.65E-02	6.55E-02	6.45E-02	6.42E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-01
5.30E-02	5.21E-02	5.12E-02	5.03E-02	4.95E-02	4.87E-02	4.79E-02	4.71E-02	4.63E-02	4.56E-02	4.49E-02	4.42E-02	4.63E+01
4.28E-42	1.43E-42	4.80E-43	1.60E-43	5.37E-44	1.80E-44	6.02E-45	2.02E-45	6.76E-46	2.26E-46	7.58E-47	2.54E-47	4.90E+02
5.65E-02	5.55E-02	5.46E-02	5.37E-02	5.28E-02	5.20E-02	5.11E-02	5.03E-02	4.95E-02	4.87E-02	4.80E-02	4.73E-02	4.77E+01
3.03E-11	2.34E-11	1.80E-11	1.39E-11	1.07E-11	8.28E-12	6.39E-12	4.94E-12	3.81E-12	2.94E-12	2.27E-12	1.76E-12	4.87E+01
########	########	########	########	########	########	########	########	########	########	########	########	6.85E-01
########	########	########	########	########	########	########	########	########	########	########	########	7.23E-02
1.08E-01	1.07E-01	1.05E-01	1.03E-01	1.01E-01	9.98E-02	9.82E-02	9.67E-02	9.52E-02	9.37E-02	9.23E-02	9.09E-02	8.47E+01
2.42E-02	2.37E-02	2.33E-02	2.30E-02	2.26E-02	2.22E-02	2.19E-02	2.15E-02	2.12E-02	2.08E-02	2.05E-02	2.02E-02	2.06E+01
3.37E-02	3.32E-02	3.26E-02	3.20E-02	3.15E-02	3.10E-02	3.05E-02	3.00E-02	2.95E-02	2.91E-02	2.86E-02	2.82E-02	2.92E+01
8.16E-04	7.78E-04	7.41E-04	7.07E-04	6.74E-04	6.43E-04	6.13E-04	5.85E-04	5.58E-04	5.33E-04	5.09E-04	4.86E-04	1.06E+01
2.10E-02	2.06E-02	2.03E-02	1.99E-02	1.96E-02	1.93E-02	1.90E-02	1.87E-02	1.84E-02	1.81E-02	1.78E-02	1.76E-02	1.78E+01
########	########	########	########	########	########	########	########	########	########	########	########	1.16E+00
6.00E+00	**5.90E+00**	**5.80E+00**	**5.71E+00**	**5.62E+00**	**5.53E+00**	**5.44E+00**	**5.36E+00**	**5.27E+00**	**5.19E+00**	**5.11E+00**	**5.04E+00**	**2.84E+03**

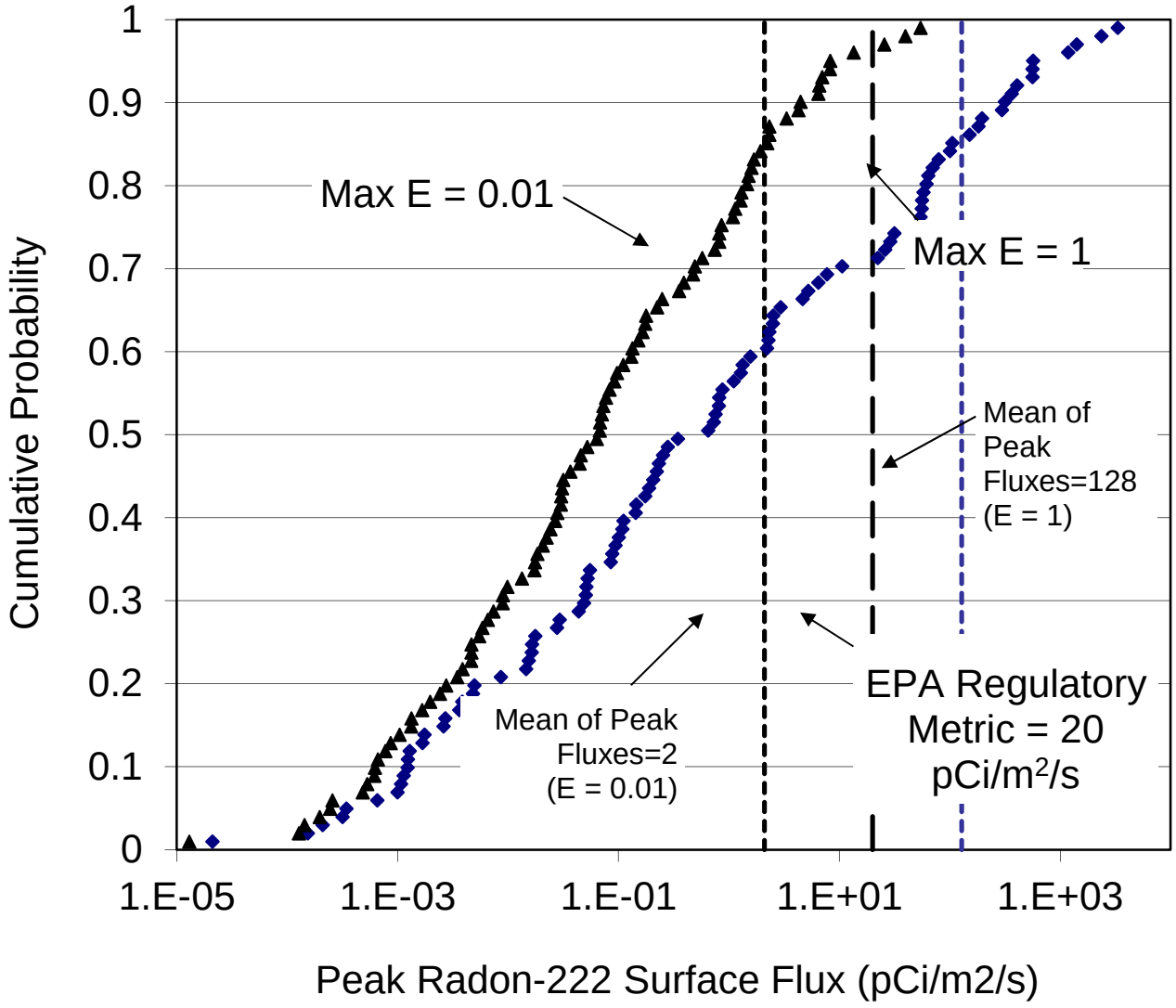
This worksheet processes the results calculated in "Radon_transport_3-regions_stochastic.mcd"
Cliff Ho, 505-844-2384, ckho@sandia.gov
10/3/2005

Porosity	Moisture Content	Cover Thickness (m)	Waste Thickness (m)	Vadose Thickness (m)	Infiltration (m/s)	Waste Volume (m^3)	Emanation Factor	Effective Diffusion Coefficient (m^2/s)	Radon-222 Surface Flux (pCi/m2/s)	Radon-222 Aquifer Concentration (pCi/L)
0.302181	0.128109	3.96881	3.76538	137.123	4.17E-11	18321	1.99E-06	1.42E-06	0.000243938	2.71E-32
0.329645	0.152393	3.97062	5.90003	139.011	2.96E-11	3774.89	0.0045615	1.24E-06	2.23E+00	4.07E-31
0.385656	0.161131	4.37871	5.44924	137.758	6.00E-11	23314.7	0.00105018	1.60E-06	0.0706202	1.96E-31
0.352094	0.139714	1.31359	4.60618	142.513	5.61E-11	820.088	2.55E-06	1.68E-06	0.0316773	6.81E-33
0.419666	0.172672	1.11872	4.82293	141.349	5.89E-11	4202.77	0.000514914	1.72E-06	1.27E+00	2.47E-33
0.3269	0.085672	4.26644	6.19844	141.017	2.18E-11	5956.86	0.00198087	2.73E-06	1.30E+00	2.82E-23
0.403601	0.083681	4.1198	8.14892	141.701	2.94E-11	67161.9	1.22E-05	3.49E-06	0.000772513	1.34E-26
0.34547	0.131683	0.199456	3.82987	142.392	2.62E-11	2195.08	0.00303185	1.77E-06	2.56E+01	8.79E-30
0.315072	0.069774	0.896147	6.73543	142.433	1.67E-11	11163.2	0.00764051	3.15E-06	1.35E+01	5.27E-22
0.323066	0.069238	2.19093	7.06634	134.276	4.68E-11	2852.89	7.63E-06	3.24E-06	0.0309006	1.21E-22
0.443357	0.213216	4.3621	6.26688	137.729	4.50E-11	14034.7	6.58E-06	1.35E-06	0.000482518	1.86E-37
0.319028	0.206871	2.66446	6.61372	133.267	1.21E-11	14410.5	5.91E-06	4.31E-07	0.000530219	7.10E-49
0.303276	0.092099	2.54864	5.98673	137.548	4.17E-11	12000.7	0.00671582	2.30E-06	4.45E+00	1.91E-23
0.378028	0.123642	4.87352	5.88876	134.361	2.62E-11	9788.4	0.000901808	2.25E-06	0.174462	4.05E-26
0.388052	0.161028	4.23027	4.32499	135.128	4.87E-11	12754.3	0.000524004	1.63E-06	0.0681365	4.61E-31
0.325774	0.130677	0.715324	5.60068	140.972	5.69E-11	17148.1	0.004845	1.60E-06	4.25E+00	7.87E-30
0.366462	0.155826	1.38681	6.51876	139.585	4.17E-11	19577.5	0.00238358	1.52E-06	1.14E+00	7.44E-32
0.310159	0.200024	4.74877	6.27803	140.814	5.05E-11	44105.6	2.64E-06	4.35E-07	1.30E-05	4.08E-51
0.414015	0.160462	3.49464	7.18685	141.421	3.86E-11	24571.4	0.00412105	1.87E-06	4.91E-01	9.05E-31
0.376342	0.150308	3.14575	8.17207	137.987	3.13E-11	252.248	0.00372363	1.71E-06	5.44E+01	1.62E-27
0.427263	0.084698	3.58896	6.30973	133.757	1.68E-11	40096.6	0.00670976	3.66E-06	8.56E-01	8.32E-23
0.438694	0.148484	0.607921	6.11191	136.562	1.32E-11	14156.6	2.12E-05	2.30E-06	0.0242181	4.62E-31
0.379126	0.094773	1.82919	5.6675	137.098	2.46E-11	966.131	0.00354891	2.96E-06	3.97E+01	3.90E-23
0.368077	0.157013	4.46438	5.37834	135.979	2.31E-11	727.798	5.41E-05	1.51E-06	0.110199	9.16E-31
0.425297	0.153552	0.15698	7.92064	140.449	5.44E-11	623.03	1.17E-05	2.09E-06	0.389566	3.30E-31
0.413491	0.138045	2.18897	4.35355	133.582	1.42E-11	38638.7	1.29E-04	2.28E-06	0.0223345	2.03E-29
0.444542	0.180408	1.11493	6.83315	136.589	1.46E-11	28170.2	0.00150135	1.82E-06	5.75E-01	4.60E-32
0.389443	0.159706	0.763774	6.28682	134.588	1.60E-11	32876.3	8.85E-05	1.66E-06	0.0367029	2.82E-32
0.340069	0.191376	2.44662	6.3711	134.318	5.93E-11	36337.6	1.72E-04	7.63E-07	0.0133481	9.78E-40
0.422137	0.15208	3.67946	5.93079	134.815	5.52E-11	7037.69	2.45E-05	2.09E-06	0.00988756	4.06E-30
0.355748	0.209786	1.04106	5.36066	135.492	3.17E-11	37739	0.00441561	6.71E-07	8.17E-01	1.70E-42

0.398838	0.178158	3.76077	8.20891	136.469	4.43E-11	3187.96	2.98E-05	1.45E-06	0.0184706	6.73E-33
0.303261	0.167859	2.71445	6.16159	139.649	5.85E-11	28130.4	7.00E-06	7.62E-07	0.000664667	1.35E-40
0.341452	0.107183	4.15503	3.94344	142.325	1.19E-11	3448.51	1.59E-06	2.28E-06	0.00133412	2.72E-29
0.386071	0.105601	2.6283	4.77056	134.052	1.42E-11	2345.41	9.89E-06	2.74E-06	0.0279902	1.89E-26
0.421778	0.071675	4.23961	6.43457	138.58	3.26E-11	8180.54	3.80E-06	4.00E-06	0.00197051	3.42E-25
0.371345	0.19941	1.11068	5.26312	141.951	4.16E-11	48238.8	2.71E-04	9.19E-07	0.0443799	1.51E-41
0.408353	0.079641	1.80951	6.56373	141.723	3.23E-11	21229.7	6.13E-06	3.65E-06	0.00347199	6.63E-27
0.367491	0.066648	0.170641	5.62607	136.883	4.26E-11	18936.4	0.00111442	3.73E-06	1.50E+00	1.02E-22
0.408452	0.16325	1.94029	7.20736	139.719	1.20E-11	18357	3.51E-04	1.77E-06	0.133452	4.19E-32
0.387663	0.146755	1.58471	3.07146	135.814	3.13E-11	5237.8	4.99E-06	1.87E-06	0.00737752	3.02E-32
0.407106	0.123344	0.982703	4.99571	142.821	2.74E-11	42642.7	0.00712439	2.52E-06	2.33E+00	1.23E-28
0.383853	0.133076	0.610024	7.33486	138.948	5.40E-11	17829	6.17E-06	2.10E-06	0.00587779	3.97E-31
0.323673	0.079257	4.35954	7.66549	134.32	2.16E-11	7500.37	1.55E-06	2.90E-06	0.000862873	3.28E-24
0.362799	0.179934	1.08327	6.41909	139.005	3.50E-11	12550.9	1.39E-06	1.11E-06	0.00104051	8.09E-39
0.375948	0.195191	2.73139	6.85114	136.553	3.32E-11	41114.1	2.14E-06	1.01E-06	1.43E-04	1.05E-39
0.40947	0.203215	2.06603	8.00718	137.784	3.25E-11	13837.8	1.89E-04	1.19E-06	0.0635674	1.26E-36
0.326166	0.104613	4.21409	4.93024	142.481	4.05E-11	438.836	7.51E-06	2.19E-06	0.0522905	2.76E-27
0.372339	0.074884	1.30408	7.73557	142.826	2.85E-11	9926.64	1.65E-05	3.50E-06	0.0267415	1.77E-25
0.402065	0.188013	3.32431	5.40447	138.136	5.88E-11	15330.1	4.42E-05	1.33E-06	0.00655043	5.89E-36
0.323095	0.15786	4.67597	7.55308	141.98	3.25E-11	618.507	1.02E-05	1.09E-06	0.0172908	1.73E-34
0.322249	0.065434	3.844	3.25079	136.265	5.02E-11	6974.56	1.08E-04	3.38E-06	0.0729284	2.31E-22
0.401082	0.165462	3.99109	7.89849	138.708	1.93E-11	5419.88	0.00894895	1.67E-06	3.34E+00	1.19E-29
0.362996	0.071028	0.662213	3.90225	136.481	1.61E-11	20372.9	3.07E-06	3.54E-06	0.00275189	7.47E-26
0.440224	0.09206	0.0979299	3.65389	135.902	3.51E-11	2054.22	0.000672692	3.56E-06	7.01E+00	6.20E-25
0.323916	0.211235	3.64932	3.66133	142.228	2.82E-11	28549.4	1.51E-05	4.23E-07	0.000256593	8.42E-54
0.419499	0.166999	4.39943	6.05384	141.07	4.22E-11	43593.5	1.26E-04	1.81E-06	0.004665	4.41E-33
0.329363	0.137716	3.74482	6.83868	139.867	2.57E-11	15257.3	1.17E-04	1.50E-06	0.0205728	5.08E-31
0.418857	0.138453	3.07703	6.51821	140.668	3.35E-11	3985	0.00207415	2.32E-06	2.32E+00	4.09E-28
0.324246	0.140592	3.32809	7.23913	140.218	2.27E-11	42450.3	2.60E-06	1.39E-06	0.000197206	8.15E-34
0.406677	0.171363	2.44059	8.2166	136.416	3.74E-11	36470.6	0.00611941	1.63E-06	8.18E-01	6.85E-31
0.341981	0.157279	1.29701	4.10718	137.843	1.22E-11	7475.27	7.86E-05	1.27E-06	0.0918201	2.49E-34
0.399561	0.054017	3.15346	5.05976	141.382	4.99E-11	4252.96	0.00473677	4.44E-06	8.26E+00	3.05E-21
0.405233	0.070309	1.2857	6.05835	138.406	5.97E-11	25784.3	2.89E-05	3.92E-06	0.0175186	3.87E-25
0.319593	0.201476	2.2437	8.02295	138.687	5.65E-11	4267.64	4.35E-04	4.88E-07	0.223321	8.42E-46
0.421356	0.181541	1.71465	5.02594	139.4	2.28E-11	997.088	1.07E-04	1.60E-06	0.745883	1.18E-33
0.375934	0.118381	2.32404	3.67407	140.599	3.54E-11	1117.52	1.32E-05	2.34E-06	0.0770243	5.26E-29
0.362948	0.148083	1.96965	3.28769	134.58	3.23E-11	5589.23	0.00146246	1.62E-06	1.61E+00	4.64E-30
0.437755	0.217382	0.134732	6.99142	140.864	5.34E-11	23735.7	0.00270685	1.25E-06	1.93E+00	6.59E-38
0.380584	0.083373	2.91076	3.05724	137.384	3.29E-11	2719.77	7.17E-05	3.30E-06	0.151122	9.54E-25
0.369456	0.075643	2.10769	5.25736	138.063	4.81E-11	20302.4	5.87E-05	3.45E-06	0.0303283	1.01E-24

0.423116	0.216694	1.86772	5.43853	133.683	1.58E-11	17901.2	3.28E-05	1.13E-06	0.00892019	2.49E-38
0.367221	0.057789	0.0492583	6.93092	142.82	5.36E-11	27536	1.70E-04	4.06E-06	0.178128	9.03E-24
0.442562	0.06262	4.21934	5.94654	139.155	2.96E-11	5794.71	0.00222116	4.44E-06	1.69E+00	3.95E-22
0.407703	0.075644	3.41193	7.82556	136.675	1.65E-11	10835.4	1.09E-06	3.77E-06	0.000624333	1.65E-25
0.330029	0.201661	2.93749	7.48861	141.601	2.11E-11	15911.1	1.45E-06	5.64E-07	1.28E-04	7.21E-48
0.422038	0.177123	2.72907	5.59162	135.419	5.69E-11	4615.54	1.06E-05	1.67E-06	0.00900167	2.58E-33
0.37363	0.055525	1.84446	6.91977	133.51	2.71E-11	37927.8	0.000676669	4.20E-06	0.24833	3.12E-21
0.305932	0.17476	4.57123	4.37327	134.725	2.87E-11	3266.12	3.41E-06	6.92E-07	0.000615949	4.51E-40
0.383878	0.090421	4.70172	7.15166	135.201	2.53E-11	7527.44	0.00267362	3.13E-06	1.08E+00	1.63E-22
0.377978	0.082057	2.84784	5.91253	140.869	2.03E-11	41778.5	7.47E-06	3.32E-06	0.00132594	8.12E-27
0.422554	0.111649	1.98497	5.75373	133.837	1.50E-11	42273.3	1.79E-05	2.92E-06	0.00388151	7.96E-28
0.396037	0.116223	2.43142	6.69653	134.365	5.94E-11	28666.5	2.68E-04	2.58E-06	0.0677174	1.08E-26
0.422425	0.191012	4.26605	6.83957	138.626	3.39E-11	67990.1	0.00664063	1.47E-06	1.30E-01	2.11E-33
0.317722	0.143565	3.81133	7.78508	139.323	2.07E-11	17223.3	3.53E-05	1.28E-06	0.00466105	1.53E-32
0.346914	0.190288	2.86959	7.17729	137.537	3.51E-11	11907.5	8.88E-06	8.33E-07	0.00166537	3.50E-40
0.34291	0.07791	1.36216	5.09444	136.338	2.41E-11	20493.4	2.34E-04	3.13E-06	0.164699	5.85E-24
0.32206	0.122215	4.26426	3.32056	135.825	2.55E-11	1013.96	1.16E-06	1.74E-06	0.0024159	1.16E-29
0.42135	0.076489	1.46993	3.05255	141.732	5.24E-11	6251.34	0.00464331	3.85E-06	8.24E+00	2.92E-24
0.387835	0.064382	4.22616	6.96618	141.685	4.29E-11	6900.83	7.90E-06	3.98E-06	0.00547788	2.46E-24
0.338139	0.151615	0.930093	3.84989	140.954	1.22E-11	12256.9	0.00729745	1.33E-06	6.59E+00	8.54E-33
0.302232	0.147263	4.342	6.52275	139.35	2.61E-11	1854.07	3.97E-05	1.07E-06	0.0299945	3.35E-33
0.417292	0.106551	0.140493	4.8402	138.948	5.43E-11	1030.86	2.19E-05	3.00E-06	0.473483	1.95E-27
0.332112	0.191979	0.288968	7.18364	134.943	4.68E-11	2927.44	3.17E-04	6.91E-07	1.46137	3.83E-40
0.381107	0.101894	1.25301	8.13482	135.315	5.73E-11	44669.1	1.44E-05	2.79E-06	0.00464194	4.80E-27
0.318271	0.206979	0.566325	4.57814	135.391	1.64E-11	5079.96	0.00393245	4.24E-07	6.47E+00	2.69E-48
0.409567	0.180932	2.41354	7.57843	137.068	1.56E-11	2063.71	2.05E-05	1.50E-06	0.0455623	1.62E-33
0.37971	0.115116	0.240369	3.57127	135.725	3.08E-11	3706.8	6.94E-05	2.45E-06	0.353023	6.34E-28
0.36445	0.092304	1.64668	3.78914	136.794	3.72E-11	4914.87	4.48E-05	2.90E-06	0.0971534	7.07E-26
0.401558	0.092464	2.51423	4.6477	135.065	1.88E-11	276.418	3.05E-06	3.22E-06	0.0832307	3.07E-25


1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Cumulative Probability
1.E-05
1.E-03
1.E-01
1.E+01
Peak Radon-222 Surface Flux (pCi/m2/s)
EPA Regulatory Metric = 20 pCi/m2/s


Cumulative Probability
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1.E-05
1.E-03
1.E-01
1.E+01
1.E+03
Peak Radon-222 Surface Flux (pCi/m2/s)
Max E = 0.01
Max E = 1
Mean of Peak Fluxes=128 (E = 1)
Mean of Peak Fluxes=2 (E = 0.01)
EPA Regulatory Metric = 20 pCi/m2/s

Radon-222 Surface Flux (pCi/m2/s)	CDF	EPA Design Metric (pCi/m2/s)	CDF		Average (Flux)
1.29525E-05	0.009901	20		0	2.099722
0.000127826	0.019802	20		1	2.099722
0.000143303	0.029703				
0.000197206	0.039604				
0.000243938	0.049505				
0.000256593	0.059406				
0.000482518	0.069307				
0.000530219	0.079208				
0.000615949	0.089109				
0.000624333	0.09901				
0.000664667	0.108911				
0.000772513	0.118812				
0.000862873	0.128713				
0.00104051	0.138614				
0.00132594	0.148515				
0.00133412	0.158416				
0.00166537	0.168317				
0.00197051	0.178218				
0.0024159	0.188119				
0.00275189	0.19802				
0.00347199	0.207921				
0.00388151	0.217822				
0.00464194	0.227723				
0.00466105	0.237624				
0.004665	0.247525				
0.00547788	0.257426				
0.00587779	0.267327				
0.00655043	0.277228				
0.00737752	0.287129				
0.00892019	0.29703				
0.00900167	0.306931				
0.00988756	0.316832				
0.0133481	0.326733				
0.0172908	0.336634				
0.0175186	0.346535				
0.0184706	0.356436				
0.0205728	0.366337				
0.0223345	0.376238				
0.0242181	0.386139				
0.0267415	0.39604				
0.0279902	0.405941				
0.0299945	0.415842				
0.0303283	0.425743				
0.0309006	0.435644				
0.0316773	0.445545				
0.0367029	0.455446				
0.0443799	0.465347				
0.0455623	0.475248				

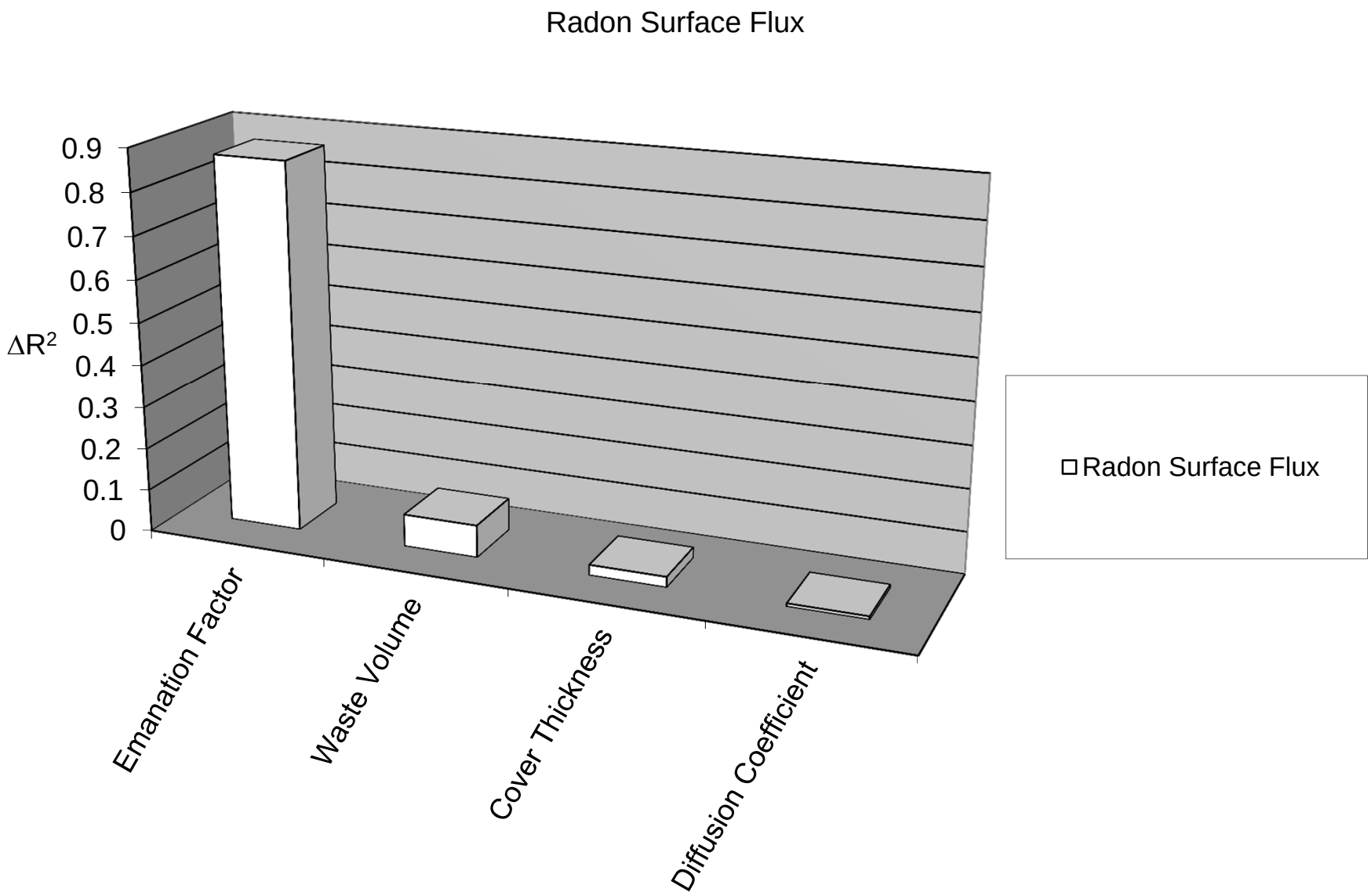
0.0522905	0.485149
0.0635674	0.49505
0.0677174	0.50495
0.0681365	0.514851
0.0706202	0.524752
0.0729284	0.534653
0.0770243	0.544554
0.0832307	0.554455
0.0918201	0.564356
0.0971534	0.574257
0.110199	0.584158
0.130315	0.594059
0.133452	0.60396
0.151122	0.613861
0.164699	0.623762
0.174462	0.633663
0.178128	0.643564
0.223321	0.653465
0.24833	0.663366
0.353023	0.673267
0.389566	0.683168
0.473483	0.693069
0.49114	0.70297
0.574941	0.712871
0.745883	0.722772
0.817196	0.732673
0.818332	0.742574
0.856226	0.752475
1.08469	0.762376
1.1439	0.772277
1.27308	0.782178
1.30177	0.792079
1.46137	0.80198
1.50496	0.811881
1.60615	0.821782
1.68661	0.831683
1.9338	0.841584
2.2311	0.851485
2.32258	0.861386
2.32652	0.871287
3.33773	0.881188
4.25331	0.891089
4.45272	0.90099
6.47138	0.910891
6.59163	0.920792
7.00997	0.930693
8.23626	0.940594
8.26063	0.950495
13.5067	0.960396
25.6106	0.970297
39.7016	0.980198

54.3543 0.990099

2.099721516

Radon Surface Flux

	Step	Multiple	Multiple	R-square	F - to	p-level	Variables	SemiPart
Emanation Factor	1	0.932529	0.869611	0.869611	653.5960	0.000000	1	0.900421
Waste Volume	2	0.972588	0.945928	0.076318	136.9073	0.000000	2	-0.277813
Cover Thickness	3	0.985145	0.970510	0.024582	80.0243	0.000000	3	-0.147202
Diffusion Coefficient	4	0.988818	0.977761	0.007251	30.9747	0.000000	4	0.085152


Radon Surface Flux
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
ΔR2
Emanation Factor
Waste Volume
Cover Thickness
Diffusion Coefficient
Radon Surface Flux

This worksheet processes the results calculated in "Radon_transport_3-regions_stochastic.mcd"
Cliff Ho, 505-844-2384, ckho@sandia.gov
10/3/2005

Porosity	Moisture Content	Cover Thickness (m)	Waste Thickness (m)	Vadose Thickness (m)	Infiltration (m/s)	Waste Volume (m^3)	Emanation Factor	Effective Diffusion Coefficient (m^2/s)	Length (m)	Width (m)
0.302181	0.128109	3.96881	3.76538	137.123	4.17E-11	18321	2.80E-06	1.42E-06	7.25E+01	6.71E+01
0.329645	0.152393	3.97062	5.90003	139.011	2.96E-11	3774.89	0.308079	1.24E-06	9.94E+00	6.44E+01
0.385656	0.161131	4.37871	5.44924	137.758	6.00E-11	23314.7	0.0340326	1.60E-06	7.02E+01	6.09E+01
0.352094	0.139714	1.31359	4.60618	142.513	5.61E-11	820.088	4.08E-06	1.68E-06	1.52E+01	1.17E+01
0.419666	0.172672	1.11872	4.82293	141.349	5.89E-11	4202.77	0.0116843	1.72E-06	1.17E+02	7.44E+00
0.3269	0.085672	4.26644	6.19844	141.017	2.18E-11	5956.86	0.0881623	2.73E-06	2.18E+01	4.41E+01
0.403601	0.083681	4.1198	8.14892	141.701	2.94E-11	67161.9	4.26E-05	3.49E-06	1.22E+02	6.74E+01
0.34547	0.131683	0.199456	3.82987	142.392	2.62E-11	2195.08	0.16694	1.77E-06	9.08E+00	6.31E+01
0.315072	0.069774	0.896147	6.73543	142.433	1.67E-11	11163.2	0.667857	3.15E-06	4.61E+01	3.59E+01
0.323066	0.069238	2.19093	7.06634	134.276	4.68E-11	2852.89	2.11E-05	3.24E-06	5.41E+01	7.47E+00
0.443357	0.213216	4.3621	6.26688	137.729	4.50E-11	14034.7	1.69E-05	1.35E-06	1.24E+02	1.80E+01
0.319028	0.206871	2.66446	6.61372	133.267	1.21E-11	14410.5	1.44E-05	4.31E-07	7.14E+01	3.05E+01
0.303276	0.092099	2.54864	5.98673	137.548	4.17E-11	12000.7	0.550362	2.30E-06	9.18E+01	2.18E+01
0.378028	0.123642	4.87352	5.88876	134.361	2.62E-11	9788.4	0.0270814	2.25E-06	3.62E+01	4.59E+01
0.388052	0.161028	4.23027	4.32499	135.128	4.87E-11	12754.3	0.011995	1.63E-06	7.03E+01	4.19E+01
0.325774	0.130677	0.715324	5.60068	140.972	5.69E-11	17148.1	0.337241	1.60E-06	5.41E+01	5.66E+01
0.366462	0.155826	1.38681	6.51876	139.585	4.17E-11	19577.5	0.116371	1.52E-06	7.80E+01	3.85E+01
0.310159	0.200024	4.74877	6.27803	140.814	5.05E-11	44105.6	4.29E-06	4.35E-07	9.06E+01	7.75E+01
0.414015	0.160462	3.49464	7.18685	141.421	3.86E-11	24571.4	0.264553	1.87E-06	5.88E+01	5.81E+01
0.376342	0.150308	3.14575	8.17207	137.987	3.13E-11	252.248	0.227222	1.71E-06	3.97E+00	7.78E+00
0.427263	0.084698	3.58896	6.30973	133.757	1.68E-11	40096.6	0.549617	3.66E-06	8.01E+01	7.94E+01
0.438694	0.148484	0.607921	6.11191	136.562	1.32E-11	14156.6	9.75E-05	2.30E-06	7.69E+01	3.01E+01
0.379126	0.094773	1.82919	5.6675	137.098	2.46E-11	966.131	0.211418	2.96E-06	3.15E+01	5.41E+00
0.368077	0.157013	4.46438	5.37834	135.979	2.31E-11	727.798	3.98E-04	1.51E-06	3.60E+00	3.76E+01
0.425297	0.153552	0.15698	7.92064	140.449	5.44E-11	623.03	4.01E-05	2.09E-06	1.36E+01	5.79E+00
0.413491	0.138045	2.18897	4.35355	133.582	1.42E-11	38638.7	1.47E-03	2.28E-06	1.13E+02	7.89E+01
0.444542	0.180408	1.11493	6.83315	136.589	1.46E-11	28170.2	0.0581733	1.82E-06	1.07E+02	3.86E+01
0.389443	0.159706	0.763774	6.28682	134.588	1.60E-11	32876.3	8.32E-04	1.66E-06	9.16E+01	5.71E+01
0.340069	0.191376	2.44662	6.3711	134.318	5.93E-11	36337.6	2.26E-03	7.63E-07	7.09E+01	8.04E+01
0.422137	0.15208	3.67946	5.93079	134.815	5.52E-11	7037.69	1.21E-04	2.09E-06	2.13E+01	5.56E+01
0.355748	0.209786	1.04106	5.36066	135.492	3.17E-11	37739	0.293417	6.71E-07	9.62E+01	7.32E+01

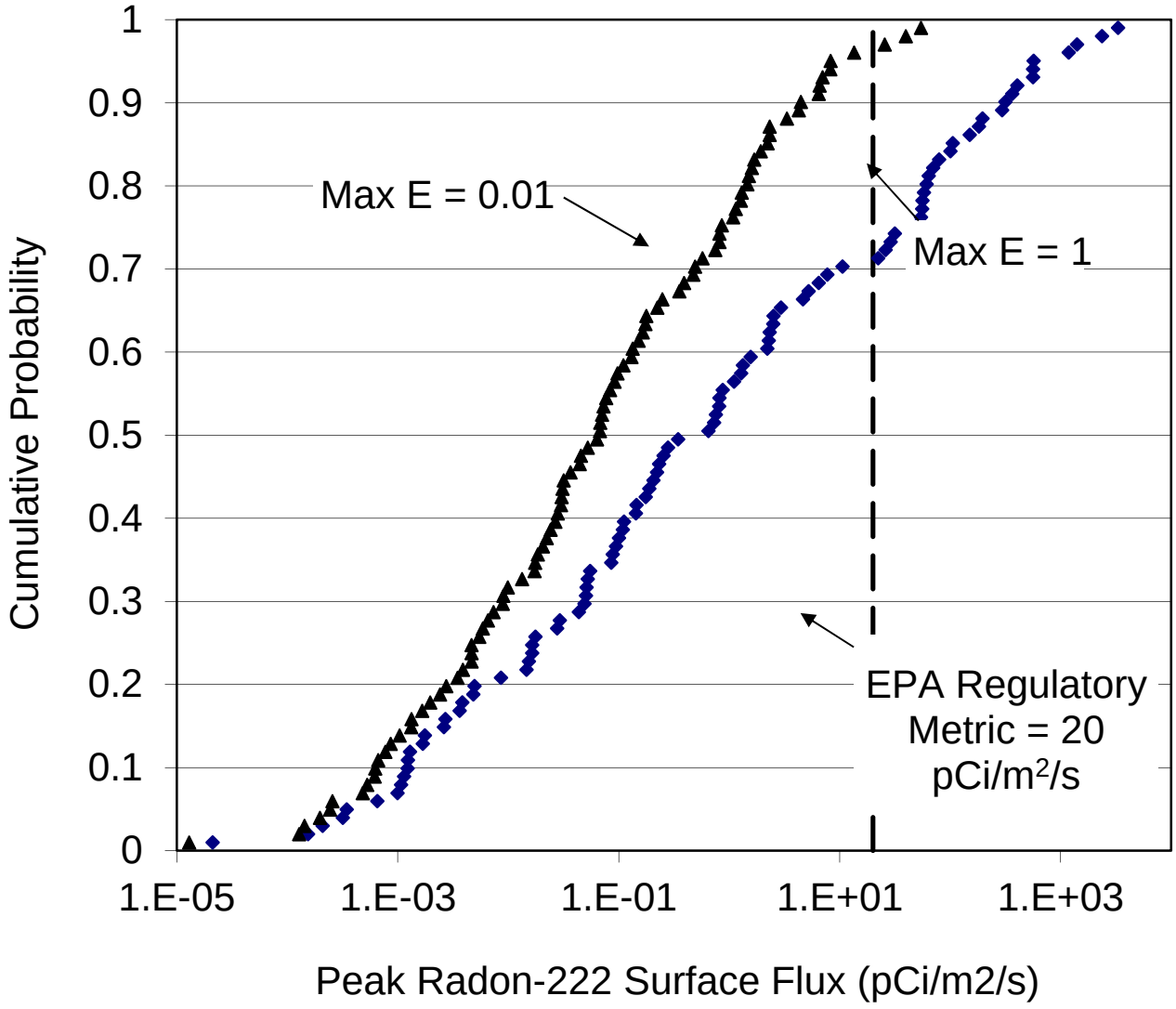
0.398838	0.178158	3.76077	8.20891	136.469	4.43E-11	3187.96	1.63E-04	1.45E-06	7.03E+00	5.53E+01
0.303261	0.167859	2.71445	6.16159	139.649	5.85E-11	28130.4	1.85E-05	7.62E-07	8.56E+01	5.34E+01
0.341452	0.107183	4.15503	3.94344	142.325	1.19E-11	3448.51	2.00E-06	2.28E-06	1.40E+01	6.25E+01
0.386071	0.105601	2.6283	4.77056	134.052	1.42E-11	2345.41	3.11E-05	2.74E-06	1.24E+02	3.95E+00
0.421778	0.071675	4.23961	6.43457	138.58	3.26E-11	8180.54	7.40E-06	4.00E-06	3.82E+01	3.32E+01
0.371345	0.19941	1.11068	5.26312	141.951	4.16E-11	48238.8	4.45E-03	9.19E-07	1.29E+02	7.12E+01
0.408353	0.079641	1.80951	6.56373	141.723	3.23E-11	21229.7	1.52E-05	3.65E-06	4.05E+01	7.99E+01
0.367491	0.066648	0.170641	5.62607	136.883	4.26E-11	18936.4	0.0372027	3.73E-06	5.01E+01	6.72E+01
0.408452	0.16325	1.94029	7.20736	139.719	1.20E-11	18357	6.59E-03	1.77E-06	3.10E+01	8.21E+01
0.387663	0.146755	1.58471	3.07146	135.814	3.13E-11	5237.8	1.11E-05	1.87E-06	3.38E+01	5.04E+01
0.407106	0.123344	0.982703	4.99571	142.821	2.74E-11	42642.7	0.601342	2.52E-06	1.19E+02	7.20E+01
0.383853	0.133076	0.610024	7.33486	138.948	5.40E-11	17829	1.53E-05	2.10E-06	1.19E+02	2.05E+01
0.323673	0.079257	4.35954	7.66549	134.32	2.16E-11	7500.37	1.92E-06	2.90E-06	1.33E+01	7.35E+01
0.362799	0.179934	1.08327	6.41909	139.005	3.50E-11	12550.9	1.65E-06	1.11E-06	2.50E+01	7.81E+01
0.375948	0.195191	2.73139	6.85114	136.553	3.32E-11	41114.1	3.12E-06	1.01E-06	1.02E+02	5.86E+01
0.40947	0.203215	2.06603	8.00718	137.784	3.25E-11	13837.8	2.59E-03	1.19E-06	3.00E+01	5.76E+01
0.326166	0.104613	4.21409	4.93024	142.481	4.05E-11	438.836	2.06E-05	2.19E-06	3.53E+00	2.52E+01
0.372339	0.074884	1.30408	7.73557	142.826	2.85E-11	9926.64	6.72E-05	3.50E-06	1.76E+01	7.27E+01
0.402065	0.188013	3.32431	5.40447	138.136	5.88E-11	15330.1	2.93E-04	1.33E-06	4.29E+01	6.61E+01
0.323095	0.15786	4.67597	7.55308	141.98	3.25E-11	618.507	3.24E-05	1.09E-06	7.99E+00	1.03E+01
0.322249	0.065434	3.844	3.25079	136.265	5.02E-11	6974.56	1.13E-03	3.38E-06	2.73E+01	7.87E+01
0.401082	0.165462	3.99109	7.89849	138.708	1.93E-11	5419.88	0.846561	1.67E-06	2.27E+01	3.02E+01
0.362996	0.071028	0.662213	3.90225	136.481	1.61E-11	20372.9	5.38E-06	3.54E-06	1.16E+02	4.49E+01
0.440224	0.09206	0.0979299	3.65389	135.902	3.51E-11	2054.22	0.0174471	3.56E-06	2.81E+01	2.00E+01
0.323916	0.211235	3.64932	3.66133	142.228	2.82E-11	28549.4	5.87E-05	4.23E-07	8.57E+01	9.10E+01
0.419499	0.166999	4.39943	6.05384	141.07	4.22E-11	43593.5	1.41E-03	1.81E-06	1.19E+02	6.03E+01
0.329363	0.137716	3.74482	6.83868	139.867	2.57E-11	15257.3	1.27E-03	1.50E-06	1.21E+02	1.84E+01
0.418857	0.138453	3.07703	6.51821	140.668	3.35E-11	3985	0.0944627	2.32E-06	2.24E+01	2.74E+01
0.324246	0.140592	3.32809	7.23913	140.218	2.27E-11	42450.3	4.19E-06	1.39E-06	7.60E+01	7.72E+01
0.406677	0.171363	2.44059	8.2166	136.416	3.74E-11	36470.6	0.478701	1.63E-06	1.24E+02	3.59E+01
0.341981	0.157279	1.29701	4.10718	137.843	1.22E-11	7475.27	6.97E-04	1.27E-06	7.71E+01	2.36E+01
0.399561	0.054017	3.15346	5.05976	141.382	4.99E-11	4252.96	0.326004	4.44E-06	3.57E+01	2.35E+01
0.405233	0.070309	1.2857	6.05835	138.406	5.97E-11	25784.3	1.56E-04	3.92E-06	4.79E+01	8.89E+01
0.319593	0.201476	2.2437	8.02295	138.687	5.65E-11	4267.64	9.08E-03	4.88E-07	1.05E+02	5.07E+00
0.421356	0.181541	1.71465	5.02594	139.4	2.28E-11	997.088	1.11E-03	1.60E-06	1.20E+01	1.65E+01
0.375934	0.118381	2.32404	3.67407	140.599	3.54E-11	1117.52	4.77E-05	2.34E-06	7.87E+01	3.87E+00
0.362948	0.148083	1.96965	3.28769	134.58	3.23E-11	5589.23	0.0559276	1.62E-06	2.84E+01	6.00E+01
0.437755	0.217382	0.134732	6.99142	140.864	5.34E-11	23735.7	0.14083	1.25E-06	8.55E+01	3.97E+01
0.380584	0.083373	2.91076	3.05724	137.384	3.29E-11	2719.77	6.07E-04	3.30E-06	8.04E+01	1.11E+01
0.369456	0.075643	2.10769	5.25736	138.063	4.81E-11	20302.4	4.49E-04	3.45E-06	5.95E+01	6.49E+01

0.423116	0.216694	1.86772	5.43853	133.683	1.58E-11	17901.2	1.88E-04	1.13E-06	5.38E+01	6.12E+01
0.367221	0.057789	0.0492583	6.93092	142.82	5.36E-11	27536	2.22E-03	4.06E-06	7.89E+01	5.04E+01
0.442562	0.06262	4.21934	5.94654	139.155	2.96E-11	5794.71	0.104682	4.44E-06	1.25E+02	7.82E+00
0.407703	0.075644	3.41193	7.82556	136.675	1.65E-11	10835.4	1.14E-06	3.77E-06	5.32E+01	2.60E+01
0.330029	0.201661	2.93749	7.48861	141.601	2.11E-11	15911.1	1.75E-06	5.64E-07	2.68E+01	7.94E+01
0.422038	0.177123	2.72907	5.59162	135.419	5.69E-11	4615.54	3.43E-05	1.67E-06	7.66E+01	1.08E+01
0.37363	0.055525	1.84446	6.91977	133.51	2.71E-11	37927.8	0.0176021	4.20E-06	8.34E+01	6.58E+01
0.305932	0.17476	4.57123	4.37327	134.725	2.87E-11	3266.12	6.29E-06	6.92E-07	9.40E+00	7.94E+01
0.383878	0.090421	4.70172	7.15166	135.201	2.53E-11	7527.44	0.138245	3.13E-06	3.64E+01	2.89E+01
0.377978	0.082057	2.84784	5.91253	140.869	2.03E-11	41778.5	2.04E-05	3.32E-06	1.18E+02	6.01E+01
0.422554	0.111649	1.98497	5.75373	133.837	1.50E-11	42273.3	7.59E-05	2.92E-06	9.63E+01	7.63E+01
0.396037	0.116223	2.43142	6.69653	134.365	5.94E-11	28666.5	4.38E-03	2.58E-06	5.34E+01	8.01E+01
0.422425	0.191012	4.26605	6.83957	138.626	3.39E-11	67990.1	0.541145	1.47E-06	1.19E+02	8.37E+01
0.317722	0.143565	3.81133	7.78508	139.323	2.07E-11	17223.3	2.10E-04	1.28E-06	5.27E+01	4.20E+01
0.346914	0.190288	2.86959	7.17729	137.537	3.51E-11	11907.5	2.65E-05	8.33E-07	4.83E+01	3.43E+01
0.34291	0.07791	1.36216	5.09444	136.338	2.41E-11	20493.4	3.59E-03	3.13E-06	9.85E+01	4.09E+01
0.32206	0.122215	4.26426	3.32056	135.825	2.55E-11	1013.96	1.26E-06	1.74E-06	9.77E+01	3.13E+00
0.42135	0.076489	1.46993	3.05255	141.732	5.24E-11	6251.34	0.316404	3.85E-06	2.87E+01	7.14E+01
0.387835	0.064382	4.22616	6.96618	141.685	4.29E-11	6900.83	2.22E-05	3.98E-06	9.02E+01	1.10E+01
0.338139	0.151615	0.930093	3.84989	140.954	1.22E-11	12256.9	0.623385	1.33E-06	5.01E+01	6.35E+01
0.302232	0.147263	4.342	6.52275	139.35	2.61E-11	1854.07	2.50E-04	1.07E-06	1.71E+01	1.67E+01
0.417292	0.106551	0.140493	4.8402	138.948	5.43E-11	1030.86	1.03E-04	3.00E-06	2.90E+01	7.33E+00
0.332112	0.191979	0.288968	7.18364	134.943	4.68E-11	2927.44	5.65E-03	6.91E-07	8.69E+01	4.69E+00
0.381107	0.101894	1.25301	8.13482	135.315	5.73E-11	44669.1	5.49E-05	2.79E-06	9.11E+01	6.03E+01
0.318271	0.206979	0.566325	4.57814	135.391	1.64E-11	5079.96	0.246601	4.24E-07	1.32E+01	8.39E+01
0.409567	0.180932	2.41354	7.57843	137.068	1.56E-11	2063.71	9.31E-05	1.50E-06	6.61E+00	4.12E+01
0.37971	0.115116	0.240369	3.57127	135.725	3.08E-11	3706.8	5.78E-04	2.45E-06	4.24E+01	2.45E+01
0.36445	0.092304	1.64668	3.78914	136.794	3.72E-11	4914.87	3.00E-04	2.90E-06	2.13E+01	6.09E+01
0.401558	0.092464	2.51423	4.6477	135.065	1.88E-11	276.418	5.32E-06	3.22E-06	1.17E+01	5.07E+00

Radon-222 Surface Flux (pCi/m2/s)	Radon-222 Aquifer Concentration (pCi/L)	Radon-222 Surface Flow (pCi/s)	Radon Atmospheric Concentration (pCi/m^3)	Radon Atmospheric Concentration (pCi/L)
0.000343963	3.82E-32	1.67E+00	7.38E-02	7.38E-05
1.51E+02	2.75E-29	9.64E+04	4.25E+03	4.25E+00
2.28855	6.36E-30	9.79E+03	4.32E+02	4.32E-01
0.0506062	1.09E-32	9.01E+00	3.97E-01	3.97E-04
2.89E+01	5.60E-32	2.52E+04	1.11E+03	1.11E+00
5.79E+01	1.26E-21	5.57E+04	2.45E+03	2.45E+00
0.00269715	4.69E-26	2.22E+01	9.80E-01	9.80E-04
1.41E+03	4.84E-28	8.08E+05	3.56E+04	3.56E+01
1.18E+03	4.60E-20	1.96E+06	8.62E+04	8.62E+01
0.085372	3.35E-22	3.45E+01	1.52E+00	1.52E-03
0.00123813	4.76E-37	2.77E+00	1.22E-01	1.22E-04
0.00128905	1.73E-48	2.81E+00	1.24E-01	1.24E-04
3.65E+02	1.56E-21	7.31E+05	3.22E+04	3.22E+01
5.23912	1.22E-24	8.71E+03	3.84E+02	3.84E-01
1.55972	1.06E-29	4.60E+03	2.03E+02	2.03E-01
2.96E+02	5.47E-28	9.06E+05	4.00E+04	4.00E+01
5.58E+01	3.63E-30	1.68E+05	7.39E+03	7.39E+00
2.10E-05	6.63E-51	1.48E-01	6.52E-03	6.52E-06
3.15E+01	5.81E-29	1.08E+05	4.75E+03	4.75E+00
3.32E+03	9.91E-26	1.02E+05	4.51E+03	4.51E+00
7.01E+01	6.82E-21	4.46E+05	1.96E+04	1.96E+01
0.111451	2.13E-30	2.58E+02	1.14E+01	1.14E-02
2.37E+03	2.33E-21	4.03E+05	1.78E+04	1.78E+01
0.810466	6.74E-30	1.10E+02	4.83E+00	4.83E-03
1.33288	1.13E-30	1.05E+02	4.62E+00	4.62E-03
0.253916	2.31E-28	2.25E+03	9.93E+01	9.93E-02
2.23E+01	1.78E-30	9.18E+04	4.05E+03	4.05E+00
0.345206	2.66E-31	1.81E+03	7.96E+01	7.96E-02
0.175178	1.28E-38	9.99E+02	4.40E+01	4.40E-02
0.0489134	2.01E-29	5.80E+01	2.56E+00	2.56E-03
5.43E+01	1.13E-40	3.82E+05	1.69E+04	1.69E+01

0.100795	3.67E-32	3.91E+01	1.73E+00	1.73E-03
0.00175837	3.57E-40	8.03E+00	3.54E-01	3.54E-04
0.00168085	3.43E-29	1.47E+00	6.48E-02	6.48E-05
0.0880338	5.94E-26	4.33E+01	1.91E+00	1.91E-03
0.0038403	6.66E-25	4.88E+00	2.15E-01	2.15E-04
0.730164	2.49E-40	6.69E+03	2.95E+02	2.95E-01
0.00859574	1.64E-26	2.78E+01	1.23E+00	1.23E-03
5.02E+01	3.39E-21	1.69E+05	7.45E+03	7.45E+00
2.50185	7.86E-31	6.37E+03	2.81E+02	2.81E-01
0.0164743	6.73E-32	2.81E+01	1.24E+00	1.24E-03
1.96E+02	1.04E-26	1.68E+06	7.39E+04	7.39E+01
0.0145998	9.87E-31	3.55E+01	1.56E+00	1.56E-03
0.00107299	4.08E-24	1.05E+00	4.63E-02	4.63E-05
0.00122839	9.55E-39	2.40E+00	1.06E-01	1.06E-04
2.09E-04	1.54E-39	1.26E+00	5.54E-02	5.54E-05
0.873263	1.73E-35	1.51E+03	6.65E+01	6.65E-02
0.143276	7.55E-27	1.28E+01	5.62E-01	5.62E-04
0.108738	7.21E-25	1.40E+02	6.15E+00	6.15E-03
0.0435299	3.92E-35	1.23E+02	5.44E+00	5.44E-03
0.0551089	5.50E-34	4.51E+00	1.99E-01	1.99E-04
0.759329	2.41E-21	1.63E+03	7.18E+01	7.18E-02
3.16E+02	1.12E-27	2.17E+05	9.55E+03	9.55E+00
0.00482078	1.31E-25	2.52E+01	1.11E+00	1.11E-03
1.82E+02	1.61E-23	1.02E+05	4.51E+03	4.51E+00
0.000997111	3.27E-53	7.78E+00	3.43E-01	3.43E-04
0.0523687	4.95E-32	3.77E+02	1.66E+01	1.66E-02
0.222701	5.50E-30	4.97E+02	2.19E+01	2.19E-02
1.06E+02	1.86E-26	6.47E+04	2.85E+03	2.85E+00
0.000317853	1.31E-33	1.86E+00	8.22E-02	8.22E-05
6.40E+01	5.36E-29	2.84E+05	1.25E+04	1.25E+01
0.814292	2.20E-33	1.48E+03	6.53E+01	6.53E-02
5.69E+02	2.10E-19	4.78E+05	2.11E+04	2.11E+01
0.0942069	2.08E-24	4.01E+02	1.77E+01	1.77E-02
4.65944	1.76E-44	2.48E+03	1.09E+02	1.09E-01
7.71699	1.22E-32	1.53E+03	6.75E+01	6.75E-02
0.279403	1.91E-28	8.50E+01	3.75E+00	3.75E-03
6.14E+01	1.77E-28	1.04E+05	4.60E+03	4.60E+00
1.01E+02	3.43E-36	3.42E+05	1.51E+04	1.51E+01
1.27945	8.07E-24	1.14E+03	5.02E+01	5.02E-02
0.232295	7.70E-24	8.97E+02	3.95E+01	3.95E-02

0.0511057	1.43E-37	1.68E+02	7.41E+00	7.41E-03
2.32239	1.18E-22	9.23E+03	4.07E+02	4.07E-01
7.95E+01	1.86E-20	7.75E+04	3.41E+03	3.41E+00
0.000652878	1.73E-25	9.04E-01	3.98E-02	3.98E-05
1.54E-04	8.69E-48	3.27E-01	1.44E-02	1.44E-05
0.0292584	8.38E-33	2.42E+01	1.06E+00	1.06E-03
6.45978	8.12E-20	3.54E+04	1.56E+03	1.56E+00
0.00113682	8.33E-40	8.49E-01	3.74E-02	3.74E-05
5.61E+01	8.41E-21	5.90E+04	2.60E+03	2.60E+00
0.00362328	2.22E-26	2.56E+01	1.13E+00	1.13E-03
0.016433	3.37E-27	1.21E+02	5.32E+00	5.32E-03
1.1076	1.77E-25	4.74E+03	2.09E+02	2.09E-01
1.06E+01	1.72E-31	1.06E+05	4.65E+03	4.65E+00
0.0276839	9.09E-32	6.12E+01	2.70E+00	2.70E-03
0.00496232	1.04E-39	8.23E+00	3.63E-01	3.63E-04
2.52101	8.95E-23	1.01E+04	4.47E+02	4.47E-01
0.00260731	1.25E-29	7.96E-01	3.51E-02	3.51E-05
5.61E+02	1.99E-22	1.15E+06	3.37E+04	3.37E+01
0.0154011	6.92E-24	1.53E+01	4.48E-01	4.48E-04
5.63E+02	7.29E-31	1.79E+06	5.26E+04	5.26E+01
0.188889	2.11E-32	5.37E+01	1.58E+00	1.58E-03
2.21778	9.13E-27	4.72E+02	1.39E+01	1.39E-02
26.0357	6.82E-39	1.06E+04	3.12E+02	3.12E-01
0.0176452	1.83E-26	9.69E+01	2.63E+00	2.63E-03
4.06E+02	1.69E-46	4.50E+05	1.22E+04	1.22E+01
0.206518	7.33E-33	5.62E+01	1.53E+00	1.53E-03
2.94098	5.28E-27	3.05E+03	8.30E+01	8.30E-02
0.650152	4.73E-25	8.43E+02	2.29E+01	2.29E-02
0.145301	5.36E-25	8.64E+00	2.35E-01	2.35E-04


1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Cumulative Probability
Max E = 0.01
Max E = 1
EPA Regulatory
Metric = 20
pCi/m2/s
1.E-05
1.E-03
1.E-01
1.E+01
1.E+03
Peak Radon-222 Surface Flux (pCi/m2/s)

Radon-222 Surface Flux (pCi/m2/s)	CDF	EPA Design Metric (pCi/m2/s)	CDF	Average Flux)	Radon-222 Surface Concentration (pCi/L)	CDF	Radon Limit (pCi/L)
2.10491E-05	0.009901	20	0	128.0422	6.52E-06	0	4
0.000154124	0.019802	20	1	128.0422	1.44E-05	1	4
0.000209422	0.029703				3.51E-05		
0.000317853	0.039604				3.74E-05		
0.000343963	0.049505				3.98E-05		
0.000652878	0.059406				4.63E-05		
0.000997111	0.069307				5.54E-05		
0.00107299	0.079208				6.48E-05		
0.00113682	0.089109				7.38E-05		
0.00122839	0.09901				8.22E-05		
0.00123813	0.108911				1.06E-04		
0.00128905	0.118812				1.22E-04		
0.00168085	0.128713				1.24E-04		
0.00175837	0.138614				1.99E-04		
0.00260731	0.148515				2.15E-04		
0.00269715	0.158416				2.35E-04		
0.00362328	0.168317				3.43E-04		
0.0038403	0.178218				3.54E-04		
0.00482078	0.188119				3.63E-04		
0.00496232	0.19802				3.97E-04		
0.00859574	0.207921				4.48E-04		
0.0145998	0.217822				5.62E-04		
0.0154011	0.227723				9.80E-04		
0.016433	0.237624				1.06E-03		
0.0164743	0.247525				1.11E-03		
0.0176452	0.257426				1.13E-03		
0.0276839	0.267327				1.23E-03		
0.0292584	0.277228				1.24E-03		
0.0435299	0.287129				1.52E-03		
0.0489134	0.29703				1.53E-03		
0.0506062	0.306931				1.56E-03		
0.0511057	0.316832				1.58E-03		
0.0523687	0.326733				1.73E-03		
0.0551089	0.336634				1.91E-03		
0.085372	0.346535				2.56E-03		
0.0880338	0.356436				2.63E-03		

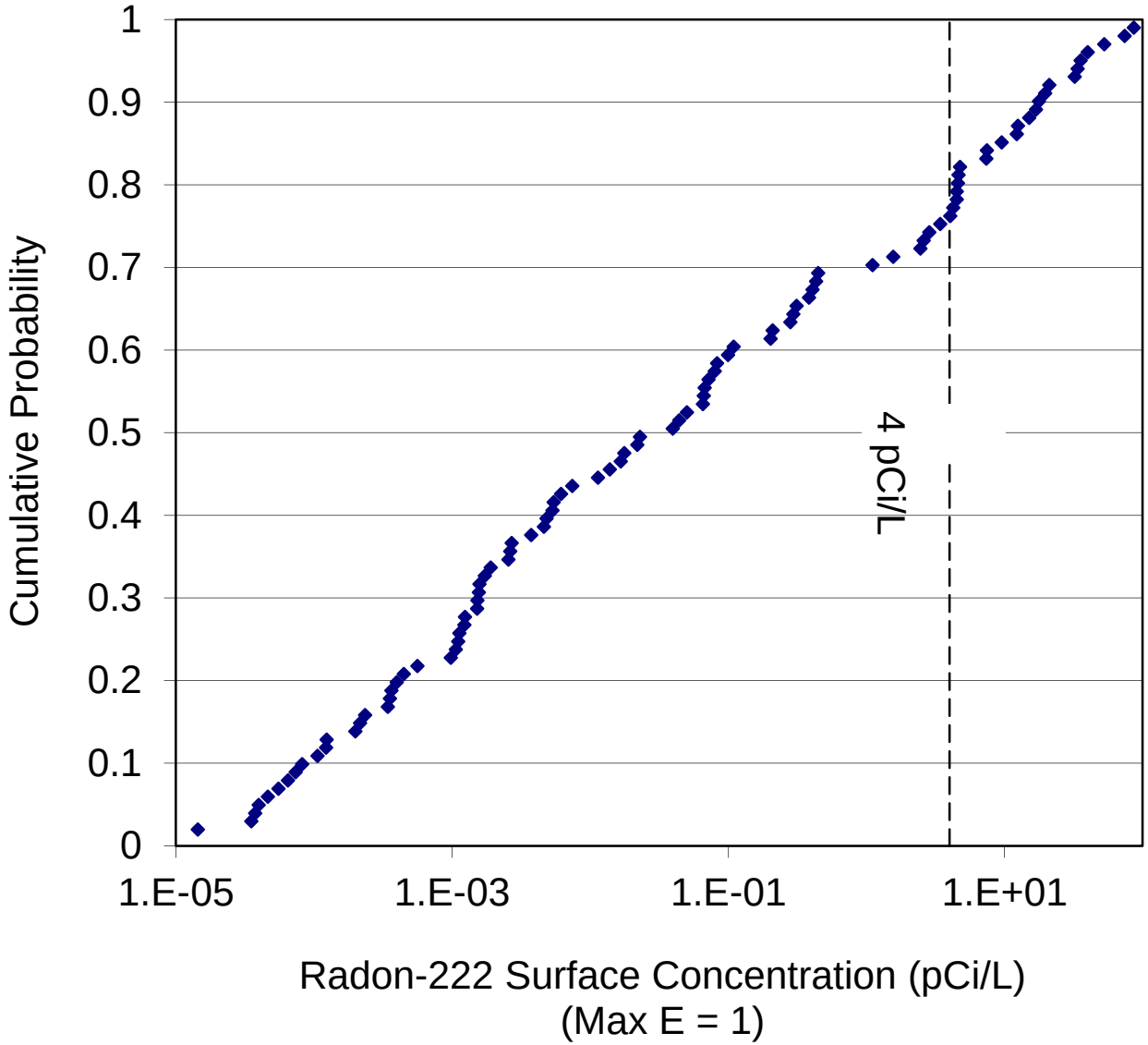
0.0942069	0.366337	2.70E-03
0.100795	0.376238	3.75E-03
0.108738	0.386139	4.62E-03
0.111451	0.39604	4.83E-03
0.143276	0.405941	5.32E-03
0.145301	0.415842	5.44E-03
0.175178	0.425743	6.15E-03
0.188889	0.435644	7.41E-03
0.206518	0.445545	1.14E-02
0.222701	0.455446	1.39E-02
0.232295	0.465347	1.66E-02
0.253916	0.475248	1.77E-02
0.279403	0.485149	2.19E-02
0.345206	0.49505	2.29E-02
0.650152	0.50495	3.95E-02
0.730164	0.514851	4.40E-02
0.759329	0.524752	5.02E-02
0.810466	0.534653	6.53E-02
0.814292	0.544554	6.65E-02
0.873263	0.554455	6.75E-02
1.1076	0.564356	7.18E-02
1.27945	0.574257	7.96E-02
1.33288	0.584158	8.30E-02
1.55972	0.594059	9.93E-02
2.21778	0.60396	1.09E-01
2.28855	0.613861	2.03E-01
2.32239	0.623762	2.09E-01
2.50185	0.633663	2.81E-01
2.52101	0.643564	2.95E-01
2.94098	0.653465	3.12E-01
4.65944	0.663366	3.84E-01
5.23912	0.673267	4.07E-01
6.45978	0.683168	4.32E-01
7.71699	0.693069	4.47E-01
10.6193	0.70297	1.11E+00
22.2774	0.712871	1.56E+00
26.0357	0.722772	2.45E+00
28.8884	0.732673	2.60E+00
31.5289	0.742574	2.85E+00
50.24	0.752475	3.41E+00

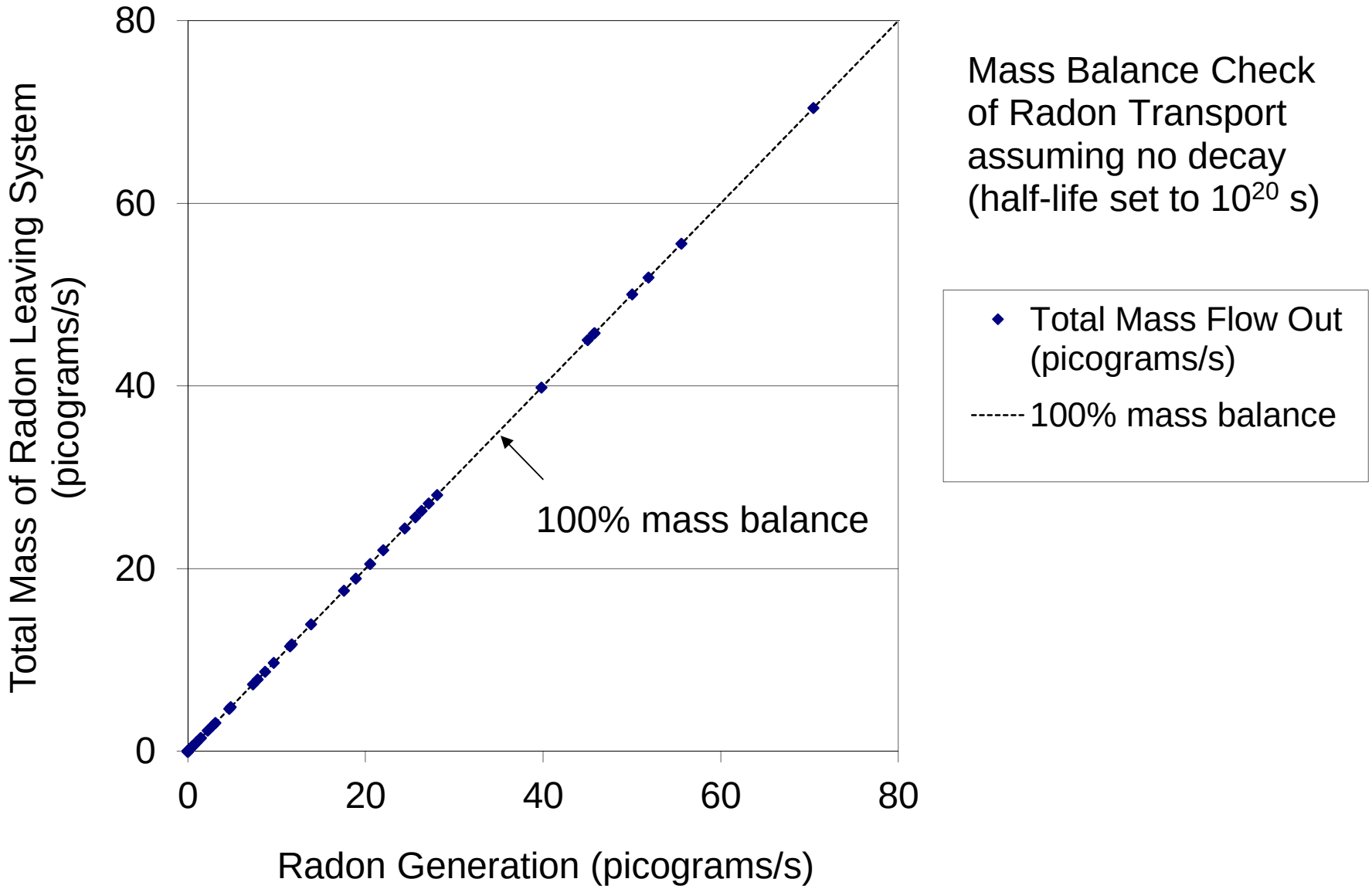
54.3027	0.762376	4.05E+00
55.8472	0.772277	4.25E+00
56.086	0.782178	4.51E+00
57.9379	0.792079	4.51E+00
61.4228	0.80198	4.60E+00
64.0153	0.811881	4.65E+00
70.1361	0.821782	4.75E+00
79.4888	0.831683	7.39E+00
100.61	0.841584	7.45E+00
105.777	0.851485	9.55E+00
150.686	0.861386	1.22E+01
181.813	0.871287	1.25E+01
196.372	0.881188	1.51E+01
296.056	0.891089	1.69E+01
315.745	0.90099	1.78E+01
364.901	0.910891	1.96E+01
405.815	0.920792	2.11E+01
561.234	0.930693	3.22E+01
563.091	0.940594	3.37E+01
568.531	0.950495	3.56E+01
1180.62	0.960396	4.00E+01
1410.18	0.970297	5.26E+01
2365.13	0.980198	7.39E+01
3316.78	0.990099	8.62E+01

Radon Surface Flux

	Step	Multiple	Multiple	R-square	F - to	p-level
Emanation Factor	1	0.932529	0.869611	0.869611	653.5960	0.000000
Waste Volume	2	0.972588	0.945928	0.076318	136.9073	0.000000
Cover Thickness	3	0.985145	0.970510	0.024582	80.0243	0.000000
Diffusion Coefficient	4	0.988818	0.977761	0.007251	30.9747	0.000000

Variables	SemiPart
1	0.900421
2	-0.277813
3	-0.147202
4	0.085152


1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Cumulative Probability
4 pCi/L
1.E-05
1.E-03
1.E-01
1.E+01
Radon-222 Surface Concentration (pCi/L)
(Max E = 1)

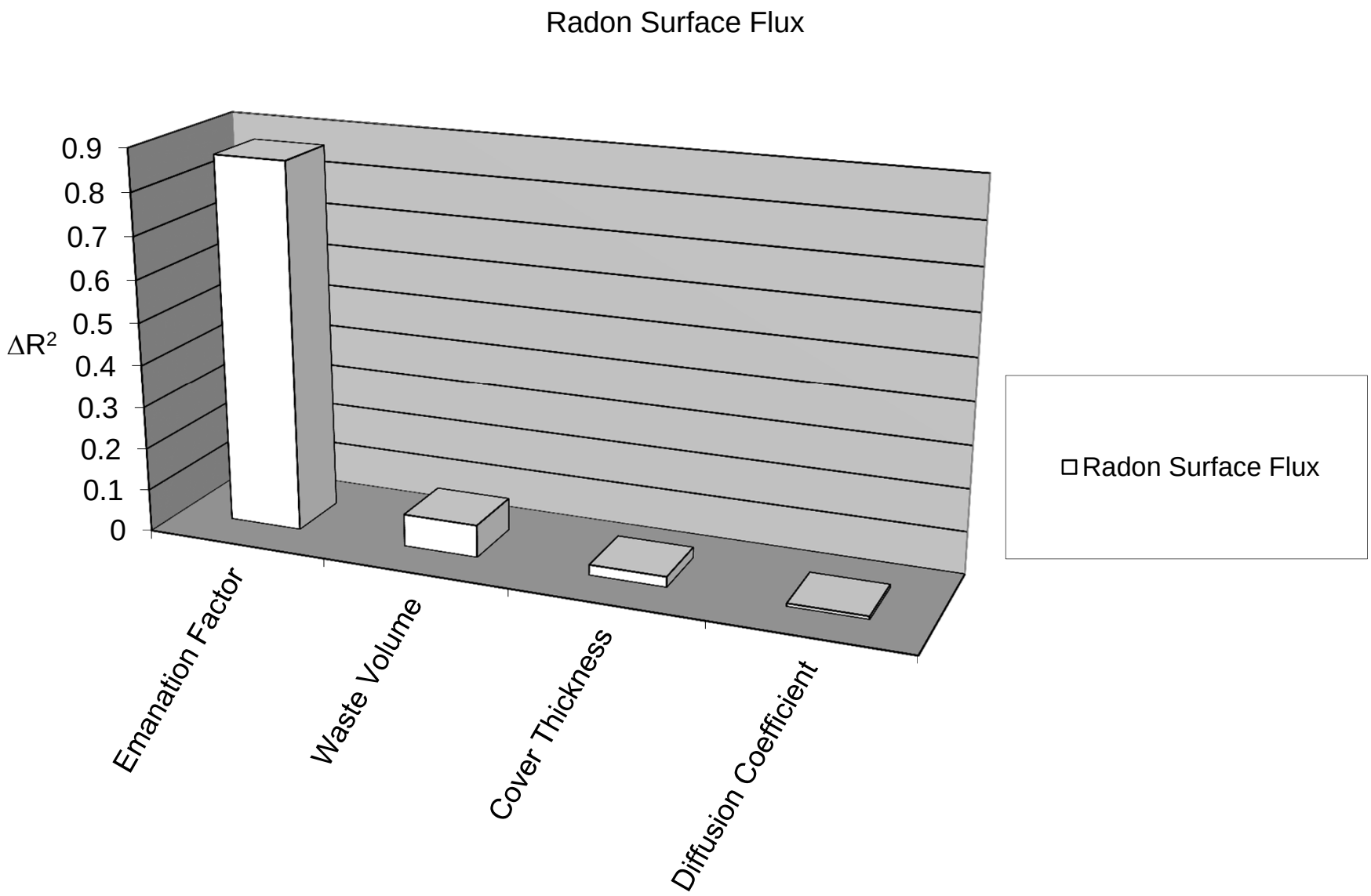

Mass Balance Check of Radon Transport assuming no decay (half-life set to 10^{20} s)
Total Mass Flow Out (picograms/s)
100% mass balance
100% mass balance
Total Mass of Radon Leaving System (picograms/s)
Radon Generation (picograms/s)
0
20
40
60
80
0
20
40
60
80

This worksheet compares the radon generation to the surface flux and water table flux to check mass conservation when decay is zero (half-life set to 10^20 s)
C.K.Ho, 12/1/2006

Realization	Generation (picograms/s)	Surface Flow (picograms/s)	Water Flow at Water Table (picograms/s)	Gas flow at Water Table (picograms/s)	Total Mass Flow Out (picograms/s)	100% mass balance		
1	2.33200000E-04	2.33200000E-04	1.04200000E-08	1.81200000E-13	2.33210420E-04		0	0
2	2.56320000E+01	2.56310000E+01	1.10300000E-03	3.45500000E-08	2.56321030E+01		100	100
3	2.83100000E+00	2.83100000E+00	1.95400000E-04	2.37700000E-09	2.83119540E+00			
4	3.39200000E-04	3.39200000E-04	1.06600000E-08	1.45000000E-13	3.39210660E-04			
5	9.72000000E-01	9.72000000E-01	3.05300000E-05	4.53200000E-10	9.72030530E-01			
6	7.33500000E+00	7.33500000E+00	1.12500000E-04	1.75300000E-08	7.33511252E+00			
7	3.54100000E-03	3.54100000E-03	6.30800000E-08	8.94900000E-12	3.54106309E-03			
8	1.38890000E+01	1.38890000E+01	1.13500000E-04	7.45800000E-09	1.38891135E+01			
9	5.55650000E+01	5.55650000E+01	3.27700000E-04	9.95400000E-08	5.55653278E+01			
10	1.75500000E-03	1.75500000E-03	3.76700000E-08	1.55100000E-12	1.75503767E-03			
11	1.40600000E-03	1.40600000E-03	9.16100000E-08	1.78400000E-12	1.40609161E-03			
12	1.19600000E-03	1.19500000E-03	5.20700000E-08	2.61200000E-12	1.19505207E-03			
13	4.57890000E+01	4.57880000E+01	1.20500000E-03	3.84600000E-08	4.57892050E+01			
14	2.25300000E+00	2.25300000E+00	5.33400000E-05	5.14600000E-09	2.25305335E+00			
15	9.98000000E-01	9.98000000E-01	4.93500000E-05	9.33500000E-10	9.98049351E-01			
16	2.80580000E+01	2.80570000E+01	9.05800000E-04	1.05300000E-08	2.80579058E+01			
17	9.68200000E+00	9.68200000E+00	3.18600000E-04	7.15500000E-09	9.68231861E+00			
18	3.57100000E-04	3.57000000E-04	8.49600000E-08	2.40700000E-13	3.57084960E-04			
19	2.20110000E+01	2.20100000E+01	8.36900000E-04	3.18000000E-08	2.20108369E+01			
20	1.89050000E+01	1.89040000E+01	6.52400000E-04	3.08800000E-08	1.89046524E+01			
21	4.57280000E+01	4.57270000E+01	3.70000000E-04	1.78300000E-07	4.57273702E+01			
22	8.10900000E-03	8.10900000E-03	4.39800000E-08	1.97300000E-11	8.10904400E-03			
23	1.75900000E+01	1.75900000E+01	1.78400000E-04	2.76900000E-08	1.75901784E+01			
24	3.30000000E-02	3.30000000E-02	9.38200000E-07	6.87400000E-11	3.30009383E-02			
25	3.33200000E-03	3.33200000E-03	9.23800000E-08	2.08800000E-12	3.33209238E-03			
26	1.22000000E-01	1.22000000E-01	8.70200000E-07	3.15500000E-10	1.22000871E-01			
27	4.84000000E+00	4.84000000E+00	4.52900000E-05	1.23800000E-08	4.84004530E+00			
28	6.90000000E-02	6.90000000E-02	6.81100000E-07	1.23000000E-10	6.90006812E-02			
29	1.88000000E-01	1.88000000E-01	2.13800000E-05	9.42300000E-11	1.88021380E-01			
30	1.00000000E-02	1.00000000E-02	4.59500000E-07	1.00100000E-11	1.00004595E-02			
31	2.44120000E+01	2.44110000E+01	1.11900000E-03	1.53300000E-08	2.44121190E+01			
32	1.40000000E-02	1.40000000E-02	8.46800000E-07	1.71200000E-11	1.40008468E-02			
33	1.54000000E-03	1.54000000E-03	1.78700000E-07	7.30400000E-13	1.54017870E-03			
34	1.66400000E-04	1.66400000E-04	1.39100000E-09	6.00600000E-13	1.66401392E-04			

35	2.58900000E-03	2.58800000E-03	1.75900000E-08	7.50200000E-12	2.58801760E-03
36	6.15900000E-04	6.15800000E-04	9.73400000E-09	1.38100000E-12	6.15809735E-04
37	3.71000000E-01	3.71000000E-01	1.63000000E-05	1.98300000E-10	3.71016300E-01
38	1.26200000E-03	1.26200000E-03	1.47800000E-08	1.85600000E-12	1.26201478E-03
39	3.09500000E+00	3.09500000E+00	2.70100000E-05	1.81500000E-09	3.09502701E+00
40	5.48000000E-01	5.48000000E-01	5.36800000E-06	1.93700000E-09	5.48005370E-01
41	9.26400000E-04	9.26400000E-04	1.25100000E-08	6.85500000E-13	9.26412511E-04
42	5.00310000E+01	5.00310000E+01	4.91700000E-04	5.32700000E-08	5.00314918E+01
43	1.27500000E-03	1.27500000E-03	3.62100000E-08	7.65200000E-13	1.27503621E-03
44	1.60000000E-04	1.60000000E-04	2.52200000E-09	4.27600000E-13	1.60002522E-04
45	1.36900000E-04	1.36900000E-04	4.82700000E-09	1.03000000E-13	1.36904827E-04
46	2.59700000E-04	2.59700000E-04	1.36600000E-08	2.97600000E-13	2.59713660E-04
47	2.16000000E-01	2.16000000E-01	9.30900000E-06	2.78600000E-10	2.16009309E-01
48	1.71100000E-03	1.71100000E-03	5.49100000E-08	1.87600000E-12	1.71105491E-03
49	5.59400000E-03	5.59400000E-03	6.16900000E-08	8.64700000E-12	5.59406170E-03
50	2.40000000E-02	2.40000000E-02	1.68000000E-06	1.74900000E-11	2.40016800E-02
51	2.69400000E-03	2.69300000E-03	1.76900000E-07	3.85800000E-12	2.69317690E-03
52	9.40000000E-02	9.40000000E-02	1.98900000E-06	7.48800000E-11	9.40019891E-02
53	7.04330000E+01	7.04310000E+01	1.67900000E-03	2.15900000E-07	7.04326792E+01
54	4.47300000E-04	4.47300000E-04	1.40400000E-09	6.09600000E-13	4.47301405E-04
55	1.45200000E+00	1.45200000E+00	7.58400000E-06	8.35900000E-10	1.45200758E+00
56	4.88200000E-03	4.88200000E-03	4.64000000E-07	4.22800000E-12	4.88246400E-03
57	1.18000000E-01	1.18000000E-01	5.29300000E-06	1.63600000E-10	1.18005293E-01
58	1.06000000E-01	1.06000000E-01	3.38500000E-06	1.79400000E-10	1.06003385E-01
59	7.85900000E+00	7.85900000E+00	1.87600000E-04	1.25700000E-08	7.85918761E+00
60	3.48400000E-04	3.48400000E-04	1.02100000E-08	6.23200000E-13	3.48410211E-04
61	3.98270000E+01	3.98260000E+01	1.56200000E-03	5.19900000E-08	3.98275621E+01
62	5.80000000E-02	5.80000000E-02	4.80600000E-07	9.54100000E-11	5.80004807E-02
63	2.71230000E+01	2.71230000E+01	4.51000000E-04	2.97100000E-08	2.71234510E+01
64	1.30000000E-02	1.30000000E-02	2.21800000E-07	8.83300000E-12	1.30002218E-02
65	7.56000000E-01	7.56000000E-01	1.42200000E-04	3.81100000E-10	7.56142200E-01
66	9.20000000E-02	9.20000000E-02	1.43700000E-06	1.30100000E-10	9.20014371E-02
67	3.97100000E-03	3.97100000E-03	6.47100000E-08	3.57200000E-12	3.97106471E-03
68	4.65300000E+00	4.65300000E+00	8.75700000E-05	3.54300000E-09	4.65308757E+00
69	1.17170000E+01	1.17160000E+01	4.71300000E-04	5.85000000E-09	1.17164713E+01
70	5.00000000E-02	5.00000000E-02	5.95100000E-07	5.92900000E-11	5.00005952E-02
71	3.70000000E-02	3.70000000E-02	6.43500000E-07	3.08000000E-11	3.70006435E-02
72	1.60000000E-02	1.60000000E-02	2.61800000E-07	3.18100000E-11	1.60002618E-02
73	1.84000000E-01	1.84000000E-01	2.21500000E-06	1.03900000E-10	1.84002215E-01
74	8.70900000E+00	8.70900000E+00	1.08200000E-04	2.23100000E-08	8.70910822E+00

75	9.51400000E-05	9.51400000E-05	7.91700000E-10	3.96600000E-13	9.51407921E-05
76	1.45800000E-04	1.45800000E-04	9.47500000E-09	2.22400000E-13	1.45809475E-04
77	2.85700000E-03	2.85700000E-03	1.39700000E-07	2.15100000E-12	2.85713970E-03
78	1.46400000E+00	1.46400000E+00	1.30500000E-05	2.53600000E-09	1.46401305E+00
79	5.23100000E-04	5.23000000E-04	3.80100000E-08	5.79300000E-13	5.23038011E-04
80	1.15020000E+01	1.15020000E+01	2.00300000E-04	3.19100000E-08	1.15022003E+01
81	1.69800000E-03	1.69800000E-03	1.58000000E-08	4.13100000E-12	1.69801580E-03
82	6.31400000E-03	6.31300000E-03	4.10500000E-08	1.85000000E-11	6.31304107E-03
83	3.64000000E-01	3.64000000E-01	1.26300000E-05	2.93300000E-10	3.64012630E-01
84	4.50230000E+01	4.50210000E+01	2.07400000E-03	7.65900000E-08	4.50230741E+01
85	1.70000000E-02	1.70000000E-02	5.65900000E-07	3.67700000E-11	1.70005659E-02
86	2.20100000E-03	2.20100000E-03	1.55600000E-07	2.22000000E-12	2.20115560E-03
87	2.98000000E-01	2.98000000E-01	2.34900000E-06	3.70900000E-10	2.98002349E-01
88	1.04600000E-04	1.04600000E-04	2.36100000E-09	1.50000000E-13	1.04602361E-04
89	2.63240000E+01	2.63240000E+01	2.85600000E-04	1.49600000E-08	2.63242856E+01
90	1.84900000E-03	1.84900000E-03	4.00400000E-08	3.01800000E-12	1.84904004E-03
91	5.18650000E+01	5.18650000E+01	3.47800000E-04	7.24800000E-08	5.18653479E+01
92	2.10000000E-02	2.10000000E-02	1.00400000E-06	3.11600000E-11	2.10010040E-02
93	8.55000000E-03	8.55000000E-03	1.04100000E-07	3.67800000E-12	8.55010410E-03
94	4.70000000E-01	4.70000000E-01	3.21700000E-05	1.98200000E-10	4.70032170E-01
95	4.57000000E-03	4.57000000E-03	1.30000000E-07	3.46300000E-12	4.57013000E-03
96	2.05170000E+01	2.05160000E+01	5.88200000E-04	1.56700000E-08	2.05165882E+01
97	7.74800000E-03	7.74800000E-03	1.29900000E-07	2.27200000E-11	7.74812992E-03
98	4.80000000E-02	4.80000000E-02	3.17100000E-07	2.48300000E-11	4.80003171E-02
99	2.50000000E-02	2.50000000E-02	3.01200000E-07	1.90900000E-11	2.50003012E-02
100	4.42700000E-04	4.42700000E-04	3.25200000E-09	1.01800000E-12	4.42703253E-04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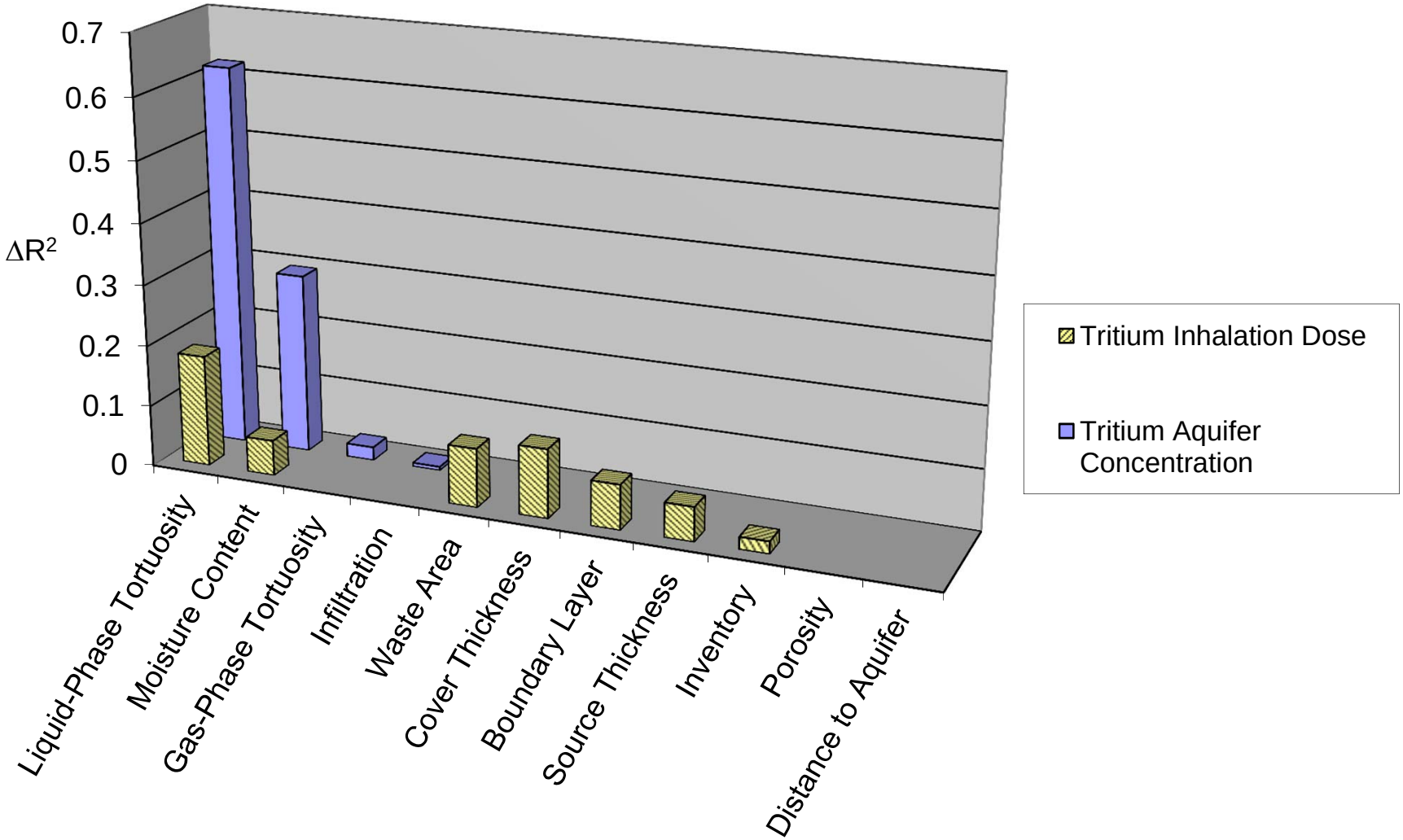
Waste Volume
Cover Thickness
Diffusion Coefficient
Radon Surface Flux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ΔR2
Liquid-Phase Tortuosity
Moisture Content
Gas-Phase Tortuosity
Infiltration
Waste Area
Cover Thickness
Boundary Layer
Source Thickness
Inventory
Porosity
Distance to Aquifer
Tritium Inhalation Dose
Tritium Aquifer Concentration

Delta R^2 for 100 Realizations

Input Parameter	Tritium Aquifer Concentration	Tritium Inhalation Dose
Liquid-Phase Tortuosity	0.620765	0.182172
Moisture Content	0.294137	0.057792
Gas-Phase Tortuosity	0.021757	
Infiltration	0.005810	
Waste Area		0.095778
Cover Thickness		0.112455
Boundary Layer		0.073175
Source Thickness		0.055921
Inventory		0.019872
Porosity		
Distance to Aquifer		

100 Realizations - Max Aquifer Concentration

	Step	Multiple	Multiple	R-square	F - to	p-level	Variables	Semipart
Liquid-phase tortuosity coefficient	1	0.787886	0.620765	0.620765	160.4147	0.000000	1	0.714768
Moisture Content	2	0.956505	0.914902	0.294137	335.2755	0.000000	2	-0.522675
Gas-phase tortuosity coefficient	3	0.967812	0.936659	0.021757	32.9757	0.000000	3	0.121631
Infiltration (m/s)	4	0.970808	0.942469	0.005810	9.5931	0.002568	4	0.083371
Inventory (Ci)	5	0.971988	0.944761	0.002292	3.9007	0.051200	5	0.044635
Waste Area (m^2)	6	0.972952	0.946636	0.001875	3.2669	0.073926	6	-0.037266
Thickness of Clean Overburden (m)	7	0.973760	0.948209	0.001573	2.7944	0.097995	7	0.044959
Source Thickness (m)	8	0.974243	0.949149	0.000940	1.6823	0.197892	8	-0.031319
Atmospheric boundary layer thickness (m)	9	0.974629	0.949902	0.000754	1.3540	0.247663	9	-0.027453

100 Realizations - Inhalation Dose

	Step	Multiple	Multiple	R-square	F - to	p-level	Variables	Semipart
Liquid-phase tortuosity coefficient	1	0.426816	0.182172	0.182172	21.82955	0.000009	1	0.261885
Waste Area (m^2)	2	0.527209	0.277949	0.095778	12.86674	0.000526	2	-0.314630
Thickness of Clean Overburden (m)	3	0.624823	0.390404	0.112455	17.70952	0.000058	3	-0.378411
Atmospheric boundary layer thickness (m)	4	0.680867	0.463579	0.073175	12.95935	0.000508	4	0.274862
Source Thickness (m)	5	0.720764	0.519500	0.055921	10.93973	0.001334	5	-0.251556
Moisture Content	6	0.759797	0.577292	0.057792	12.71479	0.000575	6	-0.253297
Inventory (Ci)	7	0.772764	0.597164	0.019872	4.53839	0.035811	7	0.140968

200 Realizations - Max Aquifer Concentration

	Step	Multiple	Multiple	R-square	F - to	p-level	Variables	Semipart
Liquid-phase tortuosity coefficient	1	0.717348	0.514588	0.514588	209.9012	0.000000	1	0.695866
Moisture Content	2	0.941135	0.885735	0.371147	639.8818	0.000000	2	-0.594338
Gas-phase tortuosity coefficient	3	0.951526	0.905402	0.019667	40.7482	0.000000	3	0.131213
Distance to Water Table (m)	4	0.954915	0.911862	0.006460	14.2918	0.000208	4	-0.064797
Waste Area (m^2)	5	0.957737	0.917261	0.005399	12.6589	0.000470	5	-0.074779

Thickness of Clean Overburden (m)	6	0.959102	0.919876	0.002616	6.3008	0.012890	6	0.058387
Infiltration (m/s)	7	0.960436	0.922438	0.002561	6.3406	0.012618	7	0.044100
Source Thickness (m)	8	0.961297	0.924093	0.001655	4.1641	0.042664	8	0.037543
Inventory (Ci)	9	0.961922	0.925294	0.001201	3.0538	0.082162	9	0.035042
Atmospheric boundary layer thickness (m)	10	0.962373	0.926162	0.000868	2.2230	0.137637	10	0.029470

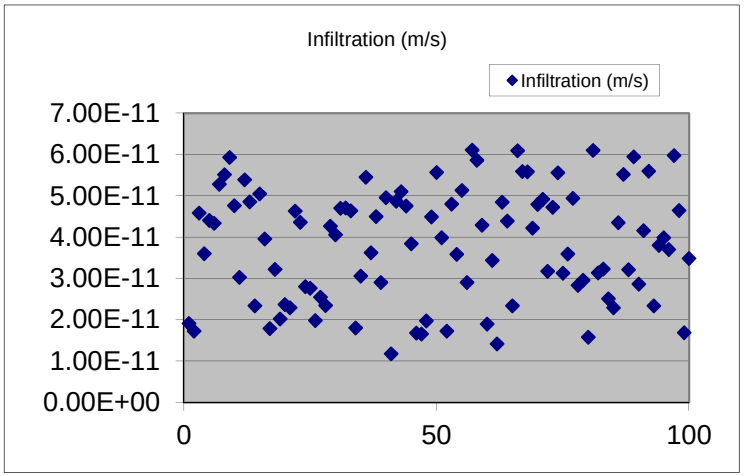
200 Realizations - Inhalation Dose

	Step	Multiple	Multiple	R-square	F - to	p-level	Variables	Semipart
Waste Area (m^2)	1	0.492219	0.242279	0.242279	63.31000	0.000000	1	-0.496525
Thickness of Clean Overburden (m)	2	0.666390	0.444076	0.201797	71.50964	0.000000	2	-0.400881
Liquid-phase tortuosity coefficient	3	0.732894	0.537133	0.093057	39.40480	0.000000	3	0.306190
Moisture Content	4	0.779956	0.608331	0.071198	35.44744	0.000000	4	-0.221371
Atmospheric boundary layer thickness (m)	5	0.803848	0.646171	0.037840	20.74738	0.000009	5	0.195309
Inventory (Ci)	6	0.820042	0.672469	0.026297	15.49599	0.000115	6	0.172651
Source Thickness (m)	7	0.827800	0.685254	0.012785	7.79885	0.005757	7	-0.113069

Inventory (Ci)	Waste Area (m^2)	Source Thickness (m)	Distance to Water Table (m)	Thickness of Clean Overburden (m)	Infiltration (m/s)	Atmospheric boundary layer thickness (m)	Liquid-phase tortuosity coefficient	Gas-phase tortuosity coefficient	Max Aquifer Concentration (pCi/L)	Inhalation Dose (mrem/year)
4.14E+03	1.56E+03	5.184	139.158	0.364	1.92E-11	5.00E-02	0.773	0.637	1.02E-11	0.00E+00
4.07E+03	5.51E+03	6.162	136.637	4.461	1.73E-11	1.18E-01	0.321	0.885	8.42E-20	0.00E+00
3.97E+03	5.14E+03	5.513	143.007	3.684	4.59E-11	7.40E-01	0.146	0.313	0.00E+00	2.84E-02
2.64E+03	1.12E+03	7.977	142.176	0.496	3.60E-11	5.41E-03	0.328	0.311	2.43E-22	0.00E+00
2.52E+03	1.09E+03	7.374	142.774	3.306	4.41E-11	9.56E-01	0.599	0.69	9.08E-17	2.68E-01
3.51E+03	6.50E+03	7.202	134.983	4.02	4.34E-11	7.51E-01	0.926	0.784	5.18E-06	4.46E-01
4.15E+03	1.00E+04	7.556	136.576	1.324	5.28E-11	6.79E-01	7.10E-01	0.56	3.79E-08	9.64E-01
4.03E+03	1.49E+02	7.914	135.908	4.245	5.52E-11	6.63E-01	0.073	0.478	1.49E-30	1.09E-01
3.29E+03	1.82E+03	7.936	133.925	4.734	5.93E-11	7.20E-02	0.016	0.986	1.49E-16	0.00E+00
2.52E+03	4.38E+03	3.709	140.244	1.076	4.77E-11	8.61E-01	0.997	0.12	6.44E-06	1.57E+00
2.81E+03	6.78E+03	5.498	139.856	0.998	3.03E-11	8.89E-01	0.306	0.183	0.00E+00	2.35E-01
3.15E+03	4.68E+03	3.186	132.953	0.941	5.39E-11	1.53E-01	0.136	0.385	0.00E+00	9.76E-01
2.91E+03	3.73E+03	5.405	139.159	4.666	4.85E-11	5.74E-01	0.188	0.849	1.15E-16	1.38E-01
3.56E+03	6.69E+03	3.753	135.905	3.603	2.34E-11	1.76E-01	0.378	0.545	1.52E-17	4.80E-01
3.46E+03	2.76E+03	4.151	140.633	3.315	5.05E-11	8.34E-01	0.678	0.928	2.38E-14	6.42E-01
3.85E+03	1.06E+03	7.179	142.346	4.493	3.96E-11	8.59E-01	0.708	0.201	7.49E-13	5.88E-01
3.36E+03	2.50E+03	6.46	139.172	4.118	1.79E-11	9.83E-01	0.124	0.476	0.00E+00	3.91E-02
4.42E+03	7.38E+03	7.097	141.02	0.514	3.22E-11	7.09E-01	0.731	0.996	6.20E-17	6.45E-01
3.90E+03	6.99E+03	7.411	138.516	4.407	2.03E-11	8.16E-01	0.229	0.127	0.00E+00	1.84E-02
2.53E+03	7.79E+03	5.632	136.983	4.354	2.37E-11	9.74E-01	0.135	0.207	0.00E+00	8.43E-03
4.47E+03	5.70E+03	3.44	133.949	4.666	2.29E-11	3.15E-01	0.457	0.406	1.77E-11	6.92E-01
3.14E+03	1.11E+03	4.894	133.177	1.617	4.63E-11	2.06E-01	0.613	0.118	3.13E-15	4.67E+00
2.46E+03	2.45E+03	5.171	135.576	4.328	4.36E-11	9.48E-01	0.613	0.803	3.98E-09	4.38E-01
3.34E+03	5.09E+03	4.592	135.262	2.113	2.81E-11	2.51E-01	0.289	0.799	9.95E-22	6.69E-01
2.48E+03	7.27E+02	6.908	141.828	1.303	2.76E-11	8.66E-01	0.858	0.653	1.58E-12	4.72E+00
4.46E+03	1.51E+03	3.35	133.386	2.574	1.99E-11	2.07E-01	0.158	0.148	0.00E+00	0.00E+00
3.37E+03	2.25E+03	4.908	133.475	3.873	2.55E-11	7.54E-01	0.963	0.728	5.38E-12	7.06E-01
3.87E+03	1.40E+03	3.871	133.774	2.373	2.35E-11	3.75E-01	0.585	0.358	2.45E-16	3.41E+00
4.50E+03	4.04E+03	3.731	142.868	2.726	4.27E-11	6.31E-01	0.069	0.397	0.00E+00	6.42E-02
3.83E+03	5.18E+03	3.988	141.998	1.693	4.06E-11	7.37E-01	0.399	0.559	8.36E-21	6.92E-01
4.30E+03	1.32E+03	4.339	137.071	4.444	4.70E-11	3.89E-01	0.735	0.95	1.47E-15	6.81E-01
3.82E+03	9.30E+03	4.846	139.717	1.797	4.71E-11	9.80E-01	0.597	0.875	2.16E-17	4.73E-01
3.77E+03	4.18E+03	6.493	142.688	1.03	4.64E-11	3.28E-01	0.564	0.946	4.59E-17	1.23E+00
4.02E+03	1.97E+03	7.88	132.916	0.245	1.80E-11	6.28E-01	0.207	0.376	1.50E-21	2.12E+00
2.43E+03	2.31E+03	3.593	133.405	1.213	3.06E-11	4.91E-01	0.18	0.483	5.58E-22	1.10E+00
3.22E+03	6.93E+03	5.939	137.266	0.707	5.45E-11	2.69E-01	0.321	0.644	9.75E-12	1.06E+00
4.25E+03	1.34E+03	7.686	139.152	2.966	3.63E-11	6.60E-02	0.835	0.249	9.15E-16	0.00E+00
4.49E+03	3.22E+03	7.568	137.187	0.96	4.50E-11	4.55E-01	0.856	0.144	6.55E-07	2.99E+00

4.14E+03	409.85	5.06	139.35	3.715	2.91E-11	6.47E-01	0.444	0.552	1.92E-08	9.01E+00
4.55E+03	4.04E+03	6.53	132.943	3.104	4.96E-11	2.67E-01	0.049	0.114	0.00E+00	0.00E+00
3.69E+03	1.15E+02	4.506	136.98	0.851	1.18E-11	6.25E-01	0.301	0.583	5.55E-21	1.80E+01
4.27E+03	1.07E+03	8.137	136.176	4.697	4.88E-11	1.03E-01	2.22E-01	0.864	8.71E-18	0.00E+00
2.87E+03	1.54E+03	6.13	141.738	0.963	5.10E-11	4.98E-01	0.29	0.414	4.62E-22	2.69E+00
4.31E+03	9.61E+03	3.732	134.941	0.231	4.76E-11	7.04E-01	0.872	0.205	2.32E-07	1.50E+00
4.44E+03	1.96E+03	6.16	137.754	0.176	3.84E-11	3.73E-01	0.843	0.594	3.13E-14	4.26E+00
3.91E+03	5.10E+03	4.889	137.383	0.402	1.68E-11	9.61E-01	0.586	0.789	3.98E-19	1.06E+00
3.88E+03	5.09E+03	5.527	137.233	2.775	1.66E-11	4.55E-01	0.447	0.926	4.03E-21	4.78E-01
3.00E+03	3.94E+03	7.961	138.908	1.067	1.98E-11	5.21E-01	0.818	0.288	4.31E-10	1.12E+00
4.29E+03	3.17E+03	8.139	136.389	1.485	4.49E-11	7.91E-01	9.65E-01	0.503	4.25E-05	2.94E+00
4.11E+03	3.88E+03	5.709	142.749	2.006	5.57E-11	7.38E-01	0.089	0.887	0.00E+00	1.61E-01
2.60E+03	1.00E+04	7.701	137.231	1.228	3.99E-11	5.30E-02	0.577	0.585	1.15E-16	0.00E+00
4.45E+03	5.86E+02	4.74	140.942	2.481	1.73E-11	9.91E-01	0.593	0.325	1.19E-07	1.07E+01
3.14E+03	9.26E+03	6.006	134.46	4.818	4.80E-11	6.44E-01	0.581	0.679	1.06E-15	7.72E-02
3.54E+03	363.518	4.852	133.798	0.594	3.59E-11	9.01E-01	0.789	0.958	1.25E-04	5.98E+00
2.86E+03	8.69E+01	4.552	137.782	3.448	5.14E-11	9.15E-01	0.882	0.231	2.79E-06	7.39E+00
4.79E+03	1.26E+03	7.83	136.341	1.437	2.90E-11	4.80E-01	0.968	0.873	1.78E-13	2.78E+00
3.95E+03	6.40E+03	7.23	139.261	2.561	6.11E-11	7.58E-01	0.419	0.767	3.91E-19	1.95E-01
2.82E+03	6.86E+03	6.606	135.802	2.522	5.86E-11	7.45E-01	0.359	0.826	3.24E-17	2.13E-01
3.06E+03	5.22E+03	7.021	137.443	4.044	4.29E-11	3.64E-01	0.318	0.206	3.75E-22	7.94E-02
4.41E+03	6.76E+03	6.788	135.183	0.505	1.90E-11	8.22E-01	0.782	0.948	8.71E-12	1.09E+00
3.29E+03	6.18E+03	4.818	138.271	4.617	3.44E-11	4.35E-01	0.062	0.283	0.00E+00	0.00E+00
2.96E+03	7.76E+02	5.557	132.969	2.311	1.42E-11	8.30E-02	0.398	0.278	1.68E-20	0.00E+00
2.96E+03	3.18E+03	7.391	140.878	4.481	4.85E-11	6.26E-01	0.446	0.785	1.39E-06	5.65E-01
4.73E+03	2.04E+03	5.849	142.937	1.781	4.40E-11	3.27E-01	0.569	0.959	1.73E-07	5.02E+00
2.46E+03	5.51E+03	5.995	142.261	3.217	2.34E-11	4.85E-01	0.607	0.671	6.03E-20	2.22E-01
2.76E+03	1.77E+03	6.364	135.2	2.474	6.09E-11	5.62E-01	0.376	0.481	9.72E-22	3.08E-01
2.42E+03	8.36E+02	6.986	137.851	1.365	5.59E-11	6.97E-01	0.906	0.455	5.12E-09	2.01E+00
3.95E+03	347.558	3.867	137.188	3.859	5.59E-11	4.02E-01	0.812	0.79	1.17E-10	4.61E+00
3.40E+03	551.604	7.123	141.614	4.185	4.22E-11	8.89E-01	0.948	0.723	2.06E-14	1.09E+00
2.62E+03	1.83E+02	5.319	137.323	2.262	4.79E-11	6.07E-01	0.198	0.549	7.30E-16	8.21E+00
4.08E+03	2.38E+03	5.671	140.509	2.156	4.92E-11	8.02E-01	0.514	0.175	2.46E-10	1.55E+00
3.98E+03	2.29E+03	3.402	133.74	1.849	3.18E-11	8.15E-01	0.825	0.264	5.63E-17	1.22E+00
3.69E+03	3.90E+02	8.137	141.67	2.719	4.72E-11	8.20E-02	0.691	0.659	2.34E-04	0.00E+00
2.53E+03	5.94E+03	6.237	136.62	4.08	5.56E-11	9.83E-01	0.397	0.981	9.28E-08	2.85E-01
3.02E+03	7.86E+03	4.952	133.871	0.047	3.13E-11	5.00E-01	0.983	0.983	1.72E-05	1.43E+00
4.47E+03	6.35E+03	7.504	134.845	0.198	3.59E-11	5.68E-01	0.254	0.15	0.00E+00	7.42E-01
2.61E+03	3.46E+03	4.301	142.358	1.248	4.94E-11	8.62E-01	0.681	0.473	1.47E-17	6.72E-01
4.10E+03	3.60E+03	3.312	136.109	3.451	2.84E-11	9.90E-01	0.951	0.458	1.31E-03	2.57E+00
4.47E+03	3.07E+03	3.942	136.432	0.649	2.96E-11	4.03E-01	0.272	0.372	5.70E-28	2.49E+00
3.10E+03	9.22E+03	4.189	135.715	4.178	1.58E-11	3.99E-01	0.203	0.147	1.02E-22	9.61E-02

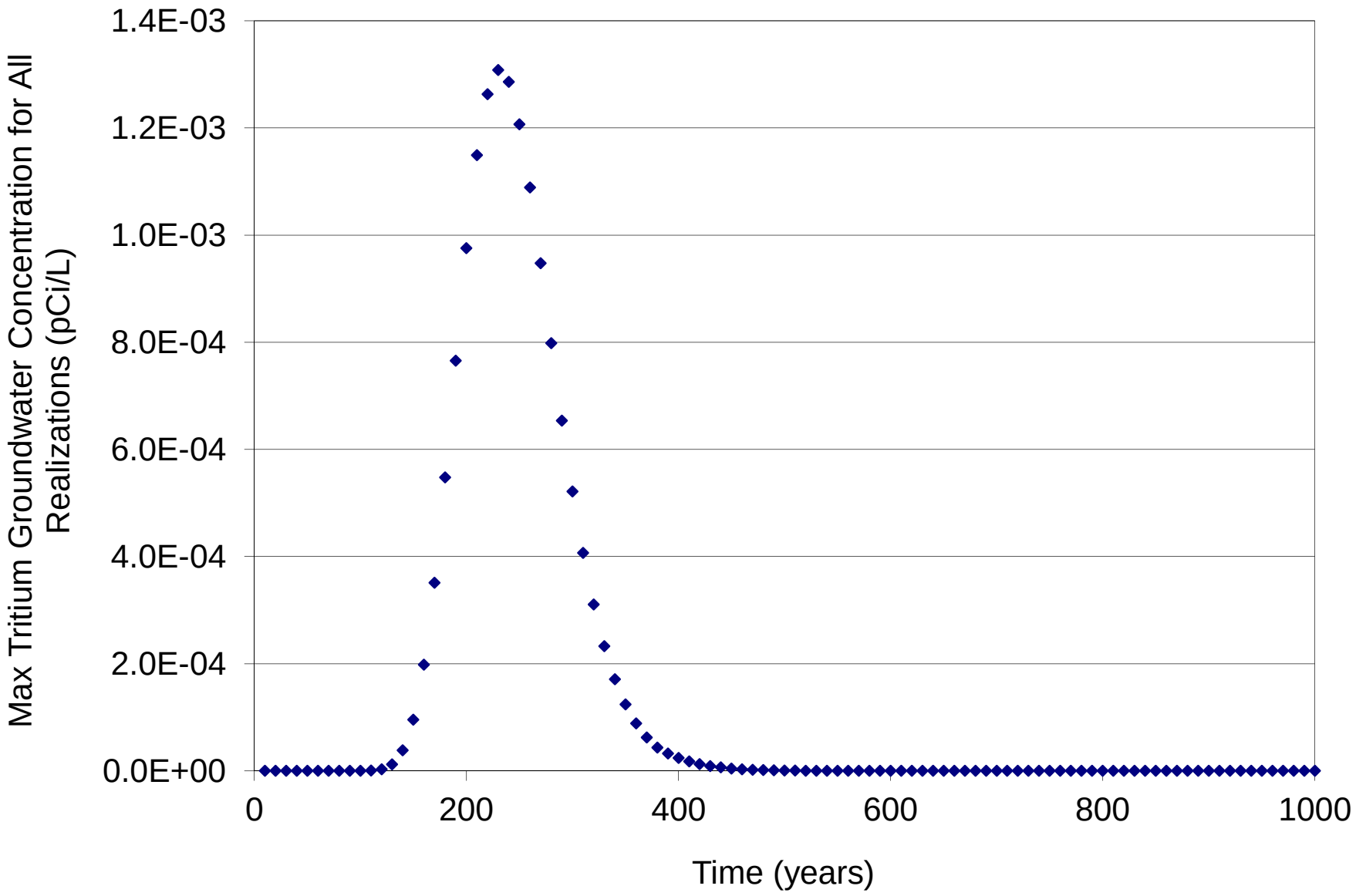
3.95E+03	4.04E+03	7.125	134.68	1.065	6.11E-11	9.31E-01	0.171	0.637	3.54E-16	7.91E-01
4.39E+03	2.73E+03	3.482	133.571	1.528	3.14E-11	2.78E-01	0.722	0.401	1.34E-10	3.64E+00
4.49E+03	4.39E+03	3.755	142.88	2.959	3.23E-11	5.26E-01	0.557	0.93	4.77E-13	1.50E+00
4.59E+03	7.77E+03	5.963	137.52	4.66	2.51E-11	9.17E-01	0.996	0.123	3.35E-14	1.14E-01
3.46E+03	8.66E+03	6.324	134.751	1.887	2.29E-11	4.90E-02	0.599	0.672	1.11E-14	0.00E+00
3.25E+03	5.79E+03	5.399	137.785	1.156	4.35E-11	2.89E-01	0.526	0.193	1.05E-21	9.32E-01
3.43E+03	1.49E+03	4.778	135.469	2.889	5.52E-11	2.59E-01	0.833	0.64	1.18E-05	3.48E+00
2.40E+03	7.86E+02	4.512	135.768	0.081	3.21E-11	3.53E-01	0.552	0.119	4.78E-15	7.16E+00
4.26E+03	9.38E+01	7.573	141.416	4.471	5.94E-11	8.19E-01	6.36E-03	0.981	8.83E-19	1.01E+00
2.62E+03	7.95E+03	7.548	139.421	1.095	2.87E-11	3.23E-01	0.818	0.168	1.24E-06	9.42E-01
4.04E+03	4.55E+02	7.169	132.968	4.71	4.16E-11	9.61E-01	0.132	0.839	5.88E-24	6.64E-02
2.77E+03	7.27E+03	6.338	135.893	1.949	5.60E-11	9.34E-01	0.382	0.913	1.69E-17	2.26E-01
2.52E+03	2.65E+02	6.13	141.799	1.635	2.34E-11	1.04E-01	0.066	0.739	2.23E-27	0.00E+00
2.45E+03	8.72E+02	4.055	140.225	3.05	3.81E-11	2.28E-01	0.017	0.653	0.00E+00	0.00E+00
3.95E+03	3.32E+03	4.248	142.438	1.414	3.99E-11	1.92E-01	0.37	0.349	6.17E-17	4.08E+00
4.59E+03	5.44E+02	4.287	133.862	4.383	3.70E-11	8.97E-01	0.231	0.654	8.32E-28	1.78E-01
3.44E+03	5.38E+03	5.156	133.688	1.6	5.98E-11	5.50E-02	0.747	0.855	2.99E-14	0.00E+00
2.98E+03	1.18E+02	4.46	136.871	2.245	4.65E-11	7.20E-01	0.44	0.681	6.22E-13	5.27E+00
3.97E+03	7.03E+02	5.014	138.231	2.013	1.69E-11	5.48E-01	0.827	0.963	4.67E-07	4.48E+00
2.46E+03	2.07E+03	4.118	134.351	0.59	3.48E-11	1.10E-01	0.321	0.146	3.89E-17	0.00E+00



Run	Porosity	Moisture Content	Inventory (Ci)	Waste Area (m^2)	Source Thickness (m)	Distance to Water Table (m)	Thickness of Clean Overburden (m)	Infiltration (m/s)	Atmospheric boundary layer thickness (m)	Liquid-phase tortuosity coefficient	Gas-phase tortuosity coefficient
1	0.302	0.146	3.39E+03	9.31E+01	6.142	137.486	4.387	6.08E-11	5.82E-01	0.497	0.685
2	0.33	0.062	3.84E+03	1.61E+03	7.57	133.048	3.25	2.99E-11	1.96E-01	0.898	0.112
3	0.386	0.143	3.54E+03	6.83E+03	4.273	138.55	2.87	1.32E-11	4.00E-01	0.23	0.248
4	0.352	0.069	4.68E+03	5.53E+01	4.261	141.316	1.632	1.63E-11	1.98E-01	0.712	0.793
5	0.42	0.206	4.40E+03	7.87E+03	6.444	141.033	2.476	2.45E-11	8.74E-01	0.716	0.818
6	0.327	0.078	4.32E+03	7.54E+03	6.988	135.588	0.052	2.42E-11	8.25E-01	0.304	0.199
7	0.404	0.213	4.49E+03	2.38E+03	5.698	135.474	2.684	3.06E-11	1.41E-01	7.81E-01	0.946
8	0.345	0.061	4.65E+03	7.06E+03	5.224	140.706	4.451	5.65E-11	6.19E-01	0.96	0.968
9	0.315	0.111	4.66E+03	1.19E+03	8.149	133.291	1.337	4.00E-11	7.68E-01	0.798	0.82
10	0.323	0.122	2.71E+03	2.48E+03	3.163	142.914	1.832	3.49E-11	1.33E-01	0.047	0.821
11	0.443	0.216	3.54E+03	2.39E+03	3.528	132.906	2.658	3.76E-11	7.29E-01	0.074	0.743
12	0.319	0.145	2.46E+03	4.58E+02	4.692	139.865	4.394	3.68E-11	9.41E-01	0.728	0.63
13	0.303	0.172	3.49E+03	6.75E+03	7.361	137.127	1.242	4.75E-11	6.91E-01	0.687	0.112
14	0.378	0.098	2.73E+03	1.81E+03	5.609	133.891	4.202	2.53E-11	5.45E-01	0.739	0.912
15	0.388	0.143	2.91E+03	6.92E+03	7.814	136.635	4.341	4.49E-11	4.22E-01	0.546	0.326
16	0.326	0.122	4.31E+03	9.55E+03	3.632	141.406	4.307	1.58E-11	2.07E-01	0.188	0.289
17	0.366	0.154	3.98E+03	1.00E+04	5.214	135.024	1.173	3.06E-11	5.68E-01	0.964	0.157
18	0.31	0.171	4.28E+03	1.09E+03	8.207	141.045	2.16	6.08E-11	2.53E-01	0.957	0.895
19	0.414	0.128	4.42E+03	8.93E+03	3.204	140.582	0.079	5.68E-11	6.07E-01	0.523	0.506
20	0.376	0.054	3.60E+03	1.05E+04	3.661	137.021	3.458	5.59E-11	8.64E-01	0.735	0.946
21	0.427	0.156	2.58E+03	3.87E+03	4.811	138.102	3.263	2.33E-11	2.39E-01	0.505	0.775
22	0.439	0.152	3.26E+03	9.65E+02	3.154	135.968	0.773	3.44E-11	9.02E-01	0.175	0.157
23	0.379	0.091	3.38E+03	1.01E+04	7.096	142.067	0.921	2.06E-11	2.00E-02	0.687	0.177
24	0.368	0.054	3.12E+03	1.47E+03	7.07	141.198	4.87	1.43E-11	7.76E-01	0.253	0.947
25	0.425	0.067	4.19E+03	2.97E+03	6.23	137.255	0.778	5.08E-11	4.88E-01	0.762	0.629
26	0.413	0.2	2.54E+03	1.50E+03	3.322	138.812	4.53	1.60E-11	9.14E-01	0.333	0.48
27	0.445	0.193	3.26E+03	7.29E+03	6.663	142.816	4.181	5.33E-11	5.96E-01	0.18	0.227
28	0.389	0.172	2.78E+03	2.36E+03	4.532	138.151	1.32	5.53E-11	8.42E-01	0.977	0.603
29	0.34	0.144	2.72E+03	4.39E+03	4.758	133.315	3.275	5.04E-11	7.07E-01	0.681	0.969
30	0.422	0.078	2.84E+03	3.24E+03	5.69	137.375	4.865	3.91E-11	4.21E-01	0.032	0.139
31	0.356	0.178	3.00E+03	4.48E+03	7.943	135.728	3.057	5.81E-11	9.44E-01	0.32	0.811
32	0.399	0.058	3.23E+03	4.50E+03	7.511	138.859	3.401	5.80E-11	2.56E-01	0.015	0.165
33	0.303	0.164	4.00E+03	9.63E+02	7.917	142.591	1.426	2.16E-11	1.82E-01	0.232	0.933
34	0.341	0.068	4.64E+03	5.54E+02	4.637	137.004	4.863	1.79E-11	8.33E-01	0.348	0.263
35	0.386	0.216	2.65E+03	1.62E+03	5.251	139.566	4.173	1.25E-11	4.42E-01	0.954	0.99
36	0.422	0.1	3.74E+03	5.78E+02	6.181	140.95	2.353	4.21E-11	3.85E-01	0.459	0.164

37	0.371	0.222	4.55E+03	7.13E+02	3.906	136.354	3.147	5.87E-11	9.98E-01	0.568	0.624
38	0.408	0.103	4.49E+03	1.22E+03	3.302	134.091	3.128	4.10E-11	3.80E-02	0.275	0.959
39	0.367	0.116	3.33E+03	6.05E+03	5.653	136.493	4.287	4.16E-11	9.55E-01	0.431	0.732
40	0.408	0.091	4.01E+03	2.25E+03	3.128	136.509	4.222	3.28E-11	2.70E-01	0.155	0.519
41	0.388	0.094	3.08E+03	1.48E+03	5.829	142.242	4.515	1.92E-11	5.82E-01	0.814	0.237
42	0.407	0.208	4.76E+03	1.53E+03	7.446	137.48	0.197	5.33E-11	2.04E-01	7.85E-01	0.691
43	0.384	0.208	3.83E+03	1.33E+03	4.858	140.448	4.171	2.74E-11	1.95E-01	0.191	0.775
44	0.324	0.067	2.72E+03	5.95E+02	3.652	136.738	3.664	5.45E-11	7.61E-01	0.069	0.198
45	0.363	0.083	3.84E+03	2.75E+02	5.89	134.513	2.738	1.33E-11	8.54E-01	0.476	0.651
46	0.376	0.186	3.25E+03	1.20E+03	7.015	134.181	3.138	1.34E-11	2.32E-01	0.532	0.732
47	0.409	0.089	3.55E+03	3.28E+03	7.802	137.269	1.168	4.00E-11	6.78E-01	0.998	0.353
48	0.326	0.054	4.68E+03	1.53E+03	4.13	140.9	4.691	5.68E-11	2.65E-01	0.3	0.151
49	0.372	0.073	4.76E+03	3.07E+03	5.369	138.045	2.423	3.49E-11	2.10E-02	4.75E-01	0.993
50	0.402	0.107	3.63E+03	3.80E+03	7.577	134.105	3.923	3.36E-11	8.20E-01	0.154	0.274
51	0.323	0.06	4.56E+03	2.69E+02	5.839	134.936	4.297	5.82E-11	3.36E-01	0.785	0.879
52	0.322	0.086	3.18E+03	6.18E+03	4.343	142.843	0.576	2.01E-11	1.27E-01	0.705	0.497
53	0.401	0.079	3.77E+03	7.76E+03	6.382	141.906	0.508	1.94E-11	9.78E-01	0.808	0.35
54	0.363	0.205	3.24E+03	1.54E+03	7.99	138.361	4.747	5.48E-11	1.51E-01	0.225	0.198
55	0.44	0.087	3.10E+03	7.85E+03	3.8	137.377	3.639	1.72E-11	7.31E-01	0.123	0.304
56	0.324	0.164	4.62E+03	1.85E+03	7.496	133.626	0.691	4.17E-11	6.33E-01	0.153	0.979
57	0.419	0.209	4.34E+03	4.92E+03	6.887	133.397	3.501	3.03E-11	3.54E-01	0.832	0.954
58	0.329	0.211	4.05E+03	4.77E+03	7.226	134.77	2.504	4.83E-11	2.10E-01	0.816	0.208
59	0.419	0.079	4.24E+03	3.84E+03	3.66	135.116	1.294	3.67E-11	9.06E-01	0.319	0.623
60	0.324	0.151	4.13E+03	1.24E+03	7.932	141.719	1.874	5.86E-11	6.45E-01	0.402	0.184
61	0.407	0.215	3.22E+03	5.15E+03	4.099	138.58	3.88	3.24E-11	1.61E-01	0.178	0.226
62	0.342	0.153	3.56E+03	6.59E+02	4.072	141.296	0.691	4.95E-11	7.28E-01	0.691	0.131
63	0.4	0.097	4.41E+03	7.04E+03	6.989	133.489	1.494	3.55E-11	8.55E-01	0.145	0.651
64	0.405	0.113	3.70E+03	1.59E+03	7.991	134.596	1.865	4.48E-11	8.43E-01	0.609	0.714
65	0.32	0.19	3.77E+03	4.02E+03	6.334	134.547	3.423	4.22E-11	8.90E-02	0.278	0.481
66	0.421	0.065	3.94E+03	3.59E+03	5.239	141.964	4.855	2.54E-11	7.49E-01	0.116	0.877
67	0.376	0.155	4.22E+03	2.51E+03	5.092	135.521	3.764	2.13E-11	6.25E-01	0.178	0.166
68	0.363	0.087	2.78E+03	4.02E+03	7.023	134.059	1.149	4.30E-11	6.15E-01	0.453	0.532
69	0.438	0.164	4.29E+03	9.22E+03	6.634	133.993	0.587	6.12E-11	4.08E-01	0.535	0.3
70	0.381	0.157	3.45E+03	3.54E+03	5.631	143.255	1.584	2.00E-11	8.18E-01	0.307	0.558
71	0.369	0.129	3.62E+03	4.41E+03	3.481	141.644	4.007	1.47E-11	3.50E-02	0.777	0.103
72	0.423	0.121	2.56E+03	3.87E+03	3.993	141.152	2.973	2.82E-11	5.56E-01	0.89	0.165
73	0.367	0.155	4.76E+03	7.62E+02	6.267	141.53	0.424	4.09E-11	5.08E-01	0.103	0.859
74	0.443	0.216	3.88E+03	9.90E+03	8.121	133.337	3.936	3.38E-11	7.98E-01	0.495	0.175
75	0.408	0.12	3.28E+03	2.02E+02	8.131	135.161	3.516	5.45E-11	2.20E-02	0.681	0.62
76	0.33	0.085	4.46E+03	4.39E+02	3.337	140.085	1.791	5.05E-11	5.97E-01	0.535	0.57

77	0.422	0.152	2.98E+03	2.84E+03	5.194	137.218	3.177	2.65E-11	6.10E-02	0.297	0.223
78	0.374	0.161	2.52E+03	8.48E+03	5.11	141.049	2.39	3.37E-11	3.14E-01	0.617	0.866
79	0.306	0.062	2.81E+03	7.76E+02	4.614	136.371	1.524	3.52E-11	6.19E-01	0.227	0.625
80	0.384	0.098	2.93E+03	4.32E+03	3.32	139.725	4.001	1.29E-11	7.59E-01	0.663	0.66
81	0.378	0.207	4.29E+03	2.65E+03	6.138	139.102	0.789	3.50E-11	7.96E-01	0.627	0.807
82	0.423	0.178	2.60E+03	1.19E+03	4.779	135.546	1.745	4.25E-11	8.15E-01	0.629	0.812
83	0.396	0.121	2.73E+03	4.00E+03	7.829	138.813	0.558	2.12E-11	5.52E-01	0.203	0.56
84	0.422	0.208	3.75E+03	1.05E+04	3.181	138.667	2.975	2.31E-11	5.34E-01	0.837	0.799
85	0.318	0.12	3.92E+03	3.83E+02	6.342	137.513	0.851	1.39E-11	9.24E-01	0.463	0.288
86	0.347	0.114	3.49E+03	9.54E+02	3.585	139.686	2.544	1.22E-11	2.74E-01	0.455	0.815
87	0.343	0.181	3.20E+03	2.04E+03	6.155	134.885	0.212	4.72E-11	4.58E-01	0.319	0.353
88	0.322	0.18	3.08E+03	1.77E+02	3.155	138.223	1.022	3.61E-11	8.85E-01	0.167	0.552
89	0.421	0.087	4.50E+03	9.08E+03	8.12	139.481	4.829	2.82E-11	1.61E-01	3.17E-01	0.193
90	0.388	0.17	4.48E+03	1.00E+03	3.44	142.636	0.179	2.55E-11	4.91E-01	0.545	0.529
91	0.338	0.116	4.31E+03	1.12E+04	7.301	137.591	3.712	4.97E-11	7.35E-01	0.301	0.635
92	0.302	0.072	3.92E+03	4.64E+03	7.73	141.166	0.263	2.06E-11	8.78E-01	0.181	0.604
93	0.417	0.088	3.83E+03	5.60E+02	6.729	136.705	3.965	3.32E-11	3.92E-01	0.751	0.641
94	0.332	0.166	2.87E+03	1.92E+03	6.232	132.939	1.676	3.31E-11	4.90E-02	0.074	0.656
95	0.381	0.171	2.96E+03	8.02E+02	4.484	136.204	3.162	2.54E-11	1.60E-02	0.621	0.906
96	0.318	0.067	2.97E+03	9.72E+03	6.237	136.232	1.433	5.83E-11	9.38E-01	0.338	0.737
97	0.41	0.058	3.38E+03	3.53E+02	7.393	142.198	2.617	2.52E-11	9.60E-01	0.918	0.146
98	0.38	0.106	3.05E+03	4.13E+03	6.391	138.069	1.635	1.78E-11	8.67E-01	0.749	0.309
99	0.364	0.078	3.31E+03	2.88E+03	8.017	141.332	1.957	2.42E-11	2.66E-01	0.838	0.984
100	0.402	0.065	2.90E+03	2.36E+02	3.313	140.904	0.848	2.91E-11	7.20E-01	0.15	0.168


Max Tritium Groundwater Concentration for All Realizations (pCi/L)
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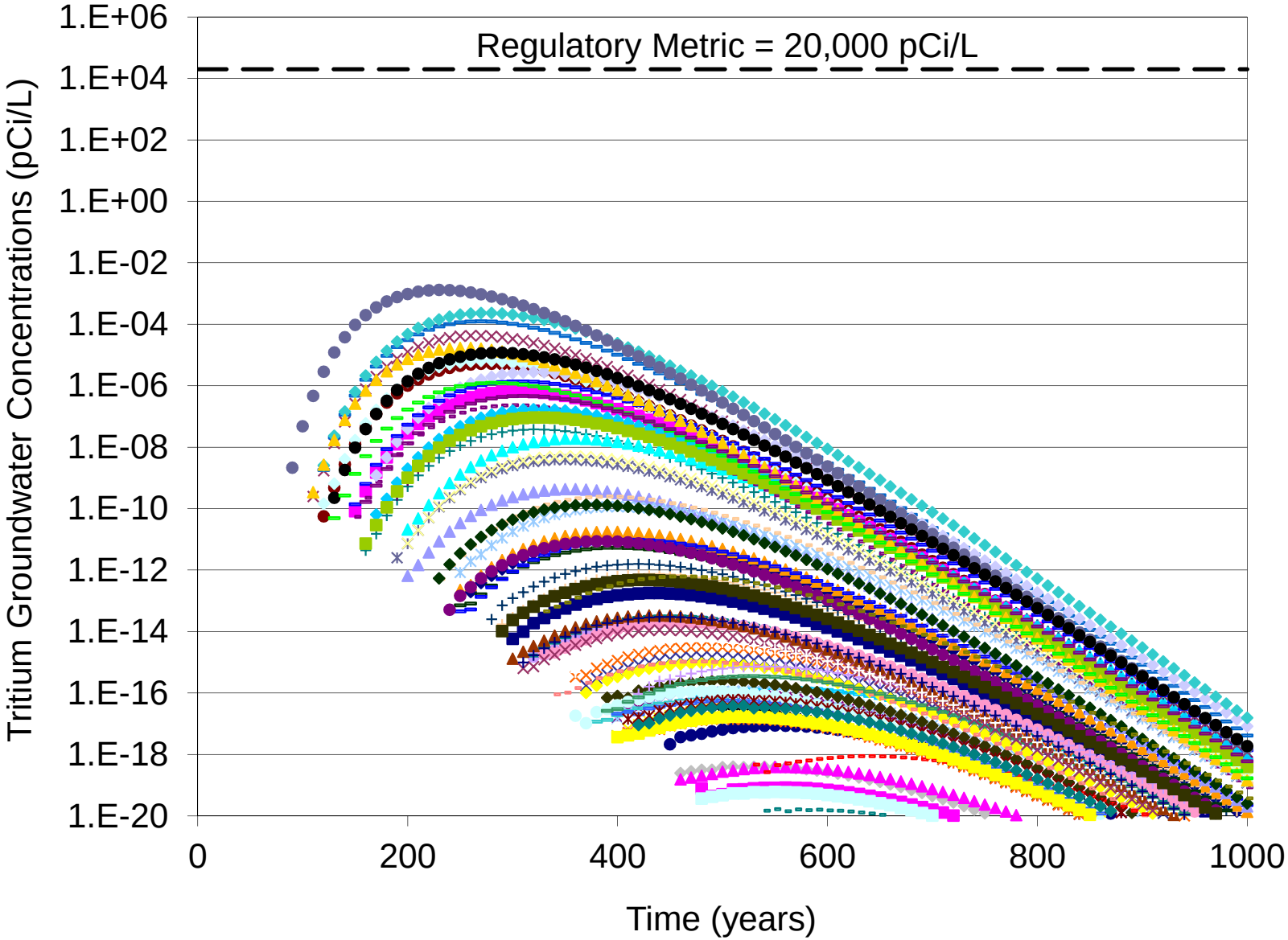
1.0E-03
8.0E-04
6.0E-04
4.0E-04
2.0E-04
0.0E+00
0
200
400
600
800
1000
Time (years)


Regulatory Metric = 20,000 pCi/L
Tritium Groundwater Concentrations (pCi/L)
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1.E+04
1.E+02
1.E+00
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1.E-04
1.E-06
1.E-08
1.E-10
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1.E-18
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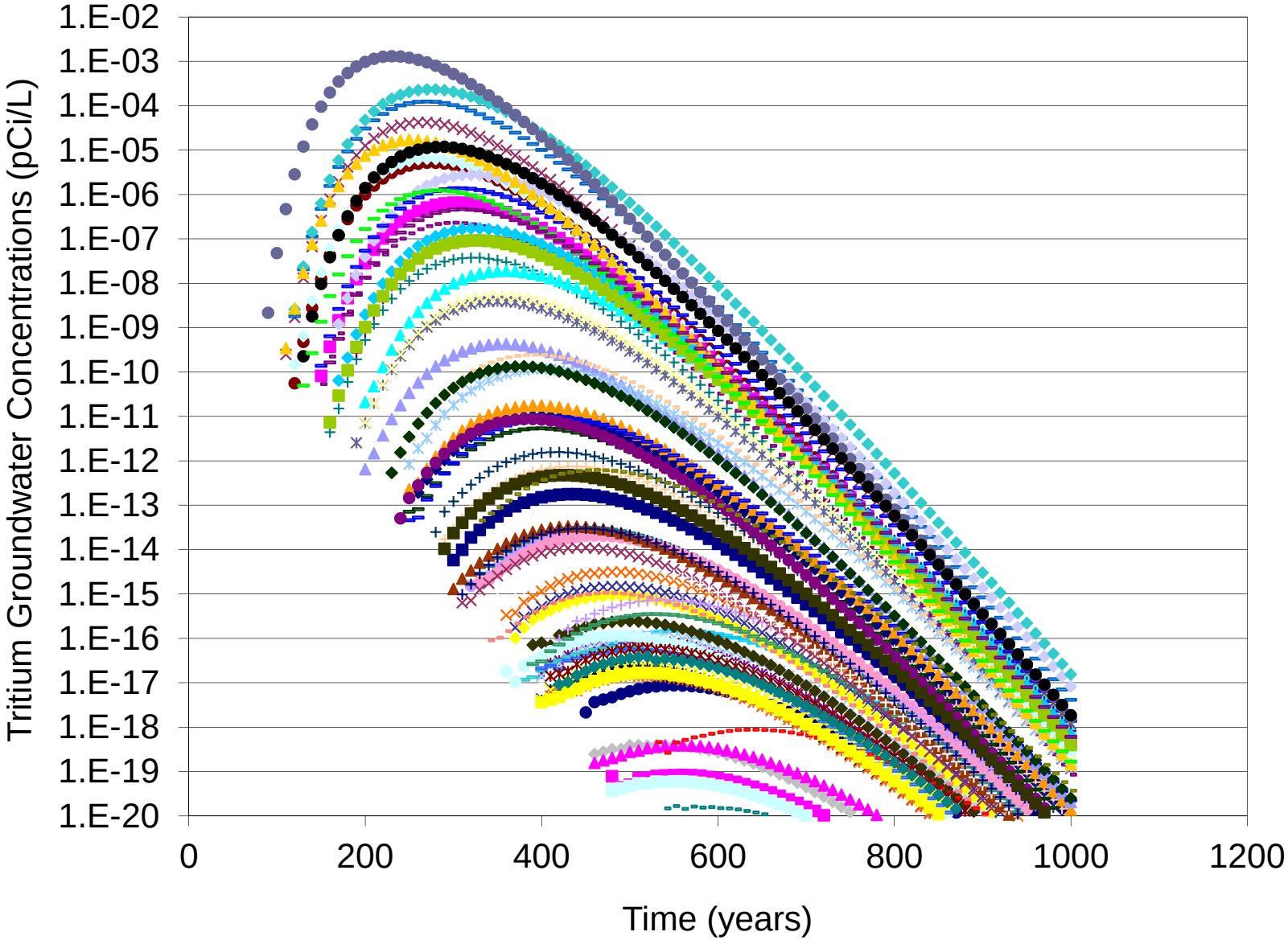
0
200
400
600
800
1000
Time (years)


Tritium Groundwater Concentrations (pCi/L)
1.E-02
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1.E-09
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1.E-12
1.E-13
1.E-14
1.E-15
1.E-16
1.E-17
1.E-18
1.E-19
1.E-20
0
200
400
600
800
1000
1200
Time (years)

Tritium Concentration (pCi/L) in Groundwater for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130	140
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	5.62E-11	4.80E-10	2.79E-09
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.44E-10	6.56E-10	4.06E-09
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0

37	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	2.50E-10	1.71E-09	1.31E-08	6.72E-08
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
52	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	1.81E-09	2.06E-08	1.14E-07
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
58	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0	0	0	2.58E-09	2.35E-08	1.43E-07
74	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0	3.48E-10	2.70E-09	1.74E-08	7.73E-08
76	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00

77	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	2.16E-09	4.79E-08	4.69E-07	2.86E-06	1.21E-05	3.81E-05
79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
82	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0	0	0	0	2.26E-10	1.80E-09
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	4.95E-11	2.67E-10
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
96	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
99	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max value	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**2.16E-09**	**4.79E-08**	**4.69E-07**	**2.86E-06**	**1.21E-05**	**3.81E-05**

150	160	170	180	190	200	210	220	230	240	250	260	270	280	290
0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-13	3.84E-13	6.55E-13	1.05E-12
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E-08	4.30E-08	1.20E-07	2.80E-07	5.65E-07	1.00E-06	1.59E-06	2.31E-06	3.08E-06	3.83E-06	4.46E-06	4.92E-06	5.16E-06	5.18E-06	5.00E-06
0	4.41E-12	1.50E-11	5.99E-11	1.94E-10	5.24E-10	1.21E-09	2.47E-09	4.52E-09	7.49E-09	1.14E-08	1.61E-08	2.12E-08	2.63E-08	3.08E-08
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.70E-08	5.93E-08	1.65E-07	3.86E-07	7.73E-07	1.36E-06	2.14E-06	3.07E-06	4.05E-06	4.97E-06	5.72E-06	6.22E-06	6.44E-06	6.37E-06	6.06E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.72E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-13	3.24E-13	6.64E-13	1.24E-12	2.10E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	2.55E-12	7.25E-12	1.98E-11	5.12E-11	1.15E-10	2.30E-10	4.15E-10	6.84E-10	1.04E-09	1.48E-09	1.98E-09
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-14	7.11E-14
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	7.15E-14	8.14E-14	1.62E-13	3.17E-13	5.33E-13
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	4.61E-14	5.25E-14	1.35E-13	2.72E-13	5.13E-13

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.20E-11	3.74E-10	1.48E-09	4.63E-09	1.25E-08	2.86E-08	5.72E-08	1.02E-07	1.65E-07	2.43E-07	3.33E-07	4.25E-07	5.11E-07	5.82E-07	6.31E-07
0	0	0	0	0	2.12E-11	4.83E-11	1.30E-10	3.20E-10	6.85E-10	1.31E-09	2.30E-09	3.67E-09	5.48E-09	7.64E-09
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.39E-11	2.25E-10	7.44E-10	2.30E-09	6.01E-09	1.33E-08	2.59E-08	4.47E-08	7.01E-08	1.01E-07	1.34E-07	1.67E-07	1.95E-07	2.17E-07	2.29E-07
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0.00E+00	6.48E-13	1.48E-12	3.78E-12	8.72E-12	1.79E-11	3.39E-11	5.80E-11	9.17E-11	1.35E-10	1.85E-10
2.61E-07	7.92E-07	1.97E-06	4.17E-06	7.67E-06	1.25E-05	1.85E-05	2.50E-05	3.13E-05	3.67E-05	4.05E-05	4.25E-05	4.25E-05	4.08E-05	3.77E-05
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.07E-10	2.74E-10	8.14E-10	2.05E-09	4.50E-09	8.85E-09	1.57E-08	2.54E-08	3.79E-08	5.26E-08	6.84E-08	8.40E-08
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.76E-07	1.57E-06	4.18E-06	9.36E-06	1.81E-05	3.08E-05	4.72E-05	6.59E-05	8.49E-05	1.02E-04	1.15E-04	1.23E-04	1.25E-04	1.22E-04	1.15E-04
0	0	1.21E-09	4.63E-09	1.49E-08	4.00E-08	9.20E-08	1.88E-07	3.43E-07	5.68E-07	8.60E-07	1.21E-06	1.59E-06	1.96E-06	2.29E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	5.08E-14	1.45E-13	2.80E-13	5.34E-13	9.05E-13	1.45E-12
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E-10	6.44E-10	2.64E-09	8.57E-09	2.32E-08	5.39E-08	1.09E-07	1.97E-07	3.22E-07	4.82E-07	6.66E-07	8.60E-07	1.04E-06	1.20E-06	1.31E-06
0	0	6.49E-11	2.09E-10	7.08E-10	1.98E-09	4.66E-09	9.77E-09	1.83E-08	3.09E-08	4.78E-08	6.85E-08	9.15E-08	1.15E-07	1.36E-07
0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0.00E+00	7.43E-12	1.97E-11	5.22E-11	1.21E-10	2.48E-10	4.55E-10	7.65E-10	1.19E-09	1.73E-09	2.35E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.38E-13	1.91E-12	3.26E-12	6.33E-12	1.11E-11
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	5.22E-13	1.48E-12	3.04E-12	6.54E-12	1.26E-11	2.23E-11	3.65E-11
0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.30E-07	2.14E-06	5.89E-06	1.36E-05	2.72E-05	4.78E-05	7.54E-05	1.08E-04	1.44E-04	1.77E-04	2.05E-04	2.25E-04	2.34E-04	2.34E-04	2.24E-04
0	7.35E-12	2.93E-11	1.10E-10	3.67E-10	1.02E-09	2.44E-09	5.12E-09	9.59E-09	1.62E-08	2.51E-08	3.61E-08	4.83E-08	6.09E-08	7.25E-08
2.61E-07	7.01E-07	1.57E-06	2.99E-06	5.02E-06	7.52E-06	1.03E-05	1.29E-05	1.51E-05	1.66E-05	1.72E-05	1.71E-05	1.62E-05	1.48E-05	1.31E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.55E-05	1.98E-04	3.51E-04	5.48E-04	7.66E-04	9.76E-04	1.15E-03	1.26E-03	1.31E-03	1.29E-03	1.21E-03	1.09E-03	9.48E-04	7.98E-04	6.54E-04
0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.40E-13	1.54E-12	3.50E-12	6.87E-12	1.20E-11	1.99E-11	3.06E-11
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.04E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.60E-09	3.86E-08	1.22E-07	3.22E-07	7.21E-07	1.40E-06	2.43E-06	3.79E-06	5.42E-06	7.15E-06	8.82E-06	1.02E-05	1.13E-05	1.18E-05	1.18E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E-09	5.17E-09	1.59E-08	4.06E-08	8.83E-08	1.68E-07	2.84E-07	4.34E-07	6.09E-07	7.92E-07	9.62E-07	1.10E-06	1.20E-06	1.24E-06	1.23E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	1.65E-10	5.62E-10	1.97E-09	5.54E-09	1.35E-08	2.86E-08	5.37E-08	9.09E-08	1.40E-07	1.99E-07	2.64E-07	3.28E-07	3.85E-07	4.29E-07
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.55E-05	**1.98E-04**	**3.51E-04**	**5.48E-04**	**7.66E-04**	**9.76E-04**	**1.15E-03**	**1.26E-03**	**1.31E-03**	**1.29E-03**	**1.21E-03**	**1.09E-03**	**9.48E-04**	**7.98E-04**	**6.54E-04**

300	310	320	330	340	350	360	370	380	390	400	410	420	430	440
1.70E-12	2.52E-12	3.53E-12	4.68E-12	5.91E-12	7.11E-12	8.22E-12	9.13E-12	9.78E-12	1.01E-11	1.02E-11	9.97E-12	9.49E-12	8.81E-12	8.00E-12
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-17	2.78E-17	3.17E-17	4.21E-17	4.96E-17
4.65E-06	4.19E-06	3.66E-06	3.12E-06	2.59E-06	2.10E-06	1.68E-06	1.31E-06	1.00E-06	7.59E-07	5.65E-07	4.15E-07	3.01E-07	2.16E-07	1.53E-07
3.45E-08	3.68E-08	3.79E-08	3.75E-08	3.59E-08	3.34E-08	3.02E-08	2.66E-08	2.29E-08	1.92E-08	1.59E-08	1.28E-08	1.02E-08	7.99E-09	6.16E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	9.56E-18	1.63E-17	2.48E-17
5.56E-06	4.93E-06	4.25E-06	3.57E-06	2.93E-06	2.35E-06	1.84E-06	1.42E-06	1.08E-06	8.02E-07	5.90E-07	4.28E-07	3.06E-07	2.17E-07	1.52E-07
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-17	2.42E-17	2.75E-17	3.65E-17	4.90E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.89E-18	6.70E-18	7.63E-18	7.60E-18
0.00E+00	0.00E+00	1.53E-15	1.75E-15	2.48E-15	3.96E-15	5.79E-15	7.79E-15	1.02E-14	1.29E-14	1.55E-14	1.81E-14	2.01E-14	2.19E-14	2.32E-14
2.94E-14	5.02E-14	7.62E-14	1.19E-13	1.75E-13	2.44E-13	3.21E-13	4.05E-13	4.90E-13	5.71E-13	6.40E-13	6.96E-13	7.32E-13	7.49E-13	7.47E-13
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-17	1.34E-17	1.90E-17	2.60E-17	3.20E-17	3.86E-17	4.51E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.29E-12	4.83E-12	6.65E-12	8.71E-12	1.08E-11	1.29E-11	1.47E-11	1.62E-11	1.72E-11	1.77E-11	1.76E-11	1.71E-11	1.62E-11	1.49E-11	1.35E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-16	3.81E-16	6.50E-16	8.63E-16	1.16E-15	1.50E-15	1.84E-15	2.18E-15	2.50E-15
2.49E-09	2.98E-09	3.40E-09	3.72E-09	3.92E-09	3.98E-09	3.91E-09	3.73E-09	3.46E-09	3.13E-09	2.76E-09	2.39E-09	2.02E-09	1.68E-09	1.37E-09
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.21E-13	1.89E-13	2.91E-13	4.16E-13	5.73E-13	7.51E-13	9.33E-13	1.11E-12	1.28E-12	1.41E-12	1.51E-12	1.57E-12	1.58E-12	1.55E-12	1.48E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.59E-13	1.28E-12	1.80E-12	2.40E-12	3.04E-12	3.68E-12	4.26E-12	4.75E-12	5.12E-12	5.33E-12	5.38E-12	5.29E-12	5.06E-12	4.72E-12	4.31E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.06E-17	8.04E-17	6.86E-17	1.17E-16	1.33E-16	1.65E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-16	2.99E-16	3.97E-16	5.17E-16	6.80E-16	8.37E-16	9.95E-16	1.14E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E-18	7.32E-18	6.94E-18	1.03E-17	1.22E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.45E-18	1.27E-17	1.69E-17	2.06E-17	2.66E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.93E-13	1.44E-12	2.18E-12	3.11E-12	4.19E-12	5.10E-12	6.29E-12	7.32E-12	8.35E-12	9.08E-12	9.54E-12	9.75E-12	9.67E-12	9.35E-12	8.82E-12

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-16	1.73E-16	2.62E-16	3.36E-16	4.25E-16	5.26E-16	6.23E-16	7.11E-16
6.55E-07	6.53E-07	6.28E-07	5.85E-07	5.29E-07	4.65E-07	3.99E-07	3.34E-07	2.75E-07	2.21E-07	1.75E-07	1.36E-07	1.04E-07	7.84E-08	5.84E-08
1.00E-08	1.25E-08	1.48E-08	1.67E-08	1.81E-08	1.90E-08	1.92E-08	1.88E-08	1.79E-08	1.65E-08	1.49E-08	1.32E-08	1.14E-08	9.66E-09	8.03E-09
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E-07	2.27E-07	2.13E-07	1.95E-07	1.72E-07	1.49E-07	1.25E-07	1.03E-07	8.29E-08	6.56E-08	5.10E-08	3.90E-08	2.94E-08	2.18E-08	1.60E-08
0	0	1.67E-15	2.86E-15	4.33E-15	6.48E-15	9.13E-15	1.23E-14	1.52E-14	1.85E-14	2.20E-14	2.52E-14	2.78E-14	2.98E-14	3.09E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.40E-10	2.94E-10	3.45E-10	3.86E-10	4.15E-10	4.30E-10	4.31E-10	4.19E-10	3.96E-10	3.64E-10	3.27E-10	2.87E-10	2.46E-10	2.07E-10	1.72E-10
3.37E-05	2.93E-05	2.47E-05	2.04E-05	1.64E-05	1.29E-05	9.99E-06	7.60E-06	5.68E-06	4.19E-06	3.05E-06	2.19E-06	1.55E-06	1.09E-06	7.56E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-17	1.04E-17	2.37E-17	3.03E-17	4.02E-17	5.13E-17	6.40E-17	7.63E-17	8.81E-17
9.79E-08	1.09E-07	1.16E-07	1.19E-07	1.17E-07	1.12E-07	1.05E-07	9.45E-08	8.34E-08	7.19E-08	6.06E-08	5.01E-08	4.07E-08	3.25E-08	2.55E-08
0	0	0	0.00E+00	9.03E-17	1.03E-16	1.46E-16	2.17E-16	3.03E-16	3.99E-16	5.07E-16	6.22E-16	7.35E-16	8.40E-16	9.30E-16
1.04E-04	9.11E-05	7.77E-05	6.46E-05	5.25E-05	4.17E-05	3.25E-05	2.48E-05	1.87E-05	1.39E-05	1.01E-05	7.29E-06	5.19E-06	3.66E-06	2.55E-06
2.55E-06	2.72E-06	2.79E-06	2.75E-06	2.63E-06	2.44E-06	2.20E-06	1.93E-06	1.65E-06	1.39E-06	1.14E-06	9.22E-07	7.32E-07	5.72E-07	4.40E-07
5.80E-15	9.91E-15	1.88E-14	2.78E-14	4.08E-14	5.65E-14	7.52E-14	9.46E-14	1.15E-13	1.34E-13	1.51E-13	1.65E-13	1.74E-13	1.78E-13	1.78E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-18	6.95E-18	9.23E-18	1.20E-17	1.50E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.17E-12	3.06E-12	4.06E-12	5.13E-12	6.17E-12	7.11E-12	7.88E-12	8.42E-12	8.70E-12	8.71E-12	8.47E-12	8.03E-12	7.42E-12	6.70E-12	5.92E-12
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E-06	1.39E-06	1.35E-06	1.26E-06	1.15E-06	1.02E-06	8.82E-07	7.45E-07	6.16E-07	4.99E-07	3.98E-07	3.11E-07	2.40E-07	1.82E-07	1.36E-07
1.54E-07	1.66E-07	1.73E-07	1.72E-07	1.66E-07	1.56E-07	1.42E-07	1.25E-07	1.09E-07	9.18E-08	7.61E-08	6.18E-08	4.94E-08	3.88E-08	3.01E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.01E-09	3.65E-09	4.23E-09	4.68E-09	4.99E-09	5.12E-09	5.09E-09	4.90E-09	4.59E-09	4.19E-09	3.73E-09	3.25E-09	2.77E-09	2.32E-09	1.90E-09
1.79E-11	2.69E-11	3.82E-11	5.09E-11	6.47E-11	7.87E-11	9.16E-11	1.03E-10	1.11E-10	1.16E-10	1.17E-10	1.16E-10	1.11E-10	1.04E-10	9.47E-11
0.00E+00	0.00E+00	0.00E+00	1.85E-15	2.11E-15	3.00E-15	4.10E-15	5.63E-15	7.63E-15	9.75E-15	1.20E-14	1.42E-14	1.63E-14	1.80E-14	1.94E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-17	1.61E-16	2.44E-16
5.58E-11	7.82E-11	1.06E-10	1.36E-10	1.65E-10	1.93E-10	2.16E-10	2.33E-10	2.43E-10	2.46E-10	2.41E-10	2.31E-10	2.15E-10	1.95E-10	1.74E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-17	2.42E-17	2.06E-17	3.13E-17	3.56E-17
2.07E-04	1.86E-04	1.62E-04	1.37E-04	1.13E-04	9.16E-05	7.26E-05	5.65E-05	4.32E-05	3.25E-05	2.41E-05	1.77E-05	1.28E-05	9.10E-06	6.43E-06
8.22E-08	8.90E-08	9.26E-08	9.28E-08	8.99E-08	8.44E-08	7.70E-08	6.85E-08	5.94E-08	5.04E-08	4.19E-08	3.42E-08	2.74E-08	2.16E-08	1.68E-08
1.12E-05	9.32E-06	7.57E-06	6.00E-06	4.66E-06	3.56E-06	2.66E-06	1.96E-06	1.43E-06	1.02E-06	7.24E-07	5.06E-07	3.51E-07	2.40E-07	1.63E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E-18	5.78E-18	6.58E-18	6.56E-18
5.22E-04	4.07E-04	3.11E-04	2.33E-04	1.71E-04	1.24E-04	8.85E-05	6.24E-05	4.34E-05	2.99E-05	2.03E-05	1.37E-05	9.17E-06	6.08E-06	4.00E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-17	3.02E-17	5.15E-17	7.33E-17	9.73E-17	1.28E-16
4.39E-11	5.94E-11	7.60E-11	9.25E-11	1.08E-10	1.20E-10	1.29E-10	1.34E-10	1.34E-10	1.31E-10	1.24E-10	1.14E-10	1.03E-10	9.10E-11	7.86E-11
2.37E-14	4.04E-14	6.52E-14	9.82E-14	1.41E-13	1.84E-13	2.42E-13	2.98E-13	3.49E-13	3.97E-13	4.36E-13	4.62E-13	4.76E-13	4.77E-13	4.65E-13
1.31E-15	2.24E-15	3.39E-15	5.07E-15	7.42E-15	1.04E-14	1.39E-14	1.76E-14	2.14E-14	2.50E-14	2.82E-14	3.08E-14	3.26E-14	3.35E-14	3.35E-14
0.00E+00	6.32E-16	7.19E-16	1.23E-15	1.75E-15	2.59E-15	3.59E-15	4.73E-15	5.89E-15	7.18E-15	8.35E-15	9.39E-15	1.02E-14	1.08E-14	1.11E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
1.14E-05	1.06E-05	9.58E-06	8.40E-06	7.17E-06	5.97E-06	4.87E-06	3.89E-06	3.05E-06	2.35E-06	1.78E-06	1.33E-06	9.79E-07	7.13E-07	5.12E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.36E-16	4.76E-16	1.08E-15	1.23E-15	1.84E-15	2.35E-15	2.93E-15	3.05E-15	3.56E-15	4.01E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.18E-06	1.09E-06	9.72E-07	8.45E-07	7.16E-07	5.93E-07	4.81E-07	3.82E-07	2.98E-07	2.28E-07	1.72E-07	1.28E-07	9.40E-08	6.81E-08	4.88E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	3.68E-18	4.19E-18	4.77E-18	6.11E-18	7.34E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-17	1.61E-17	1.83E-17	2.61E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	9.84E-16	1.68E-15	2.87E-15	4.54E-15	6.71E-15	9.35E-15	1.24E-14	1.57E-14	1.87E-14	2.19E-14	2.48E-14	2.73E-14	2.89E-14	2.98E-14
0.00E+00	0.00E+00	0.00E+00	4.57E-14	6.51E-14	8.89E-14	1.27E-13	1.78E-13	2.36E-13	3.03E-13	3.73E-13	4.43E-13	5.06E-13	5.49E-13	5.89E-13
4.57E-07	4.67E-07	4.60E-07	4.37E-07	4.03E-07	3.62E-07	3.16E-07	2.69E-07	2.24E-07	1.83E-07	1.47E-07	1.16E-07	8.99E-08	6.87E-08	5.17E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-18	1.04E-17	1.47E-17
5.22E-04	**4.07E-04**	**3.11E-04**	**2.33E-04**	**1.71E-04**	**1.24E-04**	**8.85E-05**	**6.24E-05**	**4.34E-05**	**3.25E-05**	**2.41E-05**	**1.77E-05**	**1.28E-05**	**9.10E-06**	**6.43E-06**

450	460	470	480	490	500	510	520	530	540	550	560	570	580	590
7.11E-12	6.20E-12	5.30E-12	4.46E-12	3.68E-12	3.00E-12	2.41E-12	1.91E-12	1.49E-12	1.15E-12	8.77E-13	6.62E-13	4.95E-13	3.66E-13	2.68E-13
0.00E+00	0.00E+00	0.00E+00	7.79E-20	4.44E-20	5.05E-20	7.19E-20	7.36E-20	7.92E-20	8.22E-20	8.30E-20	8.42E-20	8.26E-20	8.01E-20	7.59E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.84E-17	6.76E-17	7.57E-17	8.22E-17	8.71E-17	9.00E-17	9.08E-17	8.97E-17	8.67E-17	8.19E-17	7.63E-17	6.96E-17	6.27E-17	5.54E-17	4.83E-17
1.07E-07	7.45E-08	5.13E-08	3.50E-08	2.37E-08	1.59E-08	1.06E-08	7.06E-09	4.65E-09	3.05E-09	1.99E-09	1.29E-09	8.31E-10	5.33E-10	3.41E-10
4.68E-09	3.51E-09	2.60E-09	1.91E-09	1.38E-09	9.92E-10	7.05E-10	4.96E-10	3.46E-10	2.40E-10	1.65E-10	1.13E-10	7.63E-11	5.14E-11	3.44E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.53E-17	4.72E-17	6.00E-17	7.41E-17	8.90E-17	1.03E-16	1.17E-16	1.29E-16	1.38E-16	1.45E-16	1.48E-16	1.49E-16	1.46E-16	1.41E-16	1.34E-16
1.05E-07	7.23E-08	4.92E-08	3.32E-08	2.23E-08	1.48E-08	9.77E-09	6.42E-09	4.19E-09	2.72E-09	1.75E-09	1.12E-09	7.18E-10	4.57E-10	2.89E-10
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.91E-17	7.12E-17	8.29E-17	9.33E-17	1.02E-16	1.09E-16	1.13E-16	1.15E-16	1.14E-16	1.11E-16	1.06E-16	9.94E-17	9.15E-17	8.28E-17	7.38E-17
9.27E-18	1.09E-17	1.22E-17	1.33E-17	1.43E-17	1.49E-17	1.52E-17	1.52E-17	1.47E-17	1.40E-17	1.32E-17	1.22E-17	1.10E-17	9.83E-18	8.63E-18
2.38E-14	2.38E-14	2.33E-14	2.22E-14	2.08E-14	1.90E-14	1.71E-14	1.51E-14	1.31E-14	1.12E-14	9.43E-15	7.83E-15	6.41E-15	5.18E-15	4.14E-15
7.26E-13	6.89E-13	6.40E-13	5.82E-13	5.20E-13	4.56E-13	3.93E-13	3.33E-13	2.78E-13	2.29E-13	1.86E-13	1.49E-13	1.18E-13	9.25E-14	7.16E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.90E-17	5.53E-17	5.84E-17	6.11E-17	6.20E-17	6.18E-17	5.99E-17	5.70E-17	5.31E-17	4.86E-17	4.37E-17	3.87E-17	3.37E-17	2.89E-17	2.45E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.19E-11	1.03E-11	8.80E-12	7.36E-12	6.06E-12	4.92E-12	3.93E-12	3.10E-12	2.42E-12	1.86E-12	1.42E-12	1.07E-12	7.96E-13	5.88E-13	4.30E-13
2.78E-15	2.91E-15	3.05E-15	3.13E-15	3.13E-15	3.05E-15	2.90E-15	2.71E-15	2.49E-15	2.24E-15	1.99E-15	1.73E-15	1.49E-15	1.26E-15	1.05E-15
1.10E-09	8.69E-10	6.78E-10	5.21E-10	3.96E-10	2.97E-10	2.20E-10	1.62E-10	1.18E-10	8.46E-11	6.04E-11	4.27E-11	3.00E-11	2.09E-11	1.45E-11
0	0	0	0	0	0	0	0	0	0	0	9.95E-22	5.67E-22	6.45E-22	7.34E-22
1.38E-12	1.26E-12	1.13E-12	9.95E-13	8.58E-13	7.28E-13	6.08E-13	5.00E-13	4.06E-13	3.25E-13	2.56E-13	2.00E-13	1.55E-13	1.18E-13	8.91E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.85E-12	3.37E-12	2.90E-12	2.45E-12	2.03E-12	1.66E-12	1.34E-12	1.07E-12	8.38E-13	6.50E-13	4.98E-13	3.78E-13	2.84E-13	2.11E-13	1.55E-13
1.85E-16	2.09E-16	2.21E-16	2.37E-16	2.41E-16	2.45E-16	2.40E-16	2.31E-16	2.18E-16	2.02E-16	1.84E-16	1.64E-16	1.44E-16	1.25E-16	1.07E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E-21	8.23E-21	7.03E-21	8.00E-21	7.59E-21	8.20E-21	8.36E-21
1.27E-15	1.37E-15	1.44E-15	1.46E-15	1.47E-15	1.43E-15	1.37E-15	1.29E-15	1.18E-15	1.07E-15	9.48E-16	8.29E-16	7.13E-16	6.05E-16	5.06E-16
1.49E-17	1.69E-17	1.89E-17	2.05E-17	2.16E-17	2.15E-17	2.16E-17	2.13E-17	2.07E-17	1.95E-17	1.80E-17	1.64E-17	1.47E-17	1.29E-17	1.12E-17
3.12E-17	3.60E-17	4.00E-17	4.34E-17	4.58E-17	4.58E-17	4.59E-17	4.54E-17	4.38E-17	4.14E-17	3.83E-17	3.49E-17	3.12E-17	2.75E-17	2.39E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-21	8.54E-22	9.72E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.58E-22
8.13E-12	7.33E-12	6.49E-12	5.63E-12	4.80E-12	4.02E-12	3.32E-12	2.70E-12	2.16E-12	1.71E-12	1.34E-12	1.03E-12	7.89E-13	5.96E-13	4.46E-13

7.91E-16	8.54E-16	8.97E-16	9.15E-16	9.15E-16	8.95E-16	8.56E-16	8.02E-16	7.38E-16	6.67E-16	5.93E-16	5.19E-16	4.47E-16	3.80E-16	3.18E-16
4.29E-08	3.12E-08	2.24E-08	1.59E-08	1.12E-08	7.84E-09	5.42E-09	3.72E-09	2.54E-09	1.72E-09	1.15E-09	7.70E-10	5.11E-10	3.38E-10	2.22E-10
6.56E-09	5.28E-09	4.18E-09	3.27E-09	2.52E-09	1.92E-09	1.44E-09	1.07E-09	7.89E-10	5.75E-10	4.15E-10	2.97E-10	2.11E-10	1.49E-10	1.04E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.15E-18	3.67E-18	4.17E-18	4.75E-18	5.63E-18	6.41E-18	7.23E-18	7.81E-18	8.30E-18	8.59E-18	8.71E-18	8.64E-18	8.41E-18	8.03E-18	7.54E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-22
1.16E-08	8.31E-09	5.89E-09	4.13E-09	2.87E-09	1.98E-09	1.35E-09	9.18E-10	6.19E-10	4.14E-10	2.75E-10	1.82E-10	1.19E-10	7.78E-11	5.06E-11
3.13E-14	3.09E-14	2.97E-14	2.80E-14	2.59E-14	2.34E-14	2.08E-14	1.81E-14	1.56E-14	1.32E-14	1.10E-14	9.00E-15	7.30E-15	5.84E-15	4.62E-15
0.00E+00	2.46E-19	2.80E-19	3.19E-19	3.18E-19	3.88E-19	3.97E-19	3.84E-19	3.89E-19	3.98E-19	3.91E-19	3.76E-19	3.57E-19	3.29E-19	3.02E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.03E-21	2.29E-21	2.61E-21	2.97E-21	2.96E-21	2.89E-21	2.88E-21
1.40E-10	1.12E-10	8.81E-11	6.85E-11	5.26E-11	3.99E-11	2.99E-11	2.21E-11	1.62E-11	1.18E-11	8.49E-12	6.06E-12	4.29E-12	3.01E-12	2.10E-12
5.20E-07	3.55E-07	2.40E-07	1.61E-07	1.07E-07	7.09E-08	4.66E-08	3.04E-08	1.98E-08	1.28E-08	8.21E-09	5.25E-09	3.34E-09	2.12E-09	1.34E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.84E-17	1.07E-16	1.12E-16	1.15E-16	1.15E-16	1.13E-16	1.09E-16	1.02E-16	9.44E-17	8.56E-17	7.64E-17	6.70E-17	5.79E-17	4.93E-17	4.14E-17
1.98E-08	1.51E-08	1.14E-08	8.45E-09	6.22E-09	4.52E-09	3.26E-09	2.33E-09	1.65E-09	1.15E-09	8.02E-10	5.54E-10	3.80E-10	2.59E-10	1.75E-10
9.99E-16	1.04E-15	1.06E-15	1.06E-15	1.03E-15	9.75E-16	9.08E-16	8.30E-16	7.45E-16	6.58E-16	5.72E-16	4.89E-16	4.12E-16	3.43E-16	2.82E-16
1.76E-06	1.20E-06	8.16E-07	5.49E-07	3.66E-07	2.43E-07	1.60E-07	1.05E-07	6.80E-08	4.40E-08	2.83E-08	1.81E-08	1.16E-08	7.33E-09	4.63E-09
3.34E-07	2.50E-07	1.85E-07	1.35E-07	9.77E-08	7.00E-08	4.96E-08	3.49E-08	2.43E-08	1.68E-08	1.15E-08	7.86E-09	5.32E-09	3.58E-09	2.39E-09
1.74E-13	1.65E-13	1.54E-13	1.40E-13	1.25E-13	1.10E-13	9.50E-14	8.06E-14	6.75E-14	5.56E-14	4.52E-14	3.63E-14	2.88E-14	2.26E-14	1.75E-14
0.00E+00	1.57E-19	1.79E-19	2.03E-19	2.31E-19	2.80E-19	3.00E-19	3.36E-19	3.61E-19	3.80E-19	3.89E-19	3.91E-19	3.85E-19	3.72E-19	3.53E-19
1.82E-17	2.16E-17	2.48E-17	2.76E-17	2.98E-17	3.14E-17	3.23E-17	3.24E-17	3.19E-17	3.08E-17	2.91E-17	2.70E-17	2.44E-17	2.20E-17	1.94E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-22	2.14E-22	3.65E-22
5.13E-12	4.37E-12	3.65E-12	3.00E-12	2.43E-12	1.94E-12	1.53E-12	1.19E-12	9.10E-13	6.91E-13	5.19E-13	3.85E-13	2.84E-13	2.07E-13	1.50E-13
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-20	1.68E-20	1.43E-20	1.63E-20	1.55E-20	1.58E-20
1.01E-07	7.37E-08	5.32E-08	3.81E-08	2.70E-08	1.89E-08	1.32E-08	9.08E-09	6.22E-09	4.23E-09	2.85E-09	1.91E-09	1.28E-09	8.45E-10	5.57E-10
2.29E-08	1.73E-08	1.28E-08	9.43E-09	6.85E-09	4.93E-09	3.51E-09	2.48E-09	1.73E-09	1.20E-09	8.29E-10	5.67E-10	3.85E-10	2.60E-10	1.74E-10
0.00E+00	0.00E+00	0.00E+00	3.67E-20	4.17E-20	4.75E-20	5.41E-20	5.39E-20	5.91E-20	5.86E-20	6.03E-20	5.98E-20	5.84E-20	5.57E-20	5.25E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.41E-22	9.57E-22	8.17E-22
1.54E-09	1.22E-09	9.57E-10	7.40E-10	5.65E-10	4.26E-10	3.17E-10	2.34E-10	1.71E-10	1.23E-10	8.82E-11	6.26E-11	4.41E-11	3.08E-11	2.14E-11
8.47E-11	7.43E-11	6.40E-11	5.41E-11	4.50E-11	3.69E-11	2.97E-11	2.37E-11	1.86E-11	1.44E-11	1.11E-11	8.41E-12	6.31E-12	4.69E-12	3.46E-12
2.03E-14	2.06E-14	2.05E-14	1.99E-14	1.89E-14	1.76E-14	1.60E-14	1.43E-14	1.26E-14	1.09E-14	9.33E-15	7.85E-15	6.51E-15	5.33E-15	4.31E-15
2.78E-16	3.56E-16	4.28E-16	5.00E-16	5.66E-16	6.25E-16	6.74E-16	7.08E-16	7.27E-16	7.30E-16	7.18E-16	6.93E-16	6.56E-16	6.10E-16	5.58E-16
1.52E-10	1.30E-10	1.09E-10	9.02E-11	7.34E-11	5.89E-11	4.66E-11	3.63E-11	2.80E-11	2.14E-11	1.61E-11	1.20E-11	8.86E-12	6.48E-12	4.70E-12
4.06E-17	4.55E-17	4.68E-17	5.24E-17	5.48E-17	5.63E-17	5.59E-17	5.43E-17	5.19E-17	4.87E-17	4.47E-17	4.04E-17	3.59E-17	3.14E-17	2.71E-17
4.50E-06	3.11E-06	2.14E-06	1.45E-06	9.82E-07	6.58E-07	4.38E-07	2.90E-07	1.90E-07	1.24E-07	8.09E-08	5.23E-08	3.36E-08	2.15E-08	1.37E-08
1.29E-08	9.70E-09	7.23E-09	5.33E-09	3.89E-09	2.80E-09	2.00E-09	1.42E-09	9.94E-10	6.92E-10	4.77E-10	3.27E-10	2.23E-10	1.51E-10	1.01E-10
1.10E-07	7.33E-08	4.86E-08	3.20E-08	2.09E-08	1.36E-08	8.78E-09	5.64E-09	3.60E-09	2.29E-09	1.45E-09	9.15E-10	5.75E-10	3.59E-10	2.24E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

8.53E-18	1.00E-17	1.16E-17	1.29E-17	1.39E-17	1.47E-17	1.40E-17	1.39E-17	1.39E-17	1.36E-17	1.27E-17	1.18E-17	1.07E-17	9.63E-18	8.49E-18
2.61E-06	1.69E-06	1.09E-06	6.99E-07	4.46E-07	2.83E-07	1.78E-07	1.12E-07	7.00E-08	4.36E-08	2.71E-08	1.67E-08	1.03E-08	6.33E-09	3.88E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.63E-16	1.98E-16	2.34E-16	2.68E-16	2.98E-16	3.23E-16	3.41E-16	3.51E-16	3.54E-16	3.49E-16	3.38E-16	3.20E-16	2.99E-16	2.73E-16	2.46E-16
6.67E-11	5.55E-11	4.55E-11	3.67E-11	2.91E-11	2.28E-11	1.77E-11	1.35E-11	1.02E-11	7.61E-12	5.62E-12	4.12E-12	2.99E-12	2.15E-12	1.53E-12
4.43E-13	4.12E-13	3.76E-13	3.36E-13	2.94E-13	2.53E-13	2.15E-13	1.79E-13	1.47E-13	1.19E-13	9.53E-14	7.52E-14	5.87E-14	4.53E-14	3.46E-14
3.27E-14	3.11E-14	2.90E-14	2.65E-14	2.37E-14	2.09E-14	1.80E-14	1.53E-14	1.28E-14	1.06E-14	8.62E-15	6.93E-15	5.50E-15	4.32E-15	3.35E-15
1.11E-14	1.08E-14	1.03E-14	9.61E-15	8.78E-15	7.87E-15	6.93E-15	6.00E-15	5.11E-15	4.29E-15	3.55E-15	2.90E-15	2.33E-15	1.86E-15	1.46E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-21	5.98E-22	6.81E-22	7.75E-22	8.82E-22
3.64E-07	2.56E-07	1.79E-07	1.23E-07	8.45E-08	5.74E-08	3.87E-08	2.59E-08	1.72E-08	1.14E-08	7.49E-09	4.89E-09	3.18E-09	2.06E-09	1.32E-09
4.44E-15	4.66E-15	4.78E-15	4.78E-15	4.67E-15	4.47E-15	4.19E-15	3.85E-15	3.47E-15	3.08E-15	2.68E-15	2.30E-15	1.95E-15	1.62E-15	1.34E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-19	2.64E-19	4.52E-19	5.14E-19	5.85E-19	6.38E-19	7.11E-19
3.46E-08	2.43E-08	1.69E-08	1.16E-08	7.93E-09	5.38E-09	3.62E-09	2.42E-09	1.60E-09	1.06E-09	6.94E-10	4.52E-10	2.94E-10	1.90E-10	1.22E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.23E-18	1.09E-17	1.26E-17	1.41E-17	1.53E-17	1.62E-17	1.67E-17	1.69E-17	1.67E-17	1.61E-17	1.49E-17	1.41E-17	1.28E-17	1.16E-17	1.02E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.26E-17	3.88E-17	4.47E-17	5.03E-17	5.51E-17	5.86E-17	6.08E-17	6.17E-17	5.61E-17	5.65E-17	5.33E-17	5.01E-17	4.60E-17	4.15E-17	3.67E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.99E-14	2.93E-14	2.80E-14	2.62E-14	2.40E-14	2.16E-14	1.91E-14	1.65E-14	1.41E-14	1.19E-14	9.83E-15	8.04E-15	6.49E-15	5.17E-15	4.07E-15
6.17E-13	6.22E-13	6.17E-13	5.96E-13	5.64E-13	5.22E-13	4.75E-13	4.23E-13	3.71E-13	3.20E-13	2.72E-13	2.28E-13	1.88E-13	1.53E-13	1.23E-13
3.84E-08	2.82E-08	2.05E-08	1.47E-08	1.05E-08	7.38E-09	5.15E-09	3.57E-09	2.45E-09	1.67E-09	1.13E-09	7.62E-10	5.09E-10	3.38E-10	2.24E-10
1.85E-17	2.29E-17	2.61E-17	3.03E-17	3.33E-17	3.60E-17	3.79E-17	3.89E-17	3.21E-17	3.45E-17	3.26E-17	3.13E-17	2.97E-17	2.65E-17	2.37E-17
4.50E-06	**3.11E-06**	**2.14E-06**	**1.45E-06**	**9.82E-07**	**6.58E-07**	**4.38E-07**	**2.90E-07**	**1.90E-07**	**1.24E-07**	**8.09E-08**	**5.23E-08**	**3.36E-08**	**2.15E-08**	**1.37E-08**

600	610	620	630	640	650	660	670	680	690	700	710	720	730	740
1.95E-13	1.41E-13	1.01E-13	7.13E-14	5.02E-14	3.51E-14	2.44E-14	1.69E-14	1.16E-14	7.91E-15	5.37E-15	3.63E-15	2.44E-15	1.63E-15	1.09E-15
7.06E-20	6.48E-20	5.84E-20	5.20E-20	4.55E-20	3.94E-20	3.37E-20	2.84E-20	2.37E-20	1.96E-20	1.60E-20	1.29E-20	1.03E-20	8.19E-21	6.43E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.43E-22	1.39E-22	1.58E-22	1.80E-22	1.53E-22	1.60E-22	1.57E-22	1.41E-22	1.37E-22	1.25E-22	1.15E-22	1.03E-22	9.20E-23	8.11E-23	7.04E-23
4.15E-17	3.52E-17	2.95E-17	2.43E-17	1.99E-17	1.61E-17	1.28E-17	1.02E-17	7.96E-18	6.18E-18	4.75E-18	3.62E-18	2.74E-18	2.06E-18	1.53E-18
2.17E-10	1.38E-10	8.68E-11	5.46E-11	3.42E-11	2.14E-11	1.33E-11	8.28E-12	5.13E-12	3.17E-12	1.95E-12	1.20E-12	7.34E-13	4.49E-13	2.74E-13
2.29E-11	1.51E-11	9.96E-12	6.53E-12	4.25E-12	2.76E-12	1.78E-12	1.15E-12	7.36E-13	4.70E-13	2.99E-13	1.90E-13	1.20E-13	7.54E-14	4.74E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E-16	1.14E-16	1.03E-16	9.17E-17	8.03E-17	6.95E-17	5.93E-17	5.00E-17	4.17E-17	3.43E-17	2.80E-17	2.26E-17	1.80E-17	1.43E-17	1.12E-17
1.82E-10	1.15E-10	7.17E-11	4.47E-11	2.78E-11	1.72E-11	1.06E-11	6.55E-12	4.02E-12	2.47E-12	1.51E-12	9.18E-13	5.58E-13	3.39E-13	2.05E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.48E-17	5.60E-17	4.78E-17	4.01E-17	3.34E-17	2.75E-17	2.23E-17	1.79E-17	1.43E-17	1.13E-17	8.79E-18	6.80E-18	5.21E-18	3.97E-18	2.99E-18
7.47E-18	6.37E-18	5.36E-18	4.46E-18	3.66E-18	2.98E-18	2.39E-18	1.90E-18	1.50E-18	1.17E-18	9.01E-19	6.90E-19	5.24E-19	3.94E-19	2.95E-19
3.26E-15	2.55E-15	1.97E-15	1.51E-15	1.14E-15	8.57E-16	6.38E-16	4.71E-16	3.45E-16	2.51E-16	1.81E-16	1.30E-16	9.25E-17	6.54E-17	4.60E-17
5.49E-14	4.17E-14	3.13E-14	2.34E-14	1.73E-14	1.26E-14	9.19E-15	6.63E-15	4.75E-15	3.38E-15	2.39E-15	1.68E-15	1.17E-15	8.15E-16	5.63E-16
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.04E-17	1.69E-17	1.37E-17	1.10E-17	8.79E-18	6.93E-18	5.40E-18	4.18E-18	3.20E-18	2.43E-18	1.83E-18	1.36E-18	1.01E-18	7.42E-19	5.42E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.12E-13	2.25E-13	1.60E-13	1.14E-13	8.00E-14	5.59E-14	3.88E-14	2.68E-14	1.84E-14	1.25E-14	8.51E-15	5.75E-15	3.86E-15	2.58E-15	1.72E-15
8.65E-16	7.04E-16	5.66E-16	4.51E-16	3.55E-16	2.76E-16	2.13E-16	1.63E-16	1.23E-16	9.26E-17	6.90E-17	5.10E-17	3.74E-17	2.72E-17	1.97E-17
9.93E-12	6.78E-12	4.60E-12	3.10E-12	2.08E-12	1.39E-12	9.21E-13	6.08E-13	4.00E-13	2.62E-13	1.71E-13	1.11E-13	7.16E-14	4.61E-14	2.96E-14
7.31E-22	7.14E-22	7.11E-22	6.94E-22	6.58E-22	6.18E-22	5.65E-22	5.14E-22	4.59E-22	4.06E-22	3.54E-22	2.96E-22	2.55E-22	2.16E-22	1.79E-22
6.67E-14	4.95E-14	3.64E-14	2.65E-14	1.92E-14	1.38E-14	9.80E-15	6.94E-15	4.88E-15	3.41E-15	2.36E-15	1.63E-15	1.12E-15	7.64E-16	5.19E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.14E-13	8.21E-14	5.90E-14	4.21E-14	2.98E-14	2.09E-14	1.46E-14	1.01E-14	6.98E-15	4.79E-15	3.26E-15	2.21E-15	1.49E-15	1.00E-15	6.70E-16
9.00E-17	7.48E-17	6.14E-17	4.98E-17	4.00E-17	3.17E-17	2.49E-17	1.94E-17	1.49E-17	1.14E-17	8.64E-18	6.49E-18	4.83E-18	3.57E-18	2.62E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.25E-21	7.96E-21	7.71E-21	7.22E-21	6.70E-21	6.09E-21	5.49E-21	4.42E-21	4.00E-21	3.53E-21	2.98E-21	2.56E-21	2.11E-21	1.72E-21	1.41E-21
4.18E-16	3.41E-16	2.75E-16	2.20E-16	1.73E-16	1.35E-16	1.05E-16	8.01E-17	6.09E-17	4.58E-17	3.42E-17	2.54E-17	1.87E-17	1.36E-17	9.88E-18
9.57E-18	8.08E-18	6.73E-18	5.53E-18	4.50E-18	3.62E-18	2.88E-18	2.27E-18	1.77E-18	1.36E-18	1.04E-18	7.93E-19	5.97E-19	4.46E-19	3.31E-19
2.05E-17	1.73E-17	1.44E-17	1.19E-17	9.65E-18	7.76E-18	6.18E-18	4.87E-18	3.80E-18	2.94E-18	2.25E-18	1.71E-18	1.29E-18	9.64E-19	7.16E-19
1.11E-21	9.45E-22	9.86E-22	9.69E-22	9.29E-22	8.60E-22	8.19E-22	7.44E-22	6.80E-22	6.07E-22	5.35E-22	4.67E-22	3.88E-22	3.35E-22	2.85E-22
3.17E-22	3.61E-22	3.09E-22	3.51E-22	3.66E-22	3.60E-22	3.35E-22	3.13E-22	2.94E-22	2.71E-22	2.46E-22	2.19E-22	1.93E-22	1.69E-22	1.46E-22
3.31E-13	2.43E-13	1.77E-13	1.28E-13	9.15E-14	6.51E-14	4.60E-14	3.22E-14	2.25E-14	1.56E-14	1.07E-14	7.33E-15	4.99E-15	3.38E-15	2.28E-15

2.63E-16	2.15E-16	1.73E-16	1.39E-16	1.09E-16	8.55E-17	6.62E-17	5.08E-17	3.86E-17	2.91E-17	2.18E-17	1.62E-17	1.19E-17	8.71E-18	6.33E-18
1.45E-10	9.40E-11	6.08E-11	3.91E-11	2.51E-11	1.60E-11	1.02E-11	6.46E-12	4.08E-12	2.57E-12	1.61E-12	1.01E-12	6.29E-13	3.91E-13	2.43E-13
7.20E-11	4.96E-11	3.40E-11	2.31E-11	1.56E-11	1.05E-11	7.04E-12	4.68E-12	3.10E-12	2.05E-12	1.34E-12	8.78E-13	5.71E-13	3.71E-13	2.39E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.55E-21	3.16E-21	3.60E-21	3.07E-21	2.91E-21	2.32E-21	2.45E-21	2.26E-21	2.02E-21	1.81E-21	1.49E-21	1.36E-21	1.17E-21	9.97E-22	8.55E-22
6.96E-18	6.33E-18	5.67E-18	5.00E-18	4.35E-18	3.74E-18	3.17E-18	2.66E-18	2.20E-18	1.81E-18	1.47E-18	1.18E-18	9.36E-19	7.38E-19	5.76E-19
2.63E-22	4.49E-22	4.26E-22	4.37E-22	3.87E-22	4.09E-22	3.94E-22	3.77E-22	3.57E-22	3.32E-22	3.03E-22	2.75E-22	2.45E-22	2.16E-22	1.88E-22
3.27E-11	2.10E-11	1.35E-11	8.59E-12	5.46E-12	3.45E-12	2.18E-12	1.37E-12	8.57E-13	5.35E-13	3.33E-13	2.07E-13	1.28E-13	7.89E-14	4.85E-14
3.62E-15	2.80E-15	2.14E-15	1.63E-15	1.22E-15	9.11E-16	6.73E-16	4.93E-16	3.59E-16	2.59E-16	1.86E-16	1.32E-16	9.35E-17	6.58E-17	4.60E-17
2.70E-19	2.39E-19	2.08E-19	1.79E-19	1.52E-19	1.27E-19	1.06E-19	8.64E-20	7.00E-20	5.61E-20	4.45E-20	3.50E-20	2.72E-20	2.10E-20	1.61E-20
2.81E-21	2.66E-21	2.53E-21	2.35E-21	2.14E-21	1.93E-21	1.70E-21	1.49E-21	1.29E-21	1.10E-21	9.32E-22	7.78E-22	6.44E-22	5.26E-22	4.27E-22
1.45E-12	9.99E-13	6.82E-13	4.63E-13	3.13E-13	2.10E-13	1.40E-13	9.31E-14	6.16E-14	4.05E-14	2.66E-14	1.73E-14	1.13E-14	7.29E-15	4.70E-15
8.41E-10	5.27E-10	3.29E-10	2.05E-10	1.27E-10	7.86E-11	4.84E-11	2.98E-11	1.83E-11	1.12E-11	6.82E-12	4.16E-12	2.52E-12	1.53E-12	9.26E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.43E-17	2.81E-17	2.27E-17	1.82E-17	1.44E-17	1.13E-17	8.74E-18	6.72E-18	5.12E-18	3.86E-18	2.89E-18	2.15E-18	1.59E-18	1.16E-18	8.44E-19
1.18E-10	7.86E-11	5.22E-11	3.45E-11	2.27E-11	1.49E-11	9.69E-12	6.29E-12	4.06E-12	2.62E-12	1.68E-12	1.07E-12	6.82E-13	4.33E-13	2.74E-13
2.28E-16	1.83E-16	1.45E-16	1.14E-16	8.84E-17	6.80E-17	5.18E-17	3.91E-17	2.93E-17	2.18E-17	1.60E-17	1.17E-17	8.53E-18	6.15E-18	4.41E-18
2.92E-09	1.83E-09	1.14E-09	7.12E-10	4.42E-10	2.73E-10	1.69E-10	1.04E-10	6.36E-11	3.89E-11	2.38E-11	1.45E-11	8.79E-12	5.33E-12	3.23E-12
1.59E-09	1.05E-09	6.91E-10	4.52E-10	2.94E-10	1.91E-10	1.23E-10	7.92E-11	5.07E-11	3.23E-11	2.06E-11	1.30E-11	8.22E-12	5.17E-12	3.25E-12
1.34E-14	1.02E-14	7.67E-15	5.72E-15	4.23E-15	3.10E-15	2.26E-15	1.63E-15	1.17E-15	8.31E-16	5.88E-16	4.13E-16	2.89E-16	2.00E-16	1.39E-16
3.30E-19	3.03E-19	2.74E-19	2.44E-19	2.14E-19	1.86E-19	1.57E-19	1.33E-19	1.12E-19	9.21E-20	7.52E-20	6.08E-20	4.87E-20	3.86E-20	3.04E-20
1.69E-17	1.45E-17	1.23E-17	1.03E-17	8.47E-18	6.92E-18	5.59E-18	4.46E-18	3.53E-18	2.77E-18	2.15E-18	1.65E-18	1.26E-18	9.53E-19	7.16E-19
3.46E-22	3.55E-22	3.36E-22	3.32E-22	3.34E-22	3.18E-22	3.01E-22	2.83E-22	2.60E-22	2.37E-22	2.12E-22	1.87E-22	1.64E-22	1.41E-22	1.21E-22
1.07E-13	7.63E-14	5.38E-14	3.77E-14	2.63E-14	1.82E-14	1.25E-14	8.54E-15	5.80E-15	3.92E-15	2.64E-15	1.76E-15	1.18E-15	7.79E-16	5.14E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.50E-20	1.48E-20	1.40E-20	1.30E-20	1.20E-20	1.08E-20	9.57E-21	8.45E-21	7.32E-21	6.29E-21	5.33E-21	4.47E-21	3.71E-21	3.04E-21	2.47E-21
3.65E-10	2.38E-10	1.55E-10	9.99E-11	6.43E-11	4.12E-11	2.63E-11	1.67E-11	1.06E-11	6.68E-12	4.21E-12	2.64E-12	1.65E-12	1.03E-12	6.40E-13
1.16E-10	7.70E-11	5.08E-11	3.33E-11	2.18E-11	1.41E-11	9.15E-12	5.90E-12	3.78E-12	2.42E-12	1.54E-12	9.79E-13	6.19E-13	3.91E-13	2.46E-13
4.81E-20	4.39E-20	3.93E-20	3.47E-20	3.02E-20	2.59E-20	2.20E-20	1.85E-20	1.53E-20	1.25E-20	1.02E-20	8.16E-21	6.49E-21	5.12E-21	4.00E-21
9.30E-22	9.71E-22	9.54E-22	9.72E-22	9.60E-22	9.17E-22	8.70E-22	8.16E-22	7.52E-22	6.81E-22	6.09E-22	5.38E-22	4.70E-22	4.06E-22	3.46E-22
1.47E-11	1.01E-11	6.85E-12	4.63E-12	3.11E-12	2.08E-12	1.38E-12	9.15E-13	6.03E-13	3.95E-13	2.58E-13	1.68E-13	1.09E-13	7.00E-14	4.50E-14
2.53E-12	1.83E-12	1.31E-12	9.36E-13	6.62E-13	4.65E-13	3.25E-13	2.25E-13	1.55E-13	1.06E-13	7.25E-14	4.91E-14	3.31E-14	2.22E-14	1.49E-14
3.44E-15	2.72E-15	2.12E-15	1.64E-15	1.26E-15	9.56E-16	7.19E-16	5.37E-16	3.97E-16	2.92E-16	2.13E-16	1.54E-16	1.11E-16	7.91E-17	5.62E-17
5.03E-16	4.46E-16	3.89E-16	3.25E-16	2.80E-16	2.33E-16	1.93E-16	1.59E-16	1.30E-16	1.04E-16	8.24E-17	6.49E-17	5.05E-17	3.90E-17	2.99E-17
3.38E-12	2.41E-12	1.71E-12	1.20E-12	8.37E-13	5.80E-13	4.00E-13	2.74E-13	1.86E-13	1.26E-13	8.49E-14	5.69E-14	3.80E-14	2.52E-14	1.67E-14
2.30E-17	1.93E-17	1.60E-17	1.31E-17	1.06E-17	8.45E-18	6.68E-18	5.24E-18	4.06E-18	3.12E-18	2.38E-18	1.80E-18	1.35E-18	1.00E-18	7.39E-19
8.72E-09	5.52E-09	3.47E-09	2.18E-09	1.36E-09	8.51E-10	5.29E-10	3.28E-10	2.03E-10	1.25E-10	7.67E-11	4.71E-11	2.88E-11	1.76E-11	1.07E-11
6.76E-11	4.49E-11	2.97E-11	1.95E-11	1.28E-11	8.30E-12	5.38E-12	3.47E-12	2.23E-12	1.43E-12	9.12E-13	5.80E-13	3.67E-13	2.32E-13	1.46E-13
1.39E-10	8.60E-11	5.31E-11	3.27E-11	2.00E-11	1.23E-11	7.48E-12	4.55E-12	2.76E-12	1.67E-12	1.01E-12	6.11E-13	3.68E-13	2.21E-13	1.33E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

7.37E-18	6.30E-18	5.33E-18	4.44E-18	3.66E-18	2.98E-18	2.40E-18	1.91E-18	1.51E-18	1.18E-18	9.10E-19	6.98E-19	5.31E-19	4.00E-19	3.00E-19
2.37E-09	1.44E-09	8.75E-10	5.30E-10	3.20E-10	1.93E-10	1.16E-10	6.98E-11	4.18E-11	2.50E-11	1.49E-11	8.91E-12	5.30E-12	3.15E-12	1.87E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E-22	5.81E-23	6.61E-23	5.65E-23	4.29E-23	4.88E-23	4.51E-23	4.54E-23	4.16E-23	3.84E-23	3.46E-23	3.05E-23	2.69E-23	2.34E-23	2.02E-23
2.19E-16	1.91E-16	1.65E-16	1.40E-16	1.12E-16	9.45E-17	7.65E-17	6.29E-17	4.98E-17	3.98E-17	3.11E-17	2.42E-17	1.88E-17	1.43E-17	1.09E-17
1.08E-12	7.61E-13	5.30E-13	3.67E-13	2.53E-13	1.73E-13	1.17E-13	7.93E-14	5.33E-14	3.57E-14	2.38E-14	1.57E-14	1.04E-14	6.81E-15	4.46E-15
2.62E-14	1.96E-14	1.45E-14	1.07E-14	7.80E-15	5.64E-15	4.05E-15	2.89E-15	2.05E-15	1.44E-15	1.01E-15	6.99E-16	4.83E-16	3.32E-16	2.27E-16
2.57E-15	1.96E-15	1.47E-15	1.10E-15	8.14E-16	5.98E-16	4.35E-16	3.15E-16	2.26E-16	1.61E-16	1.14E-16	8.02E-17	5.61E-17	3.90E-17	2.70E-17
1.14E-15	8.75E-16	6.67E-16	5.04E-16	3.77E-16	2.80E-16	2.06E-16	1.50E-16	1.09E-16	7.84E-17	5.60E-17	3.98E-17	2.81E-17	1.97E-17	1.37E-17
8.16E-22	7.86E-22	7.93E-22	7.64E-22	7.25E-22	6.75E-22	6.23E-22	5.65E-22	5.05E-22	4.46E-22	3.88E-22	3.20E-22	2.76E-22	2.30E-22	1.91E-22
8.48E-10	5.41E-10	3.44E-10	2.17E-10	1.37E-10	8.61E-11	5.39E-11	3.37E-11	2.09E-11	1.30E-11	8.04E-12	4.96E-12	3.05E-12	1.87E-12	1.15E-12
1.09E-15	8.72E-16	6.92E-16	5.44E-16	4.22E-16	3.25E-16	2.48E-16	1.87E-16	1.40E-16	1.04E-16	7.67E-17	5.61E-17	4.08E-17	2.94E-17	2.11E-17
7.73E-19	8.24E-19	8.62E-19	8.79E-19	8.83E-19	8.72E-19	8.46E-19	8.08E-19	7.60E-19	7.04E-19	6.43E-19	5.80E-19	5.16E-19	4.53E-19	3.94E-19
7.79E-11	4.96E-11	3.15E-11	1.99E-11	1.25E-11	7.87E-12	4.92E-12	3.07E-12	1.91E-12	1.18E-12	7.32E-13	4.51E-13	2.78E-13	1.70E-13	1.04E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.88E-24	3.35E-24	3.81E-24	4.34E-24	3.71E-24	3.52E-24
8.94E-18	7.72E-18	6.54E-18	5.49E-18	4.54E-18	3.72E-18	3.01E-18	2.41E-18	1.91E-18	1.50E-18	1.17E-18	8.98E-19	6.86E-19	5.20E-19	3.91E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E-17	2.75E-17	2.34E-17	1.96E-17	1.62E-17	1.33E-17	1.08E-17	8.61E-18	6.82E-18	5.35E-18	4.16E-18	3.21E-18	2.45E-18	1.85E-18	1.39E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.17E-15	2.44E-15	1.87E-15	1.41E-15	1.06E-15	7.84E-16	5.77E-16	4.21E-16	3.06E-16	2.20E-16	1.57E-16	1.12E-16	7.87E-17	5.52E-17	3.85E-17
9.80E-14	7.71E-14	6.00E-14	4.62E-14	3.52E-14	2.66E-14	1.99E-14	1.48E-14	1.09E-14	7.97E-15	5.79E-15	4.17E-15	2.98E-15	2.12E-15	1.50E-15
1.47E-10	9.61E-11	6.25E-11	4.05E-11	2.61E-11	1.68E-11	1.07E-11	6.84E-12	4.34E-12	2.75E-12	1.73E-12	1.09E-12	6.83E-13	4.27E-13	2.66E-13
2.11E-17	1.83E-17	1.57E-17	1.33E-17	1.11E-17	9.12E-18	7.43E-18	5.99E-18	4.78E-18	3.78E-18	2.95E-18	2.29E-18	1.76E-18	1.34E-18	1.01E-18
8.72E-09	**5.52E-09**	**3.47E-09**	**2.18E-09**	**1.36E-09**	**8.51E-10**	**5.29E-10**	**3.28E-10**	**2.03E-10**	**1.25E-10**	**7.67E-11**	**4.71E-11**	**2.88E-11**	**1.76E-11**	**1.07E-11**

750	760	770	780	790	800	810	820	830	840	850	860	870	880	890
7.19E-16	4.75E-16	3.12E-16	2.04E-16	1.33E-16	8.66E-17	5.61E-17	3.62E-17	2.33E-17	1.50E-17	9.56E-18	6.09E-18	3.88E-18	2.46E-18	1.55E-18
5.01E-21	3.87E-21	2.97E-21	2.25E-21	1.70E-21	1.28E-21	9.49E-22	7.02E-22	5.16E-22	3.77E-22	2.74E-22	1.97E-22	1.42E-22	1.01E-22	7.19E-23
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.05E-23	5.14E-23	4.32E-23	3.60E-23	2.97E-23	2.42E-23	1.90E-23	1.54E-23	1.21E-23	9.68E-24	7.57E-24	5.86E-24	4.54E-24	3.47E-24	2.64E-24
1.13E-18	8.32E-19	6.07E-19	4.40E-19	3.17E-19	2.27E-19	1.61E-19	1.14E-19	8.05E-20	5.64E-20	3.93E-20	2.73E-20	1.88E-20	1.29E-20	8.85E-21
1.67E-13	1.01E-13	6.15E-14	3.72E-14	2.25E-14	1.36E-14	8.16E-15	4.91E-15	2.95E-15	1.77E-15	1.06E-15	6.32E-16	3.77E-16	2.25E-16	1.34E-16
2.97E-14	1.85E-14	1.15E-14	7.17E-15	4.44E-15	2.75E-15	1.69E-15	1.04E-15	6.40E-16	3.92E-16	2.40E-16	1.46E-16	8.92E-17	5.42E-17	3.29E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.70E-18	6.70E-18	5.13E-18	3.89E-18	2.93E-18	2.19E-18	1.63E-18	1.20E-18	8.78E-19	6.39E-19	4.63E-19	3.33E-19	2.38E-19	1.70E-19	1.20E-19
1.24E-13	7.48E-14	4.50E-14	2.71E-14	1.62E-14	9.73E-15	5.82E-15	3.47E-15	2.07E-15	1.23E-15	7.33E-16	4.35E-16	2.58E-16	1.53E-16	9.04E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.24E-18	1.67E-18	1.23E-18	9.01E-19	6.56E-19	4.75E-19	3.41E-19	2.44E-19	1.74E-19	1.23E-19	8.64E-20	6.05E-20	4.21E-20	2.92E-20	2.01E-20
2.19E-19	1.61E-19	1.18E-19	8.57E-20	6.19E-20	4.44E-20	3.17E-20	2.25E-20	1.59E-20	1.12E-20	7.79E-21	5.42E-21	3.75E-21	2.58E-21	1.77E-21
3.22E-17	2.24E-17	1.55E-17	1.07E-17	7.29E-18	4.97E-18	3.37E-18	2.27E-18	1.53E-18	1.02E-18	6.82E-19	4.53E-19	3.00E-19	1.98E-19	1.30E-19
3.87E-16	2.64E-16	1.80E-16	1.22E-16	8.21E-17	5.51E-17	3.68E-17	2.45E-17	1.62E-17	1.07E-17	7.05E-18	4.63E-18	3.02E-18	1.97E-18	1.28E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.93E-19	2.83E-19	2.03E-19	1.44E-19	1.02E-19	7.17E-20	5.02E-20	3.49E-20	2.42E-20	1.67E-20	1.15E-20	7.82E-21	5.32E-21	3.60E-21	2.43E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.14E-15	7.51E-16	4.93E-16	3.23E-16	2.11E-16	1.37E-16	8.87E-17	5.72E-17	3.68E-17	2.36E-17	1.51E-17	9.63E-18	6.12E-18	3.88E-18	2.46E-18
1.42E-17	1.01E-17	7.18E-18	5.07E-18	3.55E-18	2.48E-18	1.72E-18	1.19E-18	8.18E-19	5.60E-19	3.81E-19	2.59E-19	1.75E-19	1.17E-19	7.87E-20
1.89E-14	1.21E-14	7.66E-15	4.86E-15	3.07E-15	1.93E-15	1.21E-15	7.60E-16	4.75E-16	2.96E-16	1.84E-16	1.14E-16	7.08E-17	4.37E-17	2.70E-17
1.48E-22	1.21E-22	9.74E-23	7.79E-23	6.20E-23	4.88E-23	3.82E-23	2.96E-23	2.27E-23	1.74E-23	1.32E-23	9.92E-24	7.42E-24	5.52E-24	4.08E-24
3.51E-16	2.36E-16	1.58E-16	1.05E-16	7.00E-17	4.63E-17	3.05E-17	2.00E-17	1.31E-17	8.52E-18	5.53E-18	3.58E-18	2.31E-18	1.49E-18	9.53E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.46E-16	2.96E-16	1.95E-16	1.28E-16	8.39E-17	5.47E-17	3.56E-17	2.30E-17	1.49E-17	9.58E-18	6.14E-18	3.93E-18	2.51E-18	1.60E-18	1.01E-18
1.91E-18	1.39E-18	9.96E-19	7.12E-19	5.06E-19	3.58E-19	2.52E-19	1.76E-19	1.22E-19	8.47E-20	5.83E-20	4.00E-20	2.73E-20	1.86E-20	1.26E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.14E-21	9.13E-22	7.23E-22	5.69E-22	4.44E-22	3.43E-22	2.63E-22	2.01E-22	1.52E-22	1.14E-22	8.51E-23	6.31E-23	4.65E-23	3.41E-23	2.48E-23
7.12E-18	5.10E-18	3.63E-18	2.57E-18	1.81E-18	1.26E-18	8.79E-19	6.09E-19	4.20E-19	2.88E-19	1.97E-19	1.34E-19	9.05E-20	6.10E-20	4.10E-20
2.43E-19	1.78E-19	1.29E-19	9.31E-20	6.68E-20	4.76E-20	3.37E-20	2.38E-20	1.67E-20	1.16E-20	8.06E-21	5.57E-21	3.83E-21	2.62E-21	1.78E-21
5.27E-19	3.86E-19	2.80E-19	2.02E-19	1.45E-19	1.04E-19	7.35E-20	5.19E-20	3.64E-20	2.54E-20	1.76E-20	1.22E-20	8.39E-21	5.75E-21	3.92E-21
2.36E-22	1.95E-22	1.60E-22	1.29E-22	1.03E-22	8.22E-23	6.49E-23	5.08E-23	3.95E-23	3.04E-23	2.33E-23	1.77E-23	1.34E-23	1.00E-23	7.47E-24
1.24E-22	1.05E-22	8.75E-23	6.27E-23	5.38E-23	4.50E-23	3.51E-23	2.78E-23	2.27E-23	1.75E-23	1.38E-23	1.06E-23	8.07E-24	6.13E-24	4.64E-24
1.53E-15	1.02E-15	6.78E-16	4.48E-16	2.96E-16	1.94E-16	1.27E-16	8.27E-17	5.37E-17	3.47E-17	2.24E-17	1.44E-17	9.23E-18	5.90E-18	3.76E-18

4.56E-18	3.27E-18	2.33E-18	1.65E-18	1.16E-18	8.16E-19	5.68E-19	3.94E-19	2.72E-19	1.87E-19	1.28E-19	8.70E-20	5.90E-20	3.98E-20	2.68E-20
1.50E-13	9.27E-14	5.71E-14	3.51E-14	2.15E-14	1.32E-14	8.03E-15	4.89E-15	2.97E-15	1.81E-15	1.09E-15	6.62E-16	4.00E-16	2.41E-16	1.45E-16
1.54E-13	9.88E-14	6.32E-14	4.02E-14	2.56E-14	1.62E-14	1.02E-14	6.44E-15	4.05E-15	2.54E-15	1.58E-15	9.88E-16	6.15E-16	3.82E-16	2.36E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.11E-22	5.90E-22	4.86E-22	3.95E-22	3.19E-22	2.55E-22	2.02E-22	1.59E-22	1.24E-22	9.62E-23	7.39E-23	5.64E-23	4.27E-23	3.22E-23	2.41E-23
4.46E-19	3.43E-19	2.62E-19	1.98E-19	1.49E-19	1.11E-19	8.21E-20	6.05E-20	4.42E-20	3.22E-20	2.33E-20	1.67E-20	1.20E-20	8.50E-21	6.01E-21
1.62E-22	1.38E-22	1.16E-22	9.71E-23	8.02E-23	6.57E-23	5.33E-23	4.28E-23	3.42E-23	2.49E-23	2.00E-23	1.59E-23	1.20E-23	9.38E-24	7.11E-24
2.98E-14	1.83E-14	1.12E-14	6.81E-15	4.14E-15	2.52E-15	1.53E-15	9.23E-16	5.57E-16	3.36E-16	2.02E-16	1.22E-16	7.30E-17	4.37E-17	2.62E-17
3.19E-17	2.21E-17	1.52E-17	1.04E-17	7.07E-18	4.79E-18	3.23E-18	2.17E-18	1.45E-18	9.67E-19	6.42E-19	4.24E-19	2.80E-19	1.84E-19	1.20E-19
1.22E-20	9.20E-21	6.88E-21	5.11E-21	3.77E-21	2.76E-21	2.01E-21	1.45E-21	1.04E-21	7.46E-22	5.31E-22	3.75E-22	2.64E-22	1.85E-22	1.29E-22
3.42E-22	2.72E-22	2.15E-22	1.68E-22	1.30E-22	1.00E-22	7.63E-23	5.79E-23	4.36E-23	3.26E-23	2.42E-23	1.79E-23	1.31E-23	9.56E-24	6.94E-24
3.02E-15	1.94E-15	1.24E-15	7.87E-16	4.99E-16	3.16E-16	1.99E-16	1.25E-16	7.86E-17	4.92E-17	3.07E-17	1.92E-17	1.19E-17	7.38E-18	4.57E-18
5.59E-13	3.37E-13	2.03E-13	1.22E-13	7.31E-14	4.38E-14	2.62E-14	1.56E-14	9.31E-15	5.54E-15	3.30E-15	1.96E-15	1.16E-15	6.88E-16	4.07E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.09E-19	4.37E-19	3.12E-19	2.21E-19	1.56E-19	1.09E-19	7.62E-20	5.29E-20	3.65E-20	2.51E-20	1.72E-20	1.17E-20	7.93E-21	5.36E-21	3.61E-21
1.73E-13	1.09E-13	6.81E-14	4.26E-14	2.65E-14	1.65E-14	1.02E-14	6.34E-15	3.92E-15	2.41E-15	1.49E-15	9.12E-16	5.59E-16	3.42E-16	2.09E-16
3.14E-18	2.23E-18	1.57E-18	1.10E-18	7.64E-19	5.29E-19	3.65E-19	2.50E-19	1.71E-19	1.16E-19	7.87E-20	5.31E-20	3.56E-20	2.38E-20	1.59E-20
1.95E-12	1.18E-12	7.07E-13	4.25E-13	2.55E-13	1.52E-13	9.11E-14	5.44E-14	3.24E-14	1.93E-14	1.15E-14	6.81E-15	4.04E-15	2.39E-15	1.41E-15
2.03E-12	1.27E-12	7.89E-13	4.90E-13	3.03E-13	1.87E-13	1.15E-13	7.10E-14	4.36E-14	2.67E-14	1.63E-14	9.95E-15	6.06E-15	3.68E-15	2.23E-15
9.51E-17	6.50E-17	4.42E-17	3.00E-17	2.02E-17	1.35E-17	9.05E-18	6.02E-18	3.99E-18	2.64E-18	1.74E-18	1.14E-18	7.43E-19	4.84E-19	3.14E-19
2.37E-20	1.83E-20	1.40E-20	1.07E-20	8.05E-21	6.04E-21	4.49E-21	3.32E-21	2.44E-21	1.78E-21	1.30E-21	9.35E-22	6.71E-22	4.79E-22	3.41E-22
5.33E-19	3.94E-19	2.90E-19	2.11E-19	1.53E-19	1.10E-19	7.91E-20	5.63E-20	3.99E-20	2.81E-20	1.97E-20	1.37E-20	9.53E-21	6.58E-21	4.53E-21
1.02E-22	8.52E-23	7.05E-23	5.78E-23	4.69E-23	3.78E-23	3.01E-23	2.39E-23	1.87E-23	1.46E-23	1.13E-23	8.66E-24	6.60E-24	4.99E-24	3.76E-24
3.38E-16	2.21E-16	1.44E-16	9.37E-17	6.07E-17	3.92E-17	2.52E-17	1.61E-17	1.03E-17	6.57E-18	4.18E-18	2.65E-18	1.67E-18	1.05E-18	6.63E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.99E-21	1.59E-21	1.26E-21	9.84E-22	7.65E-22	5.90E-22	4.52E-22	3.43E-22	2.59E-22	1.94E-22	1.45E-22	1.07E-22	7.87E-23	5.75E-23	4.18E-23
3.97E-13	2.46E-13	1.52E-13	9.34E-14	5.74E-14	3.52E-14	2.15E-14	1.31E-14	8.00E-15	4.87E-15	2.95E-15	1.79E-15	1.08E-15	6.54E-16	3.95E-16
1.54E-13	9.63E-14	6.00E-14	3.73E-14	2.32E-14	1.43E-14	8.84E-15	5.45E-15	3.35E-15	2.05E-15	1.26E-15	7.68E-16	4.69E-16	2.85E-16	1.73E-16
3.10E-21	2.38E-21	1.81E-21	1.37E-21	1.03E-21	7.67E-22	5.68E-22	4.18E-22	3.06E-22	2.22E-22	1.61E-22	1.15E-22	8.24E-23	5.86E-23	4.15E-23
2.92E-22	2.44E-22	2.02E-22	1.65E-22	1.34E-22	1.08E-22	8.60E-23	6.81E-23	5.34E-23	4.10E-23	3.18E-23	2.45E-23	1.86E-23	1.41E-23	1.06E-23
2.88E-14	1.84E-14	1.17E-14	7.42E-15	4.69E-15	2.96E-15	1.86E-15	1.17E-15	7.29E-16	4.55E-16	2.83E-16	1.76E-16	1.09E-16	6.74E-17	4.16E-17
9.88E-15	6.54E-15	4.31E-15	2.83E-15	1.85E-15	1.21E-15	7.85E-16	5.08E-16	3.28E-16	2.11E-16	1.35E-16	8.65E-17	5.51E-17	3.50E-17	2.22E-17
3.96E-17	2.78E-17	1.94E-17	1.35E-17	9.30E-18	6.39E-18	4.37E-18	2.97E-18	2.02E-18	1.36E-18	9.14E-19	6.12E-19	4.08E-19	2.71E-19	1.79E-19
2.27E-17	1.71E-17	1.28E-17	9.53E-18	7.03E-18	5.16E-18	3.76E-18	2.72E-18	1.96E-18	1.40E-18	9.95E-19	7.04E-19	4.95E-19	3.47E-19	2.42E-19
1.10E-14	7.18E-15	4.69E-15	3.05E-15	1.97E-15	1.28E-15	8.20E-16	5.26E-16	3.37E-16	2.15E-16	1.36E-16	8.64E-17	5.46E-17	3.45E-17	2.17E-17
5.42E-19	3.94E-19	2.85E-19	2.05E-19	1.46E-19	1.04E-19	7.34E-20	5.15E-20	3.60E-20	2.50E-20	1.73E-20	1.19E-20	8.16E-21	5.56E-21	3.78E-21
6.50E-12	3.94E-12	2.39E-12	1.44E-12	8.70E-13	5.24E-13	3.15E-13	1.89E-13	1.13E-13	6.78E-14	4.05E-14	2.42E-14	1.44E-14	8.58E-15	5.10E-15
9.16E-14	5.73E-14	3.58E-14	2.23E-14	1.38E-14	8.56E-15	5.29E-15	3.26E-15	2.01E-15	1.23E-15	7.54E-16	4.61E-16	2.81E-16	1.71E-16	1.04E-16
7.94E-14	4.75E-14	2.83E-14	1.69E-14	1.01E-14	5.98E-15	3.55E-15	2.10E-15	1.25E-15	7.37E-16	4.35E-16	2.57E-16	1.51E-16	8.91E-17	5.24E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2.23E-19	1.64E-19	1.20E-19	8.74E-20	6.32E-20	4.54E-20	3.24E-20	2.30E-20	1.62E-20	1.14E-20	7.97E-21	5.54E-21	3.84E-21	2.64E-21	1.81E-21
1.11E-12	6.55E-13	3.87E-13	2.29E-13	1.35E-13	7.93E-14	4.66E-14	2.74E-14	1.61E-14	9.43E-15	5.52E-15	3.23E-15	1.89E-15	1.10E-15	6.45E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-28	3.24E-28	3.69E-28	2.10E-28	2.39E-28	1.36E-28	1.36E-28
1.72E-23	1.44E-23	1.20E-23	9.91E-24	8.10E-24	6.56E-24	5.26E-24	4.16E-24	3.29E-24	2.58E-24	2.00E-24	1.55E-24	1.18E-24	9.02E-25	6.81E-25
8.17E-18	6.11E-18	4.52E-18	3.33E-18	2.43E-18	1.77E-18	1.28E-18	9.15E-19	6.52E-19	4.63E-19	3.26E-19	2.29E-19	1.60E-19	1.11E-19	7.68E-20
2.90E-15	1.88E-15	1.22E-15	7.84E-16	5.04E-16	3.22E-16	2.06E-16	1.31E-16	8.30E-17	5.25E-17	3.31E-17	2.08E-17	1.31E-17	8.18E-18	5.11E-18
1.54E-16	1.04E-16	7.03E-17	4.71E-17	3.14E-17	2.09E-17	1.38E-17	9.12E-18	5.99E-18	3.92E-18	2.56E-18	1.66E-18	1.08E-18	6.97E-19	4.49E-19
1.86E-17	1.27E-17	8.65E-18	5.86E-18	3.95E-18	2.66E-18	1.78E-18	1.18E-18	7.85E-19	5.19E-19	3.42E-19	2.25E-19	1.47E-19	9.58E-20	6.22E-20
9.51E-18	6.55E-18	4.50E-18	3.07E-18	2.09E-18	1.41E-18	9.49E-19	6.36E-19	4.25E-19	2.83E-19	1.87E-19	1.24E-19	8.13E-20	5.33E-20	3.48E-20
1.58E-22	1.29E-22	1.04E-22	8.30E-23	6.60E-23	5.19E-23	4.04E-23	3.13E-23	2.41E-23	1.84E-23	1.39E-23	1.05E-23	7.81E-24	5.80E-24	4.28E-24
7.01E-13	4.28E-13	2.60E-13	1.58E-13	9.58E-14	5.80E-14	3.50E-14	2.11E-14	1.27E-14	7.64E-15	4.58E-15	2.75E-15	1.64E-15	9.82E-16	5.86E-16
1.50E-17	1.06E-17	7.46E-18	5.21E-18	3.63E-18	2.51E-18	1.73E-18	1.18E-18	8.07E-19	5.48E-19	3.70E-19	2.49E-19	1.67E-19	1.12E-19	7.42E-20
3.38E-19	2.87E-19	2.41E-19	2.00E-19	1.65E-19	1.35E-19	1.09E-19	8.73E-20	6.94E-20	5.47E-20	4.28E-20	3.32E-20	2.56E-20	1.96E-20	1.49E-20
6.37E-14	3.88E-14	2.36E-14	1.43E-14	8.68E-15	5.25E-15	3.17E-15	1.91E-15	1.15E-15	6.91E-16	4.15E-16	2.49E-16	1.49E-16	8.89E-17	5.30E-17
3.20E-24	2.85E-24	2.53E-24	2.25E-24	2.00E-24	1.73E-24	1.48E-24	1.27E-24	1.07E-24	8.95E-25	7.41E-25	6.08E-25	4.95E-25	4.00E-25	3.21E-25
2.92E-19	2.16E-19	1.59E-19	1.16E-19	8.43E-20	6.08E-20	4.36E-20	3.11E-20	2.21E-20	1.56E-20	1.09E-20	7.62E-21	5.29E-21	3.66E-21	2.52E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-27	1.27E-27	7.24E-28	8.24E-28	7.04E-28	6.67E-28
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.04E-18	7.69E-19	5.65E-19	4.13E-19	2.99E-19	2.16E-19	1.55E-19	1.10E-19	7.80E-20	5.50E-20	3.85E-20	2.69E-20	1.86E-20	1.29E-20	8.85E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.32E-28	4.74E-28	5.39E-28	4.60E-28	3.49E-28
2.67E-17	1.84E-17	1.26E-17	8.61E-18	5.85E-18	3.95E-18	2.66E-18	1.78E-18	1.19E-18	7.91E-19	5.24E-19	3.46E-19	2.27E-19	1.49E-19	9.73E-20
1.05E-15	7.35E-16	5.10E-16	3.52E-16	2.42E-16	1.66E-16	1.13E-16	7.64E-17	5.15E-17	3.46E-17	2.32E-17	1.54E-17	1.02E-17	6.77E-18	4.46E-18
1.65E-13	1.02E-13	6.34E-14	3.91E-14	2.41E-14	1.48E-14	9.06E-15	5.54E-15	3.38E-15	2.06E-15	1.25E-15	7.61E-16	4.61E-16	2.79E-16	1.69E-16
7.59E-19	5.65E-19	4.18E-19	3.06E-19	2.23E-19	1.62E-19	1.16E-19	8.33E-20	5.93E-20	4.19E-20	2.95E-20	2.07E-20	1.44E-20	9.98E-21	6.89E-21
6.50E-12	**3.94E-12**	**2.39E-12**	**1.44E-12**	**8.70E-13**	**5.24E-13**	**3.15E-13**	**1.89E-13**	**1.13E-13**	**6.78E-14**	**4.05E-14**	**2.42E-14**	**1.44E-14**	**8.58E-15**	**5.10E-15**

900	910	920	930	940	950	960	970	980	990	1000	Max Concentration (pCi/L)	Water Intake (L/day)	Receptor Intake (pCi/year)
9.81E-19	6.17E-19	3.88E-19	2.43E-19	1.52E-19	9.46E-20	5.89E-20	3.66E-20	2.27E-20	1.40E-20	8.68E-21	1.02E-11	1.00E+01	3.73E-08
5.08E-23	3.58E-23	2.50E-23	1.75E-23	1.21E-23	8.37E-24	5.76E-24	3.95E-24	2.70E-24	1.84E-24	1.24E-24	8.42E-20	1.00E+01	3.07E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
2.00E-24	1.50E-24	1.12E-24	8.32E-25	6.14E-25	4.51E-25	3.29E-25	2.39E-25	1.73E-25	1.24E-25	8.88E-26	2.43E-22	1.00E+01	8.89E-19
6.03E-21	4.09E-21	2.77E-21	1.86E-21	1.25E-21	8.37E-22	5.58E-22	3.70E-22	2.45E-22	1.62E-22	1.07E-22	9.08E-17	1.00E+01	3.32E-13
7.96E-17	4.73E-17	2.80E-17	1.66E-17	9.84E-18	5.82E-18	3.44E-18	2.03E-18	1.20E-18	7.05E-19	4.15E-19	5.18E-06	1.00E+01	1.89E-02
2.00E-17	1.21E-17	7.30E-18	4.41E-18	2.65E-18	1.60E-18	9.60E-19	5.76E-19	3.45E-19	2.07E-19	1.24E-19	3.79E-08	1.00E+01	1.38E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-30	0.00E+00	0.00E+00	1.49E-30	1.00E+01	5.45E-27
8.42E-20	5.91E-20	4.13E-20	2.87E-20	1.98E-20	1.36E-20	9.35E-21	6.39E-21	4.35E-21	2.94E-21	1.99E-21	1.49E-16	1.00E+01	5.44E-13
5.34E-17	3.15E-17	1.86E-17	1.10E-17	6.44E-18	3.79E-18	2.23E-18	1.31E-18	7.65E-19	4.48E-19	2.62E-19	6.44E-06	1.00E+01	2.35E-02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
1.38E-20	9.47E-21	6.45E-21	4.38E-21	2.96E-21	1.99E-21	1.34E-21	8.94E-22	5.96E-22	3.96E-22	2.62E-22	1.15E-16	1.00E+01	4.20E-13
1.21E-21	8.22E-22	5.56E-22	3.75E-22	2.52E-22	1.69E-22	1.13E-22	7.50E-23	4.97E-23	3.29E-23	2.17E-23	1.52E-17	1.00E+01	5.56E-14
8.51E-20	5.55E-20	3.61E-20	2.34E-20	1.52E-20	9.78E-21	6.29E-21	4.04E-21	2.58E-21	1.65E-21	1.05E-21	2.38E-14	1.00E+01	8.70E-11
8.28E-19	5.34E-19	3.44E-19	2.21E-19	1.41E-19	9.02E-20	5.75E-20	3.65E-20	2.31E-20	1.46E-20	9.23E-21	7.49E-13	1.00E+01	2.74E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
1.63E-21	1.09E-21	7.28E-22	4.84E-22	3.21E-22	2.12E-22	1.39E-22	9.13E-23	5.97E-23	3.89E-23	2.53E-23	6.20E-17	1.00E+01	2.27E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
1.55E-18	9.76E-19	6.13E-19	3.84E-19	2.40E-19	1.50E-19	9.32E-20	5.79E-20	3.59E-20	2.22E-20	1.37E-20	1.77E-11	1.00E+01	6.46E-08
5.25E-20	3.49E-20	2.31E-20	1.53E-20	1.01E-20	6.60E-21	4.32E-21	2.82E-21	1.83E-21	1.19E-21	7.68E-22	3.13E-15	1.00E+01	1.14E-11
1.66E-17	1.02E-17	6.25E-18	3.83E-18	2.34E-18	1.43E-18	8.69E-19	5.28E-19	3.21E-19	1.94E-19	1.18E-19	3.98E-09	1.00E+01	1.45E-05
3.00E-24	2.19E-24	1.59E-24	1.15E-24	8.26E-25	5.91E-25	4.21E-25	2.98E-25	2.10E-25	1.48E-25	1.03E-25	9.95E-22	1.00E+01	3.63E-18
6.10E-19	3.89E-19	2.48E-19	1.57E-19	9.94E-20	6.28E-20	3.96E-20	2.49E-20	1.56E-20	9.77E-21	6.10E-21	1.58E-12	1.00E+01	5.76E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
6.41E-19	4.05E-19	2.55E-19	1.60E-19	1.00E-19	6.28E-20	3.92E-20	2.44E-20	1.52E-20	9.42E-21	5.84E-21	5.38E-12	1.00E+01	1.97E-08
8.47E-21	5.69E-21	3.81E-21	2.54E-21	1.69E-21	1.12E-21	7.38E-22	4.85E-22	3.18E-22	2.08E-22	1.36E-22	2.45E-16	1.00E+01	8.93E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
1.80E-23	1.29E-23	9.26E-24	6.60E-24	4.68E-24	3.30E-24	2.32E-24	1.62E-24	1.13E-24	7.84E-25	5.42E-25	8.36E-21	1.00E+01	3.05E-17
2.74E-20	1.83E-20	1.21E-20	8.04E-21	5.30E-21	3.49E-21	2.29E-21	1.50E-21	9.74E-22	6.33E-22	4.10E-22	1.47E-15	1.00E+01	5.36E-12
1.21E-21	8.18E-22	5.51E-22	3.70E-22	2.47E-22	1.65E-22	1.09E-22	7.22E-23	4.76E-23	3.13E-23	2.05E-23	2.16E-17	1.00E+01	7.90E-14
2.66E-21	1.80E-21	1.21E-21	8.15E-22	5.45E-22	3.63E-22	2.41E-22	1.60E-22	1.06E-22	6.94E-23	4.55E-23	4.59E-17	1.00E+01	1.68E-13
5.53E-24	4.08E-24	2.98E-24	2.17E-24	1.58E-24	1.14E-24	8.14E-25	5.81E-25	4.13E-25	2.92E-25	2.06E-25	1.50E-21	1.00E+01	5.48E-18
3.48E-24	2.60E-24	1.93E-24	1.42E-24	1.04E-24	7.58E-25	5.49E-25	3.96E-25	2.84E-25	2.03E-25	1.44E-25	5.58E-22	1.00E+01	2.04E-18
2.39E-18	1.51E-18	9.57E-19	6.03E-19	3.80E-19	2.38E-19	1.49E-19	9.32E-20	5.81E-20	3.62E-20	2.25E-20	9.75E-12	1.00E+01	3.56E-08

1.80E-20	1.20E-20	7.97E-21	5.29E-21	3.49E-21	2.30E-21	1.51E-21	9.89E-22	6.45E-22	4.20E-22	2.73E-22	9.15E-16	1.00E+01	3.34E-12
8.73E-17	5.24E-17	3.14E-17	1.88E-17	1.13E-17	6.72E-18	4.01E-18	2.39E-18	1.42E-18	8.45E-19	5.02E-19	6.55E-07	1.00E+01	2.39E-03
1.46E-16	9.01E-17	5.55E-17	3.41E-17	2.09E-17	1.28E-17	7.83E-18	4.78E-18	2.91E-18	1.77E-18	1.08E-18	1.92E-08	1.00E+01	7.00E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
1.79E-23	1.32E-23	9.72E-24	7.10E-24	5.16E-24	3.73E-24	2.68E-24	1.92E-24	1.37E-24	9.70E-25	6.84E-25	5.55E-21	1.00E+01	2.03E-17
4.24E-21	2.97E-21	2.07E-21	1.44E-21	9.95E-22	6.85E-22	4.70E-22	3.21E-22	2.19E-22	1.48E-22	1.00E-22	8.71E-18	1.00E+01	3.18E-14
5.39E-24	4.03E-24	3.04E-24	2.26E-24	1.66E-24	1.22E-24	8.94E-25	6.50E-25	4.69E-25	3.38E-25	2.41E-25	4.62E-22	1.00E+01	1.69E-18
1.56E-17	9.33E-18	5.56E-18	3.31E-18	1.97E-18	1.17E-18	6.93E-19	4.10E-19	2.43E-19	1.44E-19	8.48E-20	2.32E-07	1.00E+01	8.49E-04
7.83E-20	5.09E-20	3.30E-20	2.13E-20	1.37E-20	8.82E-21	5.65E-21	3.61E-21	2.30E-21	1.46E-21	9.29E-22	3.13E-14	1.00E+01	1.14E-10
8.93E-23	6.16E-23	4.24E-23	2.90E-23	1.98E-23	1.34E-23	9.08E-24	6.12E-24	4.11E-24	2.75E-24	1.83E-24	3.98E-19	1.00E+01	1.45E-15
5.00E-24	3.59E-24	2.56E-24	1.82E-24	1.29E-24	9.06E-25	6.35E-25	4.43E-25	3.08E-25	2.13E-25	1.47E-25	4.03E-21	1.00E+01	1.47E-17
2.82E-18	1.74E-18	1.07E-18	6.57E-19	4.03E-19	2.47E-19	1.51E-19	9.19E-20	5.60E-20	3.41E-20	2.07E-20	4.31E-10	1.00E+01	1.57E-06
2.41E-16	1.42E-16	8.38E-17	4.94E-17	2.91E-17	1.71E-17	1.01E-17	5.90E-18	3.46E-18	2.03E-18	1.19E-18	4.25E-05	1.00E+01	1.55E-01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
2.42E-21	1.61E-21	1.07E-21	7.12E-22	4.70E-22	3.10E-22	2.03E-22	1.33E-22	8.69E-23	5.65E-23	3.67E-23	1.15E-16	1.00E+01	4.21E-13
1.27E-16	7.73E-17	4.69E-17	2.85E-17	1.72E-17	1.04E-17	6.29E-18	3.79E-18	2.28E-18	1.37E-18	8.25E-19	1.19E-07	1.00E+01	4.34E-04
1.06E-20	6.98E-21	4.61E-21	3.03E-21	1.98E-21	1.30E-21	8.44E-22	5.48E-22	3.55E-22	2.29E-22	1.48E-22	1.06E-15	1.00E+01	3.88E-12
8.35E-16	4.93E-16	2.91E-16	1.71E-16	1.01E-16	5.93E-17	3.48E-17	2.04E-17	1.20E-17	7.02E-18	4.11E-18	1.25E-04	1.00E+01	4.58E-01
1.35E-15	8.19E-16	4.94E-16	2.98E-16	1.80E-16	1.08E-16	6.49E-17	3.89E-17	2.33E-17	1.39E-17	8.33E-18	2.79E-06	1.00E+01	1.02E-02
2.04E-19	1.31E-19	8.45E-20	5.42E-20	3.47E-20	2.22E-20	1.41E-20	8.96E-21	5.68E-21	3.59E-21	2.27E-21	1.78E-13	1.00E+01	6.51E-10
2.41E-22	1.69E-22	1.19E-22	8.26E-23	5.73E-23	3.96E-23	2.72E-23	1.87E-23	1.27E-23	8.66E-24	5.87E-24	3.91E-19	1.00E+01	1.43E-15
3.10E-21	2.11E-21	1.44E-21	9.71E-22	6.54E-22	4.39E-22	2.94E-22	1.96E-22	1.30E-22	8.62E-23	5.69E-23	3.24E-17	1.00E+01	1.18E-13
2.81E-24	2.09E-24	1.54E-24	1.13E-24	8.29E-25	6.02E-25	4.36E-25	3.13E-25	2.24E-25	1.60E-25	1.14E-25	3.75E-22	1.00E+01	1.37E-18
4.16E-19	2.60E-19	1.63E-19	1.01E-19	6.29E-20	3.91E-20	2.42E-20	1.50E-20	9.23E-21	5.68E-21	3.50E-21	8.71E-12	1.00E+01	3.18E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
3.02E-23	2.17E-23	1.56E-23	1.11E-23	7.84E-24	5.53E-24	3.88E-24	2.71E-24	1.89E-24	1.31E-24	9.03E-25	1.68E-20	1.00E+01	6.12E-17
2.38E-16	1.43E-16	8.58E-17	5.14E-17	3.08E-17	1.84E-17	1.10E-17	6.57E-18	3.91E-18	2.33E-18	1.39E-18	1.39E-06	1.00E+01	5.06E-03
1.05E-16	6.37E-17	3.85E-17	2.33E-17	1.40E-17	8.45E-18	5.08E-18	3.05E-18	1.83E-18	1.10E-18	6.56E-19	1.73E-07	1.00E+01	6.30E-04
2.92E-23	2.04E-23	1.43E-23	9.89E-24	6.84E-24	4.71E-24	3.23E-24	2.20E-24	1.50E-24	1.02E-24	6.86E-25	6.03E-20	1.00E+01	2.20E-16
7.89E-24	5.86E-24	4.33E-24	3.18E-24	2.32E-24	1.68E-24	1.22E-24	8.74E-25	6.26E-25	4.45E-25	3.16E-25	9.72E-22	1.00E+01	3.55E-18
2.56E-17	1.57E-17	9.65E-18	5.91E-18	3.61E-18	2.21E-18	1.34E-18	8.17E-19	4.96E-19	3.01E-19	1.82E-19	5.12E-09	1.00E+01	1.87E-05
1.41E-17	8.86E-18	5.58E-18	3.50E-18	2.19E-18	1.37E-18	8.56E-19	5.33E-19	3.31E-19	2.05E-19	1.27E-19	1.17E-10	1.00E+01	4.28E-07
1.18E-19	7.78E-20	5.10E-20	3.33E-20	2.17E-20	1.41E-20	9.12E-21	5.89E-21	3.79E-21	2.44E-21	1.56E-21	2.06E-14	1.00E+01	7.54E-11
1.68E-19	1.16E-19	7.96E-20	5.45E-20	3.72E-20	2.52E-20	1.71E-20	1.15E-20	7.73E-21	5.17E-21	3.45E-21	7.30E-16	1.00E+01	2.67E-12
1.36E-17	8.51E-18	5.31E-18	3.31E-18	2.06E-18	1.28E-18	7.91E-19	4.89E-19	3.02E-19	1.86E-19	1.14E-19	2.46E-10	1.00E+01	8.98E-07
2.56E-21	1.72E-21	1.16E-21	7.74E-22	5.16E-22	3.43E-22	2.27E-22	1.50E-22	9.84E-23	6.45E-23	4.22E-23	5.63E-17	1.00E+01	2.06E-13
3.03E-15	1.80E-15	1.06E-15	6.30E-16	3.73E-16	2.20E-16	1.30E-16	7.65E-17	4.51E-17	2.65E-17	1.56E-17	2.34E-04	1.00E+01	8.55E-01
6.32E-17	3.83E-17	2.32E-17	1.40E-17	8.45E-18	5.09E-18	3.06E-18	1.84E-18	1.10E-18	6.60E-19	3.95E-19	9.28E-08	1.00E+01	3.39E-04
3.08E-17	1.81E-17	1.06E-17	6.22E-18	3.64E-18	2.13E-18	1.25E-18	7.28E-19	4.25E-19	2.48E-19	1.45E-19	1.72E-05	1.00E+01	6.30E-02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00

1.24E-21	8.41E-22	5.69E-22	3.84E-22	2.58E-22	1.73E-22	1.15E-22	7.66E-23	5.08E-23	3.35E-23	2.21E-23	1.47E-17	1.00E+01	5.36E-14
3.76E-16	2.19E-16	1.28E-16	7.43E-17	4.32E-17	2.51E-17	1.46E-17	8.47E-18	4.91E-18	2.85E-18	1.65E-18	1.31E-03	1.00E+01	4.78E+00
1.10E-28	1.01E-28	8.22E-29	6.51E-29	5.21E-29	4.22E-29	3.38E-29	2.71E-29	2.13E-29	1.67E-29	1.30E-29	5.70E-28	1.00E+01	2.08E-24
5.12E-25	3.82E-25	2.83E-25	2.09E-25	1.53E-25	1.12E-25	8.12E-26	5.87E-26	4.22E-26	3.01E-26	2.15E-26	1.02E-22	1.00E+01	3.73E-19
5.29E-20	3.63E-20	2.47E-20	1.68E-20	1.14E-20	7.67E-21	5.16E-21	3.45E-21	2.30E-21	1.53E-21	1.01E-21	3.54E-16	1.00E+01	1.29E-12
3.19E-18	1.98E-18	1.23E-18	7.61E-19	4.70E-19	2.90E-19	1.79E-19	1.10E-19	6.74E-20	4.13E-20	2.52E-20	1.34E-10	1.00E+01	4.89E-07
2.88E-19	1.85E-19	1.18E-19	7.51E-20	4.77E-20	3.02E-20	1.91E-20	1.21E-20	7.59E-21	4.77E-21	2.99E-21	4.77E-13	1.00E+01	1.74E-09
4.03E-20	2.61E-20	1.68E-20	1.08E-20	6.91E-21	4.41E-21	2.81E-21	1.79E-21	1.14E-21	7.18E-22	4.54E-22	3.35E-14	1.00E+01	1.22E-10
2.27E-20	1.47E-20	9.52E-21	6.15E-21	3.96E-21	2.54E-21	1.63E-21	1.04E-21	6.61E-22	4.20E-22	2.66E-22	1.11E-14	1.00E+01	4.05E-11
3.14E-24	2.29E-24	1.66E-24	1.20E-24	8.62E-25	6.15E-25	4.38E-25	3.10E-25	2.18E-25	1.53E-25	1.07E-25	1.05E-21	1.00E+01	3.84E-18
3.49E-16	2.08E-16	1.24E-16	7.34E-17	4.36E-17	2.58E-17	1.53E-17	9.04E-18	5.34E-18	3.15E-18	1.86E-18	1.18E-05	1.00E+01	4.32E-02
4.92E-20	3.25E-20	2.14E-20	1.40E-20	9.17E-21	5.98E-21	3.89E-21	2.52E-21	1.63E-21	1.05E-21	6.74E-22	4.78E-15	1.00E+01	1.75E-11
1.12E-20	8.43E-21	6.28E-21	4.66E-21	3.43E-21	2.51E-21	1.83E-21	1.33E-21	9.58E-22	6.88E-22	4.91E-22	8.83E-19	1.00E+01	3.23E-15
3.16E-17	1.88E-17	1.12E-17	6.64E-18	3.94E-18	2.34E-18	1.38E-18	8.18E-19	4.84E-19	2.85E-19	1.68E-19	1.24E-06	1.00E+01	4.53E-03
2.55E-25	2.01E-25	1.58E-25	1.23E-25	9.50E-26	7.30E-26	5.57E-26	4.23E-26	3.19E-26	2.39E-26	1.79E-26	5.88E-24	1.00E+01	2.15E-20
1.73E-21	1.18E-21	8.01E-22	5.42E-22	3.66E-22	2.46E-22	1.65E-22	1.10E-22	7.30E-23	4.84E-23	3.20E-23	1.69E-17	1.00E+01	6.16E-14
5.32E-28	4.76E-28	3.69E-28	3.22E-28	2.55E-28	2.18E-28	1.76E-28	1.40E-28	1.12E-28	8.91E-29	7.05E-29	2.23E-27	1.00E+01	8.16E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
6.06E-21	4.13E-21	2.81E-21	1.90E-21	1.28E-21	8.58E-22	5.74E-22	3.82E-22	2.54E-22	1.68E-22	1.11E-22	6.17E-17	1.00E+01	2.25E-13
2.49E-28	2.55E-28	2.09E-28	1.65E-28	1.41E-28	1.13E-28	9.13E-29	7.31E-29	5.86E-29	4.61E-29	3.64E-29	8.32E-28	1.00E+01	3.04E-24
6.33E-20	4.11E-20	2.66E-20	1.72E-20	1.10E-20	7.08E-21	4.53E-21	2.89E-21	1.84E-21	1.17E-21	7.40E-22	2.99E-14	1.00E+01	1.09E-10
2.93E-18	1.92E-18	1.25E-18	8.14E-19	5.28E-19	3.41E-19	2.20E-19	1.42E-19	9.07E-20	5.80E-20	3.70E-20	6.22E-13	1.00E+01	2.27E-09
1.02E-16	6.13E-17	3.69E-17	2.22E-17	1.33E-17	7.97E-18	4.77E-18	2.85E-18	1.70E-18	1.02E-18	6.04E-19	4.67E-07	1.00E+01	1.71E-03
4.73E-21	3.24E-21	2.21E-21	1.50E-21	1.01E-21	6.82E-22	4.57E-22	3.06E-22	2.04E-22	1.35E-22	8.95E-23	3.89E-17	1.00E+01	1.42E-13
3.03E-15	**1.80E-15**	**1.06E-15**	**6.30E-16**	**3.73E-16**	**2.20E-16**	**1.30E-16**	**7.65E-17**	**4.51E-17**	**2.65E-17**	**1.56E-17**	**1.308E-03**	**1.00E+01**	**4.78E+00**

Dose (mrem/year)	Time	40CFR 141.66
2.38E-15	0	20000
1.97E-23	1000	20000
0.00E+00		
5.69E-26		
2.12E-20		
1.21E-09		
8.85E-12		
3.49E-34		
3.48E-20		
1.51E-09		
0.00E+00		
0.00E+00		
2.69E-20		
3.56E-21		
5.57E-18		
1.75E-16		
0.00E+00		
1.45E-20		
0.00E+00		
0.00E+00		
4.13E-15		
7.33E-19		
9.29E-13		
2.33E-25		
3.69E-16		
0.00E+00		
1.26E-15		
5.72E-20		
0.00E+00		
1.95E-24		
3.43E-19		
5.06E-21		
1.07E-20		
3.51E-25		
1.30E-25		
2.28E-15		

2.14E-19
1.53E-10
4.48E-12
0.00E+00
1.30E-24
2.04E-21
1.08E-25
5.43E-11
7.31E-18
9.29E-23
9.42E-25
1.01E-13
9.93E-09
0.00E+00
2.70E-20
2.77E-11
2.48E-19
2.93E-08
6.52E-10
4.17E-17
9.15E-23
7.58E-21
8.77E-26
2.04E-15
0.00E+00
3.92E-24
3.24E-10
4.03E-11
1.41E-23
2.27E-25
1.20E-12
2.74E-14
4.82E-18
1.71E-19
5.75E-14
1.32E-20
5.47E-08
2.17E-11
4.03E-09
0.00E+00

3.43E-21
3.06E-07
1.33E-31
2.38E-26
8.28E-20
3.13E-14
1.11E-16
7.83E-18
2.59E-18
2.46E-25
2.76E-09
1.12E-18
2.06E-22
2.90E-10
1.38E-27
3.94E-21
5.22E-31
0.00E+00
1.44E-20
1.95E-31
6.99E-18
1.45E-16
1.09E-10
9.10E-21
3.06E-07

Tritium Concentration (pCi/L) in Groundwater for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130	140
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	1.01E-09	1.26E-08	1.05E-07	5.99E-07	2.46E-06
3	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	7.19E-10	1.68E-08	1.81E-07	1.19E-06	5.35E-06	1.79E-05
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	1.03E-09	1.33E-08	1.08E-07	5.73E-07	2.23E-06
21	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	4.93E-10	2.95E-09
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0

37	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	9.70E-11
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	6.75E-08	8.67E-07	6.71E-06	3.47E-05	1.31E-04
52	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
58	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
74	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
76	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00

77	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
82	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
88	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
96	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
97	0	0	0	0	0	0	0	0	0	0	7.57E-09	7.76E-08	5.08E-07	2.31E-06
98	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
99	0	0	0	0	0	0	0	0	0	0	0	0	6.76E-11	4.62E-10
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	3.33E-10	1.89E-09	1.09E-08
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	0	2.09E-10
114	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	0	0	0	0	0	0	0	0	0	0	0	0	0	0

117	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	0	0	0	0	0	0	0	0	0	0	0	0	0	0
119	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	0	0	0	0	0	0	0	0	0	0	0	0	0	0
122	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123	0	0	0	0	0	0	0	0	0	3.79E-10	4.75E-09	3.89E-08	2.11E-07	8.30E-07
124	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0
126	0	0	0	0	0	0	0	0	0	0	0	0	0	0
127	0	0	0	0	0	0	0	0	0	0	0	0	0	0
128	0	0	0	0	0	0	0	0	0	0	0	0	0	0
129	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	0	0	0	0	0	0	0	0	0	0	0	0	0	0
132	0	0	0	0	0	0	0	0	0	0	0	0	0	0
133	0	0	0	0	0	0	0	0	0	0	0	0	0	0
134	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0
136	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0	0	0	0	0	0
149	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0
151	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152	0	0	0	0	0	0	0	0	0	0	0	0	0	0
153	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
154	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0
156	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00

157	0	0	0	0	0	0	0	0	0	0	0	0	0	0
158	0	0	0	0	0	0	0	0	0	0	0	0	0	0
159	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	9.13E-10	5.98E-09	3.41E-08
166	0	0	0	0	0	0	0	0	0	0	0	0	0	7.48E-11
167	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	7.78E-10	1.20E-08	8.80E-08	4.53E-07	1.71E-06
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	9.24E-11
178	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0
181	0	0	0	0	0	0	0	0	0	0	0	0	0	0
182	0	0	0	0	0	0	0	0	0	0	0	0	0	0
183	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
184	0	0	0	0	0	0	0	0	0	0	0	0	0	0
185	0	0	0	0	0	0	0	0	0	0	0	0	0	0
186	0	0	0	0	0	0	0	0	0	0	0	0	0	0
187	0	0	0	0	0	0	0	0	0	0	0	0	0	0
188	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
189	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
191	0	0	0	0	0	0	0	0	0	0	0	0	0	0
192	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
193	0	0	0	0	0	0	0	0	0	0	0	0	2.96E-09	1.60E-08
194	0	0	0	0	0	0	0	0	1.21E-08	1.92E-07	2.06E-06	1.34E-05	6.00E-05	2.00E-04
195	0	0	0	0	0	0	0	0	0	0	0	0	0	0
196	0	0	0	0	0	0	0	0	0	0	0	0	0	0

197	0	0	0	0	0	0	0	0	0	0	0	0	0	0
198	0	0	0	0	0	0	0	0	0	0	0	0	0	0
199	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1.21E-08**	**1.92E-07**	**2.06E-06**	**1.34E-05**	**6E-05**	**0.0002**

150	160	170	180	190	200	210	220	230	240	250	260	270	280	290
0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.75E-06	1.97E-05	4.20E-05	7.72E-05	1.25E-04	1.83E-04	2.44E-04	3.01E-04	3.47E-04	3.76E-04	3.87E-04	3.80E-04	3.58E-04	3.25E-04	2.86E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.80E-09	2.90E-08	1.05E-07	3.22E-07	8.24E-07	1.81E-06	3.50E-06	6.04E-06	9.44E-06	1.36E-05	1.80E-05	2.24E-05	2.63E-05	2.92E-05	3.10E-05
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.72E-05	1.02E-04	1.90E-04	3.07E-04	4.45E-04	5.85E-04	7.10E-04	8.02E-04	8.52E-04	8.58E-04	8.25E-04	7.60E-04	6.74E-04	5.79E-04	4.82E-04
0	0	0	2.84E-11	8.64E-11	2.55E-10	6.50E-10	1.44E-09	2.87E-09	5.12E-09	8.34E-09	1.25E-08	1.75E-08	2.30E-08	2.84E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-14
0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	4.22E-11	1.44E-10	4.51E-10	1.18E-09	2.68E-09	5.37E-09	9.61E-09	1.57E-08	2.34E-08	3.25E-08	4.22E-08	5.16E-08	5.99E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
0	0	0	0	0	0	0	0	0	0	2.10E-14	2.39E-14	4.76E-14	9.29E-14	1.65E-13
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-13	2.03E-13	4.61E-13	8.75E-13	1.53E-12
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
6.66E-06	1.61E-05	3.29E-05	5.80E-05	9.05E-05	1.27E-04	1.64E-04	1.96E-04	2.18E-04	2.30E-04	2.30E-04	2.20E-04	2.02E-04	1.79E-04	1.53E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-13	3.06E-13	6.32E-13	1.23E-12	2.17E-12	3.58E-12	5.49E-12
0	0	0	0	0	0	6.73E-12	1.53E-11	3.71E-11	8.03E-11	1.54E-10	2.71E-10	4.37E-10	6.54E-10	9.16E-10
1.49E-08	5.53E-08	1.67E-07	4.19E-07	8.96E-07	1.68E-06	2.80E-06	4.23E-06	5.86E-06	7.53E-06	9.04E-06	1.02E-05	1.10E-05	1.13E-05	1.11E-05
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-14	4.71E-14	8.71E-14
0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	3.81E-14	4.34E-14	9.88E-14	1.97E-13	3.44E-13
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.65E-13	6.23E-13	1.18E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	4.70E-12	1.34E-11	3.50E-11	8.57E-11	1.86E-10	3.61E-10	6.32E-10	1.02E-09	1.52E-09	2.11E-09	2.76E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	6.58E-12	2.62E-11	5.54E-11	1.15E-10	2.13E-10	3.61E-10	5.68E-10	8.32E-10
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.97E-10	2.12E-09	7.24E-09	2.03E-08	4.83E-08	9.93E-08	1.81E-07	2.95E-07	4.40E-07	6.05E-07	7.73E-07	9.29E-07	1.05E-06	1.14E-06	1.18E-06
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-13	9.99E-13	1.90E-12	3.99E-12	7.73E-12
0.00E+00	0.00E+00	0.00E+00	8.69E-12	2.97E-11	9.57E-11	2.52E-10	5.87E-10	1.20E-09	2.23E-09	3.75E-09	5.81E-09	8.34E-09	1.12E-08	1.42E-08
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.83E-04	9.11E-04	1.83E-03	3.19E-03	4.93E-03	6.89E-03	8.83E-03	1.00E-02	1.20E-02	1.20E-02	1.20E-02	1.20E-02	1.10E-02	9.52E-03	8.18E-03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.81E-13	1.68E-12	4.77E-12	9.96E-12	2.05E-11	3.80E-11	6.47E-11	1.01E-10	1.46E-10	1.99E-10
0	0	1.10E-11	3.56E-11	1.08E-10	2.90E-10	6.61E-10	1.32E-09	2.38E-09	3.88E-09	5.82E-09	8.07E-09	1.05E-08	1.28E-08	1.48E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-14
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-13	9.55E-13	2.18E-12	4.39E-12	8.28E-12	1.43E-11	2.28E-11
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-14	2.87E-13	5.71E-13	1.18E-12	2.13E-12	3.60E-12
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-15
0	0	0	0	0	0	0	0	0	2.03E-13	4.05E-13	8.56E-13	1.59E-12	2.73E-12	4.30E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E-12	8.64E-12	1.97E-11	4.20E-11	8.41E-11	1.53E-10	2.56E-10	3.97E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E-12	1.33E-11	2.88E-11	5.79E-11	1.10E-10	1.92E-10	2.85E-10

0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	9.95E-14	1.70E-13
0	0	0	0	0	0	0	4.79E-13	1.36E-12	3.10E-12	6.36E-12	1.16E-11	1.96E-11	3.05E-11	4.43E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	1.56E-10	5.76E-10	2.04E-09	6.10E-09	1.54E-08	3.37E-08	6.52E-08	1.14E-07	1.80E-07	2.63E-07	3.57E-07	4.54E-07	5.45E-07	6.21E-07
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-13	5.06E-13	1.54E-12	3.88E-12	8.55E-12	1.69E-11	3.06E-11	5.09E-11	7.86E-11
7.97E-06	2.19E-05	5.02E-05	9.81E-05	1.68E-04	2.58E-04	3.60E-04	4.62E-04	5.52E-04	6.19E-04	6.57E-04	6.63E-04	6.41E-04	5.96E-04	5.35E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-13	5.70E-13	1.14E-12	2.50E-12	4.71E-12	8.08E-12	1.30E-11	1.94E-11
2.39E-09	9.27E-09	2.89E-08	7.45E-08	1.64E-07	3.14E-07	5.37E-07	8.28E-07	1.17E-06	1.54E-06	1.88E-06	2.17E-06	2.37E-06	2.48E-06	2.47E-06
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.79E-08	1.60E-07	4.34E-07	9.86E-07	1.93E-06	3.33E-06	5.16E-06	7.29E-06	9.49E-06	1.15E-05	1.31E-05	1.41E-05	1.45E-05	1.43E-05	1.35E-05
5.89E-11	3.69E-10	1.41E-09	4.65E-09	1.25E-08	2.94E-08	5.98E-08	1.08E-07	1.77E-07	2.64E-07	3.65E-07	4.71E-07	5.70E-07	6.54E-07	7.13E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1.61E-11	5.50E-11	1.46E-10	3.74E-10	7.59E-10	1.54E-09	2.70E-09	4.35E-09	6.50E-09	9.04E-09	1.18E-08
0	7.38E-12	2.10E-11	8.13E-11	2.74E-10	7.60E-10	1.76E-09	3.65E-09	6.82E-09	1.15E-08	1.77E-08	2.53E-08	3.38E-08	4.23E-08	5.02E-08
0	0	0	0	0	0	0	1.54E-12	2.64E-12	6.00E-12	1.28E-11	2.53E-11	4.57E-11	7.58E-11	1.16E-10
0	0	0	0	2.16E-12	7.37E-12	2.03E-11	4.98E-11	1.11E-10	2.19E-10	3.92E-10	6.44E-10	9.77E-10	1.38E-09	1.84E-09
8.91E-10	4.16E-09	1.45E-08	4.13E-08	9.97E-08	2.08E-07	3.82E-07	6.31E-07	9.49E-07	1.32E-06	1.69E-06	2.05E-06	2.34E-06	2.54E-06	2.64E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2.66E-13	4.53E-13	8.60E-13	1.91E-12	3.31E-12	5.70E-12	9.19E-12	1.38E-11
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00

0	0	0	0	0	1.45E-11	2.47E-11	7.04E-11	1.76E-10	3.91E-10	7.69E-10	1.35E-09	2.21E-09	3.37E-09	4.76E-09
0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.68E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.23E-13
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	2.49E-12	4.25E-12	1.53E-11	3.10E-11	8.18E-11	1.79E-10	3.31E-10	5.57E-10	8.56E-10	1.22E-09	1.63E-09	2.05E-09
2.51E-06	6.16E-06	1.27E-05	2.25E-05	3.54E-05	5.02E-05	6.51E-05	7.82E-05	8.77E-05	9.28E-05	9.33E-05	8.96E-05	8.27E-05	7.35E-05	6.33E-05
0	0	0	0	0	0	0	0	4.96E-13	1.98E-12	4.02E-12	7.96E-12	1.47E-11	2.48E-11	3.88E-11
0	0	0	1.44E-11	6.16E-11	1.96E-10	5.20E-10	1.20E-09	2.46E-09	4.51E-09	7.52E-09	1.16E-08	1.65E-08	2.21E-08	2.78E-08
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	1.43E-14	2.44E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	2.90E-14	4.13E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.10E-10	4.99E-10	1.99E-09	6.00E-09	1.53E-08	3.36E-08	6.48E-08	1.12E-07	1.75E-07	2.51E-07	3.34E-07	4.16E-07	4.88E-07	5.44E-07	5.78E-07
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	1.23E-12	2.80E-12	7.16E-12	1.72E-11	3.76E-11	7.38E-11	1.32E-10	2.16E-10	3.27E-10	4.64E-10
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-14	1.14E-13	2.20E-13	3.91E-13	6.80E-13
0	0	0	0	1.35E-12	3.85E-12	1.05E-11	2.52E-11	5.31E-11	1.00E-10	1.72E-10	2.70E-10	3.94E-10	5.38E-10	6.91E-10
0	0	0	0	0	0	0	4.62E-13	1.18E-12	2.77E-12	6.01E-12	1.17E-11	2.08E-11	3.28E-11	4.90E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	3.70E-13	1.05E-12	2.33E-12	4.77E-12	8.78E-12	1.49E-11	2.35E-11
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-13	2.87E-13	6.12E-13	1.18E-12	2.18E-12	3.68E-12
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	1.14E-12	2.61E-12	5.75E-12	1.14E-11	2.05E-11	3.41E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	2.16E-12	8.62E-12	2.31E-11	5.75E-11	1.24E-10	2.38E-10	4.18E-10	6.73E-10	1.00E-09	1.39E-09	1.82E-09
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.45E-07	4.77E-07	1.27E-06	2.85E-06	5.52E-06	9.43E-06	1.45E-05	2.03E-05	2.63E-05	3.17E-05	3.60E-05	3.87E-05	3.96E-05	3.88E-05	3.65E-05
4.40E-10	1.92E-09	6.41E-09	1.81E-08	4.30E-08	8.87E-08	1.62E-07	2.64E-07	3.94E-07	5.41E-07	6.90E-07	8.27E-07	9.36E-07	1.01E-06	1.04E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	4.86E-11	1.66E-10	5.51E-10	1.37E-09	3.26E-09	6.72E-09	1.23E-08	2.03E-08	3.08E-08	4.33E-08	5.68E-08	7.01E-08	8.19E-08
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	2.26E-14	5.15E-14	1.03E-13	1.92E-13	3.30E-13
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.97E-06	1.18E-05	2.35E-05	4.07E-05	6.24E-05	8.64E-05	1.10E-04	1.29E-04	1.42E-04	1.48E-04	1.47E-04	1.39E-04	1.26E-04	1.11E-04	9.45E-05
0	5.24E-12	1.79E-11	6.79E-11	2.17E-10	5.85E-10	1.35E-09	2.76E-09	5.04E-09	8.35E-09	1.27E-08	1.79E-08	2.35E-08	2.91E-08	3.42E-08
0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.78E-10	2.48E-09	8.38E-09	2.33E-08	5.45E-08	1.11E-07	1.99E-07	3.22E-07	4.75E-07	6.46E-07	8.19E-07	9.76E-07	1.10E-06	1.18E-06	1.21E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	2.26E-11	1.16E-10	2.93E-10	7.01E-10	1.47E-09	2.78E-09	4.78E-09	7.55E-09	1.10E-08	1.51E-08	1.94E-08
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-15
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	9.53E-13	3.80E-12	1.05E-11	2.27E-11	4.76E-11	8.71E-11	1.46E-10	2.25E-10	3.24E-10	4.36E-10
0	0	0	0	0	6.04E-13	2.06E-12	4.69E-12	1.07E-11	2.13E-11	3.88E-11	6.44E-11	9.85E-11	1.40E-10	1.88E-10
6.05E-11	2.75E-10	1.12E-09	3.56E-09	9.68E-09	2.22E-08	4.48E-08	8.03E-08	1.30E-07	1.93E-07	2.64E-07	3.38E-07	4.06E-07	4.62E-07	5.01E-07
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-13	9.19E-13	1.94E-12	3.84E-12	6.96E-12	1.16E-11
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.26E-08	3.15E-07	9.79E-07	2.51E-06	5.50E-06	1.05E-05	1.79E-05	2.74E-05	3.85E-05	5.01E-05	6.10E-05	6.98E-05	7.58E-05	7.85E-05	7.79E-05
5.25E-04	1.14E-03	2.10E-03	3.40E-03	4.93E-03	6.49E-03	7.87E-03	8.90E-03	9.46E-03	9.54E-03	9.17E-03	8.46E-03	7.52E-03	6.46E-03	5.39E-03
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0	0	0	0	0	0	0	1.40E-13	3.98E-13	8.83E-13	1.81E-12	3.29E-12	5.52E-12	8.60E-12	1.25E-11
0	0	0	0	0	3.41E-12	7.76E-12	2.26E-11	5.18E-11	1.05E-10	1.92E-10	3.22E-10	5.00E-10	7.19E-10	9.69E-10
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000525	**0.001137**	**0.002102**	**0.003403**	**0.004933**	**0.006894**	**0.008831**	**0.01**	**0.012**	**0.012**	**0.012**	**0.012**	**0.011**	**0.009524**	**0.008176**

300	310	320	330	340	350	360	370	380	390	400	410	420	430	440
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E-15	6.96E-15	9.90E-15	1.47E-14	1.93E-14	2.56E-14	3.26E-14	4.00E-14	4.73E-14	5.42E-14
2.44E-04	2.02E-04	1.64E-04	1.30E-04	1.01E-04	7.67E-05	5.74E-05	4.24E-05	3.08E-05	2.21E-05	1.56E-05	1.10E-05	7.60E-06	5.21E-06	3.55E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.15E-05	3.08E-05	2.91E-05	2.66E-05	2.36E-05	2.04E-05	1.72E-05	1.42E-05	1.15E-05	9.14E-06	7.13E-06	5.47E-06	4.14E-06	3.09E-06	2.27E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-18	2.46E-18	3.50E-18	4.38E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-17	1.03E-16	1.46E-16	1.99E-16	2.55E-16	3.34E-16	4.14E-16	4.94E-16	5.70E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-16	2.66E-16	3.03E-16	3.88E-16	5.89E-16	7.27E-16	8.99E-16	1.07E-15	1.22E-15	1.35E-15
3.91E-04	3.10E-04	2.40E-04	1.82E-04	1.36E-04	9.99E-05	7.22E-05	5.14E-05	3.62E-05	2.52E-05	1.73E-05	1.18E-05	7.95E-06	5.31E-06	3.52E-06
3.33E-08	3.73E-08	4.01E-08	4.13E-08	4.12E-08	3.97E-08	3.72E-08	3.38E-08	3.00E-08	2.61E-08	2.21E-08	1.84E-08	1.50E-08	1.21E-08	9.54E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.99E-14	1.59E-13	2.53E-13	3.76E-13	5.35E-13	7.24E-13	9.31E-13	1.14E-12	1.35E-12	1.54E-12	1.69E-12	1.80E-12	1.86E-12	1.87E-12	1.83E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.46E-18	1.10E-17	1.46E-17	1.91E-17	2.37E-17	2.86E-17
6.62E-08	7.01E-08	7.14E-08	7.01E-08	6.67E-08	6.15E-08	5.52E-08	4.84E-08	4.14E-08	3.46E-08	2.84E-08	2.29E-08	1.82E-08	1.42E-08	1.09E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E-17	6.45E-17	1.10E-16	1.67E-16	2.20E-16	2.94E-16	3.64E-16	4.41E-16	5.15E-16	5.81E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.57E-13	3.84E-13	5.46E-13	7.27E-13	9.24E-13	1.12E-12	1.30E-12	1.45E-12	1.56E-12	1.63E-12	1.65E-12	1.62E-12	1.55E-12	1.44E-12	1.31E-12
2.50E-12	3.81E-12	5.46E-12	7.36E-12	9.48E-12	1.17E-11	1.37E-11	1.55E-11	1.69E-11	1.78E-11	1.83E-11	1.81E-11	1.76E-11	1.66E-11	1.53E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.91E-17	1.01E-16	1.34E-16	1.85E-16	2.48E-16	3.10E-16	3.76E-16	4.40E-16
1.28E-04	1.04E-04	8.21E-05	6.37E-05	4.85E-05	3.62E-05	2.66E-05	1.93E-05	1.38E-05	9.71E-06	6.77E-06	4.67E-06	3.19E-06	2.16E-06	1.45E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.99E-18	9.10E-18	1.29E-17	1.62E-17	2.01E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.88E-12	1.07E-11	1.36E-11	1.66E-11	1.93E-11	2.16E-11	2.32E-11	2.41E-11	2.42E-11	2.36E-11	2.24E-11	2.08E-11	1.88E-11	1.66E-11	1.44E-11
1.21E-09	1.51E-09	1.79E-09	2.04E-09	2.22E-09	2.34E-09	2.37E-09	2.34E-09	2.23E-09	2.08E-09	1.89E-09	1.67E-09	1.45E-09	1.24E-09	1.03E-09
1.05E-05	9.59E-06	8.50E-06	7.33E-06	6.16E-06	5.06E-06	4.06E-06	3.20E-06	2.48E-06	1.89E-06	1.41E-06	1.04E-06	7.61E-07	5.48E-07	3.90E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.45E-13	2.34E-13	3.54E-13	4.88E-13	6.44E-13	8.34E-13	1.02E-12	1.20E-12	1.35E-12	1.47E-12	1.55E-12	1.58E-12	1.57E-12	1.52E-12	1.43E-12
5.63E-13	8.60E-13	1.24E-12	1.67E-12	2.16E-12	2.66E-12	3.13E-12	3.55E-12	3.88E-12	4.10E-12	4.20E-12	4.17E-12	4.04E-12	3.81E-12	3.52E-12
0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.02E-12	3.22E-12	4.89E-12	6.98E-12	9.47E-12	1.22E-11	1.50E-11	1.77E-11	2.01E-11	2.21E-11	2.34E-11	2.40E-11	2.40E-11	2.34E-11	2.22E-11
0.00E+00	0.00E+00	1.18E-15	1.35E-15	2.30E-15	3.27E-15	4.47E-15	5.93E-15	7.47E-15	9.15E-15	1.07E-14	1.21E-14	1.33E-14	1.41E-14	1.46E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-15	4.72E-15	6.27E-15	9.18E-15	1.31E-14	1.75E-14	2.24E-14	2.76E-14	3.27E-14	3.76E-14	4.19E-14

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-15	1.86E-15	3.70E-15	5.71E-15	7.87E-15	1.00E-14	1.25E-14	1.51E-14	1.74E-14	1.96E-14
0.00E+00	1.20E-15	1.37E-15	2.34E-15	3.77E-15	5.69E-15	8.13E-15	1.09E-14	1.41E-14	1.75E-14	2.08E-14	2.39E-14	2.65E-14	2.85E-14	2.97E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.41E-09	4.00E-09	4.50E-09	4.84E-09	5.02E-09	5.03E-09	4.88E-09	4.60E-09	4.22E-09	3.77E-09	3.30E-09	2.82E-09	2.37E-09	1.95E-09	1.58E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.82E-17	1.12E-16	1.91E-16	2.35E-16	2.99E-16	3.81E-16	4.61E-16	5.40E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.15E-09	1.49E-09	1.84E-09	2.16E-09	2.44E-09	2.64E-09	2.76E-09	2.79E-09	2.74E-09	2.61E-09	2.42E-09	2.20E-09	1.95E-09	1.69E-09	1.44E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.07E-18	3.46E-18	5.90E-18
1.16E-06	1.11E-06	1.03E-06	9.21E-07	8.03E-07	6.83E-07	5.67E-07	4.61E-07	3.68E-07	2.88E-07	2.22E-07	1.69E-07	1.26E-07	9.30E-08	6.78E-08
1.39E-11	2.30E-11	3.58E-11	5.23E-11	7.22E-11	9.47E-11	1.19E-10	1.42E-10	1.64E-10	1.82E-10	1.95E-10	2.03E-10	2.04E-10	2.00E-10	1.92E-10
1.70E-08	1.94E-08	2.12E-08	2.22E-08	2.25E-08	2.20E-08	2.09E-08	1.92E-08	1.73E-08	1.52E-08	1.30E-08	1.09E-08	9.00E-09	7.29E-09	5.80E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.82E-03	5.55E-03	4.40E-03	3.42E-03	2.61E-03	1.96E-03	1.44E-03	1.05E-03	7.49E-04	5.30E-04	3.70E-04	2.56E-04	1.75E-04	1.19E-04	7.99E-05
2.54E-10	3.09E-10	3.57E-10	3.95E-10	4.20E-10	4.30E-10	4.26E-10	4.09E-10	3.82E-10	3.47E-10	3.08E-10	2.68E-10	2.28E-10	1.90E-10	1.55E-10
1.64E-08	1.73E-08	1.76E-08	1.72E-08	1.63E-08	1.50E-08	1.34E-08	1.17E-08	9.96E-09	8.31E-09	6.79E-09	5.45E-09	4.30E-09	3.34E-09	2.56E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	8.78E-16	1.50E-15	2.28E-15	3.40E-15	5.07E-15	6.98E-15	9.11E-15	1.14E-14	1.36E-14	1.58E-14	1.76E-14	1.90E-14	2.00E-14	2.04E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-17	1.55E-17	2.64E-17	4.00E-17	5.41E-17	6.81E-17	8.31E-17	9.77E-17
2.90E-14	4.40E-14	8.14E-14	1.30E-13	1.91E-13	2.67E-13	3.56E-13	4.23E-13	5.00E-13	5.97E-13	6.68E-13	7.30E-13	7.67E-13	7.84E-13	7.80E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-16	2.76E-16	3.14E-16	4.47E-16	6.10E-16	7.67E-16	9.14E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.38E-11	4.74E-11	6.28E-11	7.90E-11	9.48E-11	1.09E-10	1.21E-10	1.29E-10	1.33E-10	1.33E-10	1.29E-10	1.22E-10	1.13E-10	1.02E-10	9.02E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-16	8.96E-17	2.04E-16	2.32E-16	3.30E-16	4.23E-16	5.24E-16	6.27E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.64E-12	8.09E-12	1.12E-11	1.47E-11	1.82E-11	2.17E-11	2.48E-11	2.72E-11	2.89E-11	2.97E-11	2.96E-11	2.87E-11	2.71E-11	2.50E-11	2.25E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-18	2.13E-18	2.84E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.39E-14	1.84E-14	2.69E-14	4.00E-14	5.67E-14	7.52E-14	9.71E-14	1.19E-13	1.40E-13	1.59E-13	1.74E-13	1.84E-13	1.89E-13	1.89E-13	1.84E-13
6.34E-12	8.82E-12	1.16E-11	1.45E-11	1.73E-11	1.97E-11	2.16E-11	2.29E-11	2.35E-11	2.33E-11	2.25E-11	2.12E-11	1.94E-11	1.74E-11	1.53E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.77E-10	7.88E-10	1.02E-09	1.26E-09	1.48E-09	1.67E-09	1.82E-09	1.91E-09	1.94E-09	1.91E-09	1.83E-09	1.71E-09	1.57E-09	1.40E-09	1.22E-09
4.33E-10	6.07E-10	7.96E-10	9.95E-10	1.19E-09	1.36E-09	1.49E-09	1.58E-09	1.62E-09	1.61E-09	1.55E-09	1.46E-09	1.34E-09	1.20E-09	1.05E-09

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-17	5.31E-17	7.05E-17	8.60E-17	1.11E-16	1.39E-16	1.67E-16	1.95E-16	2.15E-16
2.58E-13	4.77E-13	7.94E-13	1.24E-12	1.81E-12	2.51E-12	3.30E-12	3.86E-12	4.85E-12	5.53E-12	6.24E-12	6.74E-12	7.04E-12	7.15E-12	7.07E-12
6.03E-11	7.75E-11	9.48E-11	1.11E-10	1.24E-10	1.33E-10	1.38E-10	1.38E-10	1.34E-10	1.27E-10	1.17E-10	1.05E-10	9.26E-11	7.98E-11	6.75E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-16	2.14E-16	2.43E-16	3.93E-16	4.73E-16	5.91E-16	7.03E-16	8.10E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-17	2.98E-17	5.10E-17	6.28E-17	7.70E-17	9.08E-17	1.06E-16	1.17E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-16	2.43E-16	3.45E-16	4.72E-16	5.60E-16	6.75E-16
0	0	0	4.17E-15	4.75E-15	6.76E-15	1.00E-14	1.36E-14	1.80E-14	2.17E-14	2.60E-14	3.02E-14	3.37E-14	3.65E-14	3.83E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-17	3.31E-17	5.03E-17	6.44E-17	7.94E-17	9.97E-17	1.19E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-18	3.99E-18	4.54E-18	6.03E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.82E-18	8.90E-18	1.27E-17	1.59E-17
6.75E-07	7.04E-07	7.07E-07	6.85E-07	6.43E-07	5.86E-07	5.20E-07	4.51E-07	3.82E-07	3.17E-07	2.58E-07	2.06E-07	1.62E-07	1.25E-07	9.56E-08
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.24E-16	8.24E-16	1.17E-15	1.47E-15	1.98E-15	2.55E-15	3.10E-15	3.64E-15	4.10E-15	4.56E-15
1.10E-10	1.51E-10	1.93E-10	2.36E-10	2.75E-10	3.08E-10	3.32E-10	3.45E-10	3.47E-10	3.39E-10	3.22E-10	2.98E-10	2.70E-10	2.39E-10	2.07E-10
4.65E-04	3.94E-04	3.24E-04	2.61E-04	2.06E-04	1.59E-04	1.21E-04	9.00E-05	6.62E-05	4.80E-05	3.44E-05	2.43E-05	1.70E-05	1.18E-05	8.08E-06
2.72E-11	3.59E-11	4.49E-11	5.36E-11	6.12E-11	6.71E-11	7.09E-11	7.24E-11	7.17E-11	6.90E-11	6.46E-11	5.90E-11	5.27E-11	4.61E-11	3.95E-11
2.38E-06	2.21E-06	1.99E-06	1.74E-06	1.49E-06	1.24E-06	1.01E-06	8.03E-07	6.29E-07	4.85E-07	3.68E-07	2.75E-07	2.03E-07	1.47E-07	1.06E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**3.01E-17**	**5.15E-17**	**4.88E-17**	**6.11E-17**	**7.59E-17**
0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.23E-05	1.09E-05	9.34E-06	7.81E-06	6.38E-06	5.10E-06	4.00E-06	3.08E-06	2.33E-06	1.73E-06	1.27E-06	9.22E-07	6.60E-07	4.67E-07	3.27E-07
7.45E-07	7.47E-07	7.22E-07	6.75E-07	6.13E-07	5.41E-07	4.65E-07	3.91E-07	3.22E-07	2.60E-07	2.06E-07	1.61E-07	1.23E-07	9.31E-08	6.94E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-18	2.84E-18	4.85E-18	6.44E-18	7.85E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.46E-08	1.71E-08	1.92E-08	2.06E-08	2.13E-08	2.12E-08	2.05E-08	1.92E-08	1.75E-08	1.56E-08	1.36E-08	1.16E-08	9.64E-09	7.90E-09	6.36E-09
5.65E-08	6.09E-08	6.30E-08	6.28E-08	6.05E-08	5.65E-08	5.13E-08	4.53E-08	3.91E-08	3.30E-08	2.73E-08	2.22E-08	1.77E-08	1.39E-08	1.07E-08
1.66E-10	2.25E-10	2.90E-10	3.53E-10	4.12E-10	4.61E-10	4.97E-10	5.17E-10	5.20E-10	5.09E-10	4.84E-10	4.48E-10	4.06E-10	3.59E-10	3.12E-10
2.31E-09	2.75E-09	3.14E-09	3.42E-09	3.60E-09	3.65E-09	3.58E-09	3.42E-09	3.17E-09	2.87E-09	2.53E-09	2.19E-09	1.86E-09	1.54E-09	1.26E-09
2.63E-06	2.52E-06	2.34E-06	2.10E-06	1.84E-06	1.57E-06	1.31E-06	1.07E-06	8.56E-07	6.72E-07	5.19E-07	3.95E-07	2.96E-07	2.19E-07	1.60E-07
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.95E-11	2.59E-11	3.26E-11	3.91E-11	4.48E-11	4.92E-11	5.21E-11	5.33E-11	5.28E-11	5.08E-11	4.76E-11	4.35E-11	3.88E-11	3.39E-11	2.90E-11
0.00E+00	5.35E-15	6.09E-15	9.53E-15	7.36E-15	1.63E-14	2.09E-14	2.68E-14	3.33E-14	3.89E-14	4.40E-14	4.82E-14	5.11E-14	5.25E-14	5.25E-14

6.35E-09	8.00E-09	9.58E-09	1.10E-08	1.21E-08	1.27E-08	1.30E-08	1.29E-08	1.23E-08	1.15E-08	1.05E-08	9.31E-09	8.10E-09	6.90E-09	5.77E-09
1.07E-14	1.52E-14	2.59E-14	3.98E-14	5.30E-14	7.11E-14	9.31E-14	1.14E-13	1.35E-13	1.54E-13	1.69E-13	1.80E-13	1.86E-13	1.86E-13	1.82E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E-13	2.79E-13	4.53E-13	7.35E-13	1.11E-12	1.58E-12	2.14E-12	2.77E-12	3.44E-12	3.88E-12	4.46E-12	4.93E-12	5.24E-12	5.45E-12	5.50E-12
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.44E-09	2.77E-09	3.00E-09	3.12E-09	3.13E-09	3.04E-09	2.86E-09	2.61E-09	2.33E-09	2.03E-09	1.72E-09	1.44E-09	1.18E-09	9.44E-10	7.46E-10
5.30E-05	4.32E-05	3.44E-05	2.68E-05	2.04E-05	1.53E-05	1.13E-05	8.23E-06	5.90E-06	4.18E-06	2.92E-06	2.02E-06	1.38E-06	9.39E-07	6.32E-07
5.66E-11	7.79E-11	1.02E-10	1.26E-10	1.49E-10	1.68E-10	1.84E-10	1.93E-10	1.97E-10	1.94E-10	1.87E-10	1.75E-10	1.60E-10	1.43E-10	1.25E-10
3.32E-08	3.78E-08	4.12E-08	4.31E-08	4.35E-08	4.24E-08	4.02E-08	3.70E-08	3.32E-08	2.91E-08	2.49E-08	2.09E-08	1.73E-08	1.40E-08	1.11E-08
0	0	0	0	1.65E-15	1.88E-15	2.14E-15	2.74E-15	3.81E-15	4.83E-15	6.05E-15	7.16E-15	8.27E-15	9.18E-15	9.91E-15
0	0	0	3.47E-16	5.93E-16	1.01E-15	1.54E-15	2.19E-15	2.97E-15	3.86E-15	4.81E-15	5.76E-15	6.68E-15	7.48E-15	8.13E-15
3.24E-14	5.53E-14	8.18E-14	1.22E-13	1.68E-13	2.22E-13	2.77E-13	3.31E-13	3.81E-13	4.22E-13	4.52E-13	4.70E-13	4.74E-13	4.65E-13	4.45E-13
0	0	0	0	1.96E-15	3.34E-15	4.44E-15	6.86E-15	8.84E-15	1.15E-14	1.43E-14	1.70E-14	1.97E-14	2.17E-14	2.35E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.52E-18	3.14E-18	5.37E-18	6.11E-18
0.00E+00	2.29E-15	2.61E-15	2.97E-15	5.07E-15	7.45E-15	9.99E-15	1.29E-14	1.60E-14	1.93E-14	2.21E-14	2.46E-14	2.65E-14	2.77E-14	2.82E-14
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.99E-14	1.39E-13	2.19E-13	3.29E-13	4.64E-13	6.21E-13	7.71E-13	9.57E-13	1.12E-12	1.26E-12	1.38E-12	1.45E-12	1.49E-12	1.48E-12	1.44E-12
0	0	0	0	0	0	0	6.31E-17	7.18E-17	6.13E-17	9.31E-17	1.19E-16	1.51E-16	1.76E-16	1.96E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	2.73E-17	4.66E-17	7.07E-17	8.56E-17	1.09E-16	1.35E-16
0	0	0	0	0	0	0	0	0	0	0	0	0	4.04E-18	2.30E-18
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	7.78E-15	8.85E-15	1.26E-14	2.01E-14	2.94E-14	4.00E-14	5.18E-14	6.11E-14	7.52E-14	8.68E-14	9.55E-14	1.03E-13	1.08E-13
5.89E-07	5.77E-07	5.47E-07	5.01E-07	4.47E-07	3.88E-07	3.28E-07	2.72E-07	2.21E-07	1.76E-07	1.38E-07	1.06E-07	8.04E-08	6.01E-08	4.44E-08
0	0	0	0	0	9.58E-17	5.45E-17	9.31E-17	1.41E-16	2.01E-16	2.52E-16	3.16E-16	3.75E-16	4.33E-16	4.72E-16
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.20E-10	7.83E-10	9.41E-10	1.08E-09	1.19E-09	1.26E-09	1.29E-09	1.28E-09	1.23E-09	1.16E-09	1.06E-09	9.42E-10	8.23E-10	7.04E-10	5.91E-10
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.04E-12	1.57E-12	2.20E-12	2.94E-12	3.71E-12	4.47E-12	5.16E-12	5.73E-12	6.14E-12	6.37E-12	6.40E-12	6.26E-12	5.96E-12	5.54E-12	5.03E-12
8.41E-10	9.73E-10	1.08E-09	1.15E-09	1.17E-09	1.16E-09	1.12E-09	1.04E-09	9.47E-10	8.40E-10	7.28E-10	6.18E-10	5.15E-10	4.21E-10	3.39E-10
6.93E-11	9.28E-11	1.17E-10	1.41E-10	1.62E-10	1.78E-10	1.89E-10	1.94E-10	1.93E-10	1.87E-10	1.75E-10	1.61E-10	1.44E-10	1.26E-10	1.08E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-18	7.47E-19
3.46E-11	4.78E-11	6.25E-11	7.76E-11	9.22E-11	1.05E-10	1.15E-10	1.21E-10	1.24E-10	1.23E-10	1.19E-10	1.12E-10	1.02E-10	9.18E-11	8.06E-11
5.80E-12	8.56E-12	1.19E-11	1.57E-11	1.96E-11	2.35E-11	2.70E-11	2.99E-11	3.20E-11	3.31E-11	3.32E-11	3.24E-11	3.08E-11	2.86E-11	2.60E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.29E-11	7.68E-11	1.05E-10	1.36E-10	1.68E-10	1.99E-10	2.26E-10	2.47E-10	2.61E-10	2.67E-10	2.65E-10	2.56E-10	2.42E-10	2.22E-10	2.00E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-17	1.98E-17	3.37E-17
2.24E-09	2.63E-09	2.95E-09	3.18E-09	3.29E-09	3.29E-09	3.19E-09	3.01E-09	2.75E-09	2.46E-09	2.15E-09	1.84E-09	1.54E-09	1.27E-09	1.03E-09
0	0	0	3.01E-16	6.85E-16	1.07E-15	1.44E-15	1.96E-15	2.57E-15	3.19E-15	3.78E-15	4.36E-15	4.85E-15	5.24E-15	5.49E-15
3.33E-05	2.93E-05	2.52E-05	2.10E-05	1.71E-05	1.37E-05	1.07E-05	8.23E-06	6.22E-06	4.63E-06	3.40E-06	2.46E-06	1.76E-06	1.24E-06	8.71E-07
1.02E-06	9.74E-07	8.97E-07	8.00E-07	6.95E-07	5.89E-07	4.87E-07	3.95E-07	3.14E-07	2.45E-07	1.88E-07	1.42E-07	1.06E-07	7.76E-08	5.63E-08
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	3.75E-18	4.27E-18	3.64E-18	4.15E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.10E-08	9.68E-08	9.89E-08	9.73E-08	9.27E-08	8.56E-08	7.69E-08	6.73E-08	5.75E-08	4.81E-08	3.94E-08	3.17E-08	2.51E-08	1.95E-08	1.50E-08
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.30E-13	7.83E-13	1.11E-12	1.48E-12	1.88E-12	2.27E-12	2.64E-12	2.95E-12	3.18E-12	3.32E-12	3.36E-12	3.30E-12	3.16E-12	2.95E-12	2.70E-12
0	0	0	0	0	0	0	4.97E-17	2.83E-17	4.83E-17	6.42E-17	8.35E-17	1.01E-16	1.22E-16	1.41E-16
7.82E-05	6.30E-05	4.97E-05	3.83E-05	2.90E-05	2.16E-05	1.58E-05	1.14E-05	8.11E-06	5.70E-06	3.96E-06	2.73E-06	1.86E-06	1.25E-06	8.38E-07
3.82E-08	4.08E-08	4.19E-08	4.15E-08	3.98E-08	3.70E-08	3.34E-08	2.94E-08	2.53E-08	2.13E-08	1.75E-08	1.42E-08	1.13E-08	8.84E-09	6.81E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.75E-18	3.27E-18	5.59E-18
1.19E-06	1.13E-06	1.03E-06	9.21E-07	7.99E-07	6.75E-07	5.58E-07	4.52E-07	3.59E-07	2.80E-07	2.15E-07	1.62E-07	1.21E-07	8.89E-08	6.46E-08
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-17	5.92E-17	7.86E-17	8.94E-17	1.09E-16	1.28E-16
2.36E-08	2.73E-08	3.03E-08	3.21E-08	3.29E-08	3.25E-08	3.12E-08	2.90E-08	2.63E-08	2.33E-08	2.02E-08	1.71E-08	1.42E-08	1.16E-08	9.28E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.91E-18	3.93E-18	6.72E-18	8.92E-18
0.00E+00	0.00E+00	7.13E-16	1.22E-15	1.62E-15	2.50E-15	3.52E-15	4.73E-15	6.16E-15	7.66E-15	8.93E-15	1.03E-14	1.16E-14	1.25E-14	1.31E-14
8.48E-15	1.61E-14	2.56E-14	3.91E-14	5.58E-14	7.45E-14	9.71E-14	1.20E-13	1.43E-13	1.64E-13	1.81E-13	1.94E-13	2.01E-13	2.03E-13	2.00E-13
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.54E-10	6.68E-10	7.67E-10	8.44E-10	8.93E-10	9.10E-10	8.98E-10	8.59E-10	8.00E-10	7.25E-10	6.42E-10	5.55E-10	4.71E-10	3.92E-10	3.20E-10
2.37E-10	2.83E-10	3.24E-10	3.54E-10	3.72E-10	3.78E-10	3.71E-10	3.53E-10	3.27E-10	2.95E-10	2.61E-10	2.25E-10	1.90E-10	1.58E-10	1.28E-10
5.20E-07	5.18E-07	4.98E-07	4.64E-07	4.19E-07	3.68E-07	3.15E-07	2.64E-07	2.16E-07	1.74E-07	1.37E-07	1.07E-07	8.15E-08	6.14E-08	4.56E-08
0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.80E-11	2.62E-11	3.56E-11	4.64E-11	5.75E-11	6.81E-11	7.73E-11	8.46E-11	8.94E-11	9.15E-11	9.10E-11	8.79E-11	8.29E-11	7.62E-11	6.86E-11
0	0	0	0	5.43E-16	6.19E-16	8.80E-16	1.10E-15	1.48E-15	2.01E-15	2.53E-15	3.07E-15	3.59E-15	4.05E-15	4.41E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-16	8.21E-16	1.29E-15	1.86E-15	2.65E-15	3.49E-15	4.46E-15	5.46E-15	6.45E-15	7.36E-15	8.13E-15
7.44E-05	6.86E-05	6.13E-05	5.33E-05	4.51E-05	3.73E-05	3.01E-05	2.39E-05	1.86E-05	1.42E-05	1.07E-05	7.96E-06	5.83E-06	4.22E-06	3.02E-06
4.38E-03	3.48E-03	2.70E-03	2.05E-03	1.53E-03	1.13E-03	8.16E-04	5.82E-04	4.10E-04	2.86E-04	1.97E-04	1.34E-04	9.07E-05	6.08E-05	4.04E-05
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1.70E-11	2.19E-11	2.68E-11	3.13E-11	3.51E-11	3.77E-11	3.92E-11	3.94E-11	3.84E-11	3.64E-11	3.36E-11	3.03E-11	2.67E-11	2.31E-11	1.95E-11
1.23E-09	1.49E-09	1.71E-09	1.89E-09	2.00E-09	2.04E-09	2.02E-09	1.94E-09	1.81E-09	1.64E-09	1.46E-09	1.26E-09	1.07E-09	8.94E-10	7.32E-10
0	0	0	1.71E-15	3.90E-15	5.54E-15	8.52E-15	1.19E-14	1.55E-14	1.97E-14	2.41E-14	2.83E-14	3.22E-14	3.51E-14	3.76E-14
0	4.52E-15	1.29E-14	2.05E-14	3.33E-14	5.31E-14	7.85E-14	1.10E-13	1.48E-13	1.89E-13	2.33E-13	2.76E-13	3.15E-13	3.49E-13	3.75E-13
0.00682	**0.005545**	**0.004403**	**0.003423**	**0.00261**	**0.001955**	**0.001441**	**0.001046**	**0.000749**	**0.00053**	**0.00037**	**0.000256**	**0.000175**	**0.000119**	**7.99E-05**

450	460	470	480	490	500	510	520	530	540	550	560	570	580	590
6.03E-14	6.51E-14	6.84E-14	7.00E-14	7.00E-14	6.84E-14	6.55E-14	6.12E-14	5.64E-14	5.09E-14	4.53E-14	3.96E-14	3.41E-14	2.89E-14	2.42E-14
2.39E-06	1.60E-06	1.06E-06	7.01E-07	4.59E-07	2.99E-07	1.94E-07	1.25E-07	7.98E-08	5.09E-08	3.23E-08	2.04E-08	1.28E-08	8.05E-09	5.03E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.65E-06	1.19E-06	8.45E-07	5.95E-07	4.15E-07	2.87E-07	1.97E-07	1.34E-07	9.08E-08	6.10E-08	4.07E-08	2.70E-08	1.78E-08	1.17E-08	7.60E-09
5.21E-18	5.93E-18	6.61E-18	7.19E-18	7.59E-18	7.77E-18	7.88E-18	7.77E-18	7.50E-18	7.11E-18	6.61E-18	6.04E-18	5.42E-18	4.80E-18	4.18E-18
5.96E-16	6.69E-16	7.06E-16	7.17E-16	7.20E-16	7.09E-16	6.77E-16	6.37E-16	5.87E-16	5.31E-16	4.73E-16	4.14E-16	3.57E-16	3.03E-16	2.54E-16
1.46E-15	1.53E-15	1.56E-15	1.55E-15	1.51E-15	1.44E-15	1.35E-15	1.23E-15	1.11E-15	9.80E-16	8.52E-16	7.30E-16	6.17E-16	5.14E-16	4.22E-16
2.32E-06	1.52E-06	9.85E-07	6.35E-07	4.08E-07	2.60E-07	1.65E-07	1.04E-07	6.57E-08	4.11E-08	2.57E-08	1.59E-08	9.87E-09	6.09E-09	3.75E-09
7.43E-09	5.70E-09	4.32E-09	3.23E-09	2.39E-09	1.75E-09	1.26E-09	9.07E-10	6.44E-10	4.54E-10	3.17E-10	2.20E-10	1.51E-10	1.04E-10	7.03E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.74E-12	1.63E-12	1.49E-12	1.33E-12	1.17E-12	1.01E-12	8.59E-13	7.18E-13	5.92E-13	4.81E-13	3.86E-13	3.06E-13	2.39E-13	1.85E-13	1.42E-13
3.34E-17	3.77E-17	4.16E-17	4.45E-17	4.64E-17	4.64E-17	4.66E-17	4.51E-17	4.30E-17	4.03E-17	3.70E-17	3.34E-17	2.97E-17	2.60E-17	2.24E-17
8.25E-09	6.17E-09	4.56E-09	3.34E-09	2.41E-09	1.73E-09	1.23E-09	8.62E-10	6.01E-10	4.16E-10	2.85E-10	1.95E-10	1.32E-10	8.87E-11	5.93E-11
6.37E-16	6.78E-16	7.03E-16	7.11E-16	7.02E-16	6.78E-16	6.41E-16	5.95E-16	5.42E-16	4.85E-16	4.27E-16	3.70E-16	3.16E-16	2.66E-16	2.21E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.17E-12	1.03E-12	8.81E-13	7.43E-13	6.17E-13	5.04E-13	4.06E-13	3.22E-13	2.53E-13	1.96E-13	1.50E-13	1.13E-13	8.50E-14	6.31E-14	4.64E-14
1.38E-11	1.22E-11	1.06E-11	9.02E-12	7.56E-12	6.24E-12	5.07E-12	4.07E-12	3.22E-12	2.52E-12	1.94E-12	1.49E-12	1.12E-12	8.40E-13	6.23E-13
2.89E-16	4.28E-16	4.49E-16	4.54E-16	4.42E-16	4.37E-16	4.23E-16	3.98E-16	3.67E-16	3.33E-16	2.96E-16	2.59E-16	2.23E-16	1.89E-16	1.59E-16
9.61E-07	6.34E-07	4.15E-07	2.70E-07	1.75E-07	1.13E-07	7.19E-08	4.58E-08	2.90E-08	1.83E-08	1.15E-08	7.16E-09	4.46E-09	2.77E-09	1.71E-09
2.29E-17	2.61E-17	2.86E-17	3.06E-17	3.20E-17	3.23E-17	3.22E-17	3.14E-17	3.01E-17	2.81E-17	2.58E-17	2.33E-17	2.08E-17	1.82E-17	1.57E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E-11	1.02E-11	8.39E-12	6.78E-12	5.41E-12	4.25E-12	3.29E-12	2.52E-12	1.91E-12	1.43E-12	1.06E-12	7.79E-13	5.67E-13	4.09E-13	2.92E-13
8.50E-10	6.87E-10	5.46E-10	4.29E-10	3.32E-10	2.54E-10	1.92E-10	1.43E-10	1.06E-10	7.76E-11	5.63E-11	4.05E-11	2.88E-11	2.04E-11	1.43E-11
2.75E-07	1.91E-07	1.32E-07	9.05E-08	6.15E-08	4.14E-08	2.77E-08	1.84E-08	1.22E-08	7.98E-09	5.21E-09	3.38E-09	2.18E-09	1.40E-09	8.96E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.32E-12	1.19E-12	1.05E-12	9.15E-13	7.80E-13	6.54E-13	5.40E-13	4.39E-13	3.52E-13	2.79E-13	2.18E-13	1.69E-13	1.29E-13	9.75E-14	7.30E-14
3.17E-12	2.81E-12	2.43E-12	2.07E-12	1.74E-12	1.43E-12	1.16E-12	9.33E-13	7.38E-13	5.76E-13	4.45E-13	3.39E-13	2.56E-13	1.92E-13	1.42E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-21	1.82E-21	2.07E-21	2.06E-21	2.18E-21	2.29E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.06E-11	1.87E-11	1.67E-11	1.46E-11	1.25E-11	1.06E-11	8.78E-12	7.19E-12	5.81E-12	4.63E-12	3.64E-12	2.83E-12	2.18E-12	1.66E-12	1.25E-12
1.47E-14	1.44E-14	1.38E-14	1.29E-14	1.19E-14	1.07E-14	9.47E-15	8.24E-15	7.05E-15	5.94E-15	4.94E-15	4.05E-15	3.27E-15	2.61E-15	2.07E-15
4.52E-14	4.67E-14	4.81E-14	4.78E-14	4.66E-14	4.45E-14	4.16E-14	3.81E-14	3.43E-14	3.03E-14	2.64E-14	2.26E-14	1.91E-14	1.59E-14	1.31E-14

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-19	1.54E-19	1.31E-19	1.24E-19	1.42E-19	1.53E-19	1.61E-19	1.62E-19	1.59E-19
2.13E-14	2.19E-14	2.29E-14	2.29E-14	2.26E-14	2.17E-14	2.03E-14	1.87E-14	1.69E-14	1.50E-14	1.31E-14	1.13E-14	9.58E-15	8.01E-15	6.61E-15
3.03E-14	3.00E-14	2.91E-14	2.75E-14	2.55E-14	2.32E-14	2.07E-14	1.81E-14	1.57E-14	1.33E-14	1.11E-14	9.18E-15	7.48E-15	6.02E-15	4.78E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-20	1.21E-20	1.38E-20	1.57E-20	1.56E-20	1.65E-20
1.26E-09	9.88E-10	7.65E-10	5.84E-10	4.41E-10	3.29E-10	2.43E-10	1.77E-10	1.28E-10	9.17E-11	6.51E-11	4.59E-11	3.21E-11	2.23E-11	1.53E-11
6.09E-16	6.45E-16	6.86E-16	7.17E-16	7.20E-16	7.13E-16	6.90E-16	6.52E-16	6.06E-16	5.52E-16	4.95E-16	4.36E-16	3.79E-16	3.24E-16	2.73E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.20E-09	9.86E-10	7.97E-10	6.35E-10	4.99E-10	3.86E-10	2.96E-10	2.24E-10	1.67E-10	1.24E-10	9.08E-11	6.59E-11	4.75E-11	3.39E-11	2.40E-11
6.72E-18	7.65E-18	8.70E-18	9.70E-18	1.05E-17	1.10E-17	1.14E-17	1.15E-17	1.13E-17	1.09E-17	1.03E-17	9.59E-18	8.76E-18	7.88E-18	6.98E-18
4.88E-08	3.48E-08	2.45E-08	1.71E-08	1.19E-08	8.15E-09	5.55E-09	3.76E-09	2.52E-09	1.68E-09	1.12E-09	7.36E-10	4.82E-10	3.14E-10	2.04E-10
1.80E-10	1.65E-10	1.48E-10	1.30E-10	1.12E-10	9.50E-11	7.93E-11	6.52E-11	5.29E-11	4.23E-11	3.34E-11	2.60E-11	2.01E-11	1.53E-11	1.16E-11
4.55E-09	3.52E-09	2.68E-09	2.02E-09	1.50E-09	1.11E-09	8.04E-10	5.80E-10	4.14E-10	2.93E-10	2.06E-10	1.43E-10	9.90E-11	6.80E-11	4.63E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.33E-05	3.53E-05	2.32E-05	1.51E-05	9.82E-06	6.33E-06	4.06E-06	2.59E-06	1.65E-06	1.04E-06	6.55E-07	4.10E-07	2.56E-07	1.59E-07	9.88E-08
1.25E-10	9.92E-11	7.75E-11	5.97E-11	4.54E-11	3.41E-11	2.53E-11	1.86E-11	1.35E-11	9.76E-12	6.97E-12	4.93E-12	3.46E-12	2.41E-12	1.67E-12
1.93E-09	1.44E-09	1.06E-09	7.71E-10	5.55E-10	3.96E-10	2.80E-10	1.96E-10	1.36E-10	9.37E-11	6.41E-11	4.35E-11	2.94E-11	1.97E-11	1.31E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.03E-14	1.97E-14	1.87E-14	1.74E-14	1.58E-14	1.41E-14	1.24E-14	1.07E-14	9.10E-15	7.62E-15	6.28E-15	5.12E-15	4.11E-15	3.27E-15	2.57E-15
1.11E-16	1.22E-16	1.31E-16	1.37E-16	1.39E-16	1.39E-16	1.35E-16	1.29E-16	1.20E-16	1.11E-16	9.98E-17	8.86E-17	7.74E-17	6.67E-17	5.66E-17
7.56E-13	7.16E-13	6.63E-13	6.02E-13	5.35E-13	4.67E-13	4.01E-13	3.39E-13	2.81E-13	2.31E-13	1.86E-13	1.49E-13	1.17E-13	9.13E-14	7.04E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E-21	6.11E-21	6.96E-21	6.93E-21	7.32E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.06E-15	9.59E-16	1.15E-15	1.21E-15	1.27E-15	1.24E-15	1.21E-15	1.17E-15	1.10E-15	1.01E-15	9.13E-16	8.13E-16	7.12E-16	6.14E-16	5.21E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-20	9.64E-21	1.65E-20	1.56E-20	1.78E-20	1.92E-20	1.96E-20	2.07E-20	2.09E-20
7.81E-11	6.65E-11	5.56E-11	4.57E-11	3.71E-11	2.96E-11	2.33E-11	1.81E-11	1.39E-11	1.06E-11	7.96E-12	5.92E-12	4.36E-12	3.19E-12	2.31E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.23E-16	8.09E-16	8.80E-16	9.31E-16	9.62E-16	9.69E-16	9.55E-16	9.21E-16	8.71E-16	8.05E-16	7.35E-16	6.58E-16	5.80E-16	5.04E-16	4.31E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.99E-11	1.72E-11	1.47E-11	1.23E-11	1.01E-11	8.18E-12	6.54E-12	5.16E-12	4.01E-12	3.09E-12	2.35E-12	1.77E-12	1.32E-12	9.71E-13	7.10E-13
3.23E-18	3.94E-18	4.63E-18	5.31E-18	5.90E-18	6.38E-18	6.73E-18	6.93E-18	6.98E-18	6.88E-18	6.26E-18	6.08E-18	5.62E-18	5.16E-18	4.64E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.75E-13	1.63E-13	1.48E-13	1.32E-13	1.16E-13	9.98E-14	8.45E-14	7.04E-14	5.78E-14	4.68E-14	3.74E-14	2.96E-14	2.31E-14	1.78E-14	1.36E-14
1.32E-11	1.11E-11	9.25E-12	7.57E-12	6.09E-12	4.84E-12	3.79E-12	2.93E-12	2.24E-12	1.69E-12	1.26E-12	9.35E-13	6.85E-13	4.98E-13	3.58E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E-23	4.50E-23
1.05E-09	8.84E-10	7.32E-10	5.97E-10	4.80E-10	3.80E-10	2.97E-10	2.30E-10	1.75E-10	1.32E-10	9.88E-11	7.31E-11	5.35E-11	3.89E-11	2.80E-11
9.03E-10	7.62E-10	6.32E-10	5.16E-10	4.15E-10	3.29E-10	2.57E-10	1.98E-10	1.51E-10	1.14E-10	8.49E-11	6.27E-11	4.58E-11	3.32E-11	2.39E-11

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.37E-16	2.52E-16	2.59E-16	2.62E-16	2.58E-16	2.49E-16	2.35E-16	2.17E-16	1.97E-16	1.76E-16	1.54E-16	1.33E-16	1.13E-16	9.51E-17	7.88E-17
6.82E-12	6.43E-12	5.93E-12	5.36E-12	4.75E-12	4.13E-12	3.53E-12	2.97E-12	2.46E-12	2.01E-12	1.62E-12	1.29E-12	1.02E-12	7.89E-13	6.07E-13
5.60E-11	4.58E-11	3.68E-11	2.91E-11	2.27E-11	1.75E-11	1.33E-11	1.00E-11	7.47E-12	5.51E-12	4.02E-12	2.90E-12	2.08E-12	1.48E-12	1.04E-12
6.87E-19	7.82E-19	6.68E-19	8.87E-19	9.38E-19	1.11E-18	1.17E-18	1.25E-18	1.30E-18	1.23E-18	1.24E-18	1.20E-18	1.14E-18	1.06E-18	9.75E-19
8.64E-16	9.56E-16	1.01E-15	1.02E-15	1.03E-15	1.01E-15	9.63E-16	9.04E-16	8.32E-16	7.52E-16	6.68E-16	5.84E-16	5.03E-16	4.27E-16	3.57E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E-16	1.36E-16	1.41E-16	1.42E-16	1.40E-16	1.35E-16	1.28E-16	1.18E-16	1.07E-16	9.56E-17	8.39E-17	7.25E-17	6.17E-17	5.18E-17	4.29E-17
7.61E-16	8.29E-16	8.94E-16	9.40E-16	9.67E-16	9.68E-16	9.46E-16	9.08E-16	8.53E-16	7.87E-16	7.13E-16	6.35E-16	5.57E-16	4.81E-16	4.10E-16
3.91E-14	3.89E-14	3.79E-14	3.60E-14	3.35E-14	3.05E-14	2.73E-14	2.40E-14	2.08E-14	1.77E-14	1.48E-14	1.22E-14	9.98E-15	8.03E-15	6.39E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.37E-16	1.54E-16	1.67E-16	1.77E-16	1.83E-16	1.85E-16	1.82E-16	1.76E-16	1.66E-16	1.55E-16	1.41E-16	1.26E-16	1.12E-16	9.71E-17	8.32E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-19	2.80E-19	2.39E-19	3.18E-19	3.10E-19	3.24E-19	2.15E-19	2.60E-19	2.45E-19	2.42E-19
7.11E-18	8.79E-18	1.02E-17	1.15E-17	1.27E-17	1.37E-17	1.43E-17	1.47E-17	1.47E-17	1.44E-17	1.39E-17	1.31E-17	1.21E-17	1.11E-17	9.93E-18
1.97E-17	2.24E-17	2.58E-17	2.88E-17	3.12E-17	3.29E-17	3.40E-17	3.30E-17	3.31E-17	3.15E-17	3.01E-17	2.78E-17	2.54E-17	2.29E-17	2.02E-17
7.20E-08	5.35E-08	3.93E-08	2.85E-08	2.05E-08	1.46E-08	1.03E-08	7.21E-09	5.00E-09	3.45E-09	2.36E-09	1.60E-09	1.08E-09	7.23E-10	4.81E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.89E-15	5.10E-15	5.17E-15	5.12E-15	4.97E-15	4.71E-15	4.38E-15	3.99E-15	3.57E-15	3.14E-15	2.72E-15	2.32E-15	1.96E-15	1.62E-15	1.33E-15
1.76E-10	1.47E-10	1.20E-10	9.73E-11	7.74E-11	6.08E-11	4.71E-11	3.60E-11	2.72E-11	2.04E-11	1.51E-11	1.10E-11	8.01E-12	5.77E-12	4.12E-12
5.49E-06	3.70E-06	2.48E-06	1.64E-06	1.08E-06	7.10E-07	4.63E-07	3.00E-07	1.93E-07	1.24E-07	7.88E-08	5.01E-08	3.16E-08	1.99E-08	1.25E-08
3.32E-11	2.74E-11	2.23E-11	1.79E-11	1.41E-11	1.10E-11	8.44E-12	6.42E-12	4.82E-12	3.59E-12	2.64E-12	1.92E-12	1.39E-12	9.95E-13	7.07E-13
7.54E-08	5.31E-08	3.71E-08	2.56E-08	1.76E-08	1.19E-08	8.06E-09	5.40E-09	3.60E-09	2.38E-09	1.57E-09	1.03E-09	6.67E-10	4.32E-10	2.78E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-20
7.82E-17	**9.37E-17**	**9.87E-17**	**1.08E-16**	**1.12E-16**	**1.12E-16**	**1.10E-16**	**1.06E-16**	**1.01E-16**	**9.32E-17**	**8.48E-17**	**7.60E-17**	**6.69E-17**	**5.81E-17**	**4.97E-17**
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	7.96E-19	4.53E-19	7.73E-19	7.34E-19	8.35E-19	9.51E-19	1.00E-18	1.05E-18	1.07E-18	1.07E-18	1.06E-18	9.99E-19	9.53E-19	8.84E-19
2.27E-07	1.56E-07	1.06E-07	7.16E-08	4.80E-08	3.19E-08	2.11E-08	1.39E-08	9.05E-09	5.88E-09	3.80E-09	2.44E-09	1.56E-09	9.94E-10	6.30E-10
5.11E-08	3.72E-08	2.68E-08	1.91E-08	1.34E-08	9.40E-09	6.51E-09	4.47E-09	3.05E-09	2.07E-09	1.39E-09	9.29E-10	6.17E-10	4.07E-10	2.68E-10
9.23E-18	1.07E-17	1.20E-17	1.30E-17	1.38E-17	1.42E-17	1.43E-17	1.41E-17	1.37E-17	1.29E-17	1.20E-17	1.10E-17	9.85E-18	8.72E-18	7.59E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
5.03E-09	3.93E-09	3.02E-09	2.30E-09	1.72E-09	1.28E-09	9.35E-10	6.79E-10	4.88E-10	3.47E-10	2.45E-10	1.72E-10	1.19E-10	8.23E-11	5.64E-11
8.15E-09	6.12E-09	4.54E-09	3.33E-09	2.41E-09	1.73E-09	1.23E-09	8.68E-10	6.06E-10	4.20E-10	2.89E-10	1.97E-10	1.34E-10	8.99E-11	6.01E-11
2.65E-10	2.21E-10	1.82E-10	1.47E-10	1.17E-10	9.22E-11	7.15E-11	5.48E-11	4.15E-11	3.11E-11	2.31E-11	1.69E-11	1.23E-11	8.87E-12	6.34E-12
1.01E-09	8.03E-10	6.27E-10	4.83E-10	3.67E-10	2.76E-10	2.05E-10	1.51E-10	1.10E-10	7.93E-11	5.67E-11	4.02E-11	2.83E-11	1.97E-11	1.37E-11
1.16E-07	8.25E-08	5.84E-08	4.09E-08	2.84E-08	1.95E-08	1.33E-08	9.02E-09	6.07E-09	4.06E-09	2.69E-09	1.78E-09	1.17E-09	7.62E-10	4.95E-10
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.43E-11	2.01E-11	1.63E-11	1.30E-11	1.03E-11	7.97E-12	6.11E-12	4.63E-12	3.47E-12	2.57E-12	1.89E-12	1.37E-12	9.89E-13	7.06E-13	5.00E-13
5.12E-14	4.88E-14	4.54E-14	4.14E-14	3.70E-14	3.24E-14	2.79E-14	2.37E-14	1.98E-14	1.63E-14	1.32E-14	1.06E-14	8.35E-15	6.53E-15	5.04E-15

4.74E-09	3.83E-09	3.05E-09	2.39E-09	1.85E-09	1.42E-09	1.07E-09	7.97E-10	5.89E-10	4.30E-10	3.12E-10	2.24E-10	1.59E-10	1.12E-10	7.87E-11
1.74E-13	1.62E-13	1.48E-13	1.32E-13	1.16E-13	9.99E-14	8.47E-14	7.07E-14	5.81E-14	4.71E-14	3.77E-14	2.98E-14	2.32E-14	1.79E-14	1.37E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.41E-12	5.18E-12	4.86E-12	4.47E-12	4.02E-12	3.55E-12	3.08E-12	2.63E-12	2.21E-12	1.83E-12	1.49E-12	1.20E-12	9.53E-13	7.49E-13	5.82E-13
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.80E-10	4.45E-10	3.37E-10	2.52E-10	1.86E-10	1.36E-10	9.82E-11	7.03E-11	4.98E-11	3.50E-11	2.44E-11	1.69E-11	1.16E-11	7.91E-12	5.36E-12
4.22E-07	2.79E-07	1.84E-07	1.20E-07	7.78E-08	5.02E-08	3.22E-08	2.06E-08	1.31E-08	8.27E-09	5.21E-09	3.26E-09	2.04E-09	1.27E-09	7.87E-10
1.07E-10	9.04E-11	7.49E-11	6.11E-11	4.90E-11	3.88E-11	3.04E-11	2.34E-11	1.79E-11	1.35E-11	1.01E-11	7.43E-12	5.44E-12	3.95E-12	2.84E-12
8.72E-09	6.74E-09	5.14E-09	3.87E-09	2.88E-09	2.12E-09	1.54E-09	1.11E-09	7.95E-10	5.63E-10	3.95E-10	2.76E-10	1.91E-10	1.31E-10	8.92E-11
1.04E-14	1.06E-14	1.06E-14	1.03E-14	9.76E-15	9.09E-15	8.31E-15	7.45E-15	6.57E-15	5.70E-15	4.86E-15	4.09E-15	3.39E-15	2.78E-15	2.25E-15
8.52E-15	8.78E-15	8.80E-15	8.59E-15	8.22E-15	7.71E-15	7.09E-15	6.39E-15	5.66E-15	4.94E-15	4.24E-15	3.59E-15	2.99E-15	2.46E-15	2.00E-15
4.16E-13	3.81E-13	3.41E-13	3.00E-13	2.58E-13	2.19E-13	1.83E-13	1.51E-13	1.22E-13	9.76E-14	7.70E-14	6.01E-14	4.64E-14	3.54E-14	2.67E-14
2.48E-14	2.54E-14	2.53E-14	2.47E-14	2.35E-14	2.20E-14	2.01E-14	1.81E-14	1.59E-14	1.38E-14	1.18E-14	9.97E-15	8.28E-15	6.79E-15	5.50E-15
0	0	0	0	0	0	0	0	0	4.29E-21	4.88E-21	4.17E-21	4.74E-21	4.50E-21	4.61E-21
0	0	0	0	0	0	0	0	0	0	0	0	3.27E-22	1.86E-22	2.12E-22
8.12E-18	9.57E-18	1.09E-17	1.22E-17	1.32E-17	1.39E-17	1.43E-17	1.40E-17	1.38E-17	1.33E-17	1.26E-17	1.17E-17	1.06E-17	9.55E-18	8.42E-18
2.79E-14	2.69E-14	2.54E-14	2.35E-14	2.13E-14	1.89E-14	1.65E-14	1.42E-14	1.20E-14	9.99E-15	8.20E-15	6.64E-15	5.31E-15	4.20E-15	3.28E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-19	7.68E-20	1.31E-19	1.24E-19	1.27E-19	1.29E-19	1.42E-19	1.44E-19	1.46E-19
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.36E-12	1.26E-12	1.15E-12	1.02E-12	8.90E-13	7.64E-13	6.45E-13	5.36E-13	4.39E-13	3.54E-13	2.82E-13	2.22E-13	1.73E-13	1.33E-13	1.01E-13
2.20E-16	2.36E-16	2.45E-16	2.50E-16	2.48E-16	2.41E-16	2.29E-16	2.13E-16	1.95E-16	1.75E-16	1.54E-16	1.34E-16	1.15E-16	9.69E-17	8.07E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E-16	1.82E-16	2.02E-16	2.17E-16	2.27E-16	2.33E-16	2.33E-16	2.25E-16	2.15E-16	2.03E-16	1.87E-16	1.69E-16	1.51E-16	1.33E-16	1.15E-16
3.93E-18	4.47E-18	5.52E-18	6.04E-18	6.60E-18	7.04E-18	7.24E-18	7.47E-18	7.44E-18	7.25E-18	6.94E-18	6.52E-18	6.03E-18	5.47E-18	4.89E-18
0.00E+00	1.38E-17	1.57E-17	1.79E-17	2.04E-17	2.03E-17	2.23E-17	2.39E-17	2.30E-17	2.30E-17	2.29E-17	2.20E-17	2.12E-17	1.96E-17	1.79E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E-13	1.09E-13	1.06E-13	1.00E-13	9.30E-14	8.45E-14	7.54E-14	6.61E-14	5.70E-14	4.84E-14	4.04E-14	3.33E-14	2.71E-14	2.18E-14	1.73E-14
3.24E-08	2.34E-08	1.67E-08	1.18E-08	8.24E-09	5.72E-09	3.94E-09	2.69E-09	1.82E-09	1.23E-09	8.20E-10	5.45E-10	3.60E-10	2.37E-10	1.55E-10
5.18E-16	5.45E-16	5.57E-16	5.57E-16	5.45E-16	5.21E-16	4.88E-16	4.48E-16	4.04E-16	3.58E-16	3.12E-16	2.68E-16	2.27E-16	1.89E-16	1.56E-16
0	0	0	0	0	0	0	0	0	0	0	0	2.33E-21	1.33E-21	2.27E-21
4.88E-10	3.96E-10	3.17E-10	2.49E-10	1.94E-10	1.49E-10	1.13E-10	8.45E-11	6.27E-11	4.60E-11	3.35E-11	2.41E-11	1.72E-11	1.22E-11	8.58E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.48E-12	3.90E-12	3.34E-12	2.81E-12	2.32E-12	1.89E-12	1.52E-12	1.20E-12	9.41E-13	7.27E-13	5.55E-13	4.19E-13	3.14E-13	2.32E-13	1.70E-13
2.68E-10	2.09E-10	1.61E-10	1.22E-10	9.18E-11	6.82E-11	5.00E-11	3.64E-11	2.62E-11	1.87E-11	1.32E-11	9.27E-12	6.45E-12	4.46E-12	3.06E-12
9.10E-11	7.53E-11	6.13E-11	4.91E-11	3.88E-11	3.02E-11	2.32E-11	1.77E-11	1.33E-11	9.86E-12	7.26E-12	5.29E-12	3.82E-12	2.73E-12	1.94E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.68E-20	6.47E-20	5.52E-20	6.28E-20	6.56E-20	7.46E-20	7.92E-20	8.02E-20	8.07E-20	7.91E-20	7.64E-20

1.28E-18	1.69E-18	1.93E-18	2.27E-18	2.63E-18	2.89E-18	3.14E-18	3.32E-18	3.42E-18	3.46E-18	3.42E-18	3.32E-18	3.16E-18	2.95E-18	2.72E-18
6.94E-11	5.87E-11	4.88E-11	3.99E-11	3.22E-11	2.55E-11	2.00E-11	1.55E-11	1.19E-11	8.96E-12	6.71E-12	4.97E-12	3.65E-12	2.65E-12	1.91E-12
2.31E-11	2.02E-11	1.73E-11	1.45E-11	1.20E-11	9.82E-12	7.90E-12	6.26E-12	4.91E-12	3.80E-12	2.91E-12	2.20E-12	1.65E-12	1.22E-12	9.00E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.76E-10	1.53E-10	1.30E-10	1.08E-10	8.90E-11	7.21E-11	5.75E-11	4.53E-11	3.53E-11	2.71E-11	2.06E-11	1.55E-11	1.16E-11	8.53E-12	6.24E-12
5.12E-17	5.83E-17	6.84E-17	8.02E-17	9.27E-17	1.02E-16	1.09E-16	1.14E-16	1.17E-16	1.17E-16	1.14E-16	1.10E-16	1.04E-16	9.14E-17	8.50E-17
8.16E-10	6.40E-10	4.95E-10	3.78E-10	2.85E-10	2.12E-10	1.56E-10	1.14E-10	8.23E-11	5.89E-11	4.18E-11	2.94E-11	2.06E-11	1.42E-11	9.80E-12
5.60E-15	5.56E-15	5.40E-15	5.12E-15	4.76E-15	4.34E-15	3.88E-15	3.41E-15	2.95E-15	2.51E-15	2.11E-15	1.74E-15	1.42E-15	1.15E-15	9.12E-16
6.03E-07	4.14E-07	2.82E-07	1.90E-07	1.28E-07	8.49E-08	5.61E-08	3.68E-08	2.41E-08	1.56E-08	1.01E-08	6.48E-09	4.14E-09	2.64E-09	1.67E-09
4.04E-08	2.87E-08	2.02E-08	1.40E-08	9.68E-09	6.62E-09	4.50E-09	3.03E-09	2.03E-09	1.35E-09	8.91E-10	5.85E-10	3.82E-10	2.48E-10	1.61E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.85E-18	4.83E-18	5.66E-18	5.77E-18	6.04E-18	6.20E-18	6.11E-18	6.00E-18	5.72E-18	5.34E-18	4.91E-18	4.43E-18	3.94E-18	3.44E-18	2.96E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E-08	8.44E-09	6.22E-09	4.54E-09	3.27E-09	2.33E-09	1.65E-09	1.16E-09	8.03E-10	5.54E-10	3.79E-10	2.57E-10	1.74E-10	1.16E-10	7.76E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E-20	5.77E-20	4.92E-20	5.61E-20	6.38E-20	6.36E-20	6.72E-20	6.86E-20	6.81E-20	6.64E-20
2.41E-12	2.11E-12	1.82E-12	1.54E-12	1.28E-12	1.04E-12	8.43E-13	6.71E-13	5.27E-13	4.09E-13	3.14E-13	2.38E-13	1.79E-13	1.33E-13	9.79E-14
1.55E-16	1.68E-16	1.76E-16	1.81E-16	1.81E-16	1.77E-16	1.69E-16	1.59E-16	1.46E-16	1.32E-16	1.17E-16	1.03E-16	8.83E-17	7.50E-17	6.28E-17
5.56E-07	3.66E-07	2.40E-07	1.56E-07	1.01E-07	6.47E-08	4.13E-08	2.63E-08	1.66E-08	1.05E-08	6.57E-09	4.11E-09	2.56E-09	1.59E-09	9.81E-10
5.18E-09	3.89E-09	2.88E-09	2.11E-09	1.53E-09	1.10E-09	7.80E-10	5.49E-10	3.83E-10	2.66E-10	1.83E-10	1.25E-10	8.45E-11	5.69E-11	3.81E-11
6.36E-18	7.85E-18	9.97E-18	1.14E-17	1.25E-17	1.34E-17	1.41E-17	1.45E-17	1.46E-17	1.44E-17	1.39E-17	1.31E-17	1.20E-17	1.11E-17	9.92E-18
4.64E-08	3.29E-08	2.32E-08	1.61E-08	1.11E-08	7.63E-09	5.19E-09	3.50E-09	2.34E-09	1.56E-09	1.03E-09	6.79E-10	4.44E-10	2.89E-10	1.87E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.47E-16	1.63E-16	1.74E-16	1.82E-16	1.85E-16	1.85E-16	1.80E-16	1.72E-16	1.61E-16	1.48E-16	1.33E-16	1.18E-16	1.04E-16	8.91E-17	7.56E-17
7.33E-09	5.70E-09	4.37E-09	3.31E-09	2.48E-09	1.83E-09	1.34E-09	9.73E-10	6.98E-10	4.97E-10	3.50E-10	2.45E-10	1.70E-10	1.17E-10	8.03E-11
1.09E-17	1.36E-17	1.58E-17	1.79E-17	1.97E-17	2.12E-17	2.23E-17	2.28E-17	2.28E-17	2.24E-17	2.15E-17	1.97E-17	1.85E-17	1.68E-17	1.50E-17
1.34E-14	1.33E-14	1.29E-14	1.22E-14	1.14E-14	1.04E-14	9.25E-15	8.12E-15	7.01E-15	5.96E-15	4.99E-15	4.12E-15	3.36E-15	2.70E-15	2.15E-15
1.91E-13	1.79E-13	1.65E-13	1.48E-13	1.31E-13	1.13E-13	9.64E-14	8.09E-14	6.68E-14	5.45E-14	4.38E-14	3.48E-14	2.73E-14	2.12E-14	1.62E-14
0.00E+00	2.85E-19	3.25E-19	2.77E-19	3.68E-19	3.89E-19	4.26E-19	4.46E-19	4.69E-19	4.71E-19	4.70E-19	4.58E-19	4.38E-19	4.11E-19	3.80E-19
1.65E-18	1.87E-18	2.13E-18	2.12E-18	2.42E-18	2.75E-18	2.85E-18	2.96E-18	2.93E-18	2.96E-18	2.87E-18	2.75E-18	2.56E-18	2.36E-18	2.14E-18
2.57E-10	2.04E-10	1.59E-10	1.22E-10	9.27E-11	6.95E-11	5.16E-11	3.78E-11	2.75E-11	1.98E-11	1.41E-11	9.98E-12	7.00E-12	4.87E-12	3.37E-12
1.03E-10	8.11E-11	6.31E-11	4.84E-11	3.67E-11	2.75E-11	2.03E-11	1.49E-11	1.08E-11	7.76E-12	5.53E-12	3.90E-12	2.73E-12	1.90E-12	1.31E-12
3.35E-08	2.43E-08	1.75E-08	1.24E-08	8.72E-09	6.08E-09	4.20E-09	2.88E-09	1.96E-09	1.33E-09	8.90E-10	5.93E-10	3.93E-10	2.59E-10	1.70E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.05E-11	5.23E-11	4.44E-11	3.71E-11	3.05E-11	2.47E-11	1.97E-11	1.55E-11	1.21E-11	9.26E-12	7.04E-12	5.29E-12	3.94E-12	2.90E-12	2.12E-12
4.68E-15	4.85E-15	4.88E-15	4.81E-15	4.63E-15	4.36E-15	4.02E-15	3.65E-15	3.25E-15	2.84E-15	2.45E-15	2.08E-15	1.74E-15	1.44E-15	1.17E-15
8.73E-15	9.11E-15	9.20E-15	9.17E-15	8.87E-15	8.43E-15	7.84E-15	7.15E-15	6.41E-15	5.66E-15	4.91E-15	4.19E-15	3.53E-15	2.93E-15	2.40E-15
2.13E-06	1.49E-06	1.04E-06	7.12E-07	4.85E-07	3.28E-07	2.20E-07	1.47E-07	9.74E-08	6.41E-08	4.20E-08	2.73E-08	1.77E-08	1.14E-08	7.31E-09
2.66E-05	1.74E-05	1.13E-05	7.34E-06	4.72E-06	3.01E-06	1.92E-06	1.21E-06	7.65E-07	4.80E-07	3.00E-07	1.87E-07	1.16E-07	7.17E-08	4.42E-08
0	0	0.00E+00	0.00E+00	7.76E-20	4.42E-20	7.54E-20	7.15E-20	8.14E-20	8.81E-20	8.71E-20	9.01E-20	8.89E-20	8.66E-20	8.31E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1.63E-11	1.33E-11	1.07E-11	8.50E-12	6.65E-12	5.13E-12	3.92E-12	2.95E-12	2.20E-12	1.63E-12	1.19E-12	8.60E-13	6.17E-13	4.39E-13	3.10E-13
5.90E-10	4.68E-10	3.65E-10	2.82E-10	2.14E-10	1.61E-10	1.20E-10	8.80E-11	6.41E-11	4.62E-11	3.30E-11	2.34E-11	1.64E-11	1.15E-11	7.94E-12
3.90E-14	3.94E-14	3.88E-14	3.73E-14	3.52E-14	3.25E-14	2.94E-14	2.62E-14	2.29E-14	1.97E-14	1.67E-14	1.40E-14	1.15E-14	9.35E-15	7.51E-15
3.92E-13	3.98E-13	3.95E-13	3.83E-13	3.63E-13	3.37E-13	3.06E-13	2.74E-13	2.41E-13	2.08E-13	1.77E-13	1.49E-13	1.23E-13	1.01E-13	8.11E-14
5.33E-05	**3.53E-05**	**2.32E-05**	**1.51E-05**	**9.82E-06**	**6.33E-06**	**4.06E-06**	**2.59E-06**	**1.65E-06**	**1.04E-06**	**6.55E-07**	**4.1E-07**	**2.56E-07**	**1.59E-07**	**9.88E-08**

600	610	620	630	640	650	660	670	680	690	700	710	720	730	740
2.00E-14	1.63E-14	1.32E-14	1.05E-14	8.30E-15	6.48E-15	5.02E-15	3.85E-15	2.92E-15	2.20E-15	1.65E-15	1.22E-15	8.98E-16	6.56E-16	4.76E-16
3.13E-09	1.94E-09	1.20E-09	7.40E-10	4.55E-10	2.79E-10	1.71E-10	1.04E-10	6.33E-11	3.84E-11	2.33E-11	1.41E-11	8.50E-12	5.12E-12	3.08E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.93E-09	3.19E-09	2.05E-09	1.31E-09	8.37E-10	5.31E-10	3.36E-10	2.12E-10	1.33E-10	8.36E-11	5.22E-11	3.25E-11	2.02E-11	1.25E-11	7.74E-12
3.59E-18	3.04E-18	2.54E-18	2.10E-18	1.71E-18	1.38E-18	1.11E-18	8.73E-19	6.84E-19	5.30E-19	4.08E-19	3.11E-19	2.35E-19	1.76E-19	1.31E-19
2.10E-16	1.72E-16	1.39E-16	1.11E-16	8.75E-17	6.84E-17	5.29E-17	4.06E-17	3.08E-17	2.32E-17	1.73E-17	1.29E-17	9.46E-18	6.91E-18	5.01E-18
3.43E-16	2.75E-16	2.18E-16	1.71E-16	1.33E-16	1.02E-16	7.81E-17	5.90E-17	4.42E-17	3.28E-17	2.42E-17	1.77E-17	1.29E-17	9.30E-18	6.67E-18
2.30E-09	1.41E-09	8.57E-10	5.21E-10	3.16E-10	1.91E-10	1.16E-10	6.96E-11	4.19E-11	2.51E-11	1.50E-11	8.99E-12	5.37E-12	3.20E-12	1.90E-12
4.74E-11	3.18E-11	2.12E-11	1.41E-11	9.30E-12	6.11E-12	4.00E-12	2.60E-12	1.69E-12	1.09E-12	7.01E-13	4.49E-13	2.87E-13	1.83E-13	1.16E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.07E-13	8.07E-14	6.00E-14	4.43E-14	3.24E-14	2.35E-14	1.69E-14	1.21E-14	8.59E-15	6.06E-15	4.25E-15	2.96E-15	2.05E-15	1.41E-15	9.68E-16
1.90E-17	1.60E-17	1.32E-17	1.08E-17	8.75E-18	7.00E-18	5.54E-18	4.35E-18	3.37E-18	2.60E-18	1.98E-18	1.50E-18	1.12E-18	8.36E-19	6.18E-19
3.95E-11	2.61E-11	1.72E-11	1.13E-11	7.34E-12	4.76E-12	3.08E-12	1.98E-12	1.27E-12	8.12E-13	5.17E-13	3.28E-13	2.07E-13	1.31E-13	8.21E-14
1.82E-16	1.47E-16	1.18E-16	9.36E-17	7.34E-17	5.70E-17	4.39E-17	3.35E-17	2.53E-17	1.90E-17	1.41E-17	1.04E-17	7.62E-18	5.55E-18	4.01E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.38E-14	2.44E-14	1.75E-14	1.25E-14	8.79E-15	6.17E-15	4.30E-15	2.97E-15	2.05E-15	1.40E-15	9.52E-16	6.45E-16	4.34E-16	2.91E-16	1.94E-16
4.57E-13	3.33E-13	2.41E-13	1.73E-13	1.23E-13	8.67E-14	6.08E-14	4.24E-14	2.94E-14	2.03E-14	1.39E-14	9.45E-15	6.40E-15	4.32E-15	2.90E-15
1.31E-16	1.07E-16	8.61E-17	6.86E-17	5.41E-17	4.22E-17	3.26E-17	2.49E-17	1.89E-17	1.42E-17	1.06E-17	7.82E-18	5.74E-18	4.18E-18	3.02E-18
1.05E-09	6.47E-10	3.96E-10	2.42E-10	1.47E-10	8.95E-11	5.43E-11	3.28E-11	1.98E-11	1.19E-11	7.16E-12	4.29E-12	2.57E-12	1.53E-12	9.15E-13
1.33E-17	1.12E-17	9.26E-18	7.59E-18	6.14E-18	4.91E-18	3.89E-18	3.05E-18	2.37E-18	1.83E-18	1.39E-18	1.05E-18	7.91E-19	5.89E-19	4.36E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.07E-13	1.46E-13	1.02E-13	7.09E-14	4.89E-14	3.35E-14	2.28E-14	1.55E-14	1.04E-14	6.99E-15	4.67E-15	3.10E-15	2.05E-15	1.35E-15	8.84E-16
9.97E-12	6.90E-12	4.75E-12	3.24E-12	2.20E-12	1.49E-12	9.99E-13	6.68E-13	4.44E-13	2.94E-13	1.94E-13	1.27E-13	8.30E-14	5.40E-14	3.50E-14
5.71E-10	3.62E-10	2.29E-10	1.44E-10	9.02E-11	5.64E-11	3.51E-11	2.18E-11	1.35E-11	8.34E-12	5.13E-12	3.15E-12	1.93E-12	1.18E-12	7.20E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.41E-14	3.98E-14	2.90E-14	2.09E-14	1.50E-14	1.07E-14	7.55E-15	5.30E-15	3.70E-15	2.56E-15	1.77E-15	1.21E-15	8.24E-16	5.59E-16	3.77E-16
1.04E-13	7.57E-14	5.46E-14	3.91E-14	2.78E-14	1.96E-14	1.37E-14	9.57E-15	6.62E-15	4.56E-15	3.12E-15	2.12E-15	1.44E-15	9.66E-16	6.48E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.28E-21	2.29E-21	2.25E-21	2.17E-21	2.06E-21	1.93E-21	1.78E-21	1.61E-21	1.44E-21	1.27E-21	1.11E-21	9.57E-22	8.15E-22	6.87E-22	5.73E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-24	2.30E-24	2.62E-24	2.24E-24	2.12E-24	1.93E-24	1.79E-24
9.32E-13	6.89E-13	5.05E-13	3.68E-13	2.65E-13	1.90E-13	1.35E-13	9.53E-14	6.69E-14	4.66E-14	3.23E-14	2.23E-14	1.53E-14	1.04E-14	7.05E-15
1.61E-15	1.25E-15	9.54E-16	7.23E-16	5.43E-16	4.04E-16	2.98E-16	2.19E-16	1.59E-16	1.15E-16	8.22E-17	5.85E-17	4.14E-17	2.91E-17	2.04E-17
1.06E-14	8.51E-15	6.75E-15	5.30E-15	4.12E-15	3.17E-15	2.42E-15	1.82E-15	1.37E-15	1.02E-15	7.48E-16	5.48E-16	3.98E-16	2.87E-16	2.06E-16

1.54E-19	1.48E-19	1.39E-19	1.28E-19	1.17E-19	1.05E-19	9.30E-20	8.12E-20	6.82E-20	5.87E-20	4.97E-20	4.12E-20	3.41E-20	2.77E-20	2.24E-20
5.38E-15	4.33E-15	3.45E-15	2.71E-15	2.11E-15	1.63E-15	1.25E-15	9.43E-16	7.08E-16	5.27E-16	3.90E-16	2.86E-16	2.08E-16	1.50E-16	1.08E-16
3.76E-15	2.92E-15	2.25E-15	1.71E-15	1.29E-15	9.69E-16	7.19E-16	5.29E-16	3.87E-16	2.80E-16	2.02E-16	1.44E-16	1.03E-16	7.24E-17	5.08E-17
1.67E-20	1.69E-20	1.67E-20	1.62E-20	1.55E-20	1.45E-20	1.34E-20	1.22E-20	1.10E-20	9.70E-21	8.48E-21	7.33E-21	6.26E-21	5.29E-21	4.42E-21
1.05E-11	7.14E-12	4.83E-12	3.24E-12	2.17E-12	1.44E-12	9.55E-13	6.29E-13	4.12E-13	2.69E-13	1.75E-13	1.13E-13	7.31E-14	4.70E-14	3.01E-14
2.27E-16	1.87E-16	1.52E-16	1.22E-16	9.66E-17	7.59E-17	5.90E-17	4.55E-17	3.47E-17	2.63E-17	1.97E-17	1.47E-17	1.09E-17	7.97E-18	5.80E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.69E-11	1.18E-11	8.15E-12	5.61E-12	3.84E-12	2.61E-12	1.77E-12	1.19E-12	7.95E-13	5.30E-13	3.51E-13	2.32E-13	1.52E-13	9.96E-14	6.49E-14
6.09E-18	5.23E-18	4.44E-18	3.72E-18	3.08E-18	2.52E-18	2.04E-18	1.64E-18	1.30E-18	1.02E-18	7.92E-19	6.11E-19	4.67E-19	3.54E-19	2.67E-19
1.32E-10	8.46E-11	5.41E-11	3.45E-11	2.19E-11	1.39E-11	8.73E-12	5.49E-12	3.44E-12	2.14E-12	1.33E-12	8.28E-13	5.13E-13	3.16E-13	1.95E-13
8.63E-12	6.39E-12	4.69E-12	3.41E-12	2.46E-12	1.76E-12	1.25E-12	8.86E-13	6.21E-13	4.33E-13	3.00E-13	2.06E-13	1.41E-13	9.62E-14	6.51E-14
3.14E-11	2.11E-11	1.42E-11	9.42E-12	6.24E-12	4.11E-12	2.70E-12	1.76E-12	1.14E-12	7.41E-13	4.78E-13	3.07E-13	1.96E-13	1.25E-13	7.96E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.52E-25	4.85E-25	5.52E-25	4.72E-25	4.47E-25	4.07E-25
6.10E-08	3.76E-08	2.31E-08	1.41E-08	8.63E-09	5.26E-09	3.20E-09	1.94E-09	1.17E-09	7.07E-10	4.26E-10	2.56E-10	1.54E-10	9.21E-11	5.51E-11
1.15E-12	7.83E-13	5.31E-13	3.58E-13	2.40E-13	1.60E-13	1.06E-13	7.02E-14	4.61E-14	3.02E-14	1.97E-14	1.28E-14	8.25E-15	5.31E-15	3.41E-15
8.69E-12	5.73E-12	3.76E-12	2.45E-12	1.59E-12	1.03E-12	6.63E-13	4.26E-13	2.72E-13	1.73E-13	1.10E-13	6.94E-14	4.38E-14	2.75E-14	1.72E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-24	8.30E-25	9.44E-25	8.06E-25	6.12E-25	6.10E-25
1.99E-15	1.53E-15	1.17E-15	8.80E-16	6.58E-16	4.88E-16	3.59E-16	2.62E-16	1.89E-16	1.36E-16	9.72E-17	6.90E-17	4.86E-17	3.41E-17	2.38E-17
4.74E-17	3.92E-17	3.20E-17	2.59E-17	2.07E-17	1.63E-17	1.28E-17	9.90E-18	7.60E-18	5.79E-18	4.37E-18	3.27E-18	2.43E-18	1.79E-18	1.31E-18
5.37E-14	4.05E-14	3.03E-14	2.24E-14	1.65E-14	1.20E-14	8.69E-15	6.23E-15	4.44E-15	3.14E-15	2.21E-15	1.54E-15	1.07E-15	7.40E-16	5.08E-16
7.70E-21	7.67E-21	7.69E-21	7.57E-21	7.30E-21	6.90E-21	6.44E-21	5.93E-21	5.38E-21	4.82E-21	4.26E-21	3.72E-21	3.20E-21	2.73E-21	2.30E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.37E-16	3.62E-16	2.96E-16	2.39E-16	1.91E-16	1.51E-16	1.18E-16	9.12E-17	7.00E-17	5.32E-17	4.01E-17	3.00E-17	2.23E-17	1.64E-17	1.20E-17
2.09E-20	2.04E-20	1.96E-20	1.85E-20	1.72E-20	1.58E-20	1.43E-20	1.27E-20	1.12E-20	9.70E-21	8.32E-21	7.05E-21	5.91E-21	4.91E-21	3.93E-21
1.66E-12	1.18E-12	8.33E-13	5.85E-13	4.08E-13	2.82E-13	1.94E-13	1.33E-13	9.04E-14	6.12E-14	4.12E-14	2.76E-14	1.84E-14	1.22E-14	8.07E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-26
3.64E-16	3.03E-16	2.50E-16	2.03E-16	1.63E-16	1.30E-16	1.02E-16	7.97E-17	6.15E-17	4.71E-17	3.57E-17	2.69E-17	2.01E-17	1.49E-17	1.10E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.15E-13	3.70E-13	2.64E-13	1.87E-13	1.31E-13	9.17E-14	6.36E-14	4.38E-14	3.00E-14	2.05E-14	1.39E-14	9.35E-15	6.27E-15	4.19E-15	2.78E-15
4.11E-18	3.61E-18	3.10E-18	2.63E-18	2.21E-18	1.83E-18	1.49E-18	1.21E-18	9.69E-19	7.69E-19	6.04E-19	4.70E-19	3.63E-19	2.77E-19	2.10E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-24	7.95E-25	9.05E-25	1.03E-24	8.80E-25	6.68E-25	6.65E-25
1.03E-14	7.69E-15	5.71E-15	4.20E-15	3.06E-15	2.22E-15	1.59E-15	1.14E-15	8.05E-16	5.66E-16	3.96E-16	2.75E-16	1.90E-16	1.31E-16	8.95E-17
2.56E-13	1.81E-13	1.28E-13	8.92E-14	6.19E-14	4.27E-14	2.92E-14	1.99E-14	1.35E-14	9.09E-15	6.10E-15	4.07E-15	2.70E-15	1.79E-15	1.18E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.68E-23	7.28E-23	6.63E-23	6.61E-23	6.45E-23	6.12E-23	5.66E-23	5.25E-23	4.79E-23	4.29E-23	3.80E-23	3.32E-23	2.87E-23	2.46E-23	2.08E-23
2.00E-11	1.42E-11	9.97E-12	6.97E-12	4.84E-12	3.34E-12	2.29E-12	1.56E-12	1.06E-12	7.13E-13	4.79E-13	3.20E-13	2.12E-13	1.41E-13	9.26E-14
1.70E-11	1.20E-11	8.43E-12	5.88E-12	4.07E-12	2.80E-12	1.91E-12	1.30E-12	8.78E-13	5.90E-13	3.95E-13	2.63E-13	1.74E-13	1.15E-13	7.53E-14

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-25	3.11E-25	3.54E-25	3.02E-25	2.29E-25
6.44E-17	5.20E-17	4.15E-17	3.28E-17	2.56E-17	1.98E-17	1.52E-17	1.16E-17	8.70E-18	6.49E-18	4.81E-18	3.54E-18	2.58E-18	1.87E-18	1.35E-18
4.62E-13	3.48E-13	2.60E-13	1.92E-13	1.41E-13	1.02E-13	7.39E-14	5.29E-14	3.77E-14	2.66E-14	1.87E-14	1.30E-14	9.04E-15	6.23E-15	4.27E-15
7.30E-13	5.07E-13	3.50E-13	2.40E-13	1.64E-13	1.11E-13	7.48E-14	5.01E-14	3.34E-14	2.22E-14	1.47E-14	9.65E-15	6.32E-15	4.12E-15	2.68E-15
8.79E-19	7.81E-19	6.83E-19	5.89E-19	5.02E-19	4.22E-19	3.51E-19	2.88E-19	2.34E-19	1.89E-19	1.50E-19	1.18E-19	9.25E-20	7.16E-20	5.50E-20
2.95E-16	2.41E-16	1.94E-16	1.55E-16	1.22E-16	9.52E-17	7.36E-17	5.63E-17	4.28E-17	3.22E-17	2.40E-17	1.78E-17	1.31E-17	9.53E-18	6.91E-18
0.00E+00	0.00E+00	0.00E+00	1.53E-23	8.70E-24	9.91E-24	1.13E-23	9.63E-24	1.01E-23	9.36E-24	8.29E-24	7.58E-24	6.90E-24	6.11E-24	5.31E-24
3.50E-17	2.83E-17	2.26E-17	1.78E-17	1.39E-17	1.08E-17	8.27E-18	6.28E-18	4.73E-18	3.53E-18	2.61E-18	1.92E-18	1.40E-18	1.02E-18	7.31E-19
3.44E-16	2.85E-16	2.34E-16	1.89E-16	1.51E-16	1.20E-16	9.39E-17	7.29E-17	5.61E-17	4.28E-17	3.23E-17	2.42E-17	1.80E-17	1.33E-17	9.75E-18
5.03E-15	3.91E-15	3.01E-15	2.30E-15	1.74E-15	1.30E-15	9.64E-16	7.10E-16	5.19E-16	3.76E-16	2.71E-16	1.94E-16	1.38E-16	9.71E-17	6.81E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-25	1.87E-25	2.13E-25	1.82E-25
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.04E-17	5.88E-17	4.84E-17	3.95E-17	3.18E-17	2.53E-17	2.00E-17	1.56E-17	1.21E-17	9.27E-18	7.05E-18	5.32E-18	3.98E-18	2.95E-18	2.18E-18
2.27E-19	2.05E-19	1.89E-19	1.70E-19	1.48E-19	1.28E-19	1.10E-19	9.25E-20	7.75E-20	6.40E-20	5.22E-20	4.23E-20	3.38E-20	2.68E-20	2.11E-20
8.77E-18	7.64E-18	6.54E-18	5.55E-18	4.64E-18	3.84E-18	3.14E-18	2.54E-18	2.03E-18	1.61E-18	1.26E-18	9.84E-19	7.58E-19	5.80E-19	4.40E-19
1.76E-17	1.51E-17	1.28E-17	1.07E-17	8.88E-18	7.26E-18	5.86E-18	4.69E-18	3.71E-18	2.91E-18	2.26E-18	1.74E-18	1.33E-18	1.01E-18	7.55E-19
3.19E-10	2.10E-10	1.38E-10	9.00E-11	5.85E-11	3.78E-11	2.44E-11	1.56E-11	9.99E-12	6.36E-12	4.04E-12	2.56E-12	1.61E-12	1.01E-12	6.35E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.07E-15	8.59E-16	6.79E-16	5.31E-16	4.11E-16	3.16E-16	2.40E-16	1.81E-16	1.35E-16	9.99E-17	7.35E-17	5.36E-17	3.89E-17	2.80E-17	2.00E-17
2.91E-12	2.05E-12	1.43E-12	9.88E-13	6.80E-13	4.65E-13	3.16E-13	2.14E-13	1.44E-13	9.60E-14	6.39E-14	4.23E-14	2.79E-14	1.83E-14	1.20E-14
7.81E-09	4.86E-09	3.02E-09	1.87E-09	1.15E-09	7.09E-10	4.35E-10	2.66E-10	1.62E-10	9.89E-11	6.01E-11	3.64E-11	2.20E-11	1.33E-11	8.02E-12
4.99E-13	3.49E-13	2.43E-13	1.68E-13	1.15E-13	7.84E-14	5.31E-14	3.58E-14	2.40E-14	1.60E-14	1.07E-14	7.05E-15	4.64E-15	3.04E-15	1.99E-15
1.79E-10	1.14E-10	7.26E-11	4.60E-11	2.90E-11	1.83E-11	1.15E-11	7.16E-12	4.46E-12	2.77E-12	1.72E-12	1.06E-12	6.54E-13	4.02E-13	2.47E-13
6.58E-21	7.49E-21	8.53E-21	8.49E-21	8.29E-21	8.26E-21	8.06E-21	7.90E-21	7.47E-21	6.93E-21	6.41E-21	5.83E-21	5.23E-21	4.63E-21	4.05E-21
4.19E-17	**3.48E-17**	**2.86E-17**	**2.33E-17**	**1.87E-17**	**1.48E-17**	**1.17E-17**	**9.07E-18**	**6.99E-18**	**5.34E-18**	**4.04E-18**	**3.04E-18**	**2.26E-18**	**1.67E-18**	**1.23E-18**
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.10E-19	7.30E-19	6.47E-19	5.66E-19	4.89E-19	4.16E-19	3.50E-19	2.91E-19	2.39E-19	1.95E-19	1.57E-19	1.25E-19	9.88E-20	7.73E-20	6.00E-20
3.98E-10	2.50E-10	1.57E-10	9.80E-11	6.10E-11	3.79E-11	2.34E-11	1.45E-11	8.90E-12	5.47E-12	3.35E-12	2.04E-12	1.25E-12	7.58E-13	4.60E-13
1.75E-10	1.14E-10	7.35E-11	4.74E-11	3.04E-11	1.94E-11	1.24E-11	7.83E-12	4.95E-12	3.12E-12	1.96E-12	1.22E-12	7.63E-13	4.75E-13	2.95E-13
6.52E-18	5.53E-18	4.62E-18	3.82E-18	3.12E-18	2.52E-18	2.01E-18	1.59E-18	1.25E-18	9.66E-19	7.42E-19	5.66E-19	4.28E-19	3.21E-19	2.39E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.83E-11	2.59E-11	1.74E-11	1.16E-11	7.74E-12	5.12E-12	3.37E-12	2.21E-12	1.44E-12	9.34E-13	6.04E-13	3.89E-13	2.49E-13	1.60E-13	1.02E-13
4.00E-11	2.65E-11	1.74E-11	1.14E-11	7.43E-12	4.82E-12	3.11E-12	2.00E-12	1.28E-12	8.18E-13	5.20E-13	3.30E-13	2.08E-13	1.31E-13	8.22E-14
4.50E-12	3.17E-12	2.21E-12	1.54E-12	1.06E-12	7.26E-13	4.94E-13	3.35E-13	2.26E-13	1.51E-13	1.01E-13	6.69E-14	4.42E-14	2.91E-14	1.91E-14
9.42E-12	6.45E-12	4.38E-12	2.96E-12	1.99E-12	1.33E-12	8.85E-13	5.86E-13	3.86E-13	2.53E-13	1.65E-13	1.08E-13	6.97E-14	4.50E-14	2.90E-14
3.20E-10	2.06E-10	1.32E-10	8.42E-11	5.35E-11	3.39E-11	2.14E-11	1.35E-11	8.43E-12	5.27E-12	3.28E-12	2.04E-12	1.26E-12	7.81E-13	4.81E-13
0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.52E-13	2.45E-13	1.70E-13	1.17E-13	8.00E-14	5.44E-14	3.68E-14	2.47E-14	1.65E-14	1.10E-14	7.28E-15	4.80E-15	3.15E-15	2.06E-15	1.34E-15
3.86E-15	2.92E-15	2.19E-15	1.63E-15	1.20E-15	8.75E-16	6.34E-16	4.56E-16	3.26E-16	2.31E-16	1.63E-16	1.14E-16	7.93E-17	5.49E-17	3.78E-17

5.47E-11	3.78E-11	2.59E-11	1.77E-11	1.20E-11	8.06E-12	5.40E-12	3.60E-12	2.39E-12	1.58E-12	1.04E-12	6.77E-13	4.41E-13	2.86E-13	1.85E-13
1.04E-14	7.75E-15	5.75E-15	4.23E-15	3.08E-15	2.23E-15	1.60E-15	1.14E-15	8.09E-16	5.69E-16	3.97E-16	2.76E-16	1.91E-16	1.31E-16	8.94E-17
0.00E+00	8.27E-22	9.41E-22	5.36E-22	6.10E-22	6.07E-22	6.42E-22	5.90E-22	5.76E-22	5.37E-22	4.92E-22	4.40E-22	3.95E-22	3.48E-22	3.03E-22
4.47E-13	3.40E-13	2.56E-13	1.91E-13	1.41E-13	1.04E-13	7.55E-14	5.45E-14	3.91E-14	2.78E-14	1.97E-14	1.38E-14	9.65E-15	6.70E-15	4.62E-15
0	0	0	0	0	1.32E-23	7.53E-24	8.57E-24	9.76E-24	8.33E-24	7.11E-24	6.75E-24	6.15E-24	5.39E-24	4.81E-24
3.61E-12	2.41E-12	1.61E-12	1.06E-12	7.00E-13	4.58E-13	2.99E-13	1.94E-13	1.25E-13	8.07E-14	5.18E-14	3.31E-14	2.11E-14	1.34E-14	8.45E-15
4.87E-10	3.00E-10	1.84E-10	1.13E-10	6.90E-11	4.21E-11	2.56E-11	1.55E-11	9.40E-12	5.68E-12	3.42E-12	2.06E-12	1.24E-12	7.41E-13	4.44E-13
2.02E-12	1.43E-12	1.01E-12	7.03E-13	4.87E-13	3.36E-13	2.30E-13	1.57E-13	1.06E-13	7.14E-14	4.78E-14	3.19E-14	2.12E-14	1.40E-14	9.21E-15
6.05E-11	4.07E-11	2.73E-11	1.82E-11	1.20E-11	7.94E-12	5.21E-12	3.40E-12	2.21E-12	1.43E-12	9.25E-13	5.95E-13	3.81E-13	2.43E-13	1.55E-13
1.79E-15	1.42E-15	1.11E-15	8.57E-16	6.56E-16	4.98E-16	3.74E-16	2.79E-16	2.07E-16	1.52E-16	1.10E-16	7.98E-17	5.74E-17	4.09E-17	2.90E-17
1.61E-15	1.28E-15	1.00E-15	7.78E-16	5.99E-16	4.56E-16	3.45E-16	2.58E-16	1.92E-16	1.42E-16	1.04E-16	7.52E-17	5.42E-17	3.89E-17	2.77E-17
2.00E-14	1.48E-14	1.09E-14	7.92E-15	5.72E-15	4.10E-15	2.92E-15	2.07E-15	1.45E-15	1.01E-15	7.02E-16	4.84E-16	3.32E-16	2.26E-16	1.54E-16
4.40E-15	3.48E-15	2.72E-15	2.11E-15	1.62E-15	1.23E-15	9.24E-16	6.89E-16	5.10E-16	3.75E-16	2.73E-16	1.98E-16	1.42E-16	1.02E-16	7.21E-17
4.66E-21	4.56E-21	4.44E-21	4.22E-21	3.95E-21	3.63E-21	3.30E-21	2.95E-21	2.61E-21	2.28E-21	1.92E-21	1.65E-21	1.38E-21	1.15E-21	9.51E-22
2.41E-22	2.40E-22	2.15E-22	2.22E-22	2.15E-22	2.02E-22	1.86E-22	1.69E-22	1.53E-22	1.36E-22	1.20E-22	9.98E-23	8.67E-23	7.42E-23	6.19E-23
7.32E-18	6.28E-18	5.31E-18	4.44E-18	3.66E-18	2.99E-18	2.41E-18	1.92E-18	1.52E-18	1.19E-18	9.21E-19	7.08E-19	5.39E-19	4.07E-19	3.05E-19
2.54E-15	1.94E-15	1.47E-15	1.10E-15	8.20E-16	6.05E-16	4.42E-16	3.21E-16	2.31E-16	1.66E-16	1.18E-16	8.31E-17	5.83E-17	4.07E-17	2.82E-17
1.43E-19	1.39E-19	1.32E-19	1.24E-19	1.14E-19	1.04E-19	9.30E-20	8.22E-20	7.18E-20	5.76E-20	5.02E-20	4.16E-20	3.53E-20	2.86E-20	2.35E-20
0	0	0	0	0	0	5.81E-23	3.31E-23	3.77E-23	3.21E-23	3.66E-23	3.12E-23	2.96E-23	2.81E-23	2.56E-23
7.64E-14	5.71E-14	4.22E-14	3.10E-14	2.25E-14	1.63E-14	1.17E-14	8.30E-15	5.86E-15	4.12E-15	2.87E-15	1.99E-15	1.37E-15	9.41E-16	6.42E-16
6.63E-17	5.38E-17	4.32E-17	3.42E-17	2.69E-17	2.09E-17	1.61E-17	1.23E-17	9.27E-18	6.95E-18	5.16E-18	3.81E-18	2.79E-18	2.03E-18	1.47E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.77E-17	8.23E-17	6.83E-17	5.61E-17	4.55E-17	3.65E-17	2.90E-17	2.28E-17	1.77E-17	1.37E-17	1.05E-17	7.92E-18	5.96E-18	4.44E-18	3.29E-18
4.30E-18	3.73E-18	3.19E-18	2.69E-18	2.24E-18	1.85E-18	1.51E-18	1.21E-18	9.68E-19	7.65E-19	5.98E-19	4.64E-19	3.57E-19	2.72E-19	2.05E-19
1.62E-17	1.44E-17	1.26E-17	1.08E-17	9.23E-18	7.76E-18	6.45E-18	5.29E-18	4.30E-18	3.46E-18	2.75E-18	2.17E-18	1.69E-18	1.31E-18	1.01E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	1.34E-23	1.52E-23	1.30E-23	1.23E-23	9.83E-24	1.04E-23	9.55E-24	8.80E-24	8.10E-24	7.38E-24	6.64E-24	5.84E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.36E-14	1.05E-14	8.08E-15	6.15E-15	4.63E-15	3.46E-15	2.56E-15	1.88E-15	1.37E-15	9.93E-16	7.14E-16	5.09E-16	3.61E-16	2.54E-16	1.78E-16
1.01E-10	6.52E-11	4.20E-11	2.70E-11	1.72E-11	1.10E-11	6.96E-12	4.40E-12	2.77E-12	1.74E-12	1.09E-12	6.80E-13	4.23E-13	2.63E-13	1.63E-13
1.27E-16	1.02E-16	8.08E-17	6.35E-17	4.93E-17	3.80E-17	2.90E-17	2.19E-17	1.64E-17	1.22E-17	9.01E-18	6.59E-18	4.79E-18	3.46E-18	2.48E-18
2.15E-21	1.96E-21	1.95E-21	1.90E-21	1.76E-21	1.69E-21	1.55E-21	1.42E-21	1.29E-21	1.15E-21	1.01E-21	8.32E-22	7.26E-22	6.22E-22	5.18E-22
5.99E-12	4.16E-12	2.86E-12	1.96E-12	1.33E-12	9.01E-13	6.06E-13	4.06E-13	2.70E-13	1.79E-13	1.18E-13	7.75E-14	5.07E-14	3.30E-14	2.14E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.24E-13	8.93E-14	6.39E-14	4.53E-14	3.20E-14	2.24E-14	1.56E-14	1.08E-14	7.39E-15	5.05E-15	3.43E-15	2.32E-15	1.56E-15	1.04E-15	6.94E-16
2.09E-12	1.42E-12	9.55E-13	6.40E-13	4.26E-13	2.83E-13	1.87E-13	1.23E-13	8.01E-14	5.22E-14	3.38E-14	2.19E-14	1.41E-14	9.02E-15	5.77E-15
1.37E-12	9.56E-13	6.64E-13	4.58E-13	3.14E-13	2.14E-13	1.45E-13	9.76E-14	6.54E-14	4.36E-14	2.89E-14	1.91E-14	1.26E-14	8.22E-15	5.36E-15
7.26E-20	6.76E-20	5.70E-20	5.32E-20	4.67E-20	4.20E-20	3.59E-20	3.07E-20	2.59E-20	2.15E-20	1.78E-20	1.45E-20	1.17E-20	9.34E-21	7.40E-21

2.41E-18	2.16E-18	1.89E-18	1.64E-18	1.40E-18	1.18E-18	9.81E-19	8.07E-19	6.58E-19	5.30E-19	4.23E-19	3.34E-19	2.61E-19	2.03E-19	1.56E-19
1.37E-12	9.70E-13	6.83E-13	4.78E-13	3.32E-13	2.29E-13	1.57E-13	1.07E-13	7.28E-14	4.91E-14	3.30E-14	2.20E-14	1.47E-14	9.70E-15	6.40E-15
6.56E-13	4.75E-13	3.40E-13	2.42E-13	1.71E-13	1.20E-13	8.39E-14	5.81E-14	4.01E-14	2.74E-14	1.87E-14	1.27E-14	8.54E-15	5.73E-15	3.83E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.52E-12	3.25E-12	2.32E-12	1.64E-12	1.16E-12	8.06E-13	5.60E-13	3.86E-13	2.65E-13	1.80E-13	1.22E-13	8.26E-14	5.54E-14	3.70E-14	2.46E-14
7.57E-17	6.70E-17	5.82E-17	5.03E-17	4.24E-17	3.55E-17	2.94E-17	2.40E-17	1.94E-17	1.55E-17	1.23E-17	9.67E-18	7.52E-18	5.80E-18	4.43E-18
6.70E-12	4.55E-12	3.08E-12	2.07E-12	1.38E-12	9.16E-13	6.06E-13	3.99E-13	2.61E-13	1.70E-13	1.11E-13	7.15E-14	4.61E-14	2.96E-14	1.89E-14
7.18E-16	5.60E-16	4.31E-16	3.29E-16	2.49E-16	1.87E-16	1.39E-16	1.02E-16	7.49E-17	5.44E-17	3.92E-17	2.81E-17	2.00E-17	1.41E-17	9.93E-18
1.06E-09	6.65E-10	4.17E-10	2.60E-10	1.62E-10	1.01E-10	6.22E-11	3.84E-11	2.36E-11	1.45E-11	8.88E-12	5.43E-12	3.31E-12	2.01E-12	1.22E-12
1.03E-10	6.62E-11	4.22E-11	2.68E-11	1.70E-11	1.07E-11	6.73E-12	4.21E-12	2.63E-12	1.64E-12	1.02E-12	6.29E-13	3.88E-13	2.39E-13	1.47E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-25	7.67E-26
2.51E-18	2.11E-18	1.74E-18	1.42E-18	1.15E-18	9.17E-19	7.25E-19	5.67E-19	4.39E-19	3.37E-19	2.56E-19	1.94E-19	1.45E-19	1.08E-19	7.93E-20
0.00E+00	6.39E-23	7.27E-23	6.21E-23	5.89E-23	4.69E-23	4.96E-23	4.56E-23	4.33E-23	3.94E-23	3.61E-23	3.17E-23	2.79E-23	2.42E-23	2.08E-23
5.14E-11	3.39E-11	2.22E-11	1.45E-11	9.42E-12	6.09E-12	3.92E-12	2.51E-12	1.61E-12	1.02E-12	6.48E-13	4.10E-13	2.58E-13	1.62E-13	1.02E-13
4.26E-20	4.78E-20	4.17E-20	3.88E-20	3.42E-20	3.00E-20	2.70E-20	2.32E-20	1.94E-20	1.61E-20	1.33E-20	1.09E-20	8.82E-21	7.06E-21	5.60E-21
7.15E-14	5.17E-14	3.72E-14	2.65E-14	1.87E-14	1.32E-14	9.19E-15	6.38E-15	4.40E-15	3.01E-15	2.05E-15	1.39E-15	9.40E-16	6.31E-16	4.22E-16
5.19E-17	4.23E-17	3.41E-17	2.72E-17	2.15E-17	1.68E-17	1.30E-17	9.94E-18	7.55E-18	5.68E-18	4.25E-18	3.15E-18	2.31E-18	1.69E-18	1.23E-18
6.05E-10	3.72E-10	2.28E-10	1.39E-10	8.48E-11	5.15E-11	3.13E-11	1.89E-11	1.14E-11	6.88E-12	4.14E-12	2.49E-12	1.49E-12	8.91E-13	5.32E-13
2.53E-11	1.68E-11	1.11E-11	7.24E-12	4.72E-12	3.06E-12	1.98E-12	1.27E-12	8.17E-13	5.22E-13	3.32E-13	2.11E-13	1.33E-13	8.38E-14	5.27E-14
8.79E-18	7.70E-18	6.62E-18	5.62E-18	4.71E-18	3.90E-18	3.19E-18	2.58E-18	2.07E-18	1.64E-18	1.29E-18	1.01E-18	7.75E-19	5.93E-19	4.50E-19
1.21E-10	7.74E-11	4.95E-11	3.15E-11	2.00E-11	1.26E-11	7.93E-12	4.97E-12	3.11E-12	1.94E-12	1.21E-12	7.47E-13	4.62E-13	2.85E-13	1.75E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.33E-17	5.24E-17	4.28E-17	3.46E-17	2.76E-17	2.18E-17	1.71E-17	1.32E-17	1.02E-17	7.72E-18	5.83E-18	4.36E-18	3.24E-18	2.39E-18	1.75E-18
5.46E-11	3.69E-11	2.48E-11	1.66E-11	1.10E-11	7.29E-12	4.80E-12	3.14E-12	2.05E-12	1.33E-12	8.61E-13	5.54E-13	3.56E-13	2.28E-13	1.45E-13
1.32E-17	1.15E-17	9.85E-18	8.34E-18	6.97E-18	5.75E-18	4.69E-18	3.79E-18	3.02E-18	2.39E-18	1.87E-18	1.45E-18	1.12E-18	8.52E-19	6.45E-19
1.69E-15	1.31E-15	1.01E-15	7.69E-16	5.80E-16	4.34E-16	3.22E-16	2.37E-16	1.73E-16	1.25E-16	9.01E-17	6.44E-17	4.57E-17	3.22E-17	2.26E-17
1.23E-14	9.28E-15	6.91E-15	5.11E-15	3.74E-15	2.72E-15	1.96E-15	1.40E-15	9.98E-16	7.05E-16	4.95E-16	3.45E-16	2.39E-16	1.65E-16	1.13E-16
3.44E-19	3.08E-19	2.71E-19	2.36E-19	2.02E-19	1.71E-19	1.43E-19	1.19E-19	9.69E-20	7.85E-20	6.29E-20	4.99E-20	3.92E-20	3.05E-20	2.36E-20
1.91E-18	1.68E-18	1.45E-18	1.24E-18	1.05E-18	8.72E-19	7.18E-19	5.85E-19	4.71E-19	3.76E-19	2.97E-19	2.32E-19	1.80E-19	1.38E-19	1.05E-19
2.31E-12	1.58E-12	1.07E-12	7.20E-13	4.83E-13	3.22E-13	2.13E-13	1.41E-13	9.24E-14	6.04E-14	3.93E-14	2.55E-14	1.65E-14	1.06E-14	6.79E-15
9.00E-13	6.13E-13	4.15E-13	2.79E-13	1.87E-13	1.24E-13	8.24E-14	5.43E-14	3.57E-14	2.33E-14	1.52E-14	9.82E-15	6.34E-15	4.08E-15	2.61E-15
1.11E-10	7.20E-11	4.65E-11	2.99E-11	1.92E-11	1.22E-11	7.78E-12	4.93E-12	3.11E-12	1.96E-12	1.23E-12	7.67E-13	4.78E-13	2.97E-13	1.84E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.54E-12	1.10E-12	7.87E-13	5.57E-13	3.91E-13	2.73E-13	1.89E-13	1.30E-13	8.93E-14	6.08E-14	4.12E-14	2.78E-14	1.86E-14	1.24E-14	8.26E-15
9.45E-16	7.52E-16	5.92E-16	4.62E-16	3.56E-16	2.72E-16	2.06E-16	1.55E-16	1.15E-16	8.52E-17	6.25E-17	4.55E-17	3.29E-17	2.36E-17	1.68E-17
1.95E-15	1.56E-15	1.23E-15	9.66E-16	7.49E-16	5.75E-16	4.38E-16	3.30E-16	2.47E-16	1.83E-16	1.35E-16	9.84E-17	7.14E-17	5.14E-17	3.68E-17
4.67E-09	2.97E-09	1.88E-09	1.19E-09	7.46E-10	4.68E-10	2.92E-10	1.82E-10	1.13E-10	6.98E-11	4.31E-11	2.65E-11	1.63E-11	9.98E-12	6.10E-12
2.71E-08	1.66E-08	1.02E-08	6.19E-09	3.76E-09	2.28E-09	1.38E-09	8.33E-10	5.02E-10	3.02E-10	1.81E-10	1.09E-10	6.49E-11	3.88E-11	2.31E-11
7.79E-20	7.21E-20	6.56E-20	5.89E-20	5.21E-20	4.53E-20	3.91E-20	3.32E-20	2.79E-20	2.32E-20	1.91E-20	1.55E-20	1.25E-20	9.97E-21	7.89E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-23	1.01E-23	1.15E-23	1.31E-23	1.30E-23	1.06E-23	1.02E-23	9.60E-24	8.39E-24	7.45E-24	6.51E-24

2.18E-13	1.51E-13	1.05E-13	7.19E-14	4.91E-14	3.33E-14	2.25E-14	1.51E-14	1.01E-14	6.70E-15	4.43E-15	2.92E-15	1.91E-15	1.25E-15	8.13E-16
5.46E-12	3.73E-12	2.53E-12	1.71E-12	1.15E-12	7.66E-13	5.09E-13	3.36E-13	2.21E-13	1.45E-13	9.45E-14	6.13E-14	3.97E-14	2.56E-14	1.64E-14
5.97E-15	4.69E-15	3.64E-15	2.80E-15	2.14E-15	1.61E-15	1.21E-15	8.95E-16	6.59E-16	4.82E-16	3.50E-16	2.52E-16	1.80E-16	1.28E-16	9.05E-17
6.47E-14	5.10E-14	3.98E-14	3.07E-14	2.35E-14	1.78E-14	1.33E-14	9.93E-15	7.33E-15	5.37E-15	3.91E-15	2.82E-15	2.02E-15	1.44E-15	1.02E-15
6.1E-08	**3.76E-08**	**2.31E-08**	**1.41E-08**	**8.63E-09**	**5.26E-09**	**3.2E-09**	**1.94E-09**	**1.17E-09**	**7.07E-10**	**4.26E-10**	**2.56E-10**	**1.54E-10**	**9.21E-11**	**5.51E-11**

750	760	770	780	790	800	810	820	830	840	850	860	870	880	890
3.43E-16	2.46E-16	1.75E-16	1.24E-16	8.71E-17	6.10E-17	4.25E-17	2.94E-17	2.03E-17	1.39E-17	9.51E-18	6.47E-18	4.38E-18	2.96E-18	1.99E-18
1.85E-12	1.11E-12	6.63E-13	3.96E-13	2.36E-13	1.41E-13	8.37E-14	4.97E-14	2.95E-14	1.75E-14	1.04E-14	6.12E-15	3.62E-15	2.13E-15	1.26E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-29	2.40E-29	1.37E-29	1.56E-29
4.77E-12	2.93E-12	1.80E-12	1.10E-12	6.73E-13	4.11E-13	2.50E-13	1.52E-13	9.20E-14	5.57E-14	3.37E-14	2.03E-14	1.22E-14	7.36E-15	4.42E-15
9.68E-20	7.10E-20	5.18E-20	3.75E-20	2.70E-20	1.93E-20	1.37E-20	9.70E-21	6.83E-21	4.78E-21	3.33E-21	2.31E-21	1.59E-21	1.09E-21	7.47E-22
3.61E-18	2.59E-18	1.84E-18	1.30E-18	9.16E-19	6.41E-19	4.46E-19	3.09E-19	2.13E-19	1.46E-19	9.95E-20	6.76E-20	4.58E-20	3.08E-20	2.07E-20
4.75E-18	3.36E-18	2.37E-18	1.66E-18	1.16E-18	8.00E-19	5.52E-19	3.79E-19	2.59E-19	1.76E-19	1.19E-19	8.02E-20	5.39E-20	3.60E-20	2.40E-20
1.13E-12	6.71E-13	3.97E-13	2.35E-13	1.39E-13	8.20E-14	4.83E-14	2.85E-14	1.67E-14	9.83E-15	5.77E-15	3.38E-15	1.98E-15	1.16E-15	6.78E-16
7.32E-14	4.62E-14	2.90E-14	1.82E-14	1.14E-14	7.09E-15	4.41E-15	2.74E-15	1.69E-15	1.05E-15	6.45E-16	3.97E-16	2.44E-16	1.49E-16	9.13E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.60E-16	4.48E-16	3.02E-16	2.03E-16	1.36E-16	9.05E-17	6.01E-17	3.97E-17	2.62E-17	1.72E-17	1.12E-17	7.31E-18	4.75E-18	3.08E-18	1.99E-18
4.54E-19	3.31E-19	2.39E-19	1.72E-19	1.23E-19	8.75E-20	6.19E-20	4.35E-20	3.04E-20	2.12E-20	1.47E-20	1.01E-20	6.94E-21	4.74E-21	3.23E-21
5.14E-14	3.21E-14	2.00E-14	1.25E-14	7.72E-15	4.78E-15	2.95E-15	1.82E-15	1.12E-15	6.85E-16	4.19E-16	2.56E-16	1.56E-16	9.52E-17	5.79E-17
2.88E-18	2.05E-18	1.46E-18	1.03E-18	7.21E-19	5.03E-19	3.49E-19	2.41E-19	1.66E-19	1.14E-19	7.73E-20	5.25E-20	3.54E-20	2.39E-20	1.60E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.94E-29	5.09E-29	5.79E-29	3.30E-29	2.82E-29
1.29E-16	8.52E-17	5.61E-17	3.68E-17	2.40E-17	1.56E-17	1.02E-17	6.56E-18	4.23E-18	2.72E-18	1.74E-18	1.11E-18	7.07E-19	4.49E-19	2.84E-19
1.94E-15	1.29E-15	8.53E-16	5.63E-16	3.70E-16	2.42E-16	1.58E-16	1.03E-16	6.65E-17	4.29E-17	2.76E-17	1.77E-17	1.13E-17	7.24E-18	4.61E-18
2.17E-18	1.55E-18	1.10E-18	7.76E-19	5.44E-19	3.80E-19	2.63E-19	1.82E-19	1.25E-19	8.54E-20	5.81E-20	3.94E-20	2.66E-20	1.78E-20	1.19E-20
5.45E-13	3.24E-13	1.92E-13	1.14E-13	6.75E-14	3.99E-14	2.36E-14	1.39E-14	8.19E-15	4.82E-15	2.83E-15	1.66E-15	9.75E-16	5.71E-16	3.34E-16
3.20E-19	2.33E-19	1.69E-19	1.22E-19	8.69E-20	6.18E-20	4.37E-20	3.08E-20	2.15E-20	1.50E-20	1.04E-20	7.16E-21	4.91E-21	3.36E-21	2.29E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.77E-16	3.76E-16	2.43E-16	1.57E-16	1.01E-16	6.49E-17	4.15E-17	2.64E-17	1.68E-17	1.07E-17	6.73E-18	4.25E-18	2.67E-18	1.68E-18	1.05E-18
2.26E-14	1.46E-14	9.34E-15	5.98E-15	3.81E-15	2.42E-15	1.53E-15	9.69E-16	6.11E-16	3.84E-16	2.41E-16	1.51E-16	9.40E-17	5.86E-17	3.64E-17
4.38E-13	2.66E-13	1.61E-13	9.76E-14	5.89E-14	3.55E-14	2.14E-14	1.28E-14	7.70E-15	4.61E-15	2.76E-15	1.65E-15	9.82E-16	5.85E-16	3.48E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.55E-27	3.73E-27	4.24E-27	3.62E-27	2.06E-27	1.96E-27	1.56E-27	1.39E-27	1.23E-27	9.86E-28	8.18E-28
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.53E-16	1.69E-16	1.12E-16	7.44E-17	4.91E-17	3.23E-17	2.11E-17	1.38E-17	8.95E-18	5.80E-18	3.74E-18	2.41E-18	1.55E-18	9.89E-19	6.31E-19
4.32E-16	2.87E-16	1.90E-16	1.25E-16	8.21E-17	5.37E-17	3.50E-17	2.27E-17	1.47E-17	9.47E-18	6.09E-18	3.90E-18	2.49E-18	1.59E-18	1.01E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.73E-22	3.86E-22	3.13E-22	2.51E-22	2.00E-22	1.57E-22	1.22E-22	9.52E-23	7.34E-23	5.61E-23	4.26E-23	3.21E-23	2.41E-23	1.79E-23	1.33E-23
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.57E-24	1.34E-24	1.17E-24	1.01E-24	8.71E-25	7.30E-25	6.12E-25	5.09E-25	4.19E-25	3.41E-25	2.76E-25	2.21E-25	1.73E-25	1.38E-25	1.08E-25
4.76E-15	3.20E-15	2.14E-15	1.42E-15	9.44E-16	6.24E-16	4.10E-16	2.69E-16	1.76E-16	1.14E-16	7.42E-17	4.80E-17	3.10E-17	1.99E-17	1.28E-17
1.42E-17	9.78E-18	6.73E-18	4.60E-18	3.14E-18	2.13E-18	1.44E-18	9.64E-19	6.45E-19	4.30E-19	2.86E-19	1.89E-19	1.25E-19	8.19E-20	5.36E-20
1.47E-16	1.04E-16	7.30E-17	5.11E-17	3.56E-17	2.46E-17	1.70E-17	1.16E-17	7.94E-18	5.39E-18	3.65E-18	2.46E-18	1.65E-18	1.10E-18	7.34E-19

1.79E-20	1.42E-20	1.11E-20	8.66E-21	6.70E-21	5.14E-21	3.91E-21	2.95E-21	2.21E-21	1.65E-21	1.22E-21	8.99E-22	6.57E-22	4.78E-22	3.46E-22
7.69E-17	5.45E-17	3.84E-17	2.69E-17	1.88E-17	1.30E-17	8.98E-18	6.17E-18	4.21E-18	2.87E-18	1.94E-18	1.31E-18	8.79E-19	5.88E-19	3.92E-19
3.55E-17	2.46E-17	1.70E-17	1.17E-17	7.97E-18	5.42E-18	3.67E-18	2.48E-18	1.66E-18	1.11E-18	7.40E-19	4.91E-19	3.25E-19	2.14E-19	1.40E-19
3.65E-21	2.99E-21	2.42E-21	1.95E-21	1.55E-21	1.20E-21	9.47E-22	7.38E-22	5.67E-22	4.38E-22	3.32E-22	2.50E-22	1.87E-22	1.40E-22	1.03E-22
1.92E-14	1.22E-14	7.75E-15	4.90E-15	3.09E-15	1.94E-15	1.22E-15	7.63E-16	4.76E-16	2.96E-16	1.84E-16	1.14E-16	7.06E-17	4.36E-17	2.68E-17
4.20E-18	3.02E-18	2.16E-18	1.53E-18	1.08E-18	7.60E-19	5.31E-19	3.69E-19	2.55E-19	1.75E-19	1.20E-19	8.19E-20	5.56E-20	3.76E-20	2.53E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	2.61E-25	1.49E-25	2.54E-25	2.41E-25	1.92E-25	2.03E-25	1.95E-25	1.92E-25	1.81E-25	1.72E-25	1.59E-25	1.46E-25	1.33E-25	1.19E-25
4.21E-14	2.72E-14	1.76E-14	1.13E-14	7.22E-15	4.61E-15	2.93E-15	1.86E-15	1.18E-15	7.42E-16	4.67E-16	2.93E-16	1.84E-16	1.15E-16	7.15E-17
1.99E-19	1.48E-19	1.09E-19	7.95E-20	5.78E-20	4.18E-20	3.00E-20	2.14E-20	1.52E-20	1.07E-20	7.54E-21	5.27E-21	3.67E-21	2.54E-21	1.75E-21
1.20E-13	7.34E-14	4.49E-14	2.74E-14	1.67E-14	1.01E-14	6.15E-15	3.73E-15	2.25E-15	1.36E-15	8.19E-16	4.93E-16	2.96E-16	1.78E-16	1.07E-16
4.39E-14	2.95E-14	1.97E-14	1.31E-14	8.65E-15	5.70E-15	3.74E-15	2.45E-15	1.60E-15	1.04E-15	6.71E-16	4.33E-16	2.78E-16	1.79E-16	1.14E-16
5.05E-14	3.19E-14	2.01E-14	1.26E-14	7.90E-15	4.94E-15	3.08E-15	1.91E-15	1.19E-15	7.34E-16	4.53E-16	2.79E-16	1.72E-16	1.05E-16	6.45E-17
3.77E-25	3.46E-25	3.19E-25	2.83E-25	2.53E-25	2.20E-25	1.91E-25	1.64E-25	1.40E-25	1.18E-25	9.81E-26	8.12E-26	6.66E-26	5.42E-26	4.37E-26
3.29E-11	1.96E-11	1.17E-11	6.93E-12	4.11E-12	2.44E-12	1.44E-12	8.53E-13	5.04E-13	2.97E-13	1.75E-13	1.03E-13	6.06E-14	3.56E-14	2.09E-14
2.18E-15	1.39E-15	8.81E-16	5.58E-16	3.52E-16	2.22E-16	1.39E-16	8.73E-17	5.45E-17	3.40E-17	2.11E-17	1.31E-17	8.11E-18	5.01E-18	3.09E-18
1.08E-14	6.70E-15	4.16E-15	2.58E-15	1.60E-15	9.84E-16	6.06E-16	3.72E-16	2.28E-16	1.40E-16	8.52E-17	5.19E-17	3.16E-17	1.92E-17	1.16E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.93E-26	1.67E-26	9.50E-27	1.08E-26	1.23E-26	8.76E-27	7.98E-27	6.81E-27	5.81E-27	4.96E-27	4.19E-27	3.51E-27	2.92E-27	2.39E-27	1.97E-27
5.95E-25	5.36E-25	4.66E-25	4.21E-25	3.69E-25	3.23E-25	2.76E-25	2.36E-25	1.98E-25	1.66E-25	1.37E-25	1.13E-25	9.15E-26	7.39E-26	5.92E-26
1.65E-17	1.14E-17	7.78E-18	5.31E-18	3.61E-18	2.44E-18	1.64E-18	1.10E-18	7.35E-19	4.89E-19	3.24E-19	2.14E-19	1.41E-19	9.22E-20	6.02E-20
9.54E-19	6.89E-19	4.95E-19	3.53E-19	2.51E-19	1.77E-19	1.24E-19	8.66E-20	6.02E-20	4.16E-20	2.86E-20	1.96E-20	1.34E-20	9.08E-21	6.14E-21
3.47E-16	2.36E-16	1.60E-16	1.07E-16	7.19E-17	4.80E-17	3.19E-17	2.11E-17	1.39E-17	9.13E-18	5.98E-18	3.90E-18	2.53E-18	1.64E-18	1.06E-18
1.92E-21	1.59E-21	1.30E-21	1.05E-21	8.47E-22	6.74E-22	5.33E-22	4.11E-22	3.21E-22	2.48E-22	1.90E-22	1.44E-22	1.09E-22	8.18E-23	6.10E-23
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.70E-18	6.27E-18	4.49E-18	3.20E-18	2.27E-18	1.60E-18	1.12E-18	7.78E-19	5.39E-19	3.71E-19	2.55E-19	1.74E-19	1.18E-19	8.02E-20	5.41E-20
3.22E-21	2.61E-21	2.07E-21	1.64E-21	1.28E-21	9.97E-22	7.70E-22	5.89E-22	4.48E-22	3.39E-22	2.54E-22	1.89E-22	1.40E-22	1.03E-22	7.54E-23
5.31E-15	3.48E-15	2.27E-15	1.48E-15	9.58E-16	6.19E-16	3.98E-16	2.56E-16	1.63E-16	1.04E-16	6.63E-17	4.21E-17	2.66E-17	1.68E-17	1.06E-17
1.91E-26	2.17E-26	1.86E-26	1.76E-26	1.60E-26	1.48E-26	1.23E-26	1.11E-26	9.46E-27	8.14E-27	6.81E-27	5.74E-27	4.77E-27	3.92E-27	3.20E-27
8.00E-18	5.81E-18	4.19E-18	3.00E-18	2.14E-18	1.51E-18	1.07E-18	7.47E-19	5.21E-19	3.61E-19	2.49E-19	1.71E-19	1.17E-19	7.98E-20	5.42E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.84E-15	1.21E-15	7.97E-16	5.21E-16	3.39E-16	2.20E-16	1.42E-16	9.18E-17	5.90E-17	3.78E-17	2.41E-17	1.54E-17	9.76E-18	6.18E-18	3.90E-18
1.58E-19	1.18E-19	8.78E-20	6.46E-20	4.73E-20	3.44E-20	2.48E-20	1.78E-20	1.27E-20	9.04E-21	6.39E-21	4.49E-21	3.14E-21	2.18E-21	1.51E-21
5.95E-25	5.23E-25	4.47E-25	3.84E-25	3.26E-25	2.75E-25	2.29E-25	1.89E-25	1.55E-25	1.22E-25	9.91E-26	7.85E-26	6.27E-26	4.92E-26	3.82E-26
6.09E-17	4.12E-17	2.78E-17	1.86E-17	1.24E-17	8.27E-18	5.48E-18	3.62E-18	2.38E-18	1.56E-18	1.02E-18	6.61E-19	4.29E-19	2.77E-19	1.79E-19
7.71E-16	5.04E-16	3.28E-16	2.12E-16	1.37E-16	8.83E-17	5.67E-17	3.62E-17	2.31E-17	1.47E-17	9.32E-18	5.89E-18	3.72E-18	2.34E-18	1.47E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.74E-23	1.44E-23	1.18E-23	9.60E-24	7.73E-24	6.17E-24	4.89E-24	3.83E-24	2.99E-24	2.31E-24	1.78E-24	1.35E-24	1.03E-24	7.72E-25	5.78E-25
6.08E-14	3.97E-14	2.59E-14	1.68E-14	1.09E-14	7.00E-15	4.50E-15	2.88E-15	1.84E-15	1.17E-15	7.43E-16	4.70E-16	2.97E-16	1.87E-16	1.18E-16
4.92E-14	3.21E-14	2.08E-14	1.35E-14	8.67E-15	5.57E-15	3.56E-15	2.27E-15	1.45E-15	9.17E-16	5.80E-16	3.66E-16	2.30E-16	1.44E-16	9.04E-17

2.28E-25	1.86E-25	1.69E-25	1.44E-25	1.30E-25	1.13E-25	9.54E-26	8.02E-26	6.72E-26	5.58E-26	4.57E-26	3.72E-26	3.01E-26	2.41E-26	1.92E-26
9.64E-19	6.85E-19	4.84E-19	3.40E-19	2.38E-19	1.65E-19	1.14E-19	7.87E-20	5.39E-20	3.68E-20	2.50E-20	1.69E-20	1.14E-20	7.62E-21	5.09E-21
2.92E-15	1.98E-15	1.34E-15	8.99E-16	6.02E-16	4.01E-16	2.66E-16	1.76E-16	1.16E-16	7.60E-17	4.97E-17	3.24E-17	2.10E-17	1.36E-17	8.78E-18
1.73E-15	1.12E-15	7.18E-16	4.60E-16	2.94E-16	1.87E-16	1.19E-16	7.51E-17	4.74E-17	2.99E-17	1.87E-17	1.17E-17	7.34E-18	4.57E-18	2.85E-18
4.19E-20	3.17E-20	2.38E-20	1.77E-20	1.31E-20	9.61E-21	7.01E-21	5.09E-21	3.67E-21	2.63E-21	1.88E-21	1.33E-21	9.38E-22	6.58E-22	4.60E-22
4.97E-18	3.56E-18	2.53E-18	1.79E-18	1.26E-18	8.77E-19	6.10E-19	4.22E-19	2.90E-19	1.99E-19	1.36E-19	9.21E-20	6.23E-20	4.19E-20	2.81E-20
4.63E-24	3.97E-24	3.37E-24	2.83E-24	2.36E-24	1.94E-24	1.55E-24	1.26E-24	1.01E-24	8.06E-25	6.36E-25	4.96E-25	3.86E-25	2.98E-25	2.28E-25
5.23E-19	3.72E-19	2.63E-19	1.84E-19	1.29E-19	8.95E-20	6.19E-20	4.26E-20	2.92E-20	1.99E-20	1.35E-20	9.11E-21	6.13E-21	4.11E-21	2.74E-21
7.10E-18	5.13E-18	3.69E-18	2.63E-18	1.87E-18	1.32E-18	9.26E-19	6.47E-19	4.50E-19	3.11E-19	2.14E-19	1.47E-19	9.99E-20	6.79E-20	4.59E-20
4.75E-17	3.30E-17	2.27E-17	1.56E-17	1.07E-17	7.25E-18	4.91E-18	3.31E-18	2.22E-18	1.48E-18	9.86E-19	6.54E-19	4.32E-19	2.84E-19	1.87E-19
1.72E-25	1.57E-25	1.45E-25	1.27E-25	1.16E-25	9.88E-26	8.67E-26	7.40E-26	6.30E-26	5.32E-26	4.44E-26	3.68E-26	3.02E-26	2.45E-26	1.98E-26
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E-18	1.16E-18	8.38E-19	6.02E-19	4.30E-19	3.05E-19	2.15E-19	1.51E-19	1.06E-19	7.34E-20	5.08E-20	3.50E-20	2.40E-20	1.64E-20	1.11E-20
1.64E-20	1.27E-20	9.70E-21	7.37E-21	5.56E-21	4.16E-21	3.09E-21	2.28E-21	1.68E-21	1.22E-21	8.86E-22	6.38E-22	4.57E-22	3.26E-22	2.31E-22
3.31E-19	2.47E-19	1.83E-19	1.35E-19	9.88E-20	7.18E-20	5.19E-20	3.73E-20	2.66E-20	1.89E-20	1.34E-20	9.40E-21	6.57E-21	4.58E-21	3.17E-21
5.63E-19	4.16E-19	3.06E-19	2.23E-19	1.62E-19	1.17E-19	8.37E-20	5.96E-20	4.22E-20	2.98E-20	2.09E-20	1.46E-20	1.01E-20	6.98E-21	4.80E-21
3.97E-13	2.47E-13	1.54E-13	9.54E-14	5.90E-14	3.64E-14	2.24E-14	1.38E-14	8.46E-15	5.18E-15	3.17E-15	1.93E-15	1.18E-15	7.14E-16	4.33E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.42E-17	1.00E-17	7.05E-18	4.93E-18	3.42E-18	2.37E-18	1.63E-18	1.11E-18	7.59E-19	5.15E-19	3.48E-19	2.34E-19	1.57E-19	1.05E-19	6.95E-20
7.79E-15	5.05E-15	3.26E-15	2.10E-15	1.35E-15	8.61E-16	5.49E-16	3.49E-16	2.21E-16	1.40E-16	8.80E-17	5.53E-17	3.46E-17	2.17E-17	1.35E-17
4.83E-12	2.90E-12	1.74E-12	1.04E-12	6.22E-13	3.71E-13	2.21E-13	1.32E-13	7.83E-14	4.65E-14	2.76E-14	1.63E-14	9.66E-15	5.71E-15	3.37E-15
1.29E-15	8.37E-16	5.40E-16	3.47E-16	2.23E-16	1.42E-16	9.08E-17	5.77E-17	3.65E-17	2.31E-17	1.46E-17	9.14E-18	5.73E-18	3.59E-18	2.24E-18
1.51E-13	9.23E-14	5.62E-14	3.42E-14	2.08E-14	1.26E-14	7.61E-15	4.60E-15	2.77E-15	1.67E-15	1.00E-15	6.02E-16	3.61E-16	2.16E-16	1.29E-16
3.51E-21	3.00E-21	2.54E-21	2.12E-21	1.76E-21	1.45E-21	1.18E-21	9.50E-22	7.60E-22	4.08E-22	3.63E-22	3.08E-22	2.52E-22	1.80E-22	1.46E-22
8.96E-19	**6.49E-19**	**4.67E-19**	**3.34E-19**	**2.37E-19**	**1.68E-19**	**1.18E-19**	**8.23E-20**	**5.72E-20**	**3.96E-20**	**2.73E-20**	**1.87E-20**	**1.28E-20**	**8.67E-21**	**5.87E-21**
0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-26	6.87E-27	7.82E-27	4.45E-27	5.07E-27	4.33E-27	3.69E-27	3.27E-27	2.79E-27	2.27E-27	1.98E-27
4.62E-20	3.52E-20	2.67E-20	2.01E-20	1.50E-20	1.11E-20	8.18E-21	5.99E-21	4.36E-21	3.15E-21	2.26E-21	1.62E-21	1.15E-21	8.14E-22	5.73E-22
2.79E-13	1.68E-13	1.02E-13	6.12E-14	3.68E-14	2.21E-14	1.32E-14	7.92E-15	4.74E-15	2.83E-15	1.69E-15	1.00E-15	5.96E-16	3.54E-16	2.10E-16
1.82E-13	1.13E-13	6.93E-14	4.26E-14	2.61E-14	1.60E-14	9.75E-15	5.94E-15	3.61E-15	2.19E-15	1.33E-15	8.04E-16	4.85E-16	2.93E-16	1.76E-16
1.77E-19	1.30E-19	9.45E-20	6.85E-20	4.93E-20	3.53E-20	2.51E-20	1.78E-20	1.25E-20	8.76E-21	6.10E-21	4.23E-21	2.92E-21	2.01E-21	1.37E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-27	7.35E-28	8.36E-28	7.14E-28	4.07E-28	3.86E-28	3.51E-28
6.45E-14	4.08E-14	2.58E-14	1.62E-14	1.02E-14	6.37E-15	3.97E-15	2.47E-15	1.54E-15	9.52E-16	5.89E-16	3.63E-16	2.24E-16	1.37E-16	8.42E-17
5.15E-14	3.21E-14	2.00E-14	1.24E-14	7.68E-15	4.74E-15	2.92E-15	1.80E-15	1.10E-15	6.74E-16	4.12E-16	2.51E-16	1.53E-16	9.30E-17	5.64E-17
1.24E-14	8.09E-15	5.24E-15	3.38E-15	2.17E-15	1.39E-15	8.90E-16	5.67E-16	3.60E-16	2.28E-16	1.44E-16	9.08E-17	5.71E-17	3.58E-17	2.24E-17
1.86E-14	1.19E-14	7.55E-15	4.80E-15	3.04E-15	1.92E-15	1.21E-15	7.58E-16	4.75E-16	2.96E-16	1.85E-16	1.15E-16	7.13E-17	4.42E-17	2.73E-17
2.96E-13	1.82E-13	1.11E-13	6.79E-14	4.14E-14	2.52E-14	1.53E-14	9.26E-15	5.60E-15	3.39E-15	2.04E-15	1.23E-15	7.39E-16	4.44E-16	2.66E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.68E-16	5.61E-16	3.61E-16	2.32E-16	1.48E-16	9.43E-17	5.99E-17	3.79E-17	2.40E-17	1.51E-17	9.48E-18	5.94E-18	3.71E-18	2.32E-18	1.44E-18
2.58E-17	1.76E-17	1.19E-17	8.04E-18	5.40E-18	3.61E-18	2.40E-18	1.59E-18	1.05E-18	6.92E-19	4.53E-19	2.96E-19	1.93E-19	1.25E-19	8.09E-20

1.19E-13	7.65E-14	4.89E-14	3.12E-14	1.98E-14	1.26E-14	7.94E-15	5.00E-15	3.14E-15	1.97E-15	1.23E-15	7.68E-16	4.78E-16	2.97E-16	1.84E-16
6.08E-17	4.11E-17	2.77E-17	1.85E-17	1.24E-17	8.21E-18	5.43E-18	3.58E-18	2.35E-18	1.54E-18	1.00E-18	6.51E-19	4.22E-19	2.72E-19	1.75E-19
2.60E-22	2.22E-22	1.87E-22	1.56E-22	1.00E-22	8.91E-23	7.62E-23	5.81E-23	4.87E-23	3.82E-23	2.91E-23	2.31E-23	1.76E-23	1.35E-23	1.03E-23
3.17E-15	2.17E-15	1.47E-15	9.95E-16	6.70E-16	4.49E-16	3.00E-16	1.99E-16	1.32E-16	8.69E-17	5.71E-17	3.73E-17	2.44E-17	1.58E-17	1.03E-17
4.25E-24	3.71E-24	3.20E-24	2.73E-24	2.29E-24	1.91E-24	1.58E-24	1.19E-24	9.94E-25	8.14E-25	6.39E-25	5.04E-25	3.97E-25	3.15E-25	2.43E-25
5.33E-15	3.35E-15	2.10E-15	1.31E-15	8.17E-16	5.08E-16	3.15E-16	1.95E-16	1.20E-16	7.40E-17	4.55E-17	2.79E-17	1.71E-17	1.04E-17	6.36E-18
2.65E-13	1.58E-13	9.42E-14	5.61E-14	3.33E-14	1.98E-14	1.17E-14	6.93E-15	4.10E-15	2.42E-15	1.43E-15	8.41E-16	4.95E-16	2.91E-16	1.71E-16
6.04E-15	3.94E-15	2.56E-15	1.66E-15	1.07E-15	6.90E-16	4.43E-16	2.83E-16	1.81E-16	1.15E-16	7.28E-17	4.60E-17	2.90E-17	1.83E-17	1.15E-17
9.79E-14	6.19E-14	3.90E-14	2.45E-14	1.54E-14	9.59E-15	5.98E-15	3.72E-15	2.31E-15	1.43E-15	8.81E-16	5.43E-16	3.34E-16	2.05E-16	1.26E-16
2.05E-17	1.43E-17	9.99E-18	6.93E-18	4.78E-18	3.28E-18	2.24E-18	1.52E-18	1.03E-18	6.94E-19	4.66E-19	3.11E-19	2.07E-19	1.38E-19	9.10E-20
1.96E-17	1.38E-17	9.64E-18	6.71E-18	4.64E-18	3.20E-18	2.19E-18	1.50E-18	1.02E-18	6.86E-19	4.62E-19	3.10E-19	2.07E-19	1.38E-19	9.14E-20
1.04E-16	6.97E-17	4.66E-17	3.11E-17	2.06E-17	1.36E-17	8.95E-18	5.87E-18	3.83E-18	2.50E-18	1.62E-18	1.05E-18	6.75E-19	4.34E-19	2.78E-19
5.08E-17	3.57E-17	2.49E-17	1.73E-17	1.19E-17	8.17E-18	5.58E-18	3.80E-18	2.57E-18	1.73E-18	1.16E-18	7.79E-19	5.19E-19	3.44E-19	2.28E-19
7.76E-22	6.27E-22	5.02E-22	3.99E-22	3.14E-22	2.45E-22	1.90E-22	1.46E-22	1.11E-22	8.44E-23	6.35E-23	4.75E-23	3.53E-23	2.61E-23	1.91E-23
5.13E-23	4.20E-23	3.43E-23	2.76E-23	2.20E-23	1.74E-23	1.37E-23	1.07E-23	8.25E-24	6.33E-24	4.83E-24	3.65E-24	2.74E-24	2.05E-24	1.52E-24
2.27E-19	1.68E-19	1.23E-19	8.98E-20	6.50E-20	4.68E-20	3.35E-20	2.38E-20	1.68E-20	1.18E-20	8.29E-21	5.78E-21	4.00E-21	2.76E-21	1.90E-21
1.95E-17	1.34E-17	9.11E-18	6.19E-18	4.19E-18	2.82E-18	1.89E-18	1.26E-18	8.38E-19	5.55E-19	3.66E-19	2.41E-19	1.58E-19	1.03E-19	6.70E-20
1.90E-20	1.52E-20	1.20E-20	9.40E-21	7.32E-21	5.65E-21	4.33E-21	3.30E-21	2.49E-21	1.87E-21	1.39E-21	1.03E-21	7.57E-22	5.53E-22	4.02E-22
2.33E-23	2.07E-23	1.84E-23	1.61E-23	1.40E-23	1.20E-23	1.02E-23	8.59E-24	7.15E-24	5.90E-24	4.83E-24	3.92E-24	3.15E-24	2.52E-24	1.99E-24
4.36E-16	2.94E-16	1.98E-16	1.32E-16	8.82E-17	5.85E-17	3.87E-17	2.55E-17	1.67E-17	1.09E-17	7.11E-18	4.61E-18	2.99E-18	1.93E-18	1.24E-18
1.05E-18	7.49E-19	5.31E-19	3.74E-19	2.62E-19	1.83E-19	1.27E-19	8.74E-20	6.00E-20	4.10E-20	2.79E-20	1.89E-20	1.28E-20	8.57E-21	5.74E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.42E-18	1.77E-18	1.28E-18	9.23E-19	6.61E-19	4.71E-19	3.34E-19	2.35E-19	1.65E-19	1.15E-19	7.95E-20	5.49E-20	3.77E-20	2.58E-20	1.76E-20
1.54E-19	1.15E-19	8.49E-20	6.23E-20	4.55E-20	3.30E-20	2.38E-20	1.70E-20	1.21E-20	8.59E-21	6.05E-21	4.24E-21	2.96E-21	2.06E-21	1.42E-21
7.66E-19	5.78E-19	4.34E-19	3.23E-19	2.39E-19	1.75E-19	1.28E-19	9.26E-20	6.67E-20	4.78E-20	3.41E-20	2.41E-20	1.70E-20	1.19E-20	8.33E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.10E-24	4.42E-24	3.77E-24	3.19E-24	2.67E-24	2.21E-24	1.82E-24	1.48E-24	1.20E-24	9.57E-25	7.60E-25	5.99E-25	4.68E-25	3.63E-25	2.80E-25
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.24E-16	8.58E-17	5.91E-17	4.05E-17	2.76E-17	1.88E-17	1.27E-17	8.52E-18	5.71E-18	3.81E-18	2.53E-18	1.67E-18	1.10E-18	7.26E-19	4.75E-19
1.00E-13	6.19E-14	3.80E-14	2.33E-14	1.43E-14	8.72E-15	5.31E-15	3.23E-15	1.96E-15	1.19E-15	7.20E-16	4.35E-16	2.63E-16	1.58E-16	9.52E-17
1.77E-18	1.25E-18	8.81E-19	6.17E-19	4.30E-19	2.98E-19	2.05E-19	1.41E-19	9.60E-20	6.52E-20	4.41E-20	2.97E-20	2.00E-20	1.33E-20	8.89E-21
4.30E-22	3.52E-22	2.88E-22	2.31E-22	1.85E-22	1.46E-22	1.15E-22	8.94E-23	6.91E-23	5.31E-23	4.04E-23	3.06E-23	2.30E-23	1.72E-23	1.28E-23
1.39E-14	8.92E-15	5.73E-15	3.66E-15	2.34E-15	1.49E-15	9.42E-16	5.96E-16	3.76E-16	2.36E-16	1.48E-16	9.27E-17	5.78E-17	3.60E-17	2.24E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.60E-16	3.04E-16	2.00E-16	1.31E-16	8.54E-17	5.55E-17	3.60E-17	2.32E-17	1.49E-17	9.59E-18	6.13E-18	3.91E-18	2.49E-18	1.58E-18	9.98E-19
3.67E-15	2.33E-15	1.48E-15	9.32E-16	5.86E-16	3.68E-16	2.30E-16	1.44E-16	8.97E-17	5.57E-17	3.46E-17	2.14E-17	1.32E-17	8.14E-18	5.01E-18
3.48E-15	2.25E-15	1.45E-15	9.32E-16	5.97E-16	3.81E-16	2.42E-16	1.54E-16	9.72E-17	6.13E-17	3.86E-17	2.42E-17	1.52E-17	9.46E-18	5.90E-18
5.81E-21	4.52E-21	3.49E-21	2.67E-21	2.03E-21	1.53E-21	1.14E-21	8.51E-22	6.28E-22	4.61E-22	3.36E-22	2.44E-22	1.76E-22	1.26E-22	8.99E-23

1.19E-19	9.01E-20	6.77E-20	5.05E-20	3.74E-20	2.75E-20	2.01E-20	1.46E-20	1.06E-20	7.58E-21	5.41E-21	3.84E-21	2.71E-21	1.91E-21	1.33E-21
4.20E-15	2.75E-15	1.79E-15	1.16E-15	7.51E-16	4.84E-16	3.11E-16	1.99E-16	1.27E-16	8.10E-17	5.14E-17	3.25E-17	2.06E-17	1.29E-17	8.13E-18
2.55E-15	1.69E-15	1.11E-15	7.31E-16	4.78E-16	3.12E-16	2.03E-16	1.31E-16	8.47E-17	5.45E-17	3.50E-17	2.24E-17	1.43E-17	9.07E-18	5.75E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-28	1.13E-28	1.29E-28	7.35E-29	8.37E-29
1.63E-14	1.08E-14	7.07E-15	4.62E-15	3.01E-15	1.96E-15	1.27E-15	8.17E-16	5.26E-16	3.37E-16	2.15E-16	1.37E-16	8.73E-17	5.53E-17	3.50E-17
3.36E-18	2.53E-18	1.89E-18	1.40E-18	1.03E-18	7.55E-19	5.49E-19	3.97E-19	2.85E-19	2.04E-19	1.45E-19	1.02E-19	7.18E-20	5.03E-20	3.50E-20
1.21E-14	7.68E-15	4.87E-15	3.07E-15	1.94E-15	1.22E-15	7.62E-16	4.77E-16	2.97E-16	1.85E-16	1.15E-16	7.10E-17	4.39E-17	2.71E-17	1.67E-17
6.94E-18	4.82E-18	3.33E-18	2.29E-18	1.57E-18	1.07E-18	7.24E-19	4.89E-19	3.28E-19	2.20E-19	1.47E-19	9.74E-20	6.44E-20	4.25E-20	2.79E-20
7.39E-13	4.47E-13	2.70E-13	1.62E-13	9.77E-14	5.86E-14	3.51E-14	2.10E-14	1.26E-14	7.50E-15	4.47E-15	2.66E-15	1.58E-15	9.40E-16	5.57E-16
8.99E-14	5.49E-14	3.35E-14	2.04E-14	1.24E-14	7.51E-15	4.55E-15	2.75E-15	1.66E-15	9.98E-16	6.00E-16	3.60E-16	2.16E-16	1.29E-16	7.72E-17
8.73E-26	9.94E-26	7.07E-26	8.05E-26	6.88E-26	6.26E-26	5.94E-26	5.24E-26	4.76E-26	4.19E-26	3.66E-26	3.17E-26	2.72E-26	2.31E-26	1.95E-26
5.80E-20	4.22E-20	3.04E-20	2.18E-20	1.56E-20	1.10E-20	7.79E-21	5.46E-21	3.81E-21	2.64E-21	1.83E-21	1.26E-21	8.59E-22	5.85E-22	3.97E-22
1.76E-23	1.44E-23	1.21E-23	9.99E-24	8.11E-24	6.54E-24	5.25E-24	4.16E-24	3.28E-24	2.56E-24	1.99E-24	1.53E-24	1.17E-24	8.86E-25	6.69E-25
6.34E-14	3.95E-14	2.45E-14	1.52E-14	9.38E-15	5.78E-15	3.56E-15	2.18E-15	1.34E-15	8.18E-16	4.99E-16	3.04E-16	1.85E-16	1.12E-16	6.79E-17
4.40E-21	3.43E-21	2.65E-21	2.03E-21	1.54E-21	1.17E-21	8.73E-22	6.50E-22	4.80E-22	3.53E-22	2.58E-22	1.87E-22	1.35E-22	9.67E-23	6.90E-23
2.80E-16	1.86E-16	1.23E-16	8.05E-17	5.27E-17	3.44E-17	2.23E-17	1.45E-17	9.33E-18	6.00E-18	3.85E-18	2.46E-18	1.57E-18	9.99E-19	6.33E-19
8.83E-19	6.32E-19	4.50E-19	3.18E-19	2.24E-19	1.56E-19	1.09E-19	7.54E-20	5.19E-20	3.56E-20	2.43E-20	1.65E-20	1.12E-20	7.54E-21	5.06E-21
3.17E-13	1.89E-13	1.12E-13	6.67E-14	3.96E-14	2.34E-14	1.39E-14	8.19E-15	4.83E-15	2.85E-15	1.68E-15	9.86E-16	5.80E-16	3.40E-16	2.00E-16
3.30E-14	2.06E-14	1.28E-14	7.98E-15	4.94E-15	3.06E-15	1.89E-15	1.16E-15	7.13E-16	4.37E-16	2.67E-16	1.63E-16	9.95E-17	6.05E-17	3.68E-17
3.39E-19	2.53E-19	1.88E-19	1.39E-19	1.01E-19	7.38E-20	5.33E-20	3.83E-20	2.74E-20	1.95E-20	1.37E-20	9.66E-21	6.76E-21	4.71E-21	3.26E-21
1.08E-13	6.59E-14	4.02E-14	2.45E-14	1.49E-14	9.07E-15	5.50E-15	3.33E-15	2.01E-15	1.21E-15	7.31E-16	4.39E-16	2.64E-16	1.58E-16	9.47E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.27E-18	9.19E-19	6.59E-19	4.70E-19	3.34E-19	2.35E-19	1.65E-19	1.15E-19	8.00E-20	5.53E-20	3.80E-20	2.60E-20	1.77E-20	1.20E-20	8.14E-21
9.22E-14	5.84E-14	3.69E-14	2.32E-14	1.46E-14	9.13E-15	5.70E-15	3.55E-15	2.21E-15	1.37E-15	8.48E-16	5.23E-16	3.23E-16	1.98E-16	1.22E-16
4.84E-19	3.61E-19	2.67E-19	1.96E-19	1.43E-19	1.04E-19	7.48E-20	5.36E-20	3.82E-20	2.71E-20	1.91E-20	1.34E-20	9.34E-21	6.48E-21	4.48E-21
1.58E-17	1.09E-17	7.53E-18	5.16E-18	3.53E-18	2.40E-18	1.62E-18	1.09E-18	7.31E-19	4.88E-19	3.25E-19	2.15E-19	1.42E-19	9.35E-20	6.13E-20
7.71E-17	5.24E-17	3.54E-17	2.38E-17	1.59E-17	1.06E-17	7.05E-18	4.66E-18	3.07E-18	2.02E-18	1.32E-18	8.59E-19	5.58E-19	3.62E-19	2.34E-19
1.81E-20	1.37E-20	1.04E-20	7.76E-21	5.77E-21	4.26E-21	3.13E-21	2.28E-21	1.65E-21	1.19E-21	8.53E-22	6.08E-22	4.31E-22	3.04E-22	2.13E-22
7.97E-20	5.99E-20	4.46E-20	3.30E-20	2.42E-20	1.77E-20	1.28E-20	9.25E-21	6.63E-21	4.73E-21	3.35E-21	2.36E-21	1.66E-21	1.16E-21	8.05E-22
4.34E-15	2.76E-15	1.75E-15	1.11E-15	7.00E-16	4.41E-16	2.77E-16	1.73E-16	1.08E-16	6.73E-17	4.18E-17	2.59E-17	1.60E-17	9.90E-18	6.10E-18
1.67E-15	1.06E-15	6.73E-16	4.26E-16	2.69E-16	1.69E-16	1.06E-16	6.63E-17	4.14E-17	2.58E-17	1.60E-17	9.92E-18	6.13E-18	3.79E-18	2.33E-18
1.14E-13	7.03E-14	4.32E-14	2.65E-14	1.63E-14	9.94E-15	6.07E-15	3.70E-15	2.25E-15	1.36E-15	8.26E-16	4.99E-16	3.01E-16	1.82E-16	1.09E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.47E-15	3.60E-15	2.36E-15	1.55E-15	1.01E-15	6.53E-16	4.22E-16	2.72E-16	1.75E-16	1.12E-16	7.15E-17	4.55E-17	2.89E-17	1.83E-17	1.16E-17
1.19E-17	8.41E-18	5.89E-18	4.11E-18	2.85E-18	1.97E-18	1.35E-18	9.21E-19	6.27E-19	4.24E-19	2.86E-19	1.92E-19	1.29E-19	8.57E-20	5.69E-20
2.62E-17	1.85E-17	1.30E-17	9.10E-18	6.33E-18	4.38E-18	3.01E-18	2.06E-18	1.41E-18	9.56E-19	6.46E-19	4.35E-19	2.92E-19	1.95E-19	1.30E-19
3.72E-12	2.26E-12	1.37E-12	8.33E-13	5.04E-13	3.04E-13	1.84E-13	1.11E-13	6.64E-14	3.98E-14	2.39E-14	1.43E-14	8.53E-15	5.09E-15	3.03E-15
1.38E-11	8.18E-12	4.85E-12	2.88E-12	1.70E-12	1.01E-12	5.95E-13	3.51E-13	2.07E-13	1.22E-13	7.16E-14	4.21E-14	2.47E-14	1.45E-14	8.49E-15
6.18E-21	4.80E-21	3.70E-21	2.83E-21	2.15E-21	1.62E-21	1.21E-21	9.02E-22	6.66E-22	4.89E-22	3.57E-22	2.59E-22	1.87E-22	1.34E-22	9.56E-23
5.62E-24	4.80E-24	4.05E-24	3.29E-24	2.75E-24	2.27E-24	1.84E-24	1.48E-24	1.18E-24	9.41E-25	7.38E-25	5.76E-25	4.47E-25	3.43E-25	2.62E-25

5.27E-16	3.40E-16	2.19E-16	1.40E-16	8.97E-17	5.72E-17	3.63E-17	2.30E-17	1.45E-17	9.16E-18	5.76E-18	3.61E-18	2.26E-18	1.41E-18	8.77E-19
1.05E-14	6.70E-15	4.26E-15	2.70E-15	1.70E-15	1.07E-15	6.75E-16	4.23E-16	2.64E-16	1.65E-16	1.03E-16	6.36E-17	3.94E-17	2.44E-17	1.50E-17
6.36E-17	4.44E-17	3.08E-17	2.13E-17	1.46E-17	1.00E-17	6.82E-18	4.62E-18	3.12E-18	2.10E-18	1.40E-18	9.36E-19	6.21E-19	4.11E-19	2.71E-19
7.19E-16	5.03E-16	3.50E-16	2.42E-16	1.67E-16	1.14E-16	7.80E-17	5.29E-17	3.58E-17	2.41E-17	1.61E-17	1.08E-17	7.16E-18	4.74E-18	3.13E-18
3.29E-11	**1.96E-11**	**1.17E-11**	**6.93E-12**	**4.11E-12**	**2.44E-12**	**1.44E-12**	**8.53E-13**	**5.04E-13**	**2.97E-13**	**1.75E-13**	**1.03E-13**	**6.06E-14**	**3.56E-14**	**2.09E-14**

900	910	920	930	940	950	960	970	980	990	1000	Max Concentration (pCi/L)	Water Intake (L/day)	Receptor Intake (pCi/year)
1.33E-18	8.86E-19	5.89E-19	3.90E-19	2.57E-19	1.69E-19	1.11E-19	7.26E-20	4.73E-20	3.08E-20	2.00E-20	7.00E-14	1.00E+01	2.56E-10
7.41E-16	4.36E-16	2.56E-16	1.50E-16	8.83E-17	5.18E-17	3.03E-17	1.78E-17	1.04E-17	6.07E-18	3.55E-18	3.87E-04	1.00E+01	1.41E+00
1.33E-29	1.26E-29	8.60E-30	7.35E-30	5.57E-30	4.76E-30	3.91E-30	3.00E-30	2.39E-30	1.86E-30	1.47E-30	4.22E-29	1.00E+01	1.54E-25
2.65E-15	1.59E-15	9.50E-16	5.68E-16	3.39E-16	2.02E-16	1.20E-16	7.16E-17	4.25E-17	2.52E-17	1.50E-17	3.15E-05	1.00E+01	1.15E-01
5.09E-22	3.45E-22	2.33E-22	1.57E-22	1.05E-22	7.03E-23	4.68E-23	3.11E-23	2.06E-23	1.36E-23	8.91E-24	7.88E-18	1.00E+01	2.88E-14
1.38E-20	9.22E-21	6.12E-21	4.05E-21	2.67E-21	1.76E-21	1.15E-21	7.51E-22	4.89E-22	3.18E-22	2.06E-22	7.20E-16	1.00E+01	2.63E-12
1.59E-20	1.05E-20	6.95E-21	4.57E-21	2.99E-21	1.95E-21	1.27E-21	8.26E-22	5.35E-22	3.45E-22	2.22E-22	1.56E-15	1.00E+01	5.69E-12
3.96E-16	2.31E-16	1.35E-16	7.86E-17	4.58E-17	2.67E-17	1.55E-17	9.01E-18	5.24E-18	3.04E-18	1.76E-18	8.58E-04	1.00E+01	3.14E+00
5.58E-17	3.40E-17	2.07E-17	1.26E-17	7.62E-18	4.62E-18	2.79E-18	1.69E-18	1.02E-18	6.12E-19	3.68E-19	4.13E-08	1.00E+01	1.51E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
1.28E-18	8.20E-19	5.25E-19	3.35E-19	2.13E-19	1.35E-19	8.58E-20	5.42E-20	3.42E-20	2.15E-20	1.35E-20	1.87E-12	1.00E+01	6.82E-09
2.19E-21	1.48E-21	9.92E-22	6.64E-22	4.43E-22	2.95E-22	1.96E-22	1.29E-22	8.51E-23	5.59E-23	3.66E-23	4.66E-17	1.00E+01	1.70E-13
3.51E-17	2.13E-17	1.29E-17	7.78E-18	4.69E-18	2.83E-18	1.70E-18	1.02E-18	6.13E-19	3.67E-19	2.20E-19	7.14E-08	1.00E+01	2.61E-04
1.07E-20	7.11E-21	4.71E-21	3.12E-21	2.05E-21	1.35E-21	8.82E-22	5.76E-22	3.75E-22	2.43E-22	1.58E-22	7.11E-16	1.00E+01	2.60E-12
2.14E-29	2.13E-29	1.56E-29	1.38E-29	1.12E-29	8.93E-30	7.26E-30	5.69E-30	4.53E-30	3.55E-30	2.78E-30	8.94E-29	1.00E+01	3.26E-25
1.80E-19	1.13E-19	7.11E-20	4.46E-20	2.79E-20	1.74E-20	1.09E-20	6.75E-21	4.19E-21	2.60E-21	1.61E-21	1.65E-12	1.00E+01	6.01E-09
2.92E-18	1.85E-18	1.17E-18	7.36E-19	4.63E-19	2.90E-19	1.82E-19	1.13E-19	7.07E-20	4.40E-20	2.73E-20	1.83E-11	1.00E+01	6.67E-08
7.96E-21	5.29E-21	3.50E-21	2.31E-21	1.52E-21	9.93E-22	6.49E-22	4.22E-22	2.74E-22	1.78E-22	1.15E-22	4.54E-16	1.00E+01	1.66E-12
1.96E-16	1.14E-16	6.67E-17	3.89E-17	2.27E-17	1.32E-17	7.70E-18	4.48E-18	2.60E-18	1.51E-18	8.77E-19	2.30E-04	1.00E+01	8.39E-01
1.55E-21	1.05E-21	7.03E-22	4.71E-22	3.15E-22	2.09E-22	1.39E-22	9.17E-23	6.05E-23	3.97E-23	2.60E-23	3.23E-17	1.00E+01	1.18E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
6.55E-19	4.08E-19	2.54E-19	1.57E-19	9.74E-20	6.02E-20	3.72E-20	2.29E-20	1.41E-20	8.63E-21	5.29E-21	2.42E-11	1.00E+01	8.83E-08
2.26E-17	1.40E-17	8.62E-18	5.31E-18	3.27E-18	2.01E-18	1.23E-18	7.54E-19	4.61E-19	2.81E-19	1.71E-19	2.37E-09	1.00E+01	8.67E-06
2.07E-16	1.23E-16	7.27E-17	4.30E-17	2.55E-17	1.50E-17	8.87E-18	5.23E-18	3.08E-18	1.82E-18	1.07E-18	1.13E-05	1.00E+01	4.12E-02
6.65E-28	5.30E-28	4.18E-28	3.36E-28	2.64E-28	2.06E-28	1.60E-28	1.23E-28	9.46E-29	7.20E-29	5.41E-29	6.55E-27	1.00E+01	2.39E-23
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
4.02E-19	2.55E-19	1.61E-19	1.02E-19	6.41E-20	4.03E-20	2.53E-20	1.58E-20	9.86E-21	6.15E-21	3.82E-21	1.58E-12	1.00E+01	5.77E-09
6.40E-19	4.05E-19	2.55E-19	1.61E-19	1.01E-19	6.32E-20	3.95E-20	2.46E-20	1.53E-20	9.52E-21	5.91E-21	4.20E-12	1.00E+01	1.53E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
9.76E-24	7.15E-24	5.20E-24	3.76E-24	2.71E-24	1.94E-24	1.38E-24	9.82E-25	6.94E-25	4.88E-25	3.42E-25	2.29E-21	1.00E+01	8.36E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
8.38E-26	6.47E-26	4.97E-26	3.79E-26	2.87E-26	2.16E-26	1.62E-26	1.21E-26	8.93E-27	6.57E-27	4.82E-27	4.04E-24	1.00E+01	1.48E-20
8.16E-18	5.20E-18	3.31E-18	2.10E-18	1.33E-18	8.38E-19	5.28E-19	3.32E-19	2.08E-19	1.30E-19	8.13E-20	2.40E-11	1.00E+01	8.78E-08
3.50E-20	2.28E-20	1.48E-20	9.55E-21	6.16E-21	3.96E-21	2.54E-21	1.63E-21	1.04E-21	6.61E-22	4.20E-22	1.47E-14	1.00E+01	5.36E-11
4.87E-19	3.22E-19	2.12E-19	1.39E-19	9.11E-20	5.95E-20	3.87E-20	2.51E-20	1.62E-20	1.05E-20	6.74E-21	4.81E-14	1.00E+01	1.76E-10

2.49E-22	1.78E-22	1.27E-22	8.96E-23	6.32E-23	4.43E-23	3.10E-23	2.15E-23	1.49E-23	1.03E-23	7.06E-24	1.62E-19	1.00E+01	5.91E-16
2.60E-19	1.72E-19	1.14E-19	7.46E-20	4.89E-20	3.19E-20	2.08E-20	1.35E-20	8.73E-21	5.64E-21	3.63E-21	2.29E-14	1.00E+01	8.37E-11
9.18E-20	5.99E-20	3.89E-20	2.52E-20	1.63E-20	1.05E-20	6.76E-21	4.33E-21	2.77E-21	1.77E-21	1.13E-21	3.03E-14	1.00E+01	1.10E-10
7.61E-23	5.56E-23	4.05E-23	2.93E-23	2.11E-23	1.51E-23	1.08E-23	7.64E-24	5.40E-24	3.79E-24	2.66E-24	2.13E-20	1.00E+01	7.77E-17
1.65E-17	1.01E-17	6.20E-18	3.79E-18	2.32E-18	1.41E-18	8.59E-19	5.22E-19	3.17E-19	1.92E-19	1.16E-19	5.03E-09	1.00E+01	1.84E-05
1.70E-20	1.14E-20	7.56E-21	5.02E-21	3.32E-21	2.19E-21	1.44E-21	9.42E-22	6.15E-22	4.01E-22	2.60E-22	7.20E-16	1.00E+01	2.63E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
1.06E-25	9.29E-26	8.09E-26	6.98E-26	5.96E-26	5.05E-26	4.24E-26	3.53E-26	2.92E-26	2.39E-26	1.95E-26	2.61E-25	1.00E+01	9.54E-22
4.45E-17	2.76E-17	1.71E-17	1.06E-17	6.53E-18	4.02E-18	2.47E-18	1.52E-18	9.29E-19	5.68E-19	3.47E-19	2.79E-09	1.00E+01	1.02E-05
1.20E-21	8.22E-22	5.60E-22	3.79E-22	2.56E-22	1.73E-22	1.16E-22	7.74E-23	5.15E-23	3.42E-23	2.27E-23	1.15E-17	1.00E+01	4.19E-14
6.37E-17	3.81E-17	2.27E-17	1.35E-17	8.06E-18	4.79E-18	2.85E-18	1.69E-18	1.00E-18	5.93E-19	3.51E-19	1.18E-06	1.00E+01	4.29E-03
7.27E-17	4.62E-17	2.93E-17	1.85E-17	1.17E-17	7.35E-18	4.62E-18	2.89E-18	1.81E-18	1.13E-18	7.01E-19	2.04E-10	1.00E+01	7.44E-07
3.94E-17	2.41E-17	1.47E-17	8.92E-18	5.42E-18	3.29E-18	1.99E-18	1.20E-18	7.27E-19	4.38E-19	2.64E-19	2.25E-08	1.00E+01	8.21E-05
3.50E-26	2.78E-26	2.20E-26	1.72E-26	1.34E-26	1.03E-26	7.94E-27	6.06E-27	4.60E-27	3.47E-27	2.60E-27	8.52E-25	1.00E+01	3.11E-21
1.23E-14	7.18E-15	4.20E-15	2.46E-15	1.44E-15	8.38E-16	4.89E-16	2.85E-16	1.66E-16	9.67E-17	5.63E-17	1.20E-02	1.00E+01	4.38E+01
1.90E-18	1.17E-18	7.15E-19	4.37E-19	2.67E-19	1.63E-19	9.91E-20	6.03E-20	3.66E-20	2.22E-20	1.34E-20	4.30E-10	1.00E+01	1.57E-06
7.04E-18	4.25E-18	2.57E-18	1.55E-18	9.31E-19	5.59E-19	3.36E-19	2.01E-19	1.21E-19	7.20E-20	4.30E-20	1.76E-08	1.00E+01	6.41E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
1.59E-27	1.28E-27	1.03E-27	8.13E-28	6.39E-28	5.00E-28	3.88E-28	3.00E-28	2.30E-28	1.75E-28	1.33E-28	2.93E-26	1.00E+01	1.07E-22
4.70E-26	3.71E-26	2.90E-26	2.26E-26	1.75E-26	1.34E-26	1.02E-26	7.46E-27	5.68E-27	4.29E-27	3.21E-27	1.46E-24	1.00E+01	5.33E-21
3.92E-20	2.55E-20	1.65E-20	1.07E-20	6.86E-21	4.40E-21	2.82E-21	1.80E-21	1.15E-21	7.29E-22	4.63E-22	2.04E-14	1.00E+01	7.46E-11
4.13E-21	2.78E-21	1.86E-21	1.24E-21	8.21E-22	5.43E-22	3.58E-22	2.36E-22	1.54E-22	1.01E-22	6.58E-23	1.39E-16	1.00E+01	5.07E-13
6.82E-19	4.38E-19	2.80E-19	1.79E-19	1.14E-19	7.24E-20	4.58E-20	2.90E-20	1.83E-20	1.15E-20	7.21E-21	7.84E-13	1.00E+01	2.86E-09
4.52E-23	3.33E-23	2.44E-23	1.78E-23	1.29E-23	9.29E-24	6.66E-24	4.76E-24	3.38E-24	2.39E-24	1.68E-24	7.70E-21	1.00E+01	2.81E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
3.63E-20	2.43E-20	1.62E-20	1.08E-20	7.13E-21	4.71E-21	3.09E-21	2.03E-21	1.33E-21	8.64E-22	5.62E-22	1.27E-15	1.00E+01	4.65E-12
5.48E-23	3.97E-23	2.85E-23	2.04E-23	1.46E-23	1.03E-23	7.28E-24	5.12E-24	3.58E-24	2.49E-24	1.73E-24	2.09E-20	1.00E+01	7.64E-17
6.63E-18	4.15E-18	2.60E-18	1.62E-18	1.01E-18	6.26E-19	3.88E-19	2.40E-19	1.48E-19	9.13E-20	5.62E-20	1.33E-10	1.00E+01	4.85E-07
2.59E-27	2.08E-27	1.66E-27	1.31E-27	1.03E-27	8.05E-28	6.25E-28	4.81E-28	3.69E-28	2.81E-28	2.12E-28	3.35E-26	1.00E+01	1.22E-22
3.66E-20	2.46E-20	1.65E-20	1.10E-20	7.34E-21	4.87E-21	3.22E-21	2.12E-21	1.40E-21	9.14E-22	5.97E-22	9.69E-16	1.00E+01	3.54E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
2.46E-18	1.55E-18	9.69E-19	6.07E-19	3.79E-19	2.36E-19	1.47E-19	9.10E-20	5.63E-20	3.48E-20	2.15E-20	2.97E-11	1.00E+01	1.08E-07
1.04E-21	7.15E-22	4.89E-22	3.33E-22	2.26E-22	1.53E-22	1.03E-22	6.88E-23	4.60E-23	3.06E-23	2.03E-23	6.98E-18	1.00E+01	2.55E-14
2.97E-26	2.28E-26	1.74E-26	1.33E-26	9.99E-27	7.49E-27	5.59E-27	4.14E-27	3.06E-27	2.24E-27	1.64E-27	1.40E-24	1.00E+01	5.10E-21
1.15E-19	7.36E-20	4.70E-20	3.00E-20	1.91E-20	1.21E-20	7.65E-21	4.83E-21	3.04E-21	1.91E-21	1.20E-21	1.89E-13	1.00E+01	6.91E-10
9.19E-19	5.74E-19	3.58E-19	2.23E-19	1.38E-19	8.56E-20	5.30E-20	3.27E-20	2.01E-20	1.24E-20	7.60E-21	2.35E-11	1.00E+01	8.57E-08
0.00E+00	0.00E+00	0.00E+00	6.20E-30	3.53E-30	2.01E-30	2.29E-30	1.95E-30	1.48E-30	1.26E-30	1.08E-30	6.20E-30	1.00E+01	2.26E-26
4.29E-25	3.17E-25	2.33E-25	1.70E-25	1.24E-25	8.96E-26	6.44E-26	4.61E-26	3.29E-26	2.33E-26	1.65E-26	7.90E-23	1.00E+01	2.89E-19
7.37E-17	4.61E-17	2.88E-17	1.79E-17	1.11E-17	6.90E-18	4.27E-18	2.64E-18	1.63E-18	1.00E-18	6.16E-19	1.94E-09	1.00E+01	7.08E-06
5.64E-17	3.52E-17	2.19E-17	1.36E-17	8.40E-18	5.19E-18	3.20E-18	1.97E-18	1.21E-18	7.43E-19	4.55E-19	1.62E-09	1.00E+01	5.91E-06

1.52E-26	1.19E-26	9.25E-27	7.15E-27	5.49E-27	4.14E-27	3.15E-27	2.38E-27	1.78E-27	1.33E-27	9.85E-28	5.46E-25	1.00E+01	1.99E-21
3.39E-21	2.25E-21	1.48E-21	9.77E-22	6.42E-22	4.20E-22	2.74E-22	1.78E-22	1.16E-22	7.48E-23	4.83E-23	2.62E-16	1.00E+01	9.58E-13
5.65E-18	3.62E-18	2.32E-18	1.48E-18	9.41E-19	5.97E-19	3.78E-19	2.39E-19	1.50E-19	9.46E-20	5.93E-20	7.15E-12	1.00E+01	2.61E-08
1.77E-18	1.09E-18	6.76E-19	4.17E-19	2.57E-19	1.58E-19	9.69E-20	5.94E-20	3.63E-20	2.22E-20	1.35E-20	1.38E-10	1.00E+01	5.04E-07
3.20E-22	2.21E-22	1.53E-22	1.05E-22	7.15E-23	4.87E-23	3.30E-23	2.23E-23	1.50E-23	1.01E-23	6.73E-24	1.30E-18	1.00E+01	4.73E-15
1.88E-20	1.25E-20	8.30E-21	5.49E-21	3.62E-21	2.38E-21	1.56E-21	1.02E-21	6.61E-22	4.29E-22	2.78E-22	1.03E-15	1.00E+01	3.76E-12
1.74E-25	1.32E-25	9.90E-26	7.40E-26	5.50E-26	4.06E-26	2.98E-26	2.18E-26	1.59E-26	1.15E-26	8.26E-27	1.53E-23	1.00E+01	5.58E-20
1.83E-21	1.21E-21	7.99E-22	5.26E-22	3.45E-22	2.26E-22	1.47E-22	9.58E-23	6.22E-23	4.02E-23	2.59E-23	1.42E-16	1.00E+01	5.19E-13
3.09E-20	2.08E-20	1.39E-20	9.24E-21	6.14E-21	4.06E-21	2.68E-21	1.76E-21	1.15E-21	7.54E-22	4.91E-22	9.68E-16	1.00E+01	3.53E-12
1.22E-19	7.95E-20	5.17E-20	3.35E-20	2.16E-20	1.39E-20	8.95E-21	5.73E-21	3.66E-21	2.34E-21	1.49E-21	3.91E-14	1.00E+01	1.43E-10
1.59E-26	1.26E-26	9.95E-27	7.80E-27	6.07E-27	4.69E-27	3.22E-27	2.53E-27	1.96E-27	1.51E-27	1.10E-27	3.28E-25	1.00E+01	1.20E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
7.54E-21	5.09E-21	3.42E-21	2.29E-21	1.53E-21	1.02E-21	6.72E-22	4.44E-22	2.93E-22	1.92E-22	1.26E-22	1.85E-16	1.00E+01	6.74E-13
1.63E-22	1.14E-22	8.00E-23	5.56E-23	3.85E-23	2.65E-23	1.82E-23	1.25E-23	8.49E-24	5.76E-24	3.90E-24	3.24E-19	1.00E+01	1.18E-15
2.19E-21	1.50E-21	1.03E-21	7.00E-22	4.75E-22	3.21E-22	2.16E-22	1.45E-22	9.71E-23	6.47E-23	4.30E-23	1.47E-17	1.00E+01	5.37E-14
3.29E-21	2.24E-21	1.53E-21	1.03E-21	6.95E-22	4.67E-22	3.13E-22	2.08E-22	1.39E-22	9.18E-23	6.06E-23	3.40E-17	1.00E+01	1.24E-13
2.63E-16	1.59E-16	9.59E-17	5.79E-17	3.48E-17	2.10E-17	1.26E-17	7.55E-18	4.52E-18	2.71E-18	1.62E-18	7.07E-07	1.00E+01	2.58E-03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
4.61E-20	3.04E-20	2.00E-20	1.31E-20	8.59E-21	5.60E-21	3.64E-21	2.36E-21	1.52E-21	9.83E-22	6.32E-22	5.17E-15	1.00E+01	1.89E-11
8.40E-18	5.22E-18	3.23E-18	2.00E-18	1.23E-18	7.59E-19	4.67E-19	2.86E-19	1.75E-19	1.07E-19	6.54E-20	3.47E-10	1.00E+01	1.27E-06
1.99E-15	1.17E-15	6.89E-16	4.05E-16	2.38E-16	1.40E-16	8.19E-17	4.80E-17	2.81E-17	1.65E-17	9.62E-18	6.63E-04	1.00E+01	2.42E+00
1.39E-18	8.66E-19	5.37E-19	3.32E-19	2.05E-19	1.27E-19	7.79E-20	4.78E-20	2.93E-20	1.80E-20	1.10E-20	7.24E-11	1.00E+01	2.64E-07
7.70E-17	4.59E-17	2.74E-17	1.63E-17	9.67E-18	5.74E-18	3.40E-18	2.02E-18	1.19E-18	7.05E-19	4.17E-19	2.48E-06	1.00E+01	9.04E-03
1.09E-22	8.19E-23	6.20E-23	4.44E-23	3.32E-23	2.45E-23	1.81E-23	1.30E-23	9.43E-24	6.79E-24	4.86E-24	1.16E-20	1.00E+01	4.22E-17
3.96E-21	**2.66E-21**	**1.78E-21**	**1.18E-21**	**7.86E-22**	**5.20E-22**	**3.43E-22**	**2.26E-22**	**1.48E-22**	**9.67E-23**	**6.30E-23**	1.12E-16	1.00E+01	4.09E-13
1.64E-27	1.35E-27	1.11E-27	9.05E-28	7.31E-28	5.86E-28	4.67E-28	3.69E-28	2.90E-28	2.26E-28	1.75E-28	1.21E-26	1.00E+01	4.41E-23
4.02E-22	2.80E-22	1.94E-22	1.34E-22	9.25E-23	6.34E-23	4.33E-23	2.94E-23	2.00E-23	1.35E-23	9.06E-24	1.07E-18	1.00E+01	3.92E-15
1.24E-16	7.36E-17	4.35E-17	2.57E-17	1.52E-17	8.94E-18	5.27E-18	3.10E-18	1.82E-18	1.07E-18	6.28E-19	1.45E-05	1.00E+01	5.30E-02
1.06E-16	6.36E-17	3.81E-17	2.28E-17	1.37E-17	8.15E-18	4.86E-18	2.90E-18	1.72E-18	1.03E-18	6.09E-19	7.47E-07	1.00E+01	2.73E-03
9.36E-22	6.35E-22	4.29E-22	2.89E-22	1.94E-22	1.30E-22	8.64E-23	5.74E-23	3.80E-23	2.51E-23	1.65E-23	1.43E-17	1.00E+01	5.23E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
2.75E-28	2.28E-28	1.94E-28	1.47E-28	1.23E-28	9.55E-29	7.65E-29	6.00E-29	4.71E-29	3.64E-29	2.81E-29	1.29E-27	1.00E+01	4.72E-24
5.15E-17	3.15E-17	1.92E-17	1.17E-17	7.11E-18	4.31E-18	2.61E-18	1.58E-18	9.55E-19	5.76E-19	3.47E-19	2.13E-08	1.00E+01	7.76E-05
3.41E-17	2.06E-17	1.25E-17	7.51E-18	4.52E-18	2.72E-18	1.63E-18	9.77E-19	5.85E-19	3.50E-19	2.09E-19	6.30E-08	1.00E+01	2.30E-04
1.40E-17	8.69E-18	5.40E-18	3.35E-18	2.07E-18	1.28E-18	7.88E-19	4.85E-19	2.98E-19	1.83E-19	1.12E-19	5.20E-10	1.00E+01	1.90E-06
1.68E-17	1.04E-17	6.36E-18	3.90E-18	2.39E-18	1.46E-18	8.91E-19	5.43E-19	3.30E-19	2.01E-19	1.22E-19	3.65E-09	1.00E+01	1.33E-05
1.59E-16	9.52E-17	5.68E-17	3.39E-17	2.02E-17	1.20E-17	7.14E-18	4.24E-18	2.52E-18	1.49E-18	8.82E-19	2.64E-06	1.00E+01	9.63E-03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
8.95E-19	5.54E-19	3.43E-19	2.11E-19	1.30E-19	8.00E-20	4.91E-20	3.01E-20	1.84E-20	1.12E-20	6.84E-21	5.33E-11	1.00E+01	1.95E-07
5.22E-20	3.36E-20	2.15E-20	1.38E-20	8.77E-21	5.58E-21	3.54E-21	2.24E-21	1.42E-21	8.92E-22	5.61E-22	5.25E-14	1.00E+01	1.92E-10

1.14E-16	7.01E-17	4.31E-17	2.65E-17	1.63E-17	9.96E-18	6.09E-18	3.71E-18	2.26E-18	1.38E-18	8.36E-19	1.30E-08	1.00E+01	4.75E-05
1.13E-19	7.20E-20	4.59E-20	2.92E-20	1.86E-20	1.18E-20	7.43E-21	4.68E-21	2.95E-21	1.85E-21	1.16E-21	1.86E-13	1.00E+01	6.80E-10
7.72E-24	5.79E-24	4.33E-24	3.20E-24	2.36E-24	1.73E-24	1.26E-24	9.11E-25	6.57E-25	4.72E-25	3.37E-25	9.41E-22	1.00E+01	3.44E-18
6.63E-18	4.27E-18	2.74E-18	1.76E-18	1.12E-18	7.14E-19	4.54E-19	2.88E-19	1.82E-19	1.15E-19	7.22E-20	5.50E-12	1.00E+01	2.01E-08
1.86E-25	1.42E-25	1.07E-25	8.09E-26	6.05E-26	4.51E-26	3.34E-26	2.46E-26	1.80E-26	1.31E-26	9.50E-27	1.32E-23	1.00E+01	4.83E-20
3.87E-18	2.35E-18	1.43E-18	8.65E-19	5.23E-19	3.16E-19	1.90E-19	1.15E-19	6.89E-20	4.14E-20	2.48E-20	3.13E-09	1.00E+01	1.14E-05
1.00E-16	5.88E-17	3.45E-17	2.02E-17	1.18E-17	6.90E-18	4.03E-18	2.36E-18	1.37E-18	8.01E-19	4.67E-19	9.33E-05	1.00E+01	3.41E-01
7.17E-18	4.48E-18	2.79E-18	1.74E-18	1.08E-18	6.68E-19	4.13E-19	2.55E-19	1.57E-19	9.66E-20	5.93E-20	1.97E-10	1.00E+01	7.18E-07
7.68E-17	4.69E-17	2.86E-17	1.74E-17	1.06E-17	6.40E-18	3.88E-18	2.35E-18	1.42E-18	8.54E-19	5.14E-19	4.35E-08	1.00E+01	1.59E-04
5.99E-20	3.93E-20	2.57E-20	1.68E-20	1.09E-20	7.09E-21	4.58E-21	2.95E-21	1.90E-21	1.22E-21	7.80E-22	1.06E-14	1.00E+01	3.87E-11
6.04E-20	3.98E-20	2.61E-20	1.71E-20	1.11E-20	7.24E-21	4.70E-21	3.04E-21	1.96E-21	1.26E-21	8.08E-22	8.80E-15	1.00E+01	3.21E-11
1.78E-19	1.13E-19	7.20E-20	4.57E-20	2.89E-20	1.82E-20	1.15E-20	7.21E-21	4.52E-21	2.83E-21	1.77E-21	4.74E-13	1.00E+01	1.73E-09
1.50E-19	9.85E-20	6.45E-20	4.21E-20	2.74E-20	1.78E-20	1.15E-20	7.41E-21	4.77E-21	3.06E-21	1.96E-21	2.54E-14	1.00E+01	9.27E-11
1.40E-23	1.01E-23	7.31E-24	5.25E-24	3.75E-24	2.67E-24	1.89E-24	1.33E-24	9.34E-25	6.52E-25	4.54E-25	4.88E-21	1.00E+01	1.78E-17
1.12E-24	8.24E-25	6.01E-25	4.36E-25	3.15E-25	2.26E-25	1.62E-25	1.15E-25	8.13E-26	5.73E-26	4.02E-26	3.27E-22	1.00E+01	1.19E-18
1.30E-21	8.84E-22	6.00E-22	4.05E-22	2.73E-22	1.83E-22	1.22E-22	8.14E-23	5.41E-23	3.58E-23	2.36E-23	1.43E-17	1.00E+01	5.23E-14
4.35E-20	2.81E-20	1.81E-20	1.17E-20	7.48E-21	4.78E-21	3.05E-21	1.94E-21	1.23E-21	7.81E-22	4.93E-22	2.82E-14	1.00E+01	1.03E-10
2.91E-22	2.09E-22	1.50E-22	1.06E-22	7.54E-23	5.31E-23	3.73E-23	2.60E-23	1.81E-23	1.25E-23	8.65E-24	1.46E-19	1.00E+01	5.32E-16
1.57E-24	1.22E-24	9.47E-25	7.29E-25	5.58E-25	4.24E-25	3.20E-25	2.41E-25	1.80E-25	1.23E-25	9.25E-26	5.81E-23	1.00E+01	2.12E-19
7.94E-19	5.08E-19	3.24E-19	2.06E-19	1.31E-19	8.27E-20	5.22E-20	3.29E-20	2.07E-20	1.30E-20	8.12E-21	1.49E-12	1.00E+01	5.43E-09
3.83E-21	2.54E-21	1.68E-21	1.11E-21	7.30E-22	4.79E-22	3.13E-22	2.04E-22	1.33E-22	8.58E-23	5.55E-23	2.50E-16	1.00E+01	9.12E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
1.19E-20	8.06E-21	5.42E-21	3.64E-21	2.43E-21	1.62E-21	1.07E-21	7.10E-22	4.68E-22	3.08E-22	2.02E-22	2.33E-16	1.00E+01	8.50E-13
9.78E-22	6.70E-22	4.57E-22	3.11E-22	2.11E-22	1.42E-22	9.54E-23	6.39E-23	4.27E-23	2.84E-23	1.88E-23	7.47E-18	1.00E+01	2.73E-14
5.79E-21	4.00E-21	2.76E-21	1.89E-21	1.29E-21	8.78E-22	5.95E-22	4.02E-22	2.70E-22	1.81E-22	1.21E-22	2.39E-17	1.00E+01	8.74E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.00E+01	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.00E+01	0.00E+00
2.15E-25	1.62E-25	1.23E-25	9.22E-26	6.87E-26	5.11E-26	3.77E-26	2.77E-26	2.02E-26	1.47E-26	1.06E-26	1.52E-23	1.00E+01	5.56E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
3.10E-19	2.02E-19	1.31E-19	8.47E-20	5.47E-20	3.52E-20	2.26E-20	1.44E-20	9.21E-21	5.86E-21	3.72E-21	1.10E-13	1.00E+01	4.03E-10
5.72E-17	3.43E-17	2.05E-17	1.23E-17	7.34E-18	4.38E-18	2.61E-18	1.56E-18	9.26E-19	5.50E-19	3.27E-19	5.89E-07	1.00E+01	2.15E-03
5.90E-21	3.90E-21	2.57E-21	1.69E-21	1.10E-21	7.21E-22	4.69E-22	3.04E-22	1.97E-22	1.27E-22	8.18E-23	5.57E-16	1.00E+01	2.04E-12
9.41E-24	6.90E-24	5.03E-24	3.65E-24	2.64E-24	1.89E-24	1.35E-24	9.62E-25	6.81E-25	4.80E-25	3.37E-25	2.33E-21	1.00E+01	8.51E-18
1.39E-17	8.59E-18	5.31E-18	3.27E-18	2.01E-18	1.24E-18	7.58E-19	4.64E-19	2.83E-19	1.73E-19	1.05E-19	1.29E-09	1.00E+01	4.72E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
6.30E-19	3.97E-19	2.49E-19	1.56E-19	9.76E-20	6.09E-20	3.79E-20	2.35E-20	1.46E-20	9.04E-21	5.58E-21	6.40E-12	1.00E+01	2.34E-08
3.07E-18	1.88E-18	1.15E-18	7.04E-19	4.29E-19	2.61E-19	1.59E-19	9.63E-20	5.84E-20	3.53E-20	2.13E-20	1.17E-09	1.00E+01	4.29E-06
3.67E-18	2.27E-18	1.41E-18	8.70E-19	5.36E-19	3.30E-19	2.03E-19	1.24E-19	7.61E-20	4.65E-20	2.84E-20	1.94E-10	1.00E+01	7.10E-07
6.38E-23	4.50E-23	3.16E-23	2.21E-23	1.54E-23	1.07E-23	7.36E-24	5.06E-24	3.46E-24	2.36E-24	1.60E-24	8.07E-20	1.00E+01	2.95E-16

9.28E-22	6.43E-22	4.44E-22	3.05E-22	2.09E-22	1.42E-22	9.65E-23	6.52E-23	4.40E-23	2.95E-23	1.97E-23	3.46E-18	1.00E+01	1.26E-14
5.10E-18	3.19E-18	1.99E-18	1.24E-18	7.70E-19	4.77E-19	2.96E-19	1.83E-19	1.13E-19	6.93E-20	4.26E-20	1.24E-10	1.00E+01	4.53E-07
3.64E-18	2.30E-18	1.45E-18	9.09E-19	5.70E-19	3.56E-19	2.22E-19	1.39E-19	8.61E-20	5.34E-20	3.31E-20	3.32E-11	1.00E+01	1.21E-07
4.76E-29	4.74E-29	3.86E-29	3.07E-29	2.50E-29	2.06E-29	1.62E-29	1.29E-29	1.02E-29	7.99E-30	6.20E-30	1.99E-28	1.00E+01	7.28E-25
2.21E-17	1.39E-17	8.71E-18	5.45E-18	3.41E-18	2.12E-18	1.32E-18	8.21E-19	5.09E-19	3.15E-19	1.94E-19	2.67E-10	1.00E+01	9.75E-07
2.42E-20	1.67E-20	1.15E-20	7.85E-21	5.35E-21	3.63E-21	2.45E-21	1.65E-21	1.11E-21	7.41E-22	4.94E-22	1.17E-16	1.00E+01	4.26E-13
1.02E-17	6.28E-18	3.84E-18	2.35E-18	1.43E-18	8.72E-19	5.30E-19	3.22E-19	1.95E-19	1.18E-19	7.14E-20	3.29E-09	1.00E+01	1.20E-05
1.83E-20	1.19E-20	7.77E-21	5.04E-21	3.26E-21	2.11E-21	1.36E-21	8.70E-22	5.57E-22	3.56E-22	2.27E-22	5.60E-15	1.00E+01	2.04E-11
3.30E-16	1.95E-16	1.16E-16	6.82E-17	4.03E-17	2.37E-17	1.40E-17	8.22E-18	4.84E-18	2.84E-18	1.67E-18	3.96E-05	1.00E+01	1.44E-01
4.61E-17	2.75E-17	1.64E-17	9.73E-18	5.78E-18	3.43E-18	2.03E-18	1.20E-18	7.12E-19	4.20E-19	2.48E-19	1.04E-06	1.00E+01	3.79E-03
1.63E-26	1.35E-26	1.10E-26	8.98E-27	7.26E-27	5.82E-27	4.63E-27	3.66E-27	2.87E-27	2.24E-27	1.74E-27	1.35E-25	1.00E+01	4.92E-22
2.68E-22	1.81E-22	1.21E-22	8.09E-23	5.38E-23	3.57E-23	2.36E-23	1.56E-23	1.02E-23	6.69E-24	4.37E-24	6.20E-18	1.00E+01	2.27E-14
5.01E-25	3.73E-25	2.76E-25	2.03E-25	1.49E-25	1.08E-25	7.85E-26	5.66E-26	4.06E-26	2.90E-26	2.06E-26	7.27E-23	1.00E+01	2.66E-19
4.11E-17	2.48E-17	1.50E-17	9.01E-18	5.42E-18	3.26E-18	1.95E-18	1.17E-18	7.00E-19	4.18E-19	2.49E-19	9.89E-08	1.00E+01	3.61E-04
4.90E-23	3.46E-23	2.43E-23	1.70E-23	1.18E-23	8.21E-24	5.67E-24	3.90E-24	2.67E-24	1.82E-24	1.24E-24	6.86E-20	1.00E+01	2.51E-16
4.01E-19	2.53E-19	1.59E-19	1.00E-19	6.27E-20	3.92E-20	2.45E-20	1.52E-20	9.47E-21	5.87E-21	3.64E-21	3.36E-12	1.00E+01	1.23E-08
3.39E-21	2.26E-21	1.50E-21	9.92E-22	6.54E-22	4.30E-22	2.82E-22	1.84E-22	1.20E-22	7.80E-23	5.05E-23	1.81E-16	1.00E+01	6.61E-13
1.17E-16	6.85E-17	4.01E-17	2.35E-17	1.37E-17	8.00E-18	4.67E-18	2.72E-18	1.59E-18	9.23E-19	5.37E-19	1.48E-04	1.00E+01	5.41E-01
2.23E-17	1.35E-17	8.15E-18	4.92E-18	2.97E-18	1.78E-18	1.07E-18	6.44E-19	3.86E-19	2.31E-19	1.38E-19	4.19E-08	1.00E+01	1.53E-04
2.25E-21	1.55E-21	1.06E-21	7.20E-22	4.89E-22	3.30E-22	2.22E-22	1.49E-22	9.98E-23	6.65E-23	4.42E-23	1.46E-17	1.00E+01	5.33E-14
5.66E-17	3.38E-17	2.02E-17	1.20E-17	7.15E-18	4.25E-18	2.52E-18	1.50E-18	8.87E-19	5.25E-19	3.11E-19	1.21E-06	1.00E+01	4.40E-03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
5.48E-21	3.68E-21	2.46E-21	1.64E-21	1.09E-21	7.19E-22	4.74E-22	3.11E-22	2.04E-22	1.33E-22	8.69E-23	1.85E-16	1.00E+01	6.76E-13
7.46E-17	4.56E-17	2.78E-17	1.70E-17	1.03E-17	6.27E-18	3.81E-18	2.30E-18	1.39E-18	8.42E-19	5.08E-19	3.29E-08	1.00E+01	1.20E-04
3.08E-21	2.11E-21	1.44E-21	9.80E-22	6.63E-22	4.47E-22	3.01E-22	2.01E-22	1.34E-22	8.93E-23	5.92E-23	2.28E-17	1.00E+01	8.34E-14
4.00E-20	2.61E-20	1.69E-20	1.10E-20	7.08E-21	4.56E-21	2.92E-21	1.87E-21	1.20E-21	7.62E-22	4.84E-22	1.34E-14	1.00E+01	4.88E-11
1.50E-19	9.65E-20	6.18E-20	3.94E-20	2.51E-20	1.60E-20	1.01E-20	6.39E-21	4.03E-21	2.54E-21	1.59E-21	2.03E-13	1.00E+01	7.41E-10
1.49E-22	1.04E-22	7.18E-23	4.95E-23	3.40E-23	2.32E-23	1.58E-23	1.07E-23	7.25E-24	4.89E-24	3.28E-24	4.71E-19	1.00E+01	1.72E-15
5.57E-22	3.83E-22	2.63E-22	1.80E-22	1.22E-22	8.28E-23	5.59E-23	3.76E-23	2.52E-23	1.68E-23	1.12E-23	2.96E-18	1.00E+01	1.08E-14
3.75E-18	2.30E-18	1.41E-18	8.62E-19	5.26E-19	3.21E-19	1.95E-19	1.19E-19	7.19E-20	4.36E-20	2.63E-20	9.10E-10	1.00E+01	3.33E-06
1.43E-18	8.79E-19	5.39E-19	3.29E-19	2.01E-19	1.23E-19	7.45E-20	4.53E-20	2.75E-20	1.66E-20	1.01E-20	3.78E-10	1.00E+01	1.38E-06
6.57E-17	3.95E-17	2.37E-17	1.42E-17	8.46E-18	5.06E-18	3.02E-18	1.80E-18	1.07E-18	6.35E-19	3.77E-19	5.20E-07	1.00E+01	1.90E-03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	0.00E+00
7.29E-18	4.58E-18	2.87E-18	1.80E-18	1.12E-18	6.99E-19	4.34E-19	2.69E-19	1.67E-19	1.03E-19	6.36E-20	9.15E-11	1.00E+01	3.34E-07
3.76E-20	2.48E-20	1.63E-20	1.07E-20	6.97E-21	4.54E-21	2.95E-21	1.91E-21	1.23E-21	7.93E-22	5.09E-22	4.88E-15	1.00E+01	1.78E-11
8.59E-20	5.67E-20	3.74E-20	2.45E-20	1.60E-20	1.05E-20	6.80E-21	4.41E-21	2.85E-21	1.84E-21	1.18E-21	9.20E-15	1.00E+01	3.36E-11
1.80E-15	1.07E-15	6.37E-16	3.78E-16	2.24E-16	1.32E-16	7.83E-17	4.62E-17	2.73E-17	1.61E-17	9.48E-18	7.85E-05	1.00E+01	2.87E-01
4.97E-15	2.91E-15	1.70E-15	9.92E-16	5.79E-16	3.38E-16	1.97E-16	1.15E-16	6.68E-17	3.88E-17	2.26E-17	9.54E-03	1.00E+01	3.48E+01
6.79E-23	4.80E-23	3.37E-23	2.36E-23	1.65E-23	1.14E-23	7.90E-24	5.44E-24	3.73E-24	2.55E-24	1.73E-24	9.01E-20	1.00E+01	3.29E-16
1.99E-25	1.50E-25	1.12E-25	8.37E-26	6.20E-26	4.57E-26	3.34E-26	2.44E-26	1.77E-26	1.27E-26	9.14E-27	1.77E-23	1.00E+01	6.47E-20

5.45E-19	3.38E-19	2.09E-19	1.29E-19	7.95E-20	4.89E-20	3.00E-20	1.84E-20	1.13E-20	6.89E-21	4.20E-21	3.94E-11	1.00E+01	1.44E-07
9.25E-18	5.68E-18	3.48E-18	2.13E-18	1.30E-18	7.95E-19	4.84E-19	2.95E-19	1.79E-19	1.08E-19	6.56E-20	2.04E-09	1.00E+01	7.47E-06
1.78E-19	1.17E-19	7.62E-20	4.96E-20	3.22E-20	2.08E-20	1.35E-20	8.65E-21	5.55E-21	3.56E-21	2.27E-21	3.94E-14	1.00E+01	1.44E-10
2.06E-18	1.35E-18	8.82E-19	5.75E-19	3.73E-19	2.42E-19	1.56E-19	1.01E-19	6.45E-20	4.13E-20	2.64E-20	3.98E-13	1.00E+01	1.45E-09
1.23E-14	**7.18E-15**	**4.2E-15**	**2.46E-15**	**1.44E-15**	**8.38E-16**	**4.89E-16**	**2.85E-16**	**1.66E-16**	**9.67E-17**	**5.63E-17**	**0.012**	**10**	**43.83**

Dose (mrem/year)
1.64E-17
9.05E-08
9.86E-33
7.36E-09
1.84E-21
1.68E-19
3.64E-19
2.01E-07
9.66E-12
0.00E+00
0.00E+00
4.36E-16
1.09E-20
1.67E-11
1.66E-19
2.09E-32
3.85E-16
4.27E-15
1.06E-19
5.37E-08
7.56E-21
0.00E+00
5.65E-15
5.55E-13
2.63E-09
1.53E-30
0.00E+00
3.70E-16
9.81E-16
0.00E+00
5.35E-25
0.00E+00
9.45E-28
5.62E-15
3.43E-18
1.13E-17

3.78E-23
5.36E-18
7.07E-18
4.97E-24
1.18E-12
1.68E-19
0.00E+00
6.10E-29
6.53E-13
2.68E-21
2.75E-10
4.76E-14
5.26E-12
1.99E-28
2.81E-06
1.00E-13
4.10E-12
0.00E+00
6.85E-30
3.41E-28
4.77E-18
3.24E-20
1.83E-16
1.80E-24
0.00E+00
2.97E-19
4.89E-24
3.10E-14
7.84E-30
2.27E-19
0.00E+00
6.93E-15
1.63E-21
3.27E-28
4.42E-17
5.48E-15
1.45E-33
1.85E-26
4.53E-13
3.78E-13

1.28E-28
6.13E-20
1.67E-15
3.22E-14
3.03E-22
2.41E-19
3.57E-27
3.32E-20
2.26E-19
9.15E-18
7.67E-29
0.00E+00
4.32E-20
7.56E-23
3.44E-21
7.94E-21
1.65E-10
0.00E+00
1.21E-18
8.11E-14
1.55E-07
1.69E-14
5.79E-10
2.70E-24
2.62E-20
2.82E-30
2.51E-22
3.39E-09
1.75E-10
3.35E-21
0.00E+00
3.02E-31
4.97E-12
1.47E-11
1.22E-13
8.53E-13
6.16E-10
0.00E+00
1.25E-14
1.23E-17

3.04E-12
4.35E-17
2.20E-25
1.29E-15
3.09E-27
7.32E-13
2.18E-08
4.60E-14
1.02E-11
2.48E-18
2.06E-18
1.11E-16
5.93E-18
1.14E-24
7.63E-26
3.35E-21
6.58E-18
3.40E-23
1.36E-26
3.48E-16
5.84E-20
0.00E+00
5.44E-20
1.75E-21
5.60E-21
0.00E+00
0.00E+00
0.00E+00
3.56E-27
0.00E+00
2.58E-17
1.38E-10
1.30E-19
5.45E-25
3.02E-13
0.00E+00
1.50E-15
2.74E-13
4.54E-14
1.89E-23

8.09E-22
2.90E-14
7.75E-15
4.66E-32
6.24E-14
2.72E-20
7.70E-13
1.31E-18
9.25E-09
2.42E-10
3.15E-29
1.45E-21
1.70E-26
2.31E-11
1.60E-23
7.84E-16
4.23E-20
3.46E-08
9.80E-12
3.41E-21
2.82E-10
0.00E+00
4.33E-20
7.69E-12
5.33E-21
3.13E-18
4.74E-17
1.10E-22
6.92E-22
2.13E-13
8.82E-14
1.22E-10
0.00E+00
2.14E-14
1.14E-18
2.15E-18
1.83E-08
2.23E-06
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4.14E-27

9.21E-15
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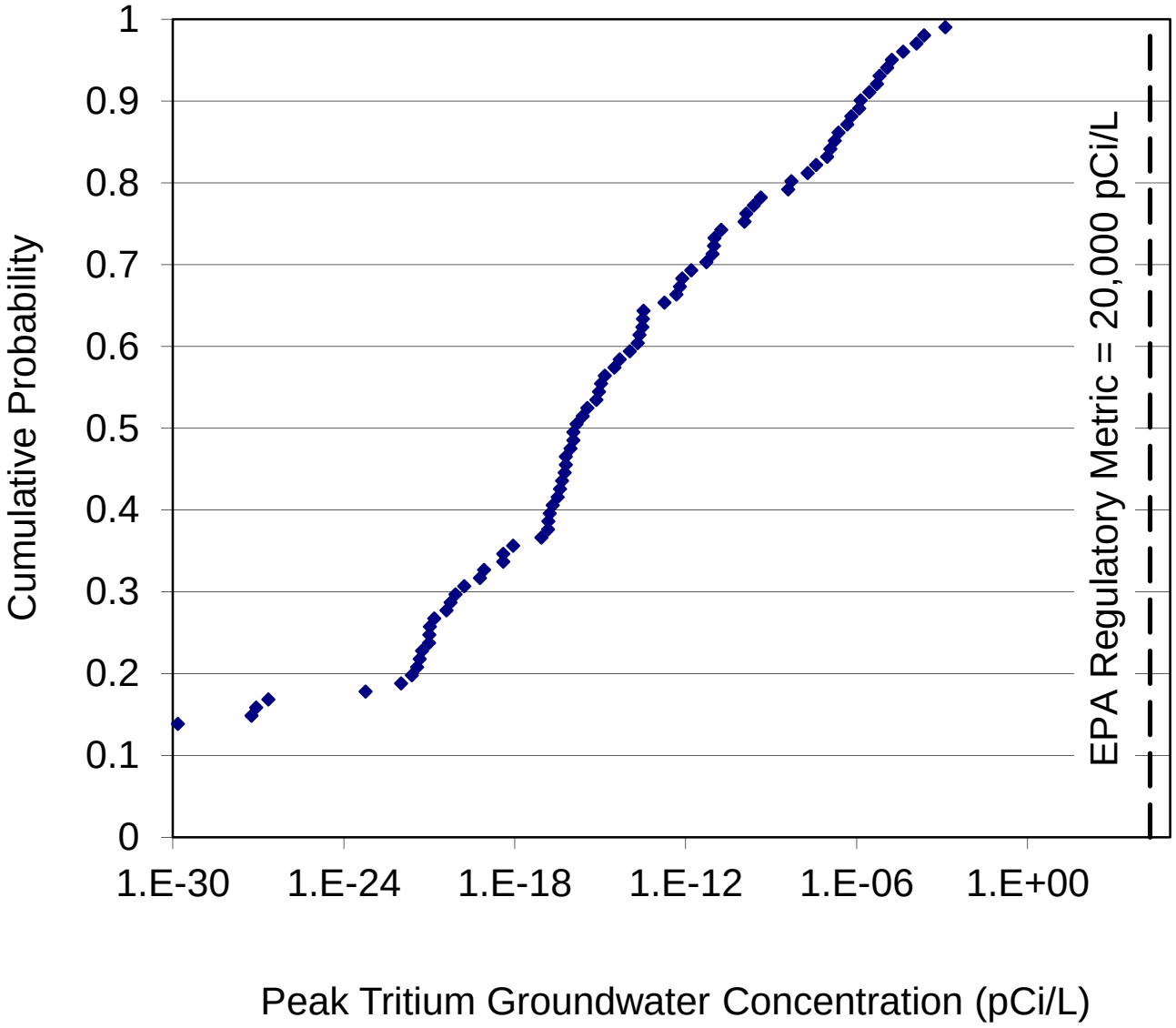
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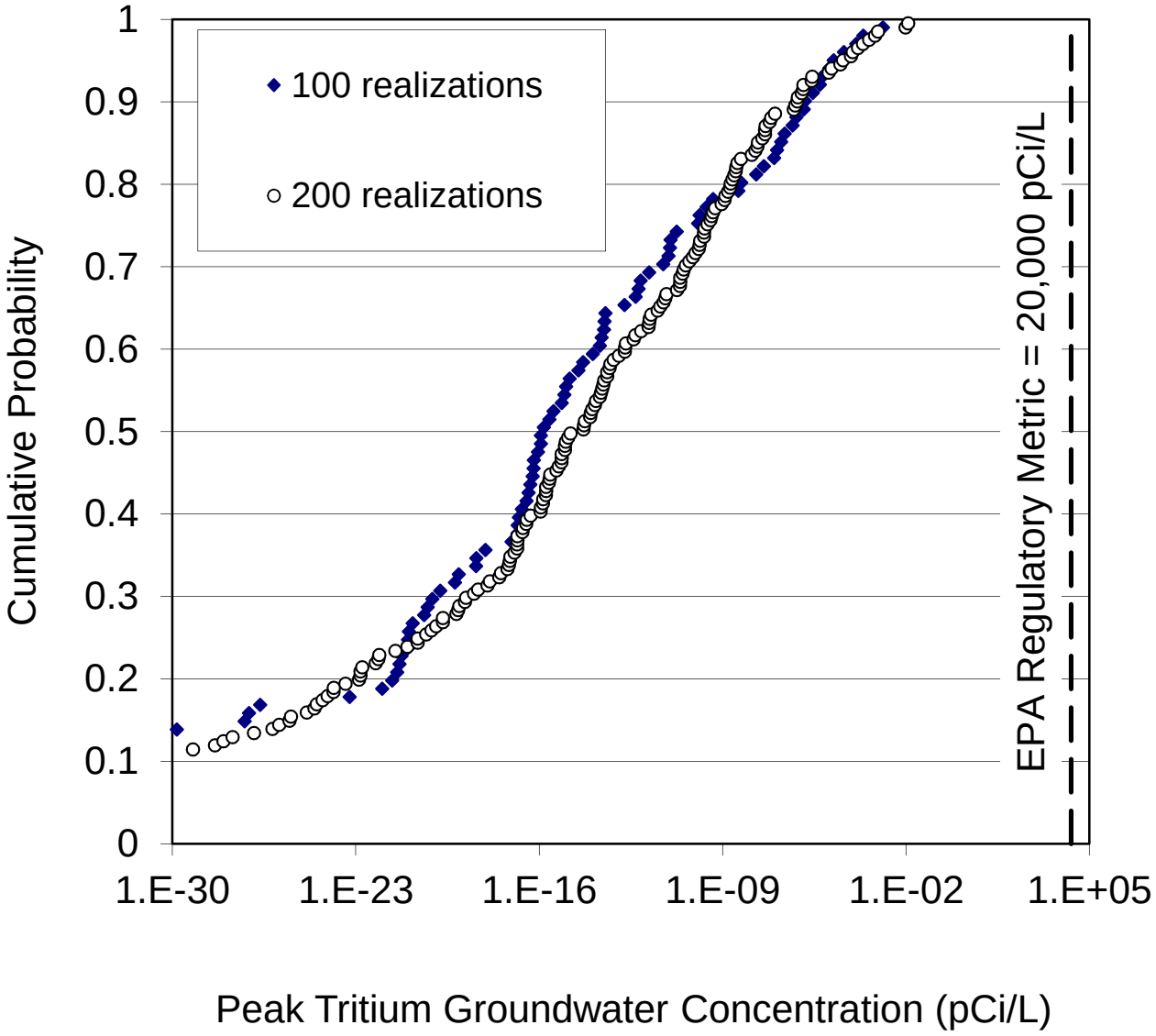
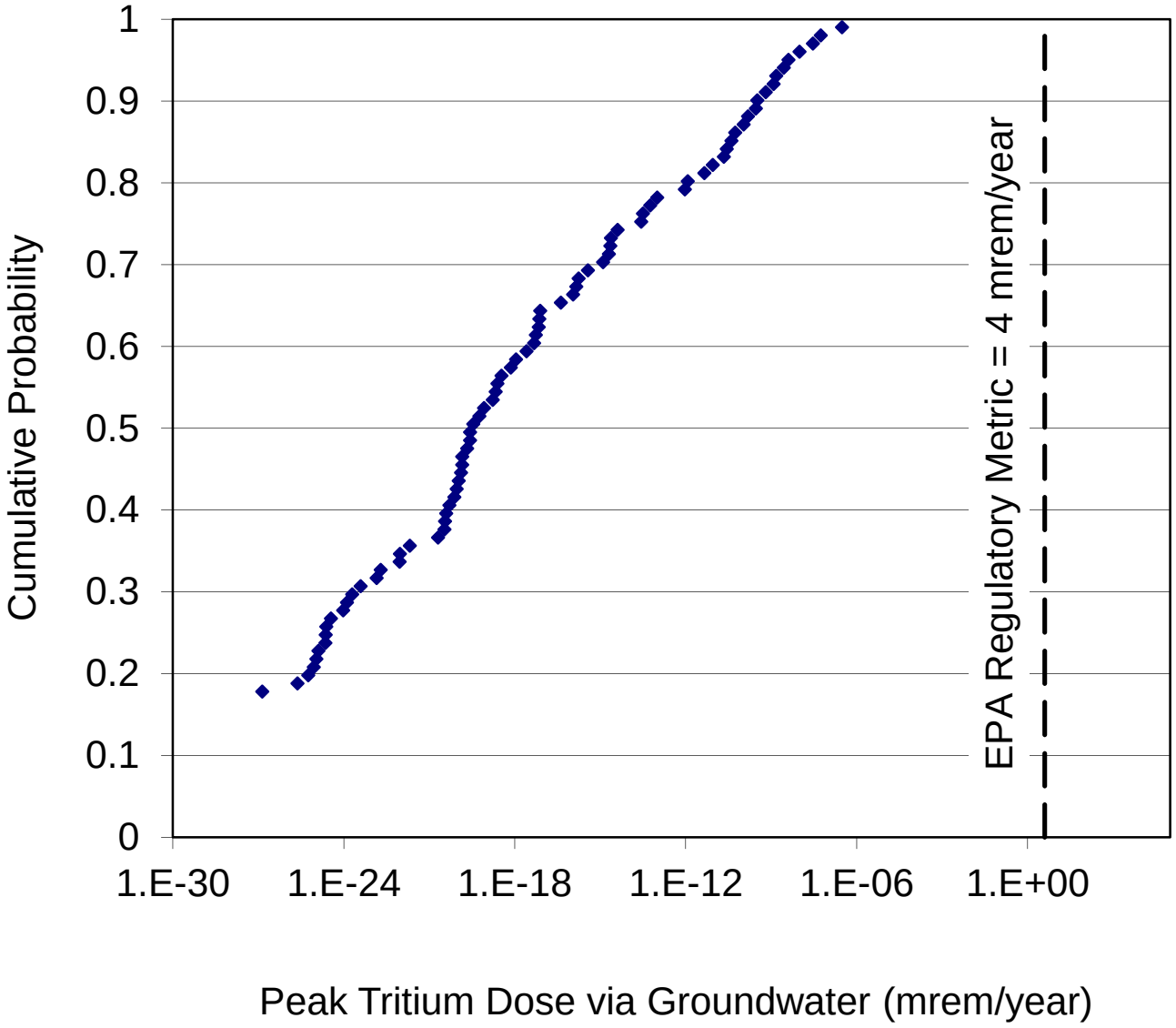
Cumulative Probability
1.E-30
1.E-24
1.E-18
1.E-12
1.E-06
1.E+00
Peak Tritium Groundwater Concentration (pCi/L)
EPA Regulatory Metric = 20,000 pCi/L


100 realizations
200 realizations
EPA Regulatory Metric = 20,000 pCi/L
Cumulative Probability
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1.E-30
1.E-23
1.E-16
1.E-09
1.E-02
1.E+05
Peak Tritium Groundwater Concentration (pCi/L)


1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Cumulative Probability
1.E-30
1.E-24
1.E-18
1.E-12
1.E-06
1.E+00
Peak Tritium Dose via Groundwater (mrem/year)
EPA Regulatory Metric = 4 mrem/year

Max Aquifer Concentration (pCi/L)	Water Intake (L/day)	Receptor Intake (pCi/year)	Dose (mrem/year)	Rank	CDF
0	10	0	0	1	0.009901
0	10	0	0	2	0.019802
0	10	0	0	3	0.029703
0	10	0	0	4	0.039604
0	10	0	0	5	0.049505
0	10	0	0	6	0.059406
0	10	0	0	7	0.069307
0	10	0	0	8	0.079208
0	10	0	0	9	0.089109
0	10	0	0	10	0.09901
0	10	0	0	11	0.108911
0	10	0	0	12	0.118812
0	10	0	0	13	0.128713
1.493E-30	10	5.45318E-27	3.49004E-34	14	0.138614
5.699E-28	10	2.08156E-24	1.3322E-31	15	0.148515
8.321E-28	10	3.03925E-24	1.94512E-31	16	0.158416
2.234E-27	10	8.15969E-24	5.2222E-31	17	0.168317
5.883E-24	10	2.14877E-20	1.37521E-27	18	0.178218
1.02E-22	10	3.72555E-19	2.38435E-26	19	0.188119
2.434E-22	10	8.89019E-19	5.68972E-26	20	0.19802
3.753E-22	10	1.37078E-18	8.77301E-26	21	0.207921
4.624E-22	10	1.68892E-18	1.08091E-25	22	0.217822
5.576E-22	10	2.03663E-18	1.30345E-25	23	0.227723
9.721E-22	10	3.5506E-18	2.27238E-25	24	0.237624
9.952E-22	10	3.63497E-18	2.32638E-25	25	0.247525
1.051E-21	10	3.83878E-18	2.45682E-25	26	0.257426
1.5E-21	10	5.47875E-18	3.5064E-25	27	0.267327
4.03E-21	10	1.47196E-17	9.42053E-25	28	0.277228
5.552E-21	10	2.02787E-17	1.29784E-24	29	0.287129
8.357E-21	10	3.05239E-17	1.95353E-24	30	0.29703
1.676E-20	10	6.12159E-17	3.91782E-24	31	0.306931
6.03E-20	10	2.20246E-16	1.40957E-23	32	0.316832
8.416E-20	10	3.07394E-16	1.96732E-23	33	0.326733
3.913E-19	10	1.42922E-15	9.14703E-23	34	0.336634
3.975E-19	10	1.45187E-15	9.29196E-23	35	0.346535
8.833E-19	10	3.22625E-15	2.0648E-22	36	0.356436
8.706E-18	10	3.17987E-14	2.03511E-21	37	0.366337

Concentration Metric (pCi/L)	Dose Metric (mrem/year)	CDF
2.00E+04	4.00E+00	0
2.00E+04	4.00E+00	1

1.468E-17	10	5.36187E-14	3.4316E-21	38	0.376238
1.521E-17	10	5.55545E-14	3.55549E-21	39	0.386139
1.686E-17	10	6.15812E-14	3.94119E-21	40	0.39604
2.164E-17	10	7.90401E-14	5.05857E-21	41	0.405941
3.243E-17	10	1.18451E-13	7.58084E-21	42	0.415842
3.892E-17	10	1.42155E-13	9.09794E-21	43	0.425743
4.591E-17	10	1.67686E-13	1.07319E-20	44	0.435644
5.633E-17	10	2.05745E-13	1.31677E-20	45	0.445545
6.171E-17	10	2.25396E-13	1.44253E-20	46	0.455446
6.202E-17	10	2.26528E-13	1.44978E-20	47	0.465347
9.082E-17	10	3.3172E-13	2.12301E-20	48	0.475248
1.149E-16	10	4.19672E-13	2.6859E-20	49	0.485149
1.154E-16	10	4.21499E-13	2.69759E-20	50	0.49505
1.489E-16	10	5.43857E-13	3.48069E-20	51	0.50495
2.445E-16	10	8.93036E-13	5.71543E-20	52	0.514851
3.541E-16	10	1.29335E-12	8.27744E-20	53	0.524752
7.303E-16	10	2.66742E-12	1.70715E-19	54	0.534653
9.152E-16	10	3.34277E-12	2.13937E-19	55	0.544554
1.063E-15	10	3.88261E-12	2.48487E-19	56	0.554455
1.467E-15	10	5.35822E-12	3.42926E-19	57	0.564356
3.134E-15	10	1.14469E-11	7.32604E-19	58	0.574257
4.781E-15	10	1.74626E-11	1.11761E-18	59	0.584158
1.108E-14	10	4.04697E-11	2.59006E-18	60	0.594059
2.063E-14	10	7.53511E-11	4.82247E-18	61	0.60396
2.383E-14	10	8.70391E-11	5.5705E-18	62	0.613861
2.991E-14	10	1.09246E-10	6.99176E-18	63	0.623762
3.129E-14	10	1.14287E-10	7.31435E-18	64	0.633663
3.351E-14	10	1.22395E-10	7.8333E-18	65	0.643564
1.783E-13	10	6.51241E-10	4.16794E-17	66	0.653465
4.767E-13	10	1.74115E-09	1.11433E-16	67	0.663366
6.217E-13	10	2.27076E-09	1.45329E-16	68	0.673267
7.493E-13	10	2.73682E-09	1.75156E-16	69	0.683168
1.578E-12	10	5.76365E-09	3.68873E-16	70	0.693069
5.383E-12	10	1.96614E-08	1.25833E-15	71	0.70297
8.706E-12	10	3.17987E-08	2.03511E-15	72	0.712871
9.753E-12	10	3.56228E-08	2.27986E-15	73	0.722772
1.02E-11	10	3.72555E-08	2.38435E-15	74	0.732673
1.768E-11	10	6.45762E-08	4.13288E-15	75	0.742574
1.173E-10	10	4.28438E-07	2.742E-14	76	0.752475
1.34E-10	10	4.89435E-07	3.13238E-14	77	0.762376

2.459E-10	10	8.9815E-07	5.74816E-14	78	0.772277
4.311E-10	10	1.57459E-06	1.00774E-13	79	0.782178
3.976E-09	10	1.45223E-05	9.2943E-13	80	0.792079
5.121E-09	10	1.87045E-05	1.19708E-12	81	0.80198
1.916E-08	10	6.99819E-05	4.47884E-12	82	0.811881
3.785E-08	10	0.000138247	8.84782E-12	83	0.821782
9.276E-08	10	0.000338806	2.16836E-11	84	0.831683
1.187E-07	10	0.000433552	2.77473E-11	85	0.841584
1.725E-07	10	0.000630056	4.03236E-11	86	0.851485
2.324E-07	10	0.000848841	5.43258E-11	87	0.861386
4.671E-07	10	0.001706083	1.09189E-10	88	0.871287
6.545E-07	10	0.002390561	1.52996E-10	89	0.881188
0.000001239	10	0.004525448	2.89629E-10	90	0.891089
0.000001386	10	0.005062365	3.23991E-10	91	0.90099
0.000002788	10	0.01018317	6.51723E-10	92	0.910891
0.00000518	10	0.01891995	1.21088E-09	93	0.920792
0.000006439	10	0.023518448	1.50518E-09	94	0.930693
0.00001182	10	0.04317255	2.76304E-09	95	0.940594
0.00001724	10	0.0629691	4.03002E-09	96	0.950495
0.00004249	10	0.155194725	9.93246E-09	97	0.960396
0.0001253	10	0.45765825	2.92901E-08	98	0.970297
0.0002342	10	0.8554155	5.47466E-08	99	0.980198
0.001308	10	4.77747	3.05758E-07	100	0.990099

Max Aquifer Concentration for 200 realizations (pCi/L)	Dose via Inhalation and Dermal Absorption (mrem/year)	Rank	CDF
0.00E+00	0.00E+00	1	0.004975
0.00E+00	0.00E+00	2	0.00995
0.00E+00	0.00E+00	3	0.014925
0.00E+00	0.00E+00	4	0.0199
0.00E+00	0.00E+00	5	0.024876
0.00E+00	0.00E+00	6	0.029851
0.00E+00	0.00E+00	7	0.034826
0.00E+00	0.00E+00	8	0.039801
0.00E+00	0.00E+00	9	0.044776
0.00E+00	0.00E+00	10	0.049751
0.00E+00	0.00E+00	11	0.054726
0.00E+00	0.00E+00	12	0.059701
0.00E+00	0.00E+00	13	0.064677
0.00E+00	0.00E+00	14	0.069652
0.00E+00	0.00E+00	15	0.074627
0.00E+00	0.00E+00	16	0.079602
0.00E+00	0.00E+00	17	0.084577
0.00E+00	0.00E+00	18	0.089552
0.00E+00	0.00E+00	19	0.094527
0.00E+00	0.00E+00	20	0.099502
0.00E+00	0.00E+00	21	0.104478
0.00E+00	0.00E+00	22	0.109453
6.20E-30	0.00E+00	23	0.114428
4.22E-29	0.00E+00	24	0.119403
8.94E-29	0.00E+00	25	0.124378
1.99E-28	0.00E+00	26	0.129353
1.29E-27	0.00E+00	27	0.134328
6.55E-27	9.22E-03	28	0.139303
1.21E-26	2.35E-02	29	0.144279
2.93E-26	3.38E-02	30	0.149254
3.35E-26	3.72E-02	31	0.154229
1.35E-25	4.84E-02	32	0.159204
2.61E-25	6.93E-02	33	0.164179
3.28E-25	8.07E-02	34	0.169154
5.46E-25	8.57E-02	35	0.174129

Concentration Metric (pCi/L)	Dose Metric (mrem/year)	Dose via Inhalation (mrem/year)	CDF
2.00E+04	1.00E+02	10	0
2.00E+04	1.00E+02	10	1

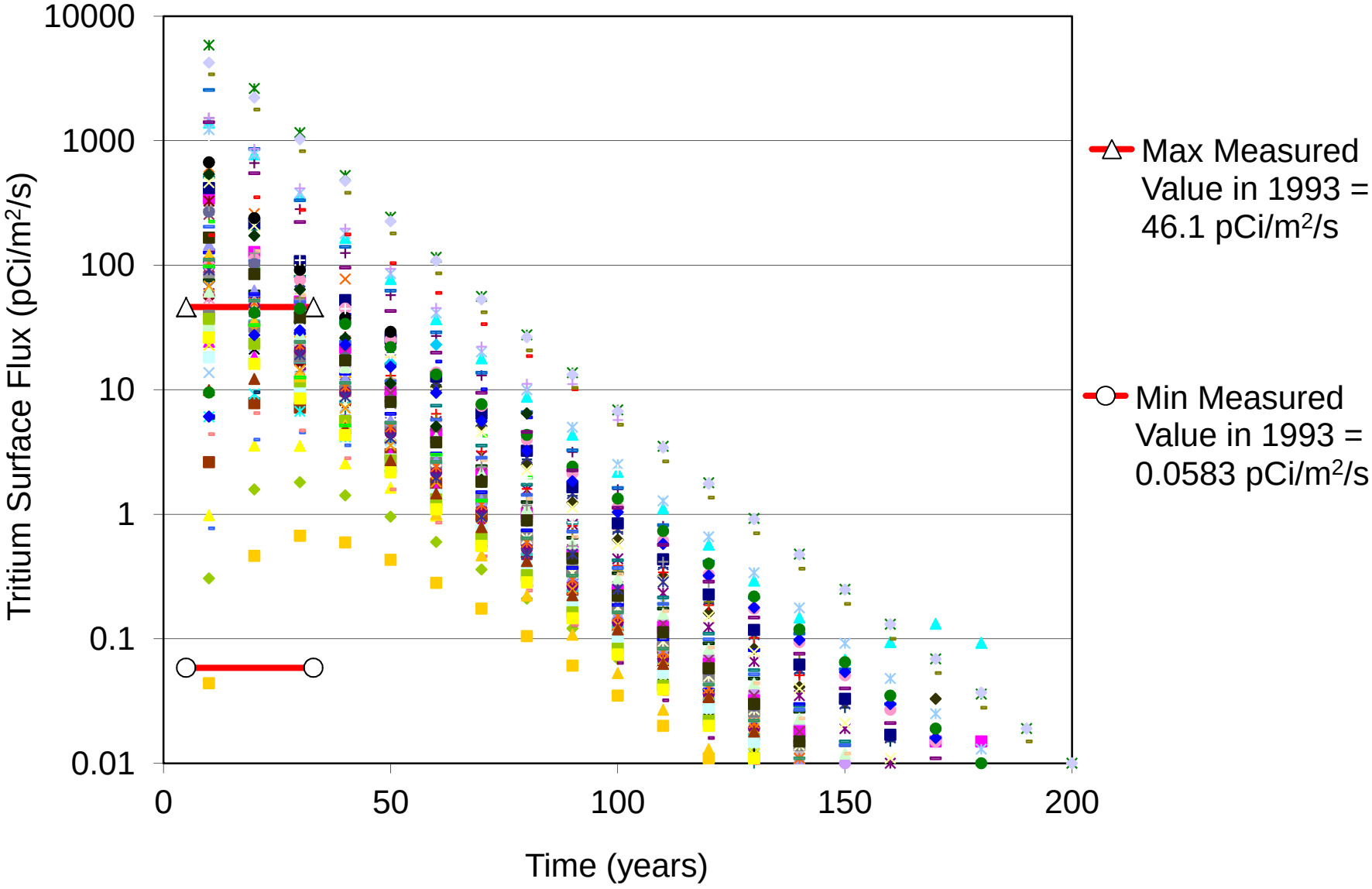
8.52E-25	8.71E-02	36	0.179104
1.40E-24	9.21E-02	37	0.18408
1.46E-24	9.70E-02	38	0.189055
4.04E-24	1.04E-01	39	0.19403
1.32E-23	1.09E-01	40	0.199005
1.52E-23	1.10E-01	41	0.20398
1.53E-23	1.16E-01	42	0.208955
1.77E-23	1.53E-01	43	0.21393
5.81E-23	1.55E-01	44	0.218905
7.27E-23	1.74E-01	45	0.223881
7.90E-23	1.88E-01	46	0.228856
3.27E-22	2.18E-01	47	0.233831
9.41E-22	2.24E-01	48	0.238806
2.29E-21	2.32E-01	49	0.243781
2.33E-21	2.36E-01	50	0.248756
4.88E-21	2.66E-01	51	0.253731
7.70E-21	2.69E-01	52	0.258706
1.16E-20	2.72E-01	53	0.263682
2.09E-20	3.04E-01	54	0.268657
2.13E-20	3.12E-01	55	0.273632
6.86E-20	3.30E-01	56	0.278607
8.07E-20	3.43E-01	57	0.283582
9.01E-20	3.66E-01	58	0.288557
1.46E-19	3.78E-01	59	0.293532
1.62E-19	3.84E-01	60	0.298507
3.24E-19	3.90E-01	61	0.303483
4.71E-19	3.96E-01	62	0.308458
1.07E-18	4.50E-01	63	0.313433
1.30E-18	4.58E-01	64	0.318408
2.96E-18	4.76E-01	65	0.323383
3.46E-18	4.84E-01	66	0.328358
6.20E-18	4.99E-01	67	0.333333
6.98E-18	5.08E-01	68	0.338308
7.47E-18	5.15E-01	69	0.343284
7.88E-18	5.48E-01	70	0.348259
1.15E-17	5.50E-01	71	0.353234
1.43E-17	5.63E-01	72	0.358209
1.43E-17	5.81E-01	73	0.363184
1.46E-17	5.99E-01	74	0.368159
1.47E-17	6.12E-01	75	0.373134

2.28E-17	6.13E-01	76	0.378109
2.39E-17	6.22E-01	77	0.383085
3.23E-17	6.38E-01	78	0.38806
3.40E-17	6.70E-01	79	0.393035
4.66E-17	7.24E-01	80	0.39801
1.12E-16	7.51E-01	81	0.402985
1.17E-16	7.62E-01	82	0.40796
1.39E-16	7.64E-01	83	0.412935
1.42E-16	8.05E-01	84	0.41791
1.81E-16	8.07E-01	85	0.422886
1.85E-16	8.22E-01	86	0.427861
1.85E-16	8.25E-01	87	0.432836
2.33E-16	8.26E-01	88	0.437811
2.50E-16	8.32E-01	89	0.442786
2.62E-16	8.35E-01	90	0.447761
4.54E-16	8.55E-01	91	0.452736
5.57E-16	8.58E-01	92	0.457711
7.11E-16	8.63E-01	93	0.462687
7.20E-16	8.80E-01	94	0.467662
7.20E-16	8.80E-01	95	0.472637
9.68E-16	8.99E-01	96	0.477612
9.69E-16	9.11E-01	97	0.482587
1.03E-15	9.47E-01	98	0.487562
1.27E-15	9.51E-01	99	0.492537
1.56E-15	9.57E-01	100	0.497512
4.88E-15	9.65E-01	101	0.502488
5.17E-15	9.98E-01	102	0.507463
5.60E-15	1.01E+00	103	0.512438
8.80E-15	1.03E+00	104	0.517413
9.20E-15	1.05E+00	105	0.522388
1.06E-14	1.06E+00	106	0.527363
1.34E-14	1.08E+00	107	0.532338
1.47E-14	1.09E+00	108	0.537313
2.04E-14	1.11E+00	109	0.542289
2.29E-14	1.13E+00	110	0.547264
2.54E-14	1.14E+00	111	0.552239
2.82E-14	1.15E+00	112	0.557214
3.03E-14	1.16E+00	113	0.562189
3.91E-14	1.17E+00	114	0.567164
3.94E-14	1.20E+00	115	0.572139

4.81E-14	1.23E+00	116	0.577114
5.25E-14	1.25E+00	117	0.58209
7.00E-14	1.27E+00	118	0.587065
1.10E-13	1.29E+00	119	0.59204
1.86E-13	1.29E+00	120	0.597015
1.89E-13	1.34E+00	121	0.60199
2.03E-13	1.34E+00	122	0.606965
3.98E-13	1.34E+00	123	0.61194
4.74E-13	1.35E+00	124	0.616915
7.84E-13	1.36E+00	125	0.621891
1.49E-12	1.38E+00	126	0.626866
1.58E-12	1.38E+00	127	0.631841
1.65E-12	1.40E+00	128	0.636816
1.87E-12	1.43E+00	129	0.641791
3.36E-12	1.43E+00	130	0.646766
4.20E-12	1.43E+00	131	0.651741
5.50E-12	1.49E+00	132	0.656716
6.40E-12	1.49E+00	133	0.661692
7.15E-12	1.50E+00	134	0.666667
1.83E-11	1.51E+00	135	0.671642
2.35E-11	1.53E+00	136	0.676617
2.40E-11	1.54E+00	137	0.681592
2.42E-11	1.54E+00	138	0.686567
2.97E-11	1.55E+00	139	0.691542
3.32E-11	1.56E+00	140	0.696517
3.94E-11	1.57E+00	141	0.701493
5.33E-11	1.59E+00	142	0.706468
7.24E-11	1.63E+00	143	0.711443
9.15E-11	1.65E+00	144	0.716418
1.24E-10	1.66E+00	145	0.721393
1.33E-10	1.66E+00	146	0.726368
1.38E-10	1.68E+00	147	0.731343
1.94E-10	1.68E+00	148	0.736318
1.97E-10	1.70E+00	149	0.741294
2.04E-10	1.80E+00	150	0.746269
2.67E-10	1.86E+00	151	0.751244
3.47E-10	2.17E+00	152	0.756219
3.78E-10	2.22E+00	153	0.761194
4.30E-10	2.23E+00	154	0.766169
5.20E-10	2.24E+00	155	0.771144

9.10E-10	2.25E+00	156	0.776119
1.17E-09	2.27E+00	157	0.781095
1.29E-09	2.30E+00	158	0.78607
1.62E-09	2.33E+00	159	0.791045
1.94E-09	2.34E+00	160	0.79602
2.04E-09	2.47E+00	161	0.800995
2.37E-09	2.79E+00	162	0.80597
2.79E-09	2.81E+00	163	0.810945
3.13E-09	2.85E+00	164	0.81592
3.29E-09	2.94E+00	165	0.820896
3.65E-09	3.21E+00	166	0.825871
5.03E-09	3.25E+00	167	0.830846
1.30E-08	3.31E+00	168	0.835821
1.76E-08	3.33E+00	169	0.840796
2.13E-08	3.33E+00	170	0.845771
2.25E-08	3.41E+00	171	0.850746
3.29E-08	3.46E+00	172	0.855721
4.13E-08	3.50E+00	173	0.860697
4.19E-08	3.73E+00	174	0.865672
4.35E-08	3.92E+00	175	0.870647
6.30E-08	3.92E+00	176	0.875622
7.14E-08	3.99E+00	177	0.880597
9.89E-08	4.04E+00	178	0.885572
5.20E-07	4.11E+00	179	0.890547
5.89E-07	4.80E+00	180	0.895522
7.07E-07	4.90E+00	181	0.900498
7.47E-07	5.01E+00	182	0.905473
1.04E-06	5.53E+00	183	0.910448
1.18E-06	5.73E+00	184	0.915423
1.21E-06	5.87E+00	185	0.920398
2.48E-06	6.31E+00	186	0.925373
2.64E-06	6.78E+00	187	0.930348
1.13E-05	6.97E+00	188	0.935323
1.45E-05	7.14E+00	189	0.940299
3.15E-05	7.25E+00	190	0.945274
3.96E-05	7.44E+00	191	0.950249
7.85E-05	7.62E+00	192	0.955224
9.33E-05	7.65E+00	193	0.960199
1.48E-04	1.28E+01	194	0.965174
2.30E-04	1.43E+01	195	0.970149

3.87E-04	1.53E+01	196	0.975124
6.63E-04	1.74E+01	197	0.9801
8.58E-04	2.30E+01	198	0.985075
9.54E-03	2.83E+01	199	0.99005
1.20E-02	5.01E+01	200	0.995025


10000
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Tritium Surface Flux (pCi/m2/s)
0
50
100
150
200
Time (years)
Max Measured Value in 1993 = 46.1 pCi/m2/s
Min Measured Value in 1993 = 0.0583 pCi/m2/s

Tritium Surface Flux (pCi/m^2/s) for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130	140
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0.984	3.566	3.548	2.564	1.633	0.976	0.564	0.319	0.178	0.098	0.054	3.00E-02	1.60E-02	1.10E-02
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	59.071	53.83	33.736	19.109	10.404	5.568	2.957	1.566	0.829	0.44	0.233	0.124	0.066	0.035
6	57.122	33.39	16.313	7.814	3.768	1.839	0.908	0.454	0.229	0.116	0.06	3.10E-02	1.60E-02	8.33E-03
7	77.306	32.596	13.957	6.203	2.847	1.34	0.644	0.315	0.156	0.078	0.04	0.02	0.01	5.37E-03
8	6.144	41.606	50.373	40.014	27.005	16.854	10.071	6.008	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	158.456	51.236	19.571	8.177	3.612	1.658	0.783	0.377	0.185	0.092	4.60E-02	2.30E-02	1.20E-02	6.19E-03
11	29.448	16.845	8.85	4.555	2.332	1.195	0.614	0.317	0.164	0.085	0.045	0.023	0.012	6.53E-03
12	110.829	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
13	13.735	18.881	12.812	7.322	3.939	2.068	1.075	0.564	0.18	0.262	0.198	0	0	0
14	54.339	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
15	83.379	59.383	31.478	15.831	7.897	3.953	1.992	1.011	0.517	2.66E-01	1.38E-01	7.20E-02	3.70E-02	2.00E-02
16	86.901	92.118	59.526	33.822	18.323	9.732	5.128	2.695	1.417	0.746	0.394	0.208	0.11	0.059
17	0.771	3.976	4.554	3.578	2.418	1.515	0.909	0.531	0.305	0.173	0.097	0.054	0.03	0.017
18	74.912	35.575	16.796	8.025	3.892	1.915	0.954	0.48	0.244	0.125	0.064	0.033	0.017	9.15E-03
19	0.306	1.583	1.808	1.417	0.956	0.599	0.36	0.21	0.121	0.069	0.039	0.022	0.012	6.71E-03
20	0.044	0.463	0.673	0.594	0.431	0.282	0.175	0.105	0.061	0.035	0.02	0.011	6.33E-03	3.53E-03
21	85.634	59.663	29.178	13.874	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
22	613.467	259.313	108.875	77.579	0	0	0	0	0	0	0	0	0	0.00E+00
23	66.946	49.107	26.103	13.089	6.501	3.239	1.625	0.821	0.418	0.214	0.111	0.057	0.03	0.016
24	82.521	46.839	22.658	14.061	11.287	0	0	0	0	0	0	0	0	0
25	396.116	199.562	95.426	45.806	22.273	10.977	5.476	2.76	1.404	0.72	0.372	0.193	0.101	0.053
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	75.693	61.581	34.783	18.183	9.316	4.757	2.435	1.252	0.647	0.336	0.175	0.092	0.048	0.026
28	425.203	226.58	103.921	47.59	22.191	10.55	5.103	2.505	1.245	0.626	0.317	0.162	0.083	0.041
29	2.625	7.808	7.181	4.947	3.04	1.76	0.987	0.618	0.35	0.196	0.084	0	0	0
30	96.5	50.665	23.736	11.102	5.27	2.543	1.245	0.617	0.31	0.157	0.08	0.041	0.021	0.011
31	102.234	117.13	73.384	40.022	20.893	10.753	5.517	2.835	1.462	7.57E-01	3.93E-01	2.05E-01	1.08E-01	5.70E-02
32	37.533	21.186	10.514	5.142	2.529	1.256	0.63	0.319	1.63E-01	8.40E-02	4.30E-02	2.30E-02	1.20E-02	6.21E-03
33	158.871	70.108	31.011	14.058	6.534	3.103	1.501	0.737	0.366	0.184	0.093	0.049	0.029	0.00E+00
34	279.786	120.745	56.069	26.766	12.997	6.397	3.185	1.601	0.808	0.387	0.341	0.186	0.102	0.051
35	224.025	94.595	39.608	17.241	7.777	3.564	4.257	1.978	0	0	0	0	0.00E+00	0.00E+00

36	126.634	55.497	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
37	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	344.385	127.708	51.064	21.732	9.679	4.458	2.106	1.016	0.498	0.247	0.124	0.063	0.032	0.018
39	1.40E+03	7.78E+02	360.943	166.067	77.617	36.946	17.882	8.781	4.366	2.194	1.112	0.569	0.293	0.148
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	5.87E+03	2.63E+03	1.16E+03	525.643	244.231	116.028	56.148	27.59	13.732	6.909	3.508	1.796	0.926	0.48
42	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	255.67	118.52	54.728	25.61	12.182	5.887	2.885	1.431	0.716	0.357	0.193	0.198	0.108	0.068
44	132.81	39.934	14.725	6.016	2.616	1.187	0.555	0.266	0.129	0.064	0.032	0.016	8.26E-03	4.24E-03
45	510.28	196.597	81.11	35.297	15.981	7.454	3.558	1.73	0.854	0.427	0.215	0.11	0.056	0.029
46	113.236	50.631	22.917	10.666	5.086	2.474	1.222	0.612	0.31	0.158	0.081	0.042	0.022	0.012
47	39.373	31.945	18.433	9.782	5.054	2.591	1.327	0.682	0.352	0.182	0.095	0.05	0.026	1.40E-02
48	146.342	62.91	27.376	12.296	5.685	2.692	1.299	0.637	0.317	0.159	0.081	0.041	0.021	0.011
49	256.032	106.893	45.688	20.337	9.36	4.421	2.132	1.045	0.519	0.261	1.32E-01	6.80E-02	3.50E-02	1.80E-02
50	26.389	23.079	14.072	7.877	4.268	2.279	1.209	0.639	0.338	0.179	0.095	0.05	0.027	0.014
51	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
52	1.52E+03	660.554	282.465	125.309	57.468	27.064	13.016	6.367	3.158	1.585	8.03E-01	4.10E-01	2.11E-01	1.09E-01
53	4.396	6.504	4.704	2.827	1.583	0.859	0.459	0.244	0.129	0.068	0.036	0.019	1.00E-02	5.46E-03
54	2.56E+03	857.922	333.305	140.722	62.626	28.905	13.703	6.631	3.262	1.626	0.819	4.17E-01	2.14E-01	1.10E-01
55	4.24E+03	2.22E+03	1.03E+03	476.738	225.64	108.738	53.231	26.407	13.249	6.712	3.429	1.764	0.913	0.475
56	416.487	218.623	107.625	52.571	25.827	12.805	6.409	3.237	1.648	0.845	0.436	0.227	0.118	0.062
57	24.333	18.385	10.638	5.749	3.03	1.582	0.824	0.429	0.224	0.117	0.062	3.20E-02	1.70E-02	9.08E-03
58	22.845	15.852	8.696	4.51	2.3	1.17	0.596	0.305	0.157	0.081	0.042	2.20E-02	1.20E-02	6.06E-03
59	6.052	9.261	6.713	4.19	2.44	1.432	0	0	0	0	0	0	0	0.00E+00
60	105.943	46.394	20.694	9.518	4.495	2.168	1.063	0.529	0.266	0.135	0.069	0.036	0.019	9.69E-03
61	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	97.146	58.651	28.466	13.452	6.396	3.08	1.503	0.742	0.371	0.187	0.099	0.039	0.081	0.03
64	671.777	233.862	89.491	36.999	16.305	23.051	0	0	0	0	0	0	0	0
65	18.257	16.166	9.688	5.261	2.762	1.433	0.741	0.383	0.199	0.104	0.054	0.028	0.015	7.90E-03
66	61.485	48.419	28.156	15.194	7.982	4.151	2.153	1.118	0.582	0.303	0.159	0.083	0.044	0.023
67	459.877	207.229	92.255	42.119	19.724	9.436	4.594	2.27	1.135	0.573	0.292	0.15	0.078	0.04
68	1.23E+03	781.962	380.878	180.041	85.647	41.285	20.174	9.981	4.993	2.521	1.284	0.659	0.34	0.177
69	100.049	112.384	76.15	44.989	25.175	13.744	7.415	3.978	2.129	1.139	0.61	0.327	0.175	0.094
70	1.52E+03	860.135	415.051	196.58	93.751	45.275	22.216	11.18	11.107	5.708	0	0	0	0
71	279.07	130.045	57.357	25.822	11.93	5.639	2.717	1.33	0.659	0.331	0.167	0.085	0.044	0.023
72	204.069	107.664	51.096	24.29	11.718	5.74	2.85	1.431	0.726	0.371	0.191	0.099	0.052	0.027
73	0.00E+00	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
74	37.05	23.405	11.666	5.62	2.712	1.321	0.651	0.324	0.163	0.083	0.042	0.022	0.011	5.83E-03
75	122.032	35.585	12.869	5.188	2.234	1.006	0.468	0.223	0.108	0.053	2.70E-02	1.30E-02	6.84E-03	3.51E-03

76	68.102	30.124	14.398	7.119	3.582	1.821	0.934	0.482	0.25	0.13	0.068	0.036	1.90E-02	9.88E-03
77	105.588	49.847	22.698	10.536	5.001	2.42	1.19	0.593	0.299	0.152	0.078	0.04	0.021	0.011
78	269.467	102.677	41.743	18.048	8.152	3.801	1.816	0.884	4.37E-01	2.18E-01	1.10E-01	5.60E-02	2.90E-02	1.50E-02
79	299.648	124.941	53.209	23.513	10.734	5.031	2.409	1.176	0.557	0	0.416	0.283	0	0
80	5.931	9.529	8.27	0	0	0	0	0	0	0	0	0	0	0
81	110.922	51.94	24.164	11.374	5.433	2.633	1.292	0.642	0.322	0.163	0.083	0.043	2.20E-02	1.10E-02
82	538.503	173.25	64.049	25.99	11.213	5.064	1.893	6.464	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	166.69	85.004	38.143	17.269	7.999	3.787	1.827	0.895	0.444	0.223	0.113	0.058	0.03	0.015
84	9.967	12.229	8.363	4.912	2.724	1.475	0.789	0.421	0.224	0.119	0.063	0.034	0.018	9.69E-03
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
86	91.84	42.467	19.172	8.79	4.114	1.963	0.951	0.481	0.48	0.25	0.286	0	0	0.00E+00
87	671.83	239.839	91.889	37.941	29.256	0	0	0	0	0	0	0	0.00E+00	0.00E+00
88	922.49	294.261	109.569	44.733	19.387	8.759	4.079	1.955	0.863	2.282	1.504	0	0	0.00E+00
89	174.506	351.243	278.867	177.19	103.9	60.033	33.606	18.612	10.077	0	0	0	0	0
90	97.711	33.002	12.547	5.176	2.226	3.01	1.289	0	0	0	0	0	0.00E+00	0.00E+00
91	6.097	27.509	30.086	23.043	15.299	9.454	5.607	3.242	1.844	1.037	0.579	0.321	0.178	0.098
92	26.285	16.186	8.504	4.312	2.171	1.096	0.556	0.284	0.146	0.075	0.039	0.02	0.011	5.60E-03
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	328.257	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
96	9.501	41.599	44.994	33.865	21.983	13.259	7.679	4.342	2.42	1.336	7.33E-01	4.01E-01	2.19E-01	1.19E-01
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
98	3.42E+03	1.79E+03	826.125	382.467	180.075	86.306	42.027	20.747	10.362	5.227	2.66	1.364	0.704	3.65E-01
99	1.41E+03	547.468	222.419	95.673	42.961	19.92	9.467	4.587	2.258	1.126	0.567	0.288	0.148	0.076
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max value	**5.87E+03**	**2.63E+03**	**1.16E+03**	**5.26E+02**	**2.44E+02**	**1.16E+02**	**5.61E+01**	**2.76E+01**	**1.37E+01**	**6.91E+00**	**3.51E+00**	**1.80E+00**	**9.26E-01**	**4.80E-01**
Average														

150	160	170	180	190	200	210	220	230	240	250	260	270	280	290
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.16E-03	3.46E-03	1.90E-03	8.26E-04	1.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.019	1.00E-02	5.45E-03	2.94E-03	1.58E-03	8.56E-04	4.63E-04	2.51E-04	1.36E-04	7.41E-05	4.03E-05	2.20E-05	1.20E-05	6.54E-06	3.58E-06
4.36E-03	2.30E-03	1.21E-03	6.43E-04	3.42E-04	1.82E-04	9.76E-05	5.23E-05	2.81E-05	1.51E-05	8.16E-06	4.41E-06	2.39E-06	1.29E-06	7.03E-07
2.79E-03	1.46E-03	7.67E-04	4.04E-04	2.14E-04	1.14E-04	6.04E-05	3.23E-05	1.73E-05	9.26E-06	4.98E-06	2.68E-06	1.45E-06	7.81E-07	4.21E-07
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.21E-03	1.67E-03	8.77E-04	4.61E-04	2.44E-04	1.29E-04	6.86E-05	3.66E-05	1.96E-05	1.05E-05	5.63E-06	3.03E-06	1.64E-06	8.84E-07	4.78E-07
3.47E-03	1.84E-03	9.84E-04	5.26E-04	2.82E-04	1.52E-04	8.16E-05	4.40E-05	2.38E-05	1.29E-05	6.98E-06	3.79E-06	2.06E-06	1.12E-06	6.11E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E-02	5.50E-03	2.92E-03	1.56E-03	8.31E-04	4.45E-04	2.39E-04	1.29E-04	6.92E-05	3.74E-05	2.02E-05	1.10E-05	5.95E-06	3.23E-06	1.76E-06
0.031	0.017	8.94E-03	4.80E-03	2.58E-03	1.39E-03	7.50E-04	4.05E-04	2.19E-04	1.19E-04	6.46E-05	3.51E-05	1.91E-05	1.04E-05	5.69E-06
9.26E-03	5.12E-03	2.82E-03	1.56E-03	8.58E-04	4.72E-04	2.60E-04	1.44E-04	7.91E-05	4.35E-05	2.38E-05	1.30E-05	6.60E-06	3.22E-06	3.62E-06
4.82E-03	2.55E-03	1.35E-03	7.19E-04	3.84E-04	2.05E-04	1.10E-04	5.93E-05	3.19E-05	1.72E-05	9.32E-06	5.05E-06	2.74E-06	1.49E-06	8.10E-07
3.72E-03	2.06E-03	1.14E-03	6.28E-04	3.48E-04	1.94E-04	1.11E-04	7.76E-05	4.37E-05	2.46E-05	1.38E-05	7.81E-06	4.49E-06	2.35E-06	8.84E-07
1.97E-03	1.09E-03	6.06E-04	3.40E-04	1.65E-04	1.36E-04	7.68E-05	4.31E-05	2.41E-05	1.28E-05	6.30E-06	5.86E-06	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.25E-03	4.36E-03	2.31E-03	1.23E-03	6.54E-04	3.50E-04	1.87E-04	1.01E-04	5.42E-05	2.92E-05	1.58E-05	8.53E-06	4.63E-06	2.51E-06	1.36E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.028	0.015	7.84E-03	4.17E-03	2.23E-03	1.19E-03	6.41E-04	3.45E-04	1.86E-04	1.00E-04	5.43E-05	2.94E-05	1.60E-05	8.69E-06	4.73E-06
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.014	7.19E-03	3.83E-03	2.05E-03	1.10E-03	5.90E-04	3.18E-04	1.71E-04	9.26E-05	5.01E-05	2.72E-05	1.48E-05	8.03E-06	4.37E-06	2.39E-06
0.031	0.00E+00	3.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.79E-03	3.04E-03	1.60E-03	8.48E-04	4.50E-04	2.40E-04	1.28E-04	6.85E-05	3.68E-05	1.98E-05	1.07E-05	5.75E-06	3.11E-06	1.69E-06	9.15E-07
3.00E-02	1.60E-02	8.42E-03	4.49E-03	2.40E-03	1.28E-03	6.89E-04	3.71E-04	2.00E-04	1.08E-04	5.87E-05	3.12E-05	1.80E-05	9.74E-06	4.44E-06
3.28E-03	1.74E-03	9.22E-04	4.92E-04	2.63E-04	1.41E-04	7.56E-05	4.07E-05	2.20E-05	1.19E-05	6.42E-06	3.48E-06	1.89E-06	1.03E-06	5.60E-07
2.20E-02	9.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.063	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.78E-03	0.00E+00	1.50E-02	1.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.068	0.094	0.132	0.093	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.25	0.131	0.069	0.036	0.019	1.00E-02	5.48E-03	2.96E-03	1.58E-03	9.30E-04	6.49E-04	5.75E-05	0.00E+00	4.37E-04	2.60E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.20E-03	1.14E-03	5.97E-04	3.13E-04	1.65E-04	8.74E-05	4.64E-05	2.47E-05	1.32E-05	7.06E-06	3.79E-06	2.04E-06	1.10E-06	5.93E-07	3.20E-07
0.015	7.89E-03	4.14E-03	2.18E-03	1.16E-03	6.13E-04	3.27E-04	1.74E-04	9.08E-05	4.84E-05	2.23E-05	2.94E-05	0.00E+00	3.09E-05	2.10E-05
6.06E-03	3.20E-03	1.70E-03	9.03E-04	4.82E-04	2.58E-04	1.38E-04	7.44E-05	4.01E-05	2.16E-05	1.17E-05	6.34E-06	3.44E-06	1.87E-06	1.02E-06
7.24E-03	3.84E-03	2.04E-03	1.09E-03	5.82E-04	3.12E-04	1.68E-04	9.00E-05	4.83E-05	2.70E-05	1.52E-05	8.20E-06	3.17E-06	0.00E+00	4.90E-06
5.75E-03	3.01E-03	1.58E-03	8.36E-04	4.43E-04	2.35E-04	1.26E-04	6.71E-05	3.56E-05	1.96E-05	9.97E-06	6.47E-06	3.44E-06	0.00E+00	5.75E-06
9.42E-03	4.93E-03	2.59E-03	1.37E-03	7.26E-04	3.86E-04	2.06E-04	1.10E-04	5.89E-05	3.16E-05	1.70E-05	9.18E-06	4.96E-06	2.69E-06	1.46E-06
7.60E-03	4.07E-03	2.18E-03	1.17E-03	6.29E-04	3.39E-04	1.82E-04	1.06E-04	6.90E-05	2.29E-06	3.14E-05	1.73E-05	1.01E-05	5.74E-06	4.07E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E-02	3.00E-02	1.60E-02	8.28E-03	4.39E-03	2.33E-03	1.24E-03	6.65E-04	3.56E-04	1.91E-04	1.03E-04	5.56E-05	3.00E-05	1.63E-05	8.81E-06
2.91E-03	1.56E-03	8.35E-04	4.49E-04	2.42E-04	1.30E-04	7.03E-05	3.80E-05	2.06E-05	1.12E-05	6.07E-06	3.30E-06	1.80E-06	9.80E-07	5.35E-07
5.70E-02	3.00E-02	1.60E-02	8.26E-03	4.37E-03	2.32E-03	1.23E-03	6.59E-04	3.53E-04	1.89E-04	1.02E-04	5.48E-05	2.96E-05	1.60E-05	8.66E-06
0.249	0.131	6.90E-02	3.70E-02	1.90E-02	1.00E-02	5.52E-03	2.96E-03	1.59E-03	8.54E-04	4.61E-04	2.49E-04	1.35E-04	7.29E-05	3.96E-05
0.033	0.017	9.15E-03	4.87E-03	2.60E-03	1.39E-03	7.45E-04	4.00E-04	2.16E-04	1.16E-04	6.29E-05	3.41E-05	1.85E-05	1.00E-05	5.46E-06
4.83E-03	2.57E-03	1.37E-03	7.35E-04	3.94E-04	2.12E-04	1.14E-04	6.16E-05	3.33E-05	1.80E-05	9.77E-06	5.30E-06	2.88E-06	1.57E-06	8.55E-07
3.20E-03	1.69E-03	8.99E-04	4.79E-04	2.56E-04	1.37E-04	7.34E-05	3.94E-05	2.12E-05	1.15E-05	6.19E-06	3.35E-06	1.82E-06	9.87E-07	5.37E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.08E-03	2.68E-03	1.42E-03	7.52E-04	4.00E-04	2.14E-04	1.14E-04	6.14E-05	3.30E-05	1.78E-05	9.62E-06	5.20E-06	2.82E-06	1.53E-06	8.32E-07
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.19E-03	2.23E-03	1.19E-03	6.34E-04	3.40E-04	1.82E-04	9.80E-05	5.28E-05	2.85E-05	1.54E-05	8.36E-06	4.54E-06	2.47E-06	1.34E-06	7.32E-07
0.012	6.55E-03	3.49E-03	1.87E-03	9.99E-04	5.35E-04	2.87E-04	1.55E-04	8.19E-05	4.17E-05	1.59E-05	0.00E+00	1.97E-05	1.12E-05	5.58E-06
0.021	0.011	5.82E-03	3.08E-03	1.64E-03	8.70E-04	4.65E-04	2.49E-04	1.33E-04	7.18E-05	3.87E-05	2.09E-05	1.13E-05	6.11E-06	3.32E-06
9.20E-02	4.80E-02	2.50E-02	1.30E-02	7.14E-03	3.81E-03	2.06E-03	1.12E-03	4.04E-04	5.81E-04	1.37E-04	6.58E-04	6.46E-04	0.00E+00	0.00E+00
0.051	0.027	0.015	7.98E-03	4.32E-03	2.34E-03	1.27E-03	6.92E-04	3.77E-04	2.06E-04	1.12E-04	6.13E-05	3.35E-05	1.84E-05	1.01E-05
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.012	6.17E-03	3.24E-03	1.71E-03	9.02E-04	4.79E-04	2.55E-04	1.36E-04	7.30E-05	3.94E-05	2.19E-05	1.11E-05	9.96E-06	5.10E-06	1.52E-05
0.014	7.55E-03	4.01E-03	2.13E-03	1.14E-03	6.09E-04	3.27E-04	1.76E-04	9.47E-05	5.11E-05	2.77E-05	1.50E-05	8.13E-06	4.42E-06	2.41E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E-03	1.60E-03	8.42E-04	4.45E-04	2.36E-04	1.25E-04	6.69E-05	3.57E-05	1.92E-05	1.03E-05	5.53E-06	2.98E-06	1.61E-06	8.70E-07	4.73E-07
1.81E-03	9.42E-04	4.92E-04	2.58E-04	1.36E-04	7.17E-05	3.86E-05	1.97E-05	1.03E-05	3.02E-06	0.00E+00	8.69E-06	2.00E-05	2.01E-05	0.00E+00

5.39E-03	2.29E-03	2.29E-03	1.26E-03	6.98E-04	3.92E-04	2.22E-04	1.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.71E-03	3.01E-03	1.59E-03	8.45E-04	4.50E-04	2.40E-04	1.29E-04	6.90E-05	3.71E-05	2.00E-05	1.08E-05	5.84E-06	3.16E-06	1.72E-06	9.33E-07
7.79E-03	4.07E-03	2.14E-03	1.13E-03	5.98E-04	3.17E-04	1.69E-04	9.04E-05	4.84E-05	2.60E-05	1.40E-05	7.54E-06	4.07E-06	2.20E-06	1.19E-06
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.94E-03	3.09E-03	1.59E-03	9.13E-04	7.03E-04	6.81E-04	3.70E-04	2.17E-04	7.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.01E-03	4.19E-03	2.20E-03	1.16E-03	6.15E-04	3.26E-04	1.75E-04	9.17E-05	5.09E-05	2.49E-05	2.43E-05	0	0	2.03E-05	0.00E+00
5.20E-03	2.80E-03	1.51E-03	8.12E-04	4.39E-04	2.38E-04	1.29E-04	7.00E-05	3.81E-05	2.07E-05	1.13E-05	6.16E-06	3.37E-06	1.84E-06	1.01E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.054	0.03	0.016	8.95E-03	4.91E-03	2.70E-03	1.48E-03	8.14E-04	4.47E-04	2.46E-04	1.35E-04	7.43E-05	4.09E-05	2.25E-05	1.24E-05
2.96E-03	1.57E-03	8.32E-04	4.44E-04	2.37E-04	1.27E-04	6.81E-05	3.66E-05	1.97E-05	1.07E-05	5.77E-06	3.12E-06	1.69E-06	9.20E-07	5.01E-07
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.50E-02	3.50E-02	1.90E-02	1.00E-02	5.72E-03	3.12E-03	1.70E-03	9.29E-04	5.08E-04	2.78E-04	1.52E-04	8.32E-05	4.56E-05	2.50E-05	1.37E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.91E-01	1.00E-01	5.30E-02	2.80E-02	1.50E-02	7.84E-03	4.18E-03	2.23E-03	1.20E-03	6.43E-04	3.46E-04	1.87E-04	1.01E-04	5.46E-05	2.97E-05
0.04	2.10E-02	1.10E-02	5.72E-03	3.02E-03	1.60E-03	8.53E-04	4.55E-04	2.44E-04	1.31E-04	7.02E-05	3.77E-05	2.04E-05	1.12E-05	5.83E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E-01	**1.31E-01**	**1.32E-01**	**9.30E-02**	**1.90E-02**	**1.00E-02**	**5.52E-03**	**2.96E-03**	**1.59E-03**	**9.30E-04**	**6.49E-04**	**6.58E-04**	**6.46E-04**	**4.37E-04**	**2.60E-04**

300	310	320	330	340	350	360	370	380	390	400	410	420	430	440
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.96E-06	1.07E-06	5.88E-07	3.23E-07	1.77E-07	9.74E-08	5.36E-08	2.95E-08	1.63E-08	8.96E-09	4.94E-09	2.73E-09	1.51E-09	8.33E-10	4.60E-10
3.82E-07	2.08E-07	1.13E-07	6.19E-08	3.38E-08	1.85E-08	1.01E-08	5.55E-09	3.04E-09	1.67E-09	9.18E-10	5.05E-10	2.78E-10	1.53E-10	8.45E-11
2.43E-07	1.33E-07	6.97E-08	8.26E-08	5.28E-09	8.89E-08	6.48E-08	3.01E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
2.59E-07	1.41E-07	7.65E-08	4.16E-08	2.27E-08	1.24E-08	6.76E-09	3.70E-09	2.02E-09	1.11E-09	6.08E-10	3.34E-10	1.84E-10	1.01E-10	5.54E-11
3.34E-07	1.82E-07	9.97E-08	5.46E-08	2.99E-08	1.64E-08	9.00E-09	4.95E-09	2.72E-09	1.50E-09	8.24E-10	4.54E-10	2.50E-10	1.38E-10	7.63E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.58E-07	5.23E-07	2.86E-07	1.56E-07	8.55E-08	4.68E-08	2.57E-08	1.41E-08	7.74E-09	4.25E-09	2.34E-09	1.29E-09	7.10E-10	3.91E-10	2.16E-10
3.11E-06	1.70E-06	9.30E-07	5.10E-07	2.80E-07	1.54E-07	8.43E-08	4.64E-08	2.55E-08	1.40E-08	7.74E-09	4.27E-09	2.35E-09	1.30E-09	7.18E-10
2.04E-06	1.14E-06	6.46E-07	3.81E-07	1.82E-07	1.23E-07	8.33E-08	0	0	0	0	0	0	0	0
4.42E-07	2.41E-07	1.32E-07	7.19E-08	3.94E-08	2.16E-08	1.18E-08	6.50E-09	3.57E-09	1.96E-09	1.08E-09	5.95E-10	3.28E-10	1.81E-10	9.97E-11
1.55E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.43E-07	4.05E-07	2.21E-07	1.21E-07	6.59E-08	3.61E-08	1.98E-08	1.08E-08	5.95E-09	3.27E-09	1.80E-09	9.88E-10	5.44E-10	3.00E-10	1.65E-10
0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
2.58E-06	1.41E-06	7.69E-07	4.21E-07	2.30E-07	1.26E-07	6.92E-08	3.80E-08	2.09E-08	1.15E-08	6.32E-09	3.48E-09	1.92E-09	1.06E-09	5.85E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E-06	7.12E-07	3.89E-07	2.13E-07	1.17E-07	6.41E-08	3.52E-08	1.94E-08	1.07E-08	5.86E-09	3.23E-09	1.78E-09	9.82E-10	5.42E-10	3.00E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.97E-07	2.70E-07	1.47E-07	8.03E-08	4.39E-08	2.40E-08	1.31E-08	7.18E-09	3.94E-09	2.12E-09	1.19E-09	5.86E-10	4.25E-10	2.54E-10	4.73E-12
4.32E-06	1.55E-08	4.62E-06	3.45E-06	2.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E-07	1.67E-07	9.10E-08	4.98E-08	2.73E-08	1.49E-08	8.20E-09	4.50E-09	2.47E-09	1.36E-09	7.49E-10	4.12E-10	2.27E-10	1.25E-10	6.92E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.34E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.74E-07	9.42E-08	5.15E-08	2.81E-08	1.47E-08	7.91E-09	5.42E-09	3.41E-09	1.62E-09	0.00E+00	5.33E-10	1.40E-09	0.00E+00	2.94E-09	0.00E+00
1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.55E-07	3.03E-07	1.66E-07	9.05E-08	4.96E-08	2.72E-08	1.49E-08	8.18E-09	4.50E-09	2.47E-09	1.36E-09	7.50E-10	4.13E-10	2.28E-10	1.26E-10
2.79E-06	1.79E-06	1.44E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.70E-06	2.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.90E-07	4.30E-07	2.34E-07	1.27E-07	6.95E-08	3.80E-08	2.08E-08	1.14E-08	6.23E-09	3.42E-09	1.88E-09	1.03E-09	5.67E-10	3.12E-10	1.72E-10
3.69E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.79E-06	2.60E-06	1.42E-06	7.72E-07	4.22E-07	2.30E-07	1.26E-07	6.91E-08	3.77E-08	2.06E-08	1.16E-08	6.04E-09	3.58E-09	1.85E-09	1.16E-09
2.92E-07	1.60E-07	8.75E-08	4.80E-08	2.63E-08	1.44E-08	7.93E-09	4.36E-09	2.40E-09	1.32E-09	7.27E-10	4.02E-10	2.20E-10	1.22E-10	6.55E-11
4.70E-06	2.55E-06	1.39E-06	7.56E-07	4.13E-07	2.25E-07	1.23E-07	6.74E-08	3.69E-08	2.02E-08	1.11E-08	6.10E-09	3.35E-09	1.84E-09	1.02E-09
2.15E-05	1.17E-05	6.37E-06	3.48E-06	1.90E-06	1.04E-06	5.68E-07	3.11E-07	1.71E-07	9.36E-08	5.14E-08	2.83E-08	1.55E-08	8.55E-09	4.71E-09
2.97E-06	1.62E-06	8.86E-07	4.84E-07	2.65E-07	1.45E-07	7.96E-08	4.37E-08	2.40E-08	1.32E-08	7.25E-09	3.99E-09	2.20E-09	1.21E-09	6.69E-10
4.66E-07	2.55E-07	1.39E-07	7.62E-08	4.17E-08	2.29E-08	1.26E-08	6.89E-09	3.79E-09	2.08E-09	1.15E-09	6.32E-10	3.47E-10	1.92E-10	1.06E-10
2.92E-07	1.59E-07	8.64E-08	4.79E-08	2.60E-08	1.46E-08	8.25E-09	4.72E-09	3.37E-09	1.81E-10	0.00E+00	1.90E-09	1.06E-09	5.31E-10	4.46E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.53E-07	2.47E-07	1.35E-07	7.36E-08	4.03E-08	2.20E-08	1.21E-08	6.63E-09	3.64E-09	2.00E-09	1.10E-09	6.05E-10	3.33E-10	1.84E-10	1.01E-10
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.97E-07	2.16E-07	1.19E-07	6.32E-08	3.23E-08	1.68E-08	5.38E-09	9.55E-09	0.00E+00	8.22E-09	5.14E-09	3.21E-09	2.00E-09	0.00E+00	0.00E+00
2.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.80E-06	9.80E-07	5.34E-07	2.91E-07	1.59E-07	8.68E-08	4.75E-08	2.60E-08	1.43E-08	7.82E-09	4.30E-09	2.36E-09	1.30E-09	7.15E-10	3.94E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.52E-06	3.03E-06	1.67E-06	9.16E-07	5.04E-07	2.78E-07	1.53E-07	8.44E-08	4.65E-08	2.57E-08	1.42E-08	7.85E-09	4.34E-09	2.40E-09	1.33E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.57E-06	7.52E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.31E-06	7.15E-07	3.91E-07	2.14E-07	1.17E-07	6.41E-08	3.52E-08	1.93E-08	1.06E-08	5.83E-09	3.21E-09	1.77E-09	9.75E-10	5.38E-10	2.97E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.55E-07	1.35E-07	7.36E-08	4.04E-08	2.19E-08	0.00E+00	8.72E-09	3.33E-08	1.75E-08	1.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.08E-07	2.77E-07	1.51E-07	8.24E-08	4.51E-08	2.47E-08	1.35E-08	7.41E-09	4.07E-09	2.23E-09	1.23E-09	6.76E-10	3.72E-10	2.05E-10	1.13E-10
6.48E-07	3.52E-07	1.92E-07	1.05E-07	5.70E-08	3.12E-08	1.70E-08	9.33E-09	5.11E-09	2.80E-09	1.54E-09	8.46E-10	4.65E-10	2.56E-10	1.41E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.53E-07	3.03E-07	1.66E-07	9.14E-08	5.03E-08	2.77E-08	1.52E-08	8.40E-09	4.63E-09	2.56E-09	1.41E-09	7.80E-10	4.31E-10	2.39E-10	1.32E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.79E-06	3.81E-06	2.03E-06	1.12E-06	6.16E-07	4.48E-07	1.22E-07	2.11E-07	1.20E-07	6.65E-08	3.86E-08	2.23E-08	1.07E-08	8.78E-09	5.08E-09
2.73E-07	1.49E-07	8.12E-08	4.44E-08	2.43E-08	1.33E-08	7.28E-09	4.00E-09	2.19E-09	1.21E-09	6.63E-10	3.65E-10	2.01E-10	1.11E-10	6.10E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.55E-06	4.15E-06	2.28E-06	1.26E-06	6.92E-07	3.82E-07	2.10E-07	1.16E-07	6.41E-08	3.54E-08	1.96E-08	1.08E-08	5.99E-09	3.31E-09	1.84E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.61E-05	8.68E-06	4.82E-06	2.75E-06	1.07E-06	1.40E-07	2.80E-07	0.00E+00	1.08E-06	4.61E-07	6.54E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.41E-06	1.08E-07	2.97E-06	2.32E-07	4.00E-06	3.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.34E-04	**1.17E-05**	**6.37E-06**	**3.48E-06**	**4.00E-06**	**3.01E-06**	**5.68E-07**	**3.11E-07**	**1.08E-06**	**4.61E-07**	**6.54E-07**	**2.83E-08**	**1.55E-08**	**8.78E-09**	**5.08E-09**

450	460	470	480	490	500	510	520	530	540	550	560	570	580	590
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.55E-10	1.41E-10	7.81E-11	4.32E-11	2.40E-11	1.33E-11	7.37E-12	4.09E-12	2.27E-12	1.26E-12	7.01E-13	3.90E-13	2.17E-13	1.21E-13	6.70E-14
4.65E-11	2.57E-11	1.41E-11	7.71E-12	4.43E-12	2.35E-12	1.39E-12	6.90E-13	3.83E-13	2.91E-13	0.00E+00	7.17E-14	1.37E-13	0.00E+00	1.27E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E-11	1.69E-11	9.41E-12	5.12E-12	2.70E-12	1.49E-12	9.45E-13	3.60E-13	1.31E-13	2.40E-13	2.24E-13	1.28E-13	0.00E+00	0.00E+00	0.00E+00
4.21E-11	2.33E-11	1.29E-11	7.13E-12	3.96E-12	2.20E-12	1.22E-12	6.81E-13	3.75E-13	2.19E-13	1.04E-13	7.02E-14	3.28E-14	2.29E-14	2.67E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.19E-10	6.58E-11	3.64E-11	2.01E-11	1.11E-11	6.16E-12	3.41E-12	1.89E-12	1.05E-12	5.81E-13	3.22E-13	1.79E-13	9.93E-14	5.52E-14	3.07E-14
3.97E-10	2.19E-10	1.21E-10	6.72E-11	3.72E-11	2.06E-11	1.14E-11	6.34E-12	3.52E-12	1.95E-12	1.08E-12	6.02E-13	3.34E-13	1.86E-13	1.03E-13
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.50E-11	3.04E-11	1.68E-11	9.30E-12	5.15E-12	2.85E-12	1.58E-12	8.75E-13	4.85E-13	2.69E-13	1.49E-13	8.29E-14	4.60E-14	2.56E-14	1.42E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.11E-11	5.03E-11	2.78E-11	1.53E-11	8.48E-12	4.69E-12	2.60E-12	1.44E-12	7.97E-13	4.41E-13	2.44E-13	1.35E-13	7.53E-14	4.24E-14	2.29E-14
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.23E-10	1.78E-10	9.86E-11	5.46E-11	3.02E-11	1.67E-11	9.27E-12	5.14E-12	2.85E-12	1.58E-12	8.77E-13	4.87E-13	2.71E-13	1.50E-13	8.36E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.66E-10	9.15E-11	5.06E-11	2.80E-11	1.55E-11	8.60E-12	4.77E-12	2.65E-12	1.47E-12	8.15E-13	4.53E-13	2.51E-13	1.40E-13	7.77E-14	4.32E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.62E-12	0.00E+00	1.85E-10	1.04E-10	5.85E-11	6.83E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.82E-11	2.11E-11	1.17E-11	6.45E-12	3.57E-12	1.98E-12	1.10E-12	6.07E-13	3.37E-13	1.87E-13	1.04E-13	5.75E-14	3.20E-14	1.78E-14	9.87E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.95E-11	3.84E-11	2.12E-11	1.18E-11	6.50E-12	3.60E-12	2.00E-12	1.11E-12	6.14E-13	3.41E-13	1.89E-13	1.05E-13	5.83E-14	3.24E-14	1.80E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.34E-11	5.31E-11	2.94E-11	1.58E-11	8.41E-12	3.86E-12	2.77E-12	3.42E-13	0.00E+00	3.95E-13	8.78E-13	0.00E+00	1.37E-12	4.41E-13	4.72E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.89E-10	2.84E-10	0.00E+00	0.00E+00	0.00E+00	5.41E-10	2.97E-10	3.31E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.51E-11	2.14E-11	1.32E-11	6.56E-12	5.43E-12	3.82E-12	0.00E+00	3.27E-12	2.26E-12	1.14E-12	5.79E-13	6.17E-13	0.00E+00	0.00E+00	0.00E+00
5.59E-10	3.08E-10	1.70E-10	9.37E-11	5.20E-11	2.84E-11	1.58E-11	8.63E-12	4.80E-12	2.57E-12	1.59E-12	8.38E-13	3.31E-13	1.43E-13	1.70E-13
2.60E-09	1.43E-09	7.90E-10	4.36E-10	2.41E-10	1.33E-10	7.37E-11	4.08E-11	2.26E-11	1.25E-11	6.93E-12	3.84E-12	2.13E-12	1.18E-12	6.55E-13
3.69E-10	2.04E-10	1.13E-10	6.23E-11	3.45E-11	1.91E-11	1.06E-11	5.93E-12	3.27E-12	1.80E-12	9.92E-13	5.80E-13	2.58E-13	1.51E-13	1.40E-13
5.80E-11	3.26E-11	1.83E-11	1.01E-11	5.67E-12	3.12E-12	2.06E-12	6.57E-13	6.48E-13	5.06E-13	0.00E+00	4.45E-13	2.44E-13	1.32E-13	7.79E-14
2.68E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.59E-11	3.09E-11	1.71E-11	9.44E-12	5.22E-12	2.89E-12	1.60E-12	8.87E-13	4.92E-13	2.73E-13	1.51E-13	8.40E-14	4.66E-14	2.59E-14	1.44E-14
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.17E-10	1.20E-10	6.60E-11	3.64E-11	2.02E-11	1.11E-11	6.10E-12	3.47E-12	1.87E-12	1.03E-12	6.03E-13	2.66E-13	2.05E-13	9.25E-14	1.05E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.37E-10	4.08E-10	2.27E-10	1.26E-10	6.97E-11	3.87E-11	2.15E-11	1.19E-11	6.64E-12	3.69E-12	2.05E-12	1.14E-12	6.36E-13	3.54E-13	1.97E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E-10	9.05E-11	5.00E-11	2.77E-11	1.53E-11	8.49E-12	4.70E-12	2.61E-12	1.45E-12	8.02E-13	4.45E-13	2.47E-13	1.37E-13	7.63E-14	4.24E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.23E-11	3.44E-11	1.90E-11	1.05E-11	5.81E-12	3.21E-12	1.78E-12	9.85E-13	5.46E-13	3.03E-13	1.68E-13	9.31E-14	5.17E-14	2.87E-14	1.59E-14
7.76E-11	4.28E-11	2.36E-11	1.30E-11	7.19E-12	3.97E-12	2.23E-12	1.21E-12	6.84E-13	3.79E-13	2.17E-13	1.19E-13	8.07E-14	3.59E-14	1.75E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.31E-11	4.05E-11	2.24E-11	1.24E-11	6.90E-12	3.83E-12	2.13E-12	1.18E-12	6.57E-13	3.65E-13	2.03E-13	1.13E-13	6.28E-14	3.50E-14	1.95E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E-11	1.86E-11	1.03E-11	5.67E-12	3.13E-12	1.73E-12	9.59E-13	5.31E-13	2.94E-13	1.63E-13	9.03E-14	5.01E-14	2.78E-14	1.54E-14	8.61E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E-09	5.63E-10	3.12E-10	1.72E-10	9.71E-11	5.35E-11	2.93E-11	1.62E-11	8.68E-12	5.01E-12	2.37E-12	1.86E-12	1.13E-12	4.71E-13	4.72E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E-09	**1.43E-09**	**7.90E-10**	**4.36E-10**	**2.41E-10**	**5.41E-10**	**2.97E-10**	**3.31E-10**	**2.26E-11**	**1.25E-11**	**6.93E-12**	**3.84E-12**	**2.13E-12**	**1.18E-12**	**6.55E-13**

600	610	620	630	640	650	660	670	680	690	700	710	720	730	740
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.73E-14	2.08E-14	1.16E-14	6.45E-15	3.59E-15	2.00E-15	1.12E-15	6.23E-16	3.47E-16	1.94E-16	1.08E-16	6.04E-17	3.37E-17	1.88E-17	1.05E-17
6.18E-14	6.35E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	1.01E-13	1.02E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	2.62E-15	0.00E+00	5.88E-15	3.43E-15	1.91E-15	1.20E-15	5.46E-16	2.48E-16	2.44E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E-14	9.47E-15	5.27E-15	2.93E-15	1.63E-15	9.09E-16	5.06E-16	2.82E-16	1.57E-16	8.76E-17	4.88E-17	2.72E-17	1.52E-17	8.48E-18	4.73E-18
5.75E-14	3.21E-14	1.79E-14	9.86E-15	5.48E-15	3.02E-15	1.65E-15	1.01E-15	5.66E-16	2.56E-16	2.00E-16	6.42E-17	7.76E-17	4.03E-17	1.10E-17
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.91E-15	4.40E-15	2.45E-15	1.36E-15	7.58E-16	4.22E-16	2.35E-16	1.31E-16	7.31E-17	4.08E-17	2.27E-17	1.27E-17	7.08E-18	3.95E-18	2.21E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.32E-14	7.73E-15	4.19E-15	2.02E-15	1.06E-15	9.28E-16	4.19E-16	8.38E-17	1.69E-17	2.53E-16	0.00E+00	0.00E+00	0.00E+00	1.23E-16	5.38E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.65E-14	2.59E-14	1.44E-14	8.01E-15	4.46E-15	2.49E-15	1.39E-15	7.72E-16	4.30E-16	2.40E-16	1.34E-16	7.47E-17	4.17E-17	2.33E-17	1.30E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.40E-14	1.34E-14	7.45E-15	4.15E-15	2.31E-15	1.29E-15	7.18E-16	4.00E-16	2.23E-16	1.25E-16	6.95E-17	3.88E-17	2.17E-17	1.21E-17	6.76E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.49E-15	3.05E-15	1.70E-15	9.45E-16	5.26E-16	2.93E-16	1.63E-16	9.09E-17	5.07E-17	2.83E-17	1.58E-17	8.79E-18	4.91E-18	2.74E-18	1.53E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E-14	5.58E-15	3.10E-15	1.73E-15	9.62E-16	5.36E-16	2.99E-16	1.67E-16	9.29E-17	5.18E-17	2.89E-17	1.61E-17	9.00E-18	5.03E-18	2.81E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	1.16E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.71E-14	4.54E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.64E-13	2.03E-13	1.12E-13	6.21E-14	3.52E-14	1.92E-14	1.11E-14	6.26E-15	2.93E-15	1.58E-15	8.30E-16	8.93E-16	3.92E-16	3.29E-16	1.44E-16
7.98E-14	2.24E-14	3.71E-14	0.00E+00	4.11E-14	2.40E-14	1.35E-14	8.44E-15	3.91E-15	3.73E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.21E-14	2.49E-14	2.63E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E-15	4.45E-15	2.48E-15	1.38E-15	7.67E-16	4.27E-16	2.38E-16	1.33E-16	7.39E-17	4.12E-17	2.30E-17	1.28E-17	7.15E-18	3.99E-18	2.23E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.61E-14	4.31E-14	3.69E-14	0.00E+00	4.01E-14	1.87E-14	8.63E-15	8.62E-15	8.42E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E-13	6.12E-14	3.41E-14	1.90E-14	1.06E-14	5.92E-15	3.30E-15	1.84E-15	1.03E-15	5.75E-16	3.21E-16	1.80E-16	1.00E-16	5.61E-17	3.13E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.36E-14	1.31E-14	7.30E-15	4.06E-15	2.26E-15	1.26E-15	7.02E-16	3.91E-16	2.18E-16	1.22E-16	6.79E-17	3.79E-17	2.11E-17	1.18E-17	6.59E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.85E-15	4.92E-15	2.74E-15	1.52E-15	8.47E-16	4.72E-16	2.63E-16	1.46E-16	8.15E-17	4.54E-17	2.53E-17	1.41E-17	7.87E-18	4.39E-18	2.45E-18
1.25E-14	1.47E-14	0.00E+00	4.73E-15	1.37E-14	1.18E-14	1.04E-15	0.00E+00	8.99E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.09E-14	6.04E-15	3.37E-15	1.88E-15	1.05E-15	5.84E-16	3.26E-16	1.82E-16	1.02E-16	5.67E-17	3.17E-17	1.77E-17	9.89E-18	5.53E-18	3.09E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.77E-15	2.67E-15	1.49E-15	8.25E-16	4.59E-16	2.70E-16	1.51E-16	6.78E-17	3.97E-17	1.93E-17	1.95E-17	1.01E-17	8.27E-19	0.00E+00	2.90E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	4.32E-13	2.19E-13	1.21E-13	7.49E-14	3.37E-14	3.26E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.64E-13	**4.32E-13**	**2.19E-13**	**1.21E-13**	**7.49E-14**	**3.37E-14**	**3.26E-14**	**4.71E-14**	**4.54E-14**	**3.73E-15**	**8.30E-16**	**8.93E-16**	**3.92E-16**	**3.29E-16**	**1.44E-16**

750	760	770	780	790	800	810	820	830	840	850	860	870	880	890
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.88E-18	3.29E-18	1.84E-18	1.03E-18	5.74E-19	3.21E-19	1.80E-19	1.01E-19	5.63E-20	3.15E-20	1.76E-20	9.87E-21	5.53E-21	3.10E-21	1.74E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.64E-18	1.48E-18	8.24E-19	4.61E-19	2.57E-19	1.44E-19	8.03E-20	4.49E-20	2.54E-20	1.40E-20	7.85E-21	4.43E-21	2.38E-21	1.38E-21	8.10E-22
7.52E-18	1.38E-17	0.00E+00	0.00E+00	7.41E-18	4.76E-18	2.69E-18	1.11E-18	9.78E-19	8.49E-19	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.23E-18	6.88E-19	3.85E-19	2.15E-19	1.20E-19	6.72E-20	3.75E-20	2.10E-20	1.18E-20	6.56E-21	3.66E-21	2.08E-21	1.13E-21	6.36E-22	3.67E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.91E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.26E-18	4.06E-18	2.27E-18	1.27E-18	7.08E-19	3.96E-19	2.22E-19	1.24E-19	6.93E-20	3.88E-20	2.17E-20	1.22E-20	6.81E-21	3.81E-21	2.14E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.78E-18	2.11E-18	1.18E-18	6.59E-19	3.69E-19	2.06E-19	1.15E-19	6.46E-20	3.61E-20	2.02E-20	1.13E-20	6.34E-21	3.55E-21	1.99E-21	1.11E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.54E-19	4.77E-19	2.66E-19	1.49E-19	8.32E-20	4.65E-20	2.60E-20	1.45E-20	8.13E-21	4.55E-21	2.55E-21	1.42E-21	7.97E-22	4.46E-22	2.50E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.57E-18	8.76E-19	4.90E-19	2.74E-19	1.53E-19	8.56E-20	4.79E-20	2.68E-20	1.50E-20	8.38E-21	4.69E-21	2.63E-21	1.47E-21	8.24E-22	4.62E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.77E-18	0.00E+00	0.00E+00	7.60E-17	0.00E+00	1.10E-16	4.65E-17	4.08E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.25E-18	6.95E-19	3.88E-19	2.17E-19	1.21E-19	6.78E-20	3.79E-20	2.13E-20	1.19E-20	6.64E-21	3.73E-21	2.08E-21	1.18E-21	6.51E-22	3.72E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.75E-17	9.80E-18	5.48E-18	3.07E-18	1.72E-18	9.61E-19	5.38E-19	3.01E-19	1.69E-19	9.45E-20	5.30E-20	2.97E-20	1.66E-20	9.32E-21	5.22E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.68E-18	2.06E-18	1.15E-18	6.42E-19	3.59E-19	2.01E-19	1.12E-19	6.28E-20	3.51E-20	1.97E-20	1.10E-20	6.16E-21	3.45E-21	1.93E-21	1.08E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.37E-18	7.63E-19	4.26E-19	2.38E-19	1.33E-19	7.43E-20	4.16E-20	2.32E-20	1.30E-20	7.27E-21	4.06E-21	2.27E-21	1.27E-21	7.15E-22	4.00E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.73E-18	9.66E-19	5.40E-19	3.02E-19	1.69E-19	9.47E-20	5.30E-20	2.97E-20	1.66E-20	9.31E-21	5.21E-21	2.92E-21	1.64E-21	9.18E-22	5.14E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	1.85E-18	1.22E-18	7.04E-19	2.90E-19	2.67E-19	2.40E-19	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.91E-17	**1.38E-17**	**5.48E-18**	**7.60E-17**	**7.41E-18**	**1.10E-16**	**4.65E-17**	**4.08E-17**	**9.78E-19**	**8.49E-19**	**5.30E-20**	**2.97E-20**	**1.66E-20**	**9.32E-21**	**5.22E-21**

900	910	920	930	940	950	960	970	980	990	1000	Peak Surface Tritium Flux (pCi/m^2/s)	Length of Waste Zone (m)
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.35E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E+00	6.24E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E+01
9.72E-22	5.45E-22	3.05E-22	1.71E-22	9.61E-23	5.38E-23	3.01E-23	1.69E-23	9.49E-24	5.34E-24	2.98E-24	5.91E+01	4.69E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.71E+01	8.09E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.73E+01	1.29E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E+01	2.24E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.41E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+02	1.02E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E+01	8.26E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+02	9.11E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E+01	7.57E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E+01	7.32E+01
4.43E-22	2.29E-22	1.47E-22	6.40E-23	3.87E-23	2.18E-23	1.65E-23	7.26E-24	3.09E-24	1.89E-24	7.49E-25	8.34E+01	3.46E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.21E+01	6.61E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E+00	8.88E+01
2.04E-22	1.10E-22	5.94E-23	3.93E-23	2.21E-23	1.11E-23	7.20E-24	2.70E-24	9.50E-25	3.19E-25	9.29E-25	7.49E+01	8.28E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+00	1.05E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-01	1.30E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E+01	8.36E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.13E+02	7.87E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.69E+01	6.78E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.25E+01	6.06E+01
1.20E-21	6.70E-22	3.75E-22	2.11E-22	1.18E-22	6.61E-23	3.71E-23	2.08E-23	1.17E-23	6.55E-24	3.68E-24	3.96E+02	1.23E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E+01
6.24E-22	3.50E-22	1.96E-22	1.10E-22	6.16E-23	3.46E-23	1.94E-23	1.09E-23	6.09E-24	3.42E-24	1.92E-24	7.57E+01	9.66E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E+02	8.31E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.81E+00	8.51E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.65E+01	7.43E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+02	6.02E+01
1.40E-22	7.84E-23	4.39E-23	2.46E-23	1.38E-23	7.73E-24	4.33E-24	2.43E-24	1.36E-24	7.64E-25	4.28E-25	3.75E+01	1.31E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+02	8.00E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E+02	2.52E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E+02	4.56E+01

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+02	8.67E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.44E+02	8.99E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+03	6.67E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.87E+03	3.63E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E+02	1.09E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+02	1.17E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+02	8.63E+01
2.59E-22	1.45E-22	8.12E-23	4.55E-23	2.55E-23	1.43E-23	8.02E-24	4.50E-24	2.53E-24	1.42E-24	7.95E-25	1.13E+02	9.70E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E+01	1.26E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E+02	4.96E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E+02	1.19E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E+01	6.13E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+03	8.06E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+00	1.23E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E+03	2.42E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E+03	1.80E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.16E+02	1.82E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E+01	7.73E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+01	9.67E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E+00	8.88E+01
2.04E-22	1.12E-22	6.04E-23	3.34E-23	2.12E-23	1.21E-23	7.68E-24	2.77E-24	1.26E-24	5.75E-25	7.71E-25	1.06E+02	1.07E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.71E+01	5.28E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E+02	7.74E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	1.26E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E+01	5.19E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E+02	1.85E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+03	8.97E+00
2.93E-21	1.64E-21	9.21E-22	5.17E-22	2.90E-22	1.63E-22	9.12E-23	5.12E-23	2.87E-23	1.61E-23	9.06E-24	1.12E+02	1.00E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+03	3.28E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E+02	5.76E+01
6.06E-22	3.40E-22	1.90E-22	1.07E-22	5.98E-23	3.35E-23	1.88E-23	1.05E-23	5.91E-24	3.32E-24	1.86E-24	2.04E+02	6.21E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.71E+01	7.47E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E+02	1.21E+02

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E+01	1.13E+02
2.22E-22	1.24E-22	7.16E-23	4.01E-23	2.26E-23	1.22E-23	6.83E-24	3.54E-24	2.39E-24	1.23E-24	7.69E-25	1.06E+02	6.59E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E+02	9.87E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+02	3.58E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E+00	1.04E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+02	7.38E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E+02	6.99E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+02	9.32E+01
2.88E-22	1.62E-22	9.07E-23	5.09E-23	2.85E-23	1.60E-23	8.98E-24	5.04E-24	2.83E-24	1.59E-24	8.92E-25	1.22E+01	9.67E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.18E+01	1.05E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E+02	5.36E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.22E+02	9.78E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E+02	3.16E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.77E+01	9.99E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E+01	2.29E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E+01	8.89E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.73E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E+02	1.29E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E+01	4.09E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E+03	1.60E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E+03	2.14E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E+01
2.93E-21	**1.64E-21**	**9.21E-22**	**5.17E-22**	**2.90E-22**	**1.63E-22**	**9.12E-23**	**5.12E-23**	**2.87E-23**	**1.61E-23**	**9.06E-24**	**5.872E+03**	**1.31E+02**

Width of Waste Zone (m)	Peak Surface Tritium Flow (pCi/s)	Max Tritium Atmospheric Concentration (pCi/m^3)	Inhalation rate (m^3/day)	Receptor Intake (pCi/year)	Dose (mrem/year)
7.50E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
7.50E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
8.24E+01	1.83E+04	4.05E+01	2.00E+01	2.96E+05	2.84E-02
2.69E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
2.33E+01	6.46E+04	3.82E+02	2.00E+01	2.79E+06	2.68E-01
8.04E+01	3.71E+05	6.36E+02	2.00E+01	4.65E+06	4.46E-01
7.77E+01	7.75E+05	1.37E+03	2.00E+01	1.00E+07	9.64E-01
6.66E+00	7.51E+03	1.55E+02	2.00E+01	1.13E+06	1.09E-01
1.93E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
4.28E+01	6.93E+05	2.23E+03	2.00E+01	1.63E+07	1.57E+00
8.21E+01	2.00E+05	3.35E+02	2.00E+01	2.45E+06	2.35E-01
5.13E+01	5.19E+05	1.39E+03	2.00E+01	1.02E+07	9.76E-01
4.92E+01	7.03E+04	1.97E+02	2.00E+01	1.44E+06	1.38E-01
9.14E+01	3.64E+05	6.84E+02	2.00E+01	5.00E+06	4.80E-01
7.97E+01	2.30E+05	9.16E+02	2.00E+01	6.69E+06	6.42E-01
1.60E+01	9.75E+04	8.39E+02	2.00E+01	6.13E+06	5.88E-01
2.82E+01	1.14E+04	5.57E+01	2.00E+01	4.07E+05	3.91E-02
8.91E+01	5.53E+05	9.20E+02	2.00E+01	6.72E+06	6.45E-01
6.64E+01	1.26E+04	2.62E+01	2.00E+01	1.92E+05	1.84E-02
6.01E+01	5.24E+03	1.20E+01	2.00E+01	8.78E+04	8.43E-03
6.81E+01	4.88E+05	9.86E+02	2.00E+01	7.21E+06	6.92E-01
1.41E+01	6.80E+05	6.65E+03	2.00E+01	4.86E+07	4.67E+00
3.62E+01	1.64E+05	6.25E+02	2.00E+01	4.56E+06	4.38E-01
8.40E+01	4.20E+05	9.54E+02	2.00E+01	6.97E+06	6.69E-01
5.89E+00	2.88E+05	6.73E+03	2.00E+01	4.92E+07	4.72E+00
4.27E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
2.33E+01	1.70E+05	1.01E+03	2.00E+01	7.35E+06	7.06E-01
1.69E+01	5.97E+05	4.87E+03	2.00E+01	3.55E+07	3.41E+00
4.74E+01	3.15E+04	9.16E+01	2.00E+01	6.69E+05	6.42E-02
6.97E+01	5.00E+05	9.87E+02	2.00E+01	7.21E+06	6.92E-01
2.19E+01	1.55E+05	9.71E+02	2.00E+01	7.09E+06	6.81E-01
7.12E+01	3.49E+05	6.75E+02	2.00E+01	4.93E+06	4.73E-01
5.22E+01	6.64E+05	1.75E+03	2.00E+01	1.28E+07	1.23E+00
7.84E+01	5.52E+05	3.02E+03	2.00E+01	2.21E+07	2.12E+00
5.07E+01	5.18E+05	1.56E+03	2.00E+01	1.14E+07	1.10E+00

7.99E+01	8.77E+05	1.51E+03	2.00E+01	1.10E+07	1.06E+00
2.32E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
3.58E+01	1.11E+06	4.26E+03	2.00E+01	3.12E+07	2.99E+00
6.14E+00	5.73E+05	1.29E+04	2.00E+01	9.39E+07	9.01E+00
3.82E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
3.18E+01	6.77E+05	2.57E+04	2.00E+01	1.88E+08	1.80E+01
2.09E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
1.41E+01	3.93E+05	3.84E+03	2.00E+01	2.80E+07	2.69E+00
8.21E+01	1.28E+06	2.14E+03	2.00E+01	1.57E+07	1.50E+00
2.27E+01	9.99E+05	6.07E+03	2.00E+01	4.43E+07	4.26E+00
5.26E+01	5.77E+05	1.51E+03	2.00E+01	1.11E+07	1.06E+00
4.05E+01	2.00E+05	6.81E+02	2.00E+01	4.97E+06	4.78E-01
7.94E+01	5.76E+05	1.60E+03	2.00E+01	1.17E+07	1.12E+00
2.67E+01	8.12E+05	4.19E+03	2.00E+01	3.06E+07	2.94E+00
6.33E+01	1.02E+05	2.30E+02	2.00E+01	1.68E+06	1.61E-01
8.78E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
7.27E+01	8.91E+05	1.52E+04	2.00E+01	1.11E+08	1.07E+01
7.54E+01	6.03E+04	1.10E+02	2.00E+01	8.04E+05	7.72E-02
1.51E+01	9.32E+05	8.53E+03	2.00E+01	6.23E+07	5.98E+00
4.82E+00	3.69E+05	1.05E+04	2.00E+01	7.69E+07	7.39E+00
6.92E+01	5.25E+05	3.97E+03	2.00E+01	2.90E+07	2.78E+00
8.28E+01	1.56E+05	2.77E+02	2.00E+01	2.03E+06	1.95E-01
7.09E+01	1.57E+05	3.04E+02	2.00E+01	2.22E+06	2.13E-01
5.88E+01	4.84E+04	1.13E+02	2.00E+01	8.27E+05	7.94E-02
6.34E+01	7.16E+05	1.56E+03	2.00E+01	1.14E+07	1.09E+00
4.73E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
2.66E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
6.02E+01	3.09E+05	8.06E+02	2.00E+01	5.88E+06	5.65E-01
2.64E+01	1.37E+06	7.16E+03	2.00E+01	5.23E+07	5.02E+00
4.37E+01	1.01E+05	3.17E+02	2.00E+01	2.31E+06	2.22E-01
3.41E+01	1.09E+05	4.40E+02	2.00E+01	3.21E+06	3.08E-01
4.52E+01	3.85E+05	2.86E+03	2.00E+01	2.09E+07	2.01E+00
3.87E+01	4.28E+05	6.57E+03	2.00E+01	4.80E+07	4.61E+00
5.49E+00	6.20E+04	1.56E+03	2.00E+01	1.14E+07	1.09E+00
5.58E+01	2.78E+05	1.17E+04	2.00E+01	8.55E+07	8.21E+00
4.13E+01	6.63E+05	2.22E+03	2.00E+01	1.62E+07	1.55E+00
3.69E+01	4.68E+05	1.75E+03	2.00E+01	1.28E+07	1.22E+00
3.94E+00	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
7.95E+01	2.20E+05	4.06E+02	2.00E+01	2.96E+06	2.85E-01
6.49E+01	9.59E+05	2.04E+03	2.00E+01	1.49E+07	1.43E+00

5.63E+01	4.32E+05	1.06E+03	2.00E+01	7.73E+06	7.42E-01
5.25E+01	3.65E+05	9.58E+02	2.00E+01	7.00E+06	6.72E-01
3.65E+01	9.70E+05	3.66E+03	2.00E+01	2.68E+07	2.57E+00
8.59E+01	9.21E+05	3.55E+03	2.00E+01	2.59E+07	2.49E+00
8.83E+01	8.78E+04	1.37E+02	2.00E+01	1.00E+06	9.61E-02
5.47E+01	4.48E+05	1.13E+03	2.00E+01	8.24E+06	7.91E-01
3.90E+01	1.47E+06	5.18E+03	2.00E+01	3.79E+07	3.64E+00
4.71E+01	7.32E+05	2.14E+03	2.00E+01	1.56E+07	1.50E+00
8.04E+01	9.51E+04	1.63E+02	2.00E+01	1.19E+06	1.14E-01
7.21E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
5.51E+01	5.31E+05	1.33E+03	2.00E+01	9.71E+06	9.32E-01
2.77E+01	9.99E+05	4.96E+03	2.00E+01	3.62E+07	3.48E+00
8.03E+01	7.25E+05	1.02E+04	2.00E+01	7.46E+07	7.16E+00
2.97E+01	3.30E+04	1.44E+03	2.00E+01	1.05E+07	1.01E+00
7.96E+01	7.77E+05	1.34E+03	2.00E+01	9.82E+06	9.42E-01
1.99E+01	1.37E+04	9.47E+01	2.00E+01	6.92E+05	6.64E-02
8.17E+01	1.91E+05	3.22E+02	2.00E+01	2.35E+06	2.26E-01
5.59E+00	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
8.29E+00	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
2.58E+01	1.09E+06	5.82E+03	2.00E+01	4.25E+07	4.08E+00
1.33E+01	2.45E+04	2.53E+02	2.00E+01	1.85E+06	1.78E-01
4.68E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
7.41E+00	4.04E+05	7.51E+03	2.00E+01	5.49E+07	5.27E+00
3.29E+01	9.91E+05	6.39E+03	2.00E+01	4.67E+07	4.48E+00
4.86E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
9.14E+01	**1.47E+06**	**2.57E+04**	**2.00E+01**	**1.88E+08**	**1.80E+01**
					1.695

Tritium Surface Flux (pCi/m^2/s) for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130	140
1	752.474	897.596	594.366	339.232	183.388	96.965	50.816	26.557	13.882	7.268	3.815	2.008	1.06	5.61E-01
2	615.59	319.803	0	0	0	0	0	0	0	0	0	0	0	0
3	18.943	19.471	12.004	6.555	4.194	2.347	1.909	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
4	3.23E+04	9.03E+03	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
5	27.24	19.64	11.126	5.924	3.092	1.605	0.833	0.433	0.226	0.119	0.062	0.033	0.017	9.25E-03
6	110.949	44.549	19.02	8.466	3.892	1.835	0.883	0.432	0.214	0.107	0.054	2.80E-02	1.40E-02	7.39E-03
7	246.95	139.882	68.951	42.084	0	0	0	0	0	0	0	0	0	0.00E+00
8	129.712	57.118	24.144	10.58	4.8	2.239	1.068	0.519	0.256	0.128	0.064	0.033	0.017	8.66E-03
9	551.606	260.677	120.006	56.05	26.68	12.923	6.354	3.164	1.592	0.809	0.414	0.214	0.111	0.058
10	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11	10.249	19.649	15.653	9.965	5.804	3.24	1.77	0.956	0.513	0.275	0.147	0.079	0.042	2.30E-02
12	189.652	182.492	109.438	58.998	30.793	15.919	8.219	4.253	2.208	1.151	0.602	0.316	1.67E-01	8.80E-02
13	50.551	26.572	13.194	6.498	3.213	1.602	0.805	0.408	0.208	0.107	0.055	0.029	0.015	7.89E-03
14	165.81	103.459	50.803	24.219	11.603	5.625	2.762	1.372	0.689	0.349	0.178	0.092	0.047	2.50E-02
15	8.746	10.011	6.618	3.816	2.088	1.116	0.591	0.311	0.164	8.60E-02	4.60E-02	2.40E-02	1.40E-02	1.20E-02
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	77.83	32.962	14.154	6.317	2.913	1.378	0.665	0.327	0.162	0.082	0.041	0.021	0.011	5.68E-03
18	524.571	266.091	125.639	59.226	28.254	13.671	6.704	3.327	1.669	0.842	0.436	0.177	0.284	1.74E-01
19	143.5	44.557	16.58	6.797	2.96	1.343	0.628	0.3	0.146	0.072	0.036	0.018	9.32E-03	4.78E-03
20	80.336	30.632	12.312	5.262	2.352	1.087	0.515	0.249	0.122	0.061	0.031	0.016	7.94E-03	4.09E-03
21	63.012	43.653	22.352	10.891	5.836	4.418	0	0	0	0	0	0	0.00E+00	0.00E+00
22	506.812	240.281	108.932	50.049	23.471	11.22	5.453	2.688	1.341	0.676	0.343	0.176	0.091	4.70E-02
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	132.867	107.754	59.664	30.465	15.251	7.621	3.825	1.932	0.983	0.503	0.259	0.136	0.076	0.031
25	417.245	135.068	50.618	20.749	9.016	4.081	1.904	0.909	0.442	0.218	0.109	0.055	0.028	0.016
26	4.831	16.112	15.419	10.69	6.534	3.764	2.103	1.155	0.629	0.341	0.184	0.099	0.053	2.90E-02
27	0.087	0.701	0.912	0.757	0.526	0.335	0.204	0.122	0.071	0.041	0.023	0.013	7.45E-03	4.44E-03
28	176.155	78.744	35.107	16.14	7.624	3.68	1.808	0.9	0.454	0.231	0.118	0.061	0.032	0.017
29	50.844	33.563	17.204	8.467	4.157	2.055	1.025	0.516	0.262	0.134	0.069	0.036	0.019	9.73E-03
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	9.439	10.022	6.688	3.966	2.241	1.237	0.674	0.365	0.196	1.06E-01	5.70E-02	3.10E-02	1.60E-02	8.86E-03
32	0.00E+00	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	436.947	217.437	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
34	396.344	387.691	224.961	117.027	59.142	29.724	14.975	7.584	3.864	1.981	1.021	0.529	0.276	0.144
35	69.672	66.291	39.59	21.222	11.004	5.65	2.899	1.491	0.77	0.399	0.208	0.109	5.70E-02	3.00E-02

36	8.58E+02	452.206	212.194	98.957	46.711	23.363	19.597	11.493	0	0	0	0	0	0.00E+00
37	176.741	174.393	107.55	59.254	31.452	16.479	8.602	4.492	2.35	1.233	6.49E-01	3.43E-01	1.82E-01	9.60E-02
38	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
39	1.48E+01	1.57E+01	9.956	5.537	2.945	1.541	0.802	0.417	0.217	0.114	0.059	0.031	0.016	8.73E-03
40	55.153	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
41	1.87E+02	1.30E+02	6.66E+01	32.551	15.855	7.777	3.852	1.926	0.972	0.495	0.253	0.131	0.068	0.035
42	624.079	248.193	105.759	46.996	21.568	10.147	4.954	4.632	2.498	1.82E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	8.75E+00	2.14E+01	0	0	0	0	0	0	0	0	0	0	0	0
44	25.534	52.306	40.245	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
45	1.82E+03	995.158	473.356	223.118	106.401	51.492	25.268	12.553	6.303	3.195	1.632	0.84	0.435	0.226
46	151.656	118.123	67.225	35.51	18.364	11.553	6.359	0	0	0	0	0	0	0
47	213.917	88.123	37.455	16.614	7.626	3.595	1.731	0.847	0.421	0.211	0.107	0.055	0.028	1.50E-02
48	200.552	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
49	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	3.368	7.34	6.121	4.044	2.441	1.41	0.795	0.442	0.242	0.122	0.082	0.046	0.025	0.014
51	3.77E+03	1.60E+03	655.711	280.718	125.157	64.064	94.597	0	0	0	0	0	0.00E+00	0.00E+00
52	1.47E+02	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53	107.437	40.834	16.842	7.37	3.361	1.579	0.759	0.371	0.184	0.093	0.047	0.024	1.20E-02	6.42E-03
54	0.00E+00	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
55	6.64E+00	1.02E+01	7.16E+00	4.16	2.259	1.187	0.922	0.509	0.557	0	0	0	0	0
56	234.77	112.866	55.284	27.444	13.746	6.938	3.526	1.803	0.928	0.48	0.25	0.13	0.068	0.036
57	4.47E+01	36.397	20.998	11.137	5.751	2.946	1.509	0.775	0.4	0.207	0.108	5.60E-02	3.00E-02	1.60E-02
58	74.549	45.56	23.526	11.741	5.827	2.86	2.032	1.097	0.543	0	0	0.00E+00	0.00E+00	0.00E+00
59	266.154	100.633	40.442	17.281	7.723	3.568	1.69	0.817	0.401	0.199	0.1	0.051	0.026	1.30E-02
60	189.284	116.779	62.612	32.573	16.79	8.639	4.452	2.301	1.194	0.622	0.325	0.17	0.09	4.70E-02
61	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
62	1.13E+03	444.28	184.741	81.032	36.961	17.356	8.334	4.073	2.019	1.013	0.513	0.262	0.135	0.07
63	53.38	29.163	14.726	7.338	3.657	1.832	0.923	0.469	0.239	0.123	0.064	0.033	0.017	9.04E-03
64	236.346	126.814	62.397	30.373	14.868	7.348	3.668	1.848	0.939	0.481	0.248	0.128	0.067	0.035
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
66	25.78	33.176	21.752	12.15	6.43	3.337	1.72	0.907	0.51	0.469	0.167	0	0	0
67	3.21E+00	11.103	10.856	7.76	4.894	2.902	1.663	0.929	0.46	0.338	0.192	0.109	0.04	0
68	1.26E+02	54.143	23.453	10.485	4.827	2.277	1.095	0.535	0.265	0.133	0.067	0.034	0.018	9.12E-03
69	76.309	32.898	14.618	6.673	3.121	1.49	0.723	0.356	0.178	0.089	0.045	0.023	0.012	6.24E-03
70	8.03E+01	48.254	25.166	12.711	6.382	3.213	1.626	0.828	0.424	0.219	0.113	0.059	0.031	0.016
71	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	110.959	54.804	24.473	11.087	5.146	2.442	1.181	0.58	0.288	0.145	0.074	0.038	0.019	1.00E-02
73	7.96E+02	349.83	162.83	77.701	37.691	18.527	9.211	4.644	2.667	1.792	0.971	5.23E-01	2.60E-01	0.00E+00
74	1.723	3.179	2.594	1.72	1.048	0.612	0.348	0.195	0.108	0.06	0.033	0.018	9.86E-03	5.39E-03
75	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00

76	2.79E+03	988.503	383.304	160.105	70.424	32.151	15.092	7.239	3.533	1.749	0.876	0.443	2.26E-01	1.16E-01
77	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	43.735	23.186	10.751	4.966	2.33	1.113	0.54	0.266	1.32E-01	6.70E-02	3.30E-02	2.00E-02	0.00E+00	1.60E-02
79	886.267	339.768	135.83	57.561	25.518	11.702	5.535	3.178	4.757	0	0	0	0	0
80	87.002	50.581	23.992	11.238	5.332	2.57	1.258	0.623	0.312	0.158	0.081	4.10E-02	0.021	1.10E-02
81	183.105	91.16	43.864	21.186	10.35	5.119	2.56	1.293	0.659	0.338	0.175	0.091	4.70E-02	2.50E-02
82	239.25	129.012	62.306	29.898	14.496	7.119	3.538	1.778	0.902	0.461	2.37E-01	1.23E-01	6.40E-02	3.40E-02
83	85.923	38.62	18.265	8.826	4.325	2.143	1.073	0.542	0.279	0.143	0.113	0.062	0.034	1.20E-02
84	37.834	23.404	11.52	5.529	2.669	1.304	0.644	0.322	0.163	0.083	0.042	0.022	0.011	5.95E-03
85	1.47E+03	695.386	323.013	151.861	72.623	35.294	17.397	8.679	4.375	2.226	1.141	0.589	0.306	1.60E-01
86	865.864	377.359	156.493	67.394	29.171	52.054	0	0	0	0	0	0	0	0.00E+00
87	236.167	100.628	45.538	21.192	10.071	4.87	2.389	1.187	0.596	0.302	0.154	0.079	3.90E-02	2.50E-02
88	2.20E+03	1.14E+03	538.853	253.749	121.057	58.621	28.782	14.305	7.185	3.642	1.861	0.957	0.496	2.58E-01
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	1.28E+03	426.742	163.751	68.299	30.077	13.759	6.474	3.113	1.523	0.755	0.379	0.192	9.80E-02	5.10E-02
91	8.548	8.889	5.709	3.248	1.764	0.939	0.495	0.261	0.137	0.072	0.038	0.02	0.011	5.64E-03
92	141.592	59.799	26.589	12.183	5.719	2.739	1.334	0.659	0.329	0.166	0.085	0.043	0.022	1.20E-02
93	899.363	511.258	241.702	112.581	53.057	25.405	12.351	6.087	3.035	1.538	0.844	0.505	0.718	0.603
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
96	5.36E+01	22.825	9.753	4.318	1.974	0.926	0.443	0.216	0.107	0.053	2.70E-02	1.40E-02	7.01E-03	3.61E-03
97	1.76E+03	773.934	336.046	150.75	69.712	33.04	15.971	7.845	3.905	1.965	0.998	0.511	2.64E-01	1.37E-01
98	1.13E+02	5.35E+01	24.42	11.316	5.356	2.583	1.266	0.629	0.316	0.16	0.082	0.042	0.022	1.10E-02
99	3.03E+02	1.15E+02	45.914	19.484	8.661	9.878	10.249	0	0	0	0	0	0	0
100	3.28E+03	1.17E+03	452.747	188.481	82.83	52.291	60.839	0	0	0	0	0	0	0
101	**5.40E+02**	**2.14E+02**	**8.91E+01**	**3.91E+01**	**1.78E+01**	**8.35E+00**	**4.01E+00**	**1.96E+00**	**9.70E-01**	**4.86E-01**	**2.46E-01**	**1.26E-01**	**6.50E-02**	**3.40E-02**
102	748.714	318.615	148.068	71.171	34.843	17.318	8.306	5.467	2.925	1.574	0.832	0	0	0
103	3.69E+02	188.422	92.488	45.219	22.233	11.025	5.517	2.785	1.417	0.726	0.374	0.194	0.101	0.053
104	645.321	205.925	77.501	31.979	13.986	6.368	2.986	1.432	0.699	0.346	0.173	0.088	0.045	2.30E-02
105	185.421	84.111	35.853	15.776	7.176	3.354	1.603	0.779	0.385	0.192	0.097	0.049	0.025	0.013
106	7.20E+00	10.448	7.304	4.258	2.324	1.234	0.648	0.339	0.177	0.093	0.049	0.026	0.013	8.43E-03
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	4.255	19.429	20.839	15.367	9.761	5.771	3.285	1.83	1.006	0.549	0.299	0.162	0.088	4.70E-02
109	1.43E+03	481.732	183.373	75.867	33.182	15.093	7.067	3.384	1.649	0.816	0.408	0.206	0.105	0.054
110	122.171	41.385	15.903	6.617	2.903	1.323	0.62	0.297	0.145	0.072	0.036	0.018	9.24E-03	4.82E-03
111	3.45E+02	182.029	84.514	39.287	18.576	8.939	4.369	2.164	1.084	0.549	0.28	0.144	0.074	0.039
112	76.253	63.157	35.856	18.675	9.491	4.799	2.431	1.237	0.633	0.326	0.168	0.088	0.046	0.024
113	2.46E+02	136.218	64.077	29.984	14.24	6.875	3.369	1.673	0.84	0.425	0.217	0.112	0.058	0.03
114	702.481	244.458	94.968	39.789	16.143	20.036	0	0	0	0	0	0	0	0
115	149.568	52.689	21.132	9.125	4.131	1.933	0.926	0.453	0.224	0.113	0.057	0.029	0.015	7.80E-03

116	321.946	83.314	28.312	11.454	26.588	0	0	0	0	0	0	0	0	0
117	2.14E+03	999.334	449.96	206.777	97.284	46.712	22.812	11.297	5.661	2.865	1.462	0.752	0.389	0.202
118	191.213	78.689	34.146	15.488	7.258	3.485	1.705	0.847	0.426	0.216	0.111	0.057	0.03	0.015
119	1.38E+03	563.605	234.038	101.799	46.001	21.411	10.199	4.949	2.438	1.216	0.613	0.312	0.16	0.082
120	1.53E+03	602.756	244.411	104.626	46.738	21.564	10.201	4.922	2.413	1.198	0.602	0.305	0.156	8.00E-02
121	256.942	130.207	61.366	28.903	13.787	6.674	3.275	1.626	0.816	0.413	0.211	0.109	0.056	0.029
122	137.366	42.142	15.657	6.423	2.8	1.272	0.596	0.285	0.139	0.069	0.034	0.017	8.90E-03	4.57E-03
123	225.543	64.005	22.52	8.882	0	0	0	0	0	0	0	0	0	0
124	327.248	183.081	84.555	38.701	17.816	18.756	10.37	0	0	0	0	0	0	0
125	139.208	83.174	40.334	19.087	9.092	4.387	2.145	1.062	0.531	0.268	0.137	0.07	0.036	0.019
126	719.091	412.356	201.583	96.775	46.768	22.865	11.311	5.657	2.856	1.454	0.746	0.385	0.2	0.104
127	74.877	40.307	19.997	9.801	4.817	2.385	1.191	0.6	0.304	0.152	0.088	0.076	0.042	0.027
128	300.571	123.37	52.224	23.114	10.598	4.994	2.404	1.177	0.584	0.293	0.149	0.076	0.039	2.00E-02
129	271.049	221.145	125.661	66.158	34.135	17.546	9.036	4.672	2.426	1.266	0.663	0.349	0.184	9.80E-02
130	1.61E+02	7.95E+01	3.89E+01	19.146	9.476	4.728	2.379	1.206	0.616	0.317	0.164	0.085	0.044	0.023
131	83.777	40.767	21.251	0	0	0	0	0	0	0	0	0	0	0
132	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
133	170.403	82.635	36.677	16.545	7.654	3.622	1.747	0.856	0.425	0.214	0.108	0.055	0.028	0.015
134	818.488	407.236	187.872	87.117	41.091	19.722	9.614	4.75	2.374	1.198	0.61	0.313	0.161	0.084
135	192.774	145.076	75.491	36.871	17.895	11.038	8.888	0	0	0	0	0	0	0
136	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	115.625	63.683	29.236	13.365	6.221	2.953	1.427	0.7	0.348	0.175	0.088	0.045	0.023	0.012
138	4.322	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	359.515	186.918	92.026	45.035	22.172	11.016	5.525	2.795	1.425	0.732	0.378	0.197	0.103	0.054
141	8.05E+03	3.18E+03	1.33E+03	580.438	263.745	123.314	58.96	28.7	14.176	7.088	3.58	1.824	0.937	0.484
142	28.234	23.608	14.042	7.796	4.243	2.296	1.242	0.672	0.365	0.201	0.111	0	0	0.00E+00
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	11.255	9.954	6.123	3.446	1.873	1.002	0.532	0.282	0.149	0.079	0.042	0.022	0.012	6.31E-03
145	6.169	10.769	8.19	5.042	2.861	1.564	0.841	0.448	0.238	0.126	0.067	0.035	0.019	0.01
146	314.585	0	0	0	0	0	0	0	0	0	0	0	0	0
147	1.35E+03	537.694	215.522	91.206	40.249	63.793	0	0	0	0	0	0	0	0
148	391.965	183.718	80.609	36.216	16.734	7.919	3.822	1.874	0.932	0.468	0.238	0.122	0.063	0.032
149	30.981	20.906	10.822	5.374	2.661	1.325	0.666	0.337	0.172	0.089	0.046	0.024	0.012	6.54E-03
150	425.798	224.154	109.196	52.742	25.647	12.601	6.258	3.139	1.588	0.81	0.416	0.215	0.112	0.058
151	53.131	39.086	21.127	10.708	5.35	2.675	1.344	0.68	0.346	0.177	0.091	0.047	0.025	1.30E-02
152	178.684	103.068	53.7	27.789	14.456	7.598	4.015	2.135	1.142	0.613	0.33	0.172	0.077	0
153	149.744	53.661	20.806	10.439	7.5	0	0	0	0	0	0	0	0	0
154	48.836	29.624	15.15	7.517	3.725	1.857	0.933	0.473	0.241	0.124	0.064	0.033	0.017	9.16E-03
155	1.33E+02	42.891	0	0	0	0	0	0	0	0	0	0	0	0

156	67.834	38.962	19.237	9.363	4.59	2.275	1.14	0.576	0.294	0.151	0.078	0.041	0.021	0.011
157	0	0	0	0	0	0	0	0	0	0	0	0	0	0
158	45.631	35.155	19.028	9.592	4.762	2.366	1.183	0.595	0.302	0.154	0.079	0.041	0.021	0.011
159	63.673	51.602	29.562	15.588	8.01	4.087	2.086	1.068	0.549	0.284	0.147	0.077	0.04	0.021
160	2.21E+02	128.169	71.478	36.599	0	0	0	0	0	0	0	0	0	0
161	493.726	318.055	167.583	84.57	42.319	21.222	10.702	5.432	2.776	1.427	0.738	0.383	0.2	0.105
162	937.871	444.975	204.825	95.334	45.155	21.753	10.636	5.268	2.638	1.334	0.68	0.349	0.18	0.094
163	141.644	74.502	34.814	16.233	7.684	3.698	1.806	0.894	0.448	0.226	0.115	0.059	0.031	0.016
164	103.483	59.455	30.052	14.829	7.314	3.631	1.817	0.917	0.466	0.239	0.123	0.064	0.033	0.017
165	738.275	247.386	93.881	38.746	16.913	7.681	3.592	1.719	0.837	0.414	0.207	0.105	0.05	0.022
166	182.756	58.104	21.672	8.868	3.851	1.743	0.813	0.388	0.189	0.093	0.046	0.023	0.012	6.14E-03
167	1.53E+01	15.027	0	0	0	0	0	0	0	0	0	0	0	0
168	135.589	36.154	15.326	0	0	0	0	0	0	0	0	0	0	0
169	65.539	39.618	22.178	9.66	0	0	0	0	0	0	0	0	0	0
170	524.633	167.549	62.888	25.889	11.301	5.137	2.405	1.152	0.562	0.278	0.139	0.07	0.036	0.018
171	233.295	78.929	30.518	12.794	5.655	2.594	1.223	0.589	0.289	0.143	0.072	0.036	0.019	9.61E-03
172	112.456	51.124	22.566	10.177	4.708	2.227	1.074	0.526	0.261	0.131	0.066	0.034	6.58E-03	0.03
173	88.095	52.819	25.729	12.215	5.834	2.821	1.382	0.685	0.343	0.174	0.089	0.045	0.024	0.012
174	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
175	94.689	42.248	18.463	8.293	3.831	1.812	0.874	0.428	0.213	0.107	0.054	0.028	0.014	7.37E-03
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	152.981	66.665	28.126	12.318	5.588	2.608	1.245	0.605	0.298	0.149	0.075	0.038	0.02	0.01
178	0.354	2.302	2.798	2.24	1.517	0.946	0.562	0.325	0.185	0.103	0.055	0.038	0.022	1.20E-02
179	185.297	136.591	73.31	36.864	18.286	9.083	4.539	2.286	1.159	0.593	0.302	0.136	0.216	0.125
180	1.69E+03	788.883	355.786	163.882	77.303	37.215	18.221	9.046	4.543	2.304	1.179	0.607	0.315	0.164
181	106.417	62.695	31.57	15.485	7.599	3.758	1.875	0.944	0.479	0.245	0.126	0.065	0.034	1.80E-02
182	139.162	63.655	27.392	12.103	5.514	2.579	1.232	0.599	0.296	0.148	0.075	0.044	0	0.041
183	157.564	78.317	37.932	18.496	9.13	4.561	2.303	1.174	0.603	0.312	0.163	0.085	0.045	0.024
184	18.271	25.455	17.755	10.392	5.702	3.045	1.607	0.845	0.443	0.233	0.123	0.065	0.034	1.80E-02
185	0	0	0	0	0	0	0	0	0	0	0	0	0	0
186	173.546	69.301	29.097	12.85	5.892	2.779	1.339	0.656	0.326	0.164	0.083	0.043	0.022	0.011
187	53.658	26.008	11.67	5.338	2.503	1.199	0.585	0.289	0.145	0.073	0.037	0.019	9.97E-03	5.19E-03
188	312.352	109.799	42.335	17.62	7.732	3.525	1.653	0.793	0.387	0.191	0.096	0.048	0.025	0.013
189	9.072	31.41	30.91	22.336	14.324	8.675	5.092	2.932	1.665	0.952	0.537	0.302	0.17	0.095
190	157.647	76.804	35.258	16.301	7.669	3.672	1.786	0.88	0.439	0.221	0.112	0.058	0.03	0.016
191	130.107	97.423	53.587	27.527	13.898	7.005	3.544	1.803	0.922	0.475	0.246	0.128	0.067	0.035
192	4.96E+01	33.144	17.636	8.927	4.468	2.238	1.127	0.571	0.291	0.149	0.077	0.04	0.021	0.011
193	4.77E+03	1.51E+03	555.991	225.931	97.603	43.993	20.457	9.74	4.723	2.164	0.262	4.709	0	0.00E+00
194	4.12E+03	0	0	0	0	0	0	0	0	0	0	0	0	0
195	33.483	37.186	24.823	14.575	8.13	4.425	2.379	1.272	0.678	0.361	0.192	0.103	0.055	0.029

196	0	0	0	0	0	0	0	0	0	0	0	0	0	0
197	38.684	19.046	8.945	4.235	2.037	0.995	0.493	0.247	0.125	0.064	0.033	0.017	8.83E-03	4.62E-03
198	97.955	57.129	27.32	12.884	6.146	2.975	1.461	0.726	0.365	0.185	0.095	0.049	0.025	0.013
199	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
200	6.23E+01	5.06E+01	0	0	0	0	0	0	0	0	0	0	0	0
Max Value	**3.23E+04**	**9.03E+03**	**1.33E+03**	**5.80E+02**	**2.64E+02**	**1.23E+02**	**9.46E+01**	**2.87E+01**	**1.42E+01**	**7.27E+00**	**3.82E+00**	**4.71E+00**	**1.06E+00**	**6.03E-01**

150	160	170	180	190	200	210	220	230	240	250	260	270	280	290
2.98E-01	1.58E-01	8.40E-02	4.50E-02	2.40E-02	1.30E-02	6.99E-03	3.77E-03	2.03E-03	1.10E-03	5.98E-04	3.22E-04	1.80E-04	8.73E-05	4.00E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0
4.93E-03	2.63E-03	1.41E-03	7.56E-04	4.07E-04	2.19E-04	1.18E-04	6.40E-05	3.47E-05	1.88E-05	1.02E-05	5.57E-06	3.03E-06	1.66E-06	9.04E-07
3.85E-03	2.02E-03	1.02E-03	4.82E-04	4.54E-04	6.45E-04	3.69E-04	1.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.49E-03	2.34E-03	1.23E-03	6.46E-04	3.41E-04	1.81E-04	9.62E-05	5.12E-05	2.75E-05	1.48E-05	7.45E-06	3.77E-06	3.09E-06	8.32E-07	0.00E+00
3.00E-02	1.60E-02	8.42E-03	4.46E-03	2.37E-03	1.27E-03	6.77E-04	3.63E-04	1.95E-04	1.05E-04	5.67E-05	3.06E-05	1.66E-05	9.00E-06	4.89E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.20E-02	6.48E-03	3.49E-03	1.88E-03	1.01E-03	5.51E-04	2.90E-04	1.52E-04	7.92E-05	1.15E-04	6.61E-05	3.30E-05	1.40E-05	0.00E+00	0.00E+00
4.70E-02	2.50E-02	1.30E-02	7.12E-03	3.82E-03	2.05E-03	1.11E-03	5.97E-04	3.23E-04	1.75E-04	9.48E-05	5.15E-05	2.80E-05	1.53E-05	8.32E-06
4.16E-03	2.20E-03	1.17E-03	6.21E-04	3.32E-04	1.77E-04	9.52E-05	5.12E-05	2.76E-05	1.49E-05	8.04E-06	4.36E-06	2.36E-06	1.28E-06	6.98E-07
1.30E-02	6.77E-03	3.57E-03	1.89E-03	1.00E-03	5.34E-04	2.85E-04	1.53E-04	8.22E-05	4.43E-05	2.32E-05	1.18E-05	8.58E-06	3.88E-06	6.54E-06
6.38E-03	3.55E-03	2.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.96E-03	1.55E-03	8.18E-04	4.32E-04	2.29E-04	1.22E-04	6.50E-05	3.48E-05	1.87E-05	1.00E-05	5.40E-06	2.92E-06	1.58E-06	8.54E-07	4.63E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.47E-03	1.29E-03	6.72E-04	3.52E-04	1.86E-04	9.82E-05	5.21E-05	2.77E-05	1.48E-05	7.92E-06	4.25E-06	2.28E-06	1.21E-06	6.53E-07	3.85E-07
2.12E-03	1.10E-03	5.78E-04	3.04E-04	1.60E-04	8.49E-05	4.51E-05	2.40E-05	1.28E-05	6.87E-06	3.68E-06	1.98E-06	1.07E-06	5.76E-07	3.11E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E-02	1.30E-02	6.76E-03	3.57E-03	1.89E-03	1.01E-03	5.35E-04	2.85E-04	1.55E-04	8.21E-05	4.69E-05	3.70E-05	0.00E+00	4.24E-05	2.48E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.70E-02	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.52E-03	0.032	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E-02	8.40E-03	4.54E-03	2.46E-03	1.33E-03	7.23E-04	3.93E-04	2.14E-04	1.16E-04	6.34E-05	3.46E-05	1.89E-05	1.03E-05	5.66E-06	3.10E-06
3.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.72E-03	4.60E-03	2.43E-03	1.29E-03	6.89E-04	3.68E-04	1.97E-04	1.06E-04	5.69E-05	3.07E-05	1.66E-05	8.98E-06	4.87E-06	2.64E-06	1.44E-06
5.11E-03	2.70E-03	1.43E-03	7.58E-04	4.04E-04	2.16E-04	1.16E-04	6.20E-05	3.34E-05	1.80E-05	9.71E-06	5.25E-06	2.85E-06	1.54E-06	8.39E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.77E-03	2.58E-03	1.39E-03	7.53E-04	4.08E-04	2.21E-04	1.20E-04	6.53E-05	3.56E-05	1.94E-05	1.06E-05	5.77E-06	3.15E-06	1.73E-06	9.44E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.076	4.00E-02	2.20E-02	1.10E-02	3.78E-03	1.50E-02	9.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.60E-02	8.44E-03	4.49E-03	2.40E-03	1.28E-03	6.88E-04	3.70E-04	1.99E-04	1.07E-04	5.81E-05	3.14E-05	1.71E-05	9.26E-06	5.04E-06	2.74E-06

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.10E-02	2.70E-02	1.50E-02	7.88E-03	4.24E-03	2.28E-03	1.23E-03	6.66E-04	3.61E-04	1.96E-04	1.06E-04	5.79E-05	3.15E-05	1.72E-05	9.38E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.63E-03	2.46E-03	1.31E-03	7.03E-04	3.77E-04	2.02E-04	1.09E-04	5.87E-05	3.17E-05	1.72E-05	9.30E-06	5.05E-06	2.74E-06	1.49E-06	8.13E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E-02	9.75E-03	5.15E-03	2.73E-03	1.45E-03	7.74E-04	4.14E-04	2.22E-04	1.19E-04	6.40E-05	3.42E-05	1.89E-05	9.57E-06	5.28E-06	2.73E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.118	6.20E-02	3.30E-02	1.70E-02	9.24E-03	4.93E-03	2.63E-03	1.41E-03	7.57E-04	4.08E-04	2.20E-04	1.19E-04	6.42E-05	3.48E-05	1.89E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.60E-03	3.98E-03	2.09E-03	1.11E-03	5.85E-04	3.11E-04	1.66E-04	8.87E-05	4.75E-05	2.55E-05	1.37E-05	7.41E-06	4.00E-06	2.17E-06	1.17E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.35E-03	1.76E-03	9.24E-04	4.88E-04	2.59E-04	1.38E-04	7.34E-05	3.93E-05	2.11E-05	1.13E-05	6.10E-06	3.29E-06	1.78E-06	9.65E-07	5.23E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.019	0.01	5.36E-03	2.84E-03	1.58E-03	8.91E-04	4.15E-04	4.98E-04	2.77E-04	1.52E-04	8.81E-05	4.77E-05	3.27E-05	0.00E+00	0.00E+00
8.22E-03	4.36E-03	2.32E-03	1.24E-03	6.60E-04	3.54E-04	1.90E-04	1.02E-04	5.51E-05	3.05E-05	1.52E-05	8.48E-06	5.52E-06	3.70E-07	5.30E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.96E-03	3.63E-03	1.90E-03	9.99E-04	5.27E-04	2.79E-04	1.48E-04	7.91E-05	4.23E-05	2.27E-05	1.21E-05	6.54E-06	3.45E-06	2.13E-06	1.42E-06
2.50E-02	1.30E-02	7.11E-03	3.80E-03	2.03E-03	1.09E-03	5.87E-04	3.16E-04	1.65E-04	8.67E-05	3.69E-05	5.38E-07	3.55E-05	1.97E-05	1.07E-05
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.60E-02	1.90E-02	1.00E-02	5.29E-03	2.80E-03	1.49E-03	7.94E-04	4.24E-04	2.27E-04	1.22E-04	6.57E-05	3.54E-05	1.91E-05	1.04E-05	5.61E-06
4.77E-03	2.46E-03	1.16E-03	5.23E-04	8.56E-04	4.73E-04	2.80E-04	9.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.018	9.72E-03	5.15E-03	2.74E-03	1.46E-03	7.79E-04	4.18E-04	2.24E-04	1.21E-04	6.50E-05	3.51E-05	1.90E-05	1.03E-05	5.59E-06	3.04E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.75E-03	2.51E-03	1.32E-03	7.23E-04	4.55E-04	8.72E-04	5.55E-04	3.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.22E-03	2.27E-03	2.76E-03	1.50E-03	8.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.58E-03	4.54E-03	2.41E-03	1.29E-03	6.86E-04	3.68E-04	1.97E-04	1.06E-04	5.72E-05	3.09E-05	1.67E-05	9.06E-06	4.92E-06	2.67E-06	1.45E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.25E-03	2.75E-03	1.45E-03	7.64E-04	4.05E-04	2.15E-04	1.15E-04	6.14E-05	3.29E-05	1.77E-05	9.52E-06	5.13E-06	2.78E-06	1.50E-06	8.15E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.95E-03	1.61E-03	8.79E-04	4.80E-04	2.63E-04	1.44E-04	7.86E-05	4.31E-05	2.36E-05	1.29E-05	7.10E-06	3.90E-06	2.14E-06	1.18E-06	6.48E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

6.00E-02	3.10E-02	1.60E-02	8.48E-03	4.65E-03	2.56E-03	5.46E-05	0.00E+00	6.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.84E-03	3.07E-03	1.62E-03	8.57E-04	4.55E-04	2.43E-04	1.30E-04	6.94E-05	3.73E-05	2.01E-05	1.08E-05	5.84E-06	3.16E-06	1.71E-06	9.30E-07
1.30E-02	6.96E-03	3.69E-03	1.97E-03	1.05E-03	5.63E-04	3.02E-04	1.63E-04	8.76E-05	4.73E-05	2.56E-05	1.39E-05	7.54E-06	4.10E-06	2.23E-06
1.80E-02	9.32E-03	4.94E-03	2.63E-03	1.40E-03	7.48E-04	4.01E-04	2.16E-04	1.16E-04	6.26E-05	3.38E-05	1.83E-05	9.93E-06	5.39E-06	2.93E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00
3.12E-03	1.64E-03	8.69E-04	4.61E-04	2.45E-04	1.31E-04	7.01E-05	3.76E-05	2.02E-05	1.09E-05	5.88E-06	3.18E-06	1.72E-06	9.35E-07	5.08E-07
8.40E-02	4.40E-02	2.30E-02	1.20E-02	6.58E-03	3.51E-03	1.88E-03	1.01E-03	5.42E-04	2.92E-04	1.58E-04	8.52E-05	4.62E-05	2.50E-05	1.36E-05
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E-02	1.40E-02	7.60E-03	4.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E-01	7.10E-02	3.70E-02	2.00E-02	1.10E-02	5.60E-03	2.99E-03	1.60E-03	8.60E-04	4.62E-04	2.49E-04	1.35E-04	7.28E-05	3.94E-05	2.14E-05
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.60E-02	1.40E-02	7.14E-03	3.75E-03	1.98E-03	1.05E-03	5.58E-04	2.98E-04	1.59E-04	8.51E-05	4.55E-05	2.45E-05	1.30E-05	7.77E-06	2.62E-06
3.00E-03	1.60E-03	8.55E-04	4.58E-04	2.46E-04	1.32E-04	7.19E-05	3.88E-05	1.99E-05	1.10E-05	1.60E-06	8.60E-06	4.97E-06	2.33E-06	9.10E-07
6.12E-03	3.50E-03	0.00E+00	2.67E-03	1.52E-03	9.34E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.88E-03	9.77E-04	5.12E-04	2.69E-04	1.42E-04	7.52E-05	3.99E-05	2.12E-05	1.14E-05	6.05E-06	3.17E-06	1.73E-06	1.05E-06	1.08E-06	0.00E+00
7.10E-02	3.70E-02	2.00E-02	1.00E-02	5.52E-03	2.93E-03	1.57E-03	8.37E-04	4.49E-04	2.41E-04	1.30E-04	7.01E-05	3.79E-05	2.05E-05	1.11E-05
5.98E-03	3.14E-03	1.66E-03	8.80E-04	4.68E-04	2.50E-04	1.34E-04	7.16E-05	3.85E-05	2.07E-05	1.12E-05	6.05E-06	3.27E-06	1.78E-06	9.64E-07
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E-02	**9.14E-03**	**4.80E-03**	**2.54E-03**	**1.34E-03**	**7.14E-04**	**3.81E-04**	**2.04E-04**	**1.09E-04**	**5.86E-05**	**3.16E-05**	**1.70E-05**	**9.20E-06**	**4.98E-06**	**2.70E-06**
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.028	0.015	7.80E-03	4.14E-03	2.21E-03	1.18E-03	6.32E-04	3.40E-04	1.82E-04	9.74E-05	5.68E-05	3.44E-05	1.41E-05	0	1.67E-05
1.20E-02	6.21E-03	3.25E-03	1.71E-03	9.01E-04	4.77E-04	2.54E-04	1.35E-04	7.22E-05	3.88E-05	2.09E-05	1.10E-05	6.35E-06	3.41E-06	1.97E-06
6.79E-03	3.54E-03	1.86E-03	9.78E-04	5.17E-04	2.74E-04	1.46E-04	7.78E-05	4.15E-05	2.22E-05	1.21E-05	6.30E-06	3.55E-06	1.49E-06	9.41E-07
8.91E-03	4.58E-03	4.06E-03	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.60E-02	1.40E-02	7.54E-03	4.09E-03	2.22E-03	1.21E-03	6.56E-04	3.57E-04	1.95E-04	1.06E-04	5.79E-05	3.17E-05	1.73E-05	9.48E-06	5.20E-06
0.028	0.015	7.58E-03	3.96E-03	2.10E-03	1.15E-03	7.25E-04	0	0	2.29E-03	0	0	0	0	0
2.60E-03	2.37E-03	4.21E-03	1.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.02	0.011	5.60E-03	2.96E-03	1.57E-03	8.38E-04	4.47E-04	2.40E-04	1.29E-04	6.91E-05	3.73E-05	2.01E-05	1.09E-05	5.89E-06	3.20E-06
1.30E-02	6.64E-03	3.61E-03	1.88E-03	8.20E-04	1.79E-03	1.11E-03	6.81E-04	0.00E+00	0.00E+00	0	0	0	0	0
0.016	8.30E-03	4.38E-03	2.32E-03	1.23E-03	6.56E-04	3.51E-04	1.88E-04	1.01E-04	5.43E-05	2.93E-05	1.58E-05	8.55E-06	4.64E-06	2.52E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.07E-03	2.13E-03	1.12E-03	5.92E-04	3.14E-04	1.67E-04	8.92E-05	4.77E-05	2.56E-05	1.38E-05	7.41E-06	4.00E-06	2.16E-06	1.17E-06	6.35E-07

0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.106	0.056	2.90E-02	1.60E-02	8.25E-03	4.39E-03	2.35E-03	1.26E-03	6.74E-04	3.63E-04	1.96E-04	1.06E-04	5.71E-05	3.09E-05	1.68E-05
8.13E-03	4.28E-03	2.27E-03	1.20E-03	6.41E-04	3.42E-04	1.83E-04	9.84E-05	5.29E-05	2.85E-05	1.54E-05	8.34E-06	4.52E-06	2.46E-06	1.34E-06
0.043	0.022	0.012	6.16E-03	3.25E-03	1.73E-03	9.13E-04	4.86E-04	2.52E-04	1.25E-04	5.79E-05	8.96E-05	1.85E-04	8.50E-05	0
4.20E-02	2.20E-02	1.10E-02	6.39E-03	3.31E-03	3.09E-03	8.83E-03	3.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.015	8.03E-03	4.23E-03	2.23E-03	1.18E-03	6.77E-04	3.31E-04	3.20E-04	3.97E-04	2.16E-04	1.30E-04	1.42E-04	0	0	0
2.37E-03	1.23E-03	6.44E-04	3.38E-04	1.78E-04	9.44E-05	5.01E-05	2.67E-05	1.43E-05	7.63E-06	4.10E-06	2.20E-06	1.19E-06	6.41E-07	3.46E-07
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0
9.75E-03	5.01E-03	2.92E-03	2.13E-03	3.56E-03	1.94E-03	1.83E-03	0	0	0	0	0	0	0	0
0.055	0.029	0.015	8.10E-03	4.31E-03	2.30E-03	1.23E-03	6.60E-04	3.55E-04	1.91E-04	1.03E-04	5.58E-05	3.03E-05	1.64E-05	8.92E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.10E-02	5.55E-03	2.92E-03	1.54E-03	8.17E-04	4.35E-04	2.32E-04	1.24E-04	6.65E-05	3.57E-05	1.92E-05	1.04E-05	5.61E-06	3.04E-06	1.65E-06
5.20E-02	2.80E-02	1.50E-02	7.94E-03	4.26E-03	2.30E-03	1.24E-03	6.69E-04	3.62E-04	1.97E-04	1.07E-04	5.81E-05	3.16E-05	1.72E-05	9.41E-06
0.012	6.50E-03	3.45E-03	1.84E-03	9.79E-04	5.24E-04	2.81E-04	1.51E-04	8.10E-05	4.38E-05	2.37E-05	1.37E-05	7.65E-06	1.45E-06	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.69E-03	4.02E-03	2.12E-03	1.12E-03	5.92E-04	3.14E-04	1.68E-04	8.95E-05	4.80E-05	2.55E-05	1.36E-05	8.44E-06	5.21E-06	3.11E-06	2.10E-06
0.044	0.023	0.012	6.37E-03	3.38E-03	1.80E-03	9.58E-04	5.13E-04	2.74E-04	1.51E-04	8.60E-05	3.45E-05	2.01E-05	1.11E-05	4.15E-05
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.19E-03	3.17E-03	2.65E-03	0	3.86E-03	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.028	0.015	7.98E-03	4.25E-03	2.27E-03	1.21E-03	6.51E-04	3.50E-04	1.89E-04	1.02E-04	5.51E-05	2.99E-05	1.62E-05	8.81E-06	4.79E-06
0.252	1.32E-01	6.90E-02	3.70E-02	1.90E-02	1.20E-02	5.60E-03	1.70E-02	9.30E-03	6.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.37E-03	1.81E-03	9.69E-04	5.20E-04	2.79E-04	1.49E-04	9.10E-05	4.77E-05	4.89E-05	2.72E-05	1.54E-05	8.53E-06	4.41E-06	4.14E-06	0
5.35E-03	2.87E-03	1.53E-03	7.67E-04	3.65E-04	5.84E-04	3.16E-04	1.98E-04	1.07E-04	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.017	8.86E-03	4.66E-03	2.46E-03	1.31E-03	6.94E-04	3.70E-04	1.98E-04	1.06E-04	5.70E-05	3.07E-05	1.66E-05	8.96E-06	4.85E-06	2.63E-06
3.45E-03	1.83E-03	9.70E-04	5.17E-04	2.76E-04	1.48E-04	7.93E-05	4.27E-05	2.30E-05	1.24E-05	6.72E-06	3.64E-06	1.98E-06	1.08E-06	5.85E-07
0.031	0.016	8.54E-03	4.53E-03	2.41E-03	1.29E-03	6.89E-04	3.70E-04	1.99E-04	1.07E-04	5.78E-05	3.13E-05	1.70E-05	9.14E-06	4.86E-06
6.80E-03	3.59E-03	1.90E-03	1.01E-03	5.37E-04	2.87E-04	1.54E-04	8.24E-05	4.43E-05	2.39E-05	1.29E-05	6.96E-06	3.77E-06	2.05E-06	1.11E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.83E-03	2.55E-03	1.36E-03	7.22E-04	3.86E-04	2.06E-04	1.11E-04	5.96E-05	3.21E-05	1.73E-05	9.38E-06	5.08E-06	2.76E-06	1.50E-06	8.16E-07
0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

5.91E-03	3.13E-03	1.66E-03	8.86E-04	4.74E-04	2.54E-04	1.36E-04	7.34E-05	3.96E-05	2.14E-05	1.16E-05	6.28E-06	3.41E-06	1.85E-06	1.01E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.83E-03	3.07E-03	1.62E-03	8.70E-04	4.32E-04	2.84E-04	1.57E-04	3.10E-04	1.51E-04	1.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.011	5.90E-03	3.12E-03	1.67E-03	9.12E-04	4.20E-04	3.64E-04	4.22E-04	2.46E-04	1.56E-04	1.11E-04	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.055	0.029	0.015	8.24E-03	4.39E-03	2.35E-03	1.26E-03	6.76E-04	3.64E-04	1.96E-04	1.06E-04	5.74E-05	3.11E-05	1.69E-05	9.17E-06
0.049	0.026	0.014	7.14E-03	3.79E-03	2.01E-03	1.07E-03	5.75E-04	3.08E-04	1.67E-04	8.95E-05	4.87E-05	2.22E-05	2.28E-05	1.32E-06
8.32E-03	4.37E-03	2.30E-03	1.22E-03	6.46E-04	3.44E-04	1.84E-04	9.83E-05	5.28E-05	2.84E-05	1.53E-05	8.25E-06	4.47E-06	2.41E-06	1.32E-06
9.17E-03	4.84E-03	2.57E-03	1.36E-03	7.27E-04	3.88E-04	2.08E-04	1.12E-04	6.02E-05	3.24E-05	1.75E-05	9.48E-06	5.14E-06	2.80E-06	1.52E-06
0	4.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.21E-03	1.50E-03	1.09E-03	0	2.13E-03	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.54E-03	4.97E-03	2.60E-03	1.36E-03	7.19E-04	3.80E-04	2.02E-04	1.08E-04	5.75E-05	3.08E-05	1.63E-05	9.10E-06	4.89E-06	3.18E-06	6.77E-07
4.98E-03	2.60E-03	1.36E-03	7.15E-04	3.77E-04	2.00E-04	1.06E-04	5.66E-05	3.03E-05	1.62E-05	8.71E-06	4.69E-06	2.53E-06	1.36E-06	7.37E-07
0.011	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.85E-03	5.75E-03	7.37E-03	4.93E-03	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.83E-03	2.01E-03	1.05E-03	5.56E-04	2.94E-04	1.56E-04	8.32E-05	4.45E-05	2.38E-05	1.28E-05	6.87E-06	3.71E-06	2.01E-06	1.07E-06	5.70E-07
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.27E-03	2.75E-03	1.44E-03	7.61E-04	4.02E-04	2.14E-04	1.14E-04	6.01E-05	3.21E-05	1.59E-05	1.12E-05	2.47E-06	1.30E-05	2.05E-05	1.23E-05
7.10E-03	4.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.101	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.60E-02	4.50E-02	2.40E-02	1.30E-02	6.74E-03	3.60E-03	1.93E-03	1.03E-03	5.55E-04	2.99E-04	1.61E-04	8.72E-05	4.72E-05	2.56E-05	1.39E-05
9.33E-03	4.92E-03	2.60E-03	1.38E-03	7.36E-04	3.93E-04	2.10E-04	1.13E-04	6.07E-05	3.27E-05	1.76E-05	9.54E-06	5.17E-06	2.80E-06	1.52E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.013	6.66E-03	3.56E-03	1.90E-03	1.02E-03	5.49E-04	2.96E-04	1.60E-04	8.64E-05	4.68E-05	2.54E-05	1.38E-05	7.52E-06	4.10E-06	2.24E-06
9.67E-03	5.16E-03	2.76E-03	1.48E-03	7.92E-04	4.26E-04	2.30E-04	1.24E-04	6.70E-05	3.63E-05	1.98E-05	1.05E-05	5.71E-06	3.50E-06	1.27E-06
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.95E-03	3.12E-03	1.64E-03	8.68E-04	4.60E-04	2.45E-04	1.31E-04	6.99E-05	3.75E-05	2.02E-05	1.09E-05	5.86E-06	3.17E-06	1.72E-06	9.31E-07
2.72E-03	1.43E-03	7.54E-04	3.99E-04	2.12E-04	1.13E-04	6.05E-05	3.24E-05	1.74E-05	9.37E-06	5.06E-06	2.73E-06	1.48E-06	8.02E-07	4.36E-07
6.60E-03	3.65E-03	1.94E-03	7.78E-04	4.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00
0.053	0.03	0.017	9.64E-03	4.32E-03	6.27E-03	0	0	0	0	0	0	0	0	0
2.50E-02	1.30E-02	9.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.018	9.77E-03	5.19E-03	2.76E-03	1.47E-03	7.88E-04	4.23E-04	2.27E-04	1.22E-04	6.60E-05	3.57E-05	1.93E-05	1.05E-05	5.69E-06	3.10E-06
5.75E-03	3.03E-03	1.61E-03	8.53E-04	4.55E-04	2.42E-04	1.29E-04	6.73E-05	4.12E-05	1.99E-05	9.17E-06	2.18E-05	1.23E-05	6.18E-06	5.81E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.016	8.43E-03	4.53E-03	2.44E-03	1.32E-03	7.11E-04	3.87E-04	2.11E-04	1.10E-04	6.51E-05	2.06E-05	0	2.33E-05	1.30E-05	7.53E-06

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.43E-03	1.28E-03	6.78E-04	3.60E-04	1.92E-04	1.03E-04	5.50E-05	2.96E-05	1.59E-05	8.58E-06	4.64E-06	2.51E-06	1.36E-06	7.39E-07	4.02E-07
6.88E-03	3.62E-03	1.91E-03	1.01E-03	5.37E-04	2.86E-04	1.53E-04	8.20E-05	4.40E-05	2.37E-05	1.28E-05	6.90E-06	3.73E-06	2.02E-06	1.10E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.98E-01	**1.58E-01**	**8.40E-02**	**4.50E-02**	**2.40E-02**	**1.50E-02**	**9.15E-03**	**1.70E-02**	**9.30E-03**	**6.18E-03**	**5.98E-04**	**3.22E-04**	**1.85E-04**	**8.73E-05**	**4.15E-05**

300	310	320	330	340	350	360	370	380	390	400	410	420	430	440
2.12E-05	0.00E+00	3.35E-05	1.72E-05	1.27E-05	9.33E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.94E-07	2.71E-07	1.48E-07	8.13E-08	4.46E-08	2.45E-08	1.35E-08	7.42E-09	4.09E-09	2.25E-09	1.24E-09	6.85E-10	3.79E-10	2.09E-10	1.16E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	3.61E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.66E-06	1.45E-06	7.89E-07	4.31E-07	2.35E-07	1.29E-07	7.05E-08	3.87E-08	2.12E-08	1.17E-08	6.40E-09	3.52E-09	1.94E-09	1.07E-09	5.88E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.54E-06	2.48E-06	1.36E-06	7.44E-07	4.08E-07	2.24E-07	1.23E-07	6.76E-08	3.72E-08	2.05E-08	1.13E-08	6.21E-09	3.43E-09	1.89E-09	1.05E-09
3.80E-07	2.07E-07	1.13E-07	6.18E-08	3.38E-08	1.85E-08	1.02E-08	5.57E-09	3.06E-09	1.68E-09	9.25E-10	5.09E-10	2.80E-10	1.55E-10	8.52E-11
8.84E-06	5.70E-06	4.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.52E-07	1.37E-07	7.46E-08	4.07E-08	2.22E-08	1.21E-08	6.64E-09	3.64E-09	2.00E-09	1.10E-09	6.01E-10	3.31E-10	1.82E-10	1.00E-10	5.50E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.04E-07	3.12E-08	2.91E-08	4.93E-08	3.28E-07	2.55E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.69E-07	9.16E-08	4.99E-08	2.69E-08	1.45E-08	7.95E-09	3.70E-09	2.54E-09	2.91E-09	1.41E-09	0.00E+00	0.00E+00	3.86E-09	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E-06	9.32E-07	5.12E-07	2.81E-07	1.55E-07	8.52E-08	4.69E-08	2.59E-08	1.43E-08	7.87E-09	4.35E-09	2.40E-09	1.33E-09	7.34E-10	4.06E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.82E-07	4.26E-07	2.33E-07	1.27E-07	6.96E-08	3.81E-08	2.09E-08	1.15E-08	6.29E-09	3.46E-09	1.90E-09	1.05E-09	5.76E-10	3.17E-10	1.75E-10
4.57E-07	2.49E-07	1.36E-07	7.41E-08	4.05E-08	2.22E-08	1.22E-08	6.66E-09	3.66E-09	2.01E-09	1.10E-09	6.07E-10	3.34E-10	1.84E-10	1.02E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.17E-07	2.84E-07	1.56E-07	8.56E-08	4.70E-08	2.59E-08	1.42E-08	7.84E-09	4.32E-09	2.38E-09	1.32E-09	7.26E-10	4.01E-10	2.22E-10	1.23E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.50E-06	8.17E-07	4.46E-07	2.44E-07	1.34E-07	7.33E-08	4.02E-08	2.21E-08	1.22E-08	6.68E-09	3.68E-09	2.03E-09	1.12E-09	6.14E-10	3.40E-10

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.13E-06	2.81E-06	1.54E-06	8.42E-07	4.62E-07	2.54E-07	1.39E-07	7.67E-08	4.22E-08	2.32E-08	1.28E-08	7.06E-09	3.90E-09	2.15E-09	1.19E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.44E-07	2.42E-07	1.32E-07	7.25E-08	3.97E-08	2.18E-08	1.19E-08	6.56E-09	3.60E-09	1.98E-09	1.09E-09	6.01E-10	3.31E-10	1.83E-10	1.01E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.18E-06	0.00E+00	3.38E-06	2.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.03E-05	5.59E-06	3.05E-06	1.67E-06	9.04E-07	4.99E-07	2.88E-07	1.76E-07	7.66E-08	5.16E-08	5.56E-08	2.83E-08	0.00E+00	4.80E-08	1.92E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.38E-07	3.47E-07	1.89E-07	1.03E-07	5.61E-08	3.07E-08	1.68E-08	9.18E-09	5.02E-09	2.77E-09	1.52E-09	8.26E-10	4.44E-10	2.70E-10	1.46E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.84E-07	1.55E-07	8.43E-08	4.60E-08	2.51E-08	1.37E-08	7.51E-09	4.11E-09	2.26E-09	1.24E-09	6.80E-10	3.74E-10	2.06E-10	1.13E-10	6.24E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E-06	1.78E-06	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.02E-07	0.00E+00	0.00E+00	1.78E-06	1.41E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.42E-06	2.40E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.05E-06	1.66E-06	9.02E-07	4.92E-07	2.68E-07	1.47E-07	8.01E-08	4.39E-08	2.40E-08	1.32E-08	7.23E-09	3.97E-09	2.19E-09	1.20E-09	6.62E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.65E-06	9.01E-07	4.92E-07	2.69E-07	1.47E-07	8.03E-08	4.40E-08	2.41E-08	1.32E-08	7.27E-09	4.00E-09	2.20E-09	1.21E-09	6.67E-10	3.68E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.92E-07	4.32E-07	2.36E-07	1.29E-07	7.06E-08	3.87E-08	2.12E-08	1.17E-08	6.43E-09	3.53E-09	1.91E-09	1.08E-09	6.00E-10	3.11E-10	2.12E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.43E-07	2.41E-07	1.30E-07	7.04E-08	3.87E-08	2.00E-08	1.19E-08	1.06E-08	1.33E-09	0.00E+00	0.00E+00	1.10E-08	6.96E-09	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.57E-07	1.97E-07	1.08E-07	5.98E-08	3.30E-08	1.82E-08	1.01E-08	5.56E-09	3.07E-09	1.70E-09	9.41E-10	5.21E-10	2.89E-10	1.60E-10	8.88E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.06E-07	2.75E-07	1.50E-07	8.19E-08	4.47E-08	2.45E-08	1.34E-08	7.34E-09	4.03E-09	2.21E-09	1.21E-09	6.66E-10	3.66E-10	1.98E-10	1.06E-10
1.22E-06	6.63E-07	3.62E-07	1.98E-07	1.09E-07	5.95E-08	3.26E-08	1.79E-08	9.84E-09	5.41E-09	2.98E-09	1.64E-09	9.04E-10	4.99E-10	2.75E-10
1.60E-06	8.71E-07	4.75E-07	2.60E-07	1.42E-07	7.78E-08	4.27E-08	2.34E-08	1.29E-08	7.06E-09	3.89E-09	2.14E-09	1.18E-09	6.49E-10	3.58E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.77E-07	1.51E-07	8.22E-08	4.49E-08	2.46E-08	1.34E-08	7.36E-09	4.04E-09	2.22E-09	1.22E-09	6.69E-10	3.68E-10	2.03E-10	1.12E-10	6.16E-11
7.40E-06	4.03E-06	2.20E-06	1.20E-06	6.57E-07	3.60E-07	1.97E-07	1.08E-07	5.93E-08	3.26E-08	1.79E-08	9.85E-09	5.42E-09	2.99E-09	1.65E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E-05	6.32E-06	3.45E-06	1.88E-06	1.02E-06	5.70E-07	3.19E-07	1.84E-07	8.88E-08	2.86E-08	3.18E-08	5.05E-08	0.00E+00	3.83E-08	1.80E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.21E-06	2.88E-06	8.27E-06	4.40E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.05E-06	7.16E-07	6.22E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.05E-06	3.29E-06	1.79E-06	9.77E-07	5.34E-07	2.92E-07	1.60E-07	8.74E-08	4.79E-08	2.63E-08	1.44E-08	7.94E-09	4.37E-09	2.40E-09	1.32E-09
5.25E-07	2.86E-07	1.56E-07	8.51E-08	4.65E-08	2.55E-08	1.39E-08	7.65E-09	4.20E-09	2.31E-09	1.27E-09	6.97E-10	3.84E-10	2.11E-10	1.17E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.47E-06	**7.97E-07**	**4.34E-07**	**2.37E-07**	**1.29E-07**	**7.06E-08**	**3.86E-08**	**2.12E-08**	**1.16E-08**	**6.37E-09**	**3.50E-09**	**1.92E-09**	**1.06E-09**	**5.84E-10**	**3.23E-10**
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.70E-06	4.75E-06	3.89E-06	3.17E-06	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	1.97E-06	3.22E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0
1.48E-06	1.30E-06	2.38E-06	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.85E-06	1.57E-06	8.60E-07	4.73E-07	2.60E-07	1.43E-07	7.89E-08	4.34E-08	2.40E-08	1.31E-08	7.54E-09	4.15E-09	2.05E-09	1.14E-09	8.03E-10
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0
1.74E-06	9.45E-07	5.15E-07	2.81E-07	1.53E-07	8.38E-08	4.58E-08	2.51E-08	1.38E-08	7.55E-09	4.15E-09	2.28E-09	1.25E-09	6.90E-10	3.80E-10
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.37E-06	7.44E-07	4.06E-07	2.21E-07	1.21E-07	6.61E-08	3.62E-08	1.98E-08	1.09E-08	5.97E-09	3.28E-09	1.80E-09	9.92E-10	5.46E-10	3.01E-10
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.45E-07	1.88E-07	1.02E-07	5.58E-08	3.05E-08	1.66E-08	9.11E-09	4.99E-09	2.74E-09	1.50E-09	8.25E-10	4.53E-10	2.49E-10	1.37E-10	7.56E-11

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.12E-06	4.96E-06	2.70E-06	1.47E-06	8.05E-07	4.40E-07	2.41E-07	1.32E-07	7.23E-08	3.97E-08	2.18E-08	1.20E-08	6.58E-09	3.62E-09	2.00E-09
7.27E-07	3.96E-07	2.16E-07	1.18E-07	6.46E-08	3.54E-08	1.94E-08	1.06E-08	5.84E-09	3.21E-09	1.77E-09	9.72E-10	5.36E-10	2.95E-10	1.63E-10
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.88E-07	1.01E-07	5.53E-08	3.02E-08	1.68E-08	9.29E-09	4.62E-09	2.18E-09	0	3.80E-09	8.52E-10	8.46E-09	5.51E-09	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.85E-06	2.64E-06	1.44E-06	7.88E-07	4.31E-07	2.36E-07	1.29E-07	7.08E-08	3.89E-08	2.14E-08	1.18E-08	6.45E-09	3.56E-09	1.95E-09	1.07E-09
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.95E-07	4.87E-07	2.65E-07	1.45E-07	7.90E-08	4.32E-08	2.36E-08	1.29E-08	7.09E-09	3.89E-09	2.14E-09	1.18E-09	6.46E-10	3.55E-10	1.97E-10
5.15E-06	2.82E-06	1.54E-06	8.46E-07	4.64E-07	2.55E-07	1.40E-07	7.71E-08	4.24E-08	2.34E-08	1.29E-08	7.11E-09	3.92E-09	2.17E-09	1.20E-09
3.71E-06	2.09E-06	1.19E-06	5.05E-07	4.05E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0
5.76E-06	3.17E-06	0	0	0	0	0	0	0	0	0	0	0	0	0
2.04E-05	1.13E-05	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.61E-06	1.43E-06	7.78E-07	4.26E-07	2.33E-07	1.28E-07	7.00E-08	3.84E-08	2.11E-08	1.16E-08	6.39E-09	3.52E-09	1.94E-09	1.07E-09	5.90E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0	0	0.00E+00	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.43E-06	7.77E-07	4.23E-07	2.31E-07	1.26E-07	6.93E-08	3.75E-08	2.03E-08	1.20E-08	5.90E-09	2.28E-09	1.39E-09	4.86E-10	0	1.62E-09
3.19E-07	1.74E-07	9.51E-08	5.20E-08	2.85E-08	1.56E-08	8.56E-09	4.70E-09	2.58E-09	1.42E-09	7.81E-10	4.30E-10	2.37E-10	1.31E-10	7.22E-11
2.92E-06	1.34E-06	4.59E-07	9.67E-07	0.00E+00	6.82E-07	3.94E-07	2.18E-07	1.53E-07	0	0	0	0	0	0
6.04E-07	3.25E-07	1.99E-07	1.05E-07	1.35E-08	4.11E-08	9.33E-08	6.32E-08	4.27E-08	2.88E-08	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.45E-07	2.43E-07	1.33E-07	7.25E-08	3.97E-08	2.18E-08	1.19E-08	6.55E-09	3.60E-09	1.98E-09	1.09E-09	6.00E-10	3.30E-10	1.82E-10	1.01E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0

5.50E-07	3.00E-07	1.64E-07	8.98E-08	4.92E-08	2.69E-08	1.48E-08	8.12E-09	4.46E-09	2.45E-09	1.35E-09	7.44E-10	4.10E-10	2.26E-10	1.25E-10
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.99E-06	2.72E-06	1.48E-06	8.10E-07	4.43E-07	2.42E-07	1.33E-07	7.28E-08	3.99E-08	2.19E-08	1.21E-08	6.59E-09	3.67E-09	2.00E-09	1.08E-09
2.12E-05	1.12E-05	7.29E-06	6.07E-06	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0
7.31E-07	4.12E-07	2.29E-07	8.29E-08	2.70E-08	6.19E-08	1.53E-07	1.05E-07	4.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.24E-07	4.57E-07	2.44E-07	1.47E-07	7.69E-08	2.05E-08	0	0	3.69E-08	1.97E-08	1.01E-08	6.52E-09	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0.00E+00	0.00E+00	0	0	0
3.62E-06	0	4.05E-06	0	0	0	0	0	0	0	0	0	0	0	0
4.04E-07	2.20E-07	1.16E-07	6.38E-08	3.96E-08	3.35E-09	1.89E-08	2.67E-08	0.00E+00	4.06E-08	2.77E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0	0	0	0
3.15E-07	1.52E-07	5.42E-08	0	4.51E-08	1.32E-07	6.08E-08	4.41E-08	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.58E-06	4.13E-06	2.25E-06	1.23E-06	6.72E-07	3.68E-07	2.02E-07	1.11E-07	6.07E-08	3.33E-08	1.83E-08	1.01E-08	5.55E-09	3.06E-09	1.69E-09
8.28E-07	4.51E-07	2.46E-07	1.34E-07	7.33E-08	4.01E-08	2.19E-08	1.20E-08	6.59E-09	3.62E-09	1.99E-09	1.09E-09	6.03E-10	3.31E-10	1.84E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E-06	6.69E-07	3.66E-07	2.01E-07	1.10E-07	6.05E-08	3.33E-08	1.83E-08	1.01E-08	5.55E-09	3.06E-09	1.69E-09	9.32E-10	5.15E-10	2.84E-10
1.77E-06	0.00E+00	1.24E-06	7.73E-07	3.70E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.06E-07	2.75E-07	1.50E-07	8.18E-08	4.47E-08	2.44E-08	1.34E-08	7.32E-09	4.01E-09	2.20E-09	1.21E-09	6.65E-10	3.66E-10	2.02E-10	1.11E-10
2.37E-07	1.29E-07	7.03E-08	3.84E-08	2.10E-08	1.15E-08	6.29E-09	3.45E-09	1.89E-09	1.04E-09	5.71E-10	3.14E-10	1.73E-10	9.53E-11	5.25E-11
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.69E-06	9.19E-07	5.03E-07	2.76E-07	1.49E-07	8.02E-08	4.20E-08	2.41E-08	9.74E-09	2.87E-09	4.12E-10	0.00E+00	8.65E-09	4.39E-09	1.70E-09
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0
4.52E-06	2.40E-06	0	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.19E-07	1.19E-07	6.52E-08	3.56E-08	1.95E-08	1.07E-08	5.85E-09	3.21E-09	1.76E-09	9.69E-10	5.33E-10	2.93E-10	1.62E-10	8.91E-11	4.92E-11
5.97E-07	3.25E-07	1.77E-07	9.66E-08	5.28E-08	2.89E-08	1.58E-08	8.66E-09	4.75E-09	2.61E-09	1.43E-09	7.87E-10	4.33E-10	2.39E-10	1.31E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.12E-05	**1.13E-05**	**3.35E-05**	**1.72E-05**	**1.27E-05**	**9.33E-06**	**3.94E-07**	**2.18E-07**	**1.53E-07**	**5.16E-08**	**5.56E-08**	**5.05E-08**	**8.65E-09**	**4.80E-08**	**1.92E-08**

450	460	470	480	490	500	510	520	530	540	550	560	570	580	590
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.39E-11	3.54E-11	1.96E-11	1.09E-11	6.02E-12	3.34E-12	1.85E-12	1.03E-12	5.70E-13	3.17E-13	1.76E-13	9.79E-14	5.44E-14	3.03E-14	1.69E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.25E-10	1.79E-10	9.89E-11	5.46E-11	3.02E-11	1.67E-11	9.24E-12	5.12E-12	2.84E-12	1.57E-12	8.69E-13	4.80E-13	2.71E-13	1.46E-13	8.43E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.77E-10	3.19E-10	1.77E-10	9.77E-11	5.41E-11	3.00E-11	1.66E-11	9.22E-12	5.11E-12	2.84E-12	1.58E-12	8.75E-13	4.86E-13	2.70E-13	1.50E-13
4.70E-11	2.60E-11	1.43E-11	7.92E-12	4.38E-12	2.42E-12	1.34E-12	7.36E-13	4.16E-13	2.32E-13	1.34E-13	7.36E-14	4.37E-14	2.60E-14	8.03E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.05E-11	1.68E-11	9.39E-12	5.15E-12	2.84E-12	1.43E-12	9.58E-13	5.97E-13	2.85E-13	2.19E-13	0	3.62E-14	4.45E-14	0	1.07E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.25E-10	1.25E-10	6.91E-11	3.83E-11	2.12E-11	1.18E-11	6.54E-12	3.63E-12	2.02E-12	1.12E-12	6.24E-13	3.47E-13	1.93E-13	1.08E-13	5.99E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.66E-11	5.34E-11	2.95E-11	1.63E-11	9.01E-12	4.99E-12	2.76E-12	1.53E-12	8.48E-13	4.70E-13	2.61E-13	1.45E-13	8.04E-14	4.46E-14	2.48E-14
5.60E-11	3.09E-11	1.71E-11	9.43E-12	5.21E-12	2.89E-12	1.60E-12	8.84E-13	4.91E-13	2.72E-13	1.50E-13	8.42E-14	4.57E-14	2.51E-14	1.39E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.78E-11	3.75E-11	2.08E-11	1.15E-11	6.38E-12	3.54E-12	1.96E-12	1.09E-12	6.04E-13	3.35E-13	1.86E-13	1.04E-13	5.75E-14	3.21E-14	1.79E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.88E-10	1.02E-10	5.90E-11	3.00E-11	1.88E-11	9.90E-12	6.09E-12	3.76E-12	1.43E-12	0.00E+00	2.78E-13	0.00E+00	1.71E-12	5.63E-13	5.65E-13

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.57E-10	3.64E-10	2.01E-10	1.11E-10	6.17E-11	3.42E-11	1.90E-11	1.05E-11	5.83E-12	3.24E-12	1.80E-12	9.99E-13	5.55E-13	3.09E-13	1.72E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.56E-11	3.07E-11	1.70E-11	9.38E-12	5.19E-12	2.87E-12	1.59E-12	8.75E-13	4.95E-13	2.78E-13	1.49E-13	8.35E-14	5.20E-14	2.83E-14	1.40E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.36E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.41E-11	2.92E-11	2.75E-11	2.36E-11	1.26E-11	0.00E+00	3.26E-11	1.14E-11	1.30E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.44E-11	1.90E-11	1.05E-11	5.79E-12	3.20E-12	1.77E-12	9.80E-13	5.43E-13	3.00E-13	1.67E-13	9.23E-14	5.12E-14	2.84E-14	1.58E-14	8.75E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.65E-10	2.01E-10	1.11E-10	6.12E-11	3.38E-11	1.87E-11	1.03E-11	5.77E-12	3.16E-12	1.78E-12	1.02E-12	5.37E-13	3.37E-13	1.78E-13	1.08E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.03E-10	1.12E-10	6.19E-11	3.42E-11	1.89E-11	1.05E-11	5.78E-12	3.21E-12	1.76E-12	9.70E-13	5.47E-13	2.96E-13	1.72E-13	9.30E-14	4.43E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.39E-10	8.90E-11	5.67E-11	0.00E+00	5.64E-11	3.31E-11	1.77E-11	1.29E-11	6.88E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.92E-11	2.73E-11	1.52E-11	8.43E-12	4.68E-12	2.60E-12	1.45E-12	8.04E-13	4.48E-13	2.49E-13	1.39E-13	7.73E-14	4.30E-14	2.40E-14	1.33E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.56E-11	3.29E-11	2.00E-11	3.44E-12	1.22E-11	1.08E-12	6.32E-12	6.34E-12	0.00E+00	6.61E-12	6.98E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.52E-10	8.40E-11	4.64E-11	2.57E-11	1.42E-11	7.87E-12	4.36E-12	2.42E-12	1.34E-12	7.44E-13	4.13E-13	2.29E-13	1.27E-13	7.07E-14	3.93E-14
1.98E-10	1.09E-10	6.03E-11	3.34E-11	1.85E-11	1.02E-11	5.65E-12	3.13E-12	1.74E-12	9.63E-13	5.34E-13	2.96E-13	1.65E-13	9.14E-14	5.08E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.40E-11	1.88E-11	1.04E-11	5.74E-12	3.17E-12	1.75E-12	9.71E-13	5.37E-13	2.97E-13	1.64E-13	9.17E-14	4.99E-14	2.85E-14	1.56E-14	7.97E-15
9.09E-10	5.02E-10	2.78E-10	1.53E-10	8.52E-11	4.72E-11	2.55E-11	1.38E-11	8.20E-12	4.48E-12	2.44E-12	1.60E-12	4.42E-13	3.65E-13	5.27E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.08E-08	1.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.32E-10	4.03E-10	2.22E-10	1.25E-10	6.50E-11	3.79E-11	1.85E-11	7.45E-12	5.14E-12	5.53E-12	2.71E-12	4.36E-12	2.89E-12	0.00E+00	2.92E-12
6.43E-11	3.55E-11	1.96E-11	1.08E-11	6.00E-12	3.32E-12	1.84E-12	1.02E-12	5.64E-13	3.12E-13	1.74E-13	9.62E-14	5.33E-14	2.96E-14	1.66E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.78E-10	**9.77E-11**	**5.55E-11**	**3.02E-11**	**1.82E-11**	**1.23E-11**	**3.63E-12**	**2.01E-12**	**3.69E-12**	**0.00E+00**	**3.59E-13**	**0.00E+00**	**2.92E-12**	**1.49E-12**	**1.55E-12**
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.77E-10	3.35E-10	0	3.59E-10	2.28E-10	7.86E-11	8.50E-11	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.09E-10	1.15E-10	6.39E-11	3.56E-11	1.94E-11	1.06E-11	5.75E-12	3.65E-12	2.04E-12	7.20E-13	7.86E-13	2.27E-13	5.84E-13	7.18E-14	1.22E-13
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.66E-10	9.15E-11	5.05E-11	2.79E-11	1.54E-11	8.53E-12	4.72E-12	2.60E-12	1.44E-12	8.01E-13	4.47E-13	2.46E-13	1.38E-13	7.46E-14	4.35E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.17E-11	2.30E-11	1.27E-11	7.01E-12	3.88E-12	2.14E-12	1.19E-12	6.56E-13	3.64E-13	2.01E-13	1.12E-13	6.19E-14	3.44E-14	1.91E-14	1.06E-14

0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0
1.10E-09	6.06E-10	3.35E-10	1.85E-10	1.02E-10	5.64E-11	3.12E-11	1.73E-11	9.55E-12	5.29E-12	2.93E-12	1.63E-12	9.01E-13	4.99E-13	2.78E-13
8.99E-11	4.96E-11	2.74E-11	1.52E-11	8.39E-12	4.64E-12	2.57E-12	1.42E-12	7.89E-13	4.38E-13	2.43E-13	1.35E-13	7.49E-14	4.16E-14	2.31E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.11E-10	3.40E-10	1.74E-10	8.79E-11	6.97E-11	2.35E-11	2.74E-11	1.05E-11	0	9.04E-13	0	8.41E-12	4.27E-12	4.39E-12	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.07E-10	6.13E-11	3.45E-11	1.87E-11	1.12E-11	6.81E-12	5.23E-12	1.55E-12	2.29E-12	1.68E-12	0	2.15E-12	1.10E-12	1.15E-12	0
6.62E-10	3.67E-10	2.03E-10	1.12E-10	6.23E-11	3.45E-11	1.92E-11	1.06E-11	5.90E-12	3.28E-12	1.82E-12	1.01E-12	5.62E-13	3.13E-13	1.74E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.26E-10	1.80E-10	9.95E-11	5.50E-11	3.05E-11	1.69E-11	9.34E-12	5.18E-12	2.87E-12	1.59E-12	8.82E-13	4.91E-13	2.73E-13	1.52E-13	8.36E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1.23E-09	1.45E-09	0	0	0	0	0	0	0	0	0	0	0	0
3.99E-11	2.20E-11	1.22E-11	6.73E-12	3.73E-12	2.06E-12	1.14E-12	6.33E-13	3.51E-13	1.95E-13	1.08E-13	6.00E-14	3.33E-14	1.85E-14	1.03E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.55E-11	3.07E-11	1.70E-11	9.38E-12	5.19E-12	2.88E-12	1.59E-12	8.83E-13	4.89E-13	2.72E-13	1.51E-13	8.37E-14	4.65E-14	2.58E-14	1.44E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.89E-11	3.81E-11	2.10E-11	1.16E-11	6.44E-12	3.57E-12	1.98E-12	1.09E-12	6.07E-13	3.37E-13	1.87E-13	1.04E-13	5.76E-14	3.20E-14	1.78E-14
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.75E-10	2.89E-10	2.45E-10	5.31E-11	0	7.75E-11	0	6.37E-11	3.81E-11	1.95E-11	1.00E-11	1.12E-11	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.30E-10	5.14E-10	2.84E-10	1.57E-10	8.67E-11	4.80E-11	2.66E-11	1.47E-11	8.16E-12	4.52E-12	2.51E-12	1.39E-12	7.73E-13	4.29E-13	2.39E-13
1.00E-10	5.46E-11	2.95E-11	1.66E-11	1.10E-11	6.46E-12	2.25E-12	2.47E-12	3.72E-13	6.41E-13	0	1.21E-12	6.01E-13	2.97E-13	3.22E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.57E-10	8.70E-11	4.82E-11	2.67E-11	1.48E-11	8.20E-12	4.55E-12	2.52E-12	1.40E-12	7.78E-13	4.32E-13	2.40E-13	1.34E-13	7.43E-14	4.13E-14
0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
6.12E-11	3.38E-11	1.86E-11	1.03E-11	5.69E-12	3.15E-12	1.74E-12	9.64E-13	5.34E-13	2.96E-13	1.64E-13	9.10E-14	5.04E-14	2.80E-14	1.55E-14
2.90E-11	1.60E-11	8.83E-12	4.88E-12	2.70E-12	1.49E-12	8.27E-13	4.58E-13	2.54E-13	1.41E-13	7.80E-14	4.33E-14	2.40E-14	1.33E-14	7.41E-15
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0
2.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.71E-11	1.50E-11	8.28E-12	4.58E-12	2.54E-12	1.40E-12	7.77E-13	4.31E-13	2.39E-13	1.32E-13	7.35E-14	4.08E-14	2.27E-14	1.26E-14	6.99E-15
7.25E-11	4.00E-11	2.21E-11	1.22E-11	6.75E-12	3.71E-12	2.03E-12	1.16E-12	6.45E-13	3.54E-13	1.98E-13	1.22E-13	5.62E-14	4.15E-14	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.36E-08	**1.37E-08**	**1.45E-09**	**3.59E-10**	**2.28E-10**	**7.86E-11**	**8.50E-11**	**6.37E-11**	**3.81E-11**	**1.95E-11**	**1.00E-11**	**1.12E-11**	**4.27E-12**	**4.39E-12**	**2.92E-12**

600	610	620	630	640	650	660	670	680	690	700	710	720	730	740
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.38E-15	5.22E-15	2.91E-15	1.62E-15	9.03E-16	5.04E-16	2.81E-16	1.57E-16	8.74E-17	4.88E-17	2.72E-17	1.52E-17	8.49E-18	4.75E-18	2.65E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.39E-14	2.54E-14	1.34E-14	6.22E-15	4.32E-15	2.85E-15	1.84E-15	1.50E-15	6.52E-16	8.48E-16	0.00E+00	0.00E+00	4.82E-16	2.90E-16	1.28E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.36E-14	4.65E-14	2.59E-14	1.44E-14	8.03E-15	4.48E-15	2.50E-15	1.39E-15	7.76E-16	4.33E-16	2.41E-16	1.35E-16	7.52E-17	4.20E-17	2.34E-17
1.22E-14	4.44E-15	4.85E-15	0.00E+00	4.79E-15	2.85E-15	1.51E-15	6.84E-16	3.08E-16	3.07E-16	2.98E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.33E-14	5.43E-14	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.33E-14	1.86E-14	1.03E-14	5.79E-15	3.24E-15	1.81E-15	1.01E-15	5.73E-16	2.90E-16	1.80E-16	1.14E-16	4.15E-17	3.54E-17	1.03E-17	1.16E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.38E-14	7.66E-15	4.26E-15	2.37E-15	1.32E-15	7.35E-16	4.09E-16	2.28E-16	1.27E-16	7.08E-17	3.95E-17	2.20E-17	1.23E-17	6.85E-18	3.83E-18
7.46E-15	4.10E-15	2.44E-15	1.90E-15	7.33E-16	9.38E-17	0.00E+00	2.49E-16	3.44E-16	0.00E+00	0.00E+00	2.28E-16	1.02E-16	9.40E-17	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.93E-15	5.55E-15	3.11E-15	1.71E-15	9.49E-16	5.21E-16	3.09E-16	1.63E-16	8.21E-17	4.62E-17	2.62E-17	8.71E-18	4.71E-18	7.40E-18	2.68E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.55E-14	5.31E-14	2.96E-14	1.65E-14	9.17E-15	5.11E-15	2.85E-15	1.59E-15	8.85E-16	4.94E-16	2.76E-16	1.54E-16	8.58E-17	4.79E-17	2.68E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.87E-15	2.85E-15	4.69E-15	4.41E-15	0.00E+00	0.00E+00	2.09E-15	1.29E-15	5.81E-16	5.57E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.89E-15	2.69E-15	1.50E-15	8.41E-16	4.68E-16	2.66E-16	1.36E-16	7.67E-17	4.22E-17	1.94E-17	1.17E-17	8.96E-18	7.58E-18	4.97E-18	2.10E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.80E-14	3.33E-14	1.17E-14	6.53E-15	0.00E+00	1.61E-15	0.00E+00	1.87E-14	8.65E-15	8.35E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.89E-14	5.85E-15	1.77E-14	5.94E-15	8.16E-15	0.00E+00	7.94E-15	4.15E-15	2.93E-15	1.81E-15	8.19E-16	7.87E-16	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.46E-15	4.17E-15	2.31E-15	1.30E-15	7.16E-16	4.01E-16	2.09E-16	1.12E-16	7.32E-17	3.57E-17	2.63E-17	1.54E-17	1.26E-17	3.88E-18	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.19E-14	1.22E-14	6.77E-15	3.77E-15	2.10E-15	1.17E-15	6.51E-16	3.63E-16	2.02E-16	1.13E-16	6.29E-17	3.51E-17	1.96E-17	1.09E-17	6.11E-18
2.82E-14	1.57E-14	8.73E-15	4.86E-15	2.70E-15	1.51E-15	8.39E-16	4.67E-16	2.60E-16	1.45E-16	8.09E-17	4.51E-17	2.52E-17	1.41E-17	7.84E-18
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.35E-15	3.14E-15	1.47E-15	8.84E-16	3.99E-16	3.62E-16	0.00E+00	2.97E-16	0.00E+00	0.00E+00	0.00E+00	1.34E-16	1.22E-16	0.00E+00	0.00E+00
4.66E-13	0.00E+00	3.90E-13	2.12E-13	1.53E-13	4.76E-14	4.65E-14	4.50E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.44E-12	1.47E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.23E-15	5.05E-15	2.90E-15	1.51E-15	8.88E-16	4.53E-16	2.42E-16	1.22E-16	8.79E-17	6.90E-17	3.00E-17	1.96E-17	2.33E-17	1.01E-17	1.34E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	3.42E-13	1.65E-13	1.66E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.68E-14	1.56E-14	8.12E-15	2.55E-15	1.76E-15	1.79E-15	1.01E-15	5.35E-16	3.39E-16	1.02E-15	0	6.92E-16	6.41E-16	5.89E-16	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.88E-15	3.27E-15	1.82E-15	1.01E-15	5.62E-16	3.13E-16	1.74E-16	9.69E-17	5.40E-17	3.01E-17	1.68E-17	9.35E-18	5.22E-18	2.91E-18	1.62E-18

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.54E-13	8.59E-14	4.80E-14	2.61E-14	1.48E-14	8.45E-15	4.56E-15	2.52E-15	1.54E-15	6.38E-16	4.20E-16	2.41E-16	1.79E-16	1.25E-16	2.38E-17
1.28E-14	7.14E-15	3.97E-15	2.21E-15	1.23E-15	6.85E-16	3.82E-16	2.13E-16	1.19E-16	6.61E-17	3.69E-17	2.06E-17	1.15E-17	6.40E-18	3.57E-18
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.68E-14	5.39E-14	3.00E-14	1.67E-14	9.31E-15	5.19E-15	2.90E-15	1.61E-15	9.01E-16	5.03E-16	2.80E-16	1.57E-16	8.74E-17	4.88E-17	2.73E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.69E-14	2.63E-14	1.44E-14	8.45E-15	4.82E-15	2.37E-15	1.43E-15	9.74E-16	2.93E-16	3.88E-16	6.67E-17	4.40E-19	9.01E-17	0	1.22E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.72E-15	3.18E-15	1.77E-15	9.86E-16	5.49E-16	3.06E-16	1.70E-16	9.49E-17	5.29E-17	2.95E-17	1.65E-17	9.18E-18	5.12E-18	2.86E-18	1.60E-18
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.98E-15	4.44E-15	2.47E-15	1.38E-15	7.67E-16	4.27E-16	2.38E-16	1.33E-16	7.37E-17	4.14E-17	2.32E-17	1.31E-17	7.05E-18	3.87E-18	2.04E-18
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

9.88E-15	5.50E-15	3.06E-15	1.70E-15	9.48E-16	5.28E-16	2.94E-16	1.64E-16	9.13E-17	5.09E-17	2.84E-17	1.58E-17	8.83E-18	4.93E-18	2.75E-18
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
1.33E-13	7.37E-14	4.10E-14	2.28E-14	1.27E-14	7.07E-15	3.94E-15	2.19E-15	1.22E-15	6.82E-16	3.80E-16	2.11E-16	1.18E-16	6.65E-17	3.72E-17
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0
2.30E-14	1.28E-14	7.14E-15	3.98E-15	2.22E-15	1.24E-15	6.89E-16	3.84E-16	2.14E-16	1.20E-16	6.68E-17	3.73E-17	2.08E-17	1.16E-17	6.50E-18
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
8.71E-15	4.81E-15	2.69E-15	1.47E-15	8.46E-16	5.07E-16	2.27E-16	1.34E-16	9.33E-17	1.84E-17	1.12E-17	2.24E-17	1.31E-17	1.24E-17	5.19E-18
4.12E-15	2.29E-15	1.27E-15	7.09E-16	3.94E-16	2.20E-16	1.22E-16	6.83E-17	3.81E-17	2.12E-17	1.18E-17	6.59E-18	3.56E-18	2.04E-18	1.14E-18
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.89E-15	2.16E-15	1.20E-15	6.70E-16	3.73E-16	2.08E-16	1.16E-16	6.45E-17	3.59E-17	2.00E-17	1.12E-17	6.23E-18	3.48E-18	1.94E-18	1.08E-18
5.47E-15	1.33E-14	2.08E-14	1.89E-14	7.11E-16	0	7.54E-15	7.21E-15	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.44E-12	**1.47E-12**	**3.90E-13**	**2.12E-13**	**1.53E-13**	**4.76E-14**	**4.65E-14**	**4.50E-14**	**8.65E-15**	**8.35E-15**	**8.19E-16**	**7.87E-16**	**6.41E-16**	**5.89E-16**	**1.28E-16**

750	760	770	780	790	800	810	820	830	840	850	860	870	880	890
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.48E-18	8.28E-19	4.63E-19	2.59E-19	1.45E-19	8.11E-20	4.54E-20	2.54E-20	1.42E-20	7.96E-21	4.46E-21	2.50E-21	1.40E-21	7.84E-22	4.39E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.19E-16	1.09E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.31E-17	7.32E-18	4.09E-18	2.29E-18	1.28E-18	7.14E-19	4.00E-19	2.24E-19	1.25E-19	7.00E-20	3.92E-20	2.19E-20	1.23E-20	6.87E-21	3.85E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.14E-17	6.34E-18	0.00E+00	8.55E-19	0.00E+00	2.87E-18	1.60E-18	6.66E-19	5.65E-19	4.78E-19	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.14E-18	1.19E-18	6.66E-19	3.72E-19	2.08E-19	1.16E-19	6.50E-20	3.63E-20	2.03E-20	1.14E-20	6.35E-21	3.56E-21	1.99E-21	1.11E-21	6.24E-22
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	3.82E-18	2.08E-18	1.30E-18	6.77E-19	3.34E-19	1.88E-19	1.73E-19	6.92E-20	6.30E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E-17	8.35E-18	4.67E-18	2.61E-18	1.46E-18	8.15E-19	4.56E-19	2.55E-19	1.43E-19	7.98E-20	4.47E-20	2.50E-20	1.40E-20	7.83E-21	4.39E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.38E-19	0.00E+00	0.00E+00	4.07E-19	0.00E+00	9.58E-19	4.10E-19	3.60E-19	3.15E-19	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.41E-18	2.56E-18	1.39E-18	8.11E-19	4.53E-19	2.53E-19	1.61E-19	9.02E-20	3.65E-20	3.21E-20	2.78E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.41E-18	1.91E-18	1.06E-18	5.95E-19	3.33E-19	1.86E-19	1.04E-19	5.82E-20	3.25E-20	1.82E-20	1.02E-20	5.70E-21	3.19E-21	1.79E-21	1.00E-21
4.38E-18	2.44E-18	1.37E-18	7.64E-19	4.27E-19	2.39E-19	1.33E-19	7.46E-20	4.17E-20	2.35E-20	1.30E-20	7.35E-21	4.19E-21	2.39E-21	1.24E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	5.94E-18	5.26E-18	2.28E-18	2.02E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.07E-19	5.04E-19	2.83E-19	1.57E-19	8.77E-20	4.90E-20	2.79E-20	1.51E-20	8.30E-21	4.61E-21	2.74E-21	1.48E-21	7.58E-22	4.29E-22	2.95E-22

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.72E-17	1.96E-17	3.58E-17	0	0	2.36E-17	9.85E-18	8.85E-18	7.83E-18	0	0	0	0	0	0
2.00E-18	1.11E-18	6.22E-19	3.48E-19	1.94E-19	1.09E-19	6.07E-20	3.40E-20	1.90E-20	1.06E-20	5.95E-21	3.33E-21	1.86E-21	1.04E-21	5.84E-22
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.52E-17	8.52E-18	4.76E-18	2.66E-18	1.49E-18	8.33E-19	4.66E-19	2.61E-19	1.46E-19	8.17E-20	4.57E-20	2.56E-20	1.44E-20	8.04E-21	4.50E-21
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.70E-17	3.51E-17	2.05E-17	8.89E-18	7.92E-18	7.02E-18	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.91E-19	4.98E-19	2.78E-19	1.55E-19	8.68E-20	4.86E-20	2.71E-20	1.52E-20	8.49E-21	4.75E-21	2.66E-21	1.49E-21	8.34E-22	4.66E-22	2.62E-22
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.35E-18	7.30E-19	3.46E-19	1.49E-19	8.47E-20	1.09E-19	3.95E-20	5.71E-20	3.44E-20	0	8.63E-21	0	0	1.05E-20	5.77E-21
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1.54E-18	8.58E-19	4.79E-19	2.68E-19	1.50E-19	8.36E-20	4.68E-20	2.61E-20	1.46E-20	8.18E-21	4.58E-21	2.56E-21	1.43E-21	8.02E-22	4.49E-22
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.06E-17	1.13E-17	6.28E-18	3.49E-18	1.94E-18	1.05E-18	5.87E-19	4.15E-19	2.35E-19	1.35E-19	8.59E-20	6.73E-20	1.54E-20	0	8.63E-22
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.63E-18	2.03E-18	1.13E-18	6.34E-19	3.55E-19	1.99E-19	1.11E-19	6.22E-20	3.48E-20	1.95E-20	1.09E-20	6.11E-21	3.42E-21	1.92E-21	1.07E-21
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.04E-17	0	0	7.31E-18	3.17E-18	2.82E-18	0	0	0	0	0	0	0	0	0
6.35E-19	3.24E-19	1.87E-19	1.22E-19	7.03E-20	1.74E-20	1.82E-20	2.59E-20	1.71E-20	6.78E-22	9.45E-21	0	0	0	2.67E-21
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.06E-19	3.39E-19	1.90E-19	1.07E-19	5.99E-20	3.32E-20	1.82E-20	1.06E-20	5.99E-21	3.45E-21	1.74E-21	1.06E-21	5.65E-22	4.00E-22	2.47E-22
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.19E-16	**1.09E-16**	**3.58E-17**	**8.89E-18**	**7.92E-18**	**2.36E-17**	**9.85E-18**	**8.85E-18**	**7.83E-18**	**4.78E-19**	**8.59E-20**	**6.73E-20**	**1.54E-20**	**1.05E-20**	**5.77E-21**

900	910	920	930	940	950	960	970	980	990	1000	Peak Surface Tritium Flux (pCi/m^2/s)	Length of Waste Zone (m)
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E+02	1.26E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E+02	1.20E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E+01	9.97E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E+04	1.61E+01
2.46E-22	1.38E-22	7.73E-23	4.34E-23	2.43E-23	1.36E-23	7.65E-24	4.29E-24	2.41E-24	1.35E-24	7.59E-25	2.72E+01	8.98E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+02	1.09E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E+02	3.78E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+02	1.14E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.52E+02	1.27E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E+01	2.92E+01
2.16E-21	1.21E-21	6.76E-22	3.81E-22	2.12E-22	1.20E-22	6.64E-23	3.79E-23	2.09E-23	1.18E-23	6.48E-24	1.90E+02	2.77E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E+01	1.26E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E+02	9.76E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	9.01E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E+01	1.11E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E+02	1.65E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E+02	1.19E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.03E+01	1.17E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.30E+01	1.26E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	4.55E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+02	5.85E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E+02	3.72E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E+01	7.06E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.12E-01	1.05E+02
3.49E-22	1.96E-22	1.10E-22	6.14E-23	3.44E-23	1.93E-23	1.08E-23	6.05E-24	3.39E-24	1.90E-24	1.07E-24	1.76E+02	6.54E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E+01	7.46E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01	1.20E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.02E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E+02	3.01E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E+02	9.47E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.97E+01	3.49E+01

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.58E+02	2.16E+01
2.46E-21	1.38E-21	7.71E-22	4.32E-22	2.42E-22	1.36E-22	7.61E-23	4.27E-23	2.39E-23	1.34E-23	7.53E-24	1.77E+02	8.09E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+01	1.01E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.52E+01	8.45E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E+02	2.54E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E+02	1.26E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+01	2.83E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.23E+01	9.11E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E+03	7.66E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+02	1.36E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+02	7.59E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E+02	3.11E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.34E+00	5.57E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E+03	3.53E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+02	6.82E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	1.30E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E+01	9.35E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E+02	4.08E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.47E+01	7.03E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.45E+01	6.93E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E+02	1.09E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E+02	1.63E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+03	6.37E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E+01	1.21E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E+02	4.98E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.75E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E+01	6.80E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+01	3.89E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+02	1.04E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E+01	1.13E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.03E+01	6.24E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+02	5.16E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.96E+02	7.44E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E+00	1.10E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E+03	8.25E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E+01	9.36E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E+02	2.01E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E+01	1.13E+02
5.61E-22	3.15E-22	1.77E-22	9.86E-23	5.59E-23	3.07E-23	1.74E-23	9.74E-24	5.56E-24	3.12E-24	1.74E-24	1.83E+02	3.10E+01
6.59E-22	3.58E-22	2.63E-22	1.28E-22	8.68E-23	4.63E-23	2.63E-23	2.00E-23	7.09E-25	1.03E-23	2.39E-24	2.39E+02	4.32E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.59E+01	8.07E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E+01	1.25E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+03	5.26E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E+02	3.34E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E+02	7.89E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E+03	5.17E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+03	3.18E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.89E+00	1.27E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E+02	5.42E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.99E+02	4.60E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.31E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E+01	1.18E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E+03	4.51E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+02	6.20E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E+02	5.59E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E+03	1.85E+01
0.00E+00	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	5.40E+02	2.21E+01
0	0	0	0	0	0	0	0	0	0	0	7.49E+02	1.73E+01
0	0	0	0	0	0	0	0	0	0	0	3.69E+02	9.13E+01
0	0	0	0	0	0	0	0	0	0	0	6.45E+02	6.59E+01
0	0	0	0	0	0	0	0	0	0	0	1.85E+02	8.67E+01
0	0	0	0	0	0	0	0	0	0	0	1.04E+01	8.50E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.09E+02
0	0	0	0	0	0	0	0	0	0	0	2.08E+01	1.15E+02
0	0	0	0	0	0	0	0	0	0	0	1.43E+03	1.26E+02
0	0	0	0	0	0	0	0	0	0	0	1.22E+02	9.59E+01
0	0	0	0	0	0	0	0	0	0	0	3.45E+02	5.09E+01
0	0	0	0	0	0	0	0	0	0	0	7.63E+01	1.12E+02
0	0	0	0	0	0	0	0	0	0	0	2.46E+02	9.82E+01
0	0	0	0	0	0	0	0	0	0	0	7.02E+02	3.32E+01
1.44E-22	9.67E-23	3.72E-23	4.12E-23	5.43E-24	8.12E-24	1.09E-23	6.13E-24	0.00E+00	0.00E+00	0.00E+00	1.50E+02	1.03E+02

0	0	0	0	0	0	0	0	0	0	0	3.22E+02	7.51E+01
0	0	0	0	0	0	0	0	0	0	0	2.14E+03	1.90E+01
3.27E-22	1.83E-22	1.03E-22	5.75E-23	3.22E-23	1.81E-23	1.01E-23	5.68E-24	3.18E-24	1.79E-24	1.00E-24	1.91E+02	5.60E+01
0	0	0	0	0	0	0	0	0	0	0	1.38E+03	2.49E+01
0	0	0	0	0	0	0	0	0	0	0	1.53E+03	3.39E+01
0	0	0	0	0	0	0	0	0	0	0	2.57E+02	3.19E+01
0	0	0	0	0	0	0	0	0	0	0	1.37E+02	9.25E+01
0	0	0	0	0	0	0	0	0	0	0	2.26E+02	8.54E+01
0	0	0	0	0	0	0	0	0	0	0	3.27E+02	4.52E+01
0	0	0	0	0	0	0	0	0	0	0	1.39E+02	4.41E+01
0	0	0	0	0	0	0	0	0	0	0	7.19E+02	2.39E+01
0	0	0	0	0	0	0	0	0	0	0	7.49E+01	3.84E+01
0	0	0	0	0	0	0	0	0	0	0	3.01E+02	3.33E+01
2.52E-21	1.41E-21	7.92E-22	4.44E-22	2.49E-22	1.40E-22	7.83E-23	4.39E-23	2.47E-23	1.38E-23	7.76E-24	2.71E+02	8.30E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E+02	7.77E+01
0	0	0	0	0	0	0	0	0	0	0	8.38E+01	9.42E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	9.45E+01
0	0	0	0	0	0	0	0	0	0	0	1.70E+02	9.27E+01
0	0	0	0	0	0	0	0	0	0	0	8.18E+02	1.92E+01
0	0	0	0	0	0	0	0	0	0	0	1.93E+02	5.18E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.14E+02
0	0	0	0	0	0	0	0	0	0	0	1.16E+02	6.64E+01
0	0	0	0	0	0	0	0	0	0	0	4.32E+00	8.90E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	4.78E+01
0	0	0	0	0	0	0	0	0	0	0	3.60E+02	1.01E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E+03	3.13E+00
0	0	0	0	0	0	0	0	0	0	0	2.82E+01	9.88E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.05E+02
0	0	0	0	0	0	0	0	0	0	0	1.13E+01	9.57E+01
0	0	0	0	0	0	0	0	0	0	0	1.08E+01	7.20E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E+02	1.61E+01
0	0	0	0	0	0	0	0	0	0	0	1.35E+03	1.54E+01
0	0	0	0	0	0	0	0	0	0	0	3.92E+02	2.38E+01
1.46E-22	8.18E-23	4.61E-23	2.57E-23	1.44E-23	8.01E-24	4.56E-24	2.53E-24	1.40E-24	7.95E-25	4.45E-25	3.10E+01	8.89E+01
0	0	0	0	0	0	0	0	0	0	0	4.26E+02	1.17E+02
0	0	0	0	0	0	0	0	0	0	0	5.31E+01	7.60E+01
0	0	0	0	0	0	0	0	0	0	0	1.79E+02	1.73E+01
0	0	0	0	0	0	0	0	0	0	0	1.50E+02	9.69E+01
2.36E-21	1.97E-21	1.64E-21	0	0	0	0	0	0	0	0	4.88E+01	6.55E+01
0	0	0	0	0	0	0	0	0	0	0	1.33E+02	1.06E+02

2.52E-22	1.41E-22	7.89E-23	4.42E-23	2.48E-23	1.39E-23	7.78E-24	4.36E-24	2.44E-24	1.37E-24	7.69E-25	6.78E+01	4.77E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.31E+02
0	0	0	0	0	0	0	0	0	0	0	4.56E+01	1.24E+02
0	0	0	0	0	0	0	0	0	0	0	6.37E+01	8.37E+01
0	0	0	0	0	0	0	0	0	0	0	2.21E+02	2.17E+01
0	0	0	0	0	0	0	0	0	0	0	4.94E+02	6.17E+01
0	0	0	0	0	0	0	0	0	0	0	9.38E+02	9.28E+00
0	0	0	0	0	0	0	0	0	0	0	1.42E+02	9.81E+01
0	0	0	0	0	0	0	0	0	0	0	1.03E+02	8.64E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0	7.38E+02	3.31E+01
0	0	0	0	0	0	0	0	0	0	0	1.83E+02	1.30E+02
0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	1.53E+01	1.17E+02
0	0	0	0	0	0	0	0	0	0	0	1.36E+02	1.17E+02
0	0	0	0	0	0	0	0	0	0	0	6.55E+01	8.19E+01
0	0	0	0	0	0	0	0	0	0	0	5.25E+02	9.66E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E+02	9.99E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+02	5.49E+01
0	0	0	0	0	0	0	0	0	0	0	8.81E+01	9.48E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.16E+02
0	0	0	0	0	0	0	0	0	0	0	9.47E+01	5.36E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	6.55E+01
0	0	0	0	0	0	0	0	0	0	0	1.53E+02	1.01E+02
0	0	0	0	0	0	0	0	0	0	0	2.80E+00	4.60E+01
0	0	0	0	0	0	0	0	0	0	0	1.85E+02	4.92E+01
0	3.06E-22	8.81E-21	1.08E-22	0	4.56E-21	1.82E-21	1.49E-21	1.21E-21	0	0	1.69E+03	1.35E+01
0	0	0	0	0	0	0	0	0	0	0	1.06E+02	1.31E+02
0	0	0	0	0	0	0	0	0	0	0	1.39E+02	5.38E+01
6.02E-22	3.37E-22	1.89E-22	1.06E-22	5.95E-23	3.34E-23	1.87E-23	1.05E-23	5.89E-24	3.30E-24	1.86E-24	1.58E+02	5.62E+01
0	0	0	0	0	0	0	0	0	0	0	2.55E+01	3.76E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	3.18E+01
0	0	0	0	0	0	0	0	0	0	0	1.74E+02	8.52E+01
0	0	1.67E-21	1.37E-21	0	0	0	0	0	0	0	5.37E+01	1.16E+02
0	0	0	0	0	0	0	0	0	0	0	3.12E+02	5.58E+01
0	0	0	0	0	0	0	0	0	0	0	3.14E+01	1.27E+02
0	0	0	0	0	0	0	0	0	0	0	1.58E+02	4.68E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	1.30E+02	8.03E+01
0	0	0	0	0	0	0	0	0	0	0	4.96E+01	1.18E+02
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.77E+03	3.32E+01
0	0	0	0	0	0	0	0	0	0	0	4.12E+03	7.11E+01
0	0	0	0	0	0	0	0	0	0	0	3.72E+01	7.58E+01

0	0	0	0	0	0	0	0	0	0	0	0.00E+00	6.85E+01
9.23E-23	4.24E-23	0.00E+00	1.87E-23	6.98E-24	5.83E-24	1.57E-23	4.02E-24	0.00E+00	0.00E+00	4.23E-24	3.87E+01	1.27E+02
0	0	0	0	0	0	0	0	0	0	0	9.80E+01	9.30E+01
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	1.63E+01
0	0	0	0	0	0	0	0	0	0	0	6.23E+01	6.27E+01
2.52E-21	**1.97E-21**	**8.81E-21**	**1.37E-21**	**2.49E-22**	**4.56E-21**	**1.82E-21**	**1.49E-21**	**1.21E-21**	**1.38E-23**	**7.76E-24**	**3.23E+04**	**1.31E+02**

Width of Waste Zone (m)	Peak Surface Tritium Flow (pCi/s)	Max Tritium Atmospheric Concentration (pCi/m^3)	Inhalation rate (m^3/day)	Receptor Intake (pCi/year)	Dose (mrem/year)
7.39E+00	8.35E+04	1.56E+03	2.00E+01	1.14E+07	1.09E+00
1.34E+01	9.88E+05	1.02E+04	2.00E+01	7.44E+07	7.14E+00
6.84E+01	1.33E+05	2.68E+02	2.00E+01	1.95E+06	1.88E-01
3.44E+00	1.78E+06	7.14E+04	2.00E+01	5.22E+08	5.01E+01
8.76E+01	2.14E+05	3.37E+02	2.00E+01	2.46E+06	2.36E-01
6.94E+01	8.36E+05	1.66E+03	2.00E+01	1.21E+07	1.16E+00
6.30E+01	5.88E+05	2.14E+03	2.00E+01	1.57E+07	1.50E+00
6.17E+01	9.15E+05	2.05E+03	2.00E+01	1.49E+07	1.43E+00
9.34E+00	6.56E+05	9.67E+03	2.00E+01	7.07E+07	6.78E+00
7.92E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
8.16E+01	4.69E+04	2.21E+02	2.00E+01	1.61E+06	1.55E-01
1.65E+01	8.68E+04	7.25E+02	2.00E+01	5.29E+06	5.08E-01
5.38E+01	3.41E+05	8.74E+02	2.00E+01	6.38E+06	6.13E-01
1.86E+01	3.00E+05	2.23E+03	2.00E+01	1.63E+07	1.56E+00
7.68E+01	6.93E+04	1.24E+02	2.00E+01	9.07E+05	8.71E-02
7.89E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
8.99E+01	7.78E+05	1.19E+03	2.00E+01	8.70E+06	8.35E-01
6.57E+01	5.70E+05	4.75E+03	2.00E+01	3.47E+07	3.33E+00
7.52E+01	1.28E+06	2.35E+03	2.00E+01	1.71E+07	1.65E+00
8.92E+01	8.40E+05	1.30E+03	2.00E+01	9.48E+06	9.11E-01
3.08E+01	2.44E+05	1.09E+03	2.00E+01	7.96E+06	7.64E-01
2.12E+01	4.89E+05	3.18E+03	2.00E+01	2.32E+07	2.23E+00
8.68E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
2.51E+01	1.95E+05	1.07E+03	2.00E+01	7.82E+06	7.51E-01
7.96E+01	1.24E+06	4.58E+03	2.00E+01	3.34E+07	3.21E+00
2.12E+01	2.42E+04	1.57E+02	2.00E+01	1.14E+06	1.10E-01
6.96E+01	6.65E+03	1.32E+01	2.00E+01	9.61E+04	9.22E-03
3.62E+01	4.16E+05	1.59E+03	2.00E+01	1.16E+07	1.11E+00
5.88E+01	2.23E+05	5.23E+02	2.00E+01	3.82E+06	3.66E-01
6.81E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
3.74E+01	4.49E+04	1.65E+02	2.00E+01	1.21E+06	1.16E-01
8.97E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
3.20E+01	4.21E+05	1.93E+03	2.00E+01	1.41E+07	1.35E+00
5.85E+01	2.20E+05	3.19E+03	2.00E+01	2.33E+07	2.24E+00
4.64E+01	1.13E+05	4.45E+02	2.00E+01	3.25E+06	3.12E-01

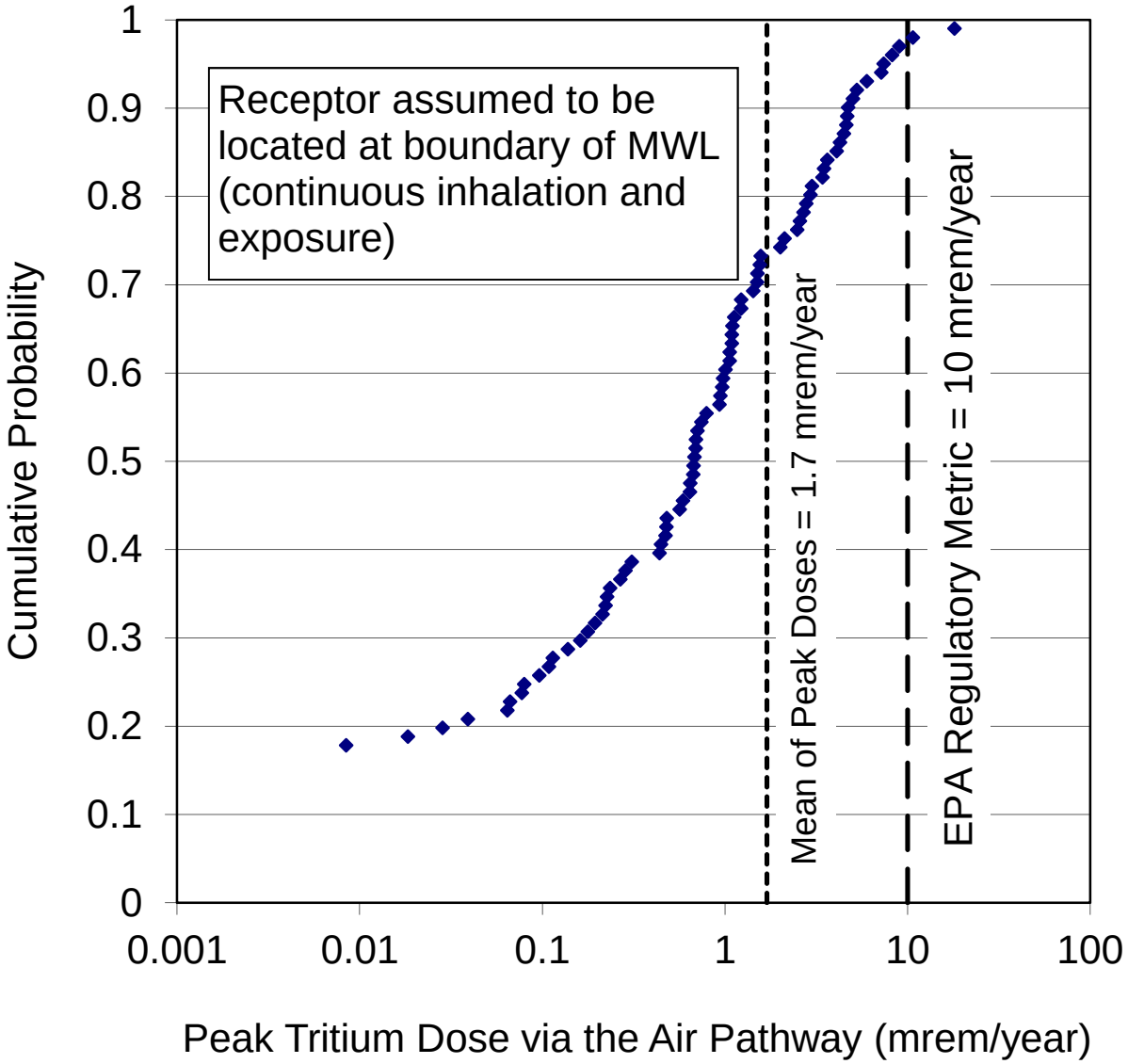
2.68E+01	4.96E+05	3.16E+03	2.00E+01	2.31E+07	2.22E+00
8.81E+00	1.26E+05	1.97E+03	2.00E+01	1.44E+07	1.38E+00
4.32E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
6.02E+01	9.53E+04	2.18E+02	2.00E+01	1.59E+06	1.53E-01
2.66E+01	1.24E+05	6.42E+02	2.00E+01	4.69E+06	4.50E-01
5.83E+01	2.77E+05	1.50E+03	2.00E+01	1.10E+07	1.05E+00
1.21E+01	9.53E+05	1.09E+04	2.00E+01	7.93E+07	7.62E+00
4.70E+01	2.84E+04	1.38E+02	2.00E+01	1.01E+06	9.70E-02
6.53E+01	3.11E+04	4.70E+02	2.00E+01	3.44E+06	3.30E-01
3.59E+01	5.00E+05	9.00E+03	2.00E+01	6.57E+07	6.31E+00
8.80E+01	1.81E+05	1.84E+03	2.00E+01	1.34E+07	1.29E+00
4.32E+01	7.02E+05	2.24E+03	2.00E+01	1.63E+07	1.57E+00
4.91E+01	3.06E+05	1.36E+03	2.00E+01	9.90E+06	9.51E-01
7.29E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
6.83E+01	2.79E+04	6.90E+01	2.00E+01	5.04E+05	4.84E-02
7.62E+00	1.01E+06	1.83E+04	2.00E+01	1.34E+08	1.28E+01
9.06E+01	9.10E+05	1.84E+03	2.00E+01	1.34E+07	1.29E+00
5.99E+01	8.34E+05	1.92E+03	2.00E+01	1.40E+07	1.34E+00
8.27E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
8.40E+01	8.01E+04	1.31E+02	2.00E+01	9.60E+05	9.21E-02
4.55E+01	4.35E+05	1.47E+03	2.00E+01	1.07E+07	1.03E+00
7.00E+01	2.20E+05	4.33E+02	2.00E+01	3.16E+06	3.04E-01
6.89E+01	3.56E+05	7.11E+02	2.00E+01	5.20E+06	4.99E-01
3.51E+01	1.02E+06	4.00E+03	2.00E+01	2.92E+07	2.81E+00
7.57E+01	2.34E+05	1.97E+03	2.00E+01	1.44E+07	1.38E+00
4.15E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
1.03E+01	7.46E+05	9.94E+03	2.00E+01	7.26E+07	6.97E+00
5.84E+01	3.76E+05	8.87E+02	2.00E+01	6.48E+06	6.22E-01
3.19E+01	3.75E+05	1.62E+03	2.00E+01	1.18E+07	1.14E+00
4.59E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
5.27E+01	1.19E+05	3.11E+02	2.00E+01	2.27E+06	2.18E-01
6.46E+01	2.79E+04	9.88E+01	2.00E+01	7.22E+05	6.93E-02
3.86E+01	5.07E+05	1.81E+03	2.00E+01	1.32E+07	1.27E+00
8.16E+01	7.03E+05	1.19E+03	2.00E+01	8.67E+06	8.32E-01
5.67E+01	2.84E+05	6.90E+02	2.00E+01	5.04E+06	4.84E-01
7.39E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
7.51E+01	4.30E+05	1.15E+03	2.00E+01	8.38E+06	8.05E-01
1.02E+01	6.07E+05	8.16E+03	2.00E+01	5.96E+07	5.73E+00
8.99E+01	3.15E+04	4.82E+01	2.00E+01	3.52E+05	3.38E-02
4.72E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00

5.32E+01	1.22E+06	2.04E+04	2.00E+01	1.49E+08	1.43E+01
7.92E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
9.05E+01	3.71E+05	5.64E+02	2.00E+01	4.12E+06	3.96E-01
3.86E+01	6.88E+05	4.72E+03	2.00E+01	3.44E+07	3.31E+00
3.83E+01	3.76E+05	1.35E+03	2.00E+01	9.87E+06	9.47E-01
8.53E+01	4.84E+05	2.15E+03	2.00E+01	1.57E+07	1.51E+00
2.76E+01	2.85E+05	1.42E+03	2.00E+01	1.04E+07	9.98E-01
4.95E+01	3.44E+05	9.55E+02	2.00E+01	6.98E+06	6.70E-01
8.41E+01	3.99E+05	6.53E+02	2.00E+01	4.77E+06	4.58E-01
7.28E+00	5.61E+05	1.06E+04	2.00E+01	7.75E+07	7.44E+00
2.86E+01	8.26E+05	3.98E+03	2.00E+01	2.91E+07	2.79E+00
2.59E+01	4.82E+05	2.57E+03	2.00E+01	1.87E+07	1.80E+00
3.42E+01	3.88E+05	1.03E+04	2.00E+01	7.55E+07	7.25E+00
7.54E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
3.15E+01	1.28E+06	5.59E+03	2.00E+01	4.08E+07	3.92E+00
8.80E+01	9.91E+04	1.55E+02	2.00E+01	1.13E+06	1.09E-01
8.56E+01	6.57E+05	1.67E+03	2.00E+01	1.22E+07	1.17E+00
1.22E+01	5.04E+05	5.70E+03	2.00E+01	4.16E+07	3.99E+00
2.31E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
2.00E+01	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
8.23E+01	5.21E+05	8.72E+02	2.00E+01	6.37E+06	6.12E-01
7.84E+00	6.21E+05	1.09E+04	2.00E+01	7.97E+07	7.65E+00
6.66E+01	4.65E+05	1.03E+03	2.00E+01	7.54E+06	7.24E-01
5.15E+01	8.71E+05	2.33E+03	2.00E+01	1.70E+07	1.63E+00
1.27E+01	7.74E+05	8.38E+03	2.00E+01	6.12E+07	5.87E+00
7.14E+01	8.52E+05	5.31E+03	2.00E+01	3.88E+07	3.73E+00
31.346	4.07E+05	3.23E+03	2.00E+01	2.36E+07	2.27E+00
15.863	5.34E+05	4.64E+03	2.00E+01	3.39E+07	3.25E+00
31.973	1.36E+06	5.85E+03	2.00E+01	4.28E+07	4.11E+00
55.95	8.99E+05	2.21E+03	2.00E+01	1.62E+07	1.55E+00
84.887	7.54E+04	1.22E+02	2.00E+01	8.93E+05	8.57E-02
65.788	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
9.393	2.26E+04	3.31E+02	2.00E+01	2.42E+06	2.32E-01
4.342	7.82E+05	2.48E+04	2.00E+01	1.81E+08	1.74E+01
91.212	1.07E+06	1.61E+03	2.00E+01	1.18E+07	1.13E+00
30.03	5.28E+05	2.42E+03	2.00E+01	1.77E+07	1.70E+00
14.978	1.28E+05	1.18E+03	2.00E+01	8.61E+06	8.26E-01
19.599	4.73E+05	3.32E+03	2.00E+01	2.43E+07	2.33E+00
36.393	8.49E+05	3.52E+03	2.00E+01	2.57E+07	2.47E+00
62.918	9.73E+05	2.13E+03	2.00E+01	1.56E+07	1.49E+00

65.6	1.59E+06	3.33E+03	2.00E+01	2.43E+07	2.34E+00
13.954	5.66E+05	5.59E+03	2.00E+01	4.08E+07	3.92E+00
67.629	7.24E+05	1.78E+03	2.00E+01	1.30E+07	1.25E+00
23.197	7.99E+05	4.75E+03	2.00E+01	3.47E+07	3.33E+00
14.866	7.72E+05	7.15E+03	2.00E+01	5.22E+07	5.01E+00
43.416	3.55E+05	1.54E+03	2.00E+01	1.12E+07	1.08E+00
57.165	7.26E+05	1.75E+03	2.00E+01	1.28E+07	1.23E+00
57.197	1.10E+06	2.65E+03	2.00E+01	1.94E+07	1.86E+00
28.575	4.23E+05	2.04E+03	2.00E+01	1.49E+07	1.43E+00
78.854	4.84E+05	1.51E+03	2.00E+01	1.10E+07	1.06E+00
16.951	2.91E+05	2.37E+03	2.00E+01	1.73E+07	1.66E+00
88.162	2.54E+05	9.09E+02	2.00E+01	6.64E+06	6.38E-01
54.703	5.47E+05	2.26E+03	2.00E+01	1.65E+07	1.59E+00
9.102	2.05E+05	3.10E+03	2.00E+01	2.26E+07	2.17E+00
38.249	4.77E+05	1.72E+03	2.00E+01	1.25E+07	1.20E+00
67.966	5.36E+05	1.09E+03	2.00E+01	7.94E+06	7.62E-01
55.792	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
52.873	8.35E+05	2.18E+03	2.00E+01	1.59E+07	1.53E+00
21.249	3.34E+05	2.40E+03	2.00E+01	1.75E+07	1.68E+00
18.881	1.89E+05	1.38E+03	2.00E+01	1.00E+07	9.65E-01
31.367	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
76.832	5.90E+05	1.22E+03	2.00E+01	8.94E+06	8.58E-01
78.722	3.03E+04	5.30E+01	2.00E+01	3.87E+05	3.72E-02
42.224	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
7.266	2.64E+05	5.00E+03	2.00E+01	3.65E+07	3.50E+00
29.62	7.46E+05	3.28E+04	2.00E+01	2.40E+08	2.30E+01
22.58	6.30E+04	3.84E+02	2.00E+01	2.81E+06	2.69E-01
28.653	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
80.144	8.63E+04	1.48E+02	2.00E+01	1.08E+06	1.04E-01
77.545	6.01E+04	1.15E+02	2.00E+01	8.40E+05	8.07E-02
54.781	2.77E+05	2.37E+03	2.00E+01	1.73E+07	1.66E+00
42.474	8.84E+05	7.89E+03	2.00E+01	5.76E+07	5.53E+00
75.339	7.02E+05	4.07E+03	2.00E+01	2.97E+07	2.85E+00
88.385	2.43E+05	3.79E+02	2.00E+01	2.77E+06	2.66E-01
10.825	5.38E+05	6.85E+03	2.00E+01	5.00E+07	4.80E+00
54.039	2.18E+05	5.56E+02	2.00E+01	4.06E+06	3.90E-01
55.435	1.72E+05	1.36E+03	2.00E+01	9.97E+06	9.57E-01
54.361	7.89E+05	2.00E+03	2.00E+01	1.46E+07	1.40E+00
72.755	2.33E+05	4.89E+02	2.00E+01	3.58E+06	3.43E-01
80.974	1.14E+06	1.94E+03	2.00E+01	1.42E+07	1.36E+00

88.605	2.86E+05	8.28E+02	2.00E+01	6.05E+06	5.81E-01
39.999	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
34.741	1.97E+05	7.82E+02	2.00E+01	5.71E+06	5.48E-01
31.073	1.66E+05	7.34E+02	2.00E+01	5.36E+06	5.15E-01
72.157	3.46E+05	2.20E+03	2.00E+01	1.61E+07	1.54E+00
8.454	2.57E+05	4.19E+03	2.00E+01	3.06E+07	2.94E+00
38.193	3.32E+05	4.93E+03	2.00E+01	3.60E+07	3.46E+00
42.404	5.89E+05	1.91E+03	2.00E+01	1.40E+07	1.34E+00
53.304	4.76E+05	1.23E+03	2.00E+01	8.99E+06	8.63E-01
56.632	1.38E+06	5.76E+03	2.00E+01	4.21E+07	4.04E+00
36.216	8.63E+05	3.28E+03	2.00E+01	2.40E+07	2.30E+00
83.114	1.49E+05	2.48E+02	2.00E+01	1.81E+06	1.74E-01
74.831	1.19E+06	2.19E+03	2.00E+01	1.60E+07	1.54E+00
86.864	4.66E+05	7.84E+02	2.00E+01	5.73E+06	5.50E-01
20.473	1.04E+06	6.98E+03	2.00E+01	5.10E+07	4.90E+00
48.476	1.13E+06	3.21E+03	2.00E+01	2.34E+07	2.25E+00
75.983	4.69E+05	1.18E+03	2.00E+01	8.60E+06	8.25E-01
64.094	5.35E+05	1.15E+03	2.00E+01	8.40E+06	8.07E-01
38.099	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
89.917	4.56E+05	1.17E+03	2.00E+01	8.57E+06	8.22E-01
25.412	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
63.223	9.73E+05	2.12E+03	2.00E+01	1.55E+07	1.49E+00
87.08	1.12E+04	3.36E+01	2.00E+01	2.45E+05	2.35E-02
27.03	2.46E+05	1.26E+03	2.00E+01	9.17E+06	8.80E-01
20.962	4.76E+05	4.87E+03	2.00E+01	3.55E+07	3.41E+00
18.063	2.51E+05	1.92E+03	2.00E+01	1.40E+07	1.34E+00
66.876	5.01E+05	1.28E+03	2.00E+01	9.36E+06	8.99E-01
52.266	4.63E+05	1.22E+03	2.00E+01	8.91E+06	8.55E-01
91.127	8.72E+04	3.20E+02	2.00E+01	2.33E+06	2.24E-01
55.923	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
49.47	7.31E+05	2.04E+03	2.00E+01	1.49E+07	1.43E+00
76.647	4.75E+05	8.54E+02	2.00E+01	6.24E+06	5.99E-01
51.76	9.01E+05	2.40E+03	2.00E+01	1.75E+07	1.68E+00
3.523	1.40E+04	5.47E+02	2.00E+01	4.00E+06	3.84E-01
75.306	5.56E+05	1.64E+03	2.00E+01	1.19E+07	1.15E+00
14.615	1.53E+05	1.44E+03	2.00E+01	1.05E+07	1.01E+00
36.78	2.14E+05	8.03E+02	2.00E+01	5.87E+06	5.63E-01
8.816	1.40E+06	2.18E+04	2.00E+01	1.59E+08	1.53E+01
4.478	1.31E+06	4.03E+04	2.00E+01	2.95E+08	2.83E+01
35.736	1.01E+05	3.88E+02	2.00E+01	2.83E+06	2.72E-01

23.389	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
69.027	3.40E+05	6.78E+02	2.00E+01	4.96E+06	4.76E-01
41.887	3.81E+05	1.25E+03	2.00E+01	9.16E+06	8.80E-01
76.146	0.00E+00	0.00E+00	2.00E+01	0.00E+00	0.00E+00
31.323	1.22E+05	5.38E+02	2.00E+01	3.93E+06	3.78E-01
9.12E+01	**1.78E+06**	**7.14E+04**	**2.00E+01**	**5.22E+08**	**5.01E+01**
					2.19E+00


Receptor assumed to be located at boundary of MWL (continuous inhalation and exposure)
Mean of Peak Doses = 1.7 mrem/year
EPA Regulatory Metric = 10 mrem/year
Cumulative Probability
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.01
0.1
1
10
100
Peak Tritium Dose via the Air Pathway (mrem/year)

Dose (mrem/year)	Rank	CDF
0	1	0.009901
0	2	0.019802
0	3	0.029703
0	4	0.039604
0	5	0.049505
0	6	0.059406
0	7	0.069307
0	8	0.079208
0	9	0.089109
0	10	0.09901
0	11	0.108911
0	12	0.118812
0	13	0.128713
0	14	0.138614
0	15	0.148515
0	16	0.158416
0	17	0.168317
0.008427892	18	0.178218
0.018390345	19	0.188119
0.028387466	20	0.19802
0.039060811	21	0.207921
0.064219821	22	0.217822
0.066431875	23	0.227723
0.077202383	24	0.237624
0.079422313	25	0.247525
0.096125788	26	0.257426
0.108823215	27	0.267327
0.114253903	28	0.277228
0.137974948	29	0.287129
0.161357195	30	0.29703
0.177546505	31	0.306931
0.194588818	32	0.316832
0.213389217	33	0.326733
0.222133189	34	0.336634
0.225704464	35	0.346535
0.23488144	36	0.356436

Metric (mrem/year)	CDF
1.00E+01	0
1.00E+01	1

Dose Average (mrem/year)
1.695489
1.695489

0.267604085	37	0.366337
0.284604172	38	0.376238
0.308330771	39	0.386139
0.438212648	40	0.39604
0.446282769	41	0.405941
0.473320122	42	0.415842
0.477568612	43	0.425743
0.479647716	44	0.435644
0.564943613	45	0.445545
0.588291761	46	0.455446
0.642080825	47	0.465347
0.644876468	48	0.475248
0.669295041	49	0.485149
0.672030376	50	0.49505
0.68093244	51	0.50495
0.691788831	52	0.514851
0.692301974	53	0.524752
0.706026985	54	0.534653
0.741751121	55	0.544554
0.790934796	56	0.554455
0.932070808	57	0.564356
0.942424049	58	0.574257
0.963821722	59	0.584158
0.975723582	60	0.594059
1.007366108	61	0.60396
1.060728883	62	0.613861
1.061077006	63	0.623762
1.090719332	64	0.633663
1.090836997	65	0.643564
1.096830044	66	0.653465
1.122787182	67	0.663366
1.224276218	68	0.673267
1.227262373	69	0.683168
1.427276606	70	0.693069
1.50045982	71	0.70297
1.502597386	72	0.712871
1.55357304	73	0.722772
1.566192985	74	0.732673
2.006578836	75	0.742574
2.117698625	76	0.752475

2.486391379	77	0.762376
2.569183788	78	0.772277
2.690900955	79	0.782178
2.78363422	80	0.792079
2.939552042	81	0.80198
2.99083577	82	0.811881
3.411728398	83	0.821782
3.478850207	84	0.831683
3.635708612	85	0.841584
4.08151698	86	0.851485
4.255447554	87	0.861386
4.483307575	88	0.871287
4.607466398	89	0.881188
4.66626099	90	0.891089
4.722820775	91	0.90099
5.023874012	92	0.910891
5.270036128	93	0.920792
5.979632865	94	0.930693
7.158755264	95	0.940594
7.386057536	96	0.950495
8.20985772	97	0.960396
9.012830855	98	0.970297
10.68409933	99	0.980198
18.02070445	100	0.990099

Tritium Dose via Air Pathway from Mathcad (mrem/year) for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130	140
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	7.83E-03	0.028	0.028	0.02	0.013	7.77E-03	4.49E-03	2.54E-03	1.42E-03	7.82E-04	4.31E-04	2.37E-04	1.28E-04	8.76E-05
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0.268	0.244	0.153	0.087	0.047	0.025	0.013	7.10E-03	3.76E-03	1.99E-03	1.06E-03	5.62E-04	3.00E-04	1.60E-04
6	0.446	0.261	0.127	0.061	0.029	0.014	7.10E-03	3.54E-03	1.79E-03	9.09E-04	4.66E-04	2.40E-04	1.25E-04	6.51E-05
7	0.964	0.406	0.174	0.077	0.035	0.017	8.03E-03	3.93E-03	1.95E-03	9.75E-04	4.93E-04	2.52E-04	1.29E-04	6.70E-05
8	0.013	0.09	0.109	0.086	0.058	0.036	0.022	0.013	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1.566	0.506	0.193	0.081	0.036	0.016	7.74E-03	3.73E-03	1.83E-03	9.09E-04	4.57E-04	2.32E-04	1.19E-04	6.12E-05
11	0.235	0.134	0.071	0.036	0.019	9.53E-03	4.90E-03	2.53E-03	1.31E-03	6.82E-04	3.56E-04	1.87E-04	9.86E-05	5.21E-05
12	0.976	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
13	0.1	0.138	0.094	0.054	0.029	0.015	7.86E-03	4.12E-03	1.31E-03	1.91E-03	1.45E-03	0	0	0
14	0.48	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
15	0.642	0.457	0.242	0.122	0.061	0.03	0.015	7.79E-03	3.98E-03	2.05E-03	1.06E-03	5.52E-04	2.89E-04	1.52E-04
16	0.555	0.588	0.38	0.216	0.117	0.062	0.033	0.017	9.05E-03	4.76E-03	2.51E-03	1.33E-03	7.05E-04	3.75E-04
17	6.61E-03	0.034	0.039	0.031	0.021	0.013	7.80E-03	4.56E-03	2.61E-03	1.48E-03	8.33E-04	4.65E-04	2.59E-04	1.44E-04
18	0.645	0.306	0.145	0.069	0.034	0.016	8.21E-03	4.13E-03	2.10E-03	1.08E-03	5.55E-04	2.88E-04	1.50E-04	7.88E-05
19	3.11E-03	0.016	0.018	0.014	9.73E-03	6.09E-03	3.66E-03	2.14E-03	1.23E-03	6.99E-04	3.94E-04	2.20E-04	1.23E-04	6.82E-05
20	5.47E-04	5.80E-03	8.43E-03	7.44E-03	5.39E-03	3.54E-03	2.19E-03	1.31E-03	7.66E-04	4.41E-04	2.51E-04	1.41E-04	7.92E-05	4.42E-05
21	0.692	0.482	0.236	0.112	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
22	4.666	1.972	0.828	0.59	0	0	0	0	0	0	0	0	0	0.00E+00
23	0.438	0.321	0.171	0.086	0.043	0.021	0.011	5.38E-03	2.74E-03	1.40E-03	7.24E-04	3.76E-04	1.96E-04	1.03E-04
24	0.669	0.38	0.184	0.114	0.092	0	0	0	0	0	0	0	0	0
25	4.723	2.379	1.138	0.546	0.266	0.131	0.065	0.033	0.017	8.59E-03	4.43E-03	2.30E-03	1.20E-03	6.31E-04
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0.706	0.574	0.324	0.17	0.087	0.044	0.023	0.012	6.03E-03	3.13E-03	1.63E-03	8.56E-04	4.51E-04	2.38E-04
28	3.412	1.818	0.834	0.382	0.178	0.085	0.041	0.02	9.99E-03	5.02E-03	2.55E-03	1.30E-03	6.68E-04	3.32E-04
29	0.022	0.064	0.059	0.041	0.025	0.014	8.12E-03	5.08E-03	2.88E-03	1.62E-03	6.94E-04	0	0	0
30	0.692	0.363	0.17	0.08	0.038	0.018	8.93E-03	4.43E-03	2.22E-03	1.12E-03	5.74E-04	2.95E-04	1.53E-04	7.94E-05
31	0.594	0.681	0.427	0.233	0.121	0.063	0.032	0.016	8.50E-03	4.40E-03	2.29E-03	1.19E-03	6.26E-04	3.29E-04
32	0.473	0.267	0.133	0.065	0.032	0.016	7.95E-03	4.03E-03	2.06E-03	1.06E-03	5.47E-04	2.85E-04	1.49E-04	7.83E-05
33	1.227	0.542	0.24	0.109	0.05	0.024	0.012	5.69E-03	2.83E-03	1.42E-03	7.22E-04	3.75E-04	2.26E-04	0.00E+00
34	2.118	0.914	0.424	0.203	0.098	0.048	0.024	0.012	6.12E-03	2.93E-03	2.59E-03	1.41E-03	7.76E-04	3.89E-04
35	1.097	0.463	0.194	0.084	0.038	0.017	0.021	9.69E-03	0	0	0	0	0.00E+00	0.00E+00
36	1.061	0.465	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
37	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	2.991	1.109	0.443	0.189	0.084	0.039	0.018	8.82E-03	4.32E-03	2.15E-03	1.08E-03	5.47E-04	2.78E-04	1.55E-04

39	9.01E+00	5.02E+00	2.327	1.071	0.5	0.238	0.115	0.057	0.028	0.014	7.17E-03	3.67E-03	1.89E-03	9.54E-04
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	1.80E+01	8.06E+00	3.56E+00	1.613	0.75	0.356	0.172	0.085	0.042	0.021	0.011	5.51E-03	2.84E-03	1.47E-03
42	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	2.691	1.247	0.576	0.27	0.128	0.062	0.03	0.015	7.54E-03	3.75E-03	2.03E-03	2.09E-03	1.14E-03	7.12E-04
44	1.503	0.452	0.167	0.068	0.03	0.013	6.28E-03	3.01E-03	1.46E-03	7.24E-04	3.62E-04	1.83E-04	9.35E-05	4.80E-05
45	4.255	1.64	0.676	0.294	0.133	0.062	0.03	0.014	7.12E-03	3.56E-03	1.80E-03	9.15E-04	4.69E-04	2.43E-04
46	1.061	0.474	0.215	0.1	0.048	0.023	0.011	5.73E-03	2.90E-03	1.48E-03	7.63E-04	3.95E-04	2.06E-04	1.08E-04
47	0.478	0.387	0.224	0.119	0.061	0.031	0.016	8.27E-03	4.27E-03	2.21E-03	1.15E-03	6.01E-04	3.16E-04	1.66E-04
48	1.123	0.483	0.21	0.094	0.044	0.021	9.97E-03	4.89E-03	2.43E-03	1.22E-03	6.20E-04	3.17E-04	1.63E-04	8.46E-05
49	2.94	1.227	0.525	0.233	0.107	0.051	0.024	0.012	5.96E-03	3.00E-03	1.52E-03	7.77E-04	4.00E-04	2.08E-04
50	0.161	0.141	0.086	0.048	0.026	0.014	7.39E-03	3.91E-03	2.07E-03	1.09E-03	5.79E-04	3.07E-04	1.64E-04	8.71E-05
51	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
52	1.07E+01	4.64	1.984	0.88	0.404	0.19	0.091	0.045	0.022	0.011	5.64E-03	2.88E-03	1.48E-03	7.69E-04
53	0.052	0.077	0.056	0.034	0.019	0.01	5.45E-03	2.90E-03	1.53E-03	8.12E-04	4.31E-04	2.29E-04	1.22E-04	6.48E-05
54	5.98E+00	2.002	0.778	0.328	0.146	0.067	0.032	0.015	7.61E-03	3.79E-03	1.91E-03	9.72E-04	4.99E-04	2.57E-04
55	7.39E+00	3.86E+00	1.79E+00	0.83	0.393	0.189	0.093	0.046	0.023	0.012	5.97E-03	3.07E-03	1.59E-03	8.28E-04
56	2.784	1.461	0.719	0.351	0.173	0.086	0.043	0.022	0.011	5.65E-03	2.92E-03	1.51E-03	7.90E-04	4.14E-04
57	0.195	0.147	0.085	0.046	0.024	0.013	6.59E-03	3.43E-03	1.79E-03	9.38E-04	4.93E-04	2.59E-04	1.37E-04	7.26E-05
58	0.213	0.148	0.081	0.042	0.021	0.011	5.57E-03	2.85E-03	1.47E-03	7.58E-04	3.94E-04	2.05E-04	1.08E-04	5.66E-05
59	0.052	0.079	0.058	0.036	0.021	0.012	0	0	0	0	0	0	0	0.00E+00
60	1.091	0.478	0.213	0.098	0.046	0.022	0.011	5.45E-03	2.74E-03	1.39E-03	7.13E-04	3.68E-04	1.91E-04	9.98E-05
61	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	0.565	0.341	0.166	0.078	0.037	0.018	8.74E-03	4.32E-03	2.16E-03	1.09E-03	5.75E-04	2.29E-04	4.71E-04	1.72E-04
64	5.024	1.749	0.669	0.277	0.122	0.172	0	0	0	0	0	0	0	0
65	0.222	0.197	0.118	0.064	0.034	0.017	9.01E-03	4.67E-03	2.42E-03	1.26E-03	6.59E-04	3.46E-04	1.82E-04	9.62E-05
66	0.308	0.243	0.141	0.076	0.04	0.021	0.011	5.61E-03	2.92E-03	1.52E-03	7.97E-04	4.18E-04	2.21E-04	1.17E-04
67	2.007	0.904	0.403	0.184	0.086	0.041	0.02	9.90E-03	4.95E-03	2.50E-03	1.28E-03	6.55E-04	3.38E-04	1.76E-04
68	4.61E+00	2.927	1.426	0.674	0.321	0.155	0.076	0.037	0.019	9.44E-03	4.81E-03	2.47E-03	1.27E-03	6.61E-04
69	0.971	1.091	0.739	0.437	0.244	0.133	0.072	0.039	0.021	0.011	5.92E-03	3.17E-03	1.70E-03	9.14E-04
70	8.21E+00	4.637	2.237	1.06	0.505	0.244	0.12	0.06	0.06	0.031	0	0	0	0
71	1.554	0.724	0.319	0.144	0.066	0.031	0.015	7.40E-03	3.67E-03	1.84E-03	9.32E-04	4.75E-04	2.44E-04	1.26E-04
72	1.224	0.646	0.307	0.146	0.07	0.034	0.017	8.59E-03	4.36E-03	2.23E-03	1.15E-03	5.96E-04	3.11E-04	1.63E-04
73	0.00E+00	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
74	0.285	0.18	0.09	0.043	0.021	0.01	5.00E-03	2.49E-03	1.25E-03	6.34E-04	3.24E-04	1.67E-04	8.62E-05	4.48E-05
75	1.427	0.416	0.151	0.061	0.026	0.012	5.47E-03	2.61E-03	1.27E-03	6.24E-04	3.12E-04	1.57E-04	8.00E-05	4.11E-05
76	0.742	0.328	0.157	0.078	0.039	0.02	0.01	5.25E-03	2.72E-03	1.42E-03	7.42E-04	3.90E-04	2.06E-04	1.08E-04
77	0.672	0.317	0.144	0.067	0.032	0.015	7.57E-03	3.77E-03	1.90E-03	9.66E-04	4.95E-04	2.56E-04	1.33E-04	6.93E-05
78	2.569	0.979	0.398	0.172	0.078	0.036	0.017	8.43E-03	4.16E-03	2.08E-03	1.05E-03	5.37E-04	2.76E-04	1.43E-04

79	2.486	1.037	0.442	0.195	0.089	0.042	0.02	9.76E-03	4.62E-03	0	3.46E-03	2.35E-03	0	0
80	0.06	0.096	0.083	0	0	0	0	0	0	0	0	0	0	0
81	0.791	0.37	0.172	0.081	0.039	0.019	9.22E-03	4.58E-03	2.29E-03	1.16E-03	5.91E-04	3.03E-04	1.57E-04	8.12E-05
82	3.636	1.17	0.432	0.175	0.076	0.034	0.013	0.044	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	1.5	0.765	0.343	0.155	0.072	0.034	0.016	8.06E-03	4.00E-03	2.01E-03	1.02E-03	5.20E-04	2.67E-04	1.38E-04
84	0.093	0.114	0.078	0.046	0.025	0.014	7.37E-03	3.93E-03	2.09E-03	1.11E-03	5.93E-04	3.16E-04	1.69E-04	9.05E-05
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
86	0.932	0.431	0.195	0.089	0.042	0.02	9.65E-03	4.89E-03	4.88E-03	2.53E-03	2.91E-03	0	0	0.00E+00
87	3.479	1.242	0.476	0.196	0.151	0	0	0	0	0	0	0	0.00E+00	0.00E+00
88	7.159	2.284	0.85	0.347	0.15	0.068	0.032	0.015	6.69E-03	0.018	0.012	0	0	0.00E+00
89	0.5	1.007	0.8	0.508	0.298	0.172	0.096	0.053	0.029	0	0	0	0	0
90	0.942	0.318	0.121	0.05	0.021	0.029	0.012	0	0	0	0	0	0.00E+00	0.00E+00
91	0.013	0.061	0.066	0.051	0.034	0.021	0.012	7.16E-03	4.07E-03	2.29E-03	1.28E-03	7.09E-04	3.92E-04	2.16E-04
92	0.226	0.139	0.073	0.037	0.019	9.41E-03	4.77E-03	2.44E-03	1.25E-03	6.45E-04	3.35E-04	1.75E-04	9.15E-05	4.81E-05
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	4.082	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
96	0.037	0.164	0.178	0.134	0.087	0.052	0.03	0.017	9.55E-03	5.27E-03	2.89E-03	1.58E-03	8.64E-04	4.71E-04
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00
98	5.27E+00	2.76E+00	1.275	0.59	0.278	0.133	0.065	0.032	0.016	8.07E-03	4.11E-03	2.11E-03	1.09E-03	5.64E-04
99	4.48E+00	1.74	0.707	0.304	0.137	0.063	0.03	0.015	7.17E-03	3.58E-03	1.80E-03	9.17E-04	4.70E-04	2.43E-04
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	**1.68E+00**	**7.74E-01**	**3.57E-01**	**1.70E-01**	**7.98E-02**	**3.93E-02**	**1.88E-02**	**9.81E-03**	**4.96E-03**	**2.52E-03**	**1.24E-03**	**5.67E-04**	**2.88E-04**	**1.50E-04**

150	160	170	180	190	200	210	220	230	240	250	260	270	280	290
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.90E-05	2.76E-05	1.51E-05	6.57E-06	1.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.57E-05	4.60E-05	2.47E-05	1.33E-05	7.17E-06	3.88E-06	2.10E-06	1.14E-06	6.17E-07	3.36E-07	1.83E-07	9.95E-08	5.43E-08	2.96E-08	1.62E-08
3.41E-05	1.79E-05	9.48E-06	5.03E-06	2.67E-06	1.43E-06	7.62E-07	4.09E-07	2.20E-07	1.18E-07	6.38E-08	3.45E-08	1.87E-08	1.01E-08	5.49E-09
3.48E-05	1.82E-05	9.56E-06	5.04E-06	2.67E-06	1.42E-06	7.53E-07	4.02E-07	2.15E-07	1.15E-07	6.21E-08	3.35E-08	1.81E-08	9.74E-09	5.24E-09
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.17E-05	1.65E-05	8.67E-06	4.56E-06	2.41E-06	1.28E-06	6.78E-07	3.62E-07	1.93E-07	1.04E-07	5.57E-08	3.00E-08	1.62E-08	8.73E-09	4.73E-09
2.76E-05	1.47E-05	7.85E-06	4.20E-06	2.25E-06	1.21E-06	6.51E-07	3.51E-07	1.90E-07	1.03E-07	5.56E-08	3.02E-08	1.64E-08	8.94E-09	4.87E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E-05	4.24E-05	2.25E-05	1.20E-05	6.40E-06	3.43E-06	1.84E-06	9.89E-07	5.33E-07	2.88E-07	1.56E-07	8.44E-08	4.58E-08	2.49E-08	1.35E-08
2.00E-04	1.07E-04	5.71E-05	3.06E-05	1.65E-05	8.87E-06	4.79E-06	2.59E-06	1.40E-06	7.60E-07	4.13E-07	2.24E-07	1.22E-07	6.66E-08	3.63E-08
7.94E-05	4.39E-05	2.42E-05	1.34E-05	7.36E-06	4.05E-06	2.23E-06	1.23E-06	6.78E-07	3.73E-07	2.04E-07	1.12E-07	5.66E-08	2.76E-08	3.10E-08
4.15E-05	2.19E-05	1.16E-05	6.19E-06	3.30E-06	1.77E-06	9.49E-07	5.10E-07	2.75E-07	1.48E-07	8.02E-08	4.35E-08	2.36E-08	1.28E-08	6.98E-09
3.78E-05	2.09E-05	1.16E-05	6.39E-06	3.54E-06	1.97E-06	1.13E-06	7.90E-07	4.45E-07	2.50E-07	1.40E-07	7.94E-08	4.57E-08	2.39E-08	9.00E-09
2.46E-05	1.37E-05	7.58E-06	4.26E-06	2.07E-06	1.70E-06	9.62E-07	5.40E-07	3.02E-07	1.60E-07	7.89E-08	7.34E-08	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.40E-05	2.85E-05	1.51E-05	8.03E-06	4.28E-06	2.29E-06	1.23E-06	6.59E-07	3.54E-07	1.91E-07	1.03E-07	5.59E-08	3.03E-08	1.64E-08	8.93E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.33E-04	1.76E-04	9.34E-05	4.98E-05	2.66E-05	1.42E-05	7.64E-06	4.11E-06	2.22E-06	1.20E-06	6.47E-07	3.51E-07	1.91E-07	1.04E-07	5.64E-08
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.26E-04	6.71E-05	3.58E-05	1.91E-05	1.03E-05	5.50E-06	2.96E-06	1.60E-06	8.64E-07	4.68E-07	2.54E-07	1.38E-07	7.49E-08	4.08E-08	2.22E-08
2.46E-04	0.00E+00	2.67E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.15E-05	2.18E-05	1.15E-05	6.08E-06	3.23E-06	1.72E-06	9.18E-07	4.92E-07	2.64E-07	1.42E-07	7.65E-08	4.13E-08	2.23E-08	1.21E-08	6.56E-09
1.74E-04	9.21E-05	4.89E-05	2.61E-05	1.39E-05	7.46E-06	4.01E-06	2.16E-06	1.16E-06	6.28E-07	3.41E-07	1.81E-07	1.04E-07	5.66E-08	2.58E-08
4.13E-05	2.19E-05	1.16E-05	6.20E-06	3.31E-06	1.78E-06	9.53E-07	5.13E-07	2.77E-07	1.50E-07	8.10E-08	4.39E-08	2.38E-08	1.30E-08	7.06E-09
1.67E-04	7.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.28E-05	0.00E+00	1.29E-04	1.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

4.37E-04	6.07E-04	8.48E-04	5.97E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.68E-04	4.02E-04	2.12E-04	1.12E-04	5.93E-05	3.15E-05	1.68E-05	9.07E-06	4.86E-06	2.85E-06	1.99E-06	1.76E-07	0.00E+00	1.34E-06	7.98E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.48E-05	1.29E-05	6.75E-06	3.54E-06	1.87E-06	9.89E-07	5.25E-07	2.80E-07	1.49E-07	7.99E-08	4.29E-08	2.31E-08	1.24E-08	6.70E-09	3.62E-09
1.26E-04	6.58E-05	3.46E-05	1.82E-05	9.63E-06	5.11E-06	2.72E-06	1.45E-06	7.57E-07	4.04E-07	1.86E-07	2.45E-07	0.00E+00	2.58E-07	1.75E-07
5.68E-05	3.00E-05	1.59E-05	8.46E-06	4.52E-06	2.42E-06	1.30E-06	6.97E-07	3.76E-07	2.03E-07	1.10E-07	5.94E-08	3.23E-08	1.75E-08	9.55E-09
8.78E-05	4.66E-05	2.48E-05	1.32E-05	7.06E-06	3.79E-06	2.03E-06	1.09E-06	5.85E-07	3.27E-07	1.85E-07	9.95E-08	3.84E-08	0.00E+00	5.94E-08
4.41E-05	2.31E-05	1.21E-05	6.41E-06	3.40E-06	1.81E-06	9.63E-07	5.15E-07	2.73E-07	1.50E-07	7.65E-08	4.96E-08	2.64E-08	0.00E+00	4.41E-08
1.08E-04	5.66E-05	2.98E-05	1.57E-05	8.33E-06	4.43E-06	2.36E-06	1.26E-06	6.76E-07	3.63E-07	1.96E-07	1.05E-07	5.70E-08	3.08E-08	1.67E-08
4.65E-05	2.49E-05	1.33E-05	7.16E-06	3.85E-06	2.07E-06	1.11E-06	6.50E-07	4.22E-07	1.40E-08	1.92E-07	1.06E-07	6.19E-08	3.51E-08	2.49E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E-04	2.10E-04	1.10E-04	5.82E-05	3.08E-05	1.64E-05	8.73E-06	4.67E-06	2.50E-06	1.34E-06	7.24E-07	3.90E-07	2.11E-07	1.14E-07	6.19E-08
3.46E-05	1.85E-05	9.92E-06	5.33E-06	2.87E-06	1.55E-06	8.34E-07	4.51E-07	2.44E-07	1.33E-07	7.20E-08	3.92E-08	2.13E-08	1.16E-08	6.35E-09
1.34E-04	6.98E-05	3.66E-05	1.93E-05	1.02E-05	5.41E-06	2.88E-06	1.54E-06	8.22E-07	4.41E-07	2.37E-07	1.28E-07	6.90E-08	3.73E-08	2.02E-08
4.33E-04	2.28E-04	1.20E-04	6.36E-05	3.38E-05	1.80E-05	9.61E-06	5.15E-06	2.76E-06	1.49E-06	8.01E-07	4.33E-07	2.34E-07	1.27E-07	6.89E-08
2.18E-04	1.15E-04	6.11E-05	3.25E-05	1.74E-05	9.28E-06	4.98E-06	2.68E-06	1.44E-06	7.78E-07	4.20E-07	2.28E-07	1.24E-07	6.71E-08	3.65E-08
3.86E-05	2.06E-05	1.10E-05	5.88E-06	3.15E-06	1.70E-06	9.13E-07	4.92E-07	2.66E-07	1.44E-07	7.81E-08	4.24E-08	2.30E-08	1.25E-08	6.84E-09
2.99E-05	1.58E-05	8.39E-06	4.47E-06	2.39E-06	1.28E-06	6.85E-07	3.68E-07	1.98E-07	1.07E-07	5.79E-08	3.13E-08	1.70E-08	9.22E-09	5.01E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.23E-05	2.76E-05	1.46E-05	7.74E-06	4.12E-06	2.20E-06	1.18E-06	6.32E-07	3.40E-07	1.83E-07	9.90E-08	5.36E-08	2.90E-08	1.58E-08	8.57E-09
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.10E-05	2.71E-05	1.44E-05	7.71E-06	4.13E-06	2.22E-06	1.19E-06	6.43E-07	3.47E-07	1.88E-07	1.02E-07	5.52E-08	3.00E-08	1.63E-08	8.91E-09
6.18E-05	3.28E-05	1.75E-05	9.35E-06	5.01E-06	2.68E-06	1.44E-06	7.78E-07	4.11E-07	2.09E-07	7.98E-08	0.00E+00	9.86E-08	5.60E-08	2.80E-08
9.19E-05	4.82E-05	2.54E-05	1.34E-05	7.13E-06	3.80E-06	2.03E-06	1.09E-06	5.82E-07	3.13E-07	1.69E-07	9.10E-08	4.92E-08	2.67E-08	1.45E-08
3.45E-04	1.81E-04	9.52E-05	5.04E-05	2.67E-05	1.42E-05	7.71E-06	4.18E-06	1.51E-06	2.17E-06	5.11E-07	2.46E-06	2.42E-06	0.00E+00	0.00E+00
4.92E-04	2.65E-04	1.43E-04	7.74E-05	4.19E-05	2.28E-05	1.24E-05	6.72E-06	3.66E-06	2.00E-06	1.09E-06	5.95E-07	3.26E-07	1.78E-07	9.77E-08
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.57E-05	3.43E-05	1.80E-05	9.50E-06	5.02E-06	2.67E-06	1.42E-06	7.57E-07	4.06E-07	2.19E-07	1.22E-07	6.19E-08	5.54E-08	2.84E-08	8.44E-08
8.57E-05	4.53E-05	2.40E-05	1.28E-05	6.83E-06	3.65E-06	1.96E-06	1.05E-06	5.68E-07	3.07E-07	1.66E-07	8.99E-08	4.88E-08	2.65E-08	1.44E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.34E-05	1.23E-05	6.47E-06	3.42E-06	1.81E-06	9.64E-07	5.14E-07	2.75E-07	1.47E-07	7.90E-08	4.25E-08	2.29E-08	1.24E-08	6.68E-09	3.63E-09
2.12E-05	1.10E-05	5.75E-06	3.02E-06	1.59E-06	8.39E-07	4.51E-07	2.31E-07	1.21E-07	3.53E-08	0.00E+00	1.02E-07	2.34E-07	2.35E-07	0.00E+00
5.87E-05	2.49E-05	2.49E-05	1.38E-05	7.61E-06	4.27E-06	2.41E-06	1.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.64E-05	1.92E-05	1.01E-05	5.38E-06	2.86E-06	1.53E-06	8.18E-07	4.39E-07	2.36E-07	1.27E-07	6.87E-08	3.72E-08	2.01E-08	1.09E-08	5.94E-09
7.43E-05	3.88E-05	2.04E-05	1.08E-05	5.70E-06	3.03E-06	1.61E-06	8.62E-07	4.62E-07	2.48E-07	1.33E-07	7.19E-08	3.88E-08	2.10E-08	1.14E-08

0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.24E-05	2.20E-05	1.13E-05	6.51E-06	5.01E-06	4.86E-06	2.64E-06	1.55E-06	5.39E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.21E-05	3.77E-05	1.98E-05	1.05E-05	5.54E-06	2.94E-06	1.57E-06	8.25E-07	4.58E-07	2.24E-07	2.19E-07	0	0	1.83E-07	0.00E+00
4.86E-05	2.61E-05	1.41E-05	7.59E-06	4.10E-06	2.22E-06	1.20E-06	6.54E-07	3.56E-07	1.94E-07	1.06E-07	5.76E-08	3.15E-08	1.72E-08	9.42E-09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.19E-04	6.55E-05	3.60E-05	1.98E-05	1.09E-05	5.96E-06	3.27E-06	1.80E-06	9.87E-07	5.42E-07	2.98E-07	1.64E-07	9.02E-08	4.97E-08	2.73E-08
2.54E-05	1.35E-05	7.15E-06	3.81E-06	2.03E-06	1.09E-06	5.85E-07	3.15E-07	1.70E-07	9.15E-08	4.95E-08	2.68E-08	1.46E-08	7.90E-09	4.30E-09
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.56E-04	1.40E-04	7.60E-05	4.14E-05	2.26E-05	1.23E-05	6.71E-06	3.67E-06	2.00E-06	1.10E-06	6.00E-07	3.29E-07	1.80E-07	9.88E-08	5.42E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.94E-04	1.54E-04	8.12E-05	4.29E-05	2.27E-05	1.21E-05	6.45E-06	3.45E-06	1.85E-06	9.93E-07	5.34E-07	2.88E-07	1.56E-07	8.42E-08	4.58E-08
1.26E-04	6.57E-05	3.45E-05	1.82E-05	9.60E-06	5.09E-06	2.71E-06	1.45E-06	7.74E-07	4.16E-07	2.23E-07	1.20E-07	6.49E-08	3.56E-08	1.85E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.85E-05	**4.11E-05**	**3.08E-05**	**1.70E-05**	**5.30E-06**	**2.81E-06**	**1.51E-06**	**8.18E-07**	**4.25E-07**	**2.40E-07**	**1.30E-07**	**8.44E-08**	**5.69E-08**	**3.63E-08**	**2.03E-08**

300	310	320	330	340	350	360	370	380	390	400	410	420	430	440
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.87E-09	4.86E-09	2.66E-09	1.46E-09	8.03E-10	4.41E-10	2.43E-10	1.34E-10	7.36E-11	4.06E-11	2.24E-11	1.24E-11	6.83E-12	3.77E-12	2.09E-12
2.99E-09	1.63E-09	8.86E-10	4.84E-10	2.64E-10	1.45E-10	7.91E-11	4.34E-11	2.38E-11	1.31E-11	7.17E-12	3.94E-12	2.17E-12	1.19E-12	6.60E-13
3.04E-09	1.66E-09	8.69E-10	1.03E-09	6.58E-11	1.11E-09	8.08E-10	3.76E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
2.56E-09	1.39E-09	7.56E-10	4.12E-10	2.24E-10	1.22E-10	6.69E-11	3.66E-11	2.00E-11	1.10E-11	6.01E-12	3.30E-12	1.81E-12	9.97E-13	5.48E-13
2.66E-09	1.45E-09	7.95E-10	4.35E-10	2.39E-10	1.31E-10	7.18E-11	3.95E-11	2.17E-11	1.19E-11	6.57E-12	3.62E-12	2.00E-12	1.10E-12	6.09E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.38E-09	4.03E-09	2.20E-09	1.20E-09	6.58E-10	3.61E-10	1.98E-10	1.09E-10	5.96E-11	3.28E-11	1.80E-11	9.92E-12	5.47E-12	3.01E-12	1.66E-12
1.98E-08	1.09E-08	5.94E-09	3.26E-09	1.79E-09	9.80E-10	5.38E-10	2.96E-10	1.63E-10	8.97E-11	4.94E-11	2.72E-11	1.50E-11	8.30E-12	4.58E-12
1.75E-08	9.81E-09	5.54E-09	3.26E-09	1.56E-09	1.06E-09	7.14E-10	0	0	0	0	0	0	0	0
3.80E-09	2.07E-09	1.13E-09	6.19E-10	3.39E-10	1.86E-10	1.02E-10	5.59E-11	3.07E-11	1.69E-11	9.29E-12	5.12E-12	2.82E-12	1.56E-12	8.58E-13
1.57E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.86E-09	2.65E-09	1.45E-09	7.89E-10	4.32E-10	2.36E-10	1.29E-10	7.10E-11	3.89E-11	2.14E-11	1.18E-11	6.47E-12	3.56E-12	1.96E-12	1.08E-12
0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0
3.07E-08	1.68E-08	9.17E-09	5.01E-09	2.75E-09	1.50E-09	8.25E-10	4.53E-10	2.49E-10	1.37E-10	7.54E-11	4.15E-11	2.29E-11	1.26E-11	6.97E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.21E-08	6.64E-09	3.63E-09	1.99E-09	1.09E-09	5.98E-10	3.29E-10	1.81E-10	9.93E-11	5.47E-11	3.01E-11	1.66E-11	9.16E-12	5.06E-12	2.79E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.57E-09	1.94E-09	1.06E-09	5.76E-10	3.15E-10	1.72E-10	9.40E-11	5.15E-11	2.83E-11	1.52E-11	8.55E-12	4.20E-12	3.05E-12	1.82E-12	3.40E-14
2.51E-08	9.02E-11	2.69E-08	2.00E-08	1.49E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.85E-09	2.10E-09	1.15E-09	6.28E-10	3.44E-10	1.88E-10	1.03E-10	5.68E-11	3.12E-11	1.72E-11	9.44E-12	5.20E-12	2.87E-12	1.58E-12	8.72E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.18E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.97E-09	1.07E-09	5.83E-10	3.18E-10	1.67E-10	8.95E-11	6.14E-11	3.86E-11	1.84E-11	0.00E+00	6.03E-12	1.59E-11	0.00E+00	3.32E-11	0.00E+00
1.05E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E-09	2.84E-09	1.55E-09	8.48E-10	4.65E-10	2.55E-10	1.40E-10	7.67E-11	4.21E-11	2.32E-11	1.28E-11	7.03E-12	3.87E-12	2.14E-12	1.18E-12
3.39E-08	2.17E-08	1.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.84E-08	1.62E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.07E-09	4.93E-09	2.68E-09	1.46E-09	7.98E-10	4.36E-10	2.39E-10	1.31E-10	7.15E-11	3.92E-11	2.15E-11	1.18E-11	6.51E-12	3.58E-12	1.97E-12
2.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E-08	1.83E-08	9.95E-09	5.43E-09	2.96E-09	1.62E-09	8.85E-10	4.85E-10	2.65E-10	1.45E-10	8.12E-11	4.24E-11	2.52E-11	1.30E-11	8.12E-12
3.47E-09	1.90E-09	1.04E-09	5.69E-10	3.12E-10	1.71E-10	9.41E-11	5.17E-11	2.85E-11	1.57E-11	8.62E-12	4.77E-12	2.61E-12	1.45E-12	7.77E-13
1.10E-08	5.95E-09	3.24E-09	1.76E-09	9.62E-10	5.26E-10	2.87E-10	1.57E-10	8.61E-11	4.72E-11	2.59E-11	1.42E-11	7.82E-12	4.30E-12	2.37E-12
3.74E-08	2.04E-08	1.11E-08	6.05E-09	3.30E-09	1.81E-09	9.88E-10	5.41E-10	2.97E-10	1.63E-10	8.95E-11	4.92E-11	2.70E-11	1.49E-11	8.20E-12
1.99E-08	1.08E-08	5.92E-09	3.24E-09	1.77E-09	9.70E-10	5.32E-10	2.92E-10	1.60E-10	8.81E-11	4.85E-11	2.67E-11	1.47E-11	8.11E-12	4.47E-12
3.73E-09	2.04E-09	1.11E-09	6.09E-10	3.34E-10	1.83E-10	1.00E-10	5.51E-11	3.03E-11	1.67E-11	9.17E-12	5.05E-12	2.78E-12	1.53E-12	8.44E-13
2.73E-09	1.49E-09	8.07E-10	4.47E-10	2.42E-10	1.36E-10	7.70E-11	4.41E-11	3.15E-11	1.69E-12	0.00E+00	1.78E-11	9.88E-12	4.96E-12	4.17E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.66E-09	2.54E-09	1.39E-09	7.58E-10	4.15E-10	2.27E-10	1.24E-10	6.82E-11	3.75E-11	2.06E-11	1.13E-11	6.23E-12	3.43E-12	1.89E-12	1.04E-12
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.83E-09	2.63E-09	1.44E-09	7.69E-10	3.93E-10	2.04E-10	6.54E-11	1.16E-10	0.00E+00	1.00E-10	6.25E-11	3.90E-11	2.44E-11	0.00E+00	0.00E+00
1.08E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.86E-09	4.27E-09	2.33E-09	1.27E-09	6.93E-10	3.79E-10	2.07E-10	1.14E-10	6.22E-11	3.41E-11	1.88E-11	1.03E-11	5.67E-12	3.12E-12	1.72E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.36E-08	2.94E-08	1.62E-08	8.89E-09	4.89E-09	2.69E-09	1.48E-09	8.19E-10	4.52E-10	2.49E-10	1.38E-10	7.62E-11	4.21E-11	2.33E-11	1.29E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.77E-08	4.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.86E-09	4.29E-09	2.34E-09	1.28E-09	7.02E-10	3.85E-10	2.11E-10	1.16E-10	6.36E-11	3.50E-11	1.93E-11	1.06E-11	5.85E-12	3.23E-12	1.78E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.96E-09	1.04E-09	5.65E-10	3.10E-10	1.68E-10	0.00E+00	6.70E-11	2.56E-10	1.35E-10	9.11E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.23E-09	1.76E-09	9.60E-10	5.25E-10	2.87E-10	1.57E-10	8.60E-11	4.72E-11	2.59E-11	1.42E-11	7.81E-12	4.30E-12	2.37E-12	1.30E-12	7.19E-13
6.18E-09	3.36E-09	1.83E-09	9.97E-10	5.44E-10	2.97E-10	1.63E-10	8.89E-11	4.87E-11	2.67E-11	1.47E-11	8.06E-12	4.43E-12	2.44E-12	1.34E-12

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.16E-09	2.83E-09	1.55E-09	8.54E-10	4.70E-10	2.59E-10	1.42E-10	7.85E-11	4.33E-11	2.39E-11	1.32E-11	7.29E-12	4.03E-12	2.23E-12	1.23E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.50E-08	8.41E-09	4.48E-09	2.47E-09	1.36E-09	9.89E-10	2.69E-10	4.66E-10	2.65E-10	1.47E-10	8.51E-11	4.93E-11	2.37E-11	1.94E-11	1.12E-11
2.34E-09	1.28E-09	6.97E-10	3.81E-10	2.08E-10	1.14E-10	6.25E-11	3.43E-11	1.88E-11	1.04E-11	5.69E-12	3.13E-12	1.72E-12	9.50E-13	5.24E-13
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.98E-08	1.64E-08	9.01E-09	4.96E-09	2.73E-09	1.51E-09	8.30E-10	4.58E-10	2.53E-10	1.40E-10	7.72E-11	4.27E-11	2.36E-11	1.31E-11	7.24E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.49E-08	1.34E-08	7.44E-09	4.25E-09	1.65E-09	2.16E-10	4.32E-10	0.00E+00	1.66E-09	7.12E-10	1.01E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.66E-09	3.44E-10	9.44E-09	7.37E-10	1.27E-08	9.56E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.43E-08	**3.09E-09**	**1.79E-09**	**9.04E-10**	**6.43E-10**	**3.04E-10**	**1.18E-10**	**6.44E-11**	**4.93E-11**	**2.60E-11**	**2.02E-11**	**5.91E-12**	**3.19E-12**	**2.01E-12**	**9.46E-13**

450	460	470	480	490	500	510	520	530	540	550	560	570	580	590
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.15E-12	6.39E-13	3.54E-13	1.96E-13	1.09E-13	6.02E-14	3.34E-14	1.85E-14	1.03E-14	5.72E-15	3.18E-15	1.77E-15	9.81E-16	5.46E-16	3.04E-16
3.63E-13	2.01E-13	1.10E-13	6.02E-14	3.46E-14	1.84E-14	1.09E-14	5.39E-15	2.99E-15	2.27E-15	0.00E+00	5.61E-16	1.07E-15	0.00E+00	9.90E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.01E-13	1.67E-13	9.31E-14	5.06E-14	2.67E-14	1.47E-14	9.34E-15	3.56E-15	1.30E-15	2.37E-15	2.22E-15	1.26E-15	0.00E+00	0.00E+00	0.00E+00
3.36E-13	1.86E-13	1.03E-13	5.69E-14	3.16E-14	1.75E-14	9.73E-15	5.43E-15	2.99E-15	1.75E-15	8.27E-16	5.60E-16	2.62E-16	1.83E-16	2.13E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.18E-13	5.07E-13	2.80E-13	1.55E-13	8.57E-14	4.74E-14	2.63E-14	1.46E-14	8.07E-15	4.47E-15	2.48E-15	1.38E-15	7.65E-16	4.25E-16	2.36E-16
2.53E-12	1.40E-12	7.75E-13	4.29E-13	2.38E-13	1.32E-13	7.30E-14	4.05E-14	2.25E-14	1.25E-14	6.92E-15	3.84E-15	2.14E-15	1.19E-15	6.59E-16
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.74E-13	2.62E-13	1.45E-13	8.00E-14	4.43E-14	2.45E-14	1.36E-14	7.53E-15	4.17E-15	2.32E-15	1.29E-15	7.14E-16	3.96E-16	2.20E-16	1.22E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.96E-13	3.29E-13	1.82E-13	1.00E-13	5.55E-14	3.07E-14	1.70E-14	9.41E-15	5.22E-15	2.89E-15	1.60E-15	8.85E-16	4.93E-16	2.78E-16	1.50E-16
0	0	0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.85E-12	2.13E-12	1.18E-12	6.51E-13	3.60E-13	1.99E-13	1.11E-13	6.12E-14	3.40E-14	1.88E-14	1.05E-14	5.81E-15	3.23E-15	1.79E-15	9.97E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.54E-12	8.54E-13	4.72E-13	2.62E-13	1.45E-13	8.03E-14	4.45E-14	2.47E-14	1.37E-14	7.60E-15	4.22E-15	2.35E-15	1.30E-15	7.25E-16	4.03E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.88E-14	0.00E+00	1.33E-12	7.46E-13	4.19E-13	4.90E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.82E-13	2.66E-13	1.47E-13	8.14E-14	4.50E-14	2.49E-14	1.38E-14	7.66E-15	4.25E-15	2.36E-15	1.31E-15	7.26E-16	4.03E-16	2.24E-16	1.24E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.51E-13	3.60E-13	1.99E-13	1.10E-13	6.09E-14	3.38E-14	1.87E-14	1.04E-14	5.75E-15	3.19E-15	1.77E-15	9.84E-16	5.46E-16	3.04E-16	1.69E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.07E-12	6.10E-13	3.38E-13	1.82E-13	9.65E-14	4.43E-14	3.18E-14	3.93E-15	0.00E+00	4.53E-15	1.01E-14	0.00E+00	1.57E-14	5.06E-15	5.42E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.24E-12	1.99E-12	0.00E+00	0.00E+00	0.00E+00	3.80E-12	2.08E-12	2.32E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.17E-13	2.55E-13	1.57E-13	7.79E-14	6.44E-14	4.54E-14	0.00E+00	3.88E-14	2.68E-14	1.36E-14	6.87E-15	7.33E-15	0.00E+00	0.00E+00	0.00E+00
1.30E-12	7.19E-13	3.97E-13	2.19E-13	1.21E-13	6.63E-14	3.68E-14	2.01E-14	1.12E-14	5.99E-15	3.72E-15	1.96E-15	7.71E-16	3.34E-16	3.96E-16
4.52E-12	2.49E-12	1.38E-12	7.59E-13	4.20E-13	2.32E-13	1.28E-13	7.10E-14	3.93E-14	2.18E-14	1.21E-14	6.69E-15	3.71E-15	2.05E-15	1.14E-15
2.47E-12	1.36E-12	7.54E-13	4.17E-13	2.31E-13	1.28E-13	7.10E-14	3.97E-14	2.19E-14	1.20E-14	6.63E-15	3.87E-15	1.72E-15	1.01E-15	9.35E-16
4.64E-13	2.60E-13	1.46E-13	8.04E-14	4.53E-14	2.50E-14	1.65E-14	5.26E-15	5.18E-15	4.05E-15	0.00E+00	3.56E-15	1.95E-15	1.05E-15	6.23E-16
2.50E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.76E-13	3.18E-13	1.76E-13	9.72E-14	5.38E-14	2.98E-14	1.65E-14	9.13E-15	5.06E-15	2.81E-15	1.56E-15	8.64E-16	4.80E-16	2.67E-16	1.48E-16
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.46E-13	5.22E-13	2.88E-13	1.59E-13	8.79E-14	4.83E-14	2.66E-14	1.51E-14	8.18E-15	4.48E-15	2.63E-15	1.16E-15	8.93E-16	4.04E-16	4.59E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.15E-12	3.96E-12	2.20E-12	1.22E-12	6.77E-13	3.76E-13	2.09E-13	1.16E-13	6.44E-14	3.58E-14	1.99E-14	1.11E-14	6.17E-15	3.44E-15	1.91E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.83E-13	5.43E-13	3.00E-13	1.66E-13	9.19E-14	5.09E-14	2.82E-14	1.56E-14	8.67E-15	4.81E-15	2.67E-15	1.48E-15	8.23E-16	4.58E-16	2.54E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.97E-13	2.19E-13	1.21E-13	6.68E-14	3.70E-14	2.05E-14	1.13E-14	6.27E-15	3.47E-15	1.93E-15	1.07E-15	5.92E-16	3.29E-16	1.83E-16	1.01E-16
7.40E-13	4.08E-13	2.25E-13	1.24E-13	6.86E-14	3.78E-14	2.12E-14	1.16E-14	6.52E-15	3.61E-15	2.07E-15	1.13E-15	7.69E-16	3.42E-16	1.67E-16

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.83E-13	3.78E-13	2.10E-13	1.16E-13	6.45E-14	3.58E-14	1.99E-14	1.10E-14	6.13E-15	3.41E-15	1.90E-15	1.06E-15	5.87E-16	3.27E-16	1.82E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.89E-13	1.59E-13	8.81E-14	4.87E-14	2.69E-14	1.49E-14	8.24E-15	4.56E-15	2.53E-15	1.40E-15	7.76E-16	4.30E-16	2.39E-16	1.33E-16	7.39E-17
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.02E-12	2.22E-12	1.23E-12	6.80E-13	3.83E-13	2.11E-13	1.16E-13	6.40E-14	3.43E-14	1.98E-14	9.35E-15	7.33E-15	4.48E-15	1.86E-15	1.86E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.80E-13	**2.37E-13**	**1.34E-13**	**7.39E-14**	**4.12E-14**	**6.34E-14**	**3.21E-14**	**2.96E-14**	**3.59E-15**	**2.06E-15**	**1.18E-15**	**6.94E-16**	**5.02E-16**	**2.28E-16**	**1.78E-16**

600	610	620	630	640	650	660	670	680	690	700	710	720	730	740
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.69E-16	9.41E-17	5.24E-17	2.92E-17	1.63E-17	9.07E-18	5.06E-18	2.82E-18	1.57E-18	8.78E-19	4.90E-19	2.74E-19	1.53E-19	8.53E-20	4.77E-20
4.83E-16	4.96E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	9.98E-16	1.01E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	2.09E-17	0.00E+00	4.69E-17	2.74E-17	1.53E-17	9.56E-18	4.36E-18	1.98E-18	1.95E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.31E-16	7.30E-17	4.06E-17	2.26E-17	1.26E-17	7.00E-18	3.90E-18	2.17E-18	1.21E-18	6.74E-19	3.76E-19	2.10E-19	1.17E-19	6.53E-20	3.64E-20
3.67E-16	2.05E-16	1.14E-16	6.30E-17	3.50E-17	1.93E-17	1.05E-17	6.44E-18	3.62E-18	1.64E-18	1.27E-18	4.10E-19	4.96E-19	2.57E-19	7.02E-20
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.81E-17	3.79E-17	2.11E-17	1.17E-17	6.53E-18	3.64E-18	2.03E-18	1.13E-18	6.29E-19	3.51E-19	1.96E-19	1.09E-19	6.09E-20	3.40E-20	1.90E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.62E-17	5.06E-17	2.74E-17	1.32E-17	6.93E-18	6.08E-18	2.74E-18	5.49E-19	1.10E-19	1.65E-18	0.00E+00	0.00E+00	0.00E+00	8.04E-19	3.52E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.54E-16	3.08E-16	1.72E-16	9.55E-17	5.32E-17	2.96E-17	1.65E-17	9.21E-18	5.13E-18	2.86E-18	1.60E-18	8.91E-19	4.97E-19	2.78E-19	1.55E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.24E-16	1.25E-16	6.95E-17	3.87E-17	2.16E-17	1.20E-17	6.70E-18	3.73E-18	2.08E-18	1.16E-18	6.48E-19	3.62E-19	2.02E-19	1.13E-19	6.30E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.92E-17	3.85E-17	2.14E-17	1.19E-17	6.63E-18	3.69E-18	2.06E-18	1.15E-18	6.39E-19	3.56E-19	1.99E-19	1.11E-19	6.19E-20	3.45E-20	1.93E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.39E-17	5.23E-17	2.91E-17	1.62E-17	9.02E-18	5.02E-18	2.80E-18	1.56E-18	8.70E-19	4.85E-19	2.71E-19	1.51E-19	8.43E-20	4.71E-20	2.63E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	2.70E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-16	1.06E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.34E-16	3.53E-16	1.94E-16	1.08E-16	6.13E-17	3.33E-17	1.94E-17	1.09E-17	5.09E-18	2.76E-18	1.44E-18	1.55E-18	6.83E-19	5.72E-19	2.50E-19
5.33E-16	1.49E-16	2.48E-16	0.00E+00	2.75E-16	1.61E-16	9.01E-17	5.64E-17	2.62E-17	2.49E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.17E-16	1.99E-16	2.10E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.24E-17	4.58E-17	2.55E-17	1.42E-17	7.90E-18	4.40E-18	2.45E-18	1.37E-18	7.61E-19	4.24E-19	2.37E-19	1.32E-19	7.37E-20	4.11E-20	2.30E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.02E-17	1.88E-16	1.61E-16	0.00E+00	1.75E-16	8.14E-17	3.77E-17	3.76E-17	3.67E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.07E-15	5.94E-16	3.31E-16	1.85E-16	1.03E-16	5.75E-17	3.21E-17	1.79E-17	9.99E-18	5.58E-18	3.12E-18	1.74E-18	9.74E-19	5.44E-19	3.04E-19
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.41E-16	7.87E-17	4.38E-17	2.44E-17	1.36E-17	7.56E-18	4.21E-18	2.35E-18	1.31E-18	7.30E-19	4.07E-19	2.27E-19	1.27E-19	7.08E-20	3.95E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.64E-17	3.13E-17	1.74E-17	9.69E-18	5.39E-18	3.00E-18	1.67E-18	9.31E-19	5.19E-19	2.89E-19	1.61E-19	8.98E-20	5.01E-20	2.79E-20	1.56E-20
1.19E-16	1.40E-16	0.00E+00	4.51E-17	1.31E-16	1.13E-16	9.92E-18	0.00E+00	8.57E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.01E-16	5.65E-17	3.15E-17	1.75E-17	9.78E-18	5.46E-18	3.05E-18	1.70E-18	9.49E-19	5.30E-19	2.96E-19	1.65E-19	9.24E-20	5.16E-20	2.89E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.09E-17	2.29E-17	1.28E-17	7.08E-18	3.94E-18	2.32E-18	1.30E-18	5.82E-19	3.41E-19	1.66E-19	1.67E-19	8.65E-20	7.10E-21	0.00E+00	2.49E-20
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	1.70E-15	8.63E-16	4.76E-16	2.95E-16	1.33E-16	1.29E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.51E-17	**6.06E-17**	**3.97E-17**	**1.24E-17**	**1.28E-17**	**7.12E-18**	**3.92E-18**	**2.73E-18**	**2.91E-18**	**4.74E-19**	**1.09E-19**	**6.51E-20**	**3.68E-20**	**3.03E-20**	**1.48E-20**

750	760	770	780	790	800	810	820	830	840	850	860	870	880	890
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.66E-20	1.49E-20	8.32E-21	4.65E-21	2.60E-21	1.46E-21	8.14E-22	4.55E-22	2.55E-22	1.43E-22	7.99E-23	4.47E-23	2.51E-23	1.40E-23	7.86E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.03E-20	1.14E-20	6.35E-21	3.55E-21	1.98E-21	1.11E-21	6.19E-22	3.46E-22	1.95E-22	1.08E-22	6.04E-23	3.41E-23	1.83E-23	1.06E-23	6.24E-24
4.80E-20	8.84E-20	0.00E+00	0.00E+00	4.73E-20	3.04E-20	1.72E-20	7.11E-21	6.25E-21	5.42E-21	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.06E-20	5.92E-21	3.31E-21	1.85E-21	1.04E-21	5.78E-22	3.23E-22	1.81E-22	1.01E-22	5.64E-23	3.15E-23	1.79E-23	9.76E-24	5.48E-24	3.16E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.22E-19	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.66E-20	4.84E-20	2.70E-20	1.51E-20	8.45E-21	4.72E-21	2.64E-21	1.48E-21	8.27E-22	4.63E-22	2.59E-22	1.45E-22	8.12E-23	4.55E-23	2.55E-23
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.52E-20	1.97E-20	1.10E-20	6.15E-21	3.44E-21	1.92E-21	1.08E-21	6.02E-22	3.37E-22	1.89E-22	1.06E-22	5.91E-23	3.31E-23	1.86E-23	1.04E-23
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.08E-20	6.01E-21	3.36E-21	1.88E-21	1.05E-21	5.86E-22	3.28E-22	1.83E-22	1.03E-22	5.74E-23	3.21E-23	1.80E-23	1.01E-23	5.63E-24	3.15E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

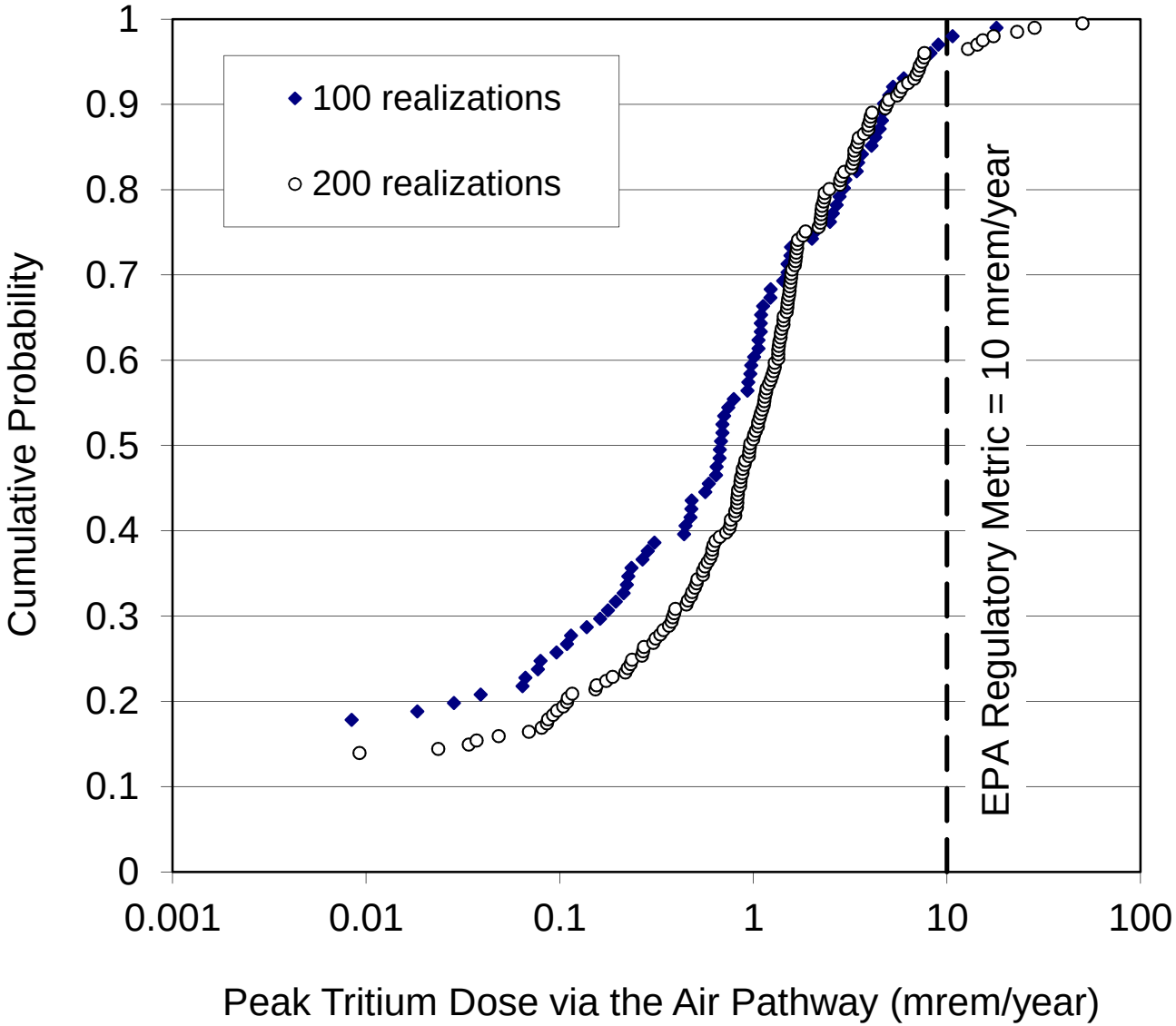
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.47E-20	8.21E-21	4.59E-21	2.56E-21	1.43E-21	8.02E-22	4.48E-22	2.51E-22	1.40E-22	7.86E-23	4.40E-23	2.46E-23	1.38E-23	7.72E-24	4.33E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.82E-21	0.00E+00	0.00E+00	1.32E-19	0.00E+00	1.91E-19	8.10E-20	7.11E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.28E-20	7.16E-21	4.00E-21	2.24E-21	1.25E-21	6.98E-22	3.90E-22	2.19E-22	1.23E-22	6.84E-23	3.84E-23	2.14E-23	1.21E-23	6.70E-24	3.83E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.70E-19	9.51E-20	5.32E-20	2.98E-20	1.67E-20	9.33E-21	5.22E-21	2.92E-21	1.64E-21	9.17E-22	5.14E-22	2.88E-22	1.61E-22	9.04E-23	5.07E-23
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.21E-20	1.23E-20	6.89E-21	3.85E-21	2.15E-21	1.20E-21	6.74E-22	3.77E-22	2.11E-22	1.18E-22	6.60E-23	3.70E-23	2.07E-23	1.16E-23	6.49E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.71E-21	4.86E-21	2.71E-21	1.52E-21	8.47E-22	4.73E-22	2.65E-22	1.48E-22	8.28E-23	4.63E-23	2.58E-23	1.44E-23	8.09E-24	4.55E-24	2.55E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.61E-20	9.03E-21	5.05E-21	2.82E-21	1.58E-21	8.85E-22	4.95E-22	2.77E-22	1.55E-22	8.70E-23	4.87E-23	2.73E-23	1.53E-23	8.57E-24	4.81E-24
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	1.59E-20	1.05E-20	6.04E-21	2.49E-21	2.30E-21	2.06E-21	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.09E-21	**3.31E-21**	**1.52E-21**	**2.19E-21**	**9.59E-22**	**2.48E-21**	**1.14E-21**	**8.77E-22**	**1.04E-22**	**7.75E-23**	**1.31E-23**	**7.31E-24**	**4.09E-24**	**2.29E-24**	**1.29E-24**

900	910	920	930	940	950	960	970	980	990	1000
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.40E-24	2.47E-24	1.38E-24	7.75E-25	4.35E-25	2.44E-25	1.37E-25	7.66E-26	4.30E-26	2.42E-26	1.35E-26
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.41E-24	1.76E-24	1.13E-24	4.93E-25	2.98E-25	1.68E-25	1.27E-25	5.59E-26	2.38E-26	1.45E-26	5.77E-27
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.76E-24	9.47E-25	5.11E-25	3.38E-25	1.90E-25	9.58E-26	6.20E-26	2.33E-26	8.18E-27	2.74E-27	8.00E-27
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.43E-23	7.99E-24	4.48E-24	2.51E-24	1.41E-24	7.89E-25	4.42E-25	2.48E-25	1.39E-25	7.80E-26	4.39E-26
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.82E-24	3.26E-24	1.83E-24	1.03E-24	5.74E-25	3.23E-25	1.81E-25	1.02E-25	5.68E-26	3.19E-26	1.79E-26
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.77E-24	9.89E-25	5.54E-25	3.10E-25	1.74E-25	9.75E-26	5.46E-26	3.06E-26	1.72E-26	9.63E-27	5.40E-27
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.42E-24	1.36E-24	7.61E-25	4.27E-25	2.39E-25	1.34E-25	7.52E-26	4.22E-26	2.37E-26	1.33E-26	7.45E-27
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.10E-24	1.15E-24	6.22E-25	3.44E-25	2.18E-25	1.25E-25	7.91E-26	2.85E-26	1.30E-26	5.93E-27	7.94E-27
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.84E-23	1.59E-23	8.94E-24	5.01E-24	2.81E-24	1.58E-24	8.85E-25	4.97E-25	2.79E-25	1.57E-25	8.79E-26
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.64E-24	2.04E-24	1.14E-24	6.40E-25	3.59E-25	2.01E-25	1.13E-25	6.32E-26	3.55E-26	1.99E-26	1.12E-26
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.42E-24	7.89E-25	4.56E-25	2.56E-25	1.44E-25	7.76E-26	4.35E-26	2.25E-26	1.52E-26	7.81E-27	4.90E-27
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
2.69E-24	1.51E-24	8.47E-25	4.75E-25	2.67E-25	1.50E-25	8.39E-26	4.71E-26	2.64E-26	1.48E-26	8.33E-27		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**Max**	
7.21E-25	**4.02E-25**	**2.26E-25**	**1.26E-25**	**7.12E-26**	**3.98E-26**	**2.28E-26**	**1.24E-26**	**6.81E-27**	**3.79E-27**	**2.22E-27**		**1.682E+00**

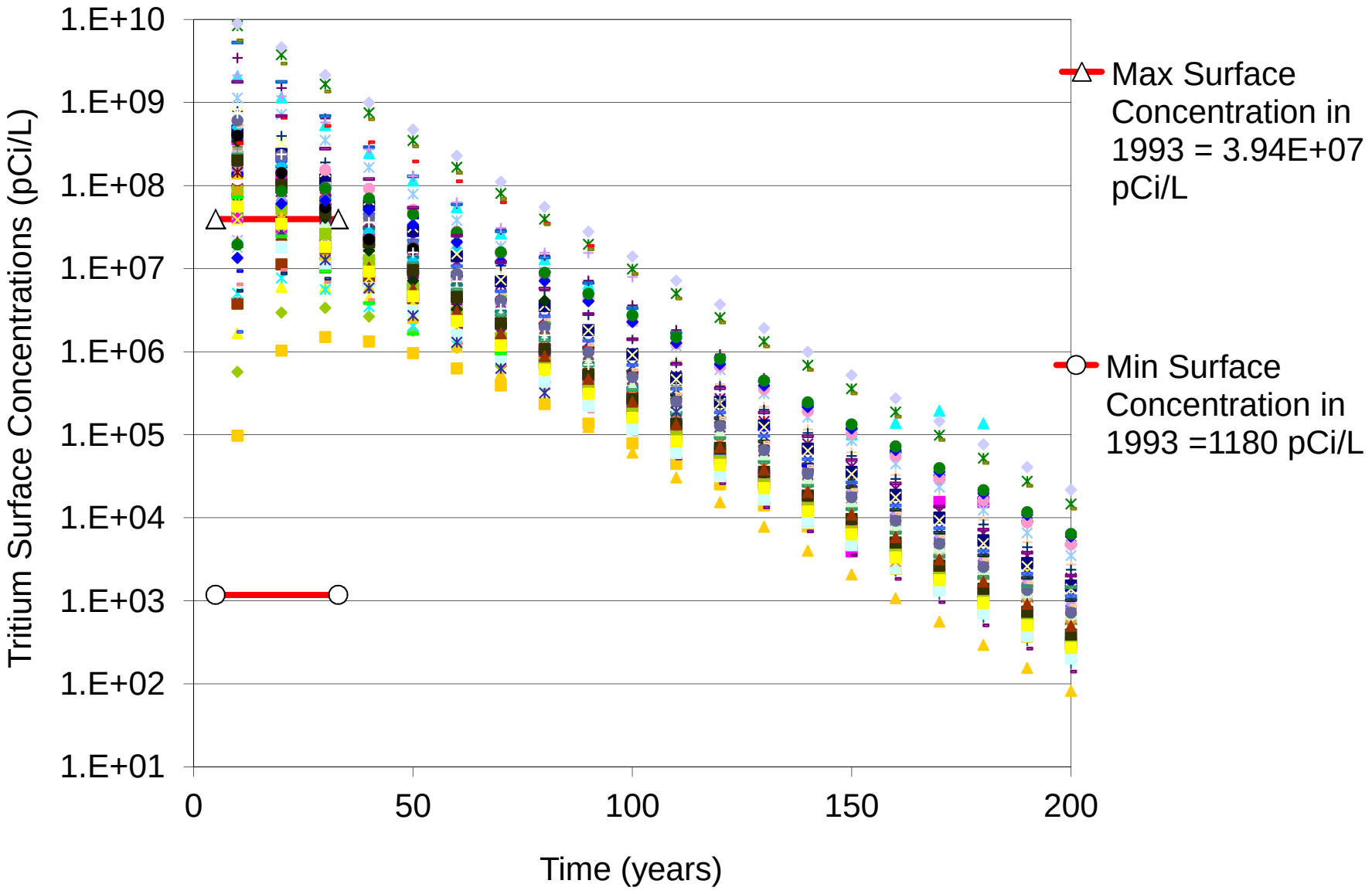

100 realizations
200 realizations
EPA Regulatory Metric = 10 mrem/year
Cumulative Probability
Peak Tritium Dose via the Air Pathway (mrem/year)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.01
0.1
1
10
100

The following are data reported in Johnson et al., 1995

Surface Concentration (pCi/L)		Surface Flux		
min	max	pCi/m^2/hr	pCi/m^2/s	Time
1180	3.94E+07	210	0.058333333	5
1180	3.94E+07	210	0.058333333	33
		166000	46.11111111	5
		166000	46.11111111	33

Concentration at x=15 ft (pCi/L) in 1990		
max at SB-5	max at SB-3	Time
180000	1.70E+07	2
180000	1.70E+07	30

Concentration at x=110 ft (pCi/L) in 1990	
2000	2
2000	30


1.E+10
1.E+09
1.E+08
1.E+07
1.E+06
1.E+05
1.E+04
1.E+03
1.E+02
1.E+01
Tritium Surface Concentrations (pCi/L)
0
50
100
150
200
Time (years)
Max Surface Concentration in 1993 = 3.94E+07 pCi/L
Min Surface Concentration in 1993 =1180 pCi/L

Tritium Surface Concentration (pCi/L) for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130
1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3	1.67E+06	6.04E+06	6.01E+06	4.34E+06	2.77E+06	1.65E+06	9.55E+05	5.40E+05	3.01E+05	1.67E+05	9.17E+04	5.04E+04	2.72E+04
4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5	1.29E+08	1.18E+08	7.39E+07	4.18E+07	2.28E+07	1.22E+07	6.47E+06	3.43E+06	1.82E+06	9.62E+05	5.11E+05	2.72E+05	1.45E+05
6	9.82E+07	5.74E+07	2.80E+07	1.34E+07	6.48E+06	3.16E+06	1.56E+06	7.80E+05	3.93E+05	2.00E+05	1.03E+05	5.29E+04	2.74E+04
7	1.20E+08	5.06E+07	2.17E+07	9.63E+06	4.42E+06	2.08E+06	1.00E+06	4.89E+05	2.42E+05	1.22E+05	6.15E+04	3.14E+04	1.61E+04
8	9.33E+06	6.32E+07	7.65E+07	6.08E+07	4.10E+07	2.56E+07	1.53E+07	9.12E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	3.12E+08	1.01E+08	3.86E+07	1.61E+07	7.12E+06	3.27E+06	1.54E+06	7.44E+05	3.65E+05	1.81E+05	9.12E+04	4.63E+04	2.37E+04
11	5.99E+07	3.43E+07	1.80E+07	9.27E+06	4.75E+06	2.43E+06	1.25E+06	6.45E+05	3.34E+05	1.74E+05	9.09E+04	4.77E+04	2.52E+04
12	3.88E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
13	1.81E+07	2.48E+07	1.68E+07	9.63E+06	5.18E+06	2.72E+06	1.41E+06	7.41E+05	2.36E+05	3.44E+05	2.60E+05	0.00E+00	0.00E+00
14	2.19E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
15	1.59E+08	1.13E+08	6.01E+07	3.02E+07	1.51E+07	7.55E+06	3.81E+06	1.93E+06	9.88E+05	5.08E+05	2.63E+05	1.37E+05	7.16E+04
16	1.71E+08	1.81E+08	1.17E+08	6.65E+07	3.60E+07	1.91E+07	1.01E+07	5.30E+06	2.79E+06	1.47E+06	7.74E+05	4.09E+05	2.17E+05
17	1.73E+06	8.95E+06	1.03E+07	8.05E+06	5.44E+06	3.41E+06	2.05E+06	1.20E+06	6.86E+05	3.89E+05	2.19E+05	1.22E+05	6.79E+04
18	1.22E+08	5.77E+07	2.73E+07	1.30E+07	6.32E+06	3.11E+06	1.55E+06	7.79E+05	3.96E+05	2.03E+05	1.05E+05	5.43E+04	2.83E+04
19	5.71E+05	2.96E+06	3.38E+06	2.65E+06	1.79E+06	1.12E+06	6.72E+05	3.93E+05	2.26E+05	1.28E+05	7.23E+04	4.05E+04	2.26E+04
20	9.73E+04	1.03E+06	1.50E+06	1.33E+06	9.60E+05	6.30E+05	3.90E+05	2.33E+05	1.36E+05	7.85E+04	4.46E+04	2.52E+04	1.41E+04
21	6.17E+07	4.30E+07	2.10E+07	1.00E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22	2.90E+08	1.23E+08	5.14E+07	3.66E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
23	1.45E+08	1.07E+08	5.66E+07	2.84E+07	1.41E+07	7.03E+06	3.53E+06	1.78E+06	9.07E+05	4.65E+05	2.40E+05	1.25E+05	6.50E+04
24	4.73E+07	2.69E+07	1.30E+07	8.06E+06	6.47E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
25	7.85E+08	3.96E+08	1.89E+08	9.08E+07	4.42E+07	2.18E+07	1.09E+07	5.47E+06	2.79E+06	1.43E+06	7.37E+05	3.83E+05	2.00E+05
26	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27	1.31E+08	1.06E+08	6.00E+07	3.14E+07	1.61E+07	8.20E+06	4.20E+06	2.16E+06	1.12E+06	5.79E+05	3.02E+05	1.58E+05	8.33E+04
28	3.65E+08	1.95E+08	8.93E+07	4.09E+07	1.91E+07	9.06E+06	4.38E+06	2.15E+06	1.07E+06	5.38E+05	2.73E+05	1.39E+05	7.15E+04
29	3.79E+06	1.13E+07	1.04E+07	7.15E+06	4.39E+06	2.54E+06	1.43E+06	8.93E+05	5.05E+05	2.84E+05	1.22E+05	0.00E+00	0.00E+00
30	1.63E+08	8.54E+07	4.00E+07	1.87E+07	8.88E+06	4.29E+06	2.10E+06	1.04E+06	5.22E+05	2.64E+05	1.35E+05	6.93E+04	3.59E+04
31	9.11E+07	1.04E+08	6.54E+07	3.57E+07	1.86E+07	9.58E+06	4.92E+06	2.53E+06	1.30E+06	6.74E+05	3.51E+05	1.83E+05	9.59E+04
32	8.42E+07	4.75E+07	2.36E+07	1.15E+07	5.68E+06	2.82E+06	1.41E+06	7.16E+05	3.66E+05	1.88E+05	9.73E+04	5.07E+04	2.65E+04
33	1.19E+08	5.27E+07	2.33E+07	1.06E+07	4.91E+06	2.33E+06	1.13E+06	5.54E+05	2.75E+05	1.39E+05	7.02E+04	3.65E+04	2.19E+04
34	4.02E+08	1.74E+08	8.06E+07	3.85E+07	1.87E+07	9.19E+06	4.58E+06	2.30E+06	1.16E+06	5.56E+05	4.91E+05	2.68E+05	1.47E+05
35	2.52E+08	1.06E+08	4.45E+07	1.94E+07	8.73E+06	4.00E+06	4.78E+06	2.22E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
36	7.80E+07	3.42E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	3.58E+08	1.33E+08	5.31E+07	2.26E+07	1.01E+07	4.64E+06	2.19E+06	1.06E+06	5.18E+05	2.57E+05	1.29E+05	6.55E+04	3.33E+04
39	2.07E+09	1.15E+09	5.34E+08	2.46E+08	1.15E+08	5.47E+07	2.65E+07	1.30E+07	6.46E+06	3.25E+06	1.65E+06	8.42E+05	4.34E+05
40	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0
41	8.40E+09	3.76E+09	1.66E+09	7.52E+08	3.50E+08	1.66E+08	8.04E+07	3.95E+07	1.97E+07	9.89E+06	5.02E+06	2.57E+06	1.33E+06
42	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	2.91E+08	1.35E+08	6.23E+07	2.92E+07	1.39E+07	6.71E+06	3.29E+06	1.63E+06	8.16E+05	4.06E+05	2.20E+05	2.26E+05	1.23E+05
44	2.14E+08	6.44E+07	2.37E+07	9.70E+06	4.22E+06	1.91E+06	8.95E+05	4.28E+05	2.09E+05	1.03E+05	5.17E+04	2.61E+04	1.33E+04
45	4.35E+08	1.68E+08	6.92E+07	3.01E+07	1.36E+07	6.36E+06	3.04E+06	1.48E+06	7.28E+05	3.64E+05	1.84E+05	9.35E+04	4.80E+04
46	2.49E+08	1.11E+08	5.04E+07	2.35E+07	1.12E+07	5.44E+06	2.69E+06	1.35E+06	6.81E+05	3.48E+05	1.79E+05	9.27E+04	4.83E+04
47	4.10E+07	3.33E+07	1.92E+07	1.02E+07	5.26E+06	2.70E+06	1.38E+06	7.10E+05	3.67E+05	1.90E+05	9.88E+04	5.16E+04	2.71E+04
48	1.75E+08	7.51E+07	3.27E+07	1.47E+07	6.78E+06	3.21E+06	1.55E+06	7.60E+05	3.78E+05	1.90E+05	9.63E+04	4.93E+04	2.54E+04
49	4.63E+08	1.94E+08	8.27E+07	3.68E+07	1.69E+07	8.00E+06	3.86E+06	1.89E+06	9.40E+05	4.72E+05	2.40E+05	1.23E+05	6.31E+04
50	4.46E+07	3.90E+07	2.38E+07	1.33E+07	7.21E+06	3.85E+06	2.04E+06	1.08E+06	5.71E+05	3.02E+05	1.60E+05	8.49E+04	4.52E+04
51	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
52	3.45E+09	1.50E+09	6.41E+08	2.84E+08	1.30E+08	6.14E+07	2.95E+07	1.44E+07	7.16E+06	3.60E+06	1.82E+06	9.31E+05	4.79E+05
53	6.48E+06	9.58E+06	6.93E+06	4.17E+06	2.33E+06	1.27E+06	6.77E+05	3.59E+05	1.90E+05	1.01E+05	5.34E+04	2.84E+04	1.51E+04
54	5.28E+09	1.77E+09	6.87E+08	2.90E+08	1.29E+08	5.96E+07	2.83E+07	1.37E+07	6.73E+06	3.35E+06	1.69E+06	8.59E+05	4.41E+05
55	8.89E+09	4.64E+09	2.15E+09	9.99E+08	4.73E+08	2.28E+08	1.12E+08	5.53E+07	2.78E+07	1.41E+07	7.18E+06	3.70E+06	1.91E+06
56	4.58E+08	2.40E+08	1.18E+08	5.78E+07	2.84E+07	1.41E+07	7.05E+06	3.56E+06	1.81E+06	9.29E+05	4.80E+05	2.49E+05	1.30E+05
57	4.22E+07	3.19E+07	1.85E+07	9.97E+06	5.26E+06	2.74E+06	1.43E+06	7.44E+05	3.89E+05	2.04E+05	1.07E+05	5.63E+04	2.97E+04
58	3.90E+07	2.70E+07	1.48E+07	7.69E+06	3.92E+06	2.00E+06	1.02E+06	5.21E+05	2.68E+05	1.38E+05	7.19E+04	3.75E+04	1.96E+04
59	5.04E+06	7.71E+06	5.59E+06	3.49E+06	2.03E+06	1.19E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60	1.99E+08	8.73E+07	3.90E+07	1.79E+07	8.46E+06	4.08E+06	2.00E+06	9.96E+05	5.01E+05	2.55E+05	1.30E+05	6.73E+04	3.49E+04
61	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
62	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63	1.39E+08	8.41E+07	4.08E+07	1.93E+07	9.17E+06	4.41E+06	2.15E+06	1.06E+06	5.31E+05	2.68E+05	1.42E+05	5.65E+04	1.16E+05
64	5.03E+08	1.75E+08	6.69E+07	2.77E+07	1.22E+07	1.72E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
65	2.03E+07	1.80E+07	1.08E+07	5.85E+06	3.07E+06	1.59E+06	8.23E+05	4.26E+05	2.21E+05	1.15E+05	6.02E+04	3.16E+04	1.66E+04
66	7.91E+07	6.23E+07	3.62E+07	1.96E+07	1.03E+07	5.34E+06	2.77E+06	1.44E+06	7.49E+05	3.91E+05	2.05E+05	1.07E+05	5.66E+04
67	7.33E+08	3.30E+08	1.47E+08	6.72E+07	3.15E+07	1.51E+07	7.33E+06	3.62E+06	1.81E+06	9.14E+05	4.66E+05	2.39E+05	1.24E+05
68	1.13E+09	7.20E+08	3.51E+08	1.66E+08	7.89E+07	3.80E+07	1.86E+07	9.19E+06	4.60E+06	2.32E+06	1.18E+06	6.07E+05	3.13E+05
69	2.04E+08	2.29E+08	1.55E+08	9.15E+07	5.12E+07	2.80E+07	1.51E+07	8.09E+06	4.33E+06	2.32E+06	1.24E+06	6.65E+05	3.57E+05
70	2.12E+09	1.20E+09	5.77E+08	2.73E+08	1.30E+08	6.29E+07	3.09E+07	1.55E+07	1.54E+07	7.93E+06	0.00E+00	0.00E+00	0.00E+00
71	5.12E+08	2.39E+08	1.05E+08	4.74E+07	2.19E+07	1.04E+07	4.99E+06	2.44E+06	1.21E+06	6.07E+05	3.07E+05	1.57E+05	8.05E+04
72	3.81E+08	2.01E+08	9.53E+07	4.53E+07	2.19E+07	1.07E+07	5.32E+06	2.67E+06	1.36E+06	6.93E+05	3.57E+05	1.85E+05	9.66E+04
73	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
74	8.33E+07	5.26E+07	2.62E+07	1.26E+07	6.10E+06	2.97E+06	1.46E+06	7.29E+05	3.66E+05	1.86E+05	9.49E+04	4.88E+04	2.52E+04
75	1.40E+08	4.07E+07	1.47E+07	5.94E+06	2.56E+06	1.15E+06	5.35E+05	2.55E+05	1.24E+05	6.10E+04	3.05E+04	1.54E+04	7.83E+03
76	8.85E+07	3.91E+07	1.87E+07	9.25E+06	4.65E+06	2.37E+06	1.21E+06	6.26E+05	3.25E+05	1.69E+05	8.86E+04	4.65E+04	2.46E+04

77	2.08E+08	9.84E+07	4.48E+07	2.08E+07	9.87E+06	4.77E+06	2.35E+06	1.17E+06	5.89E+05	3.00E+05	1.54E+05	7.93E+04	4.12E+04
78	6.10E+08	2.33E+08	9.46E+07	4.09E+07	1.85E+07	8.61E+06	4.11E+06	2.00E+06	9.89E+05	4.95E+05	2.50E+05	1.28E+05	6.56E+04
79	2.77E+08	1.15E+08	4.91E+07	2.17E+07	9.90E+06	4.64E+06	2.22E+06	1.09E+06	5.14E+05	0.00E+00	3.84E+05	2.61E+05	0.00E+00
80	5.42E+06	8.71E+06	7.56E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0
81	2.36E+08	1.11E+08	5.15E+07	2.42E+07	1.16E+07	5.61E+06	2.75E+06	1.37E+06	6.86E+05	3.47E+05	1.77E+05	9.06E+04	4.68E+04
82	3.43E+08	1.10E+08	4.08E+07	1.66E+07	7.15E+06	3.23E+06	1.21E+06	4.12E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	2.01E+08	1.02E+08	4.59E+07	2.08E+07	9.63E+06	4.56E+06	2.20E+06	1.08E+06	5.35E+05	2.69E+05	1.36E+05	6.95E+04	3.58E+04
84	2.09E+07	2.57E+07	1.76E+07	1.03E+07	5.72E+06	3.10E+06	1.66E+06	8.83E+05	4.70E+05	2.50E+05	1.33E+05	7.10E+04	3.80E+04
85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00
86	6.08E+07	2.81E+07	1.27E+07	5.82E+06	2.73E+06	1.30E+06	6.30E+05	3.19E+05	3.18E+05	1.65E+05	1.90E+05	0.00E+00	0.00E+00
87	3.98E+08	1.42E+08	5.44E+07	2.25E+07	1.73E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
88	7.44E+08	2.38E+08	8.84E+07	3.61E+07	1.57E+07	7.07E+06	3.29E+06	1.58E+06	6.96E+05	1.84E+06	1.21E+06	0.00E+00	0.00E+00
89	3.27E+08	6.58E+08	5.23E+08	3.32E+08	1.95E+08	1.13E+08	6.30E+07	3.49E+07	1.89E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00
90	7.22E+07	2.44E+07	9.27E+06	3.83E+06	1.65E+06	2.22E+06	9.52E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00
91	1.34E+07	6.05E+07	6.62E+07	5.07E+07	3.37E+07	2.08E+07	1.23E+07	7.13E+06	4.06E+06	2.28E+06	1.27E+06	7.07E+05	3.91E+05
92	5.62E+07	3.46E+07	1.82E+07	9.22E+06	4.64E+06	2.34E+06	1.19E+06	6.06E+05	3.11E+05	1.61E+05	8.33E+04	4.35E+04	2.28E+04
93	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
94	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
95	1.44E+08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
96	1.95E+07	8.54E+07	9.24E+07	6.95E+07	4.51E+07	2.72E+07	1.58E+07	8.91E+06	4.97E+06	2.74E+06	1.51E+06	8.23E+05	4.49E+05
97	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
98	5.63E+09	2.94E+09	1.36E+09	6.30E+08	2.97E+08	1.42E+08	6.92E+07	3.42E+07	1.71E+07	8.61E+06	4.38E+06	2.25E+06	1.16E+06
99	1.77E+09	6.87E+08	2.79E+08	1.20E+08	5.39E+07	2.50E+07	1.19E+07	5.76E+06	2.83E+06	1.41E+06	7.12E+05	3.62E+05	1.86E+05
100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max value	**8.89E+09**	**4.64E+09**	**2.15E+09**	**9.99E+08**	**4.73E+08**	**2.28E+08**	**1.12E+08**	**5.53E+07**	**2.78E+07**	**1.41E+07**	**7.18E+06**	**3.70E+06**	**1.91E+06**

140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.86E+04	1.04E+04	5.87E+03	3.21E+03	1.40E+03	2.25E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0
7.74E+04	4.14E+04	2.22E+04	1.19E+04	6.43E+03	3.47E+03	1.87E+03	1.01E+03	5.49E+02	2.98E+02	1.62E+02	8.82E+01	4.81E+01	2.62E+01	1.43E+01
1.43E+04	7.50E+03	3.95E+03	2.09E+03	1.11E+03	5.88E+02	3.14E+02	1.68E+02	8.99E+01	4.83E+01	2.60E+01	1.40E+01	7.58E+00	4.10E+00	2.23E+00
8.34E+03	4.34E+03	2.27E+03	1.19E+03	6.28E+02	3.32E+02	1.76E+02	9.38E+01	5.01E+01	2.68E+01	1.44E+01	7.73E+00	4.17E+00	2.25E+00	1.21E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
1.22E+04	6.33E+03	3.30E+03	1.73E+03	9.09E+02	4.80E+02	2.55E+02	1.35E+02	7.22E+01	3.86E+01	2.07E+01	1.11E+01	5.98E+00	3.22E+00	1.74E+00
1.33E+04	7.05E+03	3.75E+03	2.00E+03	1.07E+03	573.85	308.309	165.984	89.532	48.38	26.187	14.197	7.708	4.191	2.282
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.76E+04	1.98E+04	1.05E+04	5.58E+03	2.97E+03	1.59E+03	8.50E+02	4.56E+02	2.45E+02	1.32E+02	7.14E+01	3.86E+01	2.09E+01	1.14E+01	6.17E+00
1.15E+05	6.15E+04	3.28E+04	1.76E+04	9.43E+03	5.07E+03	2.73E+03	1.47E+03	796.362	431.155	233.785	126.946	69.026	37.581	20.485
3.77E+04	2.08E+04	1.15E+04	6.35E+03	3.50E+03	1.93E+03	1.06E+03	585.641	322.877	177.901	97.952	53.501	29.327	14.855	7.246
1.49E+04	7.82E+03	4.13E+03	2.19E+03	1.17E+03	622.939	3.33E+02	1.79E+02	9.62E+01	5.18E+01	2.80E+01	1.51E+01	8.20E+00	4.45E+00	2.42E+00
1.25E+04	6.95E+03	3.84E+03	2.12E+03	1.17E+03	650.689	361.743	207.167	145.023	81.647	45.865	25.722	14.582	8.393	4.388
7.87E+03	4.38E+03	2.43E+03	1.35E+03	757.773	368.716	303.26	171.266	96.099	53.823	28.53	14.046	13.066	0	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.40E+04	1.79E+04	9.45E+03	5.01E+03	2.66E+03	1.42E+03	7.59E+02	4.06E+02	2.18E+02	1.17E+02	6.33E+01	3.42E+01	1.85E+01	1.00E+01	5.45E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.05E+05	5.53E+04	2.93E+04	1.55E+04	8.27E+03	4.42E+03	2.37E+03	1.27E+03	6.83E+02	3.68E+02	1.99E+02	1.08E+02	5.84E+01	3.17E+01	1.72E+01
0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.40E+04	2.33E+04	1.24E+04	6.61E+03	3.54E+03	1.89E+03	1.02E+03	547.928	295.575	159.741	86.48	4.69E+01	2.55E+01	1.39E+01	7.54E+00
3.56E+04	2.64E+04	0.00E+00	2.86E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.87E+04	9.75E+03	5.12E+03	2.70E+03	1.43E+03	758.73	404.055	215.771	115.518	61.99	33.338	17.965	9.699	5.246	2.842
5.05E+04	2.67E+04	1.41E+04	7.50E+03	4.00E+03	2.14E+03	1.14E+03	6.14E+02	3.30E+02	1.78E+02	9.62E+01	5.23E+01	2.78E+01	1.60E+01	8.68E+00
1.39E+04	7.35E+03	3.89E+03	2.07E+03	1.10E+03	5.89E+02	3.16E+02	1.70E+02	9.13E+01	4.92E+01	2.66E+01	1.44E+01	7.81E+00	4.24E+00	2.31E+00
0.00E+00	1.62E+04	6.94E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.39E+04	9.01E+04	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.85E+04	3.93E+03	0.00E+00	1.55E+04	1.55E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.19E+05	1.00E+05	1.39E+05	1.95E+05	1.37E+05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.87E+05	3.58E+05	1.88E+05	9.87E+04	5.22E+04	2.77E+04	1.47E+04	7.84E+03	4.23E+03	2.26E+03	1.33E+03	928.357	82.271	0	625.647
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.71E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.84E+03	3.54E+03	1.84E+03	9.62E+02	5.05E+02	2.66E+02	1.41E+02	7.48E+01	3.98E+01	2.13E+01	1.14E+01	6.11E+00	3.28E+00	1.77E+00	9.55E-01
2.48E+04	1.29E+04	6.73E+03	3.53E+03	1.86E+03	9.85E+02	5.23E+02	2.79E+02	148.559	77.42	41.294	19.027	25.099	0	26.333
2.53E+04	1.33E+04	7.04E+03	3.73E+03	1.99E+03	1.06E+03	5.67E+02	3.04E+02	1.64E+02	8.82E+01	4.76E+01	2.58E+01	1.40E+01	7.57E+00	4.12E+00
1.43E+04	7.54E+03	4.00E+03	2.13E+03	1.13E+03	606.54	3.25E+02	1.75E+02	9.37E+01	5.03E+01	2.81E+01	1.59E+01	8.54E+00	3.30E+00	0.00E+00
1.32E+04	6.85E+03	3.59E+03	1.89E+03	996.713	5.28E+02	2.81E+02	1.50E+02	8.00E+01	4.24E+01	2.34E+01	1.19E+01	7.72E+00	4.10E+00	0.00E+00
3.27E+04	1.71E+04	8.93E+03	4.70E+03	2.48E+03	1.31E+03	6.98E+02	3.72E+02	1.99E+02	1.07E+02	5.73E+01	3.08E+01	1.66E+01	8.98E+00	4.86E+00
2.41E+04	1.29E+04	6.87E+03	3.68E+03	1.98E+03	1.06E+03	571.941	307.669	179.435	1.17E+02	3.86E+00	5.31E+01	2.93E+01	1.71E+01	9.70E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.48E+05	1.29E+05	6.77E+04	3.56E+04	1.88E+04	9.95E+03	5.29E+03	2.82E+03	1.51E+03	8.08E+02	4.34E+02	2.34E+02	1.26E+02	6.81E+01	3.69E+01
8.04E+03	4.29E+03	2.30E+03	1.23E+03	661.196	355.801	191.801	103.568	56.014	30.341	16.458	8.94	4.862	2.648	1.444
2.27E+05	1.18E+05	6.17E+04	3.23E+04	1.70E+04	9.01E+03	4.78E+03	2.54E+03	1.36E+03	7.27E+02	3.90E+02	2.10E+02	1.13E+02	6.10E+01	3.30E+01
9.96E+05	5.21E+05	2.74E+05	1.45E+05	7.65E+04	4.07E+04	2.17E+04	1.16E+04	6.20E+03	3.33E+03	1.79E+03	9.65E+02	5.21E+02	2.82E+02	1.53E+02
6.81E+04	3.59E+04	1.90E+04	1.01E+04	5.35E+03	2.85E+03	1.53E+03	8.19E+02	440.073	237.024	127.911	69.153	37.45	20.313	11.035
1.58E+04	8.37E+03	4.46E+03	2.38E+03	1.28E+03	6.84E+02	3.68E+02	1.98E+02	1.07E+02	5.77E+01	3.12E+01	1.69E+01	9.20E+00	5.00E+00	2.72E+00
1.03E+04	5.45E+03	2.89E+03	1.53E+03	8.16E+02	4.36E+02	2.33E+02	1.25E+02	6.72E+01	3.62E+01	1.95E+01	1.06E+01	5.72E+00	3.10E+00	1.68E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.82E+04	9.57E+03	5.04E+03	2.67E+03	1.42E+03	753.356	402.27	215.371	115.589	62.176	3.35E+01	1.81E+01	9.79E+00	5.31E+00	2.88E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.23E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.78E+03	4.65E+03	2.47E+03	1.32E+03	704.401	377.279	202.526	1.09E+02	5.87E+01	3.17E+01	1.72E+01	9.29E+00	5.04E+00	2.74E+00	1.49E+00
2.99E+04	1.59E+04	8.43E+03	4.49E+03	2.40E+03	1.29E+03	6.89E+02	3.70E+02	2.00E+02	1.05E+02	5.37E+01	2.05E+01	0.00E+00	2.53E+01	1.44E+01
6.43E+04	3.36E+04	1.76E+04	9.29E+03	4.91E+03	2.61E+03	1.39E+03	7.41E+02	3.97E+02	2.13E+02	1.14E+02	6.16E+01	3.33E+01	1.80E+01	9.74E+00
1.63E+05	8.49E+04	4.45E+04	2.34E+04	1.24E+04	6.58E+03	3.50E+03	1.90E+03	1.03E+03	3.72E+02	5.35E+02	1.26E+02	6.06E+02	5.94E+02	0.00E+00
1.92E+05	1.03E+05	5.56E+04	3.00E+04	1.62E+04	8.79E+03	4.77E+03	2.59E+03	1.41E+03	7.67E+02	4.18E+02	2.28E+02	1.25E+02	6.82E+01	3.74E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0.00E+00	0.00E+00	0.00E+00
4.16E+04	2.17E+04	1.13E+04	5.94E+03	3.13E+03	1.66E+03	878.239	467.581	249.314	1.34E+02	7.23E+01	4.01E+01	2.04E+01	1.83E+01	9.35E+00
5.06E+04	2.67E+04	1.41E+04	7.47E+03	3.98E+03	2.12E+03	1.14E+03	6.09E+02	327.738	176.614	95.362	5.16E+01	2.80E+01	1.52E+01	8.24E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.31E+04	6.85E+03	3.60E+03	1.89E+03	1.00E+03	5.30E+02	2.82E+02	1.50E+02	8.04E+01	4.31E+01	2.31E+01	1.24E+01	6.70E+00	3.62E+00	1.96E+00
4.02E+03	2.07E+03	1.08E+03	5.63E+02	2.95E+02	1.56E+02	8.20E+01	4.41E+01	2.25E+01	1.18E+01	3.45E+00	0.00E+00	9.94E+00	2.29E+01	2.30E+01
1.28E+04	7.01E+03	2.97E+03	2.97E+03	1.64E+03	9.07E+02	5.09E+02	2.88E+02	1.47E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2.15E+04	1.13E+04	5.94E+03	3.14E+03	1.67E+03	887.656	4.74E+02	2.54E+02	1.36E+02	7.32E+01	3.95E+01	2.13E+01	1.15E+01	6.24E+00	3.39E+00
3.39E+04	1.77E+04	9.23E+03	4.85E+03	2.56E+03	1.35E+03	7.19E+02	3.83E+02	2.05E+02	1.10E+02	5.89E+01	3.17E+01	1.71E+01	9.22E+00	4.99E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.43E+04	1.27E+04	6.58E+03	3.38E+03	1.95E+03	1.50E+03	1.45E+03	7.89E+02	4.62E+02	1.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.85E+04	9.64E+03	5.05E+03	2.65E+03	1.40E+03	740.544	393.126	210.616	110.379	61.238	29.994	29.27	0	0	2.44E+01
2.03E+04	1.09E+04	5.87E+03	3.16E+03	1.71E+03	9.22E+02	4.99E+02	2.71E+02	1.47E+02	7.99E+01	4.35E+01	2.37E+01	1.29E+01	7.07E+00	3.87E+00
0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.16E+05	1.19E+05	6.53E+04	3.59E+04	1.97E+04	1.08E+04	5.94E+03	3.26E+03	1.79E+03	9.83E+02	540.429	297.086	163.343	89.895	4.95E+01
1.20E+04	6.32E+03	3.35E+03	1.78E+03	947.724	506.322	271.161	145.548	78.287	42.191	22.78	12.32	6.673	3.62	1.967
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.45E+05	1.33E+05	7.26E+04	3.95E+04	2.15E+04	1.17E+04	6.40E+03	3.49E+03	1.91E+03	1.04E+03	5.70E+02	3.12E+02	1.71E+02	9.37E+01	5.14E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0
6.02E+05	3.14E+05	1.65E+05	8.66E+04	4.58E+04	2.43E+04	1.29E+04	6.88E+03	3.68E+03	1.97E+03	1.06E+03	5.70E+02	3.08E+02	1.66E+02	8.99E+01
9.58E+04	4.98E+04	2.60E+04	1.36E+04	7.17E+03	3.79E+03	2.01E+03	1.07E+03	5.72E+02	3.06E+02	1.64E+02	8.81E+01	4.73E+01	2.56E+01	1.41E+01
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.96E+05	**5.21E+05**	**2.74E+05**	**1.95E+05**	**1.37E+05**	**4.07E+04**	**2.17E+04**	**1.16E+04**	**6.20E+03**	**3.33E+03**	**1.79E+03**	**9.65E+02**	**6.06E+02**	**5.94E+02**	**6.26E+02**

290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.83E+00	4.29E+00	2.35E+00	1.29E+00	7.07E-01	3.88E-01	2.13E-01	1.17E-01	6.50E-02	3.60E-02	2.00E-02	1.10E-02	5.97E-03	3.30E-03	1.82E-03
1.21E+00	6.57E-01	3.58E-01	1.95E-01	1.06E-01	5.80E-02	3.20E-02	1.70E-02	9.54E-03	5.23E-03	2.87E-03	1.58E-03	8.68E-04	4.77E-04	2.63E-04
6.53E-01	3.78E-01	2.07E-01	1.08E-01	1.28E-01	8.20E-03	1.38E-01	1.01E-01	4.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.43E-01	5.11E-01	2.77E-01	1.51E-01	8.20E-02	4.50E-02	2.40E-02	1.30E-02	7.29E-03	3.99E-03	2.19E-03	1.20E-03	6.58E-04	3.62E-04	1.99E-04
1.244	0.679	0.371	0.203	0.111	0.061	0.033	0.018	0.01	5.53E-03	3.05E-03	1.68E-03	9.24E-04	5.10E-04	2.81E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.36E+00	1.83E+00	9.99E-01	5.45E-01	2.98E-01	1.63E-01	8.90E-02	4.90E-02	2.70E-02	1.50E-02	8.13E-03	4.47E-03	2.46E-03	1.36E-03	7.48E-04
1.12E+01	6.11E+00	3.34E+00	1.83E+00	1.00E+00	5.50E-01	3.02E-01	1.66E-01	9.10E-02	5.00E-02	2.80E-02	1.50E-02	8.39E-03	4.63E-03	2.55E-03
8.134	4.585	2.574	1.454	8.56E-01	4.08E-01	2.77E-01	1.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.32E+00	7.17E-01	3.91E-01	2.14E-01	1.17E-01	6.40E-02	3.50E-02	1.90E-02	1.10E-02	5.79E-03	3.18E-03	1.75E-03	9.65E-04	5.32E-04	2.93E-04
1.65E+00	2.89E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.96E+00	1.61E+00	8.78E-01	4.79E-01	2.62E-01	1.43E-01	7.80E-02	4.30E-02	2.40E-02	1.30E-02	7.09E-03	3.90E-03	2.14E-03	1.18E-03	6.50E-04
0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.38E+00	5.11E+00	2.79E+00	1.52E+00	8.34E-01	4.56E-01	2.50E-01	1.37E-01	7.50E-02	4.10E-02	2.30E-02	1.30E-02	6.91E-03	3.81E-03	2.10E-03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.11E+00	2.25E+00	1.23E+00	6.71E-01	3.68E-01	2.02E-01	1.11E-01	6.10E-02	3.30E-02	1.80E-02	1.00E-02	5.57E-03	3.07E-03	1.69E-03	9.35E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.542	0.838	0.456	0.248	0.135	0.074	0.04	2.20E-02	1.20E-02	6.64E-03	3.57E-03	2.01E-03	9.87E-04	7.16E-04	4.29E-04
3.95E+00	3.85E+00	1.40E-02	4.12E+00	3.07E+00	2.28E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.26E+00	6.84E-01	3.74E-01	2.04E-01	1.12E-01	6.10E-02	3.40E-02	1.80E-02	1.00E-02	5.55E-03	3.05E-03	1.68E-03	9.25E-04	5.10E-04	2.81E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
372.114	334.792	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.16E-01	2.80E-01	1.52E-01	8.30E-02	4.50E-02	2.40E-02	1.30E-02	8.74E-03	5.49E-03	2.62E-03	0.00E+00	8.59E-04	2.26E-03	0.00E+00	4.74E-03
17.929	10.78	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.24E+00	1.22E+00	6.66E-01	3.64E-01	1.99E-01	1.09E-01	6.00E-02	3.30E-02	1.80E-02	9.89E-03	5.44E-03	2.99E-03	1.65E-03	9.09E-04	5.02E-04
5.10E+00	2.91E+00	1.86E+00	1.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.86E+00	4.42E+00	2.52E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.63E+00	1.43E+00	7.77E-01	4.23E-01	2.31E-01	1.26E-01	6.90E-02	3.80E-02	2.10E-02	1.10E-02	6.18E-03	3.39E-03	1.86E-03	1.03E-03	5.64E-04
6.88E+00	6.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E+01	1.09E+01	5.90E+00	3.21E+00	1.75E+00	9.56E-01	5.22E-01	2.86E-01	1.57E-01	8.50E-02	4.70E-02	2.60E-02	1.40E-02	8.12E-03	4.20E-03
0.788	0.431	0.235	0.129	7.10E-02	3.90E-02	2.10E-02	1.20E-02	6.42E-03	3.53E-03	1.95E-03	1.07E-03	5.92E-04	3.24E-04	1.80E-04
1.79E+01	9.69E+00	5.26E+00	2.86E+00	1.56E+00	8.51E-01	4.64E-01	2.54E-01	1.39E-01	7.60E-02	4.20E-02	2.30E-02	1.30E-02	6.91E-03	3.80E-03
8.29E+01	4.50E+01	2.45E+01	1.34E+01	7.28E+00	3.98E+00	2.18E+00	1.19E+00	6.52E-01	3.57E-01	1.96E-01	1.08E-01	5.90E-02	3.30E-02	1.80E-02
6.003	3.27E+00	1.78E+00	9.74E-01	5.32E-01	2.91E-01	1.60E-01	8.70E-02	4.80E-02	2.60E-02	1.40E-02	7.97E-03	4.39E-03	2.42E-03	1.33E-03
1.48E+00	8.09E-01	4.42E-01	2.42E-01	1.32E-01	7.20E-02	4.00E-02	2.20E-02	1.20E-02	6.57E-03	3.62E-03	1.99E-03	1.10E-03	6.03E-04	3.33E-04
9.15E-01	4.98E-01	2.71E-01	1.47E-01	8.20E-02	4.40E-02	2.50E-02	1.40E-02	8.05E-03	5.75E-03	3.08E-04	0.00E+00	3.25E-03	1.80E-03	9.06E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.57E+00	8.52E-01	4.65E-01	2.54E-01	1.39E-01	7.60E-02	4.10E-02	2.30E-02	1.20E-02	6.85E-03	3.76E-03	2.07E-03	1.14E-03	6.28E-04	3.46E-04
0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.13E-01	4.41E-01	2.40E-01	1.32E-01	7.00E-02	3.60E-02	1.90E-02	5.97E-03	1.10E-02	0.00E+00	9.14E-03	5.71E-03	3.57E-03	2.23E-03	0.00E+00
7.19E+00	2.76E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.29E+00	2.87E+00	1.56E+00	8.51E-01	4.64E-01	2.53E-01	1.38E-01	7.60E-02	4.10E-02	2.30E-02	1.20E-02	6.85E-03	3.76E-03	2.07E-03	1.14E-03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.05E+01	1.12E+01	6.17E+00	3.39E+00	1.86E+00	1.03E+00	5.65E-01	3.11E-01	1.72E-01	9.50E-02	5.20E-02	2.90E-02	1.60E-02	8.83E-03	4.89E-03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.78E+01	1.57E+01	1.38E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.49E+00	2.45E+00	1.33E+00	7.29E-01	3.99E-01	2.18E-01	1.20E-01	6.60E-02	3.60E-02	2.00E-02	1.10E-02	5.99E-03	3.30E-03	1.82E-03	1.00E-03
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.06E+00	5.73E-01	3.03E-01	1.65E-01	9.10E-02	4.90E-02	0.00E+00	2.00E-02	7.50E-02	3.90E-02	2.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1.84E+00	1.00E+00	5.46E-01	2.98E-01	1.63E-01	8.90E-02	4.90E-02	2.70E-02	1.50E-02	8.02E-03	4.41E-03	2.42E-03	1.33E-03	7.34E-04	4.04E-04
2.71E+00	1.47E+00	7.98E-01	4.34E-01	2.37E-01	1.29E-01	7.10E-02	3.90E-02	2.10E-02	1.20E-02	6.35E-03	3.49E-03	1.92E-03	1.05E-03	5.80E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.12E+00	1.16E+00	6.36E-01	3.49E-01	1.92E-01	1.06E-01	5.80E-02	3.20E-02	1.80E-02	9.72E-03	5.37E-03	2.96E-03	1.64E-03	9.05E-04	5.01E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.72E+01	1.49E+01	8.38E+00	4.47E+00	2.46E+00	1.36E+00	9.85E-01	2.68E-01	4.65E-01	2.64E-01	1.46E-01	8.50E-02	4.90E-02	2.40E-02	1.90E-02
1.07	0.583	0.318	0.173	9.50E-02	5.20E-02	2.80E-02	1.60E-02	8.54E-03	4.69E-03	2.58E-03	1.42E-03	7.79E-04	4.29E-04	2.36E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0	0	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.82E+01	1.55E+01	8.52E+00	4.69E+00	2.58E+00	1.42E+00	7.83E-01	4.32E-01	2.38E-01	1.32E-01	7.30E-02	4.00E-02	2.20E-02	1.20E-02	6.80E-03
0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.89E+01	2.66E+01	1.43E+01	7.94E+00	4.54E+00	1.76E+00	2.31E-01	4.61E-01	0.00E+00	1.77E+00	7.59E-01	1.08E+00	0.00E+00	0.00E+00	0.00E+00
7.32E+00	3.03E+00	1.36E-01	3.73E+00	2.91E-01	5.02E+00	3.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.72E+02	**3.35E+02**	**2.45E+01**	**1.34E+01**	**7.28E+00**	**5.02E+00**	**3.78E+00**	**1.19E+00**	**6.52E-01**	**1.77E+00**	**7.59E-01**	**1.08E+00**	**5.90E-02**	**3.30E-02**	**1.90E-02**

440	450	460	470	480	490	500	510	520	530	540	550	560	570	580
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.01E-03	5.58E-04	3.09E-04	1.71E-04	9.47E-05	5.25E-05	2.91E-05	1.61E-05	8.96E-06	4.97E-06	2.76E-06	1.54E-06	8.53E-07	4.74E-07	2.64E-07
1.45E-04	7.99E-05	4.42E-05	2.43E-05	1.33E-05	7.62E-06	4.05E-06	2.39E-06	1.19E-06	6.58E-07	5.00E-07	0.00E+00	1.23E-07	2.36E-07	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.09E-04	6.01E-05	3.33E-05	1.86E-05	1.01E-05	5.32E-06	2.93E-06	1.86E-06	7.10E-07	2.59E-07	4.74E-07	4.43E-07	2.52E-07	0.00E+00	0.00E+00
1.55E-04	8.57E-05	4.74E-05	2.62E-05	1.45E-05	8.05E-06	4.47E-06	2.48E-06	1.39E-06	7.63E-07	4.46E-07	2.11E-07	1.43E-07	6.68E-08	4.66E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.12E-04	2.28E-04	1.26E-04	6.95E-05	3.84E-05	2.13E-05	1.18E-05	6.52E-06	3.61E-06	2.00E-06	1.11E-06	6.16E-07	3.42E-07	1.90E-07	1.05E-07
1.41E-03	7.80E-04	4.31E-04	2.39E-04	1.32E-04	7.31E-05	4.05E-05	2.25E-05	1.25E-05	6.91E-06	3.84E-06	2.13E-06	1.18E-06	6.57E-07	3.65E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.62E-04	8.93E-05	4.94E-05	2.73E-05	1.51E-05	8.35E-06	4.62E-06	2.56E-06	1.42E-06	7.87E-07	4.37E-07	2.42E-07	1.35E-07	7.47E-08	4.15E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.58E-04	1.98E-04	1.09E-04	6.02E-05	3.33E-05	1.84E-05	1.02E-05	5.63E-06	3.12E-06	1.73E-06	9.57E-07	5.30E-07	2.93E-07	1.63E-07	9.20E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.16E-03	6.40E-04	3.54E-04	1.96E-04	1.08E-04	5.99E-05	3.32E-05	1.84E-05	1.02E-05	5.65E-06	3.13E-06	1.74E-06	9.66E-07	5.37E-07	2.98E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.17E-04	2.86E-04	1.58E-04	8.73E-05	4.84E-05	2.68E-05	1.48E-05	8.23E-06	4.56E-06	2.53E-06	1.41E-06	7.80E-07	4.34E-07	2.41E-07	1.34E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.98E-06	4.42E-06	0.00E+00	3.12E-04	1.75E-04	9.86E-05	1.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.55E-04	8.57E-05	4.73E-05	2.62E-05	1.45E-05	8.01E-06	4.44E-06	2.46E-06	1.36E-06	7.55E-07	4.19E-07	2.33E-07	1.29E-07	7.17E-08	3.98E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.77E-04	1.53E-04	8.45E-05	4.67E-05	2.58E-05	1.43E-05	7.92E-06	4.39E-06	2.43E-06	1.35E-06	7.49E-07	4.16E-07	2.31E-07	1.28E-07	7.13E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.11E-04	1.69E-04	9.62E-05	5.32E-05	2.87E-05	1.52E-05	6.98E-06	5.02E-06	6.19E-07	0.00E+00	7.14E-07	1.59E-06	0.00E+00	2.47E-06	7.98E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.62E-03	2.02E-03	6.43E-04	0.00E+00	0.00E+00	0.00E+00	1.23E-03	6.73E-04	7.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.65E-05	5.18E-05	3.16E-05	1.95E-05	9.67E-06	8.00E-06	5.63E-06	0.00E+00	4.81E-06	3.33E-06	1.69E-06	8.53E-07	9.09E-07	0.00E+00	0.00E+00
2.09E-03	1.15E-03	6.35E-04	3.51E-04	1.93E-04	1.07E-04	5.86E-05	3.25E-05	1.78E-05	9.91E-06	5.29E-06	3.29E-06	1.73E-06	6.82E-07	2.95E-07
9.87E-03	5.44E-03	3.00E-03	1.66E-03	9.14E-04	5.05E-04	2.79E-04	1.54E-04	8.54E-05	4.73E-05	2.62E-05	1.45E-05	8.05E-06	4.46E-06	2.47E-06
7.36E-04	4.06E-04	2.24E-04	1.24E-04	6.85E-05	3.80E-05	2.10E-05	1.17E-05	6.52E-06	3.60E-06	1.98E-06	1.09E-06	6.37E-07	2.83E-07	1.66E-07
1.83E-04	1.01E-04	5.65E-05	3.17E-05	1.74E-05	9.83E-06	5.42E-06	3.57E-06	1.14E-06	1.12E-06	8.78E-07	0.00E+00	7.72E-07	4.23E-07	2.28E-07
7.60E-04	4.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.91E-04	1.05E-04	5.82E-05	3.21E-05	1.78E-05	9.83E-06	5.44E-06	3.01E-06	1.67E-06	9.25E-07	5.13E-07	2.85E-07	1.58E-07	8.78E-08	4.88E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.28E-04	3.46E-04	1.91E-04	1.05E-04	5.81E-05	3.21E-05	1.77E-05	9.72E-06	5.53E-06	2.99E-06	1.64E-06	9.61E-07	4.25E-07	3.26E-07	1.48E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.71E-03	1.50E-03	8.31E-04	4.61E-04	2.56E-04	1.42E-04	7.88E-05	4.37E-05	2.43E-05	1.35E-05	7.51E-06	4.18E-06	2.32E-06	1.29E-06	7.20E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.54E-04	3.06E-04	1.69E-04	9.34E-05	5.17E-05	2.86E-05	1.58E-05	8.77E-06	4.86E-06	2.70E-06	1.50E-06	8.30E-07	4.61E-07	2.56E-07	1.42E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2.23E-04	1.23E-04	6.79E-05	3.75E-05	2.07E-05	1.15E-05	6.34E-06	3.51E-06	1.94E-06	1.08E-06	5.97E-07	3.31E-07	1.84E-07	1.02E-07	5.66E-08
3.19E-04	1.76E-04	9.69E-05	5.35E-05	2.95E-05	1.63E-05	8.99E-06	5.04E-06	2.75E-06	1.55E-06	8.57E-07	4.91E-07	2.68E-07	1.83E-07	8.13E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.77E-04	1.53E-04	8.50E-05	4.71E-05	2.61E-05	1.45E-05	8.04E-06	4.47E-06	2.48E-06	1.38E-06	7.66E-07	4.26E-07	2.37E-07	1.32E-07	7.34E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E-04	7.19E-05	3.97E-05	2.19E-05	1.21E-05	6.70E-06	3.70E-06	2.05E-06	1.14E-06	6.29E-07	3.49E-07	1.93E-07	1.07E-07	5.94E-08	3.30E-08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.77E-03	2.09E-03	1.16E-03	6.40E-04	3.54E-04	1.99E-04	1.10E-04	6.02E-05	3.33E-05	1.78E-05	1.03E-05	4.86E-06	3.81E-06	2.33E-06	9.67E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E-02	**5.44E-03**	**3.00E-03**	**1.66E-03**	**9.14E-04**	**5.05E-04**	**1.23E-03**	**6.73E-04**	**7.50E-04**	**4.73E-05**	**2.62E-05**	**1.45E-05**	**8.05E-06**	**4.46E-06**	**2.47E-06**

590	600	610	620	630	640	650	660	670	680	690	700	710	720	730
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.47E-07	8.17E-08	4.55E-08	2.53E-08	1.41E-08	7.86E-09	4.38E-09	2.44E-09	1.36E-09	7.60E-10	4.24E-10	2.37E-10	1.32E-10	7.38E-11	4.12E-11
2.18E-07	1.06E-07	1.09E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	1.99E-07	2.02E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.44E-09	0.00E+00	5.33E-09	0.00E+00	1.20E-08	6.98E-09	3.89E-09	2.44E-09	1.11E-09	5.04E-10	4.97E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.85E-08	3.25E-08	1.81E-08	1.01E-08	5.60E-09	3.12E-09	1.74E-09	9.67E-10	5.39E-10	3.00E-10	1.67E-10	9.33E-11	5.20E-11	2.90E-11	1.62E-11
2.03E-07	1.13E-07	6.31E-08	3.52E-08	1.94E-08	1.08E-08	5.94E-09	3.24E-09	1.98E-09	1.11E-09	5.04E-10	3.92E-10	1.26E-10	1.53E-10	7.92E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.31E-08	1.28E-08	7.14E-09	3.97E-09	2.21E-09	1.23E-09	6.85E-10	3.82E-10	2.13E-10	1.19E-10	6.62E-11	3.69E-11	2.06E-11	1.15E-11	6.41E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.97E-08	2.86E-08	1.68E-08	9.09E-09	4.37E-09	2.30E-09	2.01E-09	9.09E-10	1.82E-10	3.66E-11	5.48E-10	0.00E+00	0.00E+00	0.00E+00	2.67E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.66E-07	9.22E-08	5.13E-08	2.85E-08	1.59E-08	8.85E-09	4.93E-09	2.75E-09	1.53E-09	8.54E-10	4.76E-10	2.66E-10	1.48E-10	8.27E-11	4.62E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.45E-08	4.15E-08	2.31E-08	1.29E-08	7.16E-09	3.99E-09	2.22E-09	1.24E-09	6.90E-10	3.85E-10	2.15E-10	1.20E-10	6.69E-11	3.74E-11	2.09E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.21E-08	1.23E-08	6.85E-09	3.81E-09	2.12E-09	1.18E-09	6.57E-10	3.66E-10	2.04E-10	1.14E-10	6.34E-11	3.54E-11	1.97E-11	1.10E-11	6.14E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.96E-08	2.20E-08	1.23E-08	6.83E-09	3.80E-09	2.12E-09	1.18E-09	6.57E-10	3.66E-10	2.04E-10	1.14E-10	6.36E-11	3.55E-11	1.98E-11	1.11E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.54E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.50E-07	0.00E+00	0.00E+00	2.39E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.71E-08	9.36E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.37E-06	7.64E-07	4.25E-07	2.34E-07	1.30E-07	7.38E-08	4.01E-08	2.33E-08	1.31E-08	6.13E-09	3.32E-09	1.74E-09	1.87E-09	8.22E-10	6.89E-10
1.54E-07	8.77E-08	2.46E-08	4.08E-08	0.00E+00	4.52E-08	2.64E-08	1.48E-08	9.28E-09	4.30E-09	4.10E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E-07	9.04E-08	4.32E-08	4.56E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.71E-08	1.51E-08	8.38E-09	4.66E-09	2.59E-09	1.44E-09	8.04E-10	4.48E-10	2.50E-10	1.39E-10	7.76E-11	4.33E-11	2.41E-11	1.35E-11	7.52E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.68E-07	2.56E-08	6.87E-08	5.88E-08	0.00E+00	6.40E-08	2.97E-08	1.38E-08	1.38E-08	1.34E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.01E-07	2.24E-07	1.25E-07	6.94E-08	3.87E-08	2.16E-08	1.21E-08	6.72E-09	3.75E-09	2.10E-09	1.17E-09	6.54E-10	3.65E-10	2.04E-10	1.14E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.91E-08	4.40E-08	2.45E-08	1.36E-08	7.58E-09	4.22E-09	2.35E-09	1.31E-09	7.30E-10	4.07E-10	2.27E-10	1.27E-10	7.07E-11	3.94E-11	2.20E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

3.14E-08	1.75E-08	9.71E-09	5.40E-09	3.00E-09	1.67E-09	9.30E-10	5.18E-10	2.89E-10	1.61E-10	8.96E-11	4.99E-11	2.78E-11	1.55E-11	8.66E-12
3.97E-08	2.82E-08	3.32E-08	0.00E+00	1.07E-08	3.10E-08	2.67E-08	2.36E-09	0.00E+00	2.04E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.09E-08	2.28E-08	1.27E-08	7.07E-09	3.94E-09	2.20E-09	1.23E-09	6.84E-10	3.82E-10	2.13E-10	1.19E-10	6.65E-11	3.71E-11	2.08E-11	1.16E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.84E-08	1.02E-08	5.71E-09	3.18E-09	1.76E-09	9.81E-10	5.76E-10	3.23E-10	1.45E-10	8.48E-11	4.12E-11	4.16E-11	2.15E-11	1.77E-12	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.68E-07	0.00E+00	8.86E-07	4.49E-07	2.48E-07	1.54E-07	6.92E-08	6.69E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.37E-06	**7.64E-07**	**8.86E-07**	**4.49E-07**	**2.48E-07**	**1.54E-07**	**6.92E-08**	**6.69E-08**	**9.71E-08**	**9.36E-08**	**4.10E-09**	**1.74E-09**	**1.87E-09**	**8.22E-10**	**6.89E-10**

740	750	760	770	780	790	800	810	820	830	840	850	860	870	880
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E-11	1.29E-11	7.19E-12	4.02E-12	2.25E-12	1.26E-12	7.03E-13	3.93E-13	2.20E-13	1.23E-13	6.89E-14	3.86E-14	2.16E-14	1.21E-14	6.78E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.04E-12	5.05E-12	2.82E-12	1.58E-12	8.80E-13	4.92E-13	2.75E-13	1.53E-13	8.57E-14	4.84E-14	2.68E-14	1.50E-14	8.46E-15	4.55E-15	2.63E-15
2.16E-11	1.48E-11	2.72E-11	0.00E+00	0.00E+00	1.46E-11	9.36E-12	5.29E-12	2.19E-12	1.92E-12	1.67E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.58E-12	2.00E-12	1.12E-12	6.24E-13	3.49E-13	1.95E-13	1.09E-13	6.08E-14	3.40E-14	1.91E-14	1.06E-14	5.94E-15	3.37E-15	1.84E-15	1.03E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.17E-10	1.07E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.58E-11	1.44E-11	8.05E-12	4.50E-12	2.51E-12	1.41E-12	7.85E-13	4.39E-13	2.46E-13	1.38E-13	7.69E-14	4.31E-14	2.41E-14	1.35E-14	7.56E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.17E-11	6.51E-12	3.64E-12	2.03E-12	1.14E-12	6.36E-13	3.56E-13	1.99E-13	1.11E-13	6.23E-14	3.49E-14	1.95E-14	1.09E-14	6.12E-15	3.43E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.43E-12	1.92E-12	1.07E-12	5.98E-13	3.34E-13	1.87E-13	1.04E-13	5.83E-14	3.26E-14	1.82E-14	1.02E-14	5.71E-15	3.20E-15	1.79E-15	1.00E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

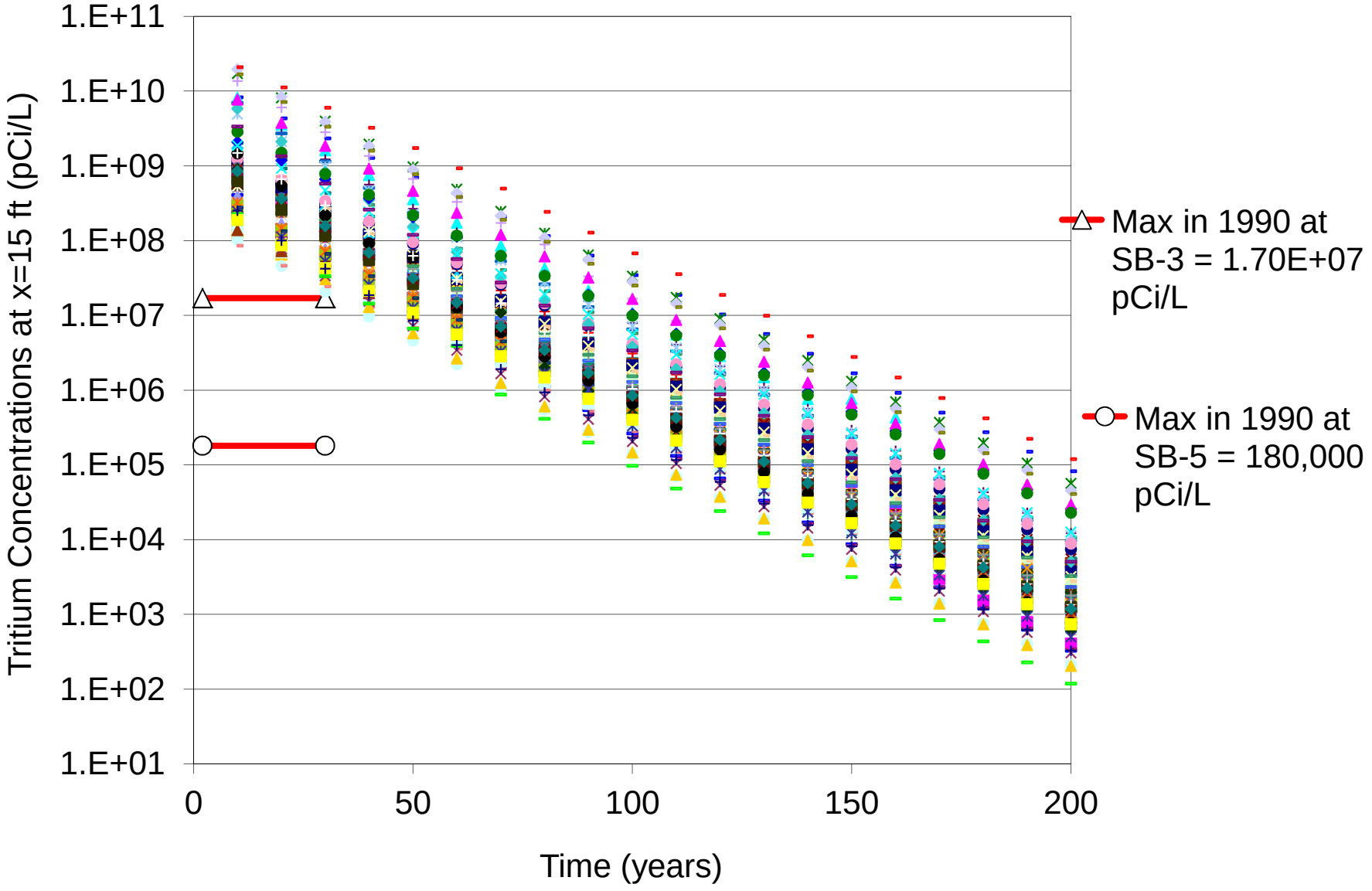
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.17E-12	3.45E-12	1.93E-12	1.08E-12	6.02E-13	3.37E-13	1.88E-13	1.05E-13	5.89E-14	3.30E-14	1.84E-14	1.03E-14	5.78E-15	3.24E-15	1.81E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.01E-10	5.81E-12	0.00E+00	0.00E+00	1.59E-10	0.00E+00	2.30E-10	9.75E-11	8.56E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.20E-12	2.34E-12	1.31E-12	7.31E-13	4.09E-13	2.29E-13	1.28E-13	7.14E-14	4.00E-14	2.24E-14	1.25E-14	7.02E-15	3.91E-15	2.22E-15	1.23E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.38E-11	3.57E-11	2.00E-11	1.12E-11	6.24E-12	3.49E-12	1.96E-12	1.10E-12	6.13E-13	3.43E-13	1.92E-13	1.08E-13	6.04E-14	3.38E-14	1.90E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.23E-11	6.87E-12	3.84E-12	2.14E-12	1.20E-12	6.70E-13	3.75E-13	2.10E-13	1.17E-13	6.56E-14	3.67E-14	2.05E-14	1.15E-14	6.44E-15	3.60E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

4.84E-12	2.70E-12	1.51E-12	8.41E-13	4.70E-13	2.62E-13	1.47E-13	8.20E-14	4.58E-14	2.57E-14	1.44E-14	8.01E-15	4.47E-15	2.51E-15	1.41E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.48E-12	3.63E-12	2.03E-12	1.13E-12	6.35E-13	3.55E-13	1.99E-13	1.11E-13	6.23E-14	3.49E-14	1.95E-14	1.10E-14	6.13E-15	3.44E-15	1.93E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.20E-12	0.00E+00	0.00E+00	3.94E-12	2.61E-12	1.50E-12	6.20E-13	5.71E-13	5.13E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.01E-10	**1.07E-10**	**2.72E-11**	**1.12E-11**	**1.59E-10**	**1.46E-11**	**2.30E-10**	**9.75E-11**	**8.56E-11**	**1.92E-12**	**1.67E-12**	**1.08E-13**	**6.04E-14**	**3.38E-14**	**1.90E-14**

890	900	910	920	930	940	950	960	970	980	990	1000	Max Surface Concentration (pCi/L)
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.04E+06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.80E-15	2.13E-15	1.19E-15	6.68E-16	3.74E-16	2.10E-16	1.18E-16	6.60E-17	3.70E-17	2.08E-17	1.17E-17	6.53E-18	1.29E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.82E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.65E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.99E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E+07
1.55E-15	8.46E-16	4.38E-16	2.80E-16	1.22E-16	7.38E-17	4.17E-17	3.15E-17	1.39E-17	5.90E-18	3.60E-18	1.43E-18	1.59E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+07
5.95E-16	3.32E-16	1.79E-16	9.63E-17	6.37E-17	3.59E-17	1.81E-17	1.17E-17	4.39E-18	1.54E-18	5.17E-19	1.51E-18	1.22E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E+06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.17E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.73E+07
4.23E-15	2.37E-15	1.33E-15	7.44E-16	4.17E-16	2.34E-16	1.31E-16	7.36E-17	4.13E-17	2.32E-17	1.30E-17	7.30E-18	7.85E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.92E-15	1.08E-15	6.03E-16	3.38E-16	1.90E-16	1.06E-16	5.96E-17	3.34E-17	1.88E-17	1.05E-17	5.90E-18	3.31E-18	1.31E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.65E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+08
5.61E-16	3.14E-16	1.76E-16	9.85E-17	5.52E-17	3.09E-17	1.73E-17	9.72E-18	5.45E-18	3.06E-18	1.71E-18	9.61E-19	8.42E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E+07

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.40E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E+08
1.02E-15	5.69E-16	3.19E-16	1.79E-16	1.00E-16	5.61E-17	3.15E-17	1.77E-17	9.90E-18	5.55E-18	3.12E-18	1.75E-18	2.49E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.46E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.58E+06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.89E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E+06
7.00E-16	3.84E-16	2.11E-16	1.14E-16	6.29E-17	3.98E-17	2.28E-17	1.45E-17	5.22E-18	2.37E-18	1.08E-18	1.45E-18	1.99E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.91E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.33E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+09
1.06E-14	5.96E-15	3.34E-15	1.87E-15	1.05E-15	5.90E-16	3.31E-16	1.86E-16	1.04E-16	5.85E-17	3.28E-17	1.84E-17	2.29E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E+08
2.02E-15	1.13E-15	6.34E-16	3.55E-16	1.99E-16	1.12E-16	6.25E-17	3.51E-17	1.97E-17	1.10E-17	6.19E-18	3.47E-18	3.81E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.33E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E+07

7.89E-16	4.39E-16	2.45E-16	1.41E-16	7.92E-17	4.45E-17	2.41E-17	1.35E-17	6.99E-18	4.72E-18	2.42E-18	1.52E-18	2.08E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.10E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E+06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E+08
1.08E-15	6.05E-16	3.39E-16	1.90E-16	1.07E-16	5.99E-17	3.36E-17	1.89E-17	1.06E-17	5.94E-18	3.33E-18	1.87E-18	2.57E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.98E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.44E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.58E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.62E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.62E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.06E-14	**5.96E-15**	**3.34E-15**	**1.87E-15**	**1.05E-15**	**5.90E-16**	**3.31E-16**	**1.86E-16**	**1.04E-16**	**5.85E-17**	**3.28E-17**	**1.84E-17**	**8.89E+09**


1.E+11
1.E+10
1.E+09
1.E+08
1.E+07
1.E+06
1.E+05
1.E+04
1.E+03
1.E+02
1.E+01
Tritium Concentrations at x=15 ft (pCi/L)
0
50
100
150
200
Time (years)
Max in 1990 at SB-3 = 1.70E+07 pCi/L
Max in 1990 at SB-5 = 180,000 pCi/L

Tritium Concentration (pCi/L) at x=15 ft for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130
1	1.08E+09	3.78E+08	1.47E+08	6.14E+07	2.70E+07	1.23E+07	5.78E+06	2.77E+06	1.35E+06	6.69E+05	3.35E+05	1.69E+05	8.63E+04
2	2.29E+08	1.23E+08	6.43E+07	3.34E+07	1.73E+07	8.94E+06	4.64E+06	2.41E+06	1.26E+06	6.59E+05	3.46E+05	1.82E+05	9.65E+04
3	3.58E+08	1.80E+08	9.40E+07	4.98E+07	2.66E+07	1.42E+07	7.67E+06	4.14E+06	2.24E+06	1.22E+06	6.60E+05	3.59E+05	1.96E+05
4	1.15E+09	5.53E+08	2.65E+08	1.29E+08	6.31E+07	3.14E+07	1.57E+07	7.97E+06	4.07E+06	2.09E+06	1.08E+06	5.63E+05	2.94E+05
5	7.00E+08	3.48E+08	1.79E+08	9.34E+07	4.90E+07	2.58E+07	1.36E+07	7.21E+06	3.83E+06	2.04E+06	1.09E+06	5.80E+05	3.11E+05
6	2.45E+08	1.15E+08	5.45E+07	2.62E+07	1.27E+07	6.28E+06	3.13E+06	1.58E+06	8.00E+05	4.09E+05	2.11E+05	1.09E+05	5.70E+04
7	2.58E+08	1.09E+08	4.85E+07	2.23E+07	1.05E+07	5.04E+06	2.47E+06	1.22E+06	6.12E+05	3.10E+05	1.58E+05	8.12E+04	4.20E+04
8	8.24E+09	4.32E+09	2.34E+09	1.28E+09	7.00E+08	3.84E+08	2.10E+08	1.15E+08	6.30E+07	3.45E+07	1.88E+07	1.03E+07	5.62E+06
9	7.77E+08	4.27E+08	2.31E+08	1.23E+08	6.52E+07	3.44E+07	1.81E+07	9.50E+06	5.00E+06	2.64E+06	1.39E+06	7.36E+05	3.90E+05
10	4.15E+08	1.59E+08	6.59E+07	2.88E+07	1.31E+07	6.16E+06	2.96E+06	1.44E+06	7.15E+05	3.59E+05	1.82E+05	9.27E+04	4.77E+04
11	1.80E+08	8.89E+07	4.52E+07	2.33E+07	1.22E+07	6.39E+06	3.37E+06	1.79E+06	9.49E+05	5.05E+05	2.70E+05	1.44E+05	7.74E+04
12	2.21E+08	1.36E+08	7.61E+07	4.10E+07	2.17E+07	1.14E+07	5.98E+06	3.13E+06	1.64E+06	8.64E+05	4.55E+05	2.40E+05	1.27E+05
13	4.00E+08	2.08E+08	1.07E+08	5.52E+07	2.85E+07	1.47E+07	7.76E+06	4.09E+06	2.22E+06	9.00E+05	4.65E+05	2.41E+05	1.26E+05
14	3.50E+08	1.49E+08	6.79E+07	3.18E+07	1.52E+07	7.39E+06	3.64E+06	1.81E+06	9.11E+05	4.63E+05	2.37E+05	1.22E+05	6.31E+04
15	5.61E+08	2.44E+08	1.17E+08	5.79E+07	2.91E+07	1.47E+07	7.53E+06	3.88E+06	2.01E+06	1.05E+06	5.46E+05	2.87E+05	1.51E+05
16	1.09E+09	5.76E+08	3.03E+08	1.58E+08	8.29E+07	4.34E+07	2.28E+07	1.20E+07	6.31E+06	3.33E+06	1.77E+06	9.37E+05	4.99E+05
17	4.69E+08	2.49E+08	1.36E+08	7.42E+07	4.07E+07	2.23E+07	1.23E+07	6.73E+06	3.69E+06	2.03E+06	1.11E+06	6.12E+05	3.37E+05
18	2.02E+08	9.49E+07	4.62E+07	2.29E+07	1.15E+07	5.81E+06	2.96E+06	1.52E+06	7.87E+05	4.10E+05	2.14E+05	1.12E+05	5.92E+04
19	1.42E+08	7.83E+07	4.36E+07	2.43E+07	1.35E+07	7.50E+06	4.15E+06	2.30E+06	1.27E+06	6.99E+05	3.86E+05	2.13E+05	1.17E+05
20	1.21E+08	6.52E+07	3.58E+07	1.97E+07	1.08E+07	5.93E+06	3.26E+06	1.79E+06	9.85E+05	5.42E+05	2.98E+05	1.64E+05	9.04E+04
21	5.56E+08	2.44E+08	1.15E+08	4.73E+07	2.20E+07	1.04E+07	5.04E+06	2.47E+06	1.23E+06	6.16E+05	3.12E+05	1.59E+05	8.19E+04
22	1.49E+09	6.31E+08	2.86E+08	1.16E+08	5.34E+07	2.52E+07	1.21E+07	5.93E+06	2.93E+06	1.47E+06	7.42E+05	3.78E+05	1.94E+05
23	5.20E+08	2.43E+08	1.18E+08	5.82E+07	2.90E+07	1.46E+07	7.37E+06	3.76E+06	1.93E+06	9.97E+05	5.18E+05	2.71E+05	1.42E+05
24	3.87E+08	1.71E+08	8.05E+07	3.68E+07	1.78E+07	8.70E+06	4.31E+06	2.16E+06	1.09E+06	5.56E+05	2.85E+05	1.47E+05	7.65E+04
25	1.39E+09	6.33E+08	3.04E+08	1.49E+08	7.43E+07	3.74E+07	1.90E+07	9.73E+06	5.02E+06	2.60E+06	1.36E+06	7.11E+05	3.74E+05
26	2.78E+09	1.25E+09	6.02E+08	3.01E+08	1.53E+08	7.83E+07	4.05E+07	2.10E+07	1.10E+07	5.76E+06	3.04E+06	1.60E+06	8.50E+05
27	4.95E+08	2.28E+08	1.12E+08	5.64E+07	2.87E+07	1.47E+07	7.58E+06	3.93E+06	2.05E+06	1.07E+06	5.64E+05	2.98E+05	1.58E+05
28	1.46E+09	6.18E+08	2.85E+08	1.36E+08	6.58E+07	3.24E+07	1.61E+07	8.10E+06	4.11E+06	2.10E+06	1.08E+06	5.56E+05	2.78E+05
29	8.23E+08	4.00E+08	2.00E+08	1.02E+08	5.32E+07	2.79E+07	1.48E+07	7.87E+06	4.21E+06	2.26E+06	1.21E+06	6.53E+05	3.53E+05
30	4.22E+08	1.88E+08	8.98E+07	4.40E+07	2.19E+07	1.10E+07	5.58E+06	2.85E+06	1.47E+06	7.58E+05	3.94E+05	2.06E+05	1.08E+05
31	9.51E+08	4.54E+08	2.24E+08	1.13E+08	5.75E+07	2.94E+07	1.51E+07	7.83E+06	4.07E+06	2.12E+06	1.11E+06	5.85E+05	3.09E+05
32	1.82E+08	8.10E+07	3.92E+07	1.95E+07	9.85E+06	5.02E+06	2.58E+06	1.33E+06	6.92E+05	3.61E+05	1.90E+05	9.99E+04	5.28E+04
33	3.78E+08	1.69E+08	7.83E+07	3.72E+07	1.80E+07	8.83E+06	4.39E+06	2.20E+06	1.12E+06	5.69E+05	2.99E+05	1.85E+05	9.91E+04
34	1.31E+09	6.59E+08	3.28E+08	1.64E+08	8.28E+07	4.21E+07	2.16E+07	1.13E+07	5.87E+06	3.08E+06	1.62E+06	8.97E+05	3.33E+05
35	8.23E+08	3.91E+08	1.88E+08	9.12E+07	4.61E+07	2.35E+07	9.09E+06	4.49E+06	2.24E+06	1.13E+06	5.74E+05	2.94E+05	1.51E+05

36	4.07E+08	1.61E+08	5.77E+07	2.45E+07	1.09E+07	4.96E+06	2.33E+06	1.11E+06	5.39E+05	2.65E+05	1.32E+05	6.60E+04	3.33E+04
37	8.52E+08	4.06E+08	1.96E+08	9.51E+07	4.68E+07	2.32E+07	1.16E+07	5.88E+06	3.00E+06	1.54E+06	7.94E+05	4.12E+05	2.15E+05
38	8.65E+08	3.42E+08	1.44E+08	6.39E+07	2.93E+07	1.38E+07	6.62E+06	3.23E+06	1.60E+06	8.02E+05	4.06E+05	2.07E+05	1.03E+05
39	8.21E+09	3.55E+09	1.62E+09	7.54E+08	3.59E+08	1.74E+08	8.55E+07	4.25E+07	2.14E+07	1.08E+07	5.54E+06	2.86E+06	1.48E+06
40	5.76E+08	2.99E+08	1.57E+08	8.35E+07	4.49E+07	2.43E+07	1.32E+07	7.19E+06	3.93E+06	2.16E+06	1.18E+06	6.50E+05	3.57E+05
41	1.72E+10	8.15E+09	3.97E+09	1.96E+09	9.74E+08	4.89E+08	2.47E+08	1.26E+08	6.47E+07	3.34E+07	1.74E+07	9.06E+06	4.75E+06
42	1.03E+09	5.78E+08	3.17E+08	1.71E+08	9.12E+07	4.84E+07	2.57E+07	1.36E+07	7.20E+06	3.82E+06	2.03E+06	1.08E+06	5.76E+05
43	1.13E+09	5.33E+08	2.58E+08	1.27E+08	6.29E+07	3.16E+07	1.60E+07	8.17E+06	4.37E+06	2.29E+06	1.19E+06	5.75E+05	2.22E+05
44	2.80E+08	1.10E+08	4.52E+07	1.97E+07	8.91E+06	4.16E+06	1.98E+06	9.65E+05	4.76E+05	2.38E+05	1.20E+05	6.12E+04	3.14E+04
45	8.12E+08	3.59E+08	1.64E+08	7.66E+07	3.65E+07	1.77E+07	8.72E+06	4.35E+06	2.19E+06	1.11E+06	5.69E+05	2.93E+05	1.52E+05
46	2.74E+08	1.34E+08	6.69E+07	3.36E+07	1.70E+07	8.68E+06	4.45E+06	2.30E+06	1.19E+06	6.22E+05	3.26E+05	1.72E+05	9.07E+04
47	2.96E+08	1.37E+08	6.71E+07	3.37E+07	1.72E+07	8.80E+06	4.55E+06	2.36E+06	1.23E+06	6.46E+05	3.40E+05	1.80E+05	9.51E+04
48	3.94E+08	1.70E+08	7.67E+07	3.56E+07	1.69E+07	8.19E+06	4.03E+06	2.00E+06	1.01E+06	5.12E+05	2.62E+05	1.35E+05	7.00E+04
49	8.16E+08	3.41E+08	1.51E+08	6.89E+07	3.24E+07	1.55E+07	7.58E+06	3.76E+06	1.88E+06	9.52E+05	4.86E+05	2.50E+05	1.29E+05
50	5.34E+08	2.68E+08	1.36E+08	7.02E+07	3.66E+07	1.93E+07	1.02E+07	5.41E+06	2.88E+06	1.54E+06	8.24E+05	4.42E+05	2.38E+05
51	1.04E+08	4.58E+07	2.07E+07	9.63E+06	4.58E+06	2.21E+06	1.09E+06	5.40E+05	2.71E+05	1.38E+05	7.03E+04	3.62E+04	1.87E+04
52	6.67E+09	2.76E+09	1.23E+09	5.63E+08	2.66E+08	1.28E+08	6.26E+07	3.11E+07	1.56E+07	7.90E+06	4.04E+06	2.08E+06	1.08E+06
53	8.55E+07	4.63E+07	2.45E+07	1.29E+07	6.82E+06	3.60E+06	1.90E+06	1.00E+06	5.31E+05	2.82E+05	1.50E+05	7.98E+04	4.26E+04
54	6.93E+09	2.72E+09	1.15E+09	5.08E+08	2.33E+08	1.10E+08	5.31E+07	2.60E+07	1.29E+07	6.50E+06	3.30E+06	1.69E+06	8.71E+05
55	1.95E+10	8.41E+09	3.88E+09	1.84E+09	8.86E+08	4.34E+08	2.16E+08	1.08E+08	5.49E+07	2.81E+07	1.44E+07	7.48E+06	3.89E+06
56	1.09E+09	5.10E+08	2.47E+08	1.22E+08	6.09E+07	3.07E+07	1.56E+07	8.01E+06	4.13E+06	2.14E+06	1.12E+06	5.85E+05	3.08E+05
57	2.33E+08	1.13E+08	5.68E+07	2.91E+07	1.50E+07	7.79E+06	4.07E+06	2.13E+06	1.12E+06	5.92E+05	3.13E+05	1.66E+05	8.85E+04
58	1.99E+08	9.36E+07	4.60E+07	2.31E+07	1.17E+07	6.00E+06	3.09E+06	1.60E+06	8.32E+05	4.35E+05	2.28E+05	1.20E+05	6.34E+04
59	2.02E+08	1.06E+08	5.63E+07	2.99E+07	1.55E+07	8.12E+06	4.27E+06	2.24E+06	1.18E+06	6.24E+05	3.30E+05	1.75E+05	9.32E+04
60	2.88E+08	1.30E+08	6.10E+07	2.94E+07	1.44E+07	7.12E+06	3.57E+06	1.81E+06	9.24E+05	4.75E+05	2.46E+05	1.28E+05	6.71E+04
61	1.68E+08	9.42E+07	5.28E+07	2.95E+07	1.64E+07	9.10E+06	5.05E+06	2.80E+06	1.55E+06	8.59E+05	4.76E+05	2.64E+05	1.46E+05
62	2.02E+09	9.19E+08	4.35E+08	2.10E+08	1.03E+08	5.11E+07	2.56E+07	1.30E+07	6.61E+06	3.39E+06	1.75E+06	9.11E+05	4.76E+05
63	6.03E+08	2.85E+08	1.34E+08	6.33E+07	3.04E+07	1.48E+07	7.27E+06	3.62E+06	1.82E+06	9.26E+05	4.73E+05	3.53E+05	1.86E+05
64	1.72E+09	6.41E+08	2.61E+08	1.13E+08	4.05E+07	3.19E+07	7.19E+06	3.40E+06	1.63E+06	7.96E+05	3.92E+05	1.96E+05	9.82E+04
65	1.47E+08	6.99E+07	3.48E+07	1.76E+07	9.03E+06	4.66E+06	2.42E+06	1.26E+06	6.59E+05	3.46E+05	1.82E+05	9.64E+04	5.12E+04
66	6.45E+08	3.10E+08	1.55E+08	7.86E+07	4.04E+07	2.09E+07	1.09E+07	5.71E+06	3.00E+06	1.58E+06	8.35E+05	4.43E+05	2.36E+05
67	1.40E+09	6.09E+08	2.80E+08	1.32E+08	6.35E+07	3.10E+07	1.54E+07	7.71E+06	3.91E+06	1.99E+06	1.03E+06	5.30E+05	2.76E+05
68	4.93E+09	2.12E+09	9.79E+08	4.66E+08	2.26E+08	1.11E+08	5.50E+07	2.76E+07	1.40E+07	7.15E+06	3.67E+06	1.90E+06	9.89E+05
69	1.23E+09	6.43E+08	3.39E+08	1.80E+08	9.57E+07	5.10E+07	2.72E+07	1.45E+07	7.75E+06	4.15E+06	2.23E+06	1.20E+06	6.44E+05
70	1.37E+10	6.03E+09	2.83E+09	1.36E+09	6.68E+08	3.30E+08	1.73E+08	8.86E+07	3.33E+07	1.67E+07	8.48E+06	4.32E+06	2.22E+06
71	1.41E+09	5.96E+08	2.69E+08	1.25E+08	5.97E+07	2.89E+07	1.42E+07	7.06E+06	3.55E+06	1.80E+06	9.21E+05	4.74E+05	2.45E+05
72	6.55E+08	2.92E+08	1.42E+08	7.04E+07	3.55E+07	1.80E+07	9.23E+06	4.76E+06	2.47E+06	1.29E+06	6.74E+05	3.55E+05	1.87E+05
73	5.87E+09	2.11E+09	8.29E+08	3.49E+08	1.54E+08	7.05E+07	3.31E+07	1.59E+07	7.72E+06	3.82E+06	1.91E+06	9.61E+05	4.89E+05
74	2.96E+08	1.37E+08	6.50E+07	3.13E+07	1.52E+07	7.49E+06	3.73E+06	1.88E+06	9.51E+05	4.86E+05	2.50E+05	1.29E+05	6.71E+04
75	2.19E+08	7.78E+07	3.07E+07	1.30E+07	5.76E+06	2.65E+06	1.25E+06	6.04E+05	2.96E+05	1.47E+05	7.39E+04	3.75E+04	1.92E+04

76	2.62E+08	1.41E+08	7.43E+07	3.91E+07	2.06E+07	1.09E+07	5.74E+06	3.04E+06	1.62E+06	8.63E+05	4.63E+05	2.48E+05	1.34E+05
77	3.24E+08	1.47E+08	7.12E+07	3.50E+07	1.75E+07	8.79E+06	4.46E+06	2.28E+06	1.18E+06	6.09E+05	3.17E+05	1.66E+05	8.73E+04
78	9.36E+08	3.67E+08	1.55E+08	6.92E+07	3.19E+07	1.51E+07	7.29E+06	3.58E+06	1.78E+06	8.98E+05	4.56E+05	2.34E+05	1.21E+05
79	6.10E+08	3.19E+08	1.62E+08	8.21E+07	4.15E+07	2.10E+07	1.06E+07	5.83E+06	2.95E+06	1.15E+06	5.88E+05	3.03E+05	1.57E+05
80	2.77E+08	1.34E+08	6.68E+07	3.36E+07	1.71E+07	8.71E+06	4.47E+06	2.31E+06	1.20E+06	6.22E+05	3.25E+05	1.71E+05	8.99E+04
81	8.42E+08	3.95E+08	1.89E+08	9.23E+07	4.56E+07	2.28E+07	1.15E+07	5.82E+06	2.97E+06	1.53E+06	7.90E+05	4.11E+05	2.14E+05
82	9.09E+08	3.54E+08	1.47E+08	6.44E+07	2.92E+07	1.41E+07	1.10E+07	2.00E+06	9.70E+05	4.76E+05	2.37E+05	1.19E+05	6.01E+04
83	6.23E+08	2.59E+08	1.17E+08	5.48E+07	2.62E+07	1.27E+07	6.28E+06	3.13E+06	1.58E+06	8.03E+05	4.11E+05	2.12E+05	1.10E+05
84	1.38E+08	7.21E+07	3.78E+07	1.99E+07	1.05E+07	5.56E+06	2.95E+06	1.57E+06	8.34E+05	4.45E+05	2.38E+05	1.27E+05	6.83E+04
85	1.86E+08	7.74E+07	3.39E+07	1.54E+07	7.17E+06	3.42E+06	1.66E+06	8.16E+05	4.07E+05	2.05E+05	1.04E+05	5.33E+04	2.75E+04
86	2.46E+08	1.12E+08	5.34E+07	2.59E+07	1.27E+07	6.37E+06	3.30E+06	1.69E+06	1.02E+06	3.32E+05	1.70E+05	8.71E+04	4.50E+04
87	1.47E+09	5.40E+08	2.18E+08	9.22E+07	5.90E+07	1.30E+07	5.97E+06	2.82E+06	1.35E+06	6.57E+05	3.24E+05	1.61E+05	8.09E+04
88	1.49E+09	6.65E+08	2.96E+08	1.35E+08	6.27E+07	2.98E+07	1.45E+07	6.03E+06	5.39E+06	1.04E+06	5.19E+05	2.61E+05	1.32E+05
89	2.10E+10	1.12E+10	6.02E+09	3.23E+09	1.73E+09	9.25E+08	4.97E+08	2.44E+08	1.28E+08	6.74E+07	3.55E+07	1.88E+07	9.91E+06
90	2.28E+08	8.34E+07	3.35E+07	1.44E+07	6.68E+06	3.92E+06	8.75E+05	4.14E+05	1.99E+05	9.75E+04	4.82E+04	2.41E+04	1.22E+04
91	2.08E+09	1.18E+09	6.64E+08	3.70E+08	2.05E+08	1.13E+08	6.25E+07	3.44E+07	1.89E+07	1.04E+07	5.69E+06	3.12E+06	1.71E+06
92	1.89E+08	8.72E+07	4.26E+07	2.13E+07	1.08E+07	5.54E+06	2.85E+06	1.48E+06	7.69E+05	4.02E+05	2.11E+05	1.11E+05	5.89E+04
93	7.71E+09	3.76E+09	1.85E+09	9.22E+08	4.64E+08	2.35E+08	1.20E+08	6.19E+07	3.20E+07	1.66E+07	8.69E+06	4.56E+06	2.40E+06
94	1.88E+09	9.29E+08	4.70E+08	2.43E+08	1.27E+08	6.72E+07	3.58E+07	1.92E+07	1.03E+07	5.55E+06	3.00E+06	1.62E+06	8.81E+05
95	9.01E+08	3.58E+08	1.52E+08	6.71E+07	3.06E+07	1.43E+07	6.85E+06	3.33E+06	1.64E+06	8.18E+05	4.12E+05	2.09E+05	1.07E+05
96	2.87E+09	1.50E+09	7.81E+08	4.11E+08	2.19E+08	1.17E+08	6.28E+07	3.39E+07	1.83E+07	9.90E+06	5.37E+06	2.92E+06	1.59E+06
97	2.53E+08	1.00E+08	4.22E+07	1.87E+07	8.52E+06	4.00E+06	1.92E+06	9.33E+05	4.61E+05	2.30E+05	1.16E+05	5.92E+04	3.04E+04
98	1.68E+10	7.17E+09	3.33E+09	1.59E+09	7.75E+08	3.83E+08	1.91E+08	9.63E+07	4.90E+07	2.51E+07	1.29E+07	6.71E+06	3.50E+06
99	3.37E+09	1.35E+09	5.78E+08	2.59E+08	1.20E+08	5.69E+07	2.75E+07	1.35E+07	6.73E+06	3.39E+06	1.72E+06	8.81E+05	4.54E+05
100	8.54E+08	3.63E+08	1.56E+08	6.90E+07	3.15E+07	1.48E+07	7.07E+06	3.44E+06	1.70E+06	8.46E+05	4.26E+05	2.17E+05	1.11E+05
Max value	**2.10E+10**	**1.12E+10**	**6.02E+09**	**3.23E+09**	**1.73E+09**	**9.25E+08**	**4.97E+08**	**2.44E+08**	**1.28E+08**	**6.74E+07**	**3.55E+07**	**1.88E+07**	**9.91E+06**

140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
4.43E+04	2.29E+04	1.19E+04	6.23E+03	3.27E+03	1.72E+03	9.12E+02	4.84E+02	2.58E+02	1.38E+02	7.36E+01	3.95E+01	2.12E+01	1.14E+01	6.17E+00
5.12E+04	2.72E+04	1.45E+04	7.75E+03	4.15E+03	2.23E+03	1.20E+03	6.47E+02	349.304	188.944	102.364	55.541	30.178	16.419	8.944
1.06E+05	5.29E+04	2.86E+04	1.55E+04	8.40E+03	4.56E+03	2.48E+03	1.35E+03	7.33E+02	3.99E+02	2.18E+02	1.19E+02	6.48E+01	3.54E+01	1.94E+01
1.54E+05	8.13E+04	4.30E+04	2.28E+04	1.21E+04	6.48E+03	3.46E+03	1.86E+03	998.469	537.698	290.111	156.803	84.891	46.03	24.995
1.67E+05	8.97E+04	4.83E+04	2.61E+04	1.41E+04	7.64E+03	4.14E+03	2.25E+03	1.22E+03	6.66E+02	3.63E+02	1.98E+02	1.08E+02	5.92E+01	3.24E+01
2.98E+04	1.57E+04	8.28E+03	4.39E+03	2.33E+03	1.24E+03	6.64E+02	3.56E+02	1.91E+02	1.03E+02	5.55E+01	3.00E+01	1.62E+01	8.79E+00	4.77E+00
2.18E+04	1.14E+04	5.99E+03	3.16E+03	1.67E+03	8.86E+02	4.71E+02	2.52E+02	1.35E+02	7.22E+01	3.88E+01	2.09E+01	1.12E+01	6.11E+00	3.27E+00
3.07E+06	1.68E+06	9.17E+05	5.01E+05	2.74E+05	1.50E+05	8.20E+04	4.49E+04	2.46E+04	1.35E+04	7.38E+03	4.05E+03	2.22E+03	1.22E+03	6.69E+02
2.07E+05	1.10E+05	5.87E+04	3.13E+04	1.68E+04	8.97E+03	4.81E+03	2.58E+03	1.39E+03	748.716	403.811	218.055	117.884	63.801	34.566
2.47E+04	1.28E+04	6.72E+03	3.53E+03	1.86E+03	9.86E+02	5.24E+02	2.79E+02	1.49E+02	7.98E+01	4.28E+01	2.30E+01	1.24E+01	6.71E+00	3.63E+00
4.16E+04	2.24E+04	1.21E+04	6.53E+03	3.53E+03	1.91E+03	1.04E+03	5.65E+02	307.24	167.39	91.303	49.856	27.252	14.912	8.167
6.76E+04	3.59E+04	1.92E+04	1.02E+04	5.48E+03	2.94E+03	1.58E+03	8.50E+02	4.58E+02	2.48E+02	1.34E+02	7.25E+01	3.93E+01	2.14E+01	1.16E+01
6.57E+04	3.45E+04	1.82E+04	9.58E+03	5.07E+03	2.69E+03	1.43E+03	763.287	407.725	218.204	116.982	62.819	33.785	18.197	9.814
3.28E+04	1.72E+04	9.03E+03	4.76E+03	2.52E+03	1.34E+03	7.12E+02	3.80E+02	2.04E+02	1.09E+02	5.87E+01	3.16E+01	1.71E+01	9.23E+00	5.00E+00
8.01E+04	4.25E+04	2.26E+04	1.21E+04	6.47E+03	3.47E+03	1.87E+03	1.01E+03	5.44E+02	2.94E+02	1.59E+02	8.64E+01	4.69E+01	2.55E+01	1.39E+01
2.66E+05	1.43E+05	7.64E+04	4.11E+04	2.21E+04	1.19E+04	6.44E+03	3.48E+03	1.89E+03	1.03E+03	556.939	303.09	165.147	90.091	49.201
1.85E+05	1.02E+05	5.60E+04	3.08E+04	1.70E+04	9.35E+03	5.18E+03	2.82E+03	1.60E+03	8.85E+02	490.185	271.58	150.606	83.221	46.108
3.14E+04	1.66E+04	8.86E+03	4.73E+03	2.53E+03	1.36E+03	7.32E+02	3.94E+02	2.13E+02	1.15E+02	6.24E+01	3.39E+01	1.84E+01	1.00E+01	5.46E+00
6.46E+04	3.54E+04	1.97E+04	1.09E+04	6.01E+03	3.32E+03	1.83E+03	1.01E+03	560.751	312.723	176.012	104.617	43.206	23.761	13.075
4.98E+04	2.75E+04	1.52E+04	8.38E+03	4.64E+03	2.58E+03	1.39E+03	6.96E+02	381.979	209.764	115.255	63.362	34.853	19.181	1.06E+01
4.23E+04	2.20E+04	1.15E+04	6.03E+03	3.17E+03	1.68E+03	8.89E+02	4.73E+02	2.52E+02	1.35E+02	7.21E+01	3.87E+01	2.08E+01	1.12E+01	6.05E+00
9.99E+04	5.18E+04	2.70E+04	1.42E+04	7.44E+03	3.92E+03	2.08E+03	1.10E+03	5.86E+02	3.13E+02	1.67E+02	8.96E+01	4.81E+01	2.59E+01	1.39E+01
7.47E+04	3.95E+04	2.09E+04	1.11E+04	5.94E+03	3.18E+03	1.70E+03	9.15E+02	4.92E+02	2.66E+02	1.44E+02	7.77E+01	4.21E+01	2.29E+01	1.24E+01
3.99E+04	2.09E+04	1.10E+04	5.81E+03	3.08E+03	1.64E+03	872.718	466.32	249.759	134.063	72.108	38.858	20.977	11.343	6.143
1.98E+05	1.05E+05	5.58E+04	2.98E+04	1.59E+04	8.55E+03	4.59E+03	2.47E+03	1.34E+03	7.22E+02	3.91E+02	2.12E+02	1.15E+02	6.27E+01	3.42E+01
4.51E+05	2.41E+05	1.29E+05	6.88E+04	3.69E+04	1.99E+04	1.07E+04	5.77E+03	3.12E+03	1.69E+03	9.17E+02	4.98E+02	2.71E+02	1.47E+02	8.03E+01
8.37E+04	4.46E+04	2.38E+04	1.28E+04	6.85E+03	3.69E+03	1.99E+03	1.07E+03	580.793	314.782	170.87	9.29E+01	5.06E+01	2.76E+01	1.50E+01
2.26E+05	1.13E+05	2.80E+04	1.47E+04	7.73E+03	4.09E+03	2.17E+03	1.15E+03	6.14E+02	3.28E+02	1.76E+02	9.43E+01	5.07E+01	2.73E+01	1.47E+01
1.91E+05	1.03E+05	5.59E+04	3.03E+04	1.65E+04	8.96E+03	4.87E+03	2.66E+03	1.45E+03	7.91E+02	4.32E+02	2.36E+02	1.29E+02	7.08E+01	3.88E+01
5.69E+04	3.01E+04	1.60E+04	8.49E+03	4.53E+03	2.42E+03	1.30E+03	6.98E+02	376.05	202.876	109.645	59.357	32.183	17.475	9.502
1.64E+05	8.69E+04	4.63E+04	2.47E+04	1.32E+04	7.11E+03	3.82E+03	2.06E+03	1.11E+03	6.02E+02	3.26E+02	1.75E+02	9.26E+01	5.71E+01	2.40E+01
2.80E+04	1.49E+04	7.96E+03	4.26E+03	2.29E+03	1.23E+03	6.62E+02	3.57E+02	1.93E+02	1.05E+02	5.68E+01	3.09E+01	1.68E+01	9.14E+00	4.99E+00
5.16E+04	1.37E+04	7.15E+03	3.74E+03	1.96E+03	1.03E+03	5.46E+02	2.89E+02	1.54E+02	8.19E+01	4.37E+01	2.34E+01	1.25E+01	6.72E+00	3.61E+00
1.75E+05	9.18E+04	4.85E+04	2.57E+04	1.36E+04	7.26E+03	3.88E+03	2.08E+03	1.11E+03	5.98E+02	3.22E+02	1.74E+02	9.39E+01	5.08E+01	2.75E+01
7.83E+04	4.07E+04	2.13E+04	1.12E+04	5.87E+03	3.10E+03	1.64E+03	8.71E+02	4.64E+02	2.47E+02	1.32E+02	7.09E+01	3.81E+01	2.05E+01	1.10E+01

1.70E+04	8.68E+03	4.47E+03	2.31E+03	1.20E+03	6.24E+02	326.448	171.206	90.04	47.475	25.09	1.33E+01	7.05E+00	3.75E+00	2.00E+00
1.13E+05	5.93E+04	3.13E+04	1.66E+04	8.83E+03	4.71E+03	2.52E+03	1.35E+03	7.24E+02	3.89E+02	2.10E+02	1.13E+02	6.14E+01	3.33E+01	1.81E+01
5.50E+04	5.88E+04	2.74E+04	3.00E+03	1.54E+03	7.89E+02	4.07E+02	2.10E+02	1.09E+02	5.66E+01	2.95E+01	1.54E+01	8.01E+00	4.19E+00	2.19E+00
7.62E+05	7.65E+05	4.30E+05	6.00E+04	3.13E+04	1.63E+04	8.58E+03	4.51E+03	2.38E+03	1.26E+03	6.68E+02	3.55E+02	1.89E+02	1.01E+02	5.39E+01
1.97E+05	1.08E+05	5.97E+04	3.29E+04	1.82E+04	1.00E+04	5.54E+03	3.06E+03	1.69E+03	9.34E+02	516.547	285.655	158.011	87.425	48.383
2.50E+06	1.32E+06	6.99E+05	3.72E+05	1.98E+05	1.06E+05	5.68E+04	3.05E+04	1.50E+04	9.61E+03	8.26E+03	4.55E+03	2.98E+03	2.37E+03	234.266
3.08E+05	1.65E+05	8.83E+04	4.75E+04	2.55E+04	1.38E+04	7.43E+03	4.02E+03	2.18E+03	1.18E+03	6.40E+02	3.48E+02	1.89E+02	1.03E+02	5.62E+01
1.15E+05	6.01E+04	3.14E+04	1.65E+04	8.68E+03	4.58E+03	2.43E+03	1.29E+03	6.85E+02	3.65E+02	1.95E+02	1.04E+02	5.59E+01	3.00E+01	1.61E+01
1.62E+04	8.43E+03	4.40E+03	2.31E+03	1.22E+03	6.44E+02	3.42E+02	1.82E+02	9.70E+01	5.19E+01	2.78E+01	1.50E+01	8.06E+00	4.35E+00	2.35E+00
7.93E+04	4.16E+04	2.19E+04	1.15E+04	6.12E+03	3.26E+03	1.74E+03	9.31E+02	479.776	261.957	87.759	185.583	99.921	58.807	49.635
4.81E+04	2.56E+04	1.37E+04	7.31E+03	3.92E+03	2.11E+03	1.14E+03	6.12E+02	3.31E+02	1.79E+02	9.73E+01	5.29E+01	2.88E+01	1.57E+01	8.55E+00
5.06E+04	2.69E+04	1.44E+04	7.71E+03	4.14E+03	2.23E+03	1.20E+03	6.45E+02	3.49E+02	1.88E+02	1.05E+02	7.84E+01	4.42E+01	2.49E+01	1.15E+01
3.65E+04	1.91E+04	1.01E+04	5.31E+03	2.81E+03	1.50E+03	7.97E+02	4.26E+02	2.27E+02	1.27E+02	7.23E+01	3.91E+01	8.96E+00	2.67E+01	1.38E+01
6.73E+04	3.52E+04	1.85E+04	9.75E+03	5.16E+03	2.74E+03	1.46E+03	7.80E+02	4.17E+02	2.24E+02	1.21E+02	6.50E+01	3.51E+01	1.90E+01	1.03E+01
1.28E+05	6.91E+04	3.73E+04	2.01E+04	1.08E+04	6.18E+03	3.38E+03	1.85E+03	1.01E+03	5.54E+02	3.04E+02	1.92E+02	6.29E+01	3.41E+01	1.85E+01
9.75E+03	5.10E+03	2.68E+03	1.41E+03	7.47E+02	3.97E+02	2.11E+02	1.13E+02	6.04E+01	3.24E+01	1.74E+01	9.39E+00	5.07E+00	2.74E+00	1.48E+00
5.60E+05	2.93E+05	1.54E+05	8.14E+04	4.31E+04	2.29E+04	1.22E+04	6.53E+03	3.50E+03	1.88E+03	1.01E+03	5.45E+02	2.95E+02	1.59E+02	8.64E+01
2.28E+04	1.22E+04	6.56E+03	3.53E+03	1.90E+03	1.03E+03	556.085	301.231	163.411	88.768	48.283	26.294	14.336	7.825	4.276
4.52E+05	2.35E+05	1.23E+05	6.49E+04	3.43E+04	1.82E+04	9.67E+03	5.16E+03	2.76E+03	1.48E+03	7.94E+02	4.28E+02	2.31E+02	1.25E+02	6.75E+01
2.04E+06	1.07E+06	5.65E+05	2.99E+05	1.59E+05	8.47E+04	4.52E+04	2.42E+04	1.30E+04	7.00E+03	3.77E+03	2.04E+03	1.10E+03	5.97E+02	3.24E+02
1.63E+05	8.61E+04	4.58E+04	2.44E+04	1.31E+04	7.00E+03	3.76E+03	2.02E+03	1.09E+03	5.90E+02	319.178	173.05	93.965	51.095	27.821
4.72E+04	2.53E+04	1.35E+04	7.27E+03	3.91E+03	2.11E+03	1.14E+03	6.16E+02	3.34E+02	1.81E+02	9.85E+01	5.36E+01	2.92E+01	1.59E+01	8.68E+00
3.36E+04	1.79E+04	9.53E+03	5.09E+03	2.73E+03	1.46E+03	7.87E+02	4.24E+02	2.29E+02	1.24E+02	6.70E+01	3.64E+01	1.97E+01	1.07E+01	5.85E+00
4.96E+04	2.65E+04	1.42E+04	7.60E+03	4.08E+03	2.20E+03	1.18E+03	6.39E+02	3.45E+02	1.87E+02	1.01E+02	5.50E+01	2.99E+01	1.63E+01	8.85E+00
3.53E+04	1.86E+04	9.88E+03	5.25E+03	2.80E+03	1.50E+03	802.465	431.169	232.169	125.264	6.77E+01	3.67E+01	1.99E+01	1.08E+01	5.88E+00
8.09E+04	4.48E+04	2.48E+04	1.38E+04	7.62E+03	4.22E+03	2.34E+03	1.30E+03	718.384	398.238	220.801	122.444	67.913	37.675	20.904
2.50E+05	1.31E+05	6.95E+04	3.68E+04	1.96E+04	1.05E+04	5.60E+03	3.00E+03	1.61E+03	8.68E+02	4.68E+02	2.53E+02	1.37E+02	7.43E+01	4.04E+01
3.47E+04	1.77E+04	9.07E+03	4.66E+03	2.41E+03	1.25E+03	6.48E+02	3.37E+02	1.76E+02	9.21E+01	4.83E+01	2.53E+01	1.33E+01	7.02E+00	3.70E+00
4.97E+04	2.53E+04	1.30E+04	6.68E+03	3.45E+03	1.79E+03	9.33E+02	4.87E+02	2.55E+02	1.34E+02	7.06E+01	3.72E+01	1.97E+01	1.04E+01	5.52E+00
2.72E+04	1.45E+04	7.77E+03	4.16E+03	2.24E+03	1.20E+03	649.073	3.51E+02	1.90E+02	1.03E+02	5.58E+01	3.04E+01	1.65E+01	9.00E+00	4.91E+00
1.26E+05	6.71E+04	3.60E+04	1.93E+04	1.04E+04	5.62E+03	3.00E+03	1.59E+03	7.87E+02	5.68E+02	3.11E+02	1.76E+02	1.02E+02	5.57E+01	1.43E+01
1.44E+05	7.58E+04	4.00E+04	2.12E+04	1.12E+04	5.98E+03	3.20E+03	1.71E+03	9.18E+02	4.94E+02	2.66E+02	1.44E+02	7.77E+01	4.21E+01	2.28E+01
5.17E+05	2.71E+05	1.43E+05	7.56E+04	4.02E+04	2.13E+04	1.14E+04	5.95E+03	3.02E+03	1.41E+03	2.37E+03	2.08E+03	1.26E+02	6.72E+01	3.59E+01
3.47E+05	1.88E+05	1.02E+05	5.50E+04	2.98E+04	1.62E+04	8.81E+03	4.80E+03	2.62E+03	1.43E+03	7.81E+02	4.27E+02	2.34E+02	1.28E+02	7.03E+01
1.14E+06	5.91E+05	3.08E+05	1.61E+05	8.41E+04	4.42E+04	2.33E+04	1.23E+04	6.51E+03	3.46E+03	1.84E+03	979.227	5.23E+02	2.79E+02	1.50E+02
1.28E+05	6.68E+04	3.51E+04	1.85E+04	9.79E+03	5.20E+03	2.77E+03	1.48E+03	786.823	4.16E+02	2.23E+02	1.21E+02	6.36E+01	1.05E+02	5.91E+01
9.92E+04	5.28E+04	2.81E+04	1.50E+04	8.06E+03	4.33E+03	2.33E+03	1.26E+03	680.309	368.351	199.765	1.09E+02	5.90E+01	3.21E+01	1.75E+01
2.51E+05	1.29E+05	6.70E+04	3.49E+04	1.83E+04	9.59E+03	5.06E+03	2.68E+03	1.42E+03	7.55E+02	4.03E+02	2.15E+02	1.15E+02	6.19E+01	3.33E+01
3.51E+04	1.84E+04	9.69E+03	5.12E+03	2.71E+03	1.44E+03	7.69E+02	4.11E+02	2.20E+02	1.18E+02	6.36E+01	3.43E+01	1.85E+01	9.99E+00	5.41E+00
9.88E+03	5.12E+03	2.67E+03	1.40E+03	7.35E+02	3.88E+02	2.05E+02	1.08E+02	5.84E+01	2.24E+01	2.74E+01	0.00E+00	5.71E+01	6.40E-02	2.00E-02

7.20E+04	3.89E+04	2.11E+04	1.14E+04	5.97E+03	4.15E+03	1.37E+03	7.39E+02	3.99E+02	2.16E+02	1.17E+02	6.35E+01	3.45E+01	1.87E+01	1.02E+01
4.61E+04	2.44E+04	1.30E+04	6.91E+03	3.69E+03	1.98E+03	1.06E+03	5.72E+02	3.08E+02	1.67E+02	9.01E+01	4.89E+01	2.65E+01	1.44E+01	7.85E+00
6.26E+04	3.27E+04	1.71E+04	9.02E+03	4.77E+03	2.53E+03	1.35E+03	7.18E+02	3.84E+02	2.06E+02	1.11E+02	5.96E+01	3.22E+01	1.74E+01	9.43E+00
8.20E+04	4.29E+04	2.25E+04	1.19E+04	6.29E+03	3.34E+03	1.78E+03	9.47E+02	5.07E+02	2.71E+02	145.748	7.84E+01	4.22E+01	2.28E+01	1.23E+01
4.75E+04	2.52E+04	1.34E+04	7.14E+03	3.82E+03	2.05E+03	1.10E+03	590.51	318.243	171.814	92.913	50.324	27.296	14.827	8.064
1.12E+05	5.86E+04	3.08E+04	2.00E+04	1.08E+04	5.74E+03	3.26E+03	2.28E+03	3.26E+02	1.70E+02	8.89E+01	4.65E+01	2.44E+01	1.28E+01	6.72E+00
3.06E+04	1.57E+04	8.11E+03	4.21E+03	2.19E+03	1.15E+03	6.02E+02	3.17E+02	1.67E+02	8.87E+01	4.71E+01	2.51E+01	1.34E+01	7.15E+00	3.83E+00
5.74E+04	3.01E+04	1.58E+04	8.37E+03	4.44E+03	2.36E+03	1.25E+03	667.077	339.605	235.681	156.927	203.19	94.832	7.199	3.85E+00
3.67E+04	1.98E+04	1.07E+04	5.77E+03	3.12E+03	1.69E+03	9.19E+02	5.00E+02	2.72E+02	1.48E+02	8.09E+01	4.42E+01	2.42E+01	1.32E+01	7.26E+00
1.43E+04	7.44E+03	3.90E+03	2.05E+03	1.08E+03	5.74E+02	3.05E+02	1.63E+02	8.70E+01	4.66E+01	2.51E+01	1.35E+01	7.27E+00	3.93E+00	2.13E+00
2.34E+04	1.22E+04	6.40E+03	3.37E+03	1.78E+03	9.41E+02	5.00E+02	2.66E+02	142.082	76.02	40.76	21.897	11.785	6.353	3.43
4.09E+04	2.08E+04	1.07E+04	5.48E+03	2.83E+03	1.47E+03	7.64E+02	3.99E+02	2.09E+02	1.10E+02	5.76E+01	3.04E+01	1.60E+01	8.49E+00	4.50E+00
6.76E+04	3.47E+04	1.79E+04	9.31E+03	4.85E+03	2.54E+03	1.33E+03	7.01E+02	3.70E+02	1.96E+02	1.04E+02	5.53E+01	2.94E+01	1.57E+01	8.40E+00
5.25E+06	2.78E+06	1.48E+06	7.87E+05	4.19E+05	2.24E+05	1.20E+05	6.40E+04	3.43E+04	1.84E+04	9.88E+03	5.31E+03	2.86E+03	1.54E+03	8.31E+02
6.18E+03	3.16E+03	1.62E+03	8.39E+02	4.36E+02	2.27E+02	1.19E+02	6.24E+01	3.28E+01	1.73E+01	9.17E+00	4.86E+00	2.58E+00	1.38E+00	7.34E-01
9.38E+05	5.15E+05	2.82E+05	1.55E+05	8.50E+04	4.67E+04	2.57E+04	1.41E+04	7.75E+03	4.27E+03	2.35E+03	1.29E+03	714.368	395.001	2.16E+02
3.12E+04	1.66E+04	8.87E+03	4.75E+03	2.55E+03	1.37E+03	736.155	397.081	214.558	116.124	62.945	34.169	18.573	10.109	5.509
1.27E+06	6.73E+05	3.58E+05	1.91E+05	1.02E+05	5.46E+04	2.93E+04	1.58E+04	8.51E+03	4.60E+03	2.49E+03	1.35E+03	7.31E+02	3.97E+02	2.16E+02
4.78E+05	2.60E+05	1.42E+05	7.72E+04	4.21E+04	2.30E+04	1.26E+04	6.88E+03	3.77E+03	2.06E+03	1.13E+03	621.242	341.154	187.468	103.083
5.51E+04	2.85E+04	1.48E+04	7.76E+03	4.07E+03	2.15E+03	1.13E+03	6.01E+02	3.20E+02	1.70E+02	9.10E+01	4.87E+01	2.61E+01	1.41E+01	7.57E+00
8.62E+05	4.70E+05	2.56E+05	1.40E+05	7.63E+04	4.17E+04	2.28E+04	1.25E+04	6.85E+03	3.76E+03	2.06E+03	1.13E+03	6.23E+02	3.43E+02	1.89E+02
1.57E+04	8.14E+03	4.25E+03	2.23E+03	1.17E+03	6.18E+02	3.28E+02	174.171	92.838	49.612	26.575	14.266	7.674	4.136	2.233
1.83E+06	9.63E+05	5.09E+05	2.69E+05	1.43E+05	7.63E+04	4.08E+04	2.18E+04	1.17E+04	6.31E+03	3.40E+03	1.84E+03	9.93E+02	5.38E+02	2.91E+02
2.36E+05	1.23E+05	6.44E+04	3.39E+04	1.79E+04	9.50E+03	5.05E+03	2.70E+03	1.44E+03	7.73E+02	4.15E+02	2.25E+02	1.22E+02	6.46E+01	3.68E+01
5.72E+04	2.97E+04	1.54E+04	8.08E+03	4.25E+03	2.24E+03	1.19E+03	6.29E+02	3.35E+02	1.79E+02	9.56E+01	5.13E+01	2.75E+01	1.48E+01	7.99E+00
5.25E+06	**2.78E+06**	**1.48E+06**	**7.87E+05**	**4.19E+05**	**2.24E+05**	**1.20E+05**	**6.40E+04**	**3.43E+04**	**1.84E+04**	**9.88E+03**	**5.31E+03**	**2.98E+03**	**2.37E+03**	**8.31E+02**

290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
3.34E+00	1.81E+00	9.80E-01	5.32E-01	2.90E-01	1.58E-01	8.60E-02	4.70E-02	2.60E-02	1.40E-02	7.69E-03	4.21E-03	2.31E-03	1.27E-03	6.97E-04
4.878	2.664	1.456	0.797	0.436	2.39E-01	1.31E-01	7.20E-02	4.00E-02	2.20E-02	1.20E-02	6.60E-03	3.64E-03	2.01E-03	1.11E-03
1.06E+01	5.81E+00	3.18E+00	1.75E+00	9.58E-01	5.26E-01	2.89E-01	1.59E-01	8.70E-02	4.80E-02	2.70E-02	1.50E-02	8.05E-03	4.44E-03	2.45E-03
13.591	7.4	4.034	2.202	1.203	0.658	0.36	0.197	1.08E-01	0.059	3.30E-02	1.80E-02	9.87E-03	5.44E-03	3.00E-03
1.78E+01	9.74E+00	5.35E+00	2.94E+00	1.62E+00	8.89E-01	4.89E-01	2.70E-01	1.49E-01	8.20E-02	4.50E-02	2.50E-02	1.40E-02	7.64E-03	4.23E-03
2.59E+00	1.41E+00	7.69E-01	4.20E-01	2.29E-01	1.25E-01	6.90E-02	3.80E-02	2.10E-02	1.10E-02	6.21E-03	3.42E-03	1.88E-03	1.03E-03	5.69E-04
1.74E+00	1.07E+00	2.87E-01	2.88E-01	5.17E-01	3.13E-01	1.48E-01	1.51E-03	6.77E-04	2.88E-04	1.13E-04	3.70E-05	6.76E-06	0.00E+00	0.00E+00
3.68E+02	2.02E+02	1.11E+02	6.11E+01	3.36E+01	1.85E+01	1.02E+01	5.61E+00	3.09E+00	1.70E+00	9.40E-01	5.18E-01	2.86E-01	1.58E-01	8.70E-02
18.746	10.176	5.529	3.007	1.637	0.891	0.486	0.265	1.45E-01	7.90E-02	4.30E-02	2.40E-02	1.30E-02	7.09E-03	3.88E-03
1.97E+00	1.07E+00	5.79E-01	3.15E-01	1.72E-01	9.40E-02	5.10E-02	2.80E-02	1.50E-02	8.38E-03	4.59E-03	2.52E-03	1.38E-03	7.61E-04	4.19E-04
4.477	2.456	1.349	0.741	0.408	0.224	0.124	0.068	0.038	0.021	0.011	6.33E-03	3.50E-03	1.93E-03	1.07E-03
6.32E+00	3.44E+00	1.88E+00	1.02E+00	5.60E-01	3.06E-01	1.68E-01	9.20E-02	5.00E-02	2.80E-02	1.50E-02	8.32E-03	4.57E-03	2.52E-03	1.39E-03
5.3	2.866	1.55E+00	8.41E-01	4.56E-01	2.48E-01	1.35E-01	7.30E-02	4.00E-02	2.20E-02	1.20E-02	6.46E-03	3.53E-03	1.93E-03	1.05E-03
2.71E+00	1.47E+00	8.00E-01	4.36E-01	2.38E-01	1.30E-01	7.10E-02	3.90E-02	2.10E-02	1.20E-02	6.37E-03	3.50E-03	1.92E-03	1.06E-03	5.81E-04
7.59E+00	4.14E+00	2.27E+00	1.24E+00	6.79E-01	3.72E-01	2.04E-01	1.12E-01	6.20E-02	3.40E-02	1.90E-02	1.00E-02	5.67E-03	3.13E-03	1.73E-03
2.69E+01	1.47E+01	8.06E+00	4.42E+00	2.43E+00	1.33E+00	7.32E-01	4.03E-01	2.22E-01	1.22E-01	6.70E-02	3.70E-02	2.00E-02	1.10E-02	6.25E-03
26.438	13.907	6.164	3.397	1.87E+00	1.03E+00	5.71E-01	3.15E-01	1.74E-01	9.60E-02	5.30E-02	2.90E-02	1.60E-02	9.04E-03	5.01E-03
2.98E+00	1.63E+00	8.90E-01	4.87E-01	2.67E-01	1.46E-01	8.00E-02	4.40E-02	2.40E-02	1.30E-02	7.36E-03	4.06E-03	2.24E-03	1.23E-03	6.82E-04
7.20E+00	3.97E+00	2.19E+00	1.21E+00	6.65E-01	3.67E-01	2.03E-01	1.12E-01	6.20E-02	3.40E-02	1.90E-02	1.00E-02	5.81E-03	3.22E-03	1.79E-03
5.82E+00	3.21E+00	1.77E+00	9.76E-01	5.39E-01	2.98E-01	1.64E-01	9.10E-02	5.00E-02	2.80E-02	1.50E-02	8.52E-03	4.72E-03	2.62E-03	1.45E-03
3.27E+00	1.77E+00	9.61E-01	5.22E-01	2.83E-01	1.54E-01	8.40E-02	4.60E-02	2.50E-02	1.40E-02	7.48E-03	4.10E-03	2.24E-03	1.23E-03	6.75E-04
7.53E+00	4.07E+00	2.20E+00	1.19E+00	6.47E-01	3.52E-01	1.91E-01	1.04E-01	5.70E-02	3.10E-02	1.70E-02	9.24E-03	5.05E-03	2.77E-03	1.51E-03
6.77E+00	3.69E+00	2.01E+00	1.10E+00	6.01E-01	3.29E-01	1.80E-01	9.90E-02	5.40E-02	3.00E-02	1.60E-02	9.02E-03	4.97E-03	2.74E-03	1.51E-03
3.332	1.809	0.984	0.536	0.292	1.59E-01	8.70E-02	4.80E-02	2.60E-02	1.40E-02	7.82E-03	4.29E-03	2.36E-03	1.30E-03	7.12E-04
1.86E+01	1.02E+01	5.57E+00	3.05E+00	1.67E+00	9.16E-01	5.03E-01	2.76E-01	1.52E-01	8.40E-02	4.60E-02	2.50E-02	1.40E-02	7.71E-03	4.26E-03
4.38E+01	2.39E+01	1.31E+01	7.17E+00	3.93E+00	2.15E+00	1.18E+00	6.49E-01	3.57E-01	1.96E-01	1.08E-01	6.00E-02	3.30E-02	1.80E-02	9.99E-03
8.22E+00	4.49E+00	2.46E+00	1.35E+00	7.40E-01	4.06E-01	2.23E-01	1.23E-01	6.80E-02	3.70E-02	2.10E-02	1.10E-02	6.24E-03	3.45E-03	1.90E-03
7.97E+00	4.31E+00	2.34E+00	1.27E+00	6.89E-01	3.75E-01	2.04E-01	1.11E-01	6.10E-02	3.30E-02	1.80E-02	9.94E-03	5.45E-03	2.99E-03	1.64E-03
2.13E+01	1.17E+01	6.41E+00	3.52E+00	1.94E+00	1.06E+00	5.86E-01	3.23E-01	1.78E-01	9.80E-02	5.40E-02	3.00E-02	1.60E-02	9.09E-03	5.02E-03
5.173	2.82	1.539	0.841	0.461	0.252	0.137	7.70E-02	4.30E-02	2.40E-02	1.20E-02	6.69E-03	3.45E-03	1.91E-03	0.00E+00
3.11E+01	1.79E+01	1.23E+01	1.40E+00	7.61E-01	4.14E-01	2.25E-01	1.23E-01	6.70E-02	3.70E-02	2.00E-02	1.10E-02	5.98E-03	3.28E-03	1.80E-03
2.72E+00	1.49E+00	8.15E-01	4.46E-01	2.45E-01	1.34E-01	7.40E-02	4.10E-02	2.20E-02	1.20E-02	6.76E-03	3.73E-03	2.06E-03	1.14E-03	6.27E-04
1.95E+00	1.05E+00	5.67E-01	3.06E-01	1.66E-01	9.00E-02	4.90E-02	2.60E-02	1.40E-02	7.84E-03	4.27E-03	2.33E-03	1.27E-03	6.92E-04	3.78E-04
1.49E+01	8.12E+00	4.42E+00	2.41E+00	1.31E+00	7.15E-01	3.91E-01	2.14E-01	1.17E-01	6.40E-02	3.50E-02	1.90E-02	1.10E-02	5.81E-03	3.19E-03
5.94E+00	3.21E+00	1.74E+00	9.40E-01	5.10E-01	2.77E-01	1.50E-01	8.20E-02	4.50E-02	2.40E-02	1.30E-02	7.22E-03	3.95E-03	2.16E-03	1.18E-03

1.07E+00	5.69E-01	3.04E-01	1.63E-01	8.70E-02	4.70E-02	2.50E-02	1.40E-02	7.30E-03	3.93E-03	2.12E-03	1.14E-03	6.17E-04	3.34E-04	1.80E-04
9.81E+00	5.34E+00	2.91E+00	1.59E+00	8.67E-01	4.74E-01	2.59E-01	1.42E-01	7.80E-02	4.30E-02	2.30E-02	1.30E-02	7.10E-03	3.91E-03	2.15E-03
1.15E+00	5.99E-01	3.14E-01	1.64E-01	8.60E-02	4.50E-02	2.40E-02	1.20E-02	6.44E-03	3.36E-03	1.75E-03	9.13E-04	4.74E-04	2.46E-04	1.27E-04
2.88E+01	1.55E+01	8.30E+00	4.46E+00	2.40E+00	1.29E+00	6.96E-01	3.75E-01	2.03E-01	1.10E-01	5.90E-02	3.20E-02	1.70E-02	9.41E-03	5.10E-03
26.782	14.829	8.21E+00	4.55E+00	2.52E+00	1.40E+00	7.74E-01	4.29E-01	2.38E-01	1.32E-01	7.30E-02	4.10E-02	2.30E-02	1.30E-02	6.94E-03
126.822	68.755	37.326	20.289	11.042	6.016	3.282	1.79E+00	9.79E-01	5.36E-01	2.93E-01	1.61E-01	8.80E-02	4.80E-02	2.70E-02
3.07E+01	1.68E+01	9.18E+00	5.02E+00	2.75E+00	1.51E+00	8.28E-01	4.55E-01	2.50E-01	1.37E-01	7.60E-02	4.20E-02	2.30E-02	1.30E-02	6.97E-03
8.69E+00	4.69E+00	2.53E+00	1.37E+00	7.40E-01	4.01E-01	2.17E-01	1.18E-01	6.40E-02	3.50E-02	1.90E-02	1.00E-02	5.61E-03	3.06E-03	1.67E-03
1.27E+00	6.90E-01	3.73E-01	2.04E-01	1.09E-01	5.80E-02	3.20E-02	2.20E-02	3.91E-03	1.60E-02	0.00E+00	0.00E+00	1.30E-02	0.00E+00	0.00E+00
2.551	1.368	0.735	3.95E-01	2.13E-01	1.15E-01	6.20E-02	3.30E-02	1.80E-02	9.79E-03	5.30E-03	2.87E-03	1.56E-03	8.46E-04	4.60E-04
4.67E+00	2.55E+00	1.40E+00	7.66E-01	4.20E-01	2.30E-01	1.27E-01	7.00E-02	3.80E-02	2.10E-02	1.20E-02	6.41E-03	3.54E-03	1.95E-03	1.08E-03
3.22E+00	1.75E+00	9.55E-01	5.21E-01	2.84E-01	1.55E-01	8.50E-02	4.60E-02	2.50E-02	1.40E-02	7.67E-03	4.21E-03	2.32E-03	1.27E-03	7.01E-04
7.76E+00	6.77E-01	3.65E-01	1.97E-01	1.06E-01	5.80E-02	3.10E-02	1.70E-02	9.20E-03	5.00E-03	2.72E-03	1.48E-03	8.07E-04	4.40E-04	2.40E-04
5.58E+00	3.03E+00	1.65E+00	8.99E-01	4.90E-01	2.68E-01	1.46E-01	8.00E-02	4.40E-02	2.40E-02	1.30E-02	7.24E-03	3.99E-03	2.19E-03	1.20E-03
1.01E+01	5.48E+00	2.98E+00	1.63E+00	8.87E-01	4.84E-01	2.65E-01	1.45E-01	7.90E-02	4.30E-02	2.40E-02	1.30E-02	7.13E-03	3.92E-03	2.15E-03
8.05E-01	4.37E-01	2.38E-01	1.30E-01	7.10E-02	3.90E-02	2.10E-02	1.20E-02	6.31E-03	3.46E-03	1.90E-03	1.04E-03	5.72E-04	3.14E-04	1.73E-04
4.69E+01	2.55E+01	1.39E+01	7.58E+00	4.13E+00	2.26E+00	1.23E+00	6.76E-01	3.70E-01	2.02E-01	1.11E-01	6.20E-02	3.30E-02	1.70E-02	8.34E-03
2.339	1.28	0.702	0.385	2.11E-01	1.16E-01	6.40E-02	3.50E-02	1.90E-02	1.10E-02	5.86E-03	3.26E-03	1.78E-03	1.02E-03	5.51E-04
3.66E+01	1.99E+01	1.08E+01	5.89E+00	3.21E+00	1.75E+00	9.58E-01	5.24E-01	2.87E-01	1.57E-01	8.60E-02	4.70E-02	2.60E-02	1.40E-02	7.88E-03
1.76E+02	9.58E+01	5.22E+01	2.85E+01	1.56E+01	8.50E+00	4.65E+00	2.55E+00	1.40E+00	7.66E-01	4.21E-01	2.31E-01	1.27E-01	7.00E-02	3.90E-02
15.167	8.28E+00	4.52E+00	2.48E+00	1.36E+00	7.43E-01	4.08E-01	2.24E-01	1.23E-01	6.80E-02	3.70E-02	2.10E-02	1.10E-02	6.24E-03	3.44E-03
4.75E+00	2.60E+00	1.42E+00	7.79E-01	4.27E-01	2.34E-01	1.29E-01	7.10E-02	3.90E-02	2.10E-02	1.20E-02	6.51E-03	3.58E-03	1.99E-03	1.10E-03
3.19E+00	1.74E+00	9.55E-01	5.26E-01	2.90E-01	1.67E-01	8.90E-02	4.70E-02	4.60E-02	2.60E-02	1.40E-02	6.85E-03	3.99E-03	4.20E-03	2.52E-04
4.83E+00	2.63E+00	1.44E+00	7.86E-01	4.30E-01	2.36E-01	1.29E-01	7.10E-02	3.90E-02	2.10E-02	1.20E-02	6.45E-03	3.55E-03	1.96E-03	1.08E-03
3.20E+00	1.75E+00	9.53E-01	5.21E-01	2.85E-01	1.56E-01	8.60E-02	4.70E-02	2.60E-02	1.40E-02	7.81E-03	4.30E-03	2.37E-03	1.31E-03	7.20E-04
11.601	6.44	3.576	1.986	1.103	0.613	0.34	0.189	1.05E-01	5.90E-02	3.30E-02	1.80E-02	1.00E-02	5.61E-03	3.12E-03
2.20E+01	1.20E+01	6.52E+00	3.56E+00	1.95E+00	1.06E+00	5.83E-01	3.19E-01	1.75E-01	9.60E-02	5.30E-02	2.90E-02	1.60E-02	8.82E-03	4.86E-03
1.95E+00	1.03E+00	5.45E-01	2.88E-01	1.53E-01	8.10E-02	4.30E-02	2.30E-02	1.20E-02	6.36E-03	3.37E-03	1.79E-03	9.46E-04	5.01E-04	2.65E-04
2.93E+00	1.56E+00	8.31E-01	4.43E-01	2.36E-01	1.26E-01	6.70E-02	3.60E-02	1.90E-02	1.00E-02	5.55E-03	2.98E-03	1.60E-03	8.57E-04	4.60E-04
2.71E+00	1.49E+00	7.74E-01	4.81E-01	2.01E-01	9.90E-02	1.30E-01	7.00E-02	4.20E-02	1.90E-02	1.90E-02	2.07E-03	1.14E-03	6.25E-04	3.44E-04
7.72E+00	4.18E+00	2.27E+00	1.23E+00	6.67E-01	3.63E-01	1.97E-01	1.07E-01	5.80E-02	3.20E-02	1.70E-02	9.50E-03	5.19E-03	2.84E-03	1.55E-03
1.24E+01	6.75E+00	3.68E+00	2.01E+00	1.10E+00	5.99E-01	3.28E-01	1.80E-01	9.80E-02	5.40E-02	3.00E-02	1.60E-02	8.96E-03	4.93E-03	2.72E-03
1.92E+01	1.03E+01	5.53E+00	2.97E+00	1.60E+00	8.61E-01	4.64E-01	2.51E-01	1.35E-01	7.30E-02	4.00E-02	2.10E-02	1.20E-02	6.28E-03	3.41E-03
3.86E+01	2.12E+01	1.17E+01	6.42E+00	3.54E+00	1.95E+00	1.08E+00	5.93E-01	3.28E-01	1.81E-01	1.00E-01	5.50E-02	3.10E-02	1.70E-02	9.40E-03
8.02E+01	4.31E+01	2.31E+01	1.25E+01	6.71E+00	3.62E+00	1.95E+00	1.06E+00	5.71E-01	3.09E-01	1.67E-01	9.10E-02	4.90E-02	2.70E-02	1.40E-02
4.85E+01	1.22E+00	6.31E-01	3.25E-01	1.67E-01	8.60E-02	4.40E-02	2.20E-02	1.10E-02	5.74E-03	2.89E-03	1.44E-03	7.14E-04	3.50E-04	1.69E-04
9.57E+00	5.23E+00	2.86E+00	1.57E+00	8.60E-01	4.72E-01	2.59E-01	1.42E-01	7.80E-02	4.30E-02	2.40E-02	1.30E-02	7.23E-03	3.99E-03	2.20E-03
1.79E+01	9.68E+00	5.23E+00	2.83E+00	1.54E+00	8.33E-01	4.52E-01	2.46E-01	1.34E-01	7.30E-02	4.00E-02	2.20E-02	1.20E-02	6.50E-03	3.56E-03
2.92E+00	1.62E+00	8.43E-01	5.55E-01	3.28E-01	1.31E-01	2.76E-01	1.46E-01	9.60E-02	4.94E-04	1.85E-04	5.50E-05	4.71E-06	0.00E+00	0.00E+00
3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

5.56E+00	3.03E+00	1.66E+00	9.05E-01	4.95E-01	2.71E-01	1.49E-01	8.10E-02	4.50E-02	2.50E-02	1.30E-02	7.41E-03	4.08E-03	2.24E-03	1.24E-03
4.28E+00	2.33E+00	1.28E+00	6.97E-01	3.82E-01	2.09E-01	1.15E-01	6.30E-02	3.50E-02	1.90E-02	1.00E-02	5.77E-03	3.18E-03	1.75E-03	9.66E-04
5.11E+00	2.78E+00	1.51E+00	8.23E-01	4.49E-01	2.45E-01	1.34E-01	7.30E-02	4.00E-02	2.20E-02	1.20E-02	6.64E-03	3.65E-03	2.01E-03	1.10E-03
6.67E+00	3.62E+00	1.96E+00	1.07E+00	5.80E-01	3.16E-01	1.72E-01	9.40E-02	5.10E-02	2.80E-02	1.50E-02	8.42E-03	4.61E-03	2.53E-03	1.39E-03
4.391	2.394	1.31E+00	7.14E-01	3.90E-01	2.14E-01	1.17E-01	6.40E-02	3.50E-02	1.90E-02	1.10E-02	5.86E-03	3.22E-03	1.78E-03	9.79E-04
3.53E+00	1.86E+00	9.75E-01	5.13E-01	2.70E-01	1.42E-01	7.50E-02	3.90E-02	2.10E-02	1.10E-02	5.71E-03	3.00E-03	1.57E-03	8.24E-04	4.31E-04
2.05E+00	1.10E+00	5.94E-01	3.20E-01	1.72E-01	9.30E-02	5.00E-02	2.70E-02	1.50E-02	8.01E-03	4.35E-03	2.36E-03	1.29E-03	6.99E-04	3.81E-04
2.07E+00	1.11E+00	5.96E-01	3.21E-01	1.73E-01	9.30E-02	5.00E-02	2.70E-02	1.50E-02	7.98E-03	4.33E-03	2.35E-03	1.27E-03	6.92E-04	3.76E-04
3.98E+00	2.19E+00	1.20E+00	6.60E-01	3.63E-01	2.00E-01	1.10E-01	6.10E-02	3.40E-02	1.90E-02	1.00E-02	5.66E-03	3.13E-03	1.73E-03	9.59E-04
1.15E+00	6.26E-01	3.40E-01	1.85E-01	1.01E-01	5.50E-02	3.00E-02	1.60E-02	9.02E-03	4.94E-03	2.71E-03	1.49E-03	8.18E-04	4.50E-04	2.47E-04
1.855	1.004	0.545	0.296	0.161	0.087	0.048	0.026	0.014	7.74E-03	4.23E-03	2.32E-03	1.27E-03	6.95E-04	3.81E-04
2.39E+00	1.27E+00	6.76E-01	3.60E-01	1.92E-01	1.02E-01	5.50E-02	2.90E-02	1.60E-02	8.38E-03	4.49E-03	2.41E-03	1.29E-03	6.92E-04	3.71E-04
4.50E+00	2.41E+00	1.30E+00	6.97E-01	3.75E-01	2.02E-01	1.09E-01	5.90E-02	3.20E-02	1.70E-02	9.34E-03	5.07E-03	2.75E-03	1.49E-03	8.10E-04
4.49E+02	2.42E+02	1.31E+02	7.09E+01	3.84E+01	2.08E+01	1.13E+01	6.13E+00	3.33E+00	1.81E+00	9.83E-01	5.35E-01	2.91E-01	1.59E-01	8.60E-02
3.92E-01	2.10E-01	1.12E-01	6.00E-02	3.20E-02	1.70E-02	9.38E-03	5.06E-03	2.73E-03	1.47E-03	7.96E-04	4.30E-04	2.33E-04	1.26E-04	6.83E-05
1.23E+02	6.43E+01	3.97E+01	2.21E+01	1.22E+01	6.84E+00	3.83E+00	2.08E+00	1.16E+00	7.36E-01	4.14E-01	1.21E-01	6.70E-02	3.70E-02	2.00E-02
3.005	1.641	0.897	0.491	2.69E-01	1.47E-01	8.10E-02	4.40E-02	2.40E-02	1.30E-02	7.39E-03	4.07E-03	2.24E-03	1.24E-03	6.83E-04
1.18E+02	6.42E+01	3.50E+01	1.91E+01	1.05E+01	5.74E+00	3.14E+00	1.73E+00	9.47E-01	5.20E-01	2.86E-01	1.57E-01	8.70E-02	4.80E-02	2.60E-02
56.717	31.225	17.2	9.48	5.228	2.885	1.59E+00	8.79E-01	4.86E-01	2.69E-01	1.49E-01	8.20E-02	4.60E-02	2.50E-02	1.40E-02
4.08E+00	2.20E+00	1.19E+00	6.46E-01	3.50E-01	1.90E-01	1.03E-01	5.60E-02	3.10E-02	1.70E-02	9.12E-03	4.98E-03	2.72E-03	1.49E-03	8.16E-04
1.04E+02	5.72E+01	3.16E+01	1.74E+01	9.61E+00	5.31E+00	2.93E+00	1.62E+00	8.97E-01	4.97E-01	2.75E-01	1.52E-01	8.40E-02	4.70E-02	2.60E-02
1.208	0.654	3.55E-01	1.93E-01	1.05E-01	5.70E-02	3.10E-02	1.70E-02	9.27E-03	5.07E-03	2.78E-03	1.52E-03	8.33E-04	4.57E-04	2.51E-04
1.57E+02	8.46E+01	4.64E+01	2.70E+01	1.69E+01	6.32E+00	1.26E+01	8.17E+00	5.31E+00	1.88E-01	1.00E-01	5.40E-02	2.90E-02	1.50E-02	8.16E-03
2.20E+01	1.32E+01	1.06E+01	1.83E+01	9.18E+00	2.75E-01	1.48E-01	8.00E-02	4.30E-02	2.30E-02	1.30E-02	6.88E-03	3.73E-03	2.03E-03	1.10E-03
4.32E+00	2.34E+00	1.27E+00	6.86E-01	3.73E-01	2.03E-01	1.10E-01	6.00E-02	3.30E-02	1.80E-02	9.80E-03	5.36E-03	2.93E-03	1.61E-03	8.82E-04
4.49E+02	**2.42E+02**	**1.31E+02**	**7.09E+01**	**3.84E+01**	**2.08E+01**	**1.26E+01**	**8.17E+00**	**5.31E+00**	**1.81E+00**	**9.83E-01**	**5.35E-01**	**2.91E-01**	**1.59E-01**	**8.70E-02**

440	450	460	470	480	490	500	510	520	530	540	550	560	570	580
3.83E-04	2.11E-04	1.16E-04	6.40E-05	3.53E-05	1.95E-05	1.08E-05	5.94E-06	3.28E-06	1.82E-06	1.00E-06	5.56E-07	3.08E-07	1.71E-07	9.46E-08
6.12E-04	3.38E-04	1.87E-04	1.03E-04	5.72E-05	3.17E-05	1.75E-05	9.72E-06	5.39E-06	2.99E-06	1.66E-06	9.21E-07	5.12E-07	2.84E-07	1.58E-07
1.35E-03	7.46E-04	4.12E-04	2.28E-04	1.26E-04	6.96E-05	3.85E-05	2.13E-05	1.18E-05	6.53E-06	3.62E-06	2.01E-06	1.11E-06	6.16E-07	3.42E-07
1.65E-03	9.11E-04	5.03E-04	2.78E-04	1.54E-04	8.49E-05	4.70E-05	2.60E-05	1.44E-05	7.97E-06	4.42E-06	2.45E-06	1.36E-06	7.54E-07	4.19E-07
2.34E-03	1.30E-03	7.18E-04	3.98E-04	2.21E-04	1.23E-04	6.80E-05	3.78E-05	2.10E-05	1.17E-05	6.48E-06	3.60E-06	2.00E-06	1.12E-06	6.21E-07
3.15E-04	1.74E-04	9.61E-05	5.23E-05	2.94E-05	1.56E-05	9.31E-06	4.41E-06	1.91E-06	2.18E-06	3.36E-07	5.65E-07	0.00E+00	7.81E-07	3.85E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.80E-02	2.70E-02	1.50E-02	8.13E-03	4.50E-03	2.49E-03	1.38E-03	7.62E-04	4.22E-04	2.34E-04	1.29E-04	7.17E-05	3.97E-05	2.20E-05	1.22E-05
2.13E-03	1.17E-03	6.41E-04	3.52E-04	1.93E-04	1.06E-04	5.84E-05	3.21E-05	1.77E-05	9.73E-06	5.36E-06	2.95E-06	1.63E-06	8.97E-07	4.94E-07
2.30E-04	1.26E-04	7.01E-05	3.90E-05	2.18E-05	1.16E-05	6.34E-06	3.93E-06	2.28E-06	6.98E-07	1.53E-06	2.34E-07	1.56E-08	0.00E+00	0.00E+00
5.93E-04	3.29E-04	1.82E-04	1.01E-04	5.52E-05	3.10E-05	1.78E-05	8.90E-06	5.00E-06	2.57E-06	1.68E-06	5.24E-07	9.02E-07	4.97E-07	2.82E-07
7.63E-04	4.20E-04	2.32E-04	1.28E-04	7.05E-05	3.89E-05	2.15E-05	1.19E-05	6.57E-06	3.63E-06	2.01E-06	1.11E-06	6.16E-07	3.42E-07	1.89E-07
5.76E-04	3.15E-04	1.73E-04	9.46E-05	5.18E-05	2.84E-05	1.56E-05	8.56E-06	4.70E-06	2.58E-06	1.42E-06	7.81E-07	4.29E-07	2.36E-07	1.30E-07
3.20E-04	1.76E-04	9.71E-05	5.35E-05	2.96E-05	1.63E-05	9.01E-06	4.98E-06	2.76E-06	1.53E-06	8.44E-07	4.68E-07	2.59E-07	1.44E-07	7.96E-08
9.53E-04	5.27E-04	2.91E-04	1.61E-04	8.92E-05	4.94E-05	2.74E-05	1.52E-05	8.41E-06	4.66E-06	2.59E-06	1.44E-06	7.98E-07	4.43E-07	2.47E-07
3.46E-03	1.91E-03	1.06E-03	5.86E-04	3.25E-04	1.80E-04	9.98E-05	5.54E-05	3.07E-05	1.70E-05	9.47E-06	5.26E-06	2.92E-06	1.62E-06	9.04E-07
2.78E-03	1.54E-03	8.54E-04	4.74E-04	2.63E-04	1.46E-04	8.11E-05	4.51E-05	2.51E-05	1.39E-05	7.75E-06	4.31E-06	2.40E-06	1.34E-06	7.43E-07
3.77E-04	2.08E-04	1.15E-04	6.37E-05	3.53E-05	1.95E-05	1.08E-05	6.01E-06	3.33E-06	1.85E-06	1.03E-06	5.70E-07	3.17E-07	1.76E-07	9.79E-08
9.90E-04	5.49E-04	3.05E-04	1.69E-04	9.39E-05	5.22E-05	2.90E-05	1.61E-05	8.96E-06	4.98E-06	2.77E-06	1.54E-06	8.58E-07	4.78E-07	2.66E-07
8.04E-04	4.46E-04	2.47E-04	1.37E-04	7.63E-05	4.24E-05	2.35E-05	1.31E-05	7.27E-06	4.04E-06	2.25E-06	1.25E-06	6.96E-07	3.88E-07	2.16E-07
3.71E-04	2.04E-04	1.12E-04	6.16E-05	3.39E-05	1.87E-05	1.03E-05	5.68E-06	3.14E-06	1.73E-06	9.56E-07	5.28E-07	2.92E-07	1.61E-07	8.93E-08
8.30E-04	4.55E-04	2.50E-04	1.37E-04	7.54E-05	4.15E-05	2.28E-05	1.26E-05	6.92E-06	3.81E-06	2.10E-06	1.16E-06	6.39E-07	3.53E-07	1.95E-07
8.32E-04	4.59E-04	2.54E-04	1.40E-04	7.75E-05	4.29E-05	2.38E-05	1.31E-05	7.29E-06	4.02E-06	2.23E-06	1.24E-06	6.89E-07	3.80E-07	2.13E-07
3.92E-04	2.16E-04	1.19E-04	6.56E-05	3.62E-05	2.00E-05	1.10E-05	6.09E-06	3.37E-06	1.86E-06	1.03E-06	5.70E-07	3.16E-07	1.75E-07	9.70E-08
2.35E-03	1.30E-03	7.19E-04	3.98E-04	2.20E-04	1.22E-04	6.77E-05	3.75E-05	2.08E-05	1.16E-05	6.41E-06	3.56E-06	1.98E-06	1.10E-06	6.12E-07
5.52E-03	3.05E-03	1.69E-03	9.32E-04	5.16E-04	2.85E-04	1.58E-04	8.76E-05	4.86E-05	2.69E-05	1.50E-05	8.30E-06	4.61E-06	2.56E-06	1.42E-06
1.05E-03	5.82E-04	3.22E-04	1.79E-04	9.89E-05	5.48E-05	3.04E-05	1.69E-05	9.36E-06	5.20E-06	2.89E-06	1.60E-06	8.92E-07	4.96E-07	2.76E-07
8.99E-04	4.94E-04	2.72E-04	1.49E-04	8.22E-05	4.53E-05	2.49E-05	1.38E-05	7.58E-06	4.18E-06	2.31E-06	1.28E-06	7.05E-07	3.90E-07	2.16E-07
2.78E-03	1.54E-03	8.49E-04	4.70E-04	2.60E-04	1.44E-04	7.98E-05	4.42E-05	2.45E-05	1.36E-05	7.54E-06	4.19E-06	2.32E-06	1.29E-06	7.16E-07
2.42E-03	9.41E-04	9.96E-04	3.16E-05	1.72E-05	9.32E-06	5.06E-06	2.75E-06	1.49E-06	8.12E-07	4.41E-07	2.40E-07	1.30E-07	7.08E-08	3.85E-08
9.85E-04	5.40E-04	2.97E-04	1.63E-04	8.96E-05	4.93E-05	2.71E-05	1.49E-05	8.22E-06	4.53E-06	2.50E-06	1.38E-06	7.59E-07	4.19E-07	2.31E-07
3.46E-04	1.92E-04	1.06E-04	5.87E-05	3.25E-05	1.80E-05	9.97E-06	5.53E-06	3.07E-06	1.70E-06	9.46E-07	5.25E-07	2.92E-07	1.62E-07	9.02E-08
2.07E-04	1.13E-04	6.19E-05	3.39E-05	1.86E-05	1.02E-05	5.58E-06	3.06E-06	1.68E-06	9.23E-07	5.07E-07	2.79E-07	1.53E-07	8.42E-08	4.64E-08
1.76E-03	9.67E-04	5.32E-04	2.93E-04	1.62E-04	8.92E-05	4.92E-05	2.72E-05	1.50E-05	8.30E-06	4.59E-06	2.54E-06	1.41E-06	7.78E-07	4.31E-07
6.46E-04	3.54E-04	1.94E-04	1.06E-04	5.84E-05	3.20E-05	1.76E-05	9.67E-06	5.32E-06	2.93E-06	1.61E-06	8.86E-07	4.88E-07	2.69E-07	1.48E-07

9.75E-05	5.28E-05	2.86E-05	1.55E-05	8.38E-06	4.54E-06	2.46E-06	1.34E-06	7.25E-07	3.93E-07	2.14E-07	1.16E-07	6.29E-08	3.42E-08	1.86E-08
1.19E-03	6.54E-04	3.61E-04	1.99E-04	1.10E-04	6.09E-05	3.37E-05	1.87E-05	1.03E-05	5.72E-06	3.17E-06	1.76E-06	9.75E-07	5.41E-07	3.00E-07
6.55E-05	3.36E-05	1.72E-05	8.74E-06	4.41E-06	2.21E-06	1.10E-06	5.39E-07	2.60E-07	1.23E-07	5.66E-08	2.49E-08	1.03E-08	3.75E-09	9.95E-10
2.77E-03	1.50E-03	8.16E-04	4.43E-04	2.41E-04	1.31E-04	7.13E-05	3.88E-05	2.11E-05	1.15E-05	6.26E-06	3.41E-06	1.86E-06	1.01E-06	5.51E-07
3.85E-03	2.14E-03	1.19E-03	6.60E-04	3.67E-04	2.04E-04	1.13E-04	6.29E-05	3.50E-05	1.95E-05	1.08E-05	6.01E-06	3.35E-06	1.86E-06	1.04E-06
1.50E-02	8.03E-03	4.42E-03	2.43E-03	1.34E-03	7.40E-04	4.08E-04	2.25E-04	1.24E-04	6.87E-05	3.80E-05	2.10E-05	1.16E-05	6.43E-06	3.56E-06
3.85E-03	2.13E-03	1.17E-03	6.49E-04	3.59E-04	1.98E-04	1.10E-04	6.08E-05	3.37E-05	1.87E-05	1.04E-05	5.74E-06	3.18E-06	1.77E-06	9.81E-07
9.10E-04	4.97E-04	2.72E-04	1.49E-04	8.12E-05	4.44E-05	2.43E-05	1.33E-05	7.30E-06	4.00E-06	2.19E-06	1.20E-06	6.60E-07	3.62E-07	1.99E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.50E-04	1.36E-04	7.38E-05	4.02E-05	2.19E-05	1.19E-05	6.49E-06	3.54E-06	1.93E-06	1.05E-06	5.74E-07	3.13E-07	1.71E-07	9.34E-08	5.10E-08
5.97E-04	3.30E-04	1.83E-04	1.01E-04	5.60E-05	3.11E-05	1.72E-05	9.55E-06	5.30E-06	2.94E-06	1.64E-06	9.09E-07	5.05E-07	2.81E-07	1.56E-07
3.86E-04	2.13E-04	1.17E-04	6.48E-05	3.58E-05	1.98E-05	1.09E-05	6.04E-06	3.34E-06	1.85E-06	1.02E-06	5.67E-07	3.14E-07	1.74E-07	9.67E-08
1.31E-04	7.16E-05	3.92E-05	2.14E-05	1.17E-05	6.42E-06	3.52E-06	1.93E-06	1.06E-06	5.80E-07	3.19E-07	1.75E-07	9.61E-08	5.28E-08	2.90E-08
6.62E-04	3.60E-04	2.09E-04	1.14E-04	5.84E-05	3.49E-05	1.48E-05	5.36E-06	6.38E-06	5.73E-06	0.00E+00	7.75E-06	5.27E-06	2.67E-06	0.00E+00
1.18E-03	6.49E-04	3.57E-04	1.96E-04	1.08E-04	5.95E-05	3.28E-05	1.80E-05	9.95E-06	5.49E-06	3.03E-06	1.67E-06	9.22E-07	5.09E-07	2.81E-07
9.53E-05	5.25E-05	2.89E-05	1.60E-05	8.81E-06	4.87E-06	2.69E-06	1.49E-06	8.23E-07	4.55E-07	2.52E-07	1.40E-07	7.74E-08	4.29E-08	2.38E-08
6.04E-03	3.30E-03	0.00E+00	0.00E+00	4.38E-03	2.41E-03	2.62E-03	1.22E-05	6.49E-06	3.46E-06	1.85E-06	9.85E-07	5.24E-07	2.79E-07	1.48E-07
3.37E-04	1.29E-04	1.22E-04	3.08E-05	6.31E-05	3.27E-05	1.69E-05	8.79E-06	8.03E-06	6.00E-07	3.30E-07	1.81E-07	9.97E-08	5.49E-08	3.02E-08
4.34E-03	2.39E-03	1.32E-03	7.28E-04	4.01E-04	2.22E-04	1.24E-04	6.75E-05	3.81E-05	1.97E-05	1.23E-05	6.98E-06	2.80E-06	2.09E-06	9.91E-07
2.10E-02	1.20E-02	6.47E-03	3.57E-03	1.97E-03	1.09E-03	6.04E-04	3.34E-04	1.85E-04	1.02E-04	5.68E-05	3.15E-05	1.74E-05	9.69E-06	5.38E-06
1.90E-03	1.05E-03	5.80E-04	3.22E-04	1.77E-04	9.80E-05	5.39E-05	3.01E-05	1.64E-05	9.28E-06	5.09E-06	2.49E-06	1.59E-06	1.24E-06	8.62E-07
6.09E-04	3.29E-04	1.77E-04	1.02E-04	5.50E-05	2.61E-05	1.71E-05	2.57E-06	1.07E-05	5.65E-06	3.39E-06	1.97E-06	1.26E-06	6.23E-07	5.75E-07
1.36E-04	7.38E-05	4.00E-05	2.16E-05	1.17E-05	6.36E-06	3.45E-06	1.87E-06	1.01E-06	5.49E-07	2.98E-07	1.62E-07	8.76E-08	4.75E-08	2.58E-08
5.94E-04	3.28E-04	1.81E-04	9.98E-05	5.51E-05	3.05E-05	1.68E-05	9.31E-06	5.15E-06	2.85E-06	1.58E-06	8.75E-07	4.85E-07	2.69E-07	1.49E-07
3.98E-04	2.20E-04	1.21E-04	6.72E-05	3.72E-05	2.06E-05	1.14E-05	6.31E-06	3.50E-06	1.94E-06	1.08E-06	5.98E-07	3.32E-07	1.85E-07	1.03E-07
1.74E-03	9.67E-04	5.39E-04	3.00E-04	1.67E-04	9.32E-05	5.20E-05	2.90E-05	1.62E-05	9.01E-06	5.03E-06	2.81E-06	1.57E-06	8.74E-07	4.88E-07
2.68E-03	1.48E-03	8.17E-04	4.51E-04	2.49E-04	1.38E-04	7.64E-05	4.23E-05	2.34E-05	1.30E-05	7.20E-06	3.99E-06	2.22E-06	1.23E-06	6.83E-07
1.40E-04	7.40E-05	3.91E-05	2.06E-05	1.08E-05	5.70E-06	2.99E-06	1.57E-06	8.18E-07	4.26E-07	2.21E-07	1.15E-07	5.90E-08	3.03E-08	1.54E-08
2.47E-04	1.33E-04	7.12E-05	3.82E-05	2.05E-05	1.10E-05	5.92E-06	3.18E-06	1.71E-06	9.16E-07	4.91E-07	2.63E-07	1.41E-07	7.56E-08	4.04E-08
1.89E-04	1.04E-04	5.73E-05	3.16E-05	1.74E-05	9.61E-06	5.31E-06	2.93E-06	1.62E-06	8.96E-07	4.95E-07	2.74E-07	1.52E-07	8.40E-08	4.66E-08
8.50E-04	4.66E-04	2.55E-04	1.40E-04	7.67E-05	4.21E-05	2.31E-05	1.27E-05	6.98E-06	3.83E-06	2.11E-06	1.16E-06	6.38E-07	3.51E-07	1.93E-07
1.50E-03	8.26E-04	4.56E-04	2.51E-04	1.39E-04	7.74E-05	4.25E-05	2.37E-05	1.35E-05	7.57E-06	3.54E-06	2.48E-06	1.47E-06	9.34E-07	1.35E-07
1.85E-03	1.00E-03	5.45E-04	2.96E-04	1.61E-04	8.75E-05	4.76E-05	2.59E-05	1.41E-05	7.66E-06	4.17E-06	2.27E-06	1.24E-06	6.74E-07	3.67E-07
5.21E-03	2.89E-03	1.60E-03	8.89E-04	4.94E-04	2.74E-04	1.52E-04	8.47E-05	4.71E-05	2.62E-05	1.46E-05	8.11E-06	4.52E-06	2.52E-06	1.40E-06
7.88E-03	4.28E-03	2.33E-03	1.27E-03	6.90E-04	3.76E-04	2.05E-04	1.12E-04	6.09E-05	3.32E-05	1.81E-05	9.88E-06	5.40E-06	2.95E-06	1.61E-06
8.01E-05	3.71E-05	1.66E-05	7.02E-06	2.70E-06	8.48E-07	1.14E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E-03	6.74E-04	3.73E-04	2.06E-04	1.14E-04	6.33E-05	3.51E-05	1.95E-05	1.08E-05	6.00E-06	3.33E-06	1.85E-06	1.03E-06	5.72E-07	3.18E-07
1.95E-03	1.07E-03	5.86E-04	3.21E-04	1.77E-04	9.70E-05	5.34E-05	2.94E-05	1.62E-05	8.90E-06	4.90E-06	2.70E-06	1.49E-06	8.23E-07	4.54E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

6.81E-04	3.75E-04	2.07E-04	1.14E-04	6.31E-05	3.49E-05	1.93E-05	1.07E-05	5.89E-06	3.26E-06	1.80E-06	9.99E-07	5.53E-07	3.07E-07	1.70E-07
5.34E-04	2.95E-04	1.63E-04	9.01E-05	4.98E-05	2.76E-05	1.53E-05	8.47E-06	4.70E-06	2.60E-06	1.45E-06	8.02E-07	4.45E-07	2.47E-07	1.37E-07
6.09E-04	3.36E-04	1.85E-04	1.02E-04	5.62E-05	3.10E-05	1.72E-05	9.61E-06	5.30E-06	3.02E-06	1.68E-06	8.33E-07	5.08E-07	3.08E-07	1.35E-07
7.62E-04	4.19E-04	2.30E-04	1.27E-04	6.97E-05	3.84E-05	2.12E-05	1.17E-05	6.44E-06	3.55E-06	1.96E-06	1.08E-06	5.99E-07	3.31E-07	1.83E-07
5.40E-04	2.98E-04	1.65E-04	9.09E-05	5.02E-05	2.78E-05	1.54E-05	8.51E-06	4.71E-06	2.61E-06	1.45E-06	8.02E-07	4.45E-07	2.47E-07	1.37E-07
2.25E-04	1.17E-04	6.11E-05	3.17E-05	1.64E-05	8.46E-06	4.35E-06	2.22E-06	1.13E-06	5.72E-07	2.87E-07	1.43E-07	7.00E-08	3.39E-08	1.61E-08
2.07E-04	1.13E-04	6.17E-05	3.37E-05	1.84E-05	1.01E-05	5.50E-06	3.01E-06	1.65E-06	9.01E-07	4.93E-07	2.70E-07	1.48E-07	8.12E-08	4.46E-08
2.05E-04	1.11E-04	6.07E-05	3.31E-05	1.80E-05	9.82E-06	5.36E-06	2.92E-06	1.60E-06	8.72E-07	4.76E-07	2.60E-07	1.42E-07	7.78E-08	4.26E-08
5.31E-04	2.95E-04	1.63E-04	9.06E-05	5.03E-05	2.79E-05	1.55E-05	8.62E-06	4.79E-06	2.66E-06	1.48E-06	8.24E-07	4.59E-07	2.56E-07	1.42E-07
1.36E-04	7.51E-05	4.14E-05	2.28E-05	1.26E-05	6.97E-06	3.85E-06	2.13E-06	1.18E-06	6.52E-07	3.61E-07	2.00E-07	1.11E-07	6.16E-08	3.42E-08
2.09E-04	1.15E-04	6.31E-05	3.47E-05	1.91E-05	1.05E-05	5.78E-06	3.19E-06	1.76E-06	9.69E-07	5.34E-07	2.95E-07	1.63E-07	9.00E-08	4.97E-08
1.99E-04	1.07E-04	5.73E-05	3.08E-05	1.65E-05	8.86E-06	4.75E-06	2.55E-06	1.37E-06	7.33E-07	3.92E-07	2.10E-07	1.12E-07	6.01E-08	3.21E-08
4.40E-04	2.39E-04	1.30E-04	7.08E-05	3.86E-05	2.10E-05	1.15E-05	6.24E-06	3.41E-06	1.86E-06	1.01E-06	5.53E-07	3.02E-07	1.65E-07	9.01E-08
4.70E-02	2.60E-02	1.40E-02	7.65E-03	4.18E-03	2.28E-03	1.25E-03	6.81E-04	3.73E-04	2.04E-04	1.12E-04	6.10E-05	3.34E-05	1.83E-05	1.00E-05
3.70E-05	2.01E-05	1.09E-05	5.91E-06	3.21E-06	1.74E-06	9.48E-07	5.15E-07	2.80E-07	1.52E-07	8.29E-08	4.51E-08	2.45E-08	1.34E-08	7.27E-09
1.10E-02	6.20E-03	3.42E-03	1.89E-03	1.04E-03	5.77E-04	3.19E-04	1.77E-04	9.77E-05	5.41E-05	2.99E-05	1.66E-05	9.19E-06	5.09E-06	2.82E-06
3.77E-04	2.08E-04	1.15E-04	6.36E-05	3.52E-05	1.95E-05	1.08E-05	5.98E-06	3.32E-06	1.84E-06	1.02E-06	5.66E-07	3.14E-07	1.74E-07	9.71E-08
1.50E-02	8.02E-03	4.43E-03	2.45E-03	1.35E-03	7.49E-04	4.14E-04	2.29E-04	1.27E-04	7.04E-05	3.90E-05	2.17E-05	1.20E-05	6.67E-06	3.70E-06
7.74E-03	4.29E-03	2.38E-03	1.32E-03	7.32E-04	4.07E-04	2.26E-04	1.25E-04	6.97E-05	3.88E-05	2.16E-05	1.20E-05	6.67E-06	3.71E-06	2.07E-06
4.47E-04	2.45E-04	1.35E-04	7.39E-05	4.06E-05	2.23E-05	1.23E-05	6.75E-06	3.72E-06	2.05E-06	1.13E-06	6.22E-07	3.43E-07	1.89E-07	1.05E-07
1.40E-02	7.94E-03	4.48E-03	2.43E-03	1.38E-03	7.37E-04	3.89E-04	2.48E-04	1.51E-04	6.63E-05	1.55E-05	3.72E-05	2.00E-05	1.28E-05	7.61E-06
1.38E-04	7.59E-05	4.18E-05	2.30E-05	1.27E-05	6.98E-06	3.85E-06	2.13E-06	1.17E-06	6.49E-07	3.59E-07	1.98E-07	1.10E-07	6.07E-08	3.36E-08
4.36E-03	2.33E-03	1.24E-03	6.64E-04	3.54E-04	1.89E-04	1.01E-04	5.36E-05	2.85E-05	1.52E-05	8.05E-06	4.27E-06	2.26E-06	1.19E-06	6.30E-07
5.98E-04	3.25E-04	1.77E-04	9.64E-05	5.25E-05	2.86E-05	1.56E-05	8.51E-06	4.64E-06	2.54E-06	1.38E-06	7.56E-07	4.13E-07	2.26E-07	1.23E-07
4.84E-04	2.66E-04	1.46E-04	8.04E-05	4.42E-05	2.44E-05	1.34E-05	7.39E-06	4.08E-06	2.25E-06	1.24E-06	6.86E-07	3.79E-07	2.10E-07	1.16E-07
4.80E-02	**2.70E-02**	**1.50E-02**	**8.13E-03**	**4.50E-03**	**2.49E-03**	**2.62E-03**	**7.62E-04**	**4.22E-04**	**2.34E-04**	**1.29E-04**	**7.17E-05**	**3.97E-05**	**2.20E-05**	**1.22E-05**

590	600	610	620	630	640	650	660	670	680	690	700	710	720	730
5.24E-08	2.91E-08	1.61E-08	8.96E-09	4.98E-09	2.77E-09	1.54E-09	8.55E-10	4.75E-10	2.65E-10	1.47E-10	8.20E-11	4.56E-11	2.54E-11	1.42E-11
8.78E-08	4.89E-08	2.72E-08	1.51E-08	8.42E-09	4.69E-09	2.61E-09	1.46E-09	8.11E-10	4.52E-10	2.52E-10	1.41E-10	7.85E-11	4.38E-11	2.45E-11
1.90E-07	1.05E-07	5.84E-08	3.24E-08	1.80E-08	1.00E-08	5.56E-09	3.09E-09	1.72E-09	9.54E-10	5.31E-10	2.95E-10	1.64E-10	9.14E-11	5.08E-11
2.33E-07	1.29E-07	7.18E-08	3.99E-08	2.22E-08	1.24E-08	6.88E-09	3.83E-09	2.13E-09	1.19E-09	6.62E-10	3.69E-10	2.06E-10	1.15E-10	6.39E-11
3.46E-07	1.92E-07	1.07E-07	5.98E-08	3.33E-08	1.86E-08	1.04E-08	5.78E-09	3.23E-09	1.80E-09	1.01E-09	5.61E-10	3.13E-10	1.75E-10	9.78E-11
3.80E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.77E-06	3.76E-06	2.08E-06	1.16E-06	6.42E-07	3.56E-07	1.98E-07	1.10E-07	6.10E-08	3.39E-08	1.88E-08	1.05E-08	5.82E-09	3.24E-09	1.80E-09
2.73E-07	1.51E-07	8.31E-08	4.59E-08	2.53E-08	1.40E-08	7.74E-09	4.28E-09	2.37E-09	1.31E-09	7.24E-10	4.00E-10	2.22E-10	1.23E-10	6.79E-11
0.00E+00	6.18E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.62E-07	9.02E-08	5.45E-08	2.64E-08	2.20E-08	2.10E-09	1.16E-09	6.44E-10	3.57E-10	1.98E-10	1.10E-10	6.09E-11	3.38E-11	1.87E-11	1.04E-11
1.05E-07	5.82E-08	3.23E-08	1.79E-08	9.94E-09	5.52E-09	3.07E-09	1.70E-09	9.46E-10	5.26E-10	2.92E-10	1.63E-10	9.05E-11	5.03E-11	2.80E-11
7.16E-08	3.94E-08	2.17E-08	1.20E-08	6.60E-09	3.64E-09	2.01E-09	1.11E-09	6.11E-10	3.37E-10	1.86E-10	1.03E-10	5.67E-11	3.13E-11	1.73E-11
4.42E-08	2.45E-08	1.36E-08	7.56E-09	4.20E-09	2.33E-09	1.30E-09	7.21E-10	4.01E-10	2.23E-10	1.24E-10	6.92E-11	3.85E-11	2.15E-11	1.20E-11
1.37E-07	7.62E-08	4.24E-08	2.36E-08	1.31E-08	7.32E-09	4.08E-09	2.27E-09	1.27E-09	7.06E-10	3.94E-10	2.20E-10	1.23E-10	6.84E-11	3.82E-11
5.04E-07	2.82E-07	1.56E-07	8.68E-08	4.87E-08	2.61E-08	1.56E-08	8.40E-09	4.76E-09	2.36E-09	1.85E-09	8.45E-10	4.53E-10	3.97E-10	8.71E-11
4.14E-07	2.31E-07	1.29E-07	7.16E-08	3.99E-08	2.23E-08	1.24E-08	6.93E-09	3.87E-09	2.16E-09	1.21E-09	6.73E-10	3.76E-10	2.10E-10	1.17E-10
5.45E-08	3.03E-08	1.69E-08	9.39E-09	5.23E-09	2.92E-09	1.62E-09	9.06E-10	5.05E-10	2.82E-10	1.57E-10	8.77E-11	4.89E-11	2.73E-11	1.53E-11
1.48E-07	8.26E-08	4.60E-08	2.57E-08	1.43E-08	7.98E-09	4.45E-09	2.48E-09	1.39E-09	7.74E-10	4.32E-10	2.41E-10	1.35E-10	7.53E-11	4.21E-11
1.20E-07	6.70E-08	3.73E-08	2.08E-08	1.16E-08	6.47E-09	3.61E-09	2.01E-09	1.12E-09	6.27E-10	3.50E-10	1.95E-10	1.09E-10	6.09E-11	3.40E-11
4.94E-08	2.74E-08	1.52E-08	8.40E-09	4.66E-09	2.58E-09	1.43E-09	7.95E-10	4.41E-10	2.45E-10	1.36E-10	7.55E-11	4.20E-11	2.33E-11	1.30E-11
1.08E-07	5.95E-08	3.29E-08	1.82E-08	1.01E-08	5.56E-09	3.08E-09	1.71E-09	9.45E-10	5.23E-10	2.90E-10	1.61E-10	8.91E-11	4.94E-11	2.74E-11
1.22E-07	6.85E-08	4.16E-08	2.25E-08	1.27E-08	4.92E-09	1.54E-09	3.69E-09	3.24E-09	1.80E-11	0.00E+00	1.50E-09	6.66E-10	5.95E-10	0.00E+00
5.38E-08	2.98E-08	1.66E-08	9.19E-09	5.10E-09	2.83E-09	1.57E-09	8.75E-10	4.87E-10	2.71E-10	1.51E-10	8.38E-11	4.66E-11	2.60E-11	1.45E-11
3.40E-07	1.89E-07	1.05E-07	5.87E-08	3.27E-08	1.82E-08	1.01E-08	5.66E-09	3.15E-09	1.76E-09	9.81E-10	5.48E-10	3.06E-10	1.71E-10	9.53E-11
7.90E-07	4.39E-07	2.44E-07	1.36E-07	7.57E-08	4.21E-08	2.35E-08	1.31E-08	7.28E-09	4.06E-09	2.26E-09	1.26E-09	7.04E-10	3.93E-10	2.19E-10
1.54E-07	8.55E-08	4.76E-08	2.65E-08	1.48E-08	8.23E-09	4.59E-09	2.56E-09	1.43E-09	7.97E-10	4.45E-10	2.48E-10	1.39E-10	7.74E-11	4.33E-11
1.19E-07	6.60E-08	3.66E-08	2.03E-08	1.12E-08	6.22E-09	3.45E-09	1.91E-09	1.06E-09	5.89E-10	3.27E-10	1.82E-10	1.01E-10	5.60E-11	3.11E-11
3.98E-07	2.21E-07	1.23E-07	6.83E-08	3.80E-08	2.11E-08	1.18E-08	6.54E-09	3.64E-09	2.03E-09	1.13E-09	6.28E-10	3.50E-10	1.95E-10	1.09E-10
2.09E-08	1.14E-08	6.18E-09	3.36E-09	1.82E-09	9.90E-10	5.38E-10	2.92E-10	1.58E-10	8.60E-11	4.66E-11	2.53E-11	1.37E-11	7.42E-12	4.01E-12
1.28E-07	7.06E-08	3.90E-08	2.16E-08	1.19E-08	6.60E-09	3.65E-09	2.02E-09	1.12E-09	6.20E-10	3.43E-10	1.90E-10	1.05E-10	5.85E-11	3.24E-11
5.02E-08	2.79E-08	1.55E-08	8.65E-09	4.82E-09	2.69E-09	1.50E-09	8.34E-10	4.65E-10	2.59E-10	1.45E-10	8.07E-11	4.51E-11	2.52E-11	1.41E-11
2.55E-08	1.41E-08	7.74E-09	4.26E-09	2.35E-09	1.30E-09	7.14E-10	3.94E-10	2.17E-10	1.20E-10	6.61E-11	3.65E-11	2.02E-11	1.11E-11	6.15E-12
2.39E-07	1.32E-07	7.33E-08	4.07E-08	2.26E-08	1.25E-08	6.95E-09	3.86E-09	2.14E-09	1.19E-09	6.62E-10	3.68E-10	2.05E-10	1.14E-10	6.33E-11
8.17E-08	4.51E-08	2.49E-08	1.37E-08	7.58E-09	4.19E-09	2.31E-09	1.28E-09	7.07E-10	3.91E-10	2.16E-10	1.20E-10	6.61E-11	3.66E-11	2.03E-11

1.01E-08	5.48E-09	2.97E-09	1.62E-09	8.77E-10	4.77E-10	2.59E-10	1.41E-10	7.63E-11	4.14E-11	2.25E-11	1.22E-11	6.62E-12	3.59E-12	1.95E-12
1.67E-07	9.26E-08	5.15E-08	2.86E-08	1.59E-08	8.85E-09	4.93E-09	2.74E-09	1.53E-09	8.50E-10	4.74E-10	2.64E-10	1.47E-10	8.21E-11	4.58E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E-07	1.64E-07	8.92E-08	4.86E-08	2.65E-08	1.44E-08	7.87E-09	4.29E-09	2.34E-09	1.27E-09	6.94E-10	3.78E-10	2.06E-10	1.12E-10	6.10E-11
5.76E-07	3.21E-07	1.78E-07	9.93E-08	5.53E-08	3.08E-08	1.71E-08	9.55E-09	5.32E-09	2.96E-09	1.65E-09	9.20E-10	5.12E-10	2.86E-10	1.59E-10
1.97E-06	1.09E-06	6.06E-07	3.36E-07	1.86E-07	1.03E-07	5.74E-08	3.19E-08	1.77E-08	9.83E-09	5.46E-09	3.04E-09	1.69E-09	9.39E-10	5.22E-10
5.45E-07	3.03E-07	1.68E-07	9.34E-08	5.20E-08	2.89E-08	1.61E-08	8.95E-09	4.98E-09	2.77E-09	1.54E-09	8.60E-10	4.79E-10	2.67E-10	1.49E-10
1.09E-07	6.00E-08	3.30E-08	1.81E-08	9.97E-09	5.48E-09	3.01E-09	1.66E-09	9.12E-10	5.02E-10	2.76E-10	1.52E-10	8.38E-11	4.61E-11	2.54E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.78E-08	1.52E-08	8.31E-09	4.54E-09	2.48E-09	1.35E-09	7.40E-10	4.04E-10	2.21E-10	1.21E-10	6.60E-11	3.60E-11	1.97E-11	1.08E-11	5.87E-12
8.69E-08	4.84E-08	2.70E-08	1.50E-08	8.36E-09	4.66E-09	2.60E-09	1.45E-09	8.09E-10	4.51E-10	2.52E-10	1.41E-10	7.85E-11	4.39E-11	2.45E-11
5.37E-08	2.98E-08	1.65E-08	9.19E-09	5.11E-09	2.84E-09	1.58E-09	8.78E-10	4.88E-10	2.72E-10	1.51E-10	8.42E-11	4.69E-11	2.61E-11	1.46E-11
1.60E-08	8.78E-09	4.83E-09	2.66E-09	1.46E-09	8.06E-10	4.44E-10	2.45E-10	1.35E-10	7.43E-11	4.10E-11	2.26E-11	1.25E-11	6.88E-12	3.79E-12
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.55E-07	8.58E-08	4.74E-08	2.62E-08	1.45E-08	8.03E-09	4.44E-09	2.46E-09	1.36E-09	7.54E-10	4.18E-10	2.31E-10	1.28E-10	7.10E-11	3.94E-11
1.32E-08	7.33E-09	4.07E-09	2.26E-09	1.26E-09	6.99E-10	3.88E-10	2.16E-10	1.20E-10	6.69E-11	3.73E-11	2.08E-11	1.16E-11	6.44E-12	3.59E-12
7.84E-08	4.15E-08	2.19E-08	1.15E-08	6.06E-09	3.18E-09	1.66E-09	8.62E-10	4.46E-10	2.30E-10	1.18E-10	5.96E-11	3.00E-11	1.49E-11	7.32E-12
1.66E-08	9.16E-09	5.04E-09	2.78E-09	1.53E-09	8.44E-10	4.66E-10	2.57E-10	1.42E-10	7.81E-11	4.31E-11	2.38E-11	1.31E-11	7.25E-12	4.00E-12
9.23E-07	4.30E-07	0.00E+00	0.00E+00	3.49E-09	0.00E+00	3.23E-07	3.10E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.98E-06	1.65E-06	9.18E-07	5.17E-07	2.87E-07	1.60E-07	8.64E-08	4.41E-08	2.50E-08	1.20E-08	4.90E-09	4.89E-09	9.30E-10	2.92E-09	2.86E-10
2.19E-07	0.00E+00	2.95E-07	1.58E-07	7.52E-08	6.72E-08	3.18E-08	2.88E-08	7.52E-10	4.16E-10	2.30E-10	1.27E-10	7.04E-11	3.90E-11	2.16E-11
2.41E-08	1.32E-08	7.17E-09	3.91E-09	2.13E-09	1.16E-09	6.33E-10	3.45E-10	1.88E-10	1.02E-10	5.57E-11	3.03E-11	1.65E-11	8.98E-12	4.88E-12
1.40E-08	7.57E-09	4.10E-09	2.22E-09	1.20E-09	6.52E-10	3.53E-10	1.91E-10	1.03E-10	5.58E-11	3.01E-11	1.63E-11	8.77E-12	4.73E-12	2.55E-12
8.26E-08	4.58E-08	2.55E-08	1.41E-08	7.85E-09	4.36E-09	2.42E-09	1.35E-09	7.49E-10	4.16E-10	2.32E-10	1.29E-10	7.17E-11	3.99E-11	2.22E-11
5.71E-08	3.17E-08	1.77E-08	9.83E-09	5.47E-09	3.05E-09	1.70E-09	9.46E-10	5.28E-10	2.94E-10	1.64E-10	9.15E-11	5.11E-11	2.85E-11	1.59E-11
2.72E-07	1.52E-07	8.49E-08	4.74E-08	2.65E-08	1.48E-08	8.28E-09	4.63E-09	2.59E-09	1.45E-09	8.08E-10	4.52E-10	2.53E-10	1.42E-10	7.92E-11
3.80E-07	2.11E-07	1.17E-07	6.53E-08	3.63E-08	2.02E-08	1.13E-08	6.27E-09	3.49E-09	1.95E-09	1.09E-09	6.05E-10	3.37E-10	1.88E-10	1.05E-10
7.80E-09	3.92E-09	1.94E-09	9.52E-10	4.59E-10	2.16E-10	9.83E-11	4.27E-11	1.71E-11	5.81E-12	1.18E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.16E-08	1.15E-08	6.16E-09	3.28E-09	1.75E-09	9.28E-10	4.92E-10	2.61E-10	1.38E-10	7.26E-11	3.81E-11	2.00E-11	1.04E-11	5.42E-12	2.81E-12
2.58E-08	1.43E-08	7.93E-09	4.40E-09	2.44E-09	1.36E-09	7.53E-10	4.18E-10	2.32E-10	1.29E-10	7.18E-11	3.99E-11	2.22E-11	1.24E-11	6.88E-12
1.07E-07	5.87E-08	3.23E-08	1.78E-08	9.83E-09	5.42E-09	2.99E-09	1.65E-09	9.10E-10	5.02E-10	2.77E-10	1.53E-10	8.46E-11	4.67E-11	2.58E-11
0.00E+00	6.71E-08	0.00E+00	2.29E-07	1.45E-07	6.82E-08	6.53E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.00E-07	1.09E-07	5.94E-08	3.24E-08	1.76E-08	9.61E-09	5.23E-09	2.85E-09	1.55E-09	8.45E-10	4.60E-10	2.51E-10	1.36E-10	7.42E-11	4.04E-11
7.81E-07	4.36E-07	2.43E-07	1.35E-07	7.56E-08	4.22E-08	2.35E-08	1.31E-08	7.34E-09	4.10E-09	2.29E-09	1.28E-09	7.16E-10	4.00E-10	2.24E-10
8.79E-07	4.80E-07	2.63E-07	1.44E-07	7.84E-08	4.29E-08	2.34E-08	1.28E-08	7.01E-09	3.83E-09	2.10E-09	1.15E-09	6.27E-10	3.43E-10	1.88E-10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.77E-07	9.85E-08	5.48E-08	3.05E-08	1.70E-08	9.48E-09	5.28E-09	2.95E-09	1.64E-09	9.17E-10	5.12E-10	2.86E-10	1.59E-10	8.90E-11	4.97E-11
2.51E-07	1.39E-07	7.66E-08	4.23E-08	2.34E-08	1.30E-08	7.17E-09	3.97E-09	2.20E-09	1.22E-09	6.75E-10	3.74E-10	2.08E-10	1.15E-10	6.39E-11
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

9.42E-08	5.22E-08	2.90E-08	1.61E-08	8.93E-09	4.96E-09	2.75E-09	1.53E-09	8.50E-10	4.73E-10	2.63E-10	1.46E-10	8.13E-11	4.52E-11	2.52E-11
7.64E-08	4.25E-08	2.36E-08	1.32E-08	7.32E-09	4.08E-09	2.27E-09	1.27E-09	7.05E-10	3.93E-10	2.19E-10	1.22E-10	6.82E-11	3.81E-11	2.12E-11
4.49E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.49E-09	0.00E+00	5.77E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.01E-07	5.60E-08	3.10E-08	1.72E-08	9.51E-09	5.27E-09	2.92E-09	1.62E-09	8.99E-10	4.99E-10	2.77E-10	1.54E-10	8.53E-11	4.74E-11	2.63E-11
7.62E-08	4.23E-08	2.35E-08	1.31E-08	7.27E-09	4.05E-09	2.25E-09	1.25E-09	6.98E-10	3.89E-10	2.16E-10	1.21E-10	6.72E-11	3.75E-11	2.09E-11
7.40E-09	3.28E-09	1.37E-09	5.09E-10	1.45E-10	4.21E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.44E-08	1.34E-08	7.36E-09	4.04E-09	2.22E-09	1.22E-09	6.70E-10	3.68E-10	2.02E-10	1.11E-10	6.12E-11	3.36E-11	1.85E-11	1.02E-11	5.60E-12
2.33E-08	1.27E-08	6.97E-09	3.81E-09	2.09E-09	1.14E-09	6.26E-10	3.43E-10	1.88E-10	1.03E-10	5.62E-11	3.08E-11	1.69E-11	9.24E-12	5.06E-12
7.93E-08	4.42E-08	2.46E-08	1.37E-08	7.66E-09	4.28E-09	2.39E-09	1.33E-09	7.44E-10	4.15E-10	2.32E-10	1.30E-10	7.25E-11	4.05E-11	2.27E-11
1.90E-08	1.05E-08	5.85E-09	3.25E-09	1.81E-09	1.01E-09	5.59E-10	3.11E-10	1.73E-10	9.64E-11	5.37E-11	2.99E-11	1.67E-11	9.29E-12	5.18E-12
2.75E-08	1.52E-08	8.41E-09	4.66E-09	2.58E-09	1.43E-09	7.91E-10	4.38E-10	2.43E-10	1.35E-10	7.47E-11	4.14E-11	2.30E-11	1.28E-11	7.08E-12
1.72E-08	9.15E-09	4.87E-09	2.59E-09	1.38E-09	7.30E-10	3.86E-10	2.04E-10	1.07E-10	5.65E-11	2.96E-11	1.54E-11	8.02E-12	4.15E-12	2.14E-12
4.93E-08	2.69E-08	1.47E-08	8.04E-09	4.39E-09	2.40E-09	1.31E-09	7.18E-10	3.93E-10	2.15E-10	1.17E-10	6.42E-11	3.51E-11	1.92E-11	1.05E-11
5.49E-06	3.01E-06	1.65E-06	9.05E-07	4.97E-07	2.72E-07	1.50E-07	8.21E-08	4.50E-08	2.47E-08	1.36E-08	7.46E-09	4.10E-09	2.25E-09	1.24E-09
3.96E-09	2.16E-09	1.17E-09	6.39E-10	3.48E-10	1.89E-10	1.03E-10	5.61E-11	3.05E-11	1.66E-11	9.04E-12	4.92E-12	2.67E-12	1.45E-12	7.89E-13
1.56E-06	8.68E-07	4.81E-07	2.67E-07	1.48E-07	8.23E-08	4.57E-08	2.54E-08	1.41E-08	7.84E-09	4.36E-09	2.42E-09	1.35E-09	7.48E-10	4.16E-10
5.33E-08	3.01E-08	1.63E-08	9.27E-09	5.19E-09	2.97E-09	1.76E-09	8.17E-10	5.50E-10	3.04E-10	2.44E-10	5.73E-11	0.00E+00	9.70E-11	5.57E-11
2.06E-06	1.14E-06	6.36E-07	3.53E-07	1.97E-07	1.09E-07	6.09E-08	3.39E-08	1.89E-08	1.05E-08	5.86E-09	3.27E-09	1.82E-09	1.02E-09	5.66E-10
1.15E-06	6.40E-07	3.57E-07	1.99E-07	1.11E-07	6.17E-08	3.44E-08	1.92E-08	1.07E-08	5.97E-09	3.33E-09	1.86E-09	1.04E-09	5.80E-10	3.24E-10
5.78E-08	3.19E-08	1.76E-08	9.75E-09	5.39E-09	2.98E-09	1.65E-09	9.15E-10	5.07E-10	2.81E-10	1.56E-10	8.62E-11	4.78E-11	2.65E-11	1.47E-11
3.72E-06	2.97E-06	3.85E-07	2.14E-07	1.19E-07	6.58E-08	3.66E-08	2.03E-08	1.13E-08	6.27E-09	3.49E-09	1.94E-09	1.08E-09	6.00E-10	3.34E-10
1.86E-08	1.03E-08	5.73E-09	3.18E-09	1.76E-09	9.78E-10	5.43E-10	3.02E-10	1.68E-10	9.31E-11	5.18E-11	2.88E-11	1.60E-11	8.91E-12	4.96E-12
3.32E-07	1.74E-07	9.11E-08	4.75E-08	2.47E-08	1.28E-08	6.59E-09	3.37E-09	1.71E-09	8.63E-10	4.30E-10	2.11E-10	1.02E-10	4.82E-11	2.20E-11
6.75E-08	3.69E-08	2.02E-08	1.10E-08	6.04E-09	3.30E-09	1.81E-09	9.89E-10	5.41E-10	2.96E-10	1.62E-10	8.87E-11	4.85E-11	2.66E-11	1.45E-11
6.42E-08	3.55E-08	1.97E-08	1.09E-08	6.04E-09	3.35E-09	1.86E-09	1.03E-09	5.71E-10	3.17E-10	1.76E-10	9.77E-11	5.43E-11	3.02E-11	1.68E-11
6.77E-06	**3.76E-06**	**2.08E-06**	**1.16E-06**	**6.42E-07**	**3.56E-07**	**3.23E-07**	**3.10E-07**	**6.10E-08**	**3.39E-08**	**1.88E-08**	**1.05E-08**	**5.82E-09**	**3.24E-09**	**1.80E-09**

740	750	760	770	780	790	800	810	820	830	840	850	860	870	880
7.90E-12	4.40E-12	2.45E-12	1.37E-12	7.64E-13	4.26E-13	2.38E-13	1.33E-13	7.42E-14	4.14E-14	2.31E-14	1.29E-14	7.23E-15	4.04E-15	2.26E-15
1.37E-11	7.63E-12	4.26E-12	2.38E-12	1.33E-12	7.44E-13	4.16E-13	2.33E-13	1.30E-13	7.28E-14	4.07E-14	2.28E-14	1.28E-14	7.14E-15	4.00E-15
2.83E-11	1.58E-11	8.77E-12	4.89E-12	2.72E-12	1.52E-12	8.45E-13	4.71E-13	2.63E-13	1.46E-13	8.16E-14	4.55E-14	2.54E-14	1.42E-14	7.90E-15
3.57E-11	1.99E-11	1.11E-11	6.20E-12	3.46E-12	1.94E-12	1.08E-12	6.04E-13	3.38E-13	1.89E-13	1.06E-13	5.90E-14	3.30E-14	1.85E-14	1.03E-14
5.47E-11	3.06E-11	1.71E-11	9.56E-12	5.35E-12	2.99E-12	1.67E-12	9.37E-13	5.24E-13	2.94E-13	1.64E-13	9.21E-14	5.16E-14	2.89E-14	1.62E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E-09	5.57E-10	3.10E-10	1.72E-10	9.59E-11	5.34E-11	2.97E-11	1.65E-11	9.21E-12	5.13E-12	2.86E-12	1.59E-12	8.86E-13	4.94E-13	2.75E-13
3.76E-11	2.09E-11	1.16E-11	6.40E-12	3.55E-12	1.97E-12	1.09E-12	6.05E-13	3.36E-13	1.86E-13	1.03E-13	5.74E-14	3.19E-14	1.77E-14	9.82E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.77E-12	3.21E-12	1.78E-12	9.89E-13	5.49E-13	3.05E-13	1.70E-13	9.43E-14	5.24E-14	2.92E-14	1.62E-14	9.02E-15	5.02E-15	2.79E-15	1.55E-15
1.56E-11	8.68E-12	4.84E-12	2.69E-12	1.50E-12	8.37E-13	4.66E-13	2.60E-13	1.45E-13	8.08E-14	4.51E-14	2.52E-14	1.40E-14	7.83E-15	4.37E-15
9.56E-12	5.29E-12	2.92E-12	1.62E-12	8.93E-13	4.94E-13	2.73E-13	1.51E-13	8.36E-14	4.62E-14	2.56E-14	1.42E-14	7.84E-15	4.34E-15	2.40E-15
6.67E-12	3.72E-12	2.07E-12	1.16E-12	6.45E-13	3.60E-13	2.01E-13	1.12E-13	6.27E-14	3.50E-14	1.96E-14	1.09E-14	6.10E-15	3.41E-15	1.91E-15
2.13E-11	1.19E-11	6.66E-12	3.71E-12	2.08E-12	1.16E-12	6.51E-13	3.61E-13	2.04E-13	1.14E-13	6.37E-14	3.51E-14	2.03E-14	1.15E-14	5.86E-15
0.00E+00	1.77E-10	9.03E-11	5.10E-11	2.19E-11	1.82E-11	1.52E-11	2.05E-13	1.12E-13	6.08E-14	3.31E-14	1.80E-14	9.76E-15	5.30E-15	2.87E-15
6.55E-11	3.66E-11	2.05E-11	1.14E-11	6.40E-12	3.58E-12	2.00E-12	1.12E-12	6.27E-13	3.51E-13	1.96E-13	1.10E-13	6.15E-14	3.45E-14	1.93E-14
8.52E-12	4.76E-12	2.66E-12	1.49E-12	8.33E-13	4.66E-13	2.61E-13	1.46E-13	8.16E-14	4.55E-14	2.55E-14	1.43E-14	8.04E-15	4.48E-15	2.49E-15
2.35E-11	1.31E-11	7.35E-12	4.11E-12	2.30E-12	1.29E-12	7.19E-13	4.02E-13	2.25E-13	1.26E-13	7.05E-14	3.95E-14	2.21E-14	1.24E-14	6.94E-15
1.90E-11	1.06E-11	5.93E-12	3.32E-12	1.85E-12	1.04E-12	5.80E-13	3.24E-13	1.81E-13	1.02E-13	5.68E-14	3.18E-14	1.78E-14	9.96E-15	5.57E-15
7.21E-12	4.01E-12	2.23E-12	1.24E-12	6.91E-13	3.85E-13	2.14E-13	1.19E-13	6.65E-14	3.71E-14	2.07E-14	1.15E-14	6.42E-15	3.58E-15	2.00E-15
1.52E-11	8.45E-12	4.69E-12	2.60E-12	1.45E-12	8.03E-13	4.46E-13	2.48E-13	1.38E-13	7.67E-14	4.26E-14	2.37E-14	1.32E-14	7.34E-15	4.08E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.05E-12	4.49E-12	2.50E-12	1.39E-12	7.77E-13	4.33E-13	2.42E-13	1.35E-13	7.52E-14	4.20E-14	2.34E-14	1.31E-14	7.31E-15	4.08E-15	2.28E-15
5.33E-11	2.98E-11	1.66E-11	9.30E-12	5.20E-12	2.91E-12	1.63E-12	9.09E-13	5.09E-13	2.85E-13	1.59E-13	8.93E-14	5.00E-14	2.80E-14	1.57E-14
1.22E-10	6.83E-11	3.82E-11	2.13E-11	1.19E-11	6.65E-12	3.72E-12	2.08E-12	1.16E-12	6.50E-13	3.63E-13	2.03E-13	1.14E-13	6.37E-14	3.56E-14
2.42E-11	1.35E-11	7.55E-12	4.22E-12	2.36E-12	1.32E-12	7.39E-13	4.14E-13	2.32E-13	1.30E-13	7.26E-14	4.06E-14	2.28E-14	1.28E-14	7.14E-15
1.73E-11	9.62E-12	5.35E-12	2.98E-12	1.66E-12	9.21E-13	5.13E-13	2.85E-13	1.59E-13	8.85E-14	4.93E-14	2.75E-14	1.53E-14	8.53E-15	4.76E-15
6.06E-11	3.38E-11	1.88E-11	1.05E-11	5.86E-12	3.27E-12	1.82E-12	1.02E-12	5.68E-13	3.17E-13	1.77E-13	9.88E-14	5.52E-14	3.08E-14	1.72E-14
2.17E-12	1.17E-12	6.34E-13	3.42E-13	1.84E-13	9.93E-14	5.34E-14	2.87E-14	1.54E-14	8.25E-15	4.41E-15	2.36E-15	1.26E-15	6.67E-16	3.54E-16
1.80E-11	9.97E-12	5.53E-12	3.07E-12	1.70E-12	9.46E-13	5.25E-13	2.92E-13	1.62E-13	9.00E-14	5.00E-14	2.78E-14	1.54E-14	8.58E-15	4.77E-15
7.85E-12	4.38E-12	2.45E-12	1.37E-12	7.65E-13	4.28E-13	2.39E-13	1.34E-13	7.49E-14	4.19E-14	2.35E-14	1.31E-14	7.35E-15	4.12E-15	2.31E-15
3.40E-12	1.88E-12	1.04E-12	5.73E-13	3.17E-13	1.75E-13	9.68E-14	5.35E-14	2.96E-14	1.64E-14	9.05E-15	5.01E-15	2.77E-15	1.53E-15	8.48E-16
3.52E-11	1.96E-11	1.09E-11	6.08E-12	3.39E-12	1.89E-12	1.05E-12	5.86E-13	3.27E-13	1.82E-13	1.02E-13	5.66E-14	3.16E-14	1.76E-14	9.83E-15
1.12E-11	6.21E-12	3.44E-12	1.91E-12	1.06E-12	5.86E-13	3.25E-13	1.80E-13	9.98E-14	5.53E-14	3.07E-14	1.70E-14	9.45E-15	5.24E-15	2.91E-15

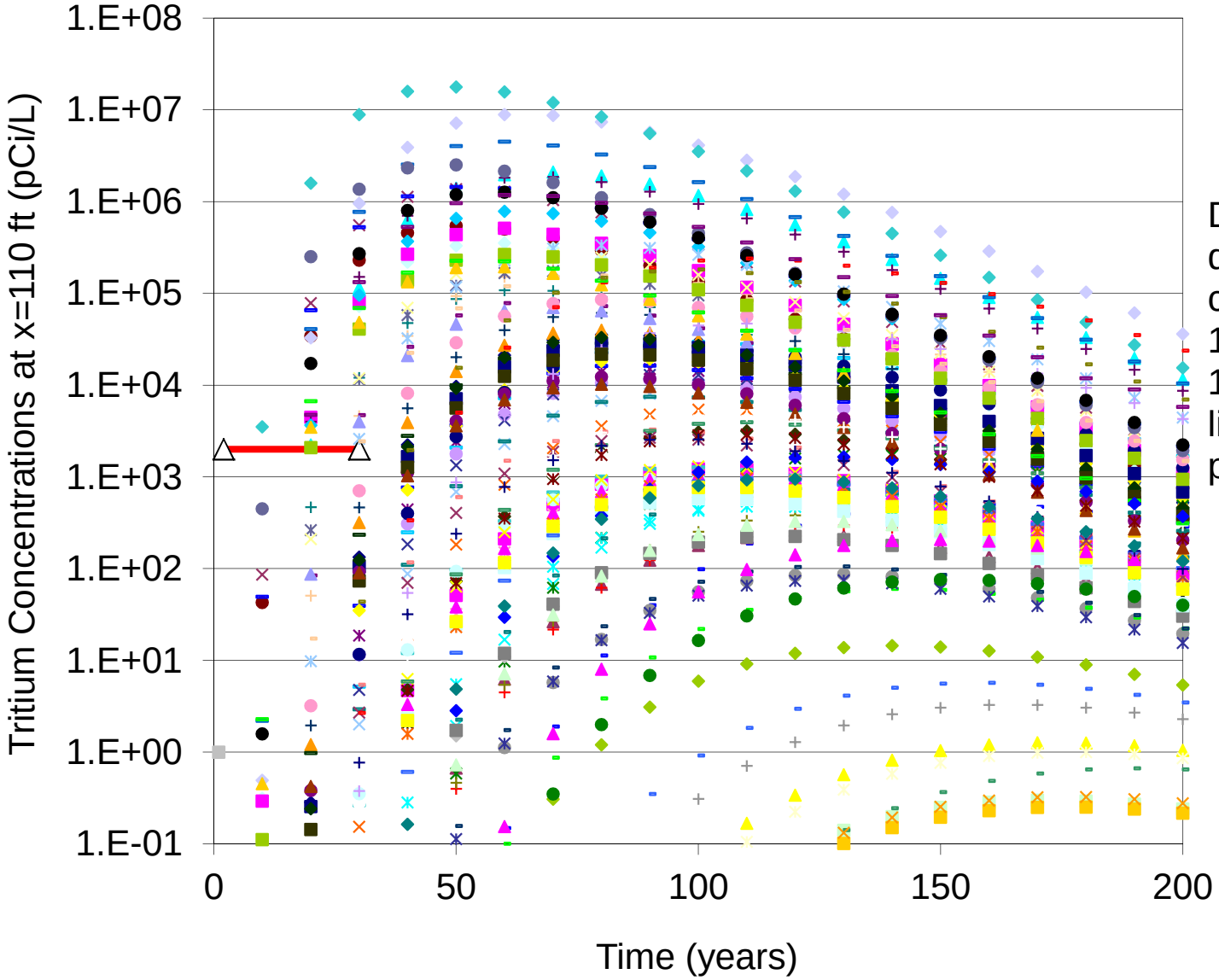
1.05E-12	5.71E-13	3.09E-13	1.67E-13	9.05E-14	4.89E-14	2.64E-14	1.43E-14	7.68E-15	4.14E-15	2.23E-15	1.20E-15	6.43E-16	3.45E-16	1.85E-16
2.55E-11	1.43E-11	7.95E-12	4.44E-12	2.48E-12	1.38E-12	7.73E-13	4.32E-13	2.42E-13	1.35E-13	7.55E-14	4.22E-14	2.36E-14	1.32E-14	7.39E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.32E-11	1.80E-11	9.81E-12	5.33E-12	2.89E-12	1.57E-12	8.53E-13	4.62E-13	2.51E-13	1.36E-13	7.34E-14	3.97E-14	2.14E-14	1.16E-14	6.23E-15
8.87E-11	4.95E-11	2.76E-11	1.54E-11	8.58E-12	4.78E-12	2.67E-12	1.49E-12	8.30E-13	4.63E-13	2.59E-13	1.44E-13	8.05E-14	4.49E-14	2.51E-14
2.91E-10	1.62E-10	9.01E-11	5.02E-11	2.79E-11	1.56E-11	8.68E-12	4.84E-12	2.70E-12	1.50E-12	8.38E-13	4.68E-13	2.61E-13	1.46E-13	8.12E-14
8.30E-11	4.63E-11	2.58E-11	1.44E-11	8.04E-12	4.49E-12	2.50E-12	1.40E-12	7.81E-13	4.36E-13	2.44E-13	1.36E-13	7.61E-14	4.25E-14	2.38E-14
1.40E-11	7.71E-12	4.25E-12	2.34E-12	1.29E-12	7.10E-13	3.92E-13	2.16E-13	1.19E-13	6.56E-14	3.61E-14	1.99E-14	1.10E-14	6.05E-15	3.34E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.21E-12	1.75E-12	9.55E-13	5.21E-13	2.84E-13	1.55E-13	8.44E-14	4.60E-14	2.51E-14	1.36E-14	7.42E-15	4.04E-15	2.19E-15	1.19E-15	6.46E-16
1.37E-11	7.65E-12	4.28E-12	2.39E-12	1.34E-12	7.48E-13	4.19E-13	2.34E-13	1.31E-13	7.34E-14	4.11E-14	2.30E-14	1.29E-14	7.22E-15	4.05E-15
8.12E-12	4.53E-12	2.52E-12	1.41E-12	7.85E-13	4.38E-13	2.45E-13	1.37E-13	7.62E-14	4.26E-14	2.38E-14	1.33E-14	7.43E-15	4.15E-15	2.32E-15
2.09E-12	1.16E-12	6.38E-13	3.52E-13	1.94E-13	1.07E-13	5.92E-14	3.27E-14	1.81E-14	9.98E-15	5.51E-15	3.04E-15	1.68E-15	9.29E-16	5.13E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.18E-11	1.21E-11	6.71E-12	3.73E-12	2.07E-12	1.15E-12	6.36E-13	3.53E-13	1.96E-13	1.09E-13	6.05E-14	3.36E-14	1.87E-14	1.04E-14	5.76E-15
2.00E-12	1.12E-12	6.23E-13	3.47E-13	1.94E-13	1.08E-13	6.04E-14	3.37E-14	1.88E-14	1.05E-14	5.88E-15	3.29E-15	1.84E-15	1.03E-15	5.74E-16
3.52E-12	1.65E-12	7.47E-13	3.19E-13	1.24E-13	3.88E-14	4.72E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.21E-12	1.22E-12	6.75E-13	3.73E-13	2.06E-13	1.14E-13	6.29E-14	3.47E-14	1.92E-14	1.06E-14	5.87E-15	3.24E-15	1.79E-15	9.91E-16	5.48E-16
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E-10	8.54E-10	6.81E-11	0.00E+00	4.96E-10	4.32E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.20E-11	6.62E-12	3.67E-12	2.03E-12	1.13E-12	6.24E-13	3.46E-13	1.92E-13	1.06E-13	5.89E-14	3.27E-14	1.81E-14	1.01E-14	5.58E-15	3.09E-15
2.65E-12	1.44E-12	7.84E-13	4.25E-13	2.31E-13	1.25E-13	6.78E-14	3.67E-14	1.99E-14	1.08E-14	5.81E-15	3.13E-15	1.69E-15	9.09E-16	4.89E-16
1.37E-12	7.36E-13	3.95E-13	2.12E-13	1.13E-13	6.06E-14	3.23E-14	1.72E-14	9.15E-15	4.85E-15	2.57E-15	1.35E-15	7.11E-16	3.72E-16	1.94E-16
1.24E-11	6.90E-12	3.84E-12	2.14E-12	1.19E-12	6.65E-13	3.71E-13	2.07E-13	1.15E-13	6.44E-14	3.59E-14	2.01E-14	1.12E-14	6.25E-15	3.49E-15
8.89E-12	4.97E-12	2.78E-12	1.55E-12	8.67E-13	4.85E-13	2.71E-13	1.52E-13	8.46E-14	4.76E-14	2.68E-14	1.49E-14	8.41E-15	4.69E-15	2.64E-15
4.43E-11	2.48E-11	1.39E-11	7.77E-12	4.35E-12	2.43E-12	1.36E-12	7.63E-13	4.28E-13	2.40E-13	1.34E-13	7.52E-14	4.21E-14	2.36E-14	1.32E-14
5.86E-11	3.27E-11	1.83E-11	1.02E-11	5.70E-12	3.19E-12	1.78E-12	9.96E-13	5.57E-13	3.11E-13	1.74E-13	9.75E-14	5.45E-14	3.05E-14	1.71E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.44E-12	7.38E-13	3.74E-13	1.88E-13	9.33E-14	4.56E-14	2.19E-14	1.02E-14	4.57E-15	1.93E-15	7.26E-16	2.10E-16	8.41E-18	0.00E+00	0.00E+00
3.83E-12	2.13E-12	1.19E-12	6.62E-13	3.69E-13	2.06E-13	1.15E-13	6.39E-14	3.56E-14	1.99E-14	1.11E-14	6.18E-15	3.45E-15	1.93E-15	1.08E-15
1.43E-11	7.88E-12	4.36E-12	2.41E-12	1.33E-12	7.36E-13	4.07E-13	2.25E-13	1.25E-13	6.89E-14	3.81E-14	2.11E-14	1.17E-14	6.46E-15	3.57E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.19E-11	1.19E-11	6.48E-12	3.52E-12	1.91E-12	1.04E-12	5.61E-13	3.04E-13	1.65E-13	8.90E-14	4.81E-14	2.60E-14	1.40E-14	7.54E-15	4.06E-15
1.25E-10	7.00E-11	3.92E-11	2.19E-11	1.23E-11	6.87E-12	3.85E-12	2.15E-12	1.21E-12	6.76E-13	3.79E-13	2.12E-13	1.19E-13	6.67E-14	3.74E-14
1.03E-10	5.61E-11	3.07E-11	1.68E-11	9.18E-12	5.02E-12	2.74E-12	1.50E-12	8.19E-13	4.48E-13	2.45E-13	1.34E-13	7.29E-14	3.98E-14	2.17E-14
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.78E-11	1.55E-11	8.68E-12	4.85E-12	2.71E-12	1.52E-12	8.49E-13	4.75E-13	2.66E-13	1.49E-13	8.33E-14	4.66E-14	2.61E-14	1.46E-14	8.20E-15
3.54E-11	1.97E-11	1.09E-11	6.07E-12	3.37E-12	1.87E-12	1.04E-12	5.78E-13	3.21E-13	1.79E-13	9.94E-14	5.53E-14	3.08E-14	1.71E-14	9.53E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1.40E-11	7.80E-12	4.35E-12	2.42E-12	1.35E-12	7.51E-13	4.19E-13	2.33E-13	1.30E-13	7.25E-14	4.05E-14	2.26E-14	1.26E-14	7.02E-15	3.92E-15
1.19E-11	6.62E-12	3.70E-12	2.07E-12	1.16E-12	6.45E-13	3.61E-13	2.02E-13	1.13E-13	6.30E-14	3.54E-14	1.98E-14	1.10E-14	6.20E-15	3.44E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.46E-11	8.13E-12	4.52E-12	2.51E-12	1.40E-12	7.77E-13	4.32E-13	2.41E-13	1.34E-13	7.46E-14	4.15E-14	2.31E-14	1.29E-14	7.17E-15	4.00E-15
1.17E-11	6.50E-12	3.63E-12	2.03E-12	1.13E-12	6.32E-13	3.53E-13	1.97E-13	1.10E-13	6.15E-14	3.44E-14	1.92E-14	1.08E-14	6.01E-15	3.36E-15
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.08E-12	1.69E-12	9.32E-13	5.13E-13	2.82E-13	1.55E-13	8.55E-14	4.70E-14	2.59E-14	1.42E-14	7.84E-15	4.31E-15	2.37E-15	1.31E-15	7.18E-16
2.77E-12	1.52E-12	8.30E-13	4.54E-13	2.49E-13	1.36E-13	7.44E-14	4.07E-14	2.23E-14	1.22E-14	6.65E-15	3.63E-15	1.98E-15	1.08E-15	5.91E-16
1.27E-11	7.09E-12	3.96E-12	2.22E-12	1.24E-12	6.95E-13	3.89E-13	2.18E-13	1.22E-13	6.84E-14	3.83E-14	2.15E-14	1.20E-14	6.74E-15	3.78E-15
2.89E-12	1.61E-12	9.00E-13	5.02E-13	2.80E-13	1.57E-13	8.75E-14	4.89E-14	2.73E-14	1.53E-14	8.53E-15	4.77E-15	2.67E-15	1.49E-15	8.35E-16
3.93E-12	2.19E-12	1.21E-12	6.74E-13	3.75E-13	2.08E-13	1.16E-13	6.44E-14	3.58E-14	1.99E-14	1.11E-14	6.17E-15	3.44E-15	1.91E-15	1.07E-15
1.09E-12	5.53E-13	2.78E-13	1.38E-13	6.75E-14	3.24E-14	1.51E-14	6.79E-15	2.87E-15	1.09E-15	3.23E-16	2.07E-17	0.00E+00	0.00E+00	0.00E+00
5.73E-12	3.13E-12	1.71E-12	9.34E-13	5.10E-13	2.79E-13	1.52E-13	8.30E-14	4.52E-14	2.47E-14	1.34E-14	7.32E-15	3.99E-15	2.17E-15	1.18E-15
6.80E-10	3.74E-10	2.05E-10	1.13E-10	6.21E-11	3.41E-11	1.88E-11	1.03E-11	5.68E-12	3.12E-12	1.72E-12	9.46E-13	5.20E-13	2.86E-13	1.58E-13
4.29E-13	2.33E-13	1.26E-13	6.85E-14	3.71E-14	2.01E-14	1.09E-14	5.89E-15	3.18E-15	1.72E-15	9.26E-16	4.99E-16	2.69E-16	1.44E-16	7.75E-17
2.32E-10	1.29E-10	7.17E-11	3.99E-11	2.22E-11	1.24E-11	6.89E-12	3.84E-12	2.14E-12	1.19E-12	6.63E-13	3.70E-13	2.06E-13	1.15E-13	6.40E-14
2.40E-11	2.07E-11	8.90E-12	7.67E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.16E-10	1.76E-10	9.84E-11	5.49E-11	3.07E-11	1.71E-11	9.57E-12	5.35E-12	2.99E-12	1.67E-12	9.34E-13	5.22E-13	2.92E-13	1.63E-13	9.14E-14
1.81E-10	1.01E-10	5.65E-11	3.16E-11	1.76E-11	9.86E-12	5.51E-12	3.08E-12	1.72E-12	9.65E-13	5.40E-13	3.02E-13	1.69E-13	9.46E-14	5.29E-14
8.16E-12	4.53E-12	2.51E-12	1.40E-12	7.75E-13	4.31E-13	2.39E-13	1.33E-13	7.39E-14	4.11E-14	2.28E-14	1.27E-14	7.07E-15	3.93E-15	2.19E-15
1.86E-10	1.03E-10	5.75E-11	3.20E-11	1.78E-11	9.94E-12	5.54E-12	3.09E-12	1.72E-12	9.58E-13	5.34E-13	2.98E-13	1.66E-13	9.26E-14	5.17E-14
2.76E-12	1.54E-12	8.56E-13	4.77E-13	2.66E-13	1.48E-13	8.26E-14	4.61E-14	2.57E-14	1.43E-14	8.00E-15	4.46E-15	2.49E-15	1.39E-15	7.77E-16
9.58E-12	3.84E-12	1.30E-12	2.58E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.95E-12	4.35E-12	2.38E-12	1.30E-12	7.12E-13	3.89E-13	2.13E-13	1.16E-13	6.35E-14	3.47E-14	1.89E-14	1.03E-14	5.63E-15	3.07E-15	1.67E-15
9.32E-12	5.19E-12	2.88E-12	1.61E-12	8.93E-13	4.97E-13	2.77E-13	1.54E-13	8.59E-14	4.78E-14	2.67E-14	1.49E-14	8.28E-15	4.62E-15	2.58E-15
1.00E-09	**8.54E-10**	**3.10E-10**	**1.72E-10**	**4.96E-10**	**4.32E-10**	**2.97E-11**	**1.65E-11**	**9.21E-12**	**5.13E-12**	**2.86E-12**	**1.59E-12**	**8.86E-13**	**4.94E-13**	**2.75E-13**

890	900	910	920	930	940	950	960	970	980	990	1000	Max Tritium Concentration at x=15 ft (pCi/L)
1.26E-15	7.06E-16	3.95E-16	2.21E-16	1.24E-16	6.93E-17	3.88E-17	2.17E-17	1.22E-17	6.81E-18	3.81E-18	2.14E-18	1.08E+09
2.24E-15	1.25E-15	7.03E-16	3.94E-16	2.21E-16	1.24E-16	6.93E-17	3.89E-17	2.18E-17	1.22E-17	6.85E-18	3.84E-18	2.29E+08
4.41E-15	2.46E-15	1.37E-15	7.66E-16	4.28E-16	2.39E-16	1.33E-16	7.45E-17	4.16E-17	2.32E-17	1.30E-17	7.25E-18	3.58E+08
5.78E-15	3.24E-15	1.81E-15	1.01E-15	5.68E-16	3.18E-16	1.78E-16	9.98E-17	5.59E-17	3.14E-17	1.76E-17	9.85E-18	1.15E+09
9.07E-15	5.09E-15	2.85E-15	1.60E-15	8.95E-16	5.01E-16	2.83E-16	1.58E-16	8.92E-17	4.94E-17	2.80E-17	1.58E-17	7.00E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+08
1.53E-13	8.54E-14	4.76E-14	2.65E-14	1.48E-14	8.25E-15	4.60E-15	2.57E-15	1.43E-15	7.99E-16	4.46E-16	2.49E-16	8.24E+09
5.46E-15	3.03E-15	1.68E-15	9.35E-16	5.20E-16	2.89E-16	1.61E-16	8.93E-17	4.97E-17	2.76E-17	1.54E-17	8.55E-18	7.77E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E+08
8.64E-16	4.81E-16	2.68E-16	1.49E-16	8.30E-17	4.62E-17	2.57E-17	1.43E-17	7.98E-18	4.44E-18	2.48E-18	1.38E-18	1.80E+08
2.44E-15	1.36E-15	7.61E-16	4.25E-16	2.38E-16	1.33E-16	7.42E-17	4.15E-17	2.32E-17	1.30E-17	7.24E-18	4.05E-18	2.21E+08
1.33E-15	7.36E-16	4.08E-16	2.26E-16	1.25E-16	6.92E-17	3.83E-17	2.12E-17	1.18E-17	6.52E-18	3.61E-18	2.00E-18	4.00E+08
1.07E-15	5.96E-16	3.34E-16	1.87E-16	1.04E-16	5.84E-17	3.27E-17	1.83E-17	1.03E-17	5.74E-18	3.21E-18	1.80E-18	3.50E+08
3.70E-15	1.84E-15	1.07E-15	5.27E-16	3.07E-16	9.66E-17	8.81E-17	7.52E-17	1.25E-17	1.19E-17	1.08E-17	2.07E-17	5.61E+08
1.56E-15	8.44E-16	4.56E-16	2.47E-16	1.33E-16	7.18E-17	3.87E-17	2.08E-17	1.12E-17	5.98E-18	3.20E-18	1.70E-18	1.09E+09
1.08E-14	6.05E-15	3.39E-15	1.90E-15	1.07E-15	5.97E-16	3.35E-16	1.88E-16	1.05E-16	5.90E-17	3.31E-17	1.86E-17	4.69E+08
1.44E-15	8.31E-16	4.78E-16	2.77E-16	1.44E-16	7.64E-17	3.25E-17	2.24E-17	6.08E-18	3.05E-18	3.77E-18	6.06E-18	2.02E+08
3.89E-15	2.18E-15	1.22E-15	6.84E-16	3.83E-16	2.15E-16	1.20E-16	6.75E-17	3.79E-17	2.12E-17	1.19E-17	6.68E-18	1.42E+08
3.12E-15	1.75E-15	9.79E-16	5.48E-16	3.07E-16	1.72E-16	9.65E-17	5.41E-17	3.03E-17	1.70E-17	9.52E-18	5.34E-18	1.21E+08
1.11E-15	6.21E-16	3.47E-16	1.94E-16	1.08E-16	6.03E-17	3.37E-17	1.88E-17	1.05E-17	5.87E-18	3.28E-18	1.83E-18	5.56E+08
2.27E-15	1.26E-15	7.04E-16	3.92E-16	2.18E-16	1.22E-16	6.77E-17	3.77E-17	2.10E-17	1.17E-17	6.52E-18	3.63E-18	1.49E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E+08
1.27E-15	7.12E-16	3.98E-16	2.23E-16	1.24E-16	6.96E-17	3.89E-17	2.18E-17	1.22E-17	6.81E-18	3.81E-18	2.13E-18	3.87E+08
8.78E-15	4.92E-15	2.76E-15	1.55E-15	8.67E-16	4.86E-16	2.73E-16	1.53E-16	8.57E-17	4.82E-17	2.70E-17	1.52E-17	1.39E+09
1.99E-14	1.12E-14	6.25E-15	3.50E-15	1.96E-15	1.10E-15	6.16E-16	3.45E-16	1.93E-16	1.08E-16	6.08E-17	3.41E-17	2.78E+09
4.00E-15	2.24E-15	1.26E-15	7.05E-16	3.96E-16	2.22E-16	1.24E-16	6.98E-17	3.91E-17	2.19E-17	1.24E-17	6.93E-18	4.95E+08
2.65E-15	1.48E-15	8.25E-16	4.60E-16	2.57E-16	1.43E-16	7.99E-17	4.46E-17	2.49E-17	1.39E-17	7.76E-18	4.33E-18	1.46E+09
9.61E-15	5.37E-15	3.00E-15	1.68E-15	9.38E-16	5.24E-16	2.93E-16	1.64E-16	9.17E-17	5.13E-17	2.87E-17	1.60E-17	8.23E+08
1.87E-16	9.86E-17	5.18E-17	2.71E-17	1.41E-17	7.29E-18	3.75E-18	1.91E-18	9.66E-19	4.82E-19	2.37E-19	1.15E-19	4.22E+08
2.65E-15	1.48E-15	8.20E-16	4.56E-16	2.54E-16	1.41E-16	7.86E-17	4.37E-17	2.43E-17	1.35E-17	7.54E-18	4.19E-18	9.51E+08
1.29E-15	7.23E-16	4.05E-16	2.27E-16	1.27E-16	7.14E-17	4.00E-17	2.24E-17	1.26E-17	7.06E-18	3.96E-18	2.22E-18	1.82E+08
4.69E-16	2.60E-16	1.44E-16	7.95E-17	4.40E-17	2.43E-17	1.35E-17	7.45E-18	4.12E-18	2.28E-18	1.26E-18	6.99E-19	3.78E+08
5.49E-15	3.06E-15	1.71E-15	9.54E-16	5.33E-16	2.98E-16	1.66E-16	9.29E-17	5.19E-17	2.90E-17	1.62E-17	9.06E-18	1.31E+09
1.61E-15	8.96E-16	4.97E-16	2.76E-16	1.53E-16	8.52E-17	4.73E-17	2.63E-17	1.46E-17	8.11E-18	4.50E-18	2.50E-18	8.23E+08

9.88E-17	5.28E-17	2.81E-17	1.50E-17	7.93E-18	4.20E-18	2.21E-18	1.16E-18	6.10E-19	3.18E-19	1.65E-19	8.53E-20	4.07E+08
4.14E-15	2.31E-15	1.30E-15	7.25E-16	4.06E-16	2.28E-16	1.27E-16	7.14E-17	4.00E-17	2.24E-17	1.26E-17	7.04E-18	8.52E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.65E+08
3.35E-15	1.80E-15	9.66E-16	5.18E-16	2.77E-16	1.48E-16	7.87E-17	4.18E-17	2.21E-17	1.17E-17	6.15E-18	3.22E-18	8.21E+09
1.40E-14	7.82E-15	4.36E-15	2.44E-15	1.36E-15	7.60E-16	4.24E-16	2.37E-16	1.32E-16	7.40E-17	4.13E-17	2.31E-17	5.76E+08
4.54E-14	2.53E-14	1.41E-14	7.90E-15	4.41E-15	2.46E-15	1.38E-15	7.69E-16	4.30E-16	2.40E-16	1.34E-16	7.51E-17	1.72E+10
1.33E-14	7.43E-15	4.16E-15	2.33E-15	1.30E-15	7.28E-16	4.07E-16	2.28E-16	1.28E-16	7.15E-17	4.00E-17	2.24E-17	1.03E+09
1.84E-15	1.01E-15	5.58E-16	3.08E-16	1.70E-16	9.35E-17	5.15E-17	2.84E-17	1.56E-17	8.61E-18	4.74E-18	2.61E-18	1.13E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E+08
3.50E-16	1.90E-16	1.03E-16	5.56E-17	3.00E-17	1.62E-17	8.73E-18	4.70E-18	2.52E-18	1.35E-18	7.24E-19	3.87E-19	8.12E+08
2.27E-15	1.27E-15	7.13E-16	4.00E-16	2.24E-16	1.26E-16	7.05E-17	3.95E-17	2.22E-17	1.25E-17	6.99E-18	3.92E-18	2.74E+08
1.30E-15	7.25E-16	4.06E-16	2.27E-16	1.27E-16	7.10E-17	3.98E-17	2.23E-17	1.25E-17	6.97E-18	3.90E-18	2.19E-18	2.96E+08
2.84E-16	1.57E-16	8.65E-17	4.78E-17	2.64E-17	1.46E-17	8.06E-18	4.45E-18	2.46E-18	1.36E-18	7.50E-19	4.14E-19	3.94E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E+08
3.20E-15	1.78E-15	9.88E-16	5.49E-16	3.05E-16	1.70E-16	9.44E-17	5.25E-17	2.92E-17	1.62E-17	9.03E-18	5.02E-18	5.34E+08
3.21E-16	1.80E-16	1.01E-16	5.63E-17	3.15E-17	1.76E-17	9.87E-18	5.53E-18	3.10E-18	1.73E-18	9.71E-19	5.44E-19	1.04E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E+09
3.03E-16	1.67E-16	9.26E-17	5.12E-17	2.83E-17	1.56E-17	8.65E-18	4.78E-18	2.64E-18	1.46E-18	8.07E-19	4.46E-19	8.55E+07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.93E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E+10
1.72E-15	9.53E-16	5.29E-16	2.94E-16	1.63E-16	9.05E-17	5.02E-17	2.79E-17	1.55E-17	8.60E-18	4.78E-18	2.65E-18	1.09E+09
2.62E-16	1.41E-16	7.53E-17	4.02E-17	2.14E-17	1.14E-17	6.04E-18	3.19E-18	1.68E-18	8.83E-19	4.61E-19	2.40E-19	2.33E+08
1.01E-16	5.18E-17	2.65E-17	1.34E-17	6.75E-18	3.34E-18	1.63E-18	7.77E-19	3.59E-19	1.59E-19	6.51E-20	2.32E-20	1.99E+08
1.95E-15	1.09E-15	6.08E-16	3.40E-16	1.90E-16	1.06E-16	5.93E-17	3.31E-17	1.85E-17	1.04E-17	5.79E-18	3.24E-18	2.02E+08
1.41E-15	8.08E-16	4.85E-16	2.67E-16	1.53E-16	7.90E-17	4.56E-17	1.61E-17	1.67E-17	6.33E-18	4.06E-18	1.21E-18	2.88E+08
7.42E-15	4.16E-15	2.33E-15	1.31E-15	7.33E-16	4.11E-16	2.31E-16	1.29E-16	7.26E-17	4.07E-17	2.28E-17	1.28E-17	1.68E+08
9.57E-15	5.36E-15	3.00E-15	1.68E-15	9.42E-16	5.28E-16	2.96E-16	1.66E-16	9.29E-17	5.21E-17	2.92E-17	1.64E-17	2.02E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E+09
6.00E-16	3.35E-16	1.87E-16	1.05E-16	5.84E-17	3.27E-17	1.82E-17	1.02E-17	5.70E-18	3.19E-18	1.78E-18	9.97E-19	1.47E+08
1.98E-15	1.09E-15	6.06E-16	3.35E-16	1.86E-16	1.03E-16	5.68E-17	3.15E-17	1.74E-17	9.64E-18	5.34E-18	2.95E-18	6.45E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+09
2.18E-15	1.17E-15	6.26E-16	3.35E-16	1.78E-16	9.50E-17	5.04E-17	2.67E-17	1.41E-17	7.40E-18	3.87E-18	2.02E-18	4.93E+09
2.10E-14	1.18E-14	6.59E-15	3.70E-15	2.08E-15	1.16E-15	6.53E-16	3.67E-16	2.06E-16	1.16E-16	6.49E-17	3.64E-17	1.23E+09
1.18E-14	6.45E-15	3.52E-15	1.92E-15	1.04E-15	5.68E-16	3.09E-16	1.68E-16	9.12E-17	4.95E-17	2.68E-17	1.46E-17	1.37E+10
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E+09
4.59E-15	2.57E-15	1.44E-15	8.09E-16	4.53E-16	2.54E-16	1.43E-16	8.00E-17	4.49E-17	2.52E-17	1.41E-17	7.92E-18	6.55E+08
5.30E-15	2.95E-15	1.64E-15	9.16E-16	5.10E-16	2.84E-16	1.58E-16	8.82E-17	4.92E-17	2.74E-17	1.53E-17	8.52E-18	5.87E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E+08

2.19E-15	1.22E-15	6.82E-16	3.81E-16	2.13E-16	1.19E-16	6.63E-17	3.70E-17	2.07E-17	1.16E-17	6.46E-18	3.61E-18	2.62E+08
1.97E-15	1.10E-15	6.22E-16	3.36E-16	1.97E-16	1.10E-16	5.57E-17	3.69E-17	2.01E-17	1.16E-17	6.83E-18	3.97E-18	3.24E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.36E+08
2.23E-15	1.24E-15	6.92E-16	3.86E-16	2.15E-16	1.20E-16	6.69E-17	3.73E-17	2.08E-17	1.16E-17	6.48E-18	3.62E-18	6.10E+08
1.88E-15	1.05E-15	5.89E-16	3.30E-16	1.85E-16	1.03E-16	5.79E-17	3.24E-17	1.82E-17	1.02E-17	5.70E-18	3.19E-18	2.77E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.42E+08
3.95E-16	2.17E-16	1.20E-16	6.57E-17	3.61E-17	1.99E-17	1.09E-17	6.00E-18	3.30E-18	1.81E-18	9.94E-19	5.45E-19	9.09E+08
3.23E-16	1.76E-16	9.58E-17	5.22E-17	2.84E-17	1.55E-17	8.40E-18	4.56E-18	2.47E-18	1.34E-18	7.27E-19	3.93E-19	6.23E+08
2.12E-15	1.19E-15	6.67E-16	3.74E-16	2.10E-16	1.18E-16	6.61E-17	3.71E-17	2.08E-17	1.17E-17	6.56E-18	3.69E-18	1.38E+08
4.67E-16	2.62E-16	1.46E-16	8.19E-17	4.59E-17	2.57E-17	1.44E-17	8.06E-18	4.52E-18	2.53E-18	1.42E-18	7.96E-19	1.86E+08
5.93E-16	3.30E-16	1.84E-16	1.03E-16	5.71E-17	3.18E-17	1.77E-17	9.89E-18	5.51E-18	3.07E-18	1.71E-18	9.56E-19	2.46E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+09
6.42E-16	3.49E-16	1.89E-16	1.03E-16	5.56E-17	3.01E-17	1.63E-17	8.80E-18	4.75E-18	2.56E-18	1.38E-18	7.39E-19	1.49E+09
8.67E-14	4.77E-14	2.63E-14	1.45E-14	7.96E-15	4.38E-15	2.41E-15	1.33E-15	7.31E-16	4.02E-16	2.21E-16	1.22E-16	2.10E+10
4.15E-17	2.22E-17	1.19E-17	6.31E-18	3.35E-18	1.78E-18	9.39E-19	4.94E-19	2.59E-19	1.35E-19	7.03E-20	3.63E-20	2.28E+08
3.57E-14	1.99E-14	1.11E-14	6.19E-15	3.45E-15	1.93E-15	1.07E-15	5.99E-16	3.35E-16	1.87E-16	1.04E-16	5.82E-17	2.08E+09
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E+08
5.12E-14	2.86E-14	1.60E-14	8.97E-15	5.02E-15	2.81E-15	1.58E-15	8.83E-16	4.95E-16	2.77E-16	1.55E-16	8.70E-17	7.71E+09
2.96E-14	1.66E-14	9.29E-15	5.21E-15	2.92E-15	1.63E-15	9.15E-16	5.13E-16	2.87E-16	1.61E-16	9.03E-17	5.06E-17	1.88E+09
1.22E-15	6.78E-16	3.77E-16	2.10E-16	1.17E-16	6.51E-17	3.63E-17	2.02E-17	1.13E-17	6.27E-18	3.50E-18	1.95E-18	9.01E+08
2.88E-14	1.61E-14	8.97E-15	5.01E-15	2.80E-15	1.56E-15	8.71E-16	4.87E-16	2.72E-16	1.52E-16	8.47E-17	4.73E-17	2.87E+09
4.34E-16	2.42E-16	1.35E-16	7.57E-17	4.23E-17	2.36E-17	1.32E-17	7.39E-18	4.13E-18	2.31E-18	1.29E-18	7.24E-19	2.53E+08
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+10
9.11E-16	4.96E-16	2.70E-16	1.47E-16	7.97E-17	4.33E-17	2.35E-17	1.27E-17	6.88E-18	3.72E-18	2.01E-18	1.08E-18	3.37E+09
1.44E-15	8.01E-16	4.47E-16	2.50E-16	1.39E-16	7.78E-17	4.34E-17	2.42E-17	1.35E-17	7.56E-18	4.23E-18	2.36E-18	8.54E+08
1.53E-13	**8.54E-14**	**4.76E-14**	**2.65E-14**	**1.48E-14**	**8.25E-15**	**4.60E-15**	**2.57E-15**	**1.43E-15**	**7.99E-16**	**4.46E-16**	**2.49E-16**	**2.10E+10**



Deepest detectable tritium concentration at 110 ft in SB-5 in 1990 (detection limit = 2,000 pCi/L)

Tritium Concentration (pCi/L) at x=110 ft for Different Times (years) and Realizations

Realization	10	20	30	40	50	60	70	80	90	100	110	120	130
1	0.00E+00	2.82E-01	1.33E+02	2.24E+03	9.68E+03	2.11E+04	3.10E+04	3.54E+04	3.43E+04	2.95E+04	2.34E+04	1.74E+04	1.23E+04
2	0.00E+00	6.78E-06	6.20E-02	4.68E+00	5.11E+01	2.11E+02	4.99E+02	8.31E+02	1.09E+03	1.22E+03	1.20E+03	1.08E+03	9.07E+02
3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.92E-08	9.74E-06	2.84E-04	3.11E-03	1.80E-02	6.50E-02	1.68E-01	3.41E-01	5.69E-01
4	0.00E+00	0.00E+00	1.20E-04	5.80E-02	1.93E+00	1.68E+01	6.81E+01	1.70E+02	3.07E+02	4.42E+02	5.39E+02	5.81E+02	5.67E+02
5	0.00E+00	2.00E-02	1.86E+01	4.43E+02	2.42E+03	6.29E+03	1.07E+04	1.39E+04	1.50E+04	1.43E+04	1.25E+04	1.01E+04	7.72E+03
6	4.26E+01	3.42E+04	2.30E+05	4.55E+05	5.43E+05	5.03E+05	4.03E+05	2.94E+05	2.02E+05	1.33E+05	8.43E+04	5.24E+04	3.20E+04
7	1.10E-02	4.67E+02	1.21E+04	4.75E+04	8.69E+04	1.08E+05	1.06E+05	9.11E+04	7.08E+04	5.13E+04	3.54E+04	2.35E+04	1.52E+04
8	0.00E+00	0.00E+00	0.00E+00	8.92E-06	3.38E-03	1.48E-01	1.90E+00	1.13E+01	4.00E+01	9.88E+01	1.88E+02	2.93E+02	3.92E+02
9	0.00E+00	1.37E-03	5.17E+00	2.49E+02	2.08E+03	7.22E+03	1.51E+04	2.29E+04	2.81E+04	2.96E+04	2.80E+04	2.43E+04	1.98E+04
10	3.14E-01	4.35E+03	7.23E+04	2.18E+05	3.31E+05	3.54E+05	3.10E+05	2.40E+05	1.71E+05	1.15E+05	7.44E+04	4.67E+04	2.86E+04
11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-08	2.90E-06	8.04E-05	8.50E-04	4.73E-03	1.70E-02	4.30E-02	8.50E-02	1.40E-01
12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.75E-09	1.12E-07	1.01E-06	5.70E-06	2.27E-05
13	0.00E+00	6.44E-04	2.00E+00	8.75E+01	6.87E+02	2.28E+03	4.58E+03	6.73E+03	8.01E+03	8.22E+03	7.57E+03	6.43E+03	5.12E+03
14	0.00E+00	1.14E-06	2.20E-02	2.37E+00	3.20E+01	1.51E+02	3.90E+02	6.88E+02	9.43E+02	1.08E+03	1.09E+03	9.91E+02	8.38E+02
15	0.00E+00	9.67E-03	1.15E+01	3.08E+02	1.78E+03	4.77E+03	8.17E+03	1.06E+04	1.14E+04	1.08E+04	9.25E+03	7.40E+03	5.60E+03
16	2.77E-05	5.08E+01	4.62E+03	3.45E+04	9.33E+04	1.52E+05	1.83E+05	1.83E+05	1.61E+05	1.30E+05	9.82E+04	7.07E+04	4.90E+04
17	0.00E+00	0.00E+00	0.00E+00	3.89E-08	1.84E-05	9.62E-04	1.40E-02	9.10E-02	3.50E-01	9.17E-01	1.83E+00	2.97E+00	4.12E+00
18	0.00E+00	7.75E-05	2.63E-01	1.20E+01	9.74E+01	3.30E+02	6.76E+02	1.01E+03	1.22E+03	1.27E+03	1.19E+03	1.02E+03	8.22E+02
19	0.00E+00	0.00E+00	4.80E-09	1.71E-05	2.03E-03	4.10E-02	3.06E-01	1.20E+00	3.10E+00	5.93E+00	9.13E+00	1.20E+01	1.38E+01
20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-09	1.08E-06	3.56E-05	4.30E-04	2.65E-03	1.00E-02	2.80E-02	5.90E-02	1.01E-01
21	0.00E+00	1.21E+00	3.18E+02	3.93E+03	1.41E+04	2.72E+04	3.67E+04	3.97E+04	3.70E+04	3.10E+04	2.41E+04	1.77E+04	1.24E+04
22	0.00E+00	1.04E-05	1.53E-01	1.45E+01	1.82E+02	8.20E+02	2.05E+03	3.55E+03	4.77E+03	5.40E+03	5.36E+03	4.84E+03	4.05E+03
23	1.26E-03	2.64E+02	1.15E+04	5.80E+04	1.22E+05	1.66E+05	1.75E+05	1.57E+05	1.27E+05	9.49E+04	6.74E+04	4.60E+04	3.04E+04
24	0.00E+00	0.00E+00	1.52E-06	1.69E-03	9.20E-02	1.12E+00	5.72E+00	1.69E+01	3.49E+01	5.56E+01	7.35E+01	8.44E+01	8.69E+01
25	1.01E-07	1.95E+00	4.63E+02	5.59E+03	2.02E+04	3.98E+04	5.51E+04	6.11E+04	5.85E+04	5.03E+04	4.01E+04	3.02E+04	2.17E+04
26	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-08	6.91E-06	1.43E-04	1.34E-03	7.17E-03	2.60E-02	6.80E-02	1.41E-01
27	5.35E-08	9.80E-01	2.33E+02	2.79E+03	9.94E+03	1.92E+04	2.61E+04	2.85E+04	2.68E+04	2.28E+04	1.79E+04	1.33E+04	9.47E+03
28	0.00E+00	1.28E-06	3.70E-02	4.80E+00	7.27E+01	3.70E+02	1.01E+03	1.86E+03	2.62E+03	3.08E+03	3.16E+03	2.92E+03	2.50E+03
29	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.71E-09	4.85E-08	3.68E-07	1.88E-06
30	0.00E+00	0.00E+00	3.07E-05	1.80E-02	6.70E-01	6.26E+00	2.64E+01	6.76E+01	1.24E+02	1.79E+02	2.18E+02	2.33E+02	2.25E+02
31	0.00E+00	1.95E-03	4.76E+00	1.84E+02	1.33E+03	4.15E+03	7.95E+03	1.12E+04	1.29E+04	1.29E+04	1.16E+04	9.63E+03	7.52E+03
32	0.00E+00	1.84E-06	2.30E-02	2.07E+00	2.48E+01	1.09E+02	2.66E+02	4.54E+02	6.07E+02	6.83E+02	6.78E+02	6.13E+02	5.15E+02
33	0.00E+00	5.60E-05	2.78E-01	1.54E+01	1.40E+02	5.09E+02	1.10E+03	1.70E+03	2.11E+03	2.23E+03	2.11E+03	1.82E+03	1.47E+03
34	0.00E+00	0.00E+00	9.05E-06	8.20E-03	3.98E-01	4.47E+00	2.16E+01	6.17E+01	1.24E+02	1.94E+02	2.53E+02	2.89E+02	2.97E+02
35	0.00E+00	0.00E+00	0.00E+00	2.30E-05	3.89E-03	1.00E-01	8.70E-01	3.84E+00	1.08E+01	2.20E+01	3.55E+01	4.80E+01	5.67E+01

36	0.00E+00	6.40E-02	3.94E+01	7.64E+02	3.65E+03	8.60E+03	1.34E+04	1.62E+04	1.63E+04	1.46E+04	1.19E+04	9.10E+03	6.60E+03
37	0.00E+00	5.10E-02	3.50E+01	7.20E+02	3.60E+03	8.85E+03	1.44E+04	1.81E+04	1.92E+04	1.79E+04	1.53E+04	1.22E+04	9.22E+03
38	2.92E-01	4.45E+03	8.13E+04	2.68E+05	4.37E+05	5.13E+05	4.40E+05	3.52E+05	2.57E+05	1.77E+05	1.16E+05	7.40E+04	4.59E+04
39	6.34E-03	2.23E+03	1.15E+05	6.33E+05	1.40E+06	1.96E+06	2.11E+06	1.91E+06	1.55E+06	1.16E+06	8.23E+05	5.58E+05	3.66E+05
40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.77E-11	4.62E-10
41	0.00E+00	0.00E+00	2.97E-06	6.67E-03	5.85E-01	9.70E+00	6.19E+01	2.17E+02	5.08E+02	8.97E+02	1.29E+03	1.58E+03	1.73E+03
42	0.00E+00	5.95E-03	1.16E+01	4.00E+02	2.74E+03	8.32E+03	1.58E+04	2.24E+04	2.60E+04	2.63E+04	2.39E+04	2.02E+04	1.61E+04
43	0.00E+00	0.00E+00	8.96E-06	8.97E-03	4.63E-01	5.41E+00	2.69E+01	7.84E+01	1.60E+02	2.53E+02	3.33E+02	3.81E+02	3.92E+02
44	1.78E-04	8.44E+01	4.70E+03	2.62E+04	5.74E+04	7.85E+04	8.20E+04	7.24E+04	5.71E+04	4.17E+04	2.88E+04	1.91E+04	1.23E+04
45	0.00E+00	1.26E-03	2.93E+00	1.10E+02	7.90E+02	2.44E+03	4.66E+03	6.53E+03	7.46E+03	7.37E+03	6.54E+03	5.36E+03	4.13E+03
46	0.00E+00	0.00E+00	1.91E-04	5.90E-02	1.50E+00	1.09E+01	3.85E+01	8.66E+01	1.44E+02	1.93E+02	2.21E+02	2.26E+02	2.10E+02
47	0.00E+00	0.00E+00	2.65E-04	7.30E-02	1.72E+00	1.19E+01	4.09E+01	8.99E+01	1.47E+02	1.94E+02	2.21E+02	2.24E+02	2.07E+02
48	3.73E-04	8.73E+01	3.99E+03	2.10E+04	4.61E+04	6.47E+04	7.02E+04	6.46E+04	5.33E+04	4.07E+04	2.93E+04	2.03E+04	1.35E+04
49	8.58E+01	7.81E+04	5.53E+05	1.12E+06	1.37E+06	1.29E+06	1.04E+06	7.60E+05	5.22E+05	3.42E+05	2.17E+05	1.34E+05	8.15E+04
50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-08	3.70E-06	1.26E-04	1.56E-03	9.77E-03	3.80E-02	1.05E-01	2.24E-01	3.91E-01
51	0.00E+00	1.56E-04	3.51E-01	1.31E+01	9.32E+01	2.91E+02	5.62E+02	8.03E+02	9.38E+02	9.49E+02	8.64E+02	7.26E+02	5.74E+02
52	2.80E-02	4.00E+03	1.51E+05	7.01E+05	1.40E+06	1.82E+06	1.86E+06	1.63E+06	1.28E+06	9.41E+05	6.55E+05	4.38E+05	2.84E+05
53	0.00E+00	7.19E-03	5.44E+00	1.17E+02	6.02E+02	1.50E+03	2.46E+03	3.10E+03	3.28E+03	3.06E+03	2.61E+03	2.08E+03	1.57E+03
54	2.19E+00	4.07E+04	7.71E+05	2.52E+06	4.04E+06	4.51E+06	4.09E+06	3.25E+06	2.37E+06	1.63E+06	1.07E+06	6.80E+05	4.22E+05
55	4.91E-01	3.29E+04	9.58E+05	3.90E+06	7.17E+06	8.85E+06	8.68E+06	7.38E+06	5.70E+06	4.11E+06	2.83E+06	1.88E+06	1.21E+06
56	0.00E+00	2.54E-01	1.05E+02	1.66E+03	7.12E+03	1.57E+04	2.38E+04	2.82E+04	2.85E+04	2.56E+04	2.12E+04	1.65E+04	1.22E+04
57	0.00E+00	3.50E-06	4.00E-02	3.30E+00	3.84E+01	1.66E+02	4.05E+02	6.92E+02	9.29E+02	1.05E+03	1.06E+03	9.66E+02	8.19E+02
58	0.00E+00	1.34E-05	9.50E-02	6.28E+00	6.34E+01	2.49E+02	5.67E+02	9.19E+02	1.18E+03	1.29E+03	1.26E+03	1.12E+03	9.25E+02
59	0.00E+00	2.17E-08	1.44E-03	2.83E-01	5.51E+00	3.36E+01	1.05E+02	2.16E+02	3.36E+02	4.28E+02	4.73E+02	4.69E+02	4.27E+02
60	2.16E-08	3.83E-01	9.23E+01	1.12E+03	4.06E+03	8.00E+03	1.11E+04	1.23E+04	1.18E+04	1.01E+04	8.02E+03	6.01E+03	4.30E+03
61	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.59E-09	5.99E-08	5.41E-07	3.09E-06	1.24E-05
62	0.00E+00	0.00E+00	1.22E-04	6.40E-02	2.26E+00	2.04E+01	8.42E+01	2.13E+02	3.89E+02	5.64E+02	6.91E+02	7.44E+02	7.27E+02
63	4.91E+01	6.54E+04	5.27E+05	1.14E+06	1.45E+06	1.39E+06	1.14E+06	8.49E+05	5.88E+05	3.89E+05	2.48E+05	1.54E+05	9.38E+04
64	8.10E-02	3.66E+03	9.52E+04	3.68E+05	6.54E+05	7.82E+05	7.44E+05	6.13E+05	4.58E+05	3.21E+05	2.14E+05	1.38E+05	8.63E+04
65	0.00E+00	3.58E-06	3.20E-02	2.33E+00	2.51E+01	1.03E+02	2.41E+02	3.98E+02	5.20E+02	5.76E+02	5.66E+02	5.07E+02	4.23E+02
66	0.00E+00	0.00E+00	2.83E-05	1.80E-02	7.27E-01	7.13E+00	3.13E+01	8.32E+01	1.58E+02	2.36E+02	2.97E+02	3.28E+02	3.27E+02
67	4.72E-04	2.10E+02	1.19E+04	6.95E+04	1.62E+05	2.36E+05	2.63E+05	2.47E+05	2.06E+05	1.59E+05	1.16E+05	8.02E+04	5.38E+04
68	0.00E+00	9.76E+00	2.59E+03	3.23E+04	1.17E+05	2.28E+05	3.09E+05	3.35E+05	3.13E+05	2.63E+05	2.04E+05	1.50E+05	1.05E+05
69	1.26E-07	3.20E+00	7.04E+02	8.17E+03	2.89E+04	5.62E+04	7.73E+04	8.54E+04	8.15E+04	7.01E+04	5.59E+04	4.21E+04	3.03E+04
70	0.00E+00	1.10E-05	3.77E-01	5.43E+01	8.74E+02	4.68E+03	1.33E+04	2.53E+04	3.69E+04	4.45E+04	4.68E+04	4.43E+04	3.87E+04
71	2.53E-06	1.73E+01	2.44E+03	2.25E+04	6.87E+04	1.20E+05	1.52E+05	1.56E+05	1.41E+05	1.14E+05	8.59E+04	6.49E+04	4.00E+04
72	0.00E+00	4.24E-08	2.91E-03	6.07E-01	1.21E+01	7.40E+01	2.30E+02	4.66E+02	7.12E+02	8.91E+02	9.64E+02	9.35E+02	8.33E+02
73	3.50E+03	1.59E+06	8.87E+06	1.59E+07	1.78E+07	1.56E+07	1.20E+07	8.38E+06	5.53E+06	3.50E+06	2.16E+06	1.30E+06	7.68E+05
74	1.11E-01	2.08E+03	4.07E+04	1.38E+05	2.29E+05	2.65E+05	2.49E+05	2.05E+05	1.54E+05	1.09E+05	7.41E+04	4.85E+04	3.10E+04
75	4.53E-01	3.49E+03	4.86E+04	1.34E+05	1.91E+05	1.95E+05	1.65E+05	1.24E+05	8.63E+04	5.69E+04	3.61E+04	2.22E+04	1.35E+04

76	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E-09	1.48E-06	4.82E-05	5.75E-04	3.51E-03	1.30E-02	3.60E-02	7.60E-02	1.32E-01
77	0.00E+00	5.16E-07	1.30E-02	1.58E+00	2.31E+01	1.15E+02	3.09E+02	5.64E+02	7.95E+02	9.32E+02	9.56E+02	8.88E+02	7.63E+02
78	4.49E+02	2.51E+05	1.36E+06	2.33E+06	2.51E+06	2.15E+06	1.61E+06	1.11E+06	7.21E+05	4.52E+05	2.76E+05	1.65E+05	9.73E+04
79	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-06	1.12E-04	2.39E-03	2.10E-02	9.90E-02	3.08E-01	7.07E-01	1.29E+00	1.96E+00
80	0.00E+00	0.00E+00	3.70E-06	3.28E-03	1.57E-01	1.74E+00	8.33E+00	2.35E+01	4.66E+01	7.19E+01	9.27E+01	1.04E+02	1.05E+02
81	0.00E+00	1.93E-06	4.80E-02	5.90E+00	8.66E+01	4.37E+02	1.19E+03	2.21E+03	3.17E+03	3.77E+03	3.93E+03	3.70E+03	3.21E+03
82	0.00E+00	2.42E-01	1.24E+02	2.12E+03	9.21E+03	2.00E+04	2.91E+04	3.30E+04	3.17E+04	2.71E+04	2.13E+04	1.57E+04	1.11E+04
83	0.00E+00	1.43E-01	7.35E+01	1.27E+03	5.63E+03	1.25E+04	1.86E+04	2.17E+04	2.13E+04	1.86E+04	1.50E+04	1.13E+04	8.10E+03
84	1.64E-08	4.22E-01	9.02E+01	1.03E+03	3.60E+03	6.90E+03	9.36E+03	1.02E+04	9.64E+03	8.21E+03	6.48E+03	4.83E+03	3.45E+03
85	0.00E+00	2.43E-03	2.69E+00	7.01E+01	4.04E+02	1.08E+03	1.88E+03	2.46E+03	2.67E+03	2.55E+03	2.20E+03	1.77E+03	1.35E+03
86	0.00E+00	0.00E+00	2.77E-06	2.39E-03	1.13E-01	1.24E+00	5.89E+00	1.66E+01	3.28E+01	5.07E+01	6.54E+01	7.35E+01	7.43E+01
87	1.58E+00	1.72E+04	2.70E+05	7.97E+05	1.19E+06	1.26E+06	1.10E+06	8.47E+05	6.00E+05	4.02E+05	2.59E+05	1.61E+05	9.84E+04
88	0.00E+00	3.59E-06	8.10E-02	9.59E+00	1.35E+02	6.56E+02	1.71E+03	3.03E+03	4.13E+03	4.69E+03	4.65E+03	4.18E+03	3.48E+03
89	0.00E+00	1.03E-04	2.67E+00	3.37E+02	5.02E+03	2.56E+04	7.04E+04	1.32E+05	1.90E+05	2.28E+05	2.40E+05	2.28E+05	2.00E+05
90	2.28E+00	6.67E+03	6.93E+04	1.69E+05	2.26E+05	2.23E+05	1.85E+05	1.37E+05	9.46E+04	6.19E+04	3.91E+04	2.40E+04	1.45E+04
91	0.00E+00	0.00E+00	8.38E-05	6.40E-02	2.82E+00	2.96E+01	1.36E+02	3.76E+02	7.34E+02	1.13E+03	1.45E+03	1.63E+03	1.65E+03
92	0.00E+00	1.98E-06	2.50E-02	2.20E+00	2.64E+01	1.17E+02	2.89E+02	4.97E+02	6.71E+02	7.64E+02	7.66E+02	6.99E+02	5.93E+02
93	0.00E+00	0.00E+00	0.00E+00	2.00E-05	4.76E-03	1.54E-01	1.59E+00	8.01E+00	2.50E+01	5.59E+01	9.78E+01	1.42E+02	1.79E+02
94	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-09	1.71E-08	2.04E-07	1.45E-06	7.03E-06
95	0.00E+00	1.39E-06	3.70E-02	4.67E+00	6.96E+01	3.51E+02	9.49E+02	1.73E+03	2.43E+03	2.84E+03	2.89E+03	2.65E+03	2.25E+03
96	0.00E+00	0.00E+00	0.00E+00	2.11E-06	7.07E-04	2.90E-02	3.50E-01	2.00E+00	6.86E+00	1.65E+01	3.06E+01	4.67E+01	6.13E+01
97	0.00E+00	2.73E-04	7.68E-01	3.18E+01	2.41E+02	7.75E+02	1.52E+03	2.18E+03	2.54E+03	2.55E+03	2.30E+03	1.91E+03	1.49E+03
98	0.00E+00	1.30E-02	4.37E+01	1.95E+03	1.54E+04	5.10E+04	1.02E+05	1.48E+05	1.73E+05	1.81E+05	1.67E+05	1.32E+05	1.04E+05
99	8.20E-02	4.74E+03	1.33E+05	5.30E+05	9.65E+05	1.18E+06	1.15E+06	9.67E+05	7.40E+05	5.29E+05	3.60E+05	2.36E+05	1.50E+05
100	0.00E+00	0.00E+00	4.01E-04	1.63E-01	4.86E+00	3.90E+01	1.47E+02	3.45E+02	5.88E+02	8.01E+02	9.25E+02	9.44E+02	8.76E+02
Max value	**3.50E+03**	**1.59E+06**	**8.87E+06**	**1.59E+07**	**1.78E+07**	**1.56E+07**	**1.20E+07**	**8.38E+06**	**5.70E+06**	**4.11E+06**	**2.83E+06**	**1.88E+06**	**1.21E+06**

140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
8.37E+03	5.53E+03	3.57E+03	2.26E+03	1.41E+03	8.66E+02	5.26E+02	3.17E+02	1.89E+02	1.12E+02	6.61E+01	3.88E+01	2.26E+01	1.32E+01	7.62E+00
7.19E+02	5.45E+02	3.99E+02	2.83E+02	1.95E+02	1.32E+02	8.78E+01	5.74E+01	37.035	23.608	14.892	9.308	5.771	3.552	2.172
8.18E-01	1.04E+00	1.20E+00	1.27E+00	1.26E+00	1.18E+00	1.05E+00	8.93E-01	7.35E-01	5.86E-01	4.54E-01	3.43E-01	2.54E-01	1.84E-01	1.31E-01
5.13E+02	4.37E+02	3.53E+02	2.74E+02	2.05E+02	1.49E+02	1.06E+02	7.33E+01	49.854	33.359	21.999	14.322	9.218	5.873	3.708
5.66E+03	4.01E+03	2.77E+03	1.86E+03	1.23E+03	7.97E+02	5.10E+02	3.23E+02	2.02E+02	1.25E+02	7.70E+01	4.70E+01	2.85E+01	1.72E+01	1.03E+01
1.92E+04	1.14E+04	6.72E+03	3.93E+03	2.28E+03	1.32E+03	7.57E+02	4.34E+02	2.48E+02	1.41E+02	8.01E+01	4.55E+01	2.57E+01	1.46E+01	8.22E+00
9.57E+03	5.89E+03	3.67E+03	2.11E+03	1.40E+03	8.32E+02	5.12E+02	3.17E+02	1.98E+02	6.61E+01	3.77E+01	2.14E+01	1.21E+01	6.87E+00	3.88E+00
4.66E+02	5.03E+02	5.02E+02	4.70E+02	4.16E+02	3.52E+02	2.87E+02	2.26E+02	1.73E+02	1.29E+02	9.39E+01	6.72E+01	4.72E+01	3.27E+01	2.23E+01
1.53E+04	1.13E+04	8.12E+03	5.66E+03	3.85E+03	2.57E+03	1.68E+03	1.09E+03	693.966	437.739	273.408	169.286	104.009	63.462	38.483
1.72E+04	1.02E+04	6.02E+03	3.51E+03	2.03E+03	1.17E+03	6.68E+02	3.81E+02	2.17E+02	1.23E+02	6.95E+01	3.92E+01	2.21E+01	1.24E+01	7.00E+00
1.98E-01	2.49E-01	2.84E-01	2.98E-01	2.93E-01	2.72E-01	2.40E-01	2.03E-01	0.166	0.131	0.101	0.076	0.056	0.04	0.028
6.88E-05	1.67E-04	3.37E-04	5.88E-04	9.06E-04	1.26E-03	1.60E-03	1.88E-03	2.06E-03	2.14E-03	2.11E-03	2.00E-03	1.81E-03	1.59E-03	1.35E-03
3.88E+03	2.82E+03	1.99E+03	1.36E+03	9.14E+02	6.01E+02	389.023	248.273	156.544	97.674	60.383	37.028	22.543	13.637	8.203
6.68E+02	5.08E+02	3.71E+02	2.63E+02	1.81E+02	1.22E+02	8.08E+01	5.25E+01	3.37E+01	2.14E+01	1.34E+01	8.31E+00	5.12E+00	3.13E+00	1.90E+00
4.06E+03	2.85E+03	1.94E+03	1.29E+03	8.41E+02	5.40E+02	3.42E+02	2.14E+02	1.32E+02	8.12E+01	4.94E+01	2.99E+01	1.80E+01	1.07E+01	6.39E+00
3.29E+04	2.16E+04	1.39E+04	8.82E+03	5.51E+03	3.41E+03	2.09E+03	1.27E+03	762.545	456.596	271.898	161.126	95.073	55.886	32.734
5.04E+00	5.58E+00	5.69E+00	5.43E+00	4.89E+00	4.20E+00	3.47E+00	2.76E+00	2.14E+00	1.61E+00	1.183	0.853	0.604	0.421	0.289
6.30E+02	4.63E+02	3.29E+02	2.27E+02	1.54E+02	101.735	6.63E+01	4.25E+01	2.70E+01	1.69E+01	1.05E+01	6.47E+00	3.96E+00	2.41E+00	1.45E+00
1.45E+01	1.40E+01	1.27E+01	1.09E+01	8.92E+00	7.05E+00	5.39E+00	4.02E+00	2.917	2.076	1.45	0.997	0.675	0.451	0.298
1.50E-01	1.95E-01	2.30E-01	2.49E-01	2.51E-01	2.39E-01	2.16E-01	1.87E-01	0.156	0.126	0.098	0.075	0.056	0.041	3.00E-02
8.42E+03	5.56E+03	3.59E+03	2.27E+03	1.42E+03	8.73E+02	5.32E+02	3.21E+02	1.92E+02	1.14E+02	6.77E+01	3.98E+01	2.33E+01	1.36E+01	7.91E+00
3.19E+03	2.40E+03	1.74E+03	1.22E+03	8.34E+02	5.58E+02	3.66E+02	2.36E+02	1.50E+02	9.44E+01	5.87E+01	3.62E+01	2.21E+01	1.34E+01	8.11E+00
1.96E+04	1.24E+04	7.69E+03	4.72E+03	2.86E+03	1.72E+03	1.03E+03	6.09E+02	3.59E+02	2.10E+02	1.23E+02	7.13E+01	4.13E+01	2.39E+01	1.38E+01
8.21E+01	7.24E+01	6.03E+01	4.80E+01	3.67E+01	2.72E+01	19.572	13.757	9.47	6.403	4.261	2.796	1.812	1.162	0.738
1.50E+04	1.01E+04	6.66E+03	4.30E+03	2.73E+03	1.71E+03	1.06E+03	6.50E+02	3.95E+02	2.38E+02	1.43E+02	8.51E+01	5.04E+01	2.98E+01	1.75E+01
2.45E-01	3.67E-01	4.87E-01	5.85E-01	6.47E-01	6.66E-01	6.47E-01	5.96E-01	5.26E-01	4.47E-01	3.67E-01	2.92E-01	2.26E-01	1.72E-01	1.27E-01
6.52E+03	4.36E+03	2.85E+03	1.83E+03	1.16E+03	7.24E+02	4.47E+02	273.57	166.002	100.015	59.885	3.57E+01	2.11E+01	1.25E+01	7.33E+00
2.01E+03	1.54E+03	1.13E+03	8.03E+02	5.55E+02	3.75E+02	2.48E+02	1.61E+02	1.04E+02	6.56E+01	4.11E+01	2.55E+01	1.57E+01	9.59E+00	5.82E+00
7.03E-06	2.05E-05	4.89E-05	9.85E-05	1.73E-04	2.69E-04	3.80E-04	4.92E-04	5.92E-04	6.67E-04	7.10E-04	7.19E-04	6.97E-04	6.49E-04	5.84E-04
2.01E+02	1.69E+02	1.35E+02	1.03E+02	7.57E+01	5.42E+01	3.78E+01	2.58E+01	17.241	11.354	7.371	4.726	2.997	1.882	1.171
5.60E+03	4.01E+03	2.79E+03	1.89E+03	1.25E+03	8.13E+02	5.20E+02	3.29E+02	2.05E+02	1.27E+02	7.79E+01	4.74E+01	2.87E+01	1.72E+01	1.03E+01
4.09E+02	3.10E+02	2.26E+02	1.60E+02	1.10E+02	7.46E+01	4.94E+01	3.22E+01	2.07E+01	1.31E+01	8.26E+00	5.14E+00	3.18E+00	1.95E+00	1.19E+00
1.13E+03	8.29E+02	5.88E+02	4.05E+02	2.72E+02	1.79E+02	1.16E+02	7.40E+01	4.66E+01	2.91E+01	1.79E+01	1.10E+01	6.66E+00	4.02E+00	2.41E+00
2.80E+02	2.47E+02	2.06E+02	1.65E+02	1.26E+02	9.41E+01	6.81E+01	4.81E+01	3.33E+01	2.26E+01	1.51E+01	9.99E+00	6.51E+00	4.20E+00	2.68E+00
6.02E+01	5.87E+01	5.33E+01	4.57E+01	3.74E+01	2.93E+01	2.22E+01	1.64E+01	1.17E+01	8.24E+00	5.67E+00	3.84E+00	2.56E+00	1.68E+00	1.09E+00

4.59E+03	3.09E+03	2.03E+03	1.30E+03	822.435	511.183	313.767	190.553	114.677	68.476	40.613	2.39E+01	1.40E+01	8.20E+00	4.77E+00
6.68E+03	4.68E+03	3.19E+03	2.13E+03	1.39E+03	8.94E+02	5.67E+02	3.55E+02	2.20E+02	1.35E+02	8.24E+01	4.99E+01	3.00E+01	1.80E+01	1.07E+01
2.79E+04	1.67E+04	9.89E+03	5.80E+03	3.37E+03	1.95E+03	1.12E+03	6.39E+02	3.64E+02	2.07E+02	1.17E+02	6.62E+01	3.74E+01	2.10E+01	1.18E+01
2.34E+05	1.47E+05	9.02E+04	5.48E+04	3.29E+04	1.96E+04	1.16E+04	6.78E+03	3.95E+03	2.29E+03	1.33E+03	7.63E+02	4.38E+02	2.51E+02	1.43E+02
3.42E-09	1.81E-08	7.26E-08	2.32E-07	6.12E-07	1.38E-06	2.70E-06	4.72E-06	7.44E-06	1.07E-05	1.44E-05	1.80E-05	2.11E-05	2.36E-05	2.51E-05
1.71E+03	1.57E+03	1.35E+03	1.11E+03	8.71E+02	6.59E+02	4.84E+02	3.46E+02	2.42E+02	1.66E+02	1.12E+02	7.41E+01	4.85E+01	31.354	20.063
1.22E+04	8.87E+03	6.27E+03	4.32E+03	2.91E+03	1.93E+03	1.25E+03	8.05E+02	5.11E+02	3.21E+02	2.00E+02	1.24E+02	7.58E+01	4.62E+01	2.80E+01
3.70E+02	3.26E+02	2.72E+02	2.16E+02	1.66E+02	1.23E+02	8.85E+01	6.22E+01	4.28E+01	2.90E+01	1.93E+01	1.27E+01	8.21E+00	5.26E+00	3.34E+00
7.68E+03	4.72E+03	2.86E+03	1.71E+03	1.01E+03	5.95E+02	3.48E+02	2.02E+02	1.17E+02	6.76E+01	4.25E+01	1.84E+01	1.35E+01	2.16E+00	8.83E+00
3.03E+03	2.14E+03	1.46E+03	9.75E+02	6.37E+02	4.08E+02	2.58E+02	1.61E+02	98.931	60.397	36.568	21.981	13.129	7.799	4.61
1.82E+02	1.49E+02	1.17E+02	8.76E+01	6.37E+01	4.50E+01	3.11E+01	2.11E+01	1.40E+01	9.20E+00	5.95E+00	3.81E+00	2.41E+00	1.51E+00	9.40E-01
1.79E+02	1.46E+02	1.14E+02	8.53E+01	6.20E+01	4.38E+01	3.03E+01	2.05E+01	1.37E+01	8.96E+00	5.80E+00	3.71E+00	2.35E+00	1.48E+00	9.19E-01
8.95E+03	5.89E+03	2.98E+03	1.81E+03	1.09E+03	6.48E+02	3.83E+02	2.25E+02	1.31E+02	7.61E+01	4.40E+01	2.54E+01	1.46E+01	8.35E+00	4.77E+00
4.88E+04	2.88E+04	1.69E+04	9.80E+03	5.66E+03	3.25E+03	1.86E+03	1.06E+03	6.02E+02	3.42E+02	1.93E+02	1.09E+02	6.15E+01	3.47E+01	1.95E+01
5.82E-01	7.64E-01	9.04E-01	9.83E-01	9.95E-01	9.49E-01	8.59E-01	7.45E-01	0.622	5.02E-01	3.94E-01	3.01E-01	2.25E-01	1.64E-01	1.18E-01
4.32E+02	3.13E+02	2.19E+02	1.49E+02	9.96E+01	6.52E+01	4.20E+01	2.66E+01	1.67E+01	1.04E+01	6.39E+00	3.90E+00	2.37E+00	1.43E+00	8.55E-01
1.80E+05	1.12E+05	6.84E+04	4.14E+04	2.47E+04	1.47E+04	8.64E+03	5.05E+03	2.94E+03	1.70E+03	9.87E+02	5.70E+02	3.29E+02	1.83E+02	1.03E+02
1.13E+03	7.94E+02	5.41E+02	3.60E+02	2.36E+02	1.51E+02	96.351	60.947	38.438	22.506	13.707	8.29	4.984	2.98	1.774
2.57E+05	1.54E+05	9.13E+04	5.36E+04	3.12E+04	1.81E+04	1.04E+04	5.98E+03	3.41E+03	1.95E+03	1.11E+03	6.26E+02	3.55E+02	2.00E+02	1.13E+02
7.61E+05	4.71E+05	2.87E+05	1.73E+05	1.03E+05	6.12E+04	3.60E+04	2.10E+04	1.22E+04	7.09E+03	4.09E+03	2.35E+03	1.35E+03	7.73E+02	4.42E+02
8.66E+03	5.97E+03	4.01E+03	2.64E+03	1.70E+03	1.08E+03	6.80E+02	4.22E+02	2.60E+02	1.59E+02	96.13	57.834	34.454	20.644	12.264
6.57E+02	5.03E+02	3.71E+02	2.65E+02	1.85E+02	1.26E+02	8.48E+01	5.63E+01	3.50E+01	2.24E+01	1.41E+01	8.83E+00	5.48E+00	3.37E+00	2.06E+00
7.25E+02	5.44E+02	3.93E+02	2.76E+02	1.89E+02	1.26E+02	8.31E+01	5.38E+01	3.44E+01	2.17E+01	1.36E+01	8.40E+00	5.16E+00	3.15E+00	1.91E+00
3.64E+02	2.94E+02	2.27E+02	1.70E+02	1.23E+02	8.65E+01	5.97E+01	4.04E+01	2.69E+01	1.77E+01	1.14E+01	7.34E+00	4.66E+00	2.93E+00	1.83E+00
2.97E+03	1.99E+03	1.31E+03	8.39E+02	5.30E+02	330.831	203.965	124.51	75.362	45.279	2.70E+01	1.60E+01	9.48E+00	5.58E+00	3.27E+00
3.78E-05	9.22E-05	1.88E-04	3.30E-04	5.13E-04	7.18E-04	9.18E-04	1.09E-03	1.21E-03	1.27E-03	1.26E-03	1.21E-03	1.11E-03	9.79E-04	8.40E-04
6.57E+02	5.58E+02	4.50E+02	3.48E+02	2.60E+02	1.88E+02	1.33E+02	9.20E+01	6.24E+01	4.16E+01	2.74E+01	1.78E+01	1.14E+01	7.25E+00	4.57E+00
5.62E+04	3.33E+04	1.95E+04	1.13E+04	6.54E+03	3.76E+03	2.15E+03	1.22E+03	6.94E+02	3.93E+02	2.22E+02	1.25E+02	7.04E+01	3.96E+01	2.22E+01
5.29E+04	3.19E+04	1.90E+04	1.12E+04	6.54E+03	3.80E+03	2.19E+03	1.26E+03	7.18E+02	4.09E+02	2.32E+02	1.32E+02	7.45E+01	4.21E+01	2.37E+01
3.33E+02	2.51E+02	1.83E+02	1.29E+02	8.87E+01	5.97E+01	39.429	2.56E+01	1.65E+01	1.04E+01	6.55E+00	4.07E+00	2.51E+00	1.54E+00	9.35E-01
3.01E+02	2.60E+02	2.13E+02	1.67E+02	1.27E+02	9.30E+01	6.65E+01	4.65E+01	3.19E+01	2.15E+01	1.42E+01	9.33E+00	6.04E+00	3.87E+00	2.45E+00
3.51E+04	2.24E+04	1.40E+04	8.65E+03	5.28E+03	3.19E+03	1.91E+03	1.13E+03	6.68E+02	3.92E+02	2.29E+02	1.33E+02	7.73E+01	4.47E+01	2.58E+01
7.11E+04	4.69E+04	3.02E+04	1.91E+04	1.19E+04	7.30E+03	4.43E+03	2.67E+03	1.60E+03	9.47E+02	5.59E+02	3.28E+02	1.92E+02	1.12E+02	6.47E+01
2.11E+04	1.43E+04	9.42E+03	6.12E+03	3.91E+03	2.46E+03	1.54E+03	9.47E+02	5.80E+02	3.52E+02	2.13E+02	1.28E+02	7.63E+01	4.54E+01	2.69E+01
3.17E+04	2.47E+04	1.85E+04	1.33E+04	9.34E+03	6.39E+03	4.28E+03	2.82E+03	1.83E+03	1.17E+03	737.474	461.284	2.86E+02	1.76E+02	1.07E+02
2.65E+04	1.71E+04	1.08E+04	6.69E+03	4.10E+03	2.48E+03	1.49E+03	882.782	520.861	3.05E+02	1.78E+02	1.03E+02	5.98E+01	3.45E+01	1.98E+01
6.95E+02	5.50E+02	4.17E+02	3.05E+02	2.16E+02	1.50E+02	1.01E+02	6.75E+01	44.209	28.555	18.223	1.15E+01	7.20E+00	4.47E+00	2.75E+00
4.49E+05	2.60E+05	1.49E+05	8.52E+04	4.84E+04	2.74E+04	1.54E+04	8.69E+03	4.88E+03	2.73E+03	1.53E+03	8.55E+02	4.77E+02	2.66E+02	1.49E+02
1.93E+04	1.18E+04	7.22E+03	4.34E+03	2.49E+03	1.59E+03	9.43E+02	5.59E+02	3.31E+02	1.45E+02	8.28E+01	4.70E+01	2.67E+01	1.51E+01	8.52E+00
8.02E+03	4.29E+03	1.36E+03	3.24E+03	4.58E+02	2.57E+02	1.44E+02	8.05E+01	4.49E+01	2.50E+01	1.39E+01	7.72E+00	4.28E+00	2.37E+00	1.32E+00

1.94E-01	2.53E-01	2.97E-01	3.21E-01	3.23E-01	3.07E-01	2.77E-01	2.40E-01	2.00E-01	1.61E-01	1.26E-01	9.60E-02	7.20E-02	5.20E-02	3.80E-02
6.16E+02	4.74E+02	3.51E+02	2.51E+02	1.75E+02	1.19E+02	7.91E+01	5.18E+01	3.35E+01	2.13E+01	1.35E+01	8.40E+00	5.20E+00	3.20E+00	1.95E+00
5.67E+04	3.27E+04	1.88E+04	1.07E+04	6.07E+03	3.44E+03	1.94E+03	1.09E+03	6.12E+02	3.43E+02	1.92E+02	1.08E+02	6.01E+01	3.36E+01	1.87E+01
2.58E+00	3.04E+00	3.27E+00	3.26E+00	3.04E+00	2.69E+00	2.28E+00	1.85E+00	1.46E+00	1.11E+00	0.825	6.00E-01	4.27E-01	2.99E-01	2.05E-01
9.81E+01	8.55E+01	7.05E+01	5.56E+01	4.23E+01	3.11E+01	22.325	15.64	10.74	7.249	4.818	3.16	2.048	1.314	0.835
2.62E+03	2.04E+03	1.52E+03	1.09E+03	7.63E+02	5.21E+02	3.49E+02	2.29E+02	1.48E+02	9.45E+01	5.96E+01	3.72E+01	2.30E+01	1.41E+01	8.61E+00
7.50E+03	4.93E+03	3.17E+03	2.00E+03	1.24E+03	7.59E+02	4.60E+02	2.76E+02	1.64E+02	9.70E+01	5.70E+01	3.33E+01	1.94E+01	1.13E+01	6.51E+00
5.59E+03	3.74E+03	2.44E+03	1.56E+03	9.81E+02	608.416	372.759	226.083	135.943	81.137	48.116	28.375	16.652	9.73	5.66E+00
2.39E+03	1.60E+03	1.05E+03	6.79E+02	4.32E+02	2.71E+02	1.68E+02	1.03E+02	6.29E+01	3.81E+01	2.29E+01	1.37E+01	8.16E+00	4.84E+00	2.86E+00
9.78E+02	6.85E+02	4.66E+02	3.10E+02	2.02E+02	1.29E+02	8.15E+01	5.08E+01	3.13E+01	1.91E+01	1.16E+01	6.99E+00	4.18E+00	2.49E+00	1.47E+00
6.92E+01	6.02E+01	4.95E+01	3.90E+01	2.95E+01	2.17E+01	1.55E+01	1.08E+01	7.375	4.952	3.274	2.136	1.376	0.878	0.554
5.90E+04	3.49E+04	2.04E+04	1.18E+04	6.82E+03	3.91E+03	2.23E+03	1.27E+03	7.16E+02	4.04E+02	2.28E+02	1.28E+02	7.20E+01	4.04E+01	2.26E+01
2.72E+03	2.03E+03	1.46E+03	1.02E+03	6.87E+02	4.55E+02	2.96E+02	1.89E+02	1.20E+02	7.45E+01	4.60E+01	2.82E+01	1.71E+01	1.03E+01	6.18E+00
1.65E+05	1.30E+05	9.81E+04	7.15E+04	5.07E+04	3.51E+04	2.38E+04	1.59E+04	1.04E+04	6.73E+03	4.30E+03	2.72E+03	1.71E+03	1.06E+03	6.56E+02
8.59E+03	5.03E+03	2.92E+03	1.68E+03	9.64E+02	5.50E+02	3.12E+02	1.77E+02	9.96E+01	5.61E+01	3.15E+01	1.77E+01	9.91E+00	5.55E+00	3.11E+00
1.55E+03	1.36E+03	1.13E+03	8.99E+02	6.89E+02	5.12E+02	3.71E+02	2.62E+02	1.82E+02	1.24E+02	8.33E+01	55.18	36.116	23.388	1.50E+01
4.75E+02	3.63E+02	2.67E+02	1.91E+02	1.32E+02	89.901	59.925	39.288	25.429	16.226	10.269	6.416	3.994	2.454	1.495
2.02E+02	2.08E+02	1.99E+02	1.79E+02	1.53E+02	1.26E+02	9.94E+01	7.61E+01	5.67E+01	4.13E+01	2.94E+01	2.06E+01	1.41E+01	9.58E+00	6.41E+00
2.51E-05	7.03E-05	1.62E-04	3.16E-04	5.38E-04	8.19E-04	1.13E-03	1.44E-03	1.70E-03	1.88E-03	1.97E-03	1.97E-03	1.89E-03	1.74E-03	1.55E-03
1.80E+03	1.37E+03	9.98E+02	7.05E+02	4.84E+02	3.25E+02	2.14E+02	1.38E+02	8.84E+01	5.57E+01	3.47E+01	2.14E+01	1.31E+01	7.98E+00	4.82E+00
7.15E+01	7.58E+01	7.43E+01	6.83E+01	5.96E+01	4.96E+01	3.98E+01	3.08E+01	2.32E+01	1.71E+01	1.23E+01	8.68E+00	6.02E+00	4.11E+00	2.77E+00
1.11E+03	7.89E+02	5.45E+02	3.66E+02	2.41E+02	1.56E+02	9.90E+01	62.09	38.509	23.648	14.397	8.7	5.222	3.117	1.85
7.70E+04	5.50E+04	3.81E+04	2.56E+04	1.69E+04	1.09E+04	6.94E+03	4.35E+03	2.70E+03	1.66E+03	1.01E+03	6.10E+02	3.66E+02	2.18E+02	1.30E+02
9.34E+04	5.79E+04	3.45E+04	2.01E+04	1.19E+04	8.96E+03	5.78E+03	3.78E+03	1.02E+03	5.83E+02	3.32E+02	1.88E+02	1.06E+02	6.01E+01	3.39E+01
7.55E+02	6.12E+02	4.73E+02	3.51E+02	2.52E+02	1.76E+02	1.20E+02	8.03E+01	5.28E+01	3.41E+01	2.18E+01	1.38E+01	8.60E+00	5.33E+00	3.28E+00
7.61E+05	**4.71E+05**	**2.87E+05**	**1.73E+05**	**1.03E+05**	**6.12E+04**	**3.60E+04**	**2.10E+04**	**1.22E+04**	**7.09E+03**	**4.30E+03**	**2.72E+03**	**1.71E+03**	**1.06E+03**	**6.56E+02**

290	300	310	320	330	340	350	360	370	380	390	400	410	420	430
4.41E+00	2.54E+00	1.46E+00	8.37E-01	4.79E-01	2.74E-01	1.56E-01	8.90E-02	5.10E-02	2.90E-02	1.60E-02	9.32E-03	5.29E-03	3.00E-03	1.70E-03
1.321	0.799	0.481	0.288	0.172	1.02E-01	6.10E-02	3.60E-02	2.10E-02	1.20E-02	7.29E-03	4.27E-03	2.50E-03	1.46E-03	8.47E-04
9.20E-02	6.40E-02	4.30E-02	2.90E-02	2.00E-02	1.30E-02	8.50E-03	5.53E-03	3.57E-03	2.29E-03	1.46E-03	9.22E-04	5.81E-04	3.64E-04	2.27E-04
2.322	1.443	0.891	0.547	0.334	0.203	0.123	0.074	4.40E-02	0.026	1.60E-02	9.37E-03	5.55E-03	3.28E-03	1.93E-03
6.18E+00	3.68E+00	2.18E+00	1.29E+00	7.60E-01	4.47E-01	2.62E-01	1.53E-01	8.90E-02	5.20E-02	3.00E-02	1.80E-02	1.00E-02	5.89E-03	3.41E-03
4.64E+00	2.61E+00	1.47E+00	8.28E-01	4.63E-01	2.60E-01	1.46E-01	8.20E-02	4.70E-02	2.90E-02	1.70E-02	7.49E-03	2.57E-03	4.14E-03	2.55E-03
2.19E+00	1.23E+00	6.93E-01	3.89E-01	2.18E-01	1.23E-01	6.90E-02	3.80E-02	2.20E-02	1.20E-02	6.75E-03	3.78E-03	2.11E-03	1.18E-03	6.60E-04
1.50E+01	1.00E+01	6.60E+00	4.31E+00	2.79E+00	1.80E+00	1.15E+00	7.27E-01	4.58E-01	2.87E-01	1.79E-01	1.11E-01	6.90E-02	4.20E-02	2.60E-02
23.206	13.924	8.316	4.946	2.931	1.731	1.019	0.598	3.50E-01	2.04E-01	1.19E-01	6.90E-02	4.00E-02	2.30E-02	1.30E-02
3.93E+00	2.21E+00	1.24E+00	6.94E-01	3.88E-01	2.17E-01	1.22E-01	6.80E-02	3.90E-02	2.10E-02	1.20E-02	7.39E-03	3.47E-03	2.06E-03	1.43E-03
0.02	0.014	9.22E-03	6.19E-03	4.11E-03	2.70E-03	1.76E-03	1.14E-03	7.29E-04	4.64E-04	2.94E-04	1.85E-04	1.16E-04	7.20E-05	4.47E-05
1.11E-03	8.94E-04	7.03E-04	5.41E-04	4.09E-04	3.03E-04	2.22E-04	1.60E-04	1.14E-04	7.97E-05	5.53E-05	3.80E-05	2.58E-05	1.74E-05	1.16E-05
4.909	2.924	1.74E+00	1.03E+00	6.04E-01	3.55E-01	2.08E-01	1.21E-01	7.10E-02	4.10E-02	2.40E-02	1.40E-02	7.98E-03	4.61E-03	2.66E-03
1.15E+00	6.89E-01	4.12E-01	2.45E-01	1.45E-01	8.60E-02	5.10E-02	3.00E-02	1.70E-02	1.00E-02	5.92E-03	3.45E-03	2.00E-03	1.16E-03	6.72E-04
3.78E+00	2.23E+00	1.31E+00	7.69E-01	4.50E-01	2.62E-01	1.52E-01	8.80E-02	5.10E-02	3.00E-02	1.70E-02	9.87E-03	5.68E-03	3.27E-03	1.88E-03
1.91E+01	1.11E+01	6.47E+00	3.75E+00	2.17E+00	1.25E+00	7.22E-01	4.16E-01	2.39E-01	1.37E-01	7.90E-02	4.50E-02	2.60E-02	1.40E-02	8.48E-03
0.196	0.131	0.087	0.057	3.70E-02	2.40E-02	1.50E-02	9.78E-03	6.19E-03	3.89E-03	2.43E-03	1.52E-03	9.39E-04	5.80E-04	3.56E-04
8.73E-01	5.22E-01	3.11E-01	1.84E-01	1.09E-01	6.40E-02	3.80E-02	2.20E-02	1.30E-02	7.53E-03	4.38E-03	2.54E-03	1.48E-03	8.54E-04	4.94E-04
1.95E-01	1.27E-01	8.10E-02	5.20E-02	3.30E-02	2.10E-02	1.30E-02	8.04E-03	4.97E-03	3.07E-03	1.88E-03	1.15E-03	7.00E-04	4.24E-04	2.57E-04
2.10E-02	1.50E-02	1.00E-02	6.83E-03	4.59E-03	3.06E-03	2.02E-03	1.32E-03	8.58E-04	5.53E-04	3.55E-04	2.26E-04	1.43E-04	9.01E-05	5.65E-05
4.58E+00	2.65E+00	1.53E+00	8.79E-01	5.05E-01	2.89E-01	1.66E-01	9.50E-02	5.40E-02	3.10E-02	1.80E-02	9.98E-03	5.67E-03	3.22E-03	1.83E-03
4.87E+00	2.91E+00	1.73E+00	1.02E+00	6.02E-01	3.54E-01	2.07E-01	1.21E-01	7.10E-02	4.10E-02	2.40E-02	1.40E-02	7.98E-03	4.61E-03	2.66E-03
7.91E+00	4.54E+00	2.60E+00	1.49E+00	8.49E-01	4.84E-01	2.76E-01	1.56E-01	8.90E-02	5.10E-02	2.90E-02	1.60E-02	9.11E-03	5.17E-03	2.95E-03
0.464	0.29	0.18	0.111	0.068	4.10E-02	2.50E-02	1.50E-02	9.08E-03	5.44E-03	3.24E-03	1.93E-03	1.15E-03	6.77E-04	4.00E-04
1.03E+01	5.99E+00	3.49E+00	2.03E+00	1.17E+00	6.79E-01	3.92E-01	2.26E-01	1.30E-01	7.50E-02	4.30E-02	2.50E-02	1.40E-02	8.03E-03	4.59E-03
9.30E-02	6.60E-02	4.70E-02	3.30E-02	2.20E-02	1.50E-02	1.00E-02	6.77E-03	4.47E-03	2.92E-03	1.89E-03	1.22E-03	7.81E-04	4.97E-04	3.14E-04
4.30E+00	2.51E+00	1.46E+00	8.49E-01	4.92E-01	2.85E-01	1.64E-01	9.50E-02	5.50E-02	3.10E-02	1.80E-02	1.00E-02	5.92E-03	3.39E-03	1.94E-03
3.51E+00	2.10E+00	1.26E+00	7.47E-01	4.42E-01	2.61E-01	1.53E-01	9.00E-02	5.30E-02	3.10E-02	1.80E-02	1.00E-02	6.02E-03	3.49E-03	2.02E-03
5.09E-04	4.32E-04	3.56E-04	2.87E-04	2.27E-04	1.76E-04	1.34E-04	1.00E-04	7.38E-05	5.37E-05	3.86E-05	2.74E-05	1.92E-05	1.34E-05	9.19E-06
0.724	0.444	0.271	0.164	0.099	0.059	0.035	2.10E-02	1.30E-02	7.41E-03	4.37E-03	2.57E-03	1.51E-03	8.82E-04	5.15E-04
6.13E+00	3.63E+00	2.14E+00	1.26E+00	7.38E-01	4.32E-01	2.52E-01	1.46E-01	8.50E-02	4.90E-02	2.80E-02	1.60E-02	9.48E-03	5.46E-03	3.14E-03
7.18E-01	4.33E-01	2.59E-01	1.55E-01	9.20E-02	5.50E-02	3.20E-02	1.90E-02	1.10E-02	6.54E-03	3.82E-03	2.23E-03	1.30E-03	7.55E-04	4.38E-04
1.44E+00	8.54E-01	5.05E-01	2.98E-01	1.75E-01	1.02E-01	6.00E-02	3.50E-02	2.00E-02	1.20E-02	6.78E-03	3.92E-03	2.26E-03	1.30E-03	7.48E-04
1.70E+00	1.06E+00	6.63E-01	4.10E-01	2.52E-01	1.55E-01	9.40E-02	5.70E-02	3.40E-02	2.10E-02	1.20E-02	7.41E-03	4.41E-03	2.62E-03	1.55E-03
7.03E-01	4.48E-01	2.83E-01	1.77E-01	1.10E-01	6.80E-02	4.20E-02	2.60E-02	1.60E-02	9.41E-03	5.67E-03	3.41E-03	2.04E-03	1.22E-03	7.24E-04

2.77E+00	1.60E+00	9.21E-01	5.29E-01	3.04E-01	1.74E-01	9.90E-02	5.70E-02	3.20E-02	1.80E-02	1.00E-02	5.92E-03	3.36E-03	1.90E-03	1.08E-03
6.35E+00	3.75E+00	2.21E+00	1.29E+00	7.57E-01	4.42E-01	2.57E-01	1.49E-01	8.70E-02	5.00E-02	2.90E-02	1.70E-02	9.61E-03	5.53E-03	3.18E-03
6.65E+00	3.73E+00	2.09E+00	1.17E+00	6.56E-01	3.67E-01	2.05E-01	1.15E-01	6.40E-02	3.60E-02	2.00E-02	1.10E-02	6.25E-03	3.49E-03	1.95E-03
8.17E+01	4.65E+01	2.64E+01	1.50E+01	8.49E+00	4.80E+00	2.72E+00	1.54E+00	8.66E-01	4.89E-01	2.76E-01	1.55E-01	8.70E-02	4.90E-02	2.80E-02
2.55E-05	2.50E-05	2.37E-05	2.17E-05	1.94E-05	1.68E-05	1.43E-05	1.18E-05	9.62E-06	7.67E-06	6.02E-06	4.64E-06	3.53E-06	2.65E-06	1.96E-06
12.717	7.992	4.984	3.087	1.9	1.163	0.708	4.29E-01	2.59E-01	1.55E-01	9.30E-02	5.60E-02	3.30E-02	2.00E-02	1.20E-02
1.69E+01	1.01E+01	6.06E+00	3.61E+00	2.14E+00	1.27E+00	7.46E-01	4.39E-01	2.58E-01	1.51E-01	8.80E-02	5.10E-02	3.00E-02	1.70E-02	1.00E-02
2.10E+00	1.31E+00	8.13E-01	5.00E-01	3.06E-01	1.86E-01	1.13E-01	6.80E-02	4.10E-02	2.40E-02	1.50E-02	8.67E-03	5.14E-03	3.04E-03	1.79E-03
1.02E+01	4.46E-01	2.47E-01	1.37E-01	7.60E-02	4.20E-02	2.30E-02	1.30E-02	7.12E-03	3.94E-03	2.17E-03	1.20E-03	6.63E-04	3.66E-04	2.02E-04
2.713	1.59	0.929	5.41E-01	3.14E-01	1.82E-01	1.05E-01	6.10E-02	3.50E-02	2.00E-02	1.20E-02	6.61E-03	3.78E-03	2.16E-03	1.23E-03
5.81E-01	3.56E-01	2.17E-01	1.32E-01	8.00E-02	4.80E-02	2.90E-02	1.70E-02	1.00E-02	6.01E-03	3.55E-03	2.10E-03	1.23E-03	7.23E-04	4.23E-04
5.68E-01	3.49E-01	2.13E-01	1.29E-01	7.80E-02	4.70E-02	2.80E-02	1.70E-02	1.00E-02	5.93E-03	3.51E-03	2.07E-03	1.22E-03	7.15E-04	4.19E-04
2.72E+00	1.55E+00	8.81E-01	5.00E-01	2.83E-01	1.61E-01	9.10E-02	5.10E-02	2.90E-02	1.60E-02	9.24E-03	5.21E-03	2.94E-03	1.66E-03	9.32E-04
1.10E+01	6.16E+00	3.46E+00	1.94E+00	1.09E+00	6.16E-01	3.38E-01	1.89E-01	1.07E-01	6.50E-02	3.90E-02	1.40E-02	1.70E-02	1.20E-02	4.66E-03
8.30E-02	5.80E-02	4.00E-02	2.70E-02	1.80E-02	1.20E-02	7.98E-03	5.21E-03	3.38E-03	2.17E-03	1.39E-03	8.81E-04	5.56E-04	3.49E-04	2.18E-04
5.10E-01	3.02E-01	1.79E-01	1.05E-01	6.20E-02	3.60E-02	2.10E-02	1.20E-02	7.16E-03	4.15E-03	2.41E-03	1.39E-03	8.02E-04	4.62E-04	2.66E-04
5.74E+01	4.15E+01	1.62E+01	1.85E+01	8.25E+00	6.82E+00	1.32E+00	7.42E-01	4.17E-01	2.34E-01	1.31E-01	7.40E-02	4.10E-02	2.30E-02	1.30E-02
1.051	0.62	0.365	0.214	1.25E-01	7.30E-02	4.20E-02	2.50E-02	1.40E-02	8.26E-03	4.77E-03	2.75E-03	1.58E-03	9.10E-04	5.23E-04
6.37E+01	3.59E+01	2.02E+01	1.13E+01	6.37E+00	3.58E+00	2.01E+00	1.13E+00	6.30E-01	3.54E-01	1.98E-01	1.12E-01	6.10E-02	3.30E-02	2.10E-02
2.52E+02	1.43E+02	8.14E+01	4.62E+01	2.62E+01	1.48E+01	8.40E+00	4.75E+00	2.68E+00	1.52E+00	8.55E-01	4.82E-01	2.72E-01	1.53E-01	8.60E-02
7.125	4.26E+00	2.44E+00	1.37E+00	9.03E-01	5.31E-01	3.09E-01	1.82E-01	1.07E-01	5.80E-02	3.20E-02	2.10E-02	1.40E-02	4.72E-03	2.69E-03
1.25E+00	7.56E-01	4.55E-01	2.72E-01	1.62E-01	9.60E-02	5.70E-02	3.40E-02	2.00E-02	1.20E-02	6.79E-03	3.97E-03	2.31E-03	1.34E-03	7.81E-04
1.15E+00	6.88E-01	4.11E-01	2.44E-01	1.44E-01	8.50E-02	5.00E-02	2.90E-02	1.70E-02	1.00E-02	5.83E-03	3.39E-03	1.96E-03	1.14E-03	6.57E-04
1.14E+00	6.99E-01	4.28E-01	2.61E-01	1.58E-01	9.60E-02	5.70E-02	3.40E-02	2.10E-02	1.20E-02	7.26E-03	4.30E-03	2.54E-03	1.50E-03	8.79E-04
1.91E+00	1.11E+00	6.44E-01	3.73E-01	2.16E-01	1.24E-01	7.20E-02	4.10E-02	2.40E-02	1.40E-02	7.74E-03	4.43E-03	2.53E-03	1.44E-03	8.22E-04
7.01E-04	5.70E-04	4.54E-04	3.53E-04	2.70E-04	2.03E-04	1.50E-04	1.09E-04	7.86E-05	5.58E-05	3.92E-05	2.72E-05	1.87E-05	1.28E-05	8.64E-06
2.85E+00	1.77E+00	1.09E+00	6.68E-01	4.07E-01	2.47E-01	1.49E-01	9.00E-02	5.40E-02	3.20E-02	1.90E-02	1.10E-02	6.68E-03	3.94E-03	2.32E-03
1.25E+01	6.98E+00	3.90E+00	2.18E+00	1.22E+00	6.82E-01	3.81E-01	2.13E-01	1.19E-01	6.60E-02	3.70E-02	2.10E-02	1.20E-02	6.43E-03	3.59E-03
1.33E+01	7.50E+00	4.22E+00	2.37E+00	1.33E+00	7.44E-01	4.17E-01	2.33E-01	1.31E-01	7.30E-02	4.10E-02	2.30E-02	1.30E-02	7.15E-03	4.00E-03
5.66E-01	3.40E-01	2.04E-01	1.22E-01	7.20E-02	4.30E-02	2.50E-02	1.50E-02	8.72E-03	5.10E-03	2.98E-03	1.74E-03	1.01E-03	5.88E-04	3.41E-04
1.54E+00	9.64E-01	5.97E-01	3.68E-01	2.26E-01	1.38E-01	8.30E-02	5.00E-02	3.00E-02	1.80E-02	1.10E-02	6.46E-03	3.84E-03	2.27E-03	1.34E-03
1.48E+01	8.50E+00	4.87E+00	2.78E+00	1.59E+00	9.11E-01	5.11E-01	2.96E-01	1.65E-01	1.00E-01	4.80E-02	2.90E-02	1.20E-02	1.40E-02	7.77E-03
3.74E+01	2.16E+01	1.24E+01	7.13E+00	4.08E+00	2.34E+00	1.33E+00	7.60E-01	4.33E-01	2.46E-01	1.40E-01	8.00E-02	4.50E-02	2.60E-02	1.40E-02
1.59E+01	9.34E+00	5.48E+00	3.21E+00	1.87E+00	1.09E+00	6.33E-01	3.68E-01	2.13E-01	1.23E-01	7.10E-02	4.10E-02	2.40E-02	1.40E-02	7.81E-03
6.51E+01	3.92E+01	2.35E+01	1.41E+01	8.36E+00	4.95E+00	2.92E+00	1.72E+00	1.01E+00	5.90E-01	3.44E-01	2.00E-01	1.16E-01	6.70E-02	3.90E-02
1.14E+01	6.49E+00	3.71E+00	2.11E+00	1.20E+00	6.81E-01	3.86E-01	2.19E-01	1.24E-01	7.00E-02	3.90E-02	2.20E-02	1.30E-02	7.07E-03	3.98E-03
1.68E+00	1.02E+00	6.19E-01	3.73E-01	2.23E-01	1.33E-01	7.90E-02	4.70E-02	2.80E-02	1.60E-02	9.62E-03	5.64E-03	3.30E-03	1.93E-03	1.12E-03
8.28E+01	4.62E+01	2.57E+01	1.43E+01	7.97E+00	4.44E+00	2.47E+00	1.38E+00	7.66E-01	4.26E-01	2.37E-01	1.32E-01	7.40E-02	4.10E-02	2.30E-02
4.80E+00	2.70E+00	1.52E+00	8.54E-01	4.79E-01	2.69E-01	1.51E-01	8.40E-02	4.70E-02	2.60E-02	1.50E-02	8.26E-03	4.61E-03	2.58E-03	1.44E-03
7.29E-01	4.04E-01	2.24E-01	1.24E-01	6.80E-02	3.80E-02	2.10E-02	1.20E-02	6.43E-03	3.56E-03	1.97E-03	1.09E-03	6.04E-04	3.34E-04	1.85E-04

2.70E-02	1.90E-02	1.30E-02	8.67E-03	5.83E-03	3.88E-03	2.55E-03	1.67E-03	1.08E-03	6.97E-04	4.45E-04	2.83E-04	1.79E-04	1.12E-04	7.03E-05
1.18E+00	7.13E-01	4.28E-01	2.56E-01	1.52E-01	9.00E-02	5.30E-02	3.10E-02	1.80E-02	1.10E-02	6.32E-03	3.69E-03	2.15E-03	1.25E-03	7.24E-04
1.05E+01	5.84E+00	3.26E+00	1.82E+00	1.01E+00	5.64E-01	3.15E-01	1.75E-01	9.80E-02	5.40E-02	3.00E-02	1.70E-02	9.44E-03	5.24E-03	2.91E-03
1.39E-01	9.30E-02	6.20E-02	4.00E-02	2.60E-02	1.70E-02	1.10E-02	6.81E-03	4.29E-03	2.68E-03	1.67E-03	1.03E-03	6.34E-04	3.88E-04	2.37E-04
0.526	0.329	2.04E-01	1.26E-01	7.70E-02	4.70E-02	2.90E-02	1.70E-02	1.00E-02	6.26E-03	3.75E-03	2.23E-03	1.33E-03	7.88E-04	4.66E-04
5.21E+00	3.14E+00	1.88E+00	1.12E+00	6.64E-01	3.92E-01	2.31E-01	1.36E-01	7.90E-02	4.60E-02	2.70E-02	1.60E-02	9.07E-03	5.24E-03	3.03E-03
3.75E+00	2.16E+00	1.24E+00	7.08E-01	4.05E-01	2.31E-01	1.31E-01	7.50E-02	4.30E-02	2.40E-02	1.40E-02	7.76E-03	4.39E-03	2.49E-03	1.41E-03
3.29E+00	1.90E+00	1.10E+00	6.31E-01	3.63E-01	2.08E-01	1.19E-01	6.80E-02	3.90E-02	2.20E-02	1.30E-02	7.17E-03	4.08E-03	2.31E-03	1.31E-03
1.68E+00	9.87E-01	5.77E-01	3.37E-01	1.96E-01	1.14E-01	6.60E-02	3.80E-02	2.20E-02	1.30E-02	7.36E-03	4.23E-03	2.44E-03	1.40E-03	8.02E-04
8.69E-01	5.11E-01	2.99E-01	1.75E-01	1.02E-01	5.90E-02	3.40E-02	2.00E-02	1.10E-02	6.57E-03	3.78E-03	2.17E-03	1.25E-03	7.14E-04	4.09E-04
0.347	0.216	0.133	0.082	0.05	0.03	0.018	0.011	6.57E-03	3.92E-03	2.33E-03	1.38E-03	8.18E-04	4.82E-04	2.84E-04
1.27E+01	7.08E+00	3.96E+00	2.21E+00	1.24E+00	6.90E-01	3.85E-01	2.15E-01	1.20E-01	6.70E-02	3.70E-02	2.10E-02	1.20E-02	6.46E-03	3.60E-03
3.69E+00	2.19E+00	1.29E+00	7.60E-01	4.46E-01	2.61E-01	1.52E-01	8.80E-02	5.10E-02	3.00E-02	1.70E-02	9.89E-03	5.69E-03	3.27E-03	1.88E-03
4.02E+02	2.45E+02	1.49E+02	8.96E+01	5.38E+01	3.22E+01	1.92E+01	1.14E+01	6.73E+00	3.97E+00	2.34E+00	1.37E+00	8.02E-01	4.69E-01	2.73E-01
1.74E+00	9.69E-01	5.41E-01	3.02E-01	1.69E-01	9.40E-02	5.20E-02	2.90E-02	1.60E-02	9.10E-03	5.07E-03	2.83E-03	1.58E-03	8.79E-04	4.90E-04
9.54E+00	6.02E+00	3.77E+00	2.35E+00	1.45E+00	8.95E-01	5.49E-01	3.35E-01	2.03E-01	1.23E-01	7.40E-02	4.50E-02	2.70E-02	1.60E-02	9.52E-03
0.918	0.552	0.33	0.196	1.23E-01	7.40E-02	4.40E-02	2.60E-02	1.50E-02	9.14E-03	5.19E-03	3.01E-03	1.92E-03	1.03E-03	6.60E-04
4.24E+00	2.77E+00	1.80E+00	1.15E+00	7.35E-01	4.65E-01	2.92E-01	1.82E-01	1.13E-01	7.00E-02	4.30E-02	2.60E-02	1.60E-02	9.74E-03	5.90E-03
1.34E-03	1.12E-03	9.20E-04	7.37E-04	5.78E-04	4.45E-04	3.36E-04	2.50E-04	1.84E-04	1.33E-04	9.51E-05	6.72E-05	4.70E-05	3.25E-05	2.23E-05
2.89E+00	1.73E+00	1.03E+00	6.08E-01	3.59E-01	2.11E-01	1.24E-01	7.20E-02	4.20E-02	2.40E-02	1.40E-02	8.22E-03	4.75E-03	2.74E-03	1.58E-03
1.85E+00	1.22E+00	7.92E-01	5.12E-01	3.28E-01	2.09E-01	1.32E-01	8.30E-02	5.20E-02	3.20E-02	2.00E-02	1.20E-02	7.48E-03	4.57E-03	2.78E-03
1.094	0.644	3.77E-01	2.21E-01	1.29E-01	7.50E-02	4.30E-02	2.50E-02	1.40E-02	8.35E-03	4.81E-03	2.76E-03	1.59E-03	9.08E-04	5.20E-04
7.65E+01	4.50E+01	2.64E+01	1.54E+01	8.96E+00	5.20E+00	3.02E+00	1.74E+00	1.01E+00	5.79E-01	3.33E-01	1.91E-01	1.09E-01	6.30E-02	3.60E-02
1.91E+01	1.07E+01	6.04E+00	3.39E+00	1.91E+00	1.07E+00	6.00E-01	3.36E-01	1.88E-01	1.06E-01	5.90E-02	3.30E-02	1.90E-02	1.00E-02	5.81E-03
2.00E+00	1.21E+00	7.31E-01	4.39E-01	2.62E-01	1.56E-01	9.20E-02	5.50E-02	3.20E-02	1.90E-02	1.10E-02	6.44E-03	3.75E-03	2.18E-03	1.27E-03
4.02E+02	**2.45E+02**	**1.49E+02**	**8.96E+01**	**5.38E+01**	**3.22E+01**	**1.92E+01**	**1.14E+01**	**6.73E+00**	**3.97E+00**	**2.34E+00**	**1.37E+00**	**8.02E-01**	**4.69E-01**	**2.73E-01**

440	450	460	470	480	490	500	510	520	530	540	550	560	570	580
9.61E-04	5.44E-04	3.08E-04	1.74E-04	9.84E-05	5.56E-05	3.14E-05	1.77E-05	1.00E-05	5.65E-06	3.19E-06	1.80E-06	1.01E-06	5.72E-07	3.23E-07
4.92E-04	2.86E-04	1.66E-04	9.59E-05	5.54E-05	3.20E-05	1.85E-05	1.07E-05	6.13E-06	3.53E-06	2.03E-06	1.17E-06	6.69E-07	3.84E-07	2.20E-07
1.41E-04	8.71E-05	5.36E-05	3.29E-05	2.01E-05	1.23E-05	7.44E-06	4.51E-06	2.73E-06	1.64E-06	9.88E-07	5.92E-07	3.55E-07	2.12E-07	1.26E-07
1.14E-03	6.67E-04	3.91E-04	2.28E-04	1.33E-04	7.77E-05	4.52E-05	2.63E-05	1.52E-05	8.84E-06	5.12E-06	2.96E-06	1.71E-06	9.87E-07	5.69E-07
1.97E-03	1.13E-03	6.53E-04	3.76E-04	2.16E-04	1.24E-04	7.12E-05	4.08E-05	2.34E-05	1.34E-05	7.66E-06	4.39E-06	2.51E-06	1.43E-06	8.18E-07
1.32E-03	1.07E-03	1.64E-04	9.13E-05	5.09E-05	2.84E-05	1.58E-05	8.81E-06	4.91E-06	2.74E-06	1.53E-06	8.51E-07	4.75E-07	2.65E-07	1.48E-07
3.69E-04	2.06E-04	1.15E-04	6.42E-05	3.59E-05	2.00E-05	1.12E-05	6.25E-06	3.49E-06	1.95E-06	1.09E-06	6.07E-07	3.39E-07	1.89E-07	1.06E-07
1.60E-02	9.59E-03	5.82E-03	3.52E-03	2.12E-03	1.28E-03	7.65E-04	4.58E-04	2.73E-04	1.63E-04	9.68E-05	5.75E-05	3.41E-05	2.01E-05	1.19E-05
7.77E-03	4.48E-03	2.58E-03	1.48E-03	8.51E-04	4.88E-04	2.80E-04	1.60E-04	9.16E-05	5.23E-05	2.99E-05	1.70E-05	9.72E-06	5.54E-06	3.15E-06
1.48E-03	0.00E+00	7.92E-04	7.64E-04	1.51E-05	8.25E-06	4.52E-06	2.47E-06	1.35E-06	7.40E-07	4.05E-07	2.22E-07	1.21E-07	6.62E-08	3.62E-08
2.76E-05	1.69E-05	1.04E-05	6.32E-06	3.84E-06	2.33E-06	1.41E-06	8.48E-07	5.10E-07	3.06E-07	1.83E-07	1.09E-07	6.50E-08	3.86E-08	2.29E-08
7.71E-06	5.07E-06	3.32E-06	2.15E-06	1.39E-06	8.93E-07	5.70E-07	3.62E-07	2.29E-07	1.44E-07	9.04E-08	5.64E-08	3.51E-08	2.18E-08	1.34E-08
1.53E-03	8.79E-04	5.05E-04	2.90E-04	1.66E-04	9.50E-05	5.44E-05	3.11E-05	1.77E-05	1.01E-05	5.78E-06	3.29E-06	1.88E-06	1.07E-06	6.08E-07
3.88E-04	2.24E-04	1.29E-04	7.44E-05	4.28E-05	2.46E-05	1.41E-05	8.09E-06	4.63E-06	2.65E-06	1.52E-06	8.68E-07	4.96E-07	2.83E-07	1.62E-07
1.08E-03	6.17E-04	3.53E-04	2.02E-04	1.15E-04	6.59E-05	3.77E-05	2.15E-05	1.23E-05	6.96E-06	3.98E-06	2.27E-06	1.28E-06	7.32E-07	4.18E-07
4.66E-03	2.54E-03	1.74E-03	9.83E-04	5.57E-04	3.25E-04	1.84E-04	9.71E-05	6.09E-05	3.96E-05	1.37E-05	7.75E-06	4.38E-06	2.47E-06	1.40E-06
2.18E-04	1.33E-04	8.10E-05	4.91E-05	2.97E-05	1.79E-05	1.08E-05	6.47E-06	3.87E-06	2.32E-06	1.38E-06	8.22E-07	4.88E-07	2.90E-07	1.72E-07
2.85E-04	1.64E-04	9.47E-05	5.45E-05	3.13E-05	1.80E-05	1.03E-05	5.92E-06	3.39E-06	1.94E-06	1.11E-06	6.35E-07	3.65E-07	2.06E-07	1.19E-07
1.55E-04	9.31E-05	5.58E-05	3.34E-05	1.99E-05	1.19E-05	7.06E-06	4.19E-06	2.48E-06	1.47E-06	8.66E-07	5.10E-07	3.00E-07	1.77E-07	1.04E-07
3.52E-05	2.19E-05	1.35E-05	8.35E-06	5.13E-06	3.14E-06	1.92E-06	1.17E-06	7.08E-07	4.29E-07	2.59E-07	1.56E-07	9.38E-08	5.63E-08	3.37E-08
1.04E-03	5.88E-04	3.33E-04	1.89E-04	1.07E-04	6.05E-05	3.42E-05	1.93E-05	1.09E-05	6.18E-06	3.49E-06	1.97E-06	1.11E-06	6.29E-07	3.55E-07
1.53E-03	8.79E-04	5.05E-04	2.90E-04	1.66E-04	9.50E-05	5.43E-05	3.11E-05	1.77E-05	1.01E-05	5.77E-06	3.29E-06	1.88E-06	1.07E-06	6.08E-07
1.56E-03	8.69E-04	5.51E-04	2.64E-04	2.55E-04	1.47E-04	7.32E-05	5.28E-05	4.01E-05	6.58E-06	3.69E-06	2.07E-06	1.16E-06	6.51E-07	3.65E-07
2.35E-04	1.38E-04	8.10E-05	4.74E-05	2.77E-05	1.62E-05	9.41E-06	5.47E-06	3.18E-06	1.84E-06	1.07E-06	6.18E-07	3.57E-07	2.06E-07	1.19E-07
2.62E-03	1.49E-03	8.52E-04	4.85E-04	2.76E-04	1.57E-04	8.93E-05	5.08E-05	2.88E-05	1.64E-05	9.30E-06	5.28E-06	2.99E-06	1.70E-06	9.62E-07
1.98E-04	1.24E-04	7.72E-05	4.79E-05	2.96E-05	1.82E-05	1.12E-05	6.85E-06	4.17E-06	2.54E-06	1.54E-06	9.30E-07	5.61E-07	3.38E-07	2.03E-07
1.11E-03	6.31E-04	3.60E-04	2.05E-04	1.17E-04	6.65E-05	3.79E-05	2.15E-05	1.22E-05	6.96E-06	3.95E-06	2.24E-06	1.27E-06	7.23E-07	4.10E-07
1.16E-03	6.71E-04	3.86E-04	2.22E-04	1.28E-04	7.32E-05	4.20E-05	2.40E-05	1.38E-05	7.87E-06	4.50E-06	2.57E-06	1.47E-06	8.36E-07	4.77E-07
6.27E-06	4.24E-06	2.85E-06	1.90E-06	1.26E-06	8.26E-07	5.40E-07	3.51E-07	2.27E-07	1.46E-07	9.36E-08	5.97E-08	3.79E-08	2.39E-08	1.51E-08
3.00E-04	1.75E-04	1.01E-04	5.88E-05	3.40E-05	1.97E-05	1.14E-05	6.55E-06	3.77E-06	2.17E-06	1.25E-06	7.17E-07	4.12E-07	2.36E-07	1.35E-07
1.80E-03	1.03E-03	5.92E-04	3.39E-04	1.94E-04	1.11E-04	6.33E-05	3.61E-05	2.06E-05	1.18E-05	6.69E-06	3.81E-06	2.17E-06	1.23E-06	7.02E-07
2.54E-04	1.47E-04	8.49E-05	4.90E-05	2.82E-05	1.63E-05	9.36E-06	5.38E-06	3.09E-06	1.77E-06	1.02E-06	5.82E-07	3.33E-07	1.91E-07	1.09E-07
4.30E-04	2.47E-04	1.41E-04	8.09E-05	4.63E-05	2.65E-05	1.51E-05	8.62E-06	4.92E-06	2.80E-06	1.60E-06	9.08E-07	5.17E-07	2.94E-07	1.67E-07
9.16E-04	5.40E-04	3.18E-04	1.87E-04	1.09E-04	6.39E-05	3.73E-05	2.18E-05	1.27E-05	7.37E-06	4.28E-06	2.48E-06	1.44E-06	8.33E-07	4.82E-07
4.29E-04	2.54E-04	1.50E-04	8.83E-05	5.19E-05	3.04E-05	1.78E-05	1.04E-05	6.08E-06	3.54E-06	2.06E-06	1.20E-06	6.94E-07	4.02E-07	2.33E-07

6.10E-04	3.45E-04	1.95E-04	1.10E-04	6.21E-05	3.50E-05	1.98E-05	1.11E-05	6.27E-06	3.53E-06	1.99E-06	1.12E-06	6.31E-07	3.55E-07	2.00E-07
1.82E-03	1.05E-03	5.99E-04	3.43E-04	1.96E-04	1.12E-04	6.40E-05	3.65E-05	2.08E-05	1.19E-05	6.76E-06	3.85E-06	2.19E-06	1.25E-06	7.09E-07
1.09E-03	6.07E-04	3.39E-04	1.89E-04	1.06E-04	5.90E-05	3.29E-05	1.84E-05	1.03E-05	5.73E-06	3.20E-06	1.79E-06	9.98E-07	5.57E-07	3.11E-07
1.60E-02	8.77E-03	4.93E-03	2.77E-03	1.56E-03	8.75E-04	4.91E-04	2.76E-04	1.55E-04	8.71E-05	4.89E-05	2.75E-05	1.54E-05	8.66E-06	4.86E-06
1.43E-06	1.04E-06	7.43E-07	5.27E-07	3.70E-07	2.58E-07	1.78E-07	1.22E-07	8.31E-08	5.62E-08	3.77E-08	2.52E-08	1.67E-08	1.10E-08	7.25E-09
6.83E-03	4.02E-03	2.36E-03	1.39E-03	8.11E-04	4.74E-04	2.76E-04	1.61E-04	9.35E-05	5.43E-05	3.15E-05	1.83E-05	1.06E-05	6.11E-06	3.53E-06
5.84E-03	3.38E-03	1.95E-03	1.13E-03	6.50E-04	3.74E-04	2.15E-04	1.24E-04	7.11E-05	4.08E-05	2.34E-05	1.34E-05	7.68E-06	4.40E-06	2.52E-06
1.05E-03	6.18E-04	3.62E-04	2.11E-04	1.23E-04	7.18E-05	4.18E-05	2.43E-05	1.41E-05	8.15E-06	4.71E-06	2.72E-06	1.57E-06	9.07E-07	5.22E-07
1.11E-04	6.14E-05	3.38E-05	1.87E-05	1.03E-05	5.66E-06	3.12E-06	1.72E-06	9.47E-07	5.21E-07	2.87E-07	1.58E-07	8.69E-08	4.78E-08	2.63E-08
7.04E-04	4.01E-04	2.29E-04	1.30E-04	7.40E-05	4.21E-05	2.39E-05	1.36E-05	7.70E-06	4.36E-06	2.47E-06	1.40E-06	7.94E-07	4.50E-07	2.55E-07
2.47E-04	1.44E-04	8.40E-05	4.88E-05	2.83E-05	1.64E-05	9.51E-06	5.50E-06	3.18E-06	1.84E-06	1.06E-06	6.10E-07	3.51E-07	2.02E-07	1.16E-07
2.45E-04	1.43E-04	8.32E-05	4.84E-05	2.81E-05	1.63E-05	9.45E-06	5.47E-06	3.16E-06	1.83E-06	1.05E-06	6.07E-07	3.50E-07	2.01E-07	1.16E-07
5.25E-04	2.95E-04	1.66E-04	9.35E-05	5.26E-05	2.96E-05	1.66E-05	9.35E-06	5.26E-06	2.96E-06	1.66E-06	9.33E-07	5.25E-07	2.95E-07	1.66E-07
3.95E-03	5.21E-04	2.89E-04	1.60E-04	8.89E-05	4.94E-05	2.74E-05	1.52E-05	8.44E-06	4.69E-06	2.60E-06	1.45E-06	8.03E-07	4.46E-07	2.48E-07
1.36E-04	8.40E-05	5.18E-05	3.18E-05	1.95E-05	1.19E-05	7.22E-06	4.38E-06	2.65E-06	1.60E-06	9.60E-07	5.76E-07	3.45E-07	2.06E-07	1.23E-07
1.53E-04	8.78E-05	5.03E-05	2.88E-05	1.65E-05	9.45E-06	5.40E-06	3.08E-06	1.76E-06	1.00E-06	5.72E-07	3.26E-07	1.86E-07	1.06E-07	6.01E-08
7.25E-03	4.06E-03	2.28E-03	1.27E-03	7.14E-04	4.00E-04	2.24E-04	1.25E-04	7.02E-05	3.93E-05	2.20E-05	1.23E-05	6.90E-06	3.86E-06	2.16E-06
3.00E-04	1.72E-04	9.83E-05	5.63E-05	3.22E-05	1.84E-05	1.05E-05	5.98E-06	3.41E-06	1.94E-06	1.11E-06	6.29E-07	3.58E-07	2.03E-07	1.16E-07
1.00E-02	6.91E-03	3.90E-03	1.55E-03	1.17E-03	2.42E-04	1.51E-03	7.21E-04	6.62E-04	1.65E-05	9.13E-06	5.04E-06	2.79E-06	1.54E-06	8.51E-07
4.80E-02	2.70E-02	1.50E-02	8.68E-03	4.79E-03	2.67E-03	1.48E-03	9.33E-04	4.55E-04	2.68E-04	1.25E-04	7.84E-05	5.00E-05	1.73E-05	0.00E+00
1.54E-03	8.75E-04	4.98E-04	2.83E-04	1.61E-04	9.15E-05	5.20E-05	2.95E-05	1.67E-05	9.50E-06	5.38E-06	3.05E-06	1.73E-06	9.79E-07	5.54E-07
4.53E-04	2.62E-04	1.51E-04	8.74E-05	5.04E-05	2.90E-05	1.67E-05	9.60E-06	5.51E-06	3.16E-06	1.81E-06	1.04E-06	5.94E-07	3.40E-07	1.94E-07
3.79E-04	2.18E-04	1.26E-04	7.22E-05	4.15E-05	2.38E-05	1.36E-05	7.80E-06	4.46E-06	2.55E-06	1.46E-06	8.32E-07	4.74E-07	2.70E-07	1.54E-07
5.16E-04	3.02E-04	1.77E-04	1.03E-04	6.01E-05	3.50E-05	2.03E-05	1.18E-05	6.84E-06	3.96E-06	2.29E-06	1.32E-06	7.64E-07	4.41E-07	2.54E-07
4.68E-04	2.67E-04	1.52E-04	8.62E-05	4.90E-05	2.78E-05	1.58E-05	8.97E-06	5.09E-06	2.88E-06	1.63E-06	9.26E-07	5.25E-07	2.97E-07	1.68E-07
5.80E-06	3.86E-06	2.55E-06	1.68E-06	1.10E-06	7.11E-07	4.59E-07	2.95E-07	1.89E-07	1.20E-07	7.62E-08	4.81E-08	3.03E-08	1.90E-08	1.18E-08
1.36E-03	8.00E-04	4.68E-04	2.73E-04	1.59E-04	9.29E-05	5.40E-05	3.14E-05	1.82E-05	1.05E-05	6.10E-06	3.53E-06	2.04E-06	1.18E-06	6.77E-07
2.00E-03	1.12E-03	6.22E-04	3.47E-04	1.93E-04	1.08E-04	6.02E-05	3.36E-05	1.87E-05	1.04E-05	5.83E-06	3.25E-06	1.81E-06	1.01E-06	5.65E-07
2.24E-03	1.25E-03	6.98E-04	3.90E-04	2.18E-04	1.22E-04	6.81E-05	3.81E-05	2.13E-05	1.19E-05	6.65E-06	3.72E-06	2.08E-06	1.16E-06	6.49E-07
1.97E-04	1.14E-04	6.59E-05	3.80E-05	2.19E-05	1.26E-05	7.24E-06	4.16E-06	2.39E-06	1.37E-06	7.85E-07	4.49E-07	2.57E-07	1.47E-07	8.41E-08
7.91E-04	4.65E-04	2.73E-04	1.60E-04	9.34E-05	5.45E-05	3.18E-05	1.85E-05	1.08E-05	6.24E-06	3.62E-06	2.09E-06	1.21E-06	7.00E-07	4.04E-07
4.67E-03	2.37E-03	1.85E-03	3.26E-04	1.83E-04	1.02E-04	5.74E-05	3.21E-05	1.80E-05	1.01E-05	5.64E-06	3.16E-06	1.77E-06	9.90E-07	5.54E-07
8.20E-03	4.64E-03	2.63E-03	1.48E-03	8.39E-04	4.74E-04	2.67E-04	1.51E-04	8.52E-05	4.80E-05	2.71E-05	1.53E-05	8.61E-06	4.85E-06	2.74E-06
4.49E-03	2.57E-03	1.48E-03	8.45E-04	4.84E-04	2.77E-04	1.58E-04	9.03E-05	5.16E-05	2.94E-05	1.68E-05	9.57E-06	5.45E-06	3.11E-06	1.77E-06
2.30E-02	1.30E-02	7.51E-03	4.32E-03	2.48E-03	1.43E-03	8.17E-04	4.68E-04	2.68E-04	1.53E-04	8.76E-05	5.00E-05	2.85E-05	1.63E-05	9.27E-06
2.24E-03	1.26E-03	7.09E-04	3.98E-04	2.24E-04	1.26E-04	7.06E-05	3.97E-05	2.23E-05	1.25E-05	7.01E-06	3.93E-06	2.21E-06	1.24E-06	6.94E-07
6.54E-04	3.80E-04	2.20E-04	1.28E-04	7.39E-05	4.27E-05	2.46E-05	1.42E-05	8.18E-06	4.71E-06	2.71E-06	1.56E-06	8.93E-07	5.12E-07	2.94E-07
1.30E-02	7.08E-03	3.94E-03	2.20E-03	1.22E-03	6.82E-04	3.80E-04	2.12E-04	1.18E-04	6.60E-05	3.68E-05	2.05E-05	1.15E-05	6.39E-06	3.57E-06
8.04E-04	4.49E-04	2.50E-04	1.40E-04	7.80E-05	4.35E-05	2.43E-05	1.36E-05	7.56E-06	4.22E-06	2.35E-06	1.31E-06	7.32E-07	4.08E-07	2.28E-07
1.03E-04	5.68E-05	3.15E-05	1.75E-05	9.68E-06	5.36E-06	2.97E-06	1.65E-06	9.15E-07	5.07E-07	2.81E-07	1.56E-07	8.67E-08	4.81E-08	2.67E-08

4.38E-05	2.71E-05	1.67E-05	1.03E-05	6.31E-06	3.85E-06	2.35E-06	1.42E-06	8.61E-07	5.20E-07	3.13E-07	1.88E-07	1.13E-07	6.74E-08	4.02E-08
4.19E-04	2.43E-04	1.40E-04	8.08E-05	4.66E-05	2.68E-05	1.54E-05	8.86E-06	5.08E-06	2.92E-06	1.67E-06	9.56E-07	5.45E-07	3.15E-07	1.78E-07
1.59E-03	9.22E-04	4.92E-04	3.23E-04	1.69E-04	6.50E-05	8.47E-05	6.55E-05	1.22E-05	0.00E+00	4.18E-05	1.02E-06	5.64E-07	3.12E-07	1.73E-07
1.44E-04	8.72E-05	5.26E-05	3.17E-05	1.90E-05	1.14E-05	6.78E-06	4.04E-06	2.40E-06	1.42E-06	8.41E-07	4.97E-07	2.93E-07	1.72E-07	1.01E-07
2.75E-04	1.62E-04	9.52E-05	5.58E-05	3.27E-05	1.91E-05	1.12E-05	6.50E-06	3.78E-06	2.20E-06	1.28E-06	7.41E-07	4.29E-07	2.48E-07	1.44E-07
1.75E-03	1.00E-03	5.77E-04	3.31E-04	1.90E-04	1.09E-04	6.21E-05	3.55E-05	2.03E-05	1.16E-05	6.58E-06	3.75E-06	2.13E-06	1.21E-06	6.89E-07
7.94E-04	4.49E-04	2.54E-04	1.43E-04	8.07E-05	4.55E-05	2.57E-05	1.45E-05	8.16E-06	4.60E-06	2.59E-06	1.46E-06	8.22E-07	4.63E-07	2.61E-07
7.45E-04	4.22E-04	2.39E-04	1.35E-04	7.65E-05	4.33E-05	2.45E-05	1.38E-05	7.81E-06	4.41E-06	2.49E-06	1.41E-06	7.93E-07	4.48E-07	2.52E-07
4.60E-04	2.63E-04	1.51E-04	8.62E-05	4.93E-05	2.81E-05	1.61E-05	9.16E-06	5.23E-06	2.98E-06	1.70E-06	9.66E-07	5.50E-07	3.13E-07	1.78E-07
2.34E-04	1.34E-04	7.63E-05	4.35E-05	2.48E-05	1.41E-05	8.04E-06	4.57E-06	2.60E-06	1.48E-06	8.40E-07	4.77E-07	2.71E-07	1.54E-07	8.71E-08
1.67E-04	9.76E-05	5.71E-05	3.33E-05	1.94E-05	1.13E-05	6.56E-06	3.81E-06	2.21E-06	1.28E-06	7.38E-07	4.26E-07	2.46E-07	1.42E-07	8.15E-08
2.01E-03	1.12E-03	6.24E-04	3.48E-04	1.94E-04	1.08E-04	6.04E-05	3.37E-05	1.88E-05	1.05E-05	5.85E-06	3.26E-06	1.82E-06	1.02E-06	5.68E-07
1.08E-03	6.18E-04	3.53E-04	2.02E-04	1.15E-04	6.59E-05	3.76E-05	2.14E-05	1.22E-05	6.94E-06	3.95E-06	2.24E-06	1.27E-06	7.24E-07	4.11E-07
1.59E-01	9.20E-02	5.40E-02	3.10E-02	1.80E-02	1.00E-02	5.96E-03	3.43E-03	1.98E-03	1.14E-03	6.51E-04	3.74E-04	2.14E-04	1.23E-04	7.01E-05
2.73E-04	1.53E-04	8.51E-05	4.75E-05	2.65E-05	1.48E-05	8.24E-06	4.60E-06	2.57E-06	1.43E-06	8.00E-07	4.47E-07	2.49E-07	1.39E-07	7.78E-08
5.66E-03	3.36E-03	1.99E-03	1.17E-03	6.92E-04	4.07E-04	2.39E-04	1.40E-04	8.22E-05	4.81E-05	2.81E-05	1.64E-05	9.55E-06	5.56E-06	3.23E-06
4.36E-04	1.56E-04	8.98E-05	5.16E-05	2.97E-05	1.70E-05	9.74E-06	5.58E-06	3.19E-06	1.82E-06	1.04E-06	5.95E-07	3.39E-07	1.93E-07	1.10E-07
3.56E-03	2.14E-03	1.28E-03	7.66E-04	4.57E-04	2.72E-04	1.61E-04	9.56E-05	5.65E-05	3.33E-05	1.96E-05	1.16E-05	6.78E-06	3.98E-06	2.33E-06
1.52E-05	1.02E-05	6.85E-06	4.55E-06	3.01E-06	1.97E-06	1.29E-06	8.35E-07	5.39E-07	3.46E-07	2.21E-07	1.41E-07	8.93E-08	5.64E-08	3.55E-08
9.10E-04	5.23E-04	3.00E-04	1.72E-04	9.86E-05	5.64E-05	3.23E-05	1.84E-05	1.05E-05	6.01E-06	3.43E-06	1.95E-06	1.11E-06	6.33E-07	3.60E-07
1.68E-03	1.02E-03	6.12E-04	3.67E-04	2.20E-04	1.31E-04	7.84E-05	4.66E-05	2.77E-05	1.64E-05	9.69E-06	5.72E-06	3.37E-06	1.98E-06	1.17E-06
2.97E-04	1.70E-04	9.70E-05	5.53E-05	3.15E-05	1.80E-05	1.02E-05	5.81E-06	3.30E-06	1.88E-06	1.07E-06	6.05E-07	3.44E-07	1.95E-07	1.11E-07
2.00E-02	1.20E-02	6.65E-03	3.79E-03	2.15E-03	1.23E-03	6.96E-04	3.95E-04	2.24E-04	1.27E-04	7.21E-05	4.09E-05	2.32E-05	1.31E-05	7.42E-06
3.25E-03	1.82E-03	1.02E-03	5.70E-04	3.19E-04	1.79E-04	9.99E-05	5.59E-05	3.13E-05	1.75E-05	9.80E-06	5.49E-06	3.07E-06	1.72E-06	9.63E-07
7.35E-04	4.25E-04	2.46E-04	1.42E-04	8.16E-05	4.70E-05	2.70E-05	1.55E-05	8.90E-06	5.10E-06	2.92E-06	1.67E-06	9.57E-07	5.47E-07	3.12E-07
1.59E-01	**9.20E-02**	**5.40E-02**	**3.10E-02**	**1.80E-02**	**1.00E-02**	**5.96E-03**	**3.43E-03**	**1.98E-03**	**1.14E-03**	**6.51E-04**	**3.74E-04**	**2.14E-04**	**1.23E-04**	**7.01E-05**

590	600	610	620	630	640	650	660	670	680	690	700	710	720	730
1.82E-07	1.03E-07	5.78E-08	3.26E-08	1.84E-08	1.04E-08	5.83E-09	3.29E-09	1.85E-09	1.04E-09	5.88E-10	3.31E-10	1.87E-10	1.05E-10	5.92E-11
1.26E-07	7.21E-08	4.13E-08	2.36E-08	1.35E-08	7.71E-09	4.41E-09	2.52E-09	1.44E-09	8.19E-10	4.67E-10	2.66E-10	1.52E-10	8.65E-11	4.93E-11
7.52E-08	4.46E-08	2.65E-08	1.57E-08	9.27E-09	5.47E-09	3.23E-09	1.90E-09	1.12E-09	6.56E-10	3.85E-10	2.26E-10	1.32E-10	7.72E-11	4.51E-11
3.28E-07	1.89E-07	1.09E-07	6.25E-08	3.59E-08	2.06E-08	1.18E-08	6.78E-09	3.89E-09	2.23E-09	1.28E-09	7.30E-10	4.17E-10	2.39E-10	1.36E-10
4.67E-07	2.66E-07	1.52E-07	8.66E-08	4.92E-08	2.81E-08	1.60E-08	9.07E-09	5.23E-09	2.92E-09	1.68E-09	9.49E-10	5.40E-10	3.09E-10	1.82E-10
8.25E-08	4.60E-08	2.57E-08	1.43E-08	8.00E-09	4.47E-09	2.49E-09	1.39E-09	7.78E-10	4.34E-10	2.43E-10	1.36E-10	7.57E-11	4.23E-11	2.36E-11
5.90E-08	3.29E-08	1.84E-08	1.03E-08	5.73E-09	3.20E-09	1.79E-09	9.99E-10	5.58E-10	3.12E-10	1.74E-10	9.72E-11	5.43E-11	3.03E-11	1.70E-11
7.01E-06	4.13E-06	2.43E-06	1.43E-06	8.36E-07	4.89E-07	2.86E-07	1.67E-07	9.77E-08	5.70E-08	3.32E-08	1.93E-08	1.12E-08	6.53E-09	3.79E-09
1.79E-06	1.02E-06	5.79E-07	3.29E-07	1.87E-07	1.06E-07	6.01E-08	3.41E-08	1.93E-08	1.09E-08	6.20E-09	3.51E-09	1.99E-09	1.12E-09	6.35E-10
1.98E-08	1.08E-08	5.89E-09	3.22E-09	1.75E-09	9.56E-10	5.21E-10	2.84E-10	1.55E-10	8.41E-11	4.57E-11	2.49E-11	1.35E-11	7.32E-12	3.97E-12
1.36E-08	8.02E-09	4.74E-09	2.79E-09	1.64E-09	9.66E-10	5.67E-10	3.32E-10	1.95E-10	1.14E-10	6.65E-11	3.88E-11	2.26E-11	1.32E-11	7.67E-12
8.28E-09	5.08E-09	3.11E-09	1.90E-09	1.16E-09	7.03E-10	4.26E-10	2.58E-10	1.55E-10	9.36E-11	5.62E-11	3.37E-11	2.02E-11	1.21E-11	7.20E-12
3.46E-07	1.97E-07	1.12E-07	6.35E-08	3.60E-08	2.05E-08	1.16E-08	6.59E-09	3.74E-09	2.12E-09	1.20E-09	6.80E-10	3.85E-10	2.18E-10	1.24E-10
9.23E-08	5.26E-08	3.00E-08	1.71E-08	9.73E-09	5.54E-09	3.15E-09	1.79E-09	1.02E-09	5.80E-10	3.30E-10	1.87E-10	1.06E-10	6.04E-11	3.43E-11
2.37E-07	1.38E-07	7.67E-08	4.46E-08	2.52E-08	1.35E-08	6.99E-09	3.98E-09	2.50E-09	1.11E-09	8.70E-10	4.21E-10	1.55E-10	2.63E-10	1.84E-10
7.89E-07	4.46E-07	2.52E-07	1.42E-07	8.01E-08	4.52E-08	2.55E-08	1.44E-08	8.12E-09	4.58E-09	2.58E-09	1.46E-09	8.21E-10	4.63E-10	2.61E-10
1.01E-07	5.99E-08	3.53E-08	2.08E-08	1.22E-08	7.18E-09	4.21E-09	2.47E-09	1.45E-09	8.45E-10	4.94E-10	2.88E-10	1.68E-10	9.80E-11	5.71E-11
6.73E-08	3.90E-08	2.19E-08	1.26E-08	7.49E-09	3.87E-09	2.56E-09	1.33E-09	6.75E-10	3.22E-10	3.36E-10	1.87E-10	1.11E-10	6.35E-11	3.40E-11
6.07E-08	3.56E-08	2.08E-08	1.22E-08	7.09E-09	4.14E-09	2.41E-09	1.40E-09	8.15E-10	4.74E-10	2.75E-10	1.60E-10	9.25E-11	5.36E-11	3.10E-11
2.01E-08	1.20E-08	7.15E-09	4.25E-09	2.52E-09	1.50E-09	8.86E-10	5.24E-10	3.09E-10	1.82E-10	1.07E-10	6.31E-11	3.71E-11	2.18E-11	1.28E-11
2.00E-07	1.13E-07	6.38E-08	3.60E-08	2.03E-08	1.15E-08	6.46E-09	3.64E-09	2.05E-09	1.16E-09	6.53E-10	3.68E-10	2.08E-10	1.17E-10	6.59E-11
3.46E-07	1.97E-07	1.12E-07	6.35E-08	3.61E-08	2.05E-08	1.16E-08	6.59E-09	3.74E-09	2.12E-09	1.20E-09	6.82E-10	3.86E-10	2.19E-10	1.24E-10
2.05E-07	1.15E-07	6.44E-08	3.61E-08	2.03E-08	1.14E-08	6.37E-09	3.57E-09	2.00E-09	1.12E-09	6.29E-10	3.53E-10	1.98E-10	1.11E-10	6.22E-11
6.86E-08	3.95E-08	2.27E-08	1.31E-08	7.51E-09	4.32E-09	2.48E-09	1.42E-09	8.14E-10	4.67E-10	2.67E-10	1.53E-10	8.75E-11	5.01E-11	2.86E-11
5.45E-07	3.09E-07	1.75E-07	9.92E-08	5.61E-08	3.18E-08	1.80E-08	1.02E-08	5.76E-09	3.26E-09	1.85E-09	1.04E-09	5.91E-10	3.33E-10	1.89E-10
1.21E-07	7.26E-08	4.33E-08	2.58E-08	1.53E-08	9.10E-09	5.39E-09	3.19E-09	1.89E-09	1.11E-09	6.56E-10	3.86E-10	2.27E-10	1.33E-10	7.82E-11
2.33E-07	1.32E-07	7.47E-08	4.24E-08	2.40E-08	1.36E-08	7.70E-09	4.36E-09	2.47E-09	1.40E-09	7.91E-10	4.47E-10	2.54E-10	1.44E-10	8.10E-11
2.72E-07	1.55E-07	8.81E-08	5.02E-08	2.85E-08	1.62E-08	9.23E-09	5.25E-09	2.98E-09	1.69E-09	9.61E-10	5.46E-10	3.10E-10	1.76E-10	9.97E-11
9.46E-09	5.92E-09	3.69E-09	2.29E-09	1.42E-09	8.76E-10	5.40E-10	3.32E-10	2.03E-10	1.24E-10	7.58E-11	4.61E-11	2.80E-11	1.70E-11	1.03E-11
7.75E-08	4.43E-08	2.54E-08	1.45E-08	8.28E-09	4.72E-09	2.70E-09	1.54E-09	8.76E-10	4.99E-10	2.85E-10	1.62E-10	9.22E-11	5.25E-11	2.98E-11
3.99E-07	2.27E-07	1.29E-07	7.31E-08	4.15E-08	2.35E-08	1.34E-08	7.58E-09	4.30E-09	2.44E-09	1.38E-09	7.82E-10	4.43E-10	2.51E-10	1.42E-10
6.24E-08	3.56E-08	2.03E-08	1.16E-08	6.62E-09	3.78E-09	2.15E-09	1.23E-09	6.99E-10	3.98E-10	2.26E-10	1.29E-10	7.33E-11	4.17E-11	2.37E-11
9.49E-08	5.39E-08	3.06E-08	1.74E-08	9.86E-09	5.59E-09	3.17E-09	1.80E-09	1.02E-09	5.77E-10	3.27E-10	1.85E-10	1.05E-10	5.94E-11	3.36E-11
2.78E-07	1.61E-07	9.27E-08	5.34E-08	3.08E-08	1.77E-08	1.02E-08	5.85E-09	3.36E-09	1.93E-09	1.11E-09	6.35E-10	3.64E-10	2.08E-10	1.19E-10
1.35E-07	7.79E-08	4.49E-08	2.59E-08	1.49E-08	8.60E-09	4.95E-09	2.85E-09	1.64E-09	9.39E-10	5.39E-10	3.09E-10	1.77E-10	1.01E-10	5.81E-11

1.12E-07	6.32E-08	3.55E-08	2.00E-08	1.12E-08	6.31E-09	3.55E-09	1.99E-09	1.12E-09	6.30E-10	3.54E-10	1.99E-10	1.12E-10	6.27E-11	3.52E-11
4.03E-07	2.29E-07	1.30E-07	7.38E-08	4.19E-08	2.38E-08	1.35E-08	7.66E-09	4.34E-09	2.46E-09	1.40E-09	7.92E-10	4.49E-10	2.54E-10	1.44E-10
1.74E-07	9.71E-08	5.43E-08	3.03E-08	1.69E-08	9.47E-09	5.29E-09	2.96E-09	1.65E-09	9.24E-10	5.17E-10	2.89E-10	1.62E-10	9.03E-11	5.05E-11
2.73E-06	1.53E-06	8.60E-07	4.83E-07	2.71E-07	1.52E-07	8.54E-08	4.79E-08	2.69E-08	1.51E-08	8.48E-09	4.76E-09	2.67E-09	1.50E-09	8.43E-10
4.74E-09	3.08E-09	1.99E-09	1.29E-09	8.25E-10	5.28E-10	3.36E-10	2.14E-10	1.35E-10	8.53E-11	5.36E-11	3.36E-11	2.10E-11	1.31E-11	8.15E-12
2.04E-06	1.17E-06	6.76E-07	3.89E-07	2.24E-07	1.29E-07	7.39E-08	4.24E-08	2.43E-08	1.40E-08	8.00E-09	4.58E-09	2.62E-09	1.50E-09	8.58E-10
1.44E-06	8.22E-07	4.70E-07	2.68E-07	1.53E-07	8.72E-08	4.97E-08	2.83E-08	1.62E-08	9.20E-09	5.24E-09	2.98E-09	1.70E-09	9.65E-10	5.49E-10
3.01E-07	1.73E-07	9.93E-08	5.70E-08	3.27E-08	1.88E-08	1.08E-08	6.16E-09	3.52E-09	2.02E-09	1.15E-09	6.59E-10	3.76E-10	2.15E-10	1.23E-10
1.45E-08	7.96E-09	4.37E-09	2.40E-09	1.32E-09	7.25E-10	3.98E-10	2.19E-10	1.20E-10	6.59E-11	3.61E-11	1.98E-11	1.09E-11	5.95E-12	3.26E-12
1.44E-07	8.15E-08	4.61E-08	2.61E-08	1.47E-08	8.33E-09	4.71E-09	2.66E-09	1.50E-09	8.49E-10	4.80E-10	2.71E-10	1.53E-10	8.64E-11	4.88E-11
6.66E-08	3.82E-08	2.19E-08	1.26E-08	7.20E-09	4.12E-09	2.36E-09	1.35E-09	7.72E-10	4.41E-10	2.52E-10	1.44E-10	8.21E-11	4.69E-11	2.68E-11
6.64E-08	3.81E-08	2.19E-08	1.25E-08	7.19E-09	4.12E-09	2.36E-09	1.35E-09	7.71E-10	4.41E-10	2.52E-10	1.44E-10	8.21E-11	4.69E-11	2.67E-11
9.31E-08	5.23E-08	2.94E-08	1.65E-08	9.28E-09	5.21E-09	2.93E-09	1.65E-09	9.25E-10	5.20E-10	2.92E-10	1.64E-10	9.22E-11	5.18E-11	2.91E-11
1.38E-07	7.66E-08	4.26E-08	2.37E-08	1.32E-08	7.32E-09	4.07E-09	2.26E-09	1.26E-09	7.00E-10	3.90E-10	2.17E-10	1.21E-10	6.71E-11	3.74E-11
7.31E-08	4.34E-08	2.57E-08	1.52E-08	9.00E-09	5.31E-09	3.13E-09	1.84E-09	1.08E-09	6.35E-10	3.73E-10	2.18E-10	1.28E-10	7.46E-11	4.35E-11
3.42E-08	1.94E-08	1.11E-08	6.28E-09	3.56E-09	2.02E-09	1.15E-09	6.52E-10	3.70E-10	2.10E-10	1.19E-10	6.74E-11	3.82E-11	2.17E-11	1.23E-11
1.21E-06	6.78E-07	3.80E-07	2.13E-07	1.19E-07	6.68E-08	3.74E-08	2.10E-08	1.17E-08	6.58E-09	3.69E-09	2.07E-09	1.16E-09	6.49E-10	3.64E-10
6.56E-08	3.73E-08	2.12E-08	1.20E-08	6.81E-09	3.86E-09	2.19E-09	1.24E-09	7.04E-10	3.99E-10	2.26E-10	1.28E-10	7.25E-11	4.11E-11	2.32E-11
4.70E-07	2.60E-07	1.44E-07	7.94E-08	4.39E-08	2.43E-08	1.34E-08	7.41E-09	4.09E-09	2.26E-09	1.25E-09	6.91E-10	3.82E-10	2.11E-10	1.17E-10
1.78E-05	1.40E-05	1.13E-05	7.60E-07	4.24E-07	2.37E-07	1.32E-07	7.37E-08	4.11E-08	2.30E-08	1.28E-08	7.15E-09	3.99E-09	2.23E-09	1.24E-09
3.14E-07	1.78E-07	1.00E-07	5.68E-08	3.21E-08	1.82E-08	1.03E-08	5.81E-09	3.28E-09	1.85E-09	1.05E-09	5.92E-10	3.34E-10	1.89E-10	1.07E-10
1.11E-07	6.33E-08	3.61E-08	2.06E-08	1.17E-08	6.69E-09	3.81E-09	2.17E-09	1.23E-09	7.02E-10	3.99E-10	2.27E-10	1.29E-10	7.32E-11	4.16E-11
8.77E-08	4.99E-08	2.84E-08	1.62E-08	9.18E-09	5.22E-09	2.96E-09	1.68E-09	9.55E-10	5.42E-10	3.07E-10	1.74E-10	9.88E-11	5.60E-11	3.17E-11
1.46E-07	8.42E-08	4.84E-08	2.78E-08	1.60E-08	9.17E-09	5.26E-09	3.02E-09	1.73E-09	9.90E-10	5.67E-10	3.24E-10	1.85E-10	1.06E-10	6.06E-11
9.53E-08	5.38E-08	3.06E-08	1.73E-08	9.75E-09	5.52E-09	3.09E-09	1.75E-09	9.88E-10	5.78E-10	3.18E-10	1.71E-10	9.51E-11	6.12E-11	3.40E-11
7.37E-09	4.58E-09	2.83E-09	1.75E-09	1.08E-09	6.60E-10	4.04E-10	2.47E-10	1.50E-10	9.15E-11	5.55E-11	3.36E-11	2.03E-11	1.23E-11	7.39E-12
3.90E-07	2.25E-07	1.29E-07	7.42E-08	4.26E-08	2.45E-08	1.40E-08	8.05E-09	4.61E-09	2.64E-09	1.51E-09	8.66E-10	4.95E-10	2.83E-10	1.62E-10
3.15E-07	1.76E-07	9.81E-08	5.48E-08	3.06E-08	1.71E-08	9.53E-09	5.32E-09	2.97E-09	1.66E-09	9.27E-10	5.18E-10	2.89E-10	1.62E-10	9.03E-11
3.63E-07	2.03E-07	1.14E-07	6.35E-08	3.55E-08	1.99E-08	1.11E-08	6.22E-09	3.48E-09	1.95E-09	1.09E-09	6.09E-10	3.41E-10	1.91E-10	1.07E-10
4.80E-08	2.74E-08	1.57E-08	8.93E-09	5.09E-09	2.90E-09	1.65E-09	9.42E-10	5.36E-10	3.05E-10	1.74E-10	9.88E-11	5.62E-11	3.19E-11	1.82E-11
2.33E-07	1.34E-07	7.73E-08	4.45E-08	2.56E-08	1.47E-08	8.43E-09	4.84E-09	2.77E-09	1.59E-09	9.10E-10	5.21E-10	2.98E-10	1.71E-10	9.75E-11
3.10E-07	1.74E-07	9.72E-08	5.44E-08	3.05E-08	1.71E-08	9.54E-09	5.34E-09	2.99E-09	1.67E-09	9.36E-10	5.24E-10	2.93E-10	1.64E-10	9.19E-11
1.54E-06	8.68E-07	4.89E-07	2.75E-07	1.55E-07	8.73E-08	4.92E-08	2.77E-08	1.56E-08	8.77E-09	4.94E-09	2.78E-09	1.56E-09	8.80E-10	4.96E-10
1.01E-06	5.73E-07	3.26E-07	1.85E-07	1.05E-07	5.99E-08	3.40E-08	1.93E-08	1.10E-08	6.23E-09	3.54E-09	2.01E-09	1.14E-09	6.47E-10	3.67E-10
5.28E-06	3.01E-06	1.71E-06	9.73E-07	5.53E-07	3.14E-07	1.78E-07	1.01E-07	5.74E-08	3.26E-08	1.85E-08	1.05E-08	5.94E-09	3.36E-09	1.91E-09
3.89E-07	2.18E-07	1.22E-07	6.85E-08	3.84E-08	2.15E-08	1.21E-08	6.76E-09	3.79E-09	2.12E-09	1.19E-09	6.67E-10	3.74E-10	2.09E-10	1.17E-10
1.68E-07	9.64E-08	5.51E-08	3.16E-08	1.80E-08	1.03E-08	5.89E-09	3.36E-09	1.92E-09	1.09E-09	6.24E-10	3.55E-10	2.03E-10	1.15E-10	6.56E-11
1.99E-06	1.11E-06	6.21E-07	3.47E-07	1.94E-07	1.08E-07	6.05E-08	3.38E-08	1.89E-08	1.06E-08	5.91E-09	3.30E-09	1.85E-09	1.03E-09	5.78E-10
1.27E-07	7.08E-08	3.95E-08	2.20E-08	1.23E-08	6.86E-09	3.83E-09	2.13E-09	1.19E-09	6.64E-10	3.71E-10	2.07E-10	1.15E-10	6.44E-11	3.59E-11
1.48E-08	8.23E-09	4.57E-09	2.54E-09	1.41E-09	7.84E-10	4.36E-10	2.42E-10	1.35E-10	7.48E-11	4.16E-11	2.31E-11	1.29E-11	7.15E-12	3.97E-12

2.40E-08	1.43E-08	8.46E-09	5.01E-09	2.97E-09	1.75E-09	1.03E-09	6.09E-10	3.59E-10	2.11E-10	1.24E-10	7.25E-11	4.25E-11	2.49E-11	1.45E-11
1.03E-07	5.87E-08	3.29E-08	1.94E-08	1.10E-08	6.02E-09	3.34E-09	2.00E-09	1.14E-09	6.22E-10	4.26E-10	1.97E-10	1.40E-10	7.73E-11	2.61E-11
9.59E-08	5.32E-08	2.95E-08	1.63E-08	9.06E-09	5.03E-09	2.79E-09	1.55E-09	8.59E-10	4.77E-10	2.65E-10	1.47E-10	8.16E-11	4.53E-11	2.52E-11
5.93E-08	3.47E-08	2.03E-08	1.19E-08	6.93E-09	4.04E-09	2.35E-09	1.37E-09	7.94E-10	4.61E-10	2.67E-10	1.55E-10	8.97E-11	5.19E-11	3.00E-11
8.30E-08	4.79E-08	2.76E-08	1.59E-08	9.17E-09	5.27E-09	3.03E-09	1.74E-09	1.00E-09	5.75E-10	3.30E-10	1.89E-10	1.08E-10	6.21E-11	3.56E-11
3.91E-07	2.22E-07	1.26E-07	7.14E-08	4.04E-08	2.29E-08	1.30E-08	7.34E-09	4.15E-09	2.35E-09	1.33E-09	7.50E-10	4.23E-10	2.39E-10	1.35E-10
1.47E-07	8.26E-08	4.65E-08	2.62E-08	1.47E-08	8.29E-09	4.66E-09	2.62E-09	1.48E-09	8.31E-10	4.67E-10	2.63E-10	1.48E-10	8.32E-11	4.68E-11
1.42E-07	8.03E-08	4.53E-08	2.55E-08	1.44E-08	8.11E-09	4.57E-09	2.57E-09	1.45E-09	8.17E-10	4.60E-10	2.59E-10	1.46E-10	8.23E-11	4.64E-11
1.01E-07	5.75E-08	3.27E-08	1.86E-08	1.05E-08	5.99E-09	3.40E-09	1.93E-09	1.09E-09	6.21E-10	3.52E-10	2.00E-10	1.13E-10	6.42E-11	3.64E-11
4.94E-08	2.80E-08	1.59E-08	9.00E-09	5.10E-09	2.89E-09	1.64E-09	9.26E-10	5.24E-10	2.97E-10	1.68E-10	9.49E-11	5.37E-11	3.04E-11	1.72E-11
4.69E-08	2.70E-08	1.55E-08	8.89E-09	5.10E-09	2.93E-09	1.68E-09	9.60E-10	5.49E-10	3.14E-10	1.80E-10	1.03E-10	5.87E-11	3.35E-11	1.91E-11
3.17E-07	1.77E-07	9.88E-08	5.52E-08	3.08E-08	1.72E-08	9.62E-09	5.37E-09	3.00E-09	1.68E-09	9.38E-10	5.24E-10	2.93E-10	1.64E-10	9.16E-11
2.33E-07	1.32E-07	7.50E-08	4.25E-08	2.41E-08	1.37E-08	7.73E-09	4.38E-09	2.48E-09	1.40E-09	7.94E-10	4.49E-10	2.54E-10	1.44E-10	8.13E-11
4.00E-05	2.29E-05	1.31E-05	7.44E-06	4.24E-06	2.42E-06	1.38E-06	7.83E-07	4.45E-07	2.53E-07	1.44E-07	8.17E-08	4.64E-08	2.63E-08	1.49E-08
4.35E-08	2.43E-08	1.36E-08	7.59E-09	4.24E-09	2.37E-09	1.33E-09	7.41E-10	4.15E-10	2.32E-10	1.30E-10	7.26E-11	4.06E-11	2.27E-11	1.27E-11
1.88E-06	1.09E-06	6.32E-07	3.66E-07	2.12E-07	1.22E-07	7.08E-08	4.09E-08	2.36E-08	1.36E-08	7.84E-09	4.51E-09	2.60E-09	1.50E-09	8.59E-10
6.27E-08	3.57E-08	2.03E-08	1.15E-08	6.56E-09	3.72E-09	2.11E-09	1.20E-09	6.81E-10	3.86E-10	2.19E-10	1.24E-10	7.04E-11	3.99E-11	2.26E-11
1.36E-06	7.95E-07	4.64E-07	2.70E-07	1.57E-07	9.15E-08	5.31E-08	3.08E-08	1.79E-08	1.04E-08	5.99E-09	3.47E-09	2.00E-09	1.16E-09	6.68E-10
2.22E-08	1.39E-08	8.64E-09	5.36E-09	3.32E-09	2.05E-09	1.26E-09	7.74E-10	4.74E-10	2.90E-10	1.77E-10	1.08E-10	6.53E-11	3.95E-11	2.39E-11
2.05E-07	1.16E-07	6.61E-08	3.75E-08	2.13E-08	1.21E-08	6.86E-09	3.89E-09	2.21E-09	1.25E-09	7.09E-10	4.02E-10	2.28E-10	1.29E-10	7.30E-11
6.84E-07	4.01E-07	2.35E-07	1.37E-07	8.01E-08	4.67E-08	2.72E-08	1.59E-08	9.22E-09	5.36E-09	3.11E-09	1.81E-09	1.05E-09	6.06E-10	3.51E-10
6.26E-08	3.55E-08	2.01E-08	1.14E-08	6.45E-09	3.65E-09	2.07E-09	1.17E-09	6.62E-10	3.74E-10	2.12E-10	1.20E-10	6.77E-11	3.83E-11	2.16E-11
4.20E-06	2.38E-06	1.34E-06	7.60E-07	4.29E-07	2.43E-07	1.37E-07	7.74E-08	4.37E-08	2.47E-08	1.39E-08	7.87E-09	4.44E-09	2.51E-09	1.41E-09
5.39E-07	3.02E-07	1.69E-07	9.47E-08	5.31E-08	2.97E-08	1.67E-08	9.33E-09	5.23E-09	2.93E-09	1.64E-09	9.21E-10	5.16E-10	2.89E-10	1.62E-10
1.78E-07	1.02E-07	5.80E-08	3.31E-08	1.88E-08	1.07E-08	6.11E-09	3.47E-09	1.98E-09	1.12E-09	6.38E-10	3.63E-10	2.06E-10	1.17E-10	6.64E-11
4.00E-05	**2.29E-05**	**1.31E-05**	**7.44E-06**	**4.24E-06**	**2.42E-06**	**1.38E-06**	**7.83E-07**	**4.45E-07**	**2.53E-07**	**1.44E-07**	**8.17E-08**	**4.64E-08**	**2.63E-08**	**1.49E-08**

740	750	760	770	780	790	800	810	820	830	840	850	860	870	880
3.34E-11	1.88E-11	1.06E-11	5.97E-12	3.36E-12	1.90E-12	1.07E-12	6.02E-13	3.39E-13	1.91E-13	1.08E-13	6.06E-14	3.42E-14	1.93E-14	1.09E-14
2.81E-11	1.60E-11	9.10E-12	5.18E-12	2.95E-12	1.68E-12	9.53E-13	5.42E-13	3.08E-13	1.75E-13	9.95E-14	5.65E-14	3.21E-14	1.83E-14	1.04E-14
2.63E-11	1.54E-11	8.95E-12	5.21E-12	3.03E-12	1.76E-12	1.02E-12	5.94E-13	3.44E-13	2.00E-13	1.16E-13	6.70E-14	3.88E-14	2.24E-14	1.30E-14
7.79E-11	4.45E-11	2.54E-11	1.45E-11	8.28E-12	4.72E-12	2.69E-12	1.54E-12	8.75E-13	4.98E-13	2.84E-13	1.62E-13	9.21E-14	5.24E-14	2.98E-14
9.93E-11	5.35E-11	3.34E-11	1.84E-11	9.67E-12	4.96E-12	4.11E-12	2.30E-12	1.34E-12	7.71E-13	4.31E-13	2.29E-13	1.45E-13	9.27E-14	4.29E-14
1.32E-11	7.39E-12	4.13E-12	2.31E-12	1.29E-12	7.22E-13	4.04E-13	2.26E-13	1.26E-13	7.06E-14	3.95E-14	2.21E-14	1.24E-14	6.92E-15	3.88E-15
9.47E-12	5.29E-12	2.96E-12	1.65E-12	9.24E-13	5.16E-13	2.89E-13	1.61E-13	9.01E-14	5.04E-14	2.82E-14	1.58E-14	8.80E-15	4.92E-15	2.75E-15
2.20E-09	1.27E-09	7.38E-10	4.27E-10	2.47E-10	1.43E-10	8.25E-11	4.77E-11	2.75E-11	1.59E-11	9.14E-12	5.27E-12	3.03E-12	1.75E-12	1.00E-12
3.59E-10	2.03E-10	1.15E-10	6.48E-11	3.66E-11	2.07E-11	1.17E-11	6.59E-12	3.72E-12	2.10E-12	1.18E-12	6.68E-13	3.77E-13	2.12E-13	1.20E-13
2.15E-12	1.16E-12	6.28E-13	3.39E-13	1.83E-13	9.84E-14	5.29E-14	2.84E-14	1.52E-14	8.13E-15	4.34E-15	2.31E-15	1.23E-15	6.48E-16	3.42E-16
4.46E-12	2.59E-12	1.51E-12	8.73E-13	5.06E-13	2.93E-13	1.70E-13	9.83E-14	5.68E-14	3.28E-14	1.90E-14	1.09E-14	6.31E-15	3.64E-15	2.10E-15
4.29E-12	2.55E-12	1.52E-12	9.00E-13	5.33E-13	3.15E-13	1.86E-13	1.10E-13	6.49E-14	3.82E-14	2.25E-14	1.32E-14	7.75E-15	4.55E-15	2.67E-15
7.00E-11	3.96E-11	2.24E-11	1.27E-11	7.18E-12	4.06E-12	2.30E-12	1.30E-12	7.34E-13	4.15E-13	2.35E-13	1.33E-13	7.49E-14	4.24E-14	2.39E-14
1.95E-11	1.11E-11	6.27E-12	3.56E-12	2.02E-12	1.15E-12	6.49E-13	3.68E-13	2.09E-13	1.18E-13	6.71E-14	3.80E-14	2.15E-14	1.22E-14	6.91E-15
8.00E-11	5.57E-11	3.95E-11	5.21E-12	2.94E-12	1.65E-12	9.32E-13	5.25E-13	2.96E-13	1.67E-13	9.39E-14	5.29E-14	2.98E-14	1.68E-14	9.45E-15
1.47E-10	8.29E-11	4.68E-11	2.64E-11	1.49E-11	8.37E-12	4.72E-12	2.66E-12	1.50E-12	8.45E-13	4.76E-13	2.68E-13	1.51E-13	8.53E-14	4.80E-14
3.32E-11	1.93E-11	1.12E-11	6.51E-12	3.78E-12	2.19E-12	1.27E-12	7.35E-13	4.25E-13	2.46E-13	1.42E-13	8.22E-14	4.75E-14	2.74E-14	1.58E-14
2.31E-11	1.04E-11	7.05E-12	4.88E-12	3.45E-12	4.84E-13	2.74E-13	1.55E-13	8.73E-14	4.94E-14	2.79E-14	1.58E-14	8.90E-15	5.03E-15	2.84E-15
1.80E-11	1.04E-11	6.00E-12	3.47E-12	2.00E-12	1.15E-12	6.66E-13	3.84E-13	2.21E-13	1.27E-13	7.33E-14	4.22E-14	2.43E-14	1.40E-14	8.02E-15
7.48E-12	4.38E-12	2.56E-12	1.50E-12	8.73E-13	5.09E-13	2.97E-13	1.73E-13	1.01E-13	5.86E-14	3.40E-14	1.98E-14	1.15E-14	6.66E-15	3.86E-15
3.72E-11	2.10E-11	1.18E-11	6.66E-12	3.75E-12	2.12E-12	1.19E-12	6.72E-13	3.79E-13	2.14E-13	1.20E-13	6.78E-14	3.82E-14	2.16E-14	1.22E-14
7.03E-11	3.98E-11	2.25E-11	1.28E-11	7.22E-12	4.09E-12	2.31E-12	1.31E-12	7.41E-13	4.19E-13	2.37E-13	1.34E-13	7.58E-14	4.29E-14	2.43E-14
3.49E-11	1.96E-11	1.10E-11	6.15E-12	3.45E-12	1.93E-12	1.09E-12	6.09E-13	3.41E-13	1.92E-13	1.07E-13	6.03E-14	3.38E-14	1.90E-14	1.06E-14
1.64E-11	9.34E-12	5.34E-12	3.05E-12	1.74E-12	9.91E-13	5.65E-13	3.22E-13	1.84E-13	1.05E-13	5.97E-14	3.40E-14	1.94E-14	1.10E-14	6.27E-15
1.07E-10	6.02E-11	3.41E-11	1.92E-11	1.09E-11	6.13E-12	3.51E-12	1.96E-12	1.13E-12	6.39E-13	3.58E-13	2.02E-13	1.19E-13	6.72E-14	3.55E-14
4.58E-11	2.68E-11	1.57E-11	9.16E-12	5.35E-12	3.12E-12	1.82E-12	1.06E-12	6.16E-13	3.58E-13	2.08E-13	1.21E-13	7.02E-14	4.07E-14	2.36E-14
4.60E-11	2.61E-11	1.48E-11	8.25E-12	4.70E-12	2.66E-12	1.51E-12	8.43E-13	4.75E-13	2.70E-13	1.49E-13	9.06E-14	5.09E-14	2.74E-14	1.37E-14
5.66E-11	3.21E-11	1.82E-11	1.03E-11	5.85E-12	3.31E-12	1.88E-12	1.06E-12	6.03E-13	3.42E-13	1.93E-13	1.10E-13	6.20E-14	3.51E-14	1.99E-14
6.21E-12	3.74E-12	2.25E-12	1.35E-12	8.12E-13	4.86E-13	2.91E-13	1.74E-13	1.04E-13	6.17E-14	3.67E-14	2.18E-14	1.29E-14	7.67E-15	4.54E-15
1.70E-11	9.64E-12	5.48E-12	3.11E-12	1.77E-12	1.00E-12	5.70E-13	3.24E-13	1.84E-13	1.04E-13	5.91E-14	3.35E-14	1.90E-14	1.08E-14	6.11E-15
8.05E-11	4.56E-11	2.58E-11	1.46E-11	8.27E-12	4.68E-12	2.65E-12	1.50E-12	8.47E-13	4.79E-13	2.71E-13	1.53E-13	8.67E-14	4.90E-14	2.77E-14
1.35E-11	7.65E-12	4.36E-12	2.48E-12	1.41E-12	8.03E-13	4.53E-13	2.56E-13	1.48E-13	8.38E-14	4.76E-14	2.72E-14	1.50E-14	8.83E-15	4.94E-15
1.90E-11	1.08E-11	6.09E-12	3.45E-12	1.95E-12	1.10E-12	6.24E-13	3.53E-13	1.99E-13	1.13E-13	6.37E-14	3.60E-14	2.04E-14	1.15E-14	6.50E-15
6.83E-11	3.91E-11	2.24E-11	1.28E-11	7.30E-12	4.17E-12	2.38E-12	1.36E-12	7.76E-13	4.43E-13	2.53E-13	1.44E-13	8.21E-14	4.68E-14	2.67E-14
3.32E-11	1.90E-11	1.09E-11	6.22E-12	3.55E-12	2.03E-12	1.16E-12	6.61E-13	3.77E-13	2.15E-13	1.23E-13	6.99E-14	3.98E-14	2.27E-14	1.29E-14

1.98E-11	1.11E-11	6.24E-12	3.51E-12	1.97E-12	1.11E-12	6.21E-13	3.49E-13	1.96E-13	1.10E-13	6.18E-14	3.47E-14	1.95E-14	1.09E-14	6.14E-15
8.16E-11	4.62E-11	2.62E-11	1.48E-11	8.39E-12	4.75E-12	2.69E-12	1.52E-12	8.62E-13	4.88E-13	2.76E-13	1.56E-13	8.84E-14	5.00E-14	2.83E-14
2.82E-11	1.58E-11	8.84E-12	4.94E-12	2.77E-12	1.55E-12	8.66E-13	4.85E-13	2.71E-13	1.52E-13	8.50E-14	4.76E-14	2.67E-14	1.49E-14	8.36E-15
4.73E-10	2.66E-10	1.49E-10	8.38E-11	4.71E-11	2.64E-11	1.48E-11	8.34E-12	4.68E-12	2.63E-12	1.48E-12	8.30E-13	4.66E-13	2.62E-13	1.47E-13
5.05E-12	3.13E-12	1.93E-12	1.19E-12	7.30E-13	4.48E-13	2.74E-13	1.68E-13	1.02E-13	6.21E-14	3.78E-14	2.29E-14	1.39E-14	8.38E-15	5.06E-15
4.91E-10	2.81E-10	1.60E-10	9.15E-11	5.23E-11	2.98E-11	1.70E-11	9.71E-12	5.54E-12	3.16E-12	1.80E-12	1.03E-12	5.84E-13	3.33E-13	1.89E-13
3.12E-10	1.77E-10	1.01E-10	5.72E-11	3.25E-11	1.85E-11	1.05E-11	5.95E-12	3.38E-12	1.92E-12	1.09E-12	6.17E-13	3.50E-13	1.99E-13	1.13E-13
6.99E-11	3.99E-11	2.27E-11	1.30E-11	7.38E-12	4.20E-12	2.39E-12	1.36E-12	7.75E-13	4.41E-13	2.51E-13	1.42E-13	8.10E-14	4.60E-14	2.61E-14
1.78E-12	9.75E-13	5.33E-13	2.91E-13	1.59E-13	8.69E-14	4.74E-14	2.58E-14	1.41E-14	7.66E-15	4.16E-15	2.26E-15	1.23E-15	6.65E-16	3.60E-16
2.75E-11	1.55E-11	8.77E-12	4.95E-12	2.79E-12	1.58E-12	8.89E-13	5.02E-13	2.83E-13	1.60E-13	9.01E-14	5.08E-14	2.87E-14	1.62E-14	9.12E-15
1.53E-11	8.69E-12	4.96E-12	2.83E-12	1.61E-12	9.17E-13	5.21E-13	2.96E-13	1.69E-13	9.61E-14	5.45E-14	3.11E-14	1.78E-14	1.01E-14	5.76E-15
1.53E-11	8.70E-12	4.96E-12	2.82E-12	1.61E-12	9.16E-13	5.22E-13	2.97E-13	1.69E-13	9.62E-14	5.47E-14	3.11E-14	1.77E-14	1.01E-14	5.72E-15
1.64E-11	9.20E-12	5.17E-12	2.91E-12	1.63E-12	9.19E-13	5.16E-13	2.90E-13	1.63E-13	9.18E-14	5.16E-14	2.90E-14	1.63E-14	9.18E-15	5.16E-15
2.08E-11	1.16E-11	6.45E-12	3.59E-12	2.00E-12	1.11E-12	6.20E-13	3.45E-13	1.92E-13	1.07E-13	5.97E-14	3.33E-14	1.85E-14	1.03E-14	5.75E-15
2.54E-11	1.48E-11	8.61E-12	5.01E-12	2.91E-12	1.69E-12	9.81E-13	5.69E-13	3.30E-13	1.91E-13	1.11E-13	6.39E-14	3.70E-14	2.14E-14	1.23E-14
6.95E-12	3.94E-12	2.23E-12	1.26E-12	7.15E-13	4.05E-13	2.29E-13	1.30E-13	7.34E-14	4.16E-14	2.35E-14	1.33E-14	7.53E-15	4.26E-15	2.41E-15
2.04E-10	1.14E-10	6.41E-11	3.60E-11	2.02E-11	1.13E-11	6.34E-12	3.56E-12	2.00E-12	1.12E-12	6.28E-13	3.52E-13	1.98E-13	1.11E-13	6.22E-14
1.32E-11	7.44E-12	4.21E-12	2.38E-12	1.35E-12	7.63E-13	4.31E-13	2.44E-13	1.38E-13	7.80E-14	4.41E-14	2.49E-14	1.41E-14	7.97E-15	4.51E-15
6.44E-11	3.56E-11	1.96E-11	1.09E-11	5.99E-12	3.31E-12	1.83E-12	1.01E-12	5.57E-13	3.07E-13	1.70E-13	9.35E-14	5.16E-14	2.85E-14	1.57E-14
6.94E-10	3.87E-10	2.16E-10	1.21E-10	6.74E-11	3.76E-11	2.10E-11	1.17E-11	6.55E-12	3.66E-12	2.04E-12	1.14E-12	6.38E-13	3.56E-13	1.99E-13
6.02E-11	3.40E-11	1.92E-11	1.09E-11	6.12E-12	3.46E-12	1.95E-12	1.10E-12	6.22E-13	3.51E-13	1.98E-13	1.12E-13	6.31E-14	3.56E-14	2.01E-14
2.36E-11	1.34E-11	7.61E-12	4.32E-12	2.45E-12	1.39E-12	7.87E-13	4.46E-13	2.53E-13	1.43E-13	8.12E-14	4.60E-14	2.61E-14	1.48E-14	8.36E-15
1.80E-11	1.02E-11	5.76E-12	3.26E-12	1.85E-12	1.05E-12	5.91E-13	3.35E-13	1.89E-13	1.07E-13	6.06E-14	3.42E-14	1.94E-14	1.09E-14	6.19E-15
3.46E-11	1.98E-11	1.13E-11	6.44E-12	3.67E-12	2.10E-12	1.20E-12	6.81E-13	3.88E-13	2.21E-13	1.26E-13	7.17E-14	4.08E-14	2.32E-14	1.32E-14
2.16E-11	9.12E-12	7.02E-12	3.47E-12	1.31E-12	2.92E-14	1.20E-12	6.29E-13	4.50E-13	1.89E-13	1.35E-13	9.79E-14	7.19E-14	5.15E-15	2.90E-15
4.45E-12	2.67E-12	1.60E-12	9.59E-13	5.73E-13	3.42E-13	2.04E-13	1.22E-13	7.23E-14	4.30E-14	2.55E-14	1.51E-14	8.95E-15	5.30E-15	3.13E-15
9.25E-11	5.28E-11	3.02E-11	1.72E-11	9.82E-12	5.60E-12	3.20E-12	1.82E-12	1.04E-12	5.92E-13	3.37E-13	1.92E-13	1.09E-13	6.22E-14	3.54E-14
5.05E-11	2.82E-11	1.58E-11	8.81E-12	4.93E-12	2.75E-12	1.54E-12	8.61E-13	4.81E-13	2.69E-13	1.51E-13	8.42E-14	4.71E-14	2.64E-14	1.47E-14
5.98E-11	3.35E-11	1.88E-11	1.05E-11	5.88E-12	3.29E-12	1.84E-12	1.03E-12	5.79E-13	3.24E-13	1.82E-13	1.02E-13	5.71E-14	3.20E-14	1.79E-14
1.03E-11	5.86E-12	3.33E-12	1.89E-12	1.07E-12	6.09E-13	3.46E-13	1.96E-13	1.11E-13	6.32E-14	3.58E-14	2.03E-14	1.15E-14	6.54E-15	3.71E-15
5.57E-11	3.18E-11	1.82E-11	1.04E-11	5.92E-12	3.38E-12	1.93E-12	1.10E-12	6.25E-13	3.56E-13	2.03E-13	1.16E-13	6.58E-14	3.74E-14	2.13E-14
5.14E-11	2.88E-11	1.61E-11	9.02E-12	5.05E-12	2.83E-12	1.58E-12	8.86E-13	4.96E-13	2.78E-13	1.56E-13	8.71E-14	4.88E-14	2.73E-14	1.53E-14
2.79E-10	1.57E-10	8.83E-11	4.97E-11	2.80E-11	1.57E-11	8.86E-12	4.99E-12	2.81E-12	1.58E-12	8.89E-13	5.00E-13	2.81E-13	1.58E-13	8.91E-14
2.08E-10	1.18E-10	6.69E-11	3.80E-11	2.15E-11	1.22E-11	6.91E-12	3.92E-12	2.22E-12	1.26E-12	7.13E-13	4.04E-13	2.29E-13	1.30E-13	7.34E-14
1.08E-09	6.11E-10	3.46E-10	1.96E-10	1.11E-10	6.26E-11	3.54E-11	2.00E-11	1.13E-11	6.40E-12	3.62E-12	2.05E-12	1.16E-12	6.53E-13	3.69E-13
6.57E-11	3.68E-11	2.06E-11	1.16E-11	6.48E-12	3.63E-12	2.03E-12	1.14E-12	6.39E-13	3.58E-13	2.01E-13	1.12E-13	6.30E-14	3.53E-14	1.98E-14
3.75E-11	2.14E-11	1.22E-11	6.92E-12	3.91E-12	2.22E-12	1.26E-12	7.17E-13	4.05E-13	2.34E-13	1.33E-13	7.60E-14	4.30E-14	2.40E-14	1.43E-14
3.23E-10	1.81E-10	1.01E-10	5.67E-11	3.17E-11	1.78E-11	9.95E-12	5.57E-12	3.12E-12	1.75E-12	9.79E-13	5.49E-13	3.07E-13	1.72E-13	9.66E-14
2.01E-11	1.12E-11	6.25E-12	3.49E-12	1.95E-12	1.09E-12	6.07E-13	3.39E-13	1.89E-13	1.06E-13	5.89E-14	3.29E-14	1.84E-14	1.03E-14	5.73E-15
2.21E-12	1.23E-12	6.84E-13	3.81E-13	2.12E-13	1.18E-13	6.56E-14	3.65E-14	2.03E-14	1.13E-14	6.30E-15	3.51E-15	1.95E-15	1.09E-15	6.05E-16

8.48E-12	4.95E-12	2.89E-12	1.68E-12	9.78E-13	5.69E-13	3.31E-13	1.92E-13	1.11E-13	6.46E-14	3.74E-14	2.17E-14	1.25E-14	7.26E-15	4.20E-15
6.22E-12	2.11E-11	1.48E-11	6.27E-12	4.37E-12	3.10E-12	2.23E-12	2.01E-13	1.13E-13	6.39E-14	3.61E-14	2.03E-14	1.15E-14	6.47E-15	3.65E-15
1.40E-11	7.76E-12	4.31E-12	2.40E-12	1.33E-12	7.40E-13	4.11E-13	2.28E-13	1.27E-13	7.06E-14	3.92E-14	2.18E-14	1.21E-14	6.75E-15	3.75E-15
1.73E-11	1.00E-11	5.77E-12	3.33E-12	1.92E-12	1.10E-12	6.36E-13	3.66E-13	2.10E-13	1.21E-13	6.94E-14	3.99E-14	2.29E-14	1.31E-14	7.53E-15
2.04E-11	1.17E-11	6.67E-12	3.81E-12	2.18E-12	1.25E-12	7.11E-13	4.06E-13	2.32E-13	1.32E-13	7.55E-14	4.31E-14	2.46E-14	1.40E-14	7.98E-15
7.62E-11	4.30E-11	2.43E-11	1.37E-11	7.72E-12	4.35E-12	2.45E-12	1.38E-12	7.79E-13	4.39E-13	2.47E-13	1.39E-13	7.84E-14	4.42E-14	2.49E-14
2.64E-11	1.48E-11	8.34E-12	4.69E-12	2.64E-12	1.49E-12	8.36E-13	4.70E-13	2.65E-13	1.49E-13	8.38E-14	4.72E-14	2.65E-14	1.49E-14	8.41E-15
2.61E-11	1.47E-11	8.28E-12	4.67E-12	2.63E-12	1.48E-12	8.33E-13	4.69E-13	2.64E-13	1.49E-13	8.38E-14	4.72E-14	2.66E-14	1.50E-14	8.43E-15
2.06E-11	1.17E-11	6.63E-12	3.76E-12	2.13E-12	1.21E-12	6.83E-13	3.87E-13	2.19E-13	1.24E-13	7.02E-14	3.98E-14	2.25E-14	1.28E-14	7.22E-15
9.72E-12	5.50E-12	3.11E-12	1.76E-12	9.93E-13	5.62E-13	3.17E-13	1.79E-13	1.01E-13	5.73E-14	3.24E-14	1.83E-14	1.03E-14	5.84E-15	3.30E-15
1.09E-11	6.23E-12	3.55E-12	2.02E-12	1.15E-12	6.57E-13	3.74E-13	2.13E-13	1.21E-13	6.90E-14	3.93E-14	2.24E-14	1.27E-14	7.23E-15	4.11E-15
5.12E-11	2.87E-11	1.60E-11	8.97E-12	5.02E-12	2.81E-12	1.57E-12	8.80E-13	4.92E-13	2.76E-13	1.54E-13	8.64E-14	4.84E-14	2.71E-14	1.52E-14
4.59E-11	2.60E-11	1.47E-11	8.30E-12	4.69E-12	2.65E-12	1.50E-12	8.46E-13	4.78E-13	2.70E-13	1.52E-13	8.61E-14	4.86E-14	2.75E-14	1.55E-14
8.46E-09	4.80E-09	2.72E-09	1.54E-09	8.72E-10	4.93E-10	2.79E-10	1.58E-10	8.94E-11	5.05E-11	2.86E-11	1.62E-11	9.13E-12	5.16E-12	2.91E-12
7.12E-12	3.99E-12	2.23E-12	1.25E-12	7.00E-13	3.92E-13	2.20E-13	1.23E-13	6.90E-14	3.87E-14	2.17E-14	1.21E-14	6.81E-15	3.82E-15	2.14E-15
4.94E-10	2.84E-10	1.63E-10	9.35E-11	5.36E-11	3.08E-11	1.76E-11	1.01E-11	5.79E-12	3.31E-12	1.90E-12	1.09E-12	6.21E-13	3.55E-13	2.03E-13
1.28E-11	7.25E-12	4.10E-12	2.32E-12	1.31E-12	7.43E-13	4.21E-13	2.38E-13	1.35E-13	7.61E-14	4.30E-14	2.43E-14	1.37E-14	7.76E-15	4.39E-15
3.85E-10	2.22E-10	1.28E-10	7.37E-11	4.24E-11	2.44E-11	1.40E-11	8.06E-12	4.63E-12	2.66E-12	1.53E-12	8.76E-13	5.02E-13	2.88E-13	1.65E-13
1.44E-11	8.70E-12	5.24E-12	3.15E-12	1.89E-12	1.13E-12	6.76E-13	4.04E-13	2.41E-13	1.43E-13	8.54E-14	5.07E-14	3.01E-14	1.79E-14	1.06E-14
4.13E-11	2.34E-11	1.32E-11	7.50E-12	4.24E-12	2.40E-12	1.36E-12	7.68E-13	4.34E-13	2.46E-13	1.39E-13	7.85E-14	4.44E-14	2.51E-14	1.42E-14
2.03E-10	1.17E-10	6.77E-11	3.91E-11	2.26E-11	1.30E-11	7.50E-12	4.32E-12	2.49E-12	1.43E-12	8.24E-13	4.74E-13	2.72E-13	1.56E-13	8.98E-14
1.22E-11	6.91E-12	3.90E-12	2.21E-12	1.25E-12	7.04E-13	3.98E-13	2.25E-13	1.27E-13	7.17E-14	4.05E-14	2.29E-14	1.29E-14	7.29E-15	4.12E-15
7.97E-10	4.50E-10	2.54E-10	1.43E-10	8.06E-11	4.55E-11	2.56E-11	1.45E-11	8.15E-12	4.59E-12	2.59E-12	1.46E-12	8.22E-13	4.63E-13	2.61E-13
9.10E-11	5.10E-11	2.86E-11	1.60E-11	9.00E-12	5.05E-12	2.83E-12	1.59E-12	8.92E-13	5.01E-13	2.81E-13	1.58E-13	8.85E-14	4.97E-14	2.79E-14
3.77E-11	2.14E-11	1.21E-11	6.89E-12	3.91E-12	2.21E-12	1.26E-12	7.11E-13	4.03E-13	2.28E-13	1.29E-13	7.33E-14	4.15E-14	2.35E-14	1.33E-14
8.46E-09	**4.80E-09**	**2.72E-09**	**1.54E-09**	**8.72E-10**	**4.93E-10**	**2.79E-10**	**1.58E-10**	**8.94E-11**	**5.05E-11**	**2.86E-11**	**1.62E-11**	**9.13E-12**	**5.16E-12**	**2.91E-12**

890	900	910	920	930	940	950	960	970	980	990	1000	Max Tritium Concentration at x=15 ft (pCi/L)
6.11E-15	3.45E-15	1.94E-15	1.09E-15	6.17E-16	3.48E-16	1.96E-16	1.11E-16	6.23E-17	3.51E-17	1.98E-17	1.12E-17	3.54E+04
5.89E-15	3.34E-15	1.90E-15	1.08E-15	6.12E-16	3.47E-16	1.97E-16	1.12E-16	6.34E-17	3.60E-17	2.04E-17	1.16E-17	1.22E+03
7.48E-15	4.32E-15	2.49E-15	1.44E-15	8.29E-16	4.78E-16	2.75E-16	1.58E-16	9.12E-17	5.25E-17	3.02E-17	1.74E-17	1.27E+00
1.70E-14	9.66E-15	5.49E-15	3.12E-15	1.78E-15	1.01E-15	5.74E-16	3.26E-16	1.85E-16	1.05E-16	5.99E-17	3.40E-17	5.81E+02
2.72E-14	1.75E-14	1.15E-14	2.58E-15	1.46E-15	8.22E-16	4.65E-16	2.62E-16	1.48E-16	8.37E-17	4.73E-17	2.67E-17	1.50E+04
2.17E-15	1.21E-15	6.80E-16	3.81E-16	2.13E-16	1.19E-16	6.68E-17	3.74E-17	2.10E-17	1.17E-17	6.58E-18	3.68E-18	5.43E+05
1.54E-15	8.61E-16	4.81E-16	2.69E-16	1.51E-16	8.42E-17	4.71E-17	2.64E-17	1.47E-17	8.25E-18	4.62E-18	2.58E-18	1.08E+05
5.77E-13	3.32E-13	1.91E-13	1.10E-13	6.28E-14	3.61E-14	2.07E-14	1.19E-14	6.80E-15	3.90E-15	2.23E-15	1.28E-15	5.03E+02
6.75E-14	3.80E-14	2.14E-14	1.21E-14	6.80E-15	3.83E-15	2.16E-15	1.22E-15	6.85E-16	3.86E-16	2.17E-16	1.22E-16	2.96E+04
1.79E-16	9.37E-17	4.87E-17	2.52E-17	1.29E-17	6.56E-18	3.30E-18	1.64E-18	7.99E-19	3.81E-19	1.76E-19	7.74E-20	3.54E+05
1.21E-15	6.96E-16	4.01E-16	2.30E-16	1.33E-16	7.62E-17	4.38E-17	2.51E-17	1.44E-17	8.29E-18	4.76E-18	2.73E-18	2.98E-01
1.56E-15	9.13E-16	5.34E-16	3.12E-16	1.82E-16	1.06E-16	6.18E-17	3.60E-17	2.10E-17	1.22E-17	7.08E-18	4.12E-18	2.14E-03
1.35E-14	7.64E-15	4.32E-15	2.44E-15	1.38E-15	7.78E-16	4.39E-16	2.48E-16	1.40E-16	7.91E-17	4.47E-17	2.52E-17	8.22E+03
3.92E-15	2.22E-15	1.26E-15	7.12E-16	4.03E-16	2.28E-16	1.29E-16	7.32E-17	4.14E-17	2.35E-17	1.33E-17	7.52E-18	1.09E+03
5.33E-15	3.00E-15	1.69E-15	9.52E-16	5.36E-16	3.02E-16	1.70E-16	9.57E-17	5.39E-17	3.04E-17	1.71E-17	9.63E-18	1.14E+04
2.71E-14	1.53E-14	8.60E-15	4.85E-15	2.73E-15	1.54E-15	8.68E-16	4.89E-16	2.76E-16	1.55E-16	8.75E-17	4.93E-17	1.83E+05
9.13E-15	5.26E-15	3.03E-15	1.75E-15	1.01E-15	5.79E-16	3.33E-16	1.92E-16	1.10E-16	6.34E-17	3.64E-17	2.09E-17	5.69E+00
1.60E-15	9.06E-16	5.12E-16	2.89E-16	1.63E-16	9.21E-17	5.20E-17	2.94E-17	1.66E-17	9.37E-18	5.29E-18	2.99E-18	1.27E+03
4.61E-15	2.65E-15	1.52E-15	8.72E-16	5.00E-16	2.87E-16	1.65E-16	9.44E-17	5.41E-17	3.10E-17	1.78E-17	1.02E-17	1.45E+01
2.24E-15	1.30E-15	7.51E-16	4.35E-16	2.51E-16	1.45E-16	8.40E-17	4.85E-17	2.80E-17	1.62E-17	9.33E-18	5.38E-18	2.51E-01
6.85E-15	3.86E-15	2.18E-15	1.23E-15	6.91E-16	3.90E-16	2.20E-16	1.24E-16	6.98E-17	3.94E-17	2.22E-17	1.25E-17	3.97E+04
1.37E-14	7.75E-15	4.38E-15	2.48E-15	1.40E-15	7.92E-16	4.48E-16	2.53E-16	1.43E-16	8.09E-17	4.57E-17	2.58E-17	5.40E+03
5.97E-15	3.35E-15	1.88E-15	1.06E-15	5.92E-16	3.32E-16	1.86E-16	1.05E-16	5.87E-17	3.30E-17	1.85E-17	1.04E-17	1.75E+05
3.57E-15	2.03E-15	1.16E-15	6.57E-16	3.74E-16	2.12E-16	1.21E-16	6.87E-17	3.90E-17	2.22E-17	1.26E-17	7.16E-18	8.69E+01
1.89E-14	1.05E-14	6.11E-15	4.20E-15	1.68E-15	1.60E-15	7.86E-16	3.11E-16	1.20E-16	1.48E-17	1.54E-16	7.75E-17	6.11E+04
1.37E-14	7.91E-15	4.58E-15	2.65E-15	1.53E-15	8.84E-16	5.10E-16	2.95E-16	1.70E-16	9.80E-17	5.65E-17	3.25E-17	6.66E-01
7.62E-15	4.73E-15	3.00E-15	1.23E-15	1.25E-15	6.42E-16	2.88E-16	8.67E-17	0.00E+00	1.31E-16	5.39E-17	3.63E-17	2.85E+04
1.13E-14	6.38E-15	3.61E-15	2.04E-15	1.16E-15	6.54E-16	3.70E-16	2.10E-16	1.19E-16	6.71E-17	3.80E-17	2.15E-17	3.16E+03
2.69E-15	1.59E-15	9.38E-16	5.53E-16	3.26E-16	1.92E-16	1.13E-16	6.64E-17	3.90E-17	2.29E-17	1.34E-17	7.86E-18	7.19E-04
3.46E-15	1.96E-15	1.11E-15	6.30E-16	3.57E-16	2.02E-16	1.15E-16	6.49E-17	3.67E-17	2.08E-17	1.18E-17	6.67E-18	2.33E+02
1.57E-14	8.87E-15	5.01E-15	2.83E-15	1.60E-15	9.06E-16	5.12E-16	2.89E-16	1.64E-16	9.25E-17	5.23E-17	2.95E-17	1.29E+04
2.95E-15	1.58E-15	8.78E-16	5.05E-16	3.09E-16	1.27E-16	9.74E-17	4.44E-17	3.74E-17	1.99E-17	9.64E-18	3.83E-18	6.83E+02
3.68E-15	2.08E-15	1.17E-15	6.63E-16	3.75E-16	2.12E-16	1.20E-16	6.76E-17	3.82E-17	2.16E-17	1.22E-17	6.88E-18	2.23E+03
1.52E-14	8.66E-15	4.93E-15	2.81E-15	1.60E-15	9.10E-16	5.18E-16	2.95E-16	1.68E-16	9.53E-17	5.42E-17	3.08E-17	2.97E+02
7.36E-15	4.19E-15	2.39E-15	1.36E-15	7.73E-16	4.39E-16	2.50E-16	1.42E-16	8.08E-17	4.59E-17	2.61E-17	1.48E-17	6.02E+01

3.45E-15	1.94E-15	1.09E-15	6.11E-16	3.43E-16	1.93E-16	1.08E-16	6.08E-17	3.42E-17	1.92E-17	1.08E-17	6.05E-18	1.63E+04
1.60E-14	9.05E-15	5.12E-15	2.90E-15	1.64E-15	9.27E-16	5.24E-16	2.96E-16	1.68E-16	9.48E-17	5.36E-17	3.03E-17	1.92E+04
4.68E-15	2.62E-15	1.47E-15	8.22E-16	4.61E-16	2.58E-16	1.45E-16	8.10E-17	4.54E-17	2.55E-17	1.43E-17	7.99E-18	5.13E+05
8.27E-14	4.65E-14	2.61E-14	1.47E-14	8.25E-15	4.64E-15	2.61E-15	1.47E-15	8.23E-16	4.63E-16	2.60E-16	1.46E-16	2.11E+06
3.05E-15	1.84E-15	1.10E-15	6.63E-16	3.97E-16	2.38E-16	1.42E-16	8.49E-17	5.07E-17	3.02E-17	1.80E-17	1.07E-17	2.55E-05
1.08E-13	6.14E-14	3.49E-14	1.99E-14	1.13E-14	6.43E-15	3.66E-15	2.08E-15	1.18E-15	6.72E-16	3.82E-16	2.17E-16	1.73E+03
6.38E-14	3.62E-14	2.05E-14	1.16E-14	6.59E-15	3.74E-15	2.12E-15	1.20E-15	6.80E-16	3.85E-16	2.18E-16	1.24E-16	2.63E+04
1.49E-14	8.43E-15	4.79E-15	2.72E-15	1.54E-15	8.76E-16	4.97E-16	2.82E-16	1.60E-16	9.07E-17	5.14E-17	2.92E-17	3.92E+02
1.95E-16	1.05E-16	5.67E-17	3.06E-17	1.64E-17	8.81E-18	4.71E-18	2.52E-18	1.34E-18	7.12E-19	3.77E-19	1.99E-19	8.20E+04
5.14E-15	2.90E-15	1.64E-15	9.23E-16	5.21E-16	2.94E-16	1.66E-16	9.34E-17	5.27E-17	2.97E-17	1.68E-17	9.45E-18	7.46E+03
3.22E-15	1.86E-15	1.05E-15	5.81E-16	3.36E-16	1.92E-16	1.15E-16	6.53E-17	3.35E-17	2.08E-17	1.19E-17	7.07E-18	2.26E+02
3.25E-15	1.85E-15	1.05E-15	5.97E-16	3.39E-16	1.93E-16	1.09E-16	6.21E-17	3.53E-17	2.00E-17	1.14E-17	6.45E-18	2.24E+02
2.90E-15	1.63E-15	9.19E-16	5.17E-16	2.91E-16	1.64E-16	9.21E-17	5.18E-17	2.92E-17	1.64E-17	9.23E-18	5.20E-18	7.02E+04
3.21E-15	1.79E-15	9.96E-16	5.55E-16	3.10E-16	1.73E-16	9.62E-17	5.36E-17	2.99E-17	1.67E-17	9.29E-18	5.18E-18	1.37E+06
7.11E-15	4.10E-15	2.37E-15	1.36E-15	7.85E-16	4.52E-16	2.60E-16	1.50E-16	8.60E-17	4.94E-17	2.84E-17	1.63E-17	9.95E-01
1.36E-15	7.71E-16	4.36E-16	2.47E-16	1.40E-16	7.89E-17	4.46E-17	2.52E-17	1.43E-17	8.07E-18	4.56E-18	2.58E-18	9.49E+02
3.49E-14	1.96E-14	1.10E-14	6.18E-15	3.47E-15	1.95E-15	1.09E-15	6.14E-16	3.45E-16	1.94E-16	1.09E-16	6.11E-17	1.86E+06
2.55E-15	1.44E-15	8.14E-16	4.60E-16	2.60E-16	1.47E-16	8.30E-17	4.69E-17	2.65E-17	1.50E-17	8.45E-18	4.78E-18	3.28E+03
8.65E-15	4.77E-15	2.63E-15	1.45E-15	7.98E-16	4.39E-16	2.42E-16	1.33E-16	7.32E-17	4.02E-17	2.21E-17	1.22E-17	4.51E+06
1.11E-13	6.21E-14	3.47E-14	1.94E-14	1.08E-14	6.05E-15	3.38E-15	1.89E-15	1.06E-15	5.90E-16	3.30E-16	1.84E-16	8.85E+06
1.14E-14	6.41E-15	3.62E-15	2.04E-15	1.15E-15	6.50E-16	3.67E-16	2.07E-16	1.17E-16	6.60E-17	3.72E-17	2.10E-17	2.85E+04
4.73E-15	2.68E-15	1.52E-15	8.59E-16	4.86E-16	2.75E-16	1.56E-16	8.81E-17	4.98E-17	2.82E-17	1.59E-17	9.02E-18	1.06E+03
3.50E-15	1.98E-15	1.12E-15	6.31E-16	3.57E-16	2.02E-16	1.14E-16	6.43E-17	3.63E-17	2.05E-17	1.16E-17	6.54E-18	1.29E+03
7.53E-15	4.28E-15	2.44E-15	1.39E-15	7.87E-16	4.48E-16	2.54E-16	1.45E-16	8.21E-17	4.67E-17	2.65E-17	1.51E-17	4.73E+02
1.63E-15	9.18E-16	5.17E-16	2.91E-16	1.64E-16	9.22E-17	5.19E-17	2.92E-17	1.65E-17	9.26E-18	5.22E-18	2.94E-18	1.23E+04
1.85E-15	1.09E-15	6.43E-16	3.78E-16	2.23E-16	1.31E-16	7.69E-17	4.51E-17	2.65E-17	1.55E-17	9.09E-18	5.32E-18	1.27E-03
2.02E-14	1.15E-14	6.53E-15	3.71E-15	2.11E-15	1.20E-15	6.83E-16	3.88E-16	2.21E-16	1.25E-16	7.13E-17	4.05E-17	7.44E+02
8.25E-15	4.62E-15	2.58E-15	1.45E-15	8.09E-16	4.53E-16	2.54E-16	1.42E-16	7.95E-17	4.45E-17	2.49E-17	1.40E-17	1.45E+06
1.01E-14	5.63E-15	3.16E-15	1.77E-15	9.93E-16	5.57E-16	3.12E-16	1.75E-16	9.82E-17	5.51E-17	3.09E-17	1.73E-17	7.82E+05
2.10E-15	1.19E-15	6.75E-16	3.83E-16	2.17E-16	1.23E-16	6.97E-17	3.95E-17	2.24E-17	1.27E-17	7.18E-18	4.07E-18	5.76E+02
1.21E-14	6.89E-15	3.92E-15	2.23E-15	1.27E-15	7.19E-16	4.09E-16	2.32E-16	1.32E-16	7.49E-17	4.25E-17	2.42E-17	3.28E+02
8.57E-15	4.80E-15	2.69E-15	1.51E-15	8.43E-16	4.72E-16	2.65E-16	1.48E-16	8.30E-17	4.65E-17	2.61E-17	1.46E-17	2.63E+05
5.02E-14	2.82E-14	1.59E-14	8.94E-15	5.03E-15	2.83E-15	1.60E-15	8.98E-16	5.05E-16	2.85E-16	1.60E-16	9.01E-17	3.35E+05
4.16E-14	2.36E-14	1.33E-14	7.56E-15	4.28E-15	2.42E-15	1.37E-15	7.77E-16	4.40E-16	2.49E-16	1.41E-16	7.98E-17	8.54E+04
2.08E-13	1.18E-13	6.65E-14	3.75E-14	2.12E-14	1.20E-14	6.75E-15	3.81E-15	2.15E-15	1.21E-15	6.85E-16	3.87E-16	4.68E+04
1.11E-14	6.21E-15	3.48E-15	1.95E-15	1.09E-15	6.13E-16	3.44E-16	1.93E-16	1.08E-16	6.05E-17	3.39E-17	1.90E-17	1.56E+05
8.14E-15	4.86E-15	2.51E-15	1.34E-15	7.83E-16	5.43E-16	1.62E-16	1.64E-16	7.37E-17	5.80E-17	3.78E-17	1.33E-17	9.64E+02
5.41E-14	3.03E-14	1.70E-14	9.54E-15	5.35E-15	3.00E-15	1.68E-15	9.44E-16	5.30E-16	2.97E-16	1.67E-16	9.35E-17	1.78E+07
3.20E-15	1.79E-15	9.98E-16	5.58E-16	3.11E-16	1.74E-16	9.72E-17	5.43E-17	3.03E-17	1.69E-17	9.47E-18	5.29E-18	2.65E+05
3.37E-16	1.88E-16	1.05E-16	5.82E-17	3.24E-17	1.81E-17	1.01E-17	5.60E-18	3.12E-18	1.74E-18	9.69E-19	5.40E-19	1.95E+05

2.42E-15	1.40E-15	8.08E-16	4.66E-16	2.69E-16	1.55E-16	8.93E-17	5.15E-17	2.96E-17	1.71E-17	9.81E-18	5.64E-18	3.23E-01
2.06E-15	1.16E-15	6.54E-16	3.69E-16	2.08E-16	1.17E-16	6.60E-17	3.72E-17	2.10E-17	1.18E-17	6.66E-18	3.75E-18	9.56E+02
2.09E-15	1.16E-15	6.45E-16	3.59E-16	2.00E-16	1.11E-16	6.18E-17	3.44E-17	1.91E-17	1.06E-17	5.92E-18	3.29E-18	2.51E+06
4.32E-15	2.47E-15	1.42E-15	8.12E-16	4.65E-16	2.66E-16	1.52E-16	8.71E-17	4.98E-17	2.85E-17	1.63E-17	9.29E-18	3.27E+00
4.55E-15	2.59E-15	1.48E-15	8.40E-16	4.79E-16	2.72E-16	1.55E-16	8.83E-17	5.02E-17	2.86E-17	1.63E-17	9.25E-18	1.05E+02
1.40E-14	7.88E-15	4.43E-15	2.49E-15	1.40E-15	7.90E-16	4.44E-16	2.50E-16	1.41E-16	7.91E-17	4.45E-17	2.50E-17	3.93E+03
4.73E-15	2.66E-15	1.50E-15	8.44E-16	4.75E-16	2.67E-16	1.50E-16	8.47E-17	4.77E-17	2.68E-17	1.51E-17	8.51E-18	3.30E+04
4.75E-15	2.68E-15	1.51E-15	8.49E-16	4.78E-16	2.69E-16	1.52E-16	8.54E-17	4.81E-17	2.71E-17	1.53E-17	8.60E-18	2.17E+04
4.09E-15	2.31E-15	1.31E-15	7.41E-16	4.19E-16	2.37E-16	1.34E-16	7.60E-17	4.30E-17	2.44E-17	1.38E-17	7.80E-18	1.02E+04
1.87E-15	1.05E-15	5.96E-16	3.37E-16	1.90E-16	1.07E-16	6.07E-17	3.43E-17	1.94E-17	1.10E-17	6.19E-18	3.49E-18	2.67E+03
2.34E-15	1.33E-15	7.54E-16	4.29E-16	2.43E-16	1.38E-16	7.85E-17	4.46E-17	2.53E-17	1.44E-17	8.16E-18	4.63E-18	7.43E+01
8.50E-15	4.76E-15	2.67E-15	1.49E-15	8.37E-16	4.69E-16	2.63E-16	1.47E-16	8.26E-17	4.63E-17	2.60E-17	1.46E-17	1.26E+06
8.76E-15	4.94E-15	2.79E-15	1.58E-15	8.90E-16	5.02E-16	2.84E-16	1.60E-16	9.03E-17	5.10E-17	2.88E-17	1.63E-17	4.69E+03
1.65E-12	9.29E-13	5.25E-13	2.96E-13	1.67E-13	9.43E-14	5.32E-14	3.00E-14	1.69E-14	9.55E-15	5.39E-15	3.04E-15	2.40E+05
1.20E-15	6.73E-16	3.77E-16	2.12E-16	1.19E-16	6.66E-17	3.74E-17	2.10E-17	1.18E-17	6.61E-18	3.71E-18	2.08E-18	2.26E+05
1.16E-13	6.63E-14	3.79E-14	2.16E-14	1.23E-14	7.04E-15	4.02E-15	2.29E-15	1.31E-15	7.46E-16	4.25E-16	2.43E-16	1.65E+03
2.48E-15	1.40E-15	7.91E-16	4.47E-16	2.53E-16	1.43E-16	8.05E-17	4.55E-17	2.57E-17	1.45E-17	8.19E-18	4.62E-18	7.66E+02
9.45E-14	5.41E-14	3.10E-14	1.77E-14	1.02E-14	5.81E-15	3.32E-15	1.90E-15	1.09E-15	6.20E-16	3.54E-16	2.02E-16	2.08E+02
6.26E-15	3.70E-15	2.18E-15	1.29E-15	7.59E-16	4.47E-16	2.63E-16	1.55E-16	9.09E-17	5.34E-17	3.13E-17	1.83E-17	1.97E-03
8.02E-15	4.53E-15	2.56E-15	1.45E-15	8.18E-16	4.62E-16	2.61E-16	1.48E-16	8.33E-17	4.71E-17	2.66E-17	1.50E-17	2.89E+03
5.16E-14	2.96E-14	1.70E-14	9.74E-15	5.58E-15	3.20E-15	1.83E-15	1.05E-15	6.01E-16	3.44E-16	1.97E-16	1.13E-16	7.58E+01
2.33E-15	1.31E-15	7.42E-16	4.19E-16	2.36E-16	1.34E-16	7.54E-17	4.26E-17	2.40E-17	1.36E-17	7.66E-18	4.32E-18	2.55E+03
1.47E-13	8.29E-14	4.67E-14	2.63E-14	1.48E-14	8.35E-15	4.71E-15	2.65E-15	1.49E-15	8.42E-16	4.74E-16	2.67E-16	1.81E+05
1.57E-14	8.80E-15	4.94E-15	2.77E-15	1.56E-15	8.75E-16	4.92E-16	2.76E-16	1.55E-16	8.72E-17	4.90E-17	2.75E-17	1.18E+06
7.54E-15	4.27E-15	2.42E-15	1.37E-15	7.74E-16	4.38E-16	2.48E-16	1.40E-16	7.94E-17	4.49E-17	2.54E-17	1.44E-17	9.44E+02
1.65E-12	**9.29E-13**	**5.25E-13**	**2.96E-13**	**1.67E-13**	**9.43E-14**	**5.32E-14**	**3.00E-14**	**1.69E-14**	**9.55E-15**	**5.39E-15**	**3.04E-15**	**1.78E+07**

e specified to be 10^30 s).

Width (m)	Infiltration (m/s)	Tritium Flow to Groundwater	Incremental Area Under Curve
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	1.97E-25	6.23E-16
42.759	4.77E-11	5.33E-22	1.68E-12
42.759	4.77E-11	2.44E-20	7.70E-11
42.759	4.77E-11	2.23E-19	7.03E-10
42.759	4.77E-11	9.15E-19	2.89E-09
42.759	4.77E-11	2.40E-18	7.57E-09
42.759	4.77E-11	4.77E-18	1.51E-08
42.759	4.77E-11	7.91E-18	2.50E-08
42.759	4.77E-11	1.16E-17	3.65E-08
42.759	4.77E-11	1.54E-17	4.87E-08
42.759	4.77E-11	1.93E-17	6.08E-08
42.759	4.77E-11	2.28E-17	7.21E-08
42.759	4.77E-11	2.61E-17	8.23E-08
42.759	4.77E-11	2.88E-17	9.10E-08
42.759	4.77E-11	3.11E-17	9.81E-08
42.759	4.77E-11	3.28E-17	1.04E-07
42.759	4.77E-11	3.41E-17	1.08E-07
42.759	4.77E-11	3.49E-17	1.10E-07
42.759	4.77E-11	3.52E-17	1.11E-07
42.759	4.77E-11	3.52E-17	1.11E-07
42.759	4.77E-11	3.49E-17	1.10E-07
42.759	4.77E-11	3.43E-17	1.08E-07
42.759	4.77E-11	3.34E-17	1.05E-07
42.759	4.77E-11	3.23E-17	1.02E-07
42.759	4.77E-11	3.10E-17	9.80E-08
42.759	4.77E-11	2.96E-17	9.36E-08
42.759	4.77E-11	2.81E-17	8.88E-08

Time (years)	Time (s)	Surface Volatilization (kg/m^2/s)	Surface Volatilization (kg/s)	Incremental Area Under Curve
0	**0**	**0**	0.00E+00	
0.1	3155760	2.12E-18	9.25E-15	2.92027E-08
0.2	6311520	1.06E-17	4.62E-14	1.45807E-07
0.3	9467280	1.87E-17	8.17E-14	2.57785E-07
0.4	12623040	2.51E-17	1.10E-13	3.46843E-07
0.5	15778800	3.02E-17	1.32E-13	4.16432E-07
0.6	18934560	3.41E-17	1.49E-13	4.71386E-07
0.7	22090320	3.73E-17	1.63E-13	5.15432E-07
0.8	25246080	3.99E-17	1.75E-13	5.51193E-07
0.9	28401840	4.20E-17	1.84E-13	5.80465E-07
1	31557600	4.38E-17	1.92E-13	6.0449E-07
1.1	34713360	4.52E-17	1.98E-13	6.24373E-07
1.2	37869120	4.64E-17	2.03E-13	6.40803E-07
1.3	41024880	4.74E-17	2.07E-13	6.54197E-07
1.4	44180640	4.82E-17	2.11E-13	6.65105E-07
1.5	47336400	4.88E-17	2.14E-13	6.73941E-07
1.6	50492160	4.93E-17	2.16E-13	6.80983E-07
1.7	53647920	4.97E-17	2.17E-13	6.86368E-07
1.8	56803680	5.00E-17	2.19E-13	6.90372E-07
1.9	59959440	5.02E-17	2.20E-13	6.93134E-07
2	63115200	5.03E-17	2.20E-13	6.94791E-07
2.1	66270960	5.04E-17	2.20E-13	6.95619E-07
2.2	69426720	5.04E-17	2.20E-13	6.95757E-07
2.3	72582480	5.03E-17	2.20E-13	6.95067E-07
2.4	75738240	5.03E-17	2.20E-13	6.93824E-07
2.5	78894000	5.01E-17	2.19E-13	6.91891E-07
2.6	82049760	5.00E-17	2.19E-13	6.89682E-07
2.7	85205520	4.98E-17	2.18E-13	6.87058E-07

42.759	4.77E-11	2.66E-17	8.38E-08
42.759	4.77E-11	2.49E-17	7.86E-08
42.759	4.77E-11	2.32E-17	7.33E-08
42.759	4.77E-11	2.15E-17	6.79E-08
42.759	4.77E-11	1.98E-17	6.24E-08
42.759	4.77E-11	1.80E-17	5.70E-08
42.759	4.77E-11	1.63E-17	5.15E-08
42.759	4.77E-11	1.46E-17	4.61E-08
42.759	4.77E-11	1.29E-17	4.09E-08
42.759	4.77E-11	1.13E-17	3.57E-08
42.759	4.77E-11	9.69E-18	3.06E-08
42.759	4.77E-11	8.12E-18	2.56E-08
42.759	4.77E-11	6.59E-18	2.08E-08
42.759	4.77E-11	5.10E-18	1.61E-08
42.759	4.77E-11	3.67E-18	1.16E-08
42.759	4.77E-11	2.27E-18	7.18E-09
42.759	4.77E-11	9.33E-19	2.94E-09
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00

2.8	88361280	4.95E-17	2.17E-13	6.84021E-07
2.9	91517040	4.93E-17	2.16E-13	6.80569E-07
3	94672800	4.90E-17	2.15E-13	6.76979E-07
3.1	97828560	4.88E-17	2.13E-13	6.73113E-07
3.2	1.01E+08	4.85E-17	2.12E-13	6.69109E-07
3.3	1.04E+08	4.82E-17	2.11E-13	6.64966E-07
3.4	1.07E+08	4.78E-17	2.09E-13	6.60548E-07
3.5	1.1E+08	4.75E-17	2.08E-13	6.5613E-07
3.6	1.14E+08	4.72E-17	2.06E-13	6.51573E-07
3.7	1.17E+08	4.69E-17	2.05E-13	6.46879E-07
3.8	1.2E+08	4.65E-17	2.03E-13	6.42046E-07
3.9	1.23E+08	4.62E-17	2.02E-13	6.37352E-07
4	1.26E+08	4.58E-17	2.00E-13	6.32519E-07
4.1	1.29E+08	4.55E-17	1.99E-13	6.27686E-07
4.2	1.33E+08	4.51E-17	1.97E-13	6.22716E-07
4.3	1.36E+08	4.48E-17	1.96E-13	6.17883E-07
4.4	1.39E+08	4.44E-17	1.94E-13	6.12912E-07
4.5	1.42E+08	4.40E-17	1.93E-13	6.0808E-07
4.6	1.45E+08	4.37E-17	1.91E-13	6.03247E-07
4.7	1.48E+08	4.33E-17	1.90E-13	5.98277E-07
4.8	1.51E+08	4.30E-17	1.88E-13	5.93444E-07
4.9	1.55E+08	4.26E-17	1.87E-13	5.88611E-07
5	1.58E+08	4.23E-17	1.85E-13	5.83779E-07
5.1	1.61E+08	4.19E-17	1.84E-13	5.79084E-07
5.2	1.64E+08	4.16E-17	1.82E-13	5.74252E-07
5.3	1.67E+08	4.13E-17	1.80E-13	5.69557E-07
5.4	1.7E+08	4.09E-17	1.79E-13	5.64862E-07
5.5	1.74E+08	4.06E-17	1.78E-13	5.60168E-07
5.6	1.77E+08	4.02E-17	1.76E-13	5.55612E-07
5.7	1.8E+08	3.99E-17	1.75E-13	5.51055E-07
5.8	1.83E+08	3.96E-17	1.73E-13	5.46499E-07
5.9	1.86E+08	3.93E-17	1.72E-13	5.4208E-07
6	1.89E+08	3.89E-17	1.70E-13	5.37662E-07
6.1	1.93E+08	3.86E-17	1.69E-13	5.33243E-07
6.2	1.96E+08	3.83E-17	1.68E-13	5.28963E-07
6.3	1.99E+08	3.80E-17	1.66E-13	5.24683E-07
6.4	2.02E+08	3.77E-17	1.65E-13	5.20403E-07
6.5	2.05E+08	3.74E-17	1.64E-13	5.16122E-07
6.6	2.08E+08	3.71E-17	1.62E-13	5.1198E-07
6.7	2.11E+08	3.68E-17	1.61E-13	5.07838E-07

42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759	4.77E-11	0.00E+00	0.00E+00
42.759			
42.759		**Sum**	2.50E-06
42.759			
42.759			
42.759			
42.759			
42.759			

6.8	2.15E+08	3.65E-17	1.60E-13	5.03834E-07
6.9	2.18E+08	3.62E-17	1.58E-13	4.99829E-07
7	2.21E+08	3.59E-17	1.57E-13	4.95825E-07
7.1	2.24E+08	3.56E-17	1.56E-13	4.91959E-07
7.2	2.27E+08	3.54E-17	1.55E-13	4.88093E-07
7.3	2.3E+08	3.51E-17	1.53E-13	4.84227E-07
7.4	2.34E+08	3.48E-17	1.52E-13	4.80361E-07
7.5	2.37E+08	3.45E-17	1.51E-13	4.76633E-07
7.6	2.4E+08	3.43E-17	1.50E-13	4.72905E-07
7.7	2.43E+08	3.40E-17	1.49E-13	4.69315E-07
7.8	2.46E+08	3.37E-17	1.48E-13	4.65725E-07
7.9	2.49E+08	3.35E-17	1.46E-13	4.62135E-07
8	2.52E+08	3.32E-17	1.45E-13	4.58545E-07
8.1	2.56E+08	3.30E-17	1.44E-13	4.55093E-07
8.2	2.59E+08	3.27E-17	1.43E-13	4.51641E-07
8.3	2.62E+08	3.25E-17	1.42E-13	4.48328E-07
8.4	2.65E+08	3.22E-17	1.41E-13	4.44876E-07
8.5	2.68E+08	3.20E-17	1.40E-13	4.41562E-07
8.6	2.71E+08	3.17E-17	1.39E-13	4.38248E-07
8.7	2.75E+08	3.15E-17	1.38E-13	4.35073E-07
8.8	2.78E+08	3.13E-17	1.37E-13	4.31897E-07
8.9	2.81E+08	3.11E-17	1.36E-13	4.28721E-07
9	2.84E+08	3.08E-17	1.35E-13	4.25545E-07
9.1	2.87E+08	3.06E-17	1.34E-13	4.22508E-07
9.2	2.9E+08	3.04E-17	1.33E-13	4.1947E-07
9.3	2.93E+08	3.02E-17	1.32E-13	4.16432E-07
9.4	2.97E+08	2.99E-17	1.31E-13	4.13395E-07
9.5	3E+08	2.97E-17	1.30E-13	4.10495E-07
9.6	3.03E+08	2.95E-17	1.29E-13	4.07596E-07
9.7	3.06E+08	2.93E-17	1.28E-13	4.04696E-07
9.8	3.09E+08	2.91E-17	1.27E-13	4.01797E-07
9.9	3.12E+08	2.89E-17	1.26E-13	3.99035E-07
10	3.16E+08	2.87E-17	1.26E-13	3.96274E-07
11	3.47E+08	2.68E-17	1.17E-13	3.70178E-06
12	3.79E+08	2.51E-17	1.10E-13	3.46843E-06
13	4.1E+08	2.36E-17	1.03E-13	3.25994E-06
14	4.42E+08	2.23E-17	9.74E-14	3.07216E-06
15	4.73E+08	2.10E-17	9.19E-14	2.90094E-06
16	5.05E+08	1.99E-17	8.71E-14	2.74768E-06
17	5.36E+08	1.89E-17	8.26E-14	2.60685E-06

Gas Flow Downward at Water Table (kg/s)	Incremental Area under Curve
0	0.00E+00
7.06136E-25	2.23E-15
1.16988E-21	3.69E-12
3.80403E-20	1.20E-10
2.63797E-19	8.32E-10
8.67855E-19	2.74E-09
1.87334E-18	5.91E-09
3.11587E-18	9.83E-09
4.39662E-18	1.39E-08
5.52445E-18	1.74E-08
6.42289E-18	2.03E-08
6.99636E-18	2.21E-08
7.26398E-18	2.29E-08
7.26398E-18	2.29E-08
7.07283E-18	2.23E-08
6.69051E-18	2.11E-08
6.11704E-18	1.93E-08
5.35241E-18	1.69E-08
4.97009E-18	1.57E-08
4.01431E-18	1.27E-08
3.44083E-18	1.09E-08
2.6762E-18	8.45E-09
1.91157E-18	6.03E-09
1.3381E-18	4.22E-09
7.6463E-19	2.41E-09
1.91157E-19	6.03E-10
0	0.00E+00
0	0.00E+00

0	0.00E+00
0	0.00E+00
0	0.00E+00
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	0	0.00E+00
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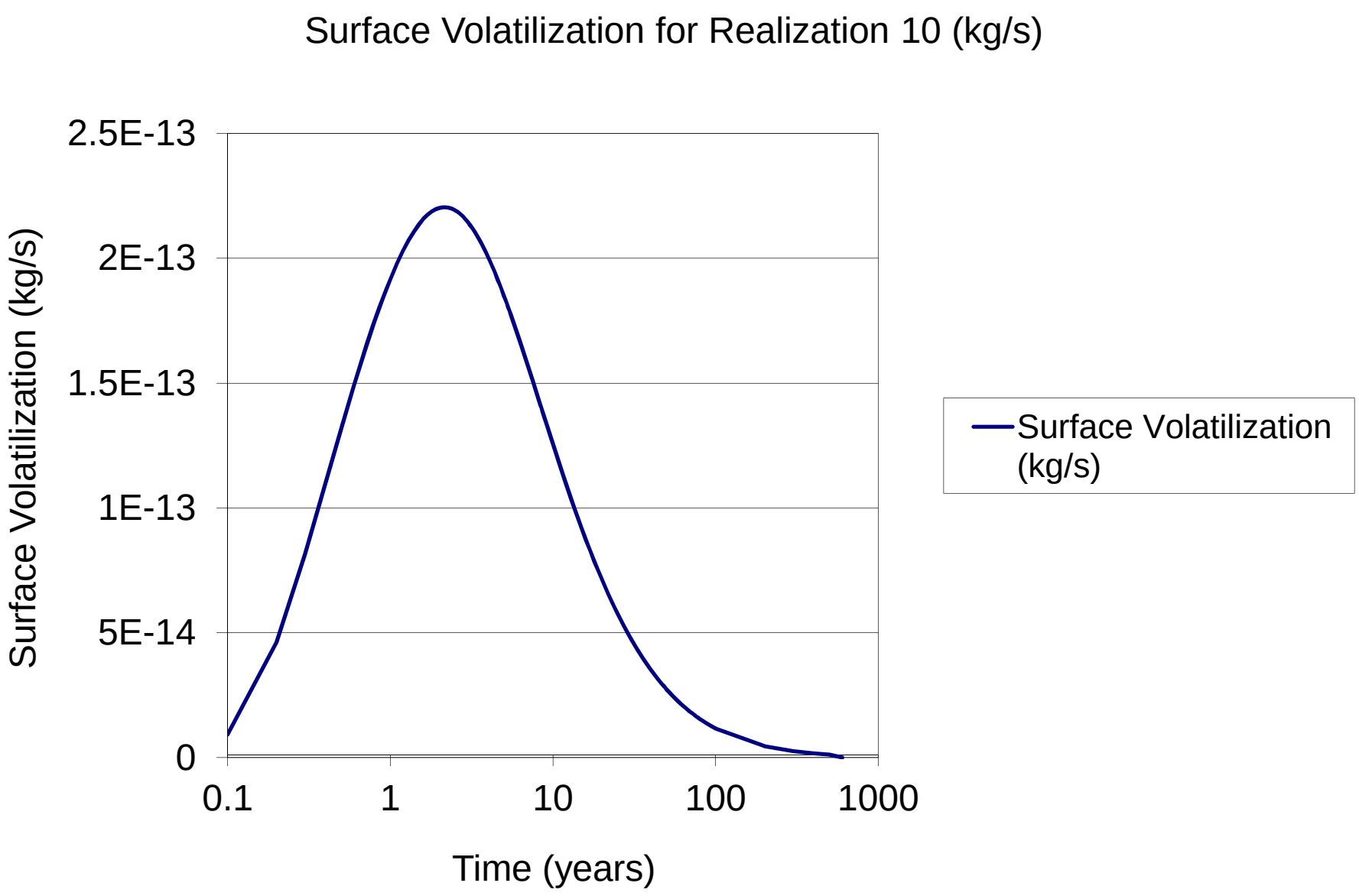
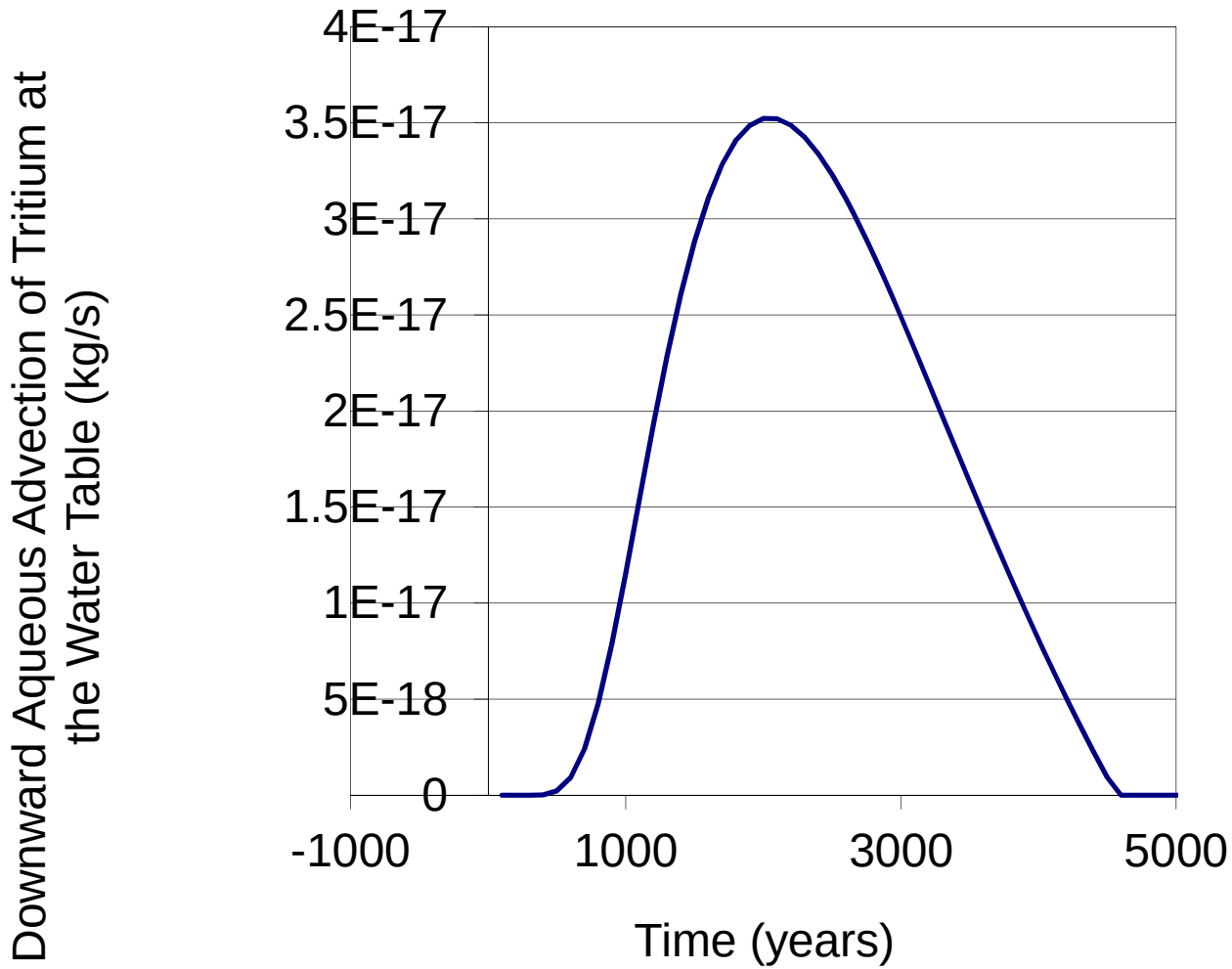
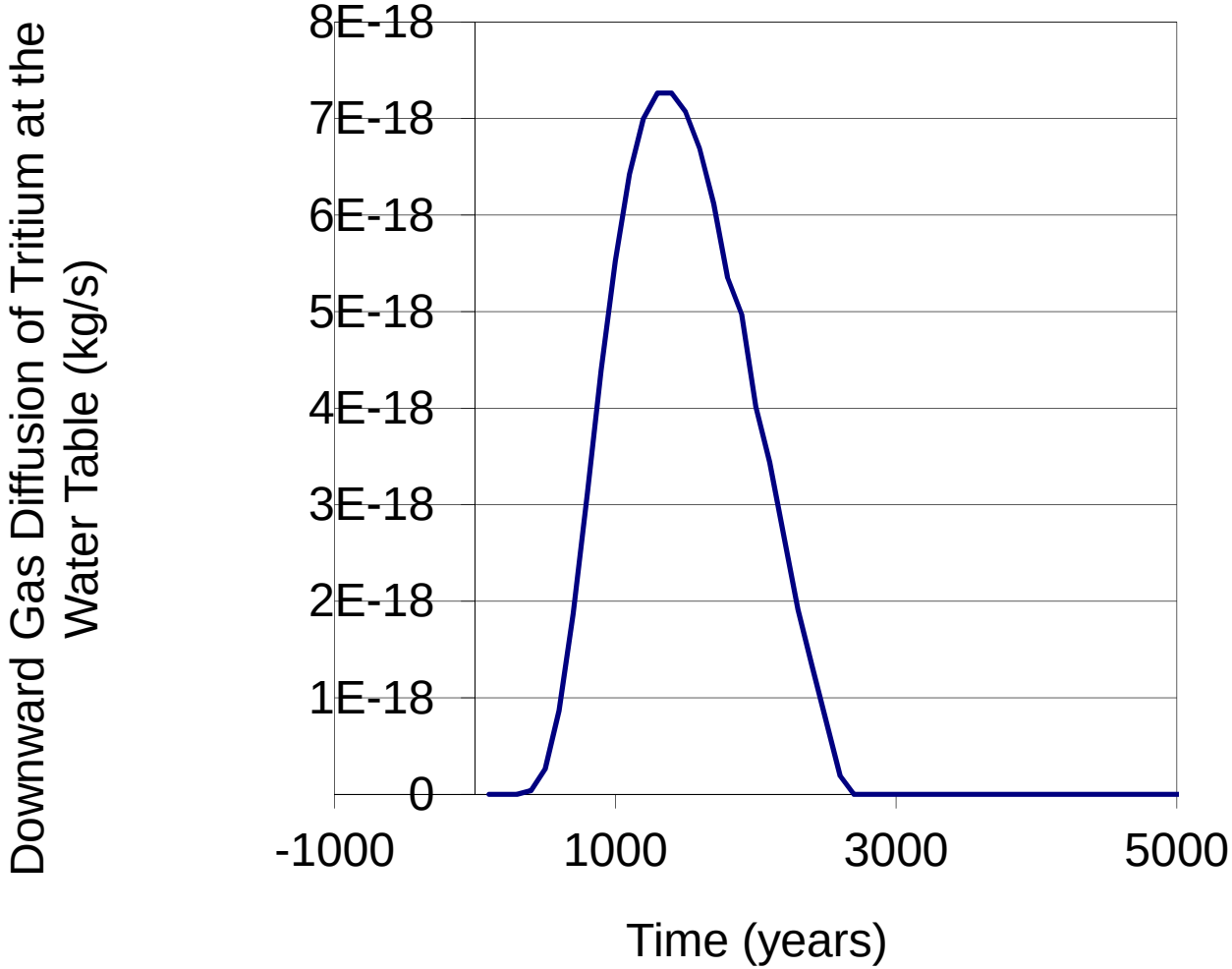
	0	0.00E+00
	0	0.00E+00
	0	0.00E+00
Sum		**2.79E-07**


Surface Volatilization for Realization 10 (kg/s)
2.5E-13
2E-13
1.5E-13
1E-13
5E-14
0
Surface Volatilization (kg/s)
0.1
1
10
100
1000
Time (years)
Surface Volatilization (kg/s)

Downward Liquid Advection of Tritium for Realization 10 (kg/s)



Downward Gas Diffusion of Tritium for Realization 10 (kg/s)



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Probabilistic Performance-Assessment Modeling of the Mixed Waste Landfill at Sandia National Laboratories (2nd Edition)

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Probabilistic Performance-Assessment Modeling of the Mixed Waste Landfill at Sandia National Laboratories

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Abstract

A probabilistic performance assessment has been conducted to evaluate the fate and transport of radionuclides (amercium-241, cesium-137, cobalt-60, plutonium-238, plutonium-239, radium-226, radon-222, strontium-90, thorium-232, tritium, uranium-238), heavy metals (lead and cadmium), and volatile organic compounds (VOCs) at the Mixed Waste Landfill (MWL). Probabilistic analyses were performed to quantify uncertainties inherent in the system and models for a 1,000-year period, and sensitivity analyses were performed to identify parameters and processes that were most important to the simulated performance metrics. Comparisons between simulated results and measured values at the MWL were made to gain confidence in the models and perform calibrations when data were available. In addition, long-term monitoring requirements and triggers were recommended based on the results of the quantified uncertainty and sensitivity analyses.

At least one-hundred realizations were simulated for each scenario defined in the performance assessment. Conservative values and assumptions were used to define values and distributions of uncertain input parameters when site data were not available. Results showed that exposure to tritium via the air pathway exceeded the regulatory metric of 10 mrem/year in about 2% of the

simulated realizations when the receptor was located at the MWL (continuously exposed to the air directly above the MWL). Simulations showed that peak radon gas fluxes exceeded the design standard of 20 pCi/m^2/s in about 3% of the realizations if up to 1% of the containers of sealed radium-226 sources were assumed to completely degrade in the future. If up to 100% of the containers of radium-226 sources were assumed to completely degrade, 30% of the realizations yielded radon surface fluxes that exceeded the design standard. For the groundwater pathway, simulations showed that none of the radionuclides or heavy metals (lead and cadmium) reached the groundwater during the 1,000-year evaluation period. Tetrachloroethylene (PCE) was used as a proxy for other VOCs because of its mobility and potential to exceed maximum contaminant levels in the groundwater relative to other VOCs. Simulations showed that PCE reached the groundwater, but only 1% of the realizations yielded aquifer concentrations that exceeded the regulatory metric of 5 μg/L.

Based on these results, monitoring triggers have been proposed for the air, surface soil, vadose zone, and groundwater at the MWL. Specific triggers include numerical thresholds for radon concentrations in the air, radionuclide and heavy-metal concentrations in surface soil, soil-gas concentrations of VOCs in the vadose zone, moisture content in the vadose zone, and uranium and VOC concentrations in groundwater. The proposed triggers are based on U.S. Environmental Protection Agency and Department of Energy regulatory standards. If a trigger is exceeded, then a trigger evaluation process will be initiated which will allow sufficient data to be collected to assess trends and recommend corrective actions, if necessary.

Acknowledgments

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Preface to the 2nd Edition

This 2nd Edition includes revisions to address comments made by the New Mexico Environment Department (NMED, November 2006).

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1. Introduction

1.1 Background and Objectives

The Corrective Measures Implementation (CMI) Plan for the Mixed Waste Landfill (MWL) at Sandia National Laboratories, Albuquerque, NM, is being submitted to the New Mexico Environment Department (NMED). As part of the final order selecting a remedy for the MWL (NMED May 2005), NMED required that the CMI Plan include a comprehensive fate and transport model to determine if contaminants will move from the MWL down through the vadose zone to groundwater. In addition, the NMED required that the CMI Plan include triggers for future action that identify and detail specific monitoring results that will require additional testing or implementation of an additional or different remedy.

This report presents the probabilistic fate and transport models that were used to assess the performance of the MWL. Relevant contaminants of concern at the site were included, and site-specific models and parameters were used in a probabilistic analysis. Results of the analysis were compared to regulatory performance metrics, and sensitivity analyses were performed to determine the most important parameters and processes that impacted the variability of the simulated performance metrics. Based on these simulations and results, appropriate triggers were identified and defined to address long-term monitoring requirements at the site.

A period of 1,000 years was selected for the probabilistic analysis to be consistent with DOE Order 435.1. DOE Order 435.1 requires that performance assessments be conducted for low-level radioactive waste disposed after September 26, 1988, and that performance objectives be evaluated for a 1,000-year period to determine potential risk impacts to the public and environment. Although most of the MWL wastes were disposed of prior to September 26, 1988, a 1,000 year period was nonetheless determined to be appropriate for assessment of regulatory performance metrics.

1.2 Overview of the Mixed Waste Landfill

The Mixed Waste Landfill (MWL) is located approximately five miles southeast of Albuquerque International Sunport and four miles south of Sandia National Laboratories' (SNL) central facilities (Figure 1). The landfill is a fenced, 2.6-acre area in the north-central portion of Technical Area 3 (TA-3). The mean elevation at the MWL is 5381 feet.

The MWL was established in 1959 as a disposal area for low-level radioactive and mixed waste that was generated at SNL research facilities. Originally, the landfill was opened as the "Area 3 Low-level Radioactive Dump," when the low-level radioactive disposal area in Technical Area 2 was closed in March 1959. The MWL accepted low-level radioactive waste and minor amounts of mixed waste from March 1959 through December 1988. Approximately 100,000 cubic ft of low-level radioactive waste containing approximately 6,300 curies of activity was disposed of at the landfill.

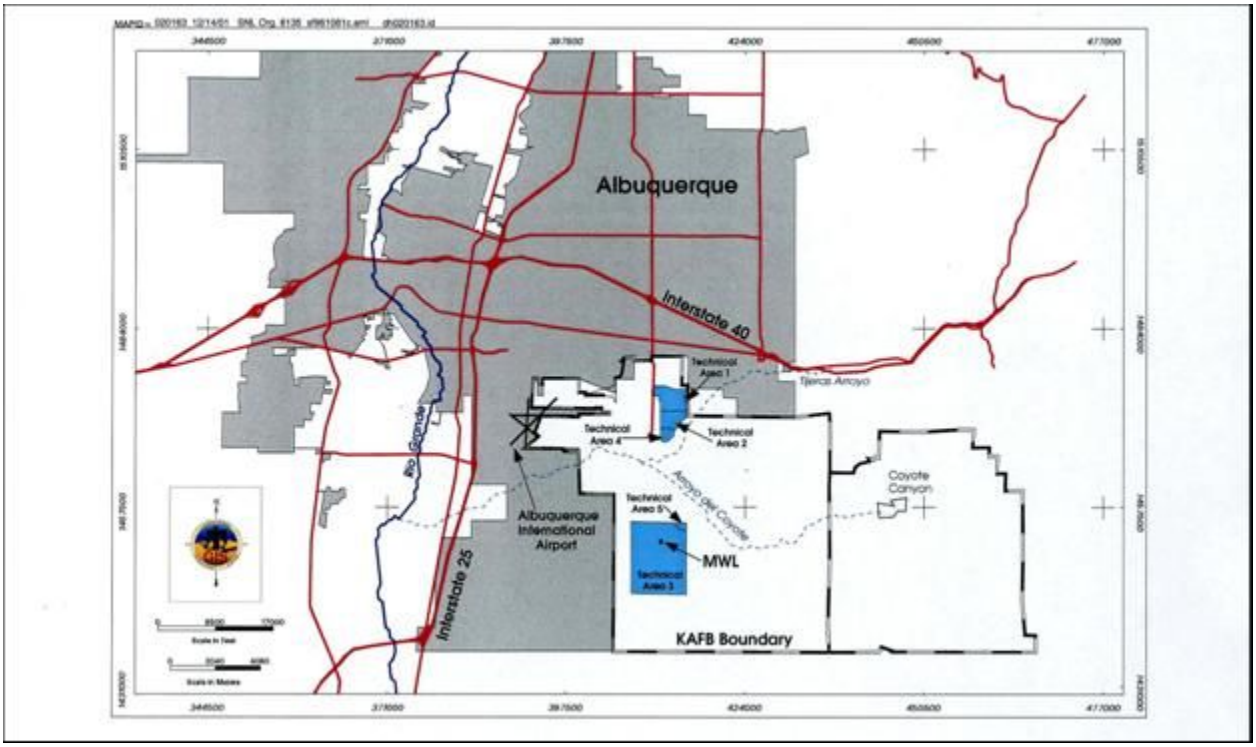

Figure 1. Location of the Mixed Waste Landfill relative to Albuquerque, NM, and Kirtland Air Force Base.

1.2.1 Site Description

The MWL consists of two distinct disposal areas: the classified area, occupying 0.6 acres, and the unclassified area, occupying 2.0 acres (Figure 2). Low-level radioactive and mixed waste has been disposed of in each area. Wastes in the classified area were buried in unlined, vertical pits. Wastes in the unclassified area were buried in unlined, shallow trenches.

A Phase 1 RCRA facility investigation was conducted in 1989 and 1990 to determine if a release of RCRA contaminants had occurred at the MWL and to begin characterizing the nature and extent of any such release. The Phase 1 facility investigation indicated that tritium was the primary contaminant of concern. No organic contaminants were identified. A Phase 2 RCRA facility investigation was initiated in 1992 to determine contaminant source, define the nature and extent of contamination, identify potential contaminant transport pathways, evaluate potential risks posed by the levels of contamination identified, and recommend remedial action, if warranted, for the landfill.

The Phase 2 RCRA facility investigation incorporated the streamlining approach, combining data quality objectives and the observational approach. Nonintrusive field activities were conducted first to facilitate the efficiency and cost-effectiveness of intrusive field activities. Data collected during the Phase 2 RCRA facility investigation were evaluated using U.S. Environmental Protection Agency-approved methods. Initially, a constituent population was statistically compared to natural background. Any constituent failing the statistical comparison was further

analyzed for spatial distribution. Constituents that failed the statistical comparison to background and showed a strong spatial correlation were identified as potential contaminants of concern.

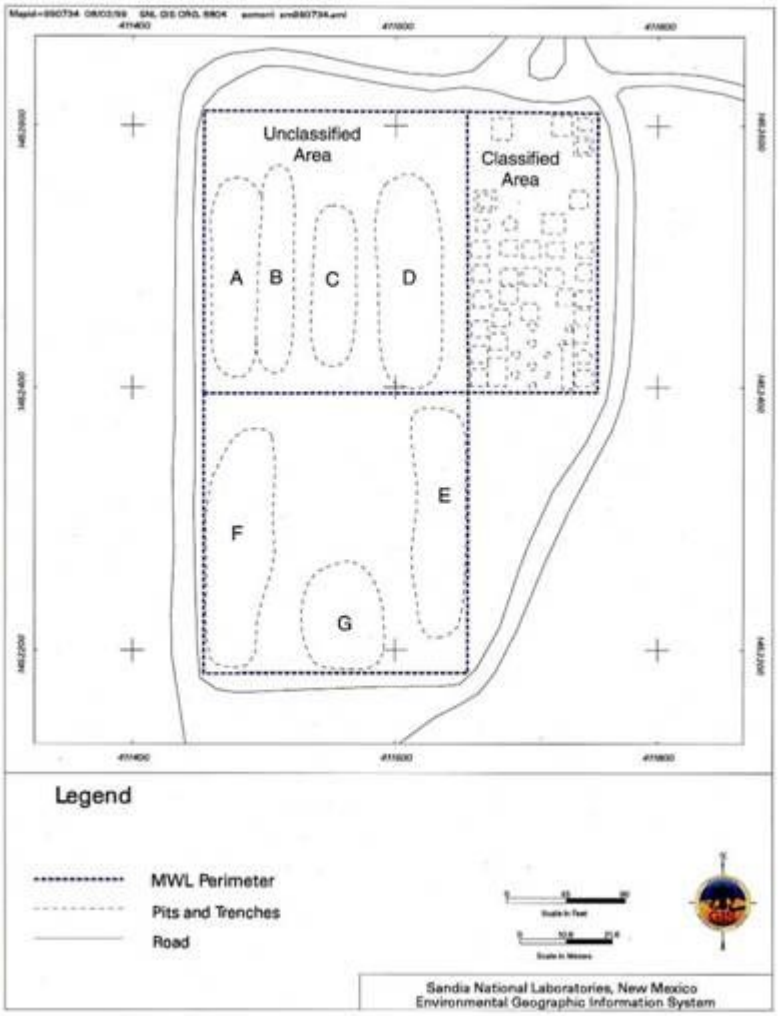

Figure 2. Map of the Mixed Waste Landfill.

The Phase 2 RCRA facility investigation was completed in 1995. This investigation included surface radiological surveys; ambient air sampling; soil sampling for background metals and radionuclides; soil sampling for volatile organic compounds (VOCs), semivolatile organic compounds, target analyte list metals, and radionuclides; nonintrusive geophysical surveys; passive and active soil gas sampling; borehole drilling; installation of groundwater monitoring wells; groundwater sampling; vadose zone tests; aquifer tests; and risk assessment. The Phase 2 RCRA facility investigation confirmed the findings of the Phase 1 RCRA facility investigation.

1.2.2 Contaminants of Concern

Based on the results of the Phase 1 and Phase 2 RCRA Facility Investigations, tritium was found to be the primary contaminant of concern that has been released from the MWL. An estimated 2400 curies of tritium were disposed of in the MWL. Tritium is extremely mobile when incorporated in water in liquid and vapor form, moving easily through the vadose zone and into the atmosphere.

Tritium levels range from 1100 picocuries/gram in surface soils to 206 picocuries/gram in subsurface soils in the classified area of the landfill. The highest tritium levels are found within 30 feet of the surface in soils adjacent to and directly below classified area disposal pits. At depths greater than 30 feet below ground surface, tritium levels fall off rapidly to a few picocuries/gram of soil.

Tritium also occurs as a diffuse air emission from the landfill. Tritium emissions from the MWL are diminishing with time due to its half-life of 12.3 years. Total tritium emissions to the atmosphere were measured at 0.294 curies/year in 1993 and at 0.090 curies/year in 2003 (Peace et al., 2002; Anderson, 2004).

An estimated 27,900 kg (9.3 curies) of uranium-238 (depleted uranium) are present in the MWL inventory. Based on the results from the Phase 1 and Phase 2 RFIs, there is no indication that uranium has been released from the MWL. However, because of the large quantity of depleted uranium disposed of in the MWL, the fate and transport of uranium was modeled in this study.

Other radionuclides present in the MWL inventory include cobalt-60, strontium-90, cesium-137, plutonium-238 and -239, americium-241, radium-226, and thorium-232. The fate and transport of these radionuclides was modeled, although there is no evidence that these radionuclides have been released from the MWL.

There is an estimated 128,000 kg of lead disposed of within various pits and trenches in the landfill. Most of the lead is in the form of shielding (i.e. lead bricks, casks, pigs, and shipping canisters). Smaller lead items include containers commonly used to dispose of radioactive sources. The lead containers were typically placed in concrete-filled A/N cans or 55-gallon drums. Larger lead items include five massive stainless steel and lead casks disposed of in Trench F, each weighing up to 40 tons. The fate and transport of lead was modeled, although there is no evidence that lead has been released from the MWL.

Cadmium is not specifically listed in the MWL inventory. However, slightly-elevated cadmium has been detected in five boreholes along the west side of the MWL to depths of up to at least 104 ft bgs. The cadmium concentrations in MWL soils range from non-detect to 1.97 mg/kg, approximately two times the NMED maximum background value of 0.9 mg/kg. The source of cadmium in MWL soils is unknown.

Cadmium has occasionally been detected in MWL groundwater at concentrations above the EPA MCL, although these detections are sporadic and unpredictable. Because the cadmium detections above the MCL are inconsistent, it is believed that these detections do not indicate contamination from the MWL. Nevertheless, cadmium is considered a contaminant of concern, and the fate and transport of cadmium was modeled.

During the Phase 2 RCRA Facility Investigations, low levels of VOCs were detected in soil gas samples obtained from the landfill. The primary VOCs detected in soil gas at the MWL include tetrachloroethene (PCE), trichloroethene (TCE), dichloro-difluoromethane, 1,1,1-trichloroethane (1,1,1-TCA), trichlorofluoromethane, and 1,1,2-trichloro,1,2,2-trifluoroethane. Of these VOCs, PCE was determined to have the highest potential to reach groundwater at concentrations near its maximum contaminant level (Klavetter, 1995a). Other VOCs were either not as mobile or did not have sufficiently high initial soil gas concentrations. For this reason, PCE is a contaminant of concern, and the fate and transport of PCE was modeled. However, because the remaining VOCs still have some potential to contaminate groundwater, PCE was modeled in this study as a proxy for all of the VOCs.

Radon gas generation from the landfill is based on the estimated 6 curies of radium-226 in the MWL inventory. Most of the radium-226 in the MWL is in the form of sealed sources. Emission of radon gas from the MWL was investigated in 1997. No significant difference between the MWL and the background measurements in terms of median, mean, and standard deviation was observed (Haaker, 1998). However, at the request of the NMED, radon was included in the MWL fate and transport model.

In summary, the following list of actual and potential contaminants was included in the MWL fate and transport model: tritium, americium-241, cesium-137, cobalt-60, plutonium-238 plutonium-239, radium-226, radon-222, strontium-90, thorium-232, uranium-238, lead, cadmium, and PCE.

2. Modeling Approach

2.1 Previous Modeling Studies

This section summarizes previous modeling studies conducted for the MWL. These studies include fate and transport modeling studies conducted by Argonne National Laboratory, Sandia, and WERC (Consortium for Environmental Education & Technology Development). Cover performance modeling studies were conducted by Sandia in support of the MWL cover design, and are summarized in this section as well.

2.1.1 Fate and Transport Modeling Studies

Previous fate and transport modeling studies conducted for the MWL include a study by Argonne National Laboratory in 1995 as part of a preliminary human health risk assessment for the MWL; a subsequent study conducted by Sandia in 1995 regarding the potential migration of radionuclides and organic compounds from the MWL; a 1997 study to model the infiltration of reactor coolant water discharged into an MWL trench in 1967; and a study conducted in 2001 by WERC of tritium migration through the vadose zone beneath the MWL.

Argonne National Laboratory Modeling Study

One of the earlier modeling studies on the MWL was conducted by Johnson et al. (1995) at Argonne National Laboratory (ANL). The ANL study used a "worst case" scenario approach in which they took conservative values of parameters at different levels of model complexity to ascertain the probable fate and transport of, as well as risk from, the contaminants. The study used a tiered approach for modeling the fate and transport of contaminants, with increasing model complexity and more justifiable simplifying assumptions.

The first-tier screen was a geometric approach in which tritium from the MWL was distributed evenly throughout the vadose zone. This first-tier screening suggested that tritiated water from the MWL could potentially reach groundwater, although the likelihood was considered small.

The second-tier analysis utilized a one-dimensional analytical solution for flow and transport in the vadose zone, but did not include lateral dispersion, which would reduce concentrations of tritium and the distance traveled by tritium from the landfill. This analysis showed that tritium concentrations could exceed the EPA drinking water guideline of 20,000 pCi/L after 57 years if the underlying soils were fully saturated. However, because of the uncertainty of the input parameters (particularly velocity, which was considered too high), the analysis over-predicted tritium concentrations in subsurface soils.

The final tier utilized a three-dimensional numerical code, TRACR3D, which still is extensively used for flow and transport calculations. This code is relatively complex, utilizing finite-element solutions for both the saturated and unsaturated zones. Tritium was the primary contaminant modeled because of its assumed higher mobility compared to other radionuclides and organic contaminants. Conservative assumptions were used in the model, boundary conditions, and hydrologic parameters to bound the probable extent and concentration of tritium. The model predicted that 27 years after disposal, the maximum tritium contamination reaches 184 ft below ground surface (bgs) with a maximum concentration of 2.8×10^6 pCi/L, significantly higher than measured field values. After an additional 100 years, the tritium was predicted to have traveled to a depth of 230 ft bgs, with a maximum tritium concentration of 5,400 pCi/L. The ANL study concluded that no detectable tritium concentrations would be likely to reach groundwater at the MWL.

The study also included screening calculations for aqueous-phase transport of PCE and TCE, and predicted that these VOCs could reach the water table approximately 250 years from time of disposal. No calculations were conducted for vapor-phase transport, which has proven to be the most significant transport mechanism for organic compounds in the vadose zone at nearby ER sites, including the Chemical Waste Landfill.

Sandia Modeling of Radionuclide and Organic Compound Transport

A subsequent study was conducted by Sandia in August 1995 to simulate potential contaminant flow and transport from the MWL. The study was conducted using the code Borehole Optimization Support System (BOSS), originally developed to determine the optimum number and location of boreholes and monitoring wells necessary to define the nature and extent of contamination. Monte Carlo uncertainty analysis of flow and transport was used to simulate the

migration of radionuclides and organic compounds from the MWL. (Klavetter, 1995a; Klavetter, 1995b).

BOSS was first used to simulate the migration of radionuclides, including tritium, cesium-137, and strontium-90 from the MWL, using more representative hydrologic property values than were applied in the ANL study. The modeling study predicted that no detectable tritium would reach groundwater at the MWL, and that detectable tritium would not migrate below a depth of 40 m (131 ft). These results are consistent with the actual tritium distribution data for subsurface soils collected during the Phase 2 RFI. The model also predicted that no detectable activity of cesium-137 and strontium-90 would migrate even 10 m below the MWL pits and trenches.

The code BOSS was also used to simulate the vapor-phase and aqueous-phase transport of the six VOCs detected in MWL soil gas (Section 1.2.2). The modeling results demonstrated that aqueous-phase transport of organic contaminants from the MWL was not a significant transport mechanism. The modeling results also demonstrated that vapor-phase transport of five of the six organic compounds was not significant, due to the low concentrations of these contaminants detected in the soil gas.

Concentrations of PCE detected in soil gas near the MWL surface were calculated to be high enough to result in concentrations of sub-ppb to a few ppb in groundwater within 50 years. The model predicted that the lateral extent of PCE in the groundwater would be limited, with PCE at concentrations greater than 1 ppb extending less than 130 m (426 feet) downgradient of the MWL. The study recommended that further evaluation of the fate and transport of PCE be considered, including a review of PCE concentrations in borehole soil samples collected during the Phase 2 RFI. PCE was detected at low concentrations in soil samples from 2 of the 16 boreholes drilled during the Phase 2 RFI. PCE was detected in BH-3 at a maximum concentration of 2.45 *J* µg/kg, and in MW-4 at a maximum concentration of 5.4 µg/kg (Peace et. al., 2002).

Modeling Study of Reactor Coolant Water Infiltration

In 1997, a modeling study was conducted to simulate the infiltration of 271,500 gallons of reactor coolant water from a trench at the MWL (Wolford1997). The objective of the study was to evaluate the potential migration of coolant water discharged into Trench D of the MWL in May and June, 1967. The water originated from the Sandia Engineering Reactor Facility in Technical Area 5, and contained approximately 1 Ci of total radioactivity, primarily short-lived fission products. Trench D was an active disposal trench at the time, and was believed to be the most likely source for contaminant release and migration from the MWL.

The modeling study used the code VS2DT (Healy, 1990), a finite difference unsaturated flow and transport model developed by the U.S. Geological Survey. The modeling results indicated that the reactor coolant water, and any tritium mobilized by the water, would not have migrated beyond a depth of approximately 120 ft, based on a 30-year simulation. The modeling results were consistent with Phase 2 RFI field measurements of tritium activities in subsurface soils, which showed tritium detected to a maximum depth of 120 ft bgs.

The study also simulated the fate and transport of the coolant water and tritium for a period of 90 years into the future. The study predicted that the coolant water and any tritium in the water would not migrate more than 5 to 10 ft below its current predicted depth of 120 ft. Due to radioactive decay, tritium concentrations in the water were predicted to decrease at a faster rate than the downward movement of the wetting front.

WERC Modeling of Tritium Migration through the Vadose Zone

In January 2001, WERC was requested by the U.S. Congress to perform an independent peer review of the performance of the MWL. The results of the study are presented in WERC (2001).

As part of this study, members of the WERC review team developed a fate and transport model of tritium migration in the vadose zone beneath the MWL. The code GoldSim, a generalized object-oriented probabilistic spreadsheet, was used to model tritium contaminant concentrations and fluxes at various depths beneath the MWL over time. The model incorporated mass transport from a source (inventory), various release mechanisms, transport processes, migration pathways, and radionuclide decay.

The WERC team concluded that based on their model results, the spatial and temporal distribution of tritium activities measured in the vadose zone appear to be consistent with those expected, given the inventory, regional meteorology, subsurface soil conditions, and hydrologic parameters. Their modeling results showed good agreement with the Phase 2 RFI data regarding tritium distributions in subsurface soils beneath the MWL. The WERC team also concluded that future concentrations of tritium in subsurface soils at the MWL should decrease over the next 10 years, based on diffusion and natural decay of tritium.

2.1.2 Cover Performance Modeling

In addition to the fate and transport models discussed above, Sandia has conducted extensive cover performance modeling to predict infiltration through various thicknesses of alternative covers. The results from these studies were used to develop the MWL alternative cover design.

Early Cover Performance Modeling

Sandia's early cover performance modeling studies utilized multiple codes to assess infiltration through various thicknesses of alternative covers. The codes used included the water balance model, HELP-3 (Schroeder et al. 1994), and two unsaturated flow models, UNSAT-H (Fayer and Jones 1990) and VS2DT (Healy 1990).

The earlier modeling studies are documented in Wolford (1998); SNL (April 1999); and culminate with the modeling results presented in the original MWL design document, "Deployment of an Alternative Cover and Final Closure of the Mixed Waste Landfill, Sandia National Laboratories, New Mexico" (SNL September 1999). This report was submitted to the NMED in September 1999 for technical review and comment, and was later published as a SAND report by Peace et al. in 2003. The cover performance modeling results from the report are also presented in Section 5.3 of the main text of the MWL Corrective Measures Implementation Plan.

In order to demonstrate that the MWL alternative cover design complies with regulatory guidance, the hydrologic performance of the cover was modeled using HELP-3, UNSAT-H and VS2DT. These codes were used to predict infiltration through soil covers ranging in thickness from 1 to 5 ft. All three models demonstrated that deployment of a vegetated soil cover for final closure of the MWL would reduce infiltration into the landfill to a small percentage of the total precipitation. The models also demonstrated that a 3-ft-thick vegetated soil cover meets the intent of RCRA Subtitle C regulations. Additional cover thicknesses did not lead to significantly better performance. Additional details on the cover performance modeling using HELP-3, UNSAT-H and VS2DT are presented in Section 5.3 of the MWL CMI Plan.

Recent Cover Performance Modeling

The most recent cover performance modeling was conducted in 2003 and 2004 using site-specific climate, hydrologic, and vegetation input parameters. The modeling simulated infiltration of water through the MWL soil cover using the one-dimensional, numerical code UNSAT-H. UNSAT-H is a Richards' equation-based model that simulates infiltration, unsaturated flow, redistribution, evaporation, plant transpiration, and deep infiltration of water. The modeling results corroborated the results from earlier modeling studies. The recent modeling results are published in the SAND report entitled, "Calculation Set for Design and Optimization of Vegetative Soil Covers" (Peace and Goering, 2005). The modeling results were used to determine infiltration input parameters for the MWL probabilistic performance-assessment model.

One of the objectives of the modeling was to assess whether a 3-ft soil cover would meet the EPA-prescribed technical equivalency criteria. The EPA performance-based, technical equivalency criteria used are 31.5 millimeter (mm)/year (yr), or less, for net annual infiltration and 1×10^{-7} centimeter (cm)/second (s) average infiltration rate, based on a hydraulic conductivity of 1×10^{-7} cm/s and the assumption of unit-gradient conditions. The modeling results verified that the 3-ft MWL cover will meet the EPA-prescribed technical equivalency criteria for RCRA landfills under both present and future conditions.

Present conditions were simulated by modeling infiltration through various thicknesses of an engineered cover, while future conditions were simulated by modeling infiltration through various thicknesses of soil under natural conditions (i.e. the "natural analog"). The recent cover modeling results are discussed further in Section 3.4 below. Complete modeling input parameters, boundary conditions, and results are presented in Peace and Goering (2005).

2.2 Probabilistic Performance-Assessment Modeling Approach

This section summarizes the approach used in this study to provide a comprehensive performance assessment of the MWL. Previous studies have looked at individual components of the landfill performance, and nearly all of the studies relied on deterministic evaluations. This study describes a probabilistic performance-assessment approach that captures the inherent uncertainties in the system while honoring site-specific features, processes, and parameters. Sensitivity analyses are also introduced that utilize the probabilistic results to identify the parameters and processes that are most important to the simulated performance metrics.

A performance assessment is defined in DOE M 435.1-1 as "an analysis of a radioactive waste disposal facility conducted to demonstrate there is a reasonable expectation that performance objectives established for the long-term protection of the public and the environment will not be exceeded following closure of the facility." In addition, DOE M 435.1-1 states that the method used for the performance assessment must include uncertainty analyses. A method that addresses these requirements has been used for the Waste Isolation Pilot Plant (DOE, 1996), the Yucca Mountain Project (DOE, 1998), and the intermediate-depth Greater Confinement Disposal Boreholes (Cochran et al., 2001) to assess the long-term performance of nuclear waste repositories. Probabilistic performance assessments have also been used for sites with uranium mill tailings (Ho et al., 2004). A similar systematic approach has been used here to conduct a performance assessment of the MWL. The approach is outlined as follows:

1. Develop and screen scenarios based on regulatory requirements (performance objectives) and relevant features, events, and processes

2. Develop models of relevant features, events, and processes

3. Develop values and/or uncertainty distributions for input parameters

4. Perform calculations and sensitivity/uncertainty analyses

5. Compare results to performance objectives, identify important parameters and processes, and provide feedback to improve calculations, as needed

In Step 1, a scenario is identified as a well-defined sequence of features, events and processes that describes possible future conditions at the disposal site. An example of a scenario is the release of radionuclides from a landfill via the vadose zone to the aquifer, where water is pumped from a well and ingested by an individual. The decision to evaluate various scenarios depends, in part, on relevant performance objectives set forth by regulatory requirements. In addition, scenarios should be chosen that represent features, events, and processes that are relevant to the specific site being evaluated.

Step 2 develops the models that are necessary to simulate the chosen scenarios in the performance assessment. The models that are used vary in complexity, and a hierarchy of models can exist. A conceptual model of each scenario is developed to guide the development of more detailed mechanistic models of individual features, events, and processes that comprise the scenario. These detailed models are then integrated into a total-system model of the entire scenario. The integration of the more detailed models may include the models themselves or a simplified abstraction of the model results.

In Step 3, values are assigned to the parameters to populate the models. If the parameter is well-characterized, a single deterministic value may be assigned. However, uncertainty and/or variability in the parameter may require the use of distributions (e.g., log-normal, uniform) to define the values. Experimental data, literature sources, and professional judgment are often used to determine these distributions. The development of uncertainty distributions for parameters used in this study is described in Section 3.3.

In Step 4, calculations are performed using the integrated models. Because stochastic parameters are used, a Monte Carlo approach is taken to create an ensemble of simulations that use different combinations of the input parameters. For each run (realization), a value for each input parameter is sampled from the uncertainty distribution, and the simulation is performed. The results of each realization are equally probable, and the collection of simulation results yields an uncertainty distribution that can be compared to performance objectives to assess the risk of exceeding those performance objectives or metrics. Sensitivity analyses can also be performed to determine which parameters the performance metrics are most sensitive to (see Section 2.2.1).

The last step (Step 5) is to analyze and compare the results with relevant performance objectives. The findings are typically documented as cumulative distribution functions that present the probability of exceeding a performance objective. Important parameters and processes are also identified through sensitivity analyses. Together, these results may be used to assess the overall performance, prioritize site characterization, evaluate alternative designs, or identify triggers for future actions to address long-term monitoring requirements for regulatory compliance. In this study, the primary purpose of the performance assessment is to determine which contaminants and performance objectives are at risk based on the simulated performance of the MWL. This information will then provide a basis for the triggers that are identified and recommended for the site.

2.2.1 Sensitivity Analyses

A probabilistic performance assessment provides not only a quantification of uncertainties in the simulated performance metrics, it also allows for a quantified sensitivity analysis to be performed. A sensitivity analysis of the probabilistic assessment results can provide valuable information regarding the processes and parameters that are most important to the simulated performance metric(s). This information provides understanding about the relationship between uncertainty in individual input parameters and the uncertainty in the performance of the system. In addition, knowledge of the parameters having the greatest influence on future performance can be used to help prioritize site characterization activities, to help optimize landfill cover design, and to assist in the design of monitoring systems and triggers. Using a sensitivity analysis provides the quantitative information necessary to ensure that resources are directed to those aspects of the cover system that “drive” performance and not on those aspects of cover design that have little significance.

The sensitivity of the performance-assessment model can be determined from the Monte Carlo probabilistic realizations using regression analysis. Multiple regression analysis involves construction of a linear regression model of the simulated output (the dependent variable) and the stochastic input variables (independent variables) using a least-squares procedure. Stepwise linear regression is a modified version of multiple regression that selectively adds input parameters to the regression model in successive steps (Helton and Davis, 2000). In this method, a sequence of regression models is constructed that successively adds the most important input parameters to the regression to improve the overall correlation. In the end, the sensitivity analysis identifies those parameters that are significantly correlated to the performance metric, and omits those parameters that are not. This study uses a stepwise linear rank regression to perform sensitivity analyses on simulated performance metrics that are at risk of being exceeded.

3. Performance-Assessment Modeling of the Mixed Waste Landfill

3.1 Scenarios and Performance Objectives

In this study, relevant contaminants of concern were grouped into the following categories: (1) radionuclides, (2) heavy metals, and (3) VOCs. Table 1 summarizes the specific contaminants, scenarios, and performance objectives that were considered in this study. In general, the two pathways of concern include transport of volatile or gas-phase contaminants from the MWL to the atmosphere, and migration of aqueous-phase or vapor-phase contaminants through the vadose zone to the groundwater. For each of these primary pathways, relevant performance objectives and metrics were identified for each of the contaminants of concern. The chosen scenarios represent the most likely releases of contaminants from the MWL based on estimated inventories, contaminant properties, and previous studies.

Table 1. Summary of scenarios and performance objectives used in the performance assessment of the MWL.

Scenario	Description	Performance Objectives[a]
1	Water percolates through the cover to the waste	• Infiltration through the cover shall be less than 10^{-7} cm/s (a unit-gradient flow is assumed to equate infiltration to hydraulic conductivity) (U.S. EPA 40 CFR 264.301)
2	Tritium diffuses to the atmosphere and migrates via gas and aqueous phases through the vadose zone to the groundwater	• Dose to the public via the air pathway shall be less than 10 mrem/yr (excludes radon) (U.S. EPA 40 CFR 61.92) • Dose from beta particles and photon emitters shall be less than 4 mrem/yr (U.S. EPA 40 CFR 141.66; U.S. EPA, 2003) • Tritium concentrations in groundwater shall not exceed 20,000 pCi/L (40 CFR 141.66 Table A; tied to 4 mrem/yr)
3	Radon steadily diffuses to the atmosphere and migrates via gas and aqueous phases through the vadose zone to the groundwater	• The average flux of radon-222 gas shall be less than 20 pCi/m^2/s at the surface of the landfill (U.S. EPA 40 CFR 192) • Radon concentrations in groundwater shall not exceed 300 pCi/L (proposed EPA rules, Federal Register: November 2, 1999 (Volume 64, Number 211) Pages 59345-59378)
4	One or more radionuclides migrate via the aqueous phase through the vadose zone to the groundwater	• Maximum concentrations in groundwater of gross alpha particle activity (including radium-226 but excluding radon and uranium) is 15 pCi/L (U.S. EPA 40 CFR 141.66; U.S. EPA, 2003) • Uranium concentrations in groundwater shall not exceed EPA MCL of 30 μg/L (U.S. EPA 40 CFR 141.66; U.S. EPA, 2003) • Dose from beta particles and photon emitters shall be less than 4 mrem/yr (U.S. EPA 40 CFR 141.66, U.S. EPA, 2003)
5	Lead and cadmium migrate via the aqueous phase through the vadose zone to the groundwater	• Lead concentrations in groundwater shall not exceed the EPA action level of 15 μg/L (U.S. EPA, 2003) • Cadmium concentrations in groundwater shall not exceed the EPA MCL of 5 μg/L (U.S. EPA, 2003)
6	PCE migrates through the vadose zone to the groundwater	• PCE concentrations in groundwater shall not exceed the EPA MCL of 5 μg/L (U.S. EPA 40 CFR 141.61; U.S. EPA, 2003

MCL = Maximum Contaminant Level

[a]The point of compliance is taken at the boundary of the waste site. The period of performance was specified as 1,000 years in the regulations for some of the performance metrics, but for many of the performance metrics, the period of performance was not specified. In this study, a 1,000 -year period was simulated.

3.2 Performance-Assessment Models

The following sections describe the models that were developed and used to simulate the fate and transport of the different contaminants in the various scenarios summarized in Table 1.

3.2.1 FRAMES/MEPAS

The aqueous transport of heavy metals (lead and cadmium) and the radionuclides were simulated using the probabilistic simulation tools FRAMES[1] (Framework for Risk Analysis in Multimedia Environmental Systems; Whelan et al., 1997) and MEPAS[2] (Multimedia Environmental Pollutant Assessment System; Whelan et al., 1992), developed by Pacific Northwest National Laboratory. The FRAMES system, which integrates the fate and transport models comprising MEPAS, allows for a holistic approach to modeling in which models of different type (i.e., source, fate and transport, exposure, health impact), resolution (i.e., analytical, semi-analytical, and numerical), and operating platforms can be combined as part of the overall assessment of contaminant fate and transport in the environment. The FRAMES system employs a graphical user interface for integrating computer models, an extensive contaminant database, a probabilistic sensitivity/uncertainty module, and textual and graphical viewers for presenting modeling outputs.

Existing models in FRAMES include those derived from MEPAS (Whelan et al., 1992). MEPAS is a physics-based environmental analysis code that integrates source-term, transport, and exposure models for endpoints such as concentration, dose, or risk. MEPAS is capable of computing contaminant fluxes for multiple routes, which include leaching to groundwater, overland runoff, volatilization, suspension, radioactive decay, constituent degradation, and source/sink terms. In this study, only the source-term and vadose-zone models were implemented. The source-term model conservatively simulates leaching from the waste zone (assuming no containment) based on either the solubility or the inventory-limited concentration (Streile et al., 1996). Decay of constituents can also occur within the source-term model. The transport of the contaminant through the vadose-zone is then simulated assuming liquid-phase advection, dispersion, adsorption, and decay of the contaminant (Whelan et al., 1996). It should be noted that gas-phase transport is not assessed in FRAMES/MEPAS. Separate models were used to evaluate the gas-phase transport of tritium, radon, and VOCs.

In this study, the aquifer concentration and subsequent dose, if applicable, were conservatively estimated based on the simulated concentration of the constituent in the groundwater at the interface of the vadose-zone and the water table (e.g., dilution caused by transport in the saturated zone was ignored). Section 3.3 presents the input parameters that were used in the radionuclide-transport models.

Uncertainty analyses are performed in FRAMES using the sensitivity module. The sensitivity module can be attached to any model that has been integrated into FRAMES and allows the user to stochastically vary any input parameter that is identified in the process models. Input parameters can be stochastically varied by a distribution, correlation coefficient, an equation, or

[1] http://mepas.pnl.gov/FRAMESV1 (FRAMES v. 1.5)
[2] http://mepas.pnl.gov/earth/mepasmain.html (MEPAS v. 4.1.1)

any combination of these three options. Four distributions are currently available: (1) uniform, (2) log uniform, (3) normal, and (4) log normal. The sensitivity module utilizes the Latin Hypercube Sampling (Wyss and Jorgensen, 1998) technique to minimize the number of modeling runs that must be performed to accurately represent distributions selected by the user. In this study, 100 realizations were simulated for each scenario (a sensitivity analysis was performed using 100 vs. 200 realizations in Section 3.5.2.2, and results showed that 100 realizations were sufficient to adequately represent the distribution of the simulated output).

3.2.2 Transient Gas- and Liquid-Phase Transport

A separate model was used to model the transient transport of tritium in both the gas and liquid phases at the MWL. As stated in the previous section, FRAMES/MEPAS was used to simulate the transport of radionuclides such as tritium, but only in the liquid phase. Tritium, in the form of tritiated water, is volatile and can be transported via both the gas and liquid phases. Regulatory metrics exist for dose caused by exposure to tritium (a beta particle emitter) in both the air and groundwater pathways (see Table 1). Also, because the half-life of tritium is relatively short (12.3 years), a transient analysis was required. Therefore, the transport of tritium was modeled using a transient model that accounts for advective liquid-phase transport, diffusive gas-phase transport, decay, and adsorption (if applicable) in the vadose zone (Jury et al., 1983; Jury et al., 1990). This same model was also used to model the transport of PCE. In this model, a contaminated zone is assumed to initially exist with a defined thickness and concentration. Over time, the contaminant migrates and decays (if applicable) assuming a flux boundary condition at the surface, defined by an atmospheric boundary layer thickness (see Jury et al., 1983) and a zero concentration boundary beneath the waste zone at a location infinitely far away from the source. Superposition is used to account for a clean overburden (cover) above the waste zone (Jury et al., 1990). The analytical solution to this model was implemented in Mathcad,® and a Monte Carlo analysis was implemented with the uncertain variables using 100 realizations. Section 3.3 presents the input parameters and distributions that were used in the tritium- and PCE-transport models.

3.2.3 Steady-State Gas- and Liquid-Phase Transport

Radon-222 is generated from the decay of radium-226, which is a decay product of uranium-238. Because these parent constituents have long half lives, the source of radon-222 production is assumed to last indefinitely. Therefore, the transient model described in the previous section that accounts for a finite source of contaminant is not appropriate. Instead, a steady-state model of radon transport was developed to account for steady generation of radon-222, advective liquid-phase transport, diffusive gas-phase transport, and decay (see Appendix A in Section 7). Mathcad® was used to provide a Monte Carlo analysis of the analytical solution using 100 realizations. Section 3.3 presents the input parameters and distributions that were used in the radon-transport model.

3.3 Input Parameters and Distributions

The constituents that were included in the performance assessment of the MWL are summarized in Table 2. The parameter values and distributions that were used are also summarized in the table. The adsorption coefficient (K_d) was assumed to be an uncertain parameter, so a range of values was obtained from the literature for the constituent and soil type (sandy loam) at the MWL. A log-uniform distribution was used to emphasize the lower values in the distribution. The inventory of each constituent was also assumed to be an uncertain variable. The estimated inventory from previous reports and studies was used as the lower bound in a uniform distribution for each constituent. The lower bound was multiplied by two to obtain the upper bound for the assumed uniform distribution. The maximum solubility obtained from the literature for each constituent was used. All other parameters were obtained from site-specific reports, scientific literature, or EPA recommendations.

Table 3 summarizes the parameters and distributions used to define the contaminated waste zone (source term) in the models. The waste-zone length, width, and thickness is based on the size of the pits, trenches, and dimensions of the MWL. The maximum thickness of the cover is based on the design specifications given in Peace et al. (2005). The minimum thickness of the cover is set equal to zero as a bounding value to account for the possibility that complete erosion of the cover may occur in the future. This is a conservative bounding assumption since the intent is to maintain the integrity of the cover at the MWL.

Table 4 summarizes the parameters and distributions used to describe the vadose-zone in the models. Uncertainty was included for a number of variables including thickness of the vadose zone, infiltration rate, hydraulic conductivity, and site-specific transport parameters. The distributions used for the various vadose-zone parameters were derived from site-specific data or literature pertaining to the constituents and scenarios evaluated in this study. The liquid- and gas-phase tortuosity coefficients are used to calculate effective diffusion coefficients in porous media. The tortuosity coefficient accounts for the increased tortuosity and reduced area available for diffusion in porous media. The minimum value is based on formulation by Millington (1959), and the maximum value is assumed to be equal to one (the upper bound), which yields the maximum diffusion. Studies of enhanced vapor diffusion have shown that large values of the tortuosity coefficient (yielding diffusion rates equivalent to those in free space) are possible in unsaturated porous media because of evaporation and condensation mechanisms across liquid islands in pores (Ho and Webb, 1998).

Finally, Table 5 summarizes the parameters and distributions used to estimate dose due to exposure via the atmospheric (e.g., inhalation) or groundwater pathway. Dose via inhalation and dermal adsorption of gas-phase tritium was calculated based on the surface flux ($pCi/m^2/s$) of tritium determined in the models.[3] The length and width of the waste zone was used to determine the flux rate of tritium at the surface (pCi/s), and the average wind speed and vertical mixing height was used to determine the average concentration above the landfill. The inhalation rate was then used to estimate the human intake of gas-phase tritium, and the dose-

[3] Inhalation and dermal adsorption of gas-phase radon and PCE were not used as performance metrics in this analysis because the enforceable regulatory metrics pertaining to radon and PCE do not use dose (surface flux of radon and groundwater concentration of PCE was used). Table 1 summarizes the performance metrics that were used for these constituents.

conversion factor (Table 2) was used to determine the dose. For groundwater exposure, a conservative estimate for water ingestion (10 L/day) was used together with the simulated groundwater concentrations to determine intake. The assumed water ingestion rate of 10 L/day is five times greater than the EPA drinking-water standard of 2 L/day and is intended to account for indirect sources of water ingestion and absorption such as consumption of vegetables and fruits irrigated by contaminated water. The dose-conversion factor was then used to estimate dose via the groundwater pathway.

Table 2. Summary of input parameters and distributions for constituents used in the models.

Constituent and Molecular Weight	Inventory[a]	Half-Life[b]	Specific Activity (Ci/g)[c]	Adsorption Coefficient, K_d (mL/g)[d]	Max Solubility (mg/L)[e]	Liquid-Phase Diffusion Coefficient (m^2/s)[f]	Gas-Phase Diffusion Coefficient (m^2/s)[f]	Henry's Constant (C_g/C_l)[g]	Dose Conversion Factor (rem/pCi)[h]
Americium-241$^{\alpha}$	Uniform: 0.04 - 0.08 Ci	433 yrs	3.43	Log-Uniform: 1900 – 9600	2.4×10^{4}	6×10^{-10}	N/A	N/A	3.64×10^{-6}
Cesium-137$^{\beta}$	Uniform: 410 – 820 Ci	30.2 yrs	86.4	Log-Uniform: 30 – 4600	137,000	6×10^{-10}	N/A	N/A	5.0×10^{-8}
Cobalt-60$^{\beta}$	Uniform: 3500 – 7000 Ci	5.27 yrs	1130	Log-Uniform: 60 – 1300	600	6×10^{-10}	N/A	N/A	2.69×10^{-8}
Plutonium-238$^{\alpha}$	Uniform: 0.0012 - 0.0024 Ci	87.7 yrs	17.1	Log-Uniform: 80 – 520	0.24	6×10^{-10}	N/A	N/A	3.2×10^{-6}
Plutonium-239$^{\alpha}$	Uniform: 0.0012 - 0.0024 Ci	2.41×10^{4} yrs	0.0621	Log-Uniform: 80 – 470	0.24	6×10^{-10}	N/A	N/A	3.54×10^{-6}
Radium-226$^{\alpha}$	Uniform: 6-12 Ci	1,600 yrs	0.989	Log-Uniform: 500 – 36,000	0.45	6×10^{-10}	N/A	N/A	1.32×10^{-6}
Radon-222$^{\alpha}$	Constant generation from Radium-226	3.82 days	1.54×10^{5}	0	N/A	$0.07\exp[-4(S - S\phi^2 + S^5)]$ where S=liquid saturation, ϕ=porosity		0.26^{-1}	1.44×10^{-8} (inhalation)
Strontium-90$^{\beta}$	Uniform: 410 -820 Ci	29.1 yrs	137	Log-Uniform: 15 – 20	90,000	6×10^{-10}	N/A	N/A	1.42×10^{-7}
Thorium-232$^{\alpha}$	Uniform: 1 – 2 Ci	1.4×10^{10} yrs	1.10×10^{-7}	Log-Uniform: 20 – 2000	23	6×10^{-10}	N/A	N/A	2.73×10^{-6}
Tritium$^{\beta}$ H-3	Uniform: 2400 – 4800 Ci	12.3 yrs	9690	0	N/A	2.3×10^{-9}	2.6×10^{-5}	1.7×10^{-5}	6.4×10^{-11} (inhalation; x1.5 to include dermal absorption)

Constituent and Molecular Weight	Inventory[a]	Half-Life[b]	Specific Activity (Ci/g)[c]	Adsorption Coefficient, K_d (mL/g)[d]	Max Solubility (mg/L)[e]	Liquid-Phase Diffusion Coefficient (m^2/s)[f]	Gas-Phase Diffusion Coefficient (m^2/s)[f]	Henry's Constant (C_g/C_l)[g]	Dose Conversion Factor (rem/pCi)[h]
Uranium-238[α]	Uniform: 9.3 – 18.6 Ci	4.47×10^9 yrs	3.35×10^{-7}	Log-Uniform: 0.4 – 15	24	6×10^{-10}	N/A	N/A	2.55×10^{-7}
Cadmium 112.41	Uniform: 1350 – 2700 kg	stable	N/A	Log-Uniform: 8 – 80	1.4×10^6	6×10^{-10}	N/A	N/A	N/A
Lead 207.2	Uniform: 128,000 – 256,000 kg	stable	N/A	Log-Uniform: 270 – 4360	4.43×10^5	6×10^{-10}	N/A	N/A	N/A
PCE 165.83	Uniform: 5 – 70 kg	Log-Uniform: 9 mos – 10^{10} yrs	N/A	Log-Uniform: 0.038 - 2	N/A	9.2×10^{-10}	9.5×10^{-6}	0.42	N/A

N/A–Not Applicable or not used in the model; for solubility, this indicates that the value is not limiting

[α]Alpha particle; [β]Beta particle

[a]Minimum inventory of all constituents except cadmium and PCE was estimated from values in SNL (1993); maximum value was assumed to be twice the minimum value. Cadmium inventory was estimated from measured soil concentrations (Peace et al., 2002) and maximum simulated penetration depth (120 feet) of coolant water potentially carrying the cadmium (Wolford, 1997). PCE inventory is estimated from measured soil-gas concentrations (Peace et al., 2002); the maximum measured gas concentration (5,900 ppb) was used as a minimum value in a uniform distribution increasing to ten times this value (calibrated to available data). The maximum areal extent of the MWL was used (430 feet x 300 feet) along with an uncertain thickness ranging from 10-27 feet (see Table 3 for waste-zone description).

[b]Lide (2005); half-life of PCE is assumed to range from 9 months (EPA fact sheet: www.epa.gov/OGWDW/dwh/t-voc/tetrachl.html) to 10^{10} yrs (no degradation)

[c]Specific activity is calculated as 3.575×10^5/(half-life (yrs) x molecular weight)

[d]U.S. EPA (1999), Sheppard and Thibault (1990), Looney et al. (1997), EPA fact sheet: www.epa.gov/OGWDW/dwh/t-voc/tetrachl.html

[e]Looney et al. (1997), Chen et al. (2002), Ohe et al. (2002), Elless and Lee (1998), BSC (2005), and EPA Online Fact Sheets (www.epa.gov/safewater/dwh/t-ioc/cadmium.html; www.epa.gov/safewater/dwh/t-ioc/lead.html). Based on the maximum inventory and minimum waste volume possible, the solubility may potentially limit the maximum aqueous source concentration for radium-226, thorium-232, uranium-238, and lead; all other constituents are not limited by the solubility.

[f]Whelan et al. (1996), Smiles et al. (1995), Rogers et al. (1994), U.S. NRC (1989), Reid et al. (1987)

[g]Rogers et al. (1984), U.S. NRC (1989), Smiles et al. (1995), steam tables, and EPA's online Henry's Constant calculator (www.epa.gov/athens/learn2model/part-two/onsite/esthenry.htm)

[h]U.S. EPA (1988)

Table 3. Summary of input parameters and distributions for the waste zone.

Input Parameter	Value or Distribution	Basis and Comments
Waste-Zone Length [m]	Uniform 3.05 – 131	Minimum value determined by size of individual pit (10'). Maximum value determined by extent of Mixed Waste Landfill.
Waste-Zone Width [m]	Uniform 3.05 – 91.4	Minimum value determined by size of individual pit (10'). Maximum value determined by extent of Mixed Waste Landfill.
Waste-Zone Thickness [m]	Uniform 3.05 – 8.23	The thickness of the waste zone for all constituents except for cadmium is based on the depth of the trenches and pits, which range from 3 – 8 m (10 – 27 feet). The thickness of the cadmium contamination zone is assumed to be equal to 36.6 m (120 feet), which is the maximum simulated penetration depth of the coolant water that may have carried the cadmium (Wolford, 1997).
Thickness of Cover and Clean Overburden [m]	Uniform 0 – 4.88	Minimum value is assumed to be zero due to erosion.[a] Maximum value is based on maximum thickness of the cover at various locations (Peace et al., 2005).

[a]The intent is to maintain the integrity of the cover at the MWL. Complete erosion of the cover is a conservative bounding assumption for modeling purposes.

Table 4. Summary of input parameters and distributions for the vadose zone.

Input Parameter	Value or Distribution	Basis and Comments
Thickness of Vadose Zone[a] [m]	Uniform 133 - 148	Thickness of the vadose zone for all constituents except for cadmium is based on measured depths to the water table. The depth to the water table from the surface ranges from 141 – 151 m (461 - 495 feet) (Goering et al., 2002). The range of vadose-zone thicknesses accounts for the waste-zone thickness. For cadmium, the thickness is assumed to be 104 m (461 – 120 = 341 feet).
Infiltration Rate [m/s]	Uniform 1.18×10^{-11} – 6.12×10^{-11}	Minimum value based on infiltration through 2 ft of engineered cover under current climate (Peace and Goering, 2005); maximum value based on two times the current maximum precipitation in a natural analog vegetative cover to account for future climates (Waugh, 1997; Menking et al., 2004).
Saturated Hydraulic Conductivity [cm/day]	Log-Normal Mean log: 1.039 S.D. log: 0.705 Upper bound: 173 Lower bound: 0.38	Peace et al. (2003)
Porosity [-]	Uniform 0.302 – 0.445	Peace and Goering (2005)
Volumetric Moisture Content [-]	Uniform 0.053 – 0.225	Peace and Goering (2005)
Longitudinal dispersivity [m]	0.1 times the travel distance (vadose-zone thickness)	Based on field data reported in Gelhar et al. (1992). This is used in the FRAMES/MEPAS models for liquid transport to the groundwater.
Liquid-Phase Tortuosity Factor [-]	Uniform 0.001 – 1	Lower bound based on formulation of Millington (1959); upper bound is physical limit. This is used in the tritium and PCE models.
Gas-Phase Tortuosity Factor [-]	Uniform 0.1 – 1	Lower bound based on formulation of Millington (1959); upper bound is physical limit. This is used in the tritium and PCE models.

[a]Used only in FRAMES/MEPAS. For all other models, the depth to the water table (141-151 m) is used.

Table 5. Summary of input parameters and distributions for the biosphere.

Input Parameter	Value or Distribution	Basis and Comments
Atmospheric Boundary Layer Thickness [m]	Uniform 0.001 – 1	Minimum is based on values reported by Jury et al. (1983). Maximum is a conservative upper value.
Vertical Atmospheric Mixing Length [m]	2	Conservative value to encompass volume occupied by a human (Yu et al., 1993).
Average Wind Speed [m/s]	3.63	Average value based on seven years of site data (SNL Site Environmental Monitoring Reports 1990-1996).
Inhalation Rate [m^3/day]	20	U.S. EPA (1991)
Water Intake [L/day]	10	Conservative estimate to account for drinking water and indirect ingestion or absorption via plants, animals, showering, etc. Recommended value for drinking water is 2 L/day (U.S. EPA, 2000).
Distance to Receptor [m]	0	The point of compliance for groundwater concentrations is assumed to be at the boundary of the landfill. Receptor is assumed to be located adjacent to landfill for inhalation, and water used for drinking, irrigation, etc. is assumed to be drawn from the aquifer directly beneath the MWL.

Key Assumptions:

The key assumptions regarding the models and input parameters used in the performance assessment of the MWL are summarized below:

- Receptor located adjacent to MWL
    - Tritium dose caused by continuous inhalation and exposure of tritium flux directly above MWL.
    - Groundwater dose calculated based on concentrations in aquifer directly beneath MWL. Water intake assumed to be 10 L/day (five times EPA standard of 2 L/day for drinking water).
- Maximum waste inventory set equal to twice estimated values based on historical records.
- Sealed sources of radium-226 allowed to degrade in 1,000 years (emanation factor for radon-222 allowed to increase).
- Cover allowed to completely erode in 1,000 years.
- 1-D model: yields maximum transport to surface and groundwater.
- Bounding tortuosity coefficients: yields maximum diffusion rates.

3.4 Water Infiltration through the Cover

Infiltration of water through a proposed soil cover for the MWL was modeled using the one-dimensional, numerical code UNSAT-H (Peace and Goering 2005). UNSAT-H is a Richards' equation-based model that simulates infiltration, unsaturated flow, redistribution, evaporation, plant transpiration, and deep infiltration of water. The modeling was conducted in 2003 and 2004 using site-specific climate, hydrologic, and vegetation input parameters. The modeling results corroborated the results from earlier modeling studies presented in Section 5.3 of the MWL Corrective Measures Implementation Plan. Complete modeling input parameters, boundary conditions, and results are discussed in Peace and Goering (2005).

One of the objectives of the modeling was to assess whether the proposed 3-ft cover will meet the EPA-prescribed technical equivalency criteria. The EPA performance-based, technical equivalency criteria used in this study are 31.5 millimeter (mm)/year (yr), or less, for net annual infiltration and 1×10^{-7} centimeter (cm)/second (s) average infiltration rate, based on a hydraulic conductivity of 1×10^{-7} cm/s and the assumption of constant unit gradient conditions. The modeling results demonstrate that the proposed 3-ft MWL cover will meet the EPA-prescribed technical equivalency criteria for RCRA landfills under both present and future conditions.

3.4.1 Model Description

The modeling study was formulated in one dimension, vertically, and was discretized by placing computational nodes at predetermined vertical spacing in a conceptual soil profile to evaluate the performance of a cover 3 ft in thickness. Figure 3 shows a cross-section of the conceptual soil profile and its numerical discretization. A total of 30 nodes were used to discretize a conceptual soil profile 6 ft in thickness. A thickness of 6 ft is used so that the overlying nodes of interest are not adversely impacted by the lowermost boundary conditions.

The conceptual soil profile was simulated as a lithologic monolayer. A soil profile with uniform soil and hydrologic properties translates into a significant conservative estimate of liquid water flow. If multiple layers are simulated, the water potential in the underlying layer must equal the water potential in the overlying layer before flow into the lower layer occurs. Multiple layering in performance modeling as well as multiple layers in nature attenuate the downward flow of liquid water (e.g., multiple capillary barriers). UNSAT-H input parameters for the cover are summarized in Table 6-1 in Peace and Goering (2005). All parameters are site-specific and were carefully measured to obtain the most accurate estimate of infiltration possible.

Climatic data represent the site-specific conditions to the maximum extent possible. The historical rainfall record from Albuquerque International Sunport, dating from 1919 to 1996, was used to input precipitation and simulate infiltration through the cover. Two discrete sets of precipitation data were compiled from the historical record. The first data set, the "historical precipitation data," included 65 years of daily rainfall recorded from 1932 to 1996. The second data set, the "maximum precipitation data," included the 8 heaviest years' rainfall recorded between 1919 and 1996, repeated 8 times for a total of 64 years. The heaviest rainfall years were 1919, 1929, 1940, 1941, 1982, 1986, 1988, and 1992. These maximum precipitation data represent a climate change of 50% more precipitation overall (1.5 times the current level).

Precipitation during these years ranged from 12 in. to over 15 in. The current average annual precipitation for the Albuquerque area is 8.65 in./yr.

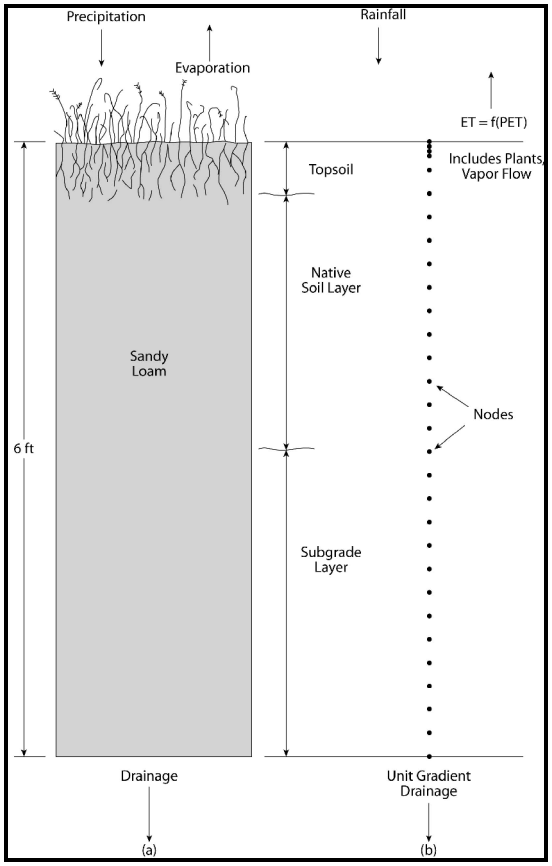

Figure 3. (a) Conceptual model for infiltration model. (b) Nodal discretization in UNSAT-H.

Literature evidence suggests that wetter conditions probably occurred during the last glacial episodes in the Southwest. Studies of paleoclimate during the Last Glacial Maximum suggest that precipitation in the Estancia basin, located west of the Manzano Mountains, nearly doubled relative to modern levels during brief, decade- to century-long episodes of colder and wetter climate (Menking et al. 2004). Farther west, studies of floral assemblages in late Pleistocene packrat middens near Yucca Mountain, Nevada, indicate that precipitation was an estimated 2.4 times modern levels during the Last Glacial Maximum (Menking et al. 2004).

Because precipitation in the southwest may have been significantly higher in the past, a precipitation multiplier of 2X was used to estimate maximum infiltration levels in the future through the MWL cover. A polynomial extrapolation of infiltration was developed using the results from modeling the “historical precipitation data” and the “maximum precipitation data”, and assuming that hydrologic properties of the cover are at equilibrium with the natural system.

Plant transpiration is the primary mechanism in removing water from a cover. Without plants, covers would only depend on evaporation to remove water from the soil profile. Vegetative input for the UNSAT-H code included root depth, root length density, leaf area index, growing season, and percent bare area. Root depth, root length density, leaf area index, growing season, and percent bare area for a climax community were measured in the field (Peace and Goering, 2005).

3.4.2 Model Results

The UNSAT-H code simulated infiltration through a soil cover with a climax community of native vegetation. The range of average infiltration rates for the MWL was predicted under current and future climate conditions. For both the current and future scenarios, the estimated infiltration rates through a 2-ft cover rather than a 3-ft cover were used to be conservative, as the model predicted infiltration through a 3 ft cover to be slightly negative, i.e. a net upward flux (Peace and Goering 2005).

Under present climate conditions, the model predicted the average infiltration rate through the proposed MWL cover to be 1.18 X 10^{-9} cm/s for the historical precipitation scenario and 5.34 X 10^{-9} cm/s for the maximum precipitation scenario.

Under future climate conditions, the properties of the MWL cover soils will gradually revert towards those of the natural soils around the landfill, as the bulk density and porosity of the soil equilibrate with natural conditions. Under these conditions, the model predicted the average infiltration rates to be 2.44 X 10^{-10} cm/s for the historical precipitation scenario and 1.04 X 10^{-9} cm/s for the maximum precipitation scenario.

Since the maximum precipitation scenario represents a 50% increase in precipitation over the historical precipitation scenario, a polynomial regression for infiltration as a function of precipitation can be determined (assuming that zero infiltration occurs with zero precipitation). We assign a normalized precipitation value of one to the historical precipitation scenario and a value of 1.5 to the maximum precipitation scenario. The quadratic regression then allows extrapolation to future climates where the precipitation is expected to be twice as high as present values. If the future precipitation is twice as high as current precipitation, the precipitation multipliers will increase to 2X for the historical scenario and 3X for the maximum scenario. Applying these multipliers to the quadratic regression yields estimated future infiltration rates of 2.29 X 10^{-9} cm/s for the historical precipitation scenario and 6.12 X 10^{-9} cm/s for the maximum precipitation scenario (Figure 4). We use 6.12×10^{-9} cm/s as an upper bound for the infiltration distribution to represent maximum precipitation conditions in the future, and we use 1.18×10^{-9} cm/s as a lower bound for the infiltration distribution to represent current precipitation conditions with the engineered cover design.

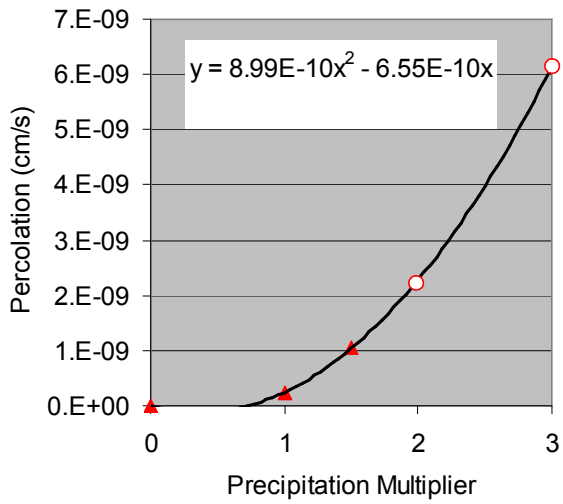

Figure 4. Polynomial regression used to estimate future infiltration values as a function of precipitation multipliers. Triangles denote simulated values; circles denote extrapolated values.

In summary, the modeling results demonstrate that the proposed 3-ft soil cover will meet the EPA-prescribed technical equivalency criteria for both present and future climate conditions, even if precipitation is significantly higher. The EPA performance-based, technical equivalency criteria are 31.5 mm/yr or less for net annual infiltration and 1 x 10^{-7} cm/s average infiltration rate, based on a hydraulic conductivity of 1 x 10^{-7} cm/s and the assumption of constant unit gradient conditions. Predicted average infiltration rates through the MWL cover are expected to range from 1.18 X 10^{-9} cm/s for present conditions to 6.12 X 10^{-9} cm/s for future conditions, under the assumption of significantly higher precipitation. These infiltration rates are considerably lower than the EPA performance-based, technical equivalency criterion of 1 x 10^{-7} cm/s.

3.4.3 Summary of Key Results and Assumptions

- Simulations of infiltration through the engineered cover at the MWL show that the net annual infiltration will be less than the regulatory metric of 10^{-7} cm/s.
- Predicted average infiltration rates through the MWL cover are expected to range from 1.18 X 10^{-9} cm/s for present conditions to 6.12 X 10^{-9} cm/s for future conditions.
- Key Assumption:
    - Predicted range of infiltration rates was based on simulated infiltration averaged over 64 years of data (as opposed to selected annual or daily averages).

3.5 Fate and Transport of Tritium

3.5.1 Model Description

As described in Section 3.2.2, the fate and transport of tritium was simulated using a model that accounts for transient liquid advection, gas diffusion, and decay (Jury et al., 1983; Jury et al., 1990). The upper boundary condition at the surface allowed for gas-phase transport of tritium to the atmosphere across a prescribed (uncertain) boundary-layer thickness. The concentration at the bottom of the model was specified as zero infinitely far away from the source.

The initial inventory of tritium was estimated from past records (SNL, 1993), and the extent of the contaminated waste zone was allowed to vary from the size of an individual pit to the entire size of the MWL. The inventory was allowed to vary between the estimated value (as a lower bound) and an upper bound equal to twice the estimated value. The simulations were run until tritium concentrations decreased to negligible values in the system. One hundred realizations were used in the simulations.

3.5.2 Model Results

3.5.2.1 Comparison to Field Data

In 1990 and 1993, measurements of tritium at the surface and at locations in the subsurface were measured at the MWL (Johnson et al., 1995). These measurements were used as a reference to check the simulated results of the model. Figure 5 shows the simulated tritium surface flux as a function of time for 100 realizations. The minimum and maximum measured tritium surface flux values taken in 1993 are also shown in the figure. The measured values are shown spanning 5 to 33 years because the actual time elapsed since the tritium was emplaced is uncertain. Emplacement of waste at the MWL began in 1960 and ended in 1988; therefore, the measured values sampled in 1993 could have occurred between 5 and 33 years after emplacement. Results show that the simulated results during this span of time are either within or above the measured bounding values. Figure 6, Figure 7, and Figure 8 show similar plots and results for different locations in the subsurface. In most cases, the simulated fluxes and concentrations are higher than the measured values. These results and comparisons provide evidence that the models can provide realistic values for the simulated outputs. In addition, the comparisons confirm that the model is producing conservatively high results for surface fluxes and subsurface concentration because of the conservative values and distributions used for the model parameters.

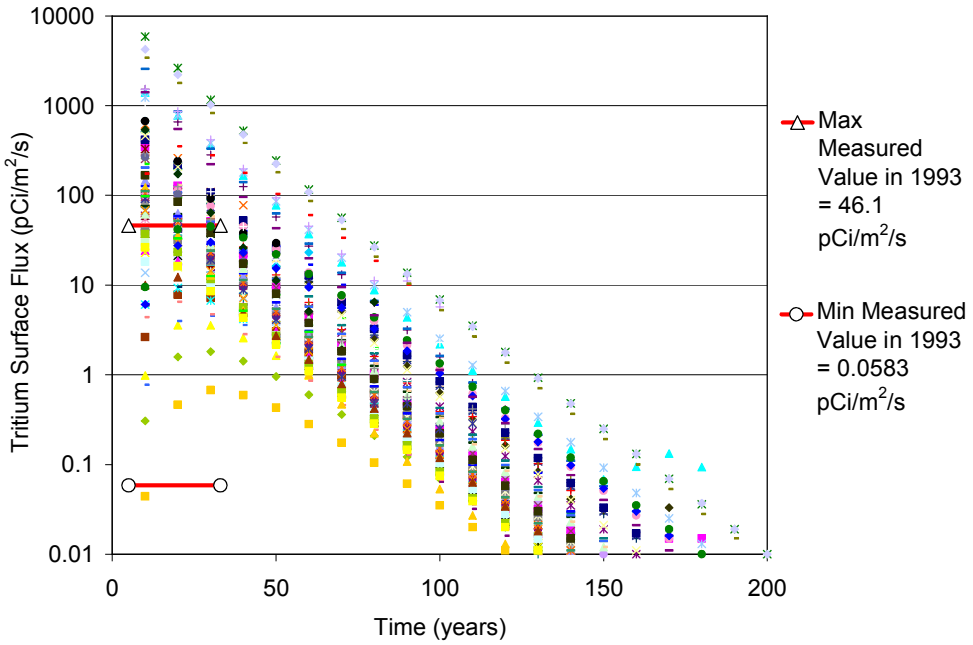

Figure 5. Comparison of simulated tritium surface flux as a function of time for 100 realizations with range of measured values in 1993.

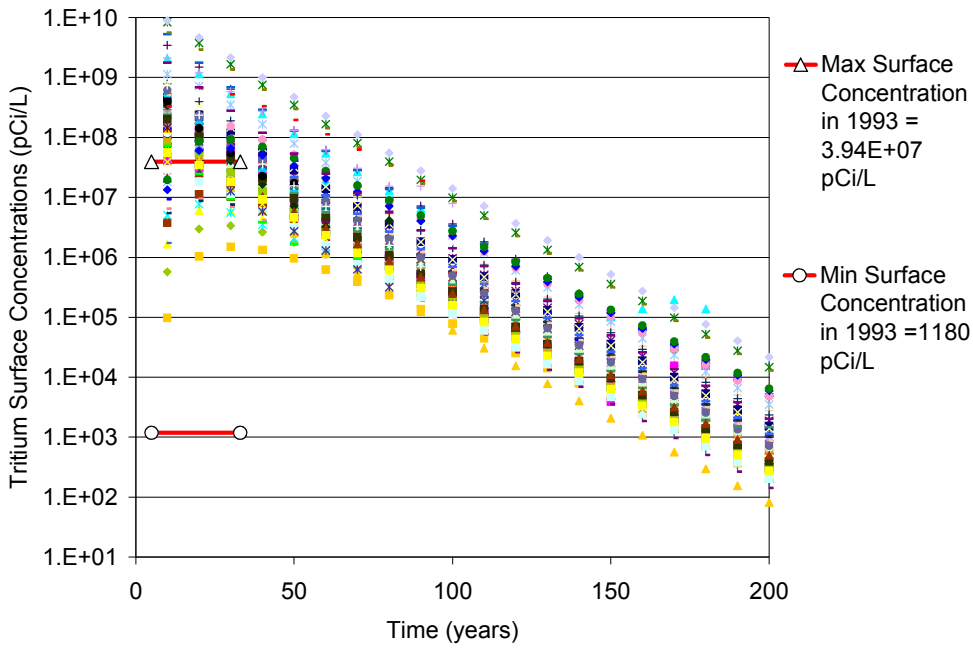

Figure 6. Comparison of simulated tritium surface concentration as a function of time for 100 realizations with range of measured values in 1993.

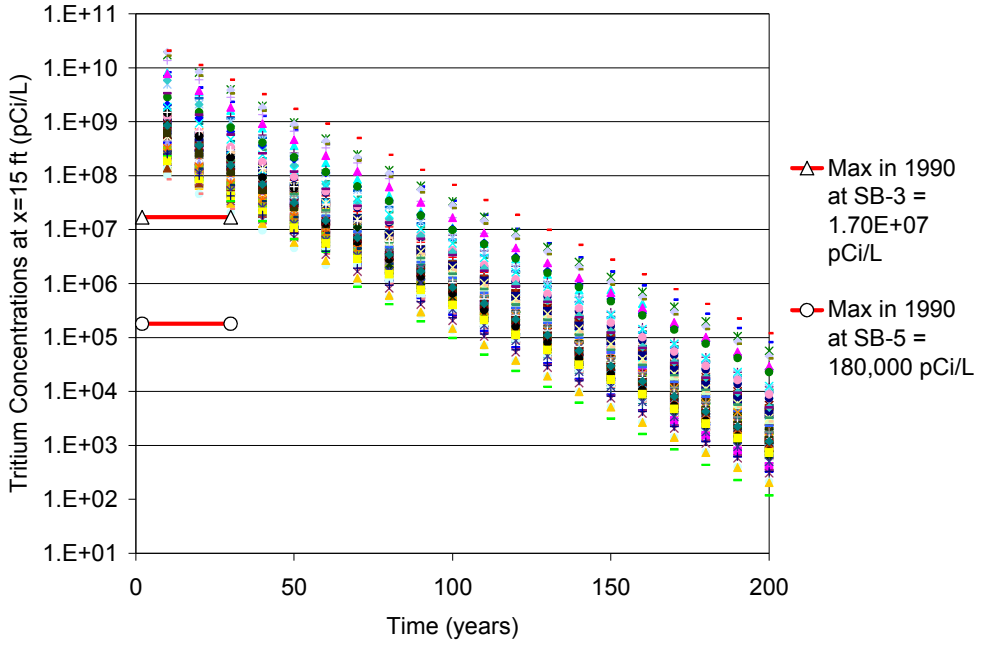

Figure 7. Comparison of simulated tritium concentration at a depth of 15 feet as a function of time for 100 realizations with measured maximum values in 1990.

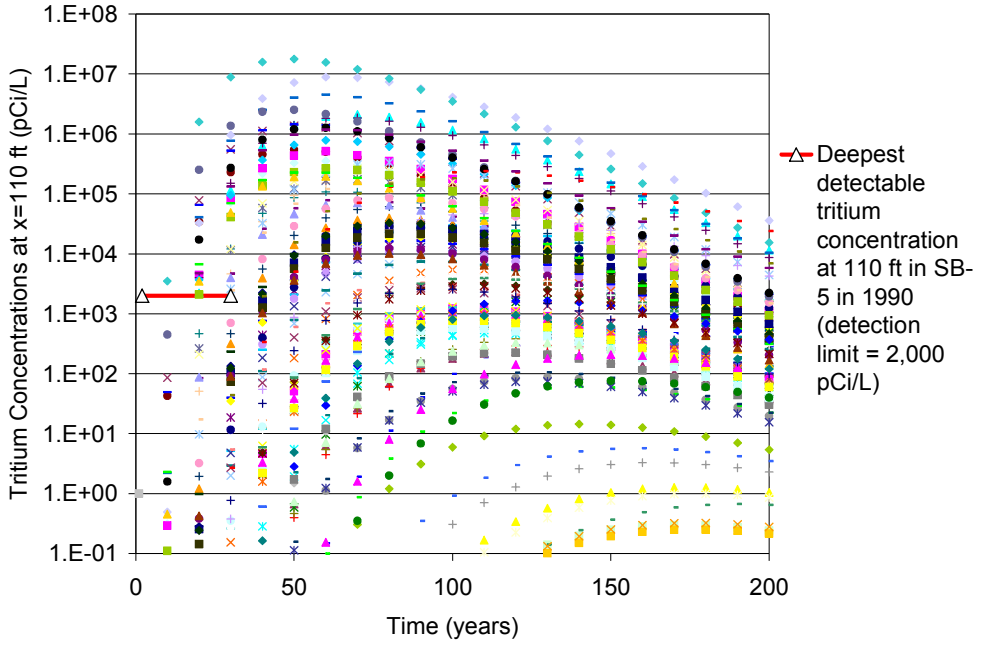

Figure 8. Comparison of simulated tritium concentration at a depth of 110 feet as a function of time for 100 realizations with measured value in 1990.

3.5.2.2 Comparison to Performance Objectives

The simulated tritium concentrations reaching the groundwater are shown in Figure 9 for all 100 realizations as a function of time. The peak tritium groundwater concentrations are all small, and Figure 10 shows the cumulative probability of the peak concentrations for 100 realizations and 200 realizations. The results show that the simulated tritium groundwater concentrations are all well below 20,000 pCi/L. In addition, the distribution resulting from 100 realizations is nearly the same as the distribution resulting from 200 realizations (therefore, all subsequent analyses only use 100 realizations).

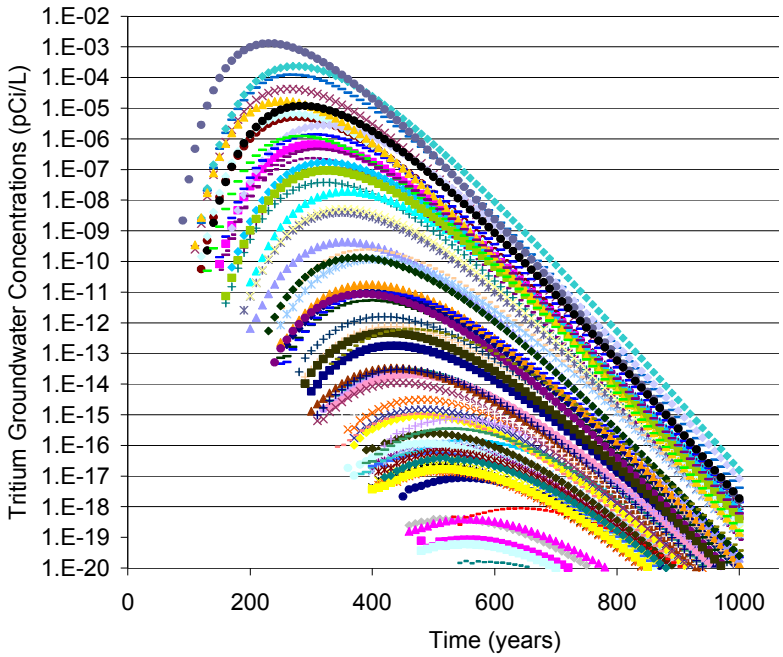

Figure 9. Simulated tritium concentrations in the aquifer as a function of time for 100 realizations.

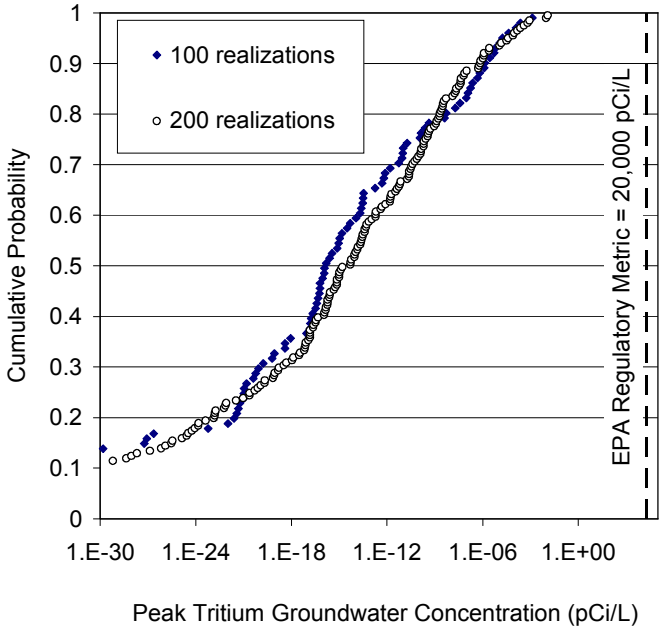

Figure 10. Cumulative probability for simulated peak tritium groundwater concentrations using 100 and 200 realizations.

Figure 11 shows the cumulative probability for the simulated peak tritium dose via groundwater, which is calculated based on the simulated aquifer concentrations and a conservative water intake of 10 L/day (accounts for drinking water, indirect ingestion via plants and animals, absorption and inhalation via showering, etc.). The results shows that all realizations are well below the EPA metric of 4 mrem/year.

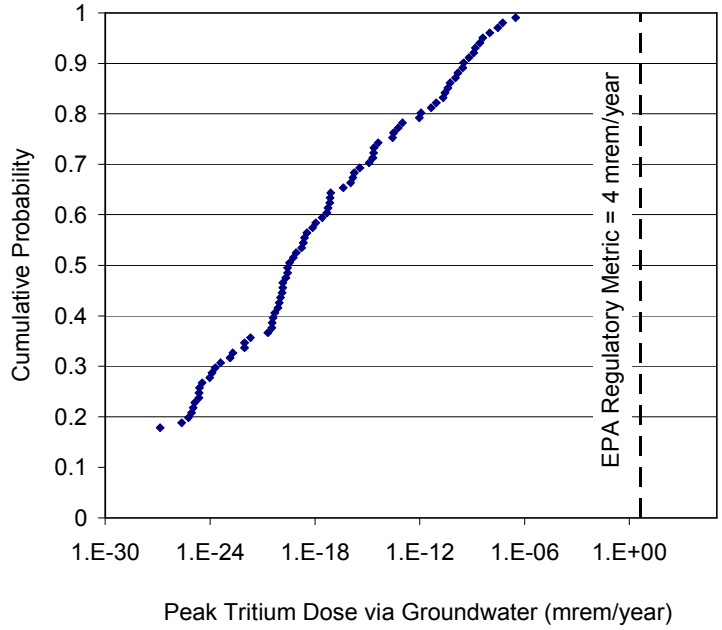

Figure 11. Cumulative probability for simulated peak tritium dose via the groundwater pathway using 100 realizations.

Figure 12 shows the cumulative probability for the simulated peak tritium dose via the air pathway for 100 realizations. The simulated dose due to inhalation (and skin absorption) is based on the concentration of gas-phase tritium immediately above the MWL. The average wind velocity, vertical mixing length, and surface flux of tritium are used to calculate the air concentration above the MWL, and the inhalation rate is used to calculate the intake (Table 5). The dose conversion factor (Table 1) is then used to calculate the dose rate. Because the simulated surface flux of tritium for several realizations was quite high (Figure 5), a small percentage (~2%) of the realizations yield a dose via the air pathway that exceeds the EPA metric of 10 mrem/year.

It should be noted, however, that Figure 5 shows the peak tritium surface fluxes occurring before 50 years due to the natural decay of tritium. The simulated maximum surface concentrations of tritium that yielded the peak fluxes are on the order of 10^{10} pCi/L. If measured values of tritium vapor concentrations at the surface over the next few decades are not shown to increase from previously measured values, which are several orders of magnitude less than maximum simulated values, the dose due to tritium via the air pathway is not likely to be exceeded.

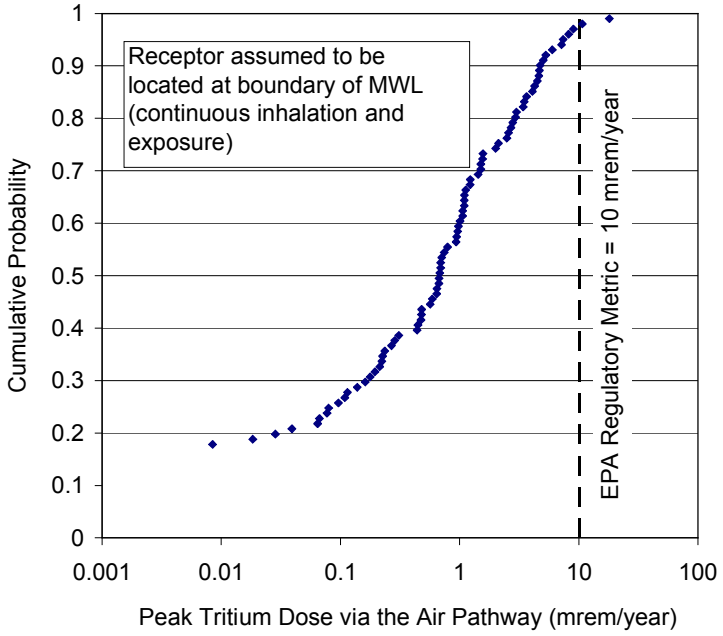

Figure 12. Cumulative probability for simulated peak tritium dose via the air pathway for 100 realizations.

3.5.2.3 Sensitivity Analysis

A sensitivity analysis (as described in Section 2.2.1) was performed to determine the parameters that were most important to the simulated performance metrics of aquifer concentration and inhalation dose. Figure 13 presents a chart that summarizes the results of the stepwise linear rank regression analysis. All of the uncertain input variables summarized in Table 2 through Table 5 relevant to tritium transport were evaluated, but only the most important input variables are shown in Figure 13. The ΔR^2 values in Figure 13 provide a measure of the incremental contributions from each input variable to the variability in the simulated performance metric. For example, the uncertainty in the liquid-phase tortuosity accounts for about 60% of the variability in the simulated tritium aquifer concentration

The sensitivity of the inhalation dose to liquid-phase tortuosity and moisture content indicates that the transport of tritium is dependent on upward diffusion through the liquid phase as well as the gas phase. A conservative upper bound for the liquid- and gas-phase tortuosity coefficients was implemented in this study (Table 4) to account for the possible effects of enhanced vapor diffusion (Ho and Webb, 1998). The dependence on cover thickness and atmospheric boundary-layer thickness indicates that the inhalation dose is also dependent on the upper boundary conditions of the landfill. Therefore, the thickness and integrity of the cover should be monitored and maintained to mitigate tritium migration to the surface. Finally, although not included as an uncertain parameter, the location and disposition of the receptor played an

important role in the simulated inhalation dose. In this study, the receptor was assumed to be located adjacent to the MWL, continuously inhaling air directly above the MWL (24 hours a day, 365 days a year). If the receptor were located further away from the site, or if the exposure were not continuous, the simulated dose via the air pathway would be considerably less.

The variability of the tritium aquifer concentration is shown to be dependent on the liquid-phase mobility parameters, indicating that diffusion of liquid-phase tritium is important. A separate ("one-off") sensitivity analysis of infiltration revealed that the infiltration would have to be increased by several orders of magnitude (close to the saturated hydraulic conductivity of the vadose zone) in order for the tritium to reach substantial concentrations in the groundwater.

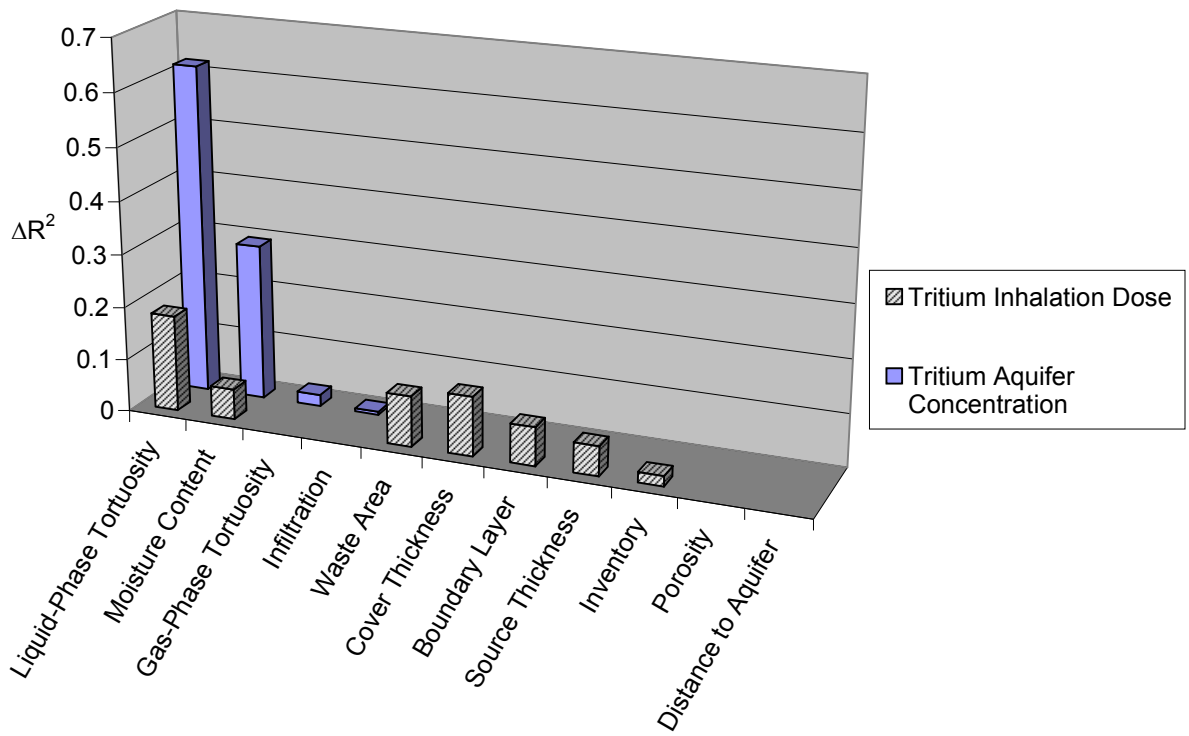

Figure 13. Analysis of sensitivity of simulated tritium inhalation dose and aquifer concentration to uncertain input parameters.

3.5.3 Summary of Key Results and Assumptions

- All simulated realizations of tritium aquifer concentration and dose via the groundwater pathway were well below the regulatory metrics of 20,000 pCi/L and 4 mrem/year, respectively.

- A small percentage (2%) of the simulated dose due to tritium via the air pathway exceeded the regulatory metric of 10 mrem/year.

- Parameters impacting tritium diffusion through both the liquid and gas phases (e.g., tortuosity coefficient, moisture content, cover thickness, atmospheric boundary-layer thickness) were found to be important to the simulated inhalation dose.

- Key Assumptions:

    - Receptor located at MWL; continuous inhalation and exposure of tritium flux from subsurface
    - Cover allowed to erode completely
    - 1-D model: maximum transport to surface
    - Bounding tortuosity coefficients: maximum diffusion rate
    - Maximum waste inventory set equal to twice estimated value of 2,400 Ci

3.6 Fate and Transport of Radon

3.6.1 Model Description

Section 3.2.3 and Appendix A describe the steady-state radon transport model that was developed for this study. Diffusion, advection, and decay of radon is included in the model. A constant generation of radon is assumed to occur in the prescribed waste zone, which can vary in size. A significant difference between the current model and previous models of radon transport in geological media (see, for example, Rogers et al., 1984) is the nature of the radium-226 source. In previous studies, the radium-226 originated from ore deposits containing uranium. At the MWL, pure radium-226 was disposed of in sealed containers. Therefore, the overall concentration of radium-226 can be much higher in the current analysis, but the emanation factor, *E*, which governs how much radon-222 gas can be released from the radium-226, can be significantly lower because of the containment. Generally speaking, the integrity of radioactive sealed sources is very robust. The radium-226 sealed sources disposed of in the MWL were most likely fabricated according to design standards that required tests to evaluate the integrity of the sources subject to extreme temperature, impact, pressure, and vibration (see, for example, 10 CFR 39.41). Radon-222 originating from uranium-238 was not considered in the radon-transport model because the activity of radium-226 (parent of radon-222) resulting from the decay of uranium-238 is negligible (15 microCuries after the first 1,000 years) relative to the radium-226 activity assumed in the model (6-12 Curies). However, radon-222 was included as a decay product of uranium-238 in the FRAMES/MEPAS liquid-phase transport simulations of the radionuclides (see Section 3.7.2.2).

3.6.2 Model Results

3.6.2.1 Comparison to Field Data

Radon surface fluxes at the MWL were measured in 1997 (Haaker, 1998). A total of 89 four-inch-diameter activated charcoal radon canisters were used to evaluate the radon surface fluxes in the vicinity of the MWL, as well as background values. Results showed that the measured radon fluxes above the MWL were not significantly different than the background values. The median flux in the vicinity of the MWL was 0.33 pCi/m^2/s while the median background flux was 0.35 pCi/m^2/s. The maximum measured fluxes for the MWL and background were 1.02 and 0.664 pCi/m^2/s, respectively. This difference in maximum values was used to calibrate the emanation factor in the radon transport model. The emanation factor governs how much radon is released to the immediate surroundings from the radium-226 source. A factor of zero represents no emission (complete containment), and a factor of one represents total emission (no containment).

The potential sources of radon-222 (radium-226) were sealed and contained, and the sealed sources were likely tested for integrity before disposal in the MWL. Therefore, the containment is assumed to be generally intact at present, but defects or breaks may still be present. The minimum emanation factor, which accounts for present-day emissions, was adjusted to yield a radon flux between 0.1 and 1 pCi/m^2/s (equivalent to the difference in maximum measured and background fluxes). The resulting minimum emanation factor used in the probabilistic simulations was 10^{-6}. The maximum emanation factor was estimated based on the possibility that the sealed containers may degrade in the future. The integrity of the containers is expected to last well beyond 1,000 years, but an upper value of the emanation factor was set equal to 0.01 to represent the possibility that 1% of the containers will completely degrade within 1,000 years. An evaluation was also performed assuming that the maximum emanation factor was equal to one, which is equivalent to complete degradation of the containment of all the radon sources within 1,000 years. A log-uniform distribution between 10^{-6} and the maximum value was used for the emanation factor.

3.6.2.2 Comparison to Performance Objectives

Figure 14 shows the cumulative probability for the simulated peak radon-222 surface flux for 100 realizations. For the scenario with a maximum emanation factor of 0.01 (1% of the radon-source containers degrades completely), the results show that 97% of the simulated radon surface fluxes are below the design standard of 20 pCi/m^2/s (3% of the realizations yield radon surface fluxes that exceed the design standard). In the bounding scenario, where we allow all of the containment of the sealed sources to completely degrade, nearly 30% of the realizations exceed the design standard of 20 pCi/m^2/s. As shown in the sensitivity analysis in the next section, the large uncertainty in the emanation factor allowed significant variations in the simulated radon surface flux. It is unlikely that the sealed sources and containers for radium-226 will degrade significantly over the next few hundred years, but because the half-life of radium-226 and uranium-238 is extremely long, radon-222 will continue to be generated from these parent products indefinitely. Therefore, degradation of the containers may eventually cause the emanation factor for radon-222 to increase at some point in the future. For a 1,000-year

evaluation period, however, the probability of exceeding the radon surface-flux design standard is very small if the sealed sources and containers do not degrade significantly and the emanation factor remains below 0.01.

Simulated radon concentrations in groundwater were negligible (<10^{-20} pCi/L). The short half-life of radon (3.8 days) and the large thickness of the vadose zone prohibit radon from migrating significant distances to the water table when the source originates from the landfill. However, in Section 3.7, small amounts of radon are shown to reach the groundwater after 10,000 years when radon is included as progeny of uranium-238, which is fairly mobile (relative to the other non-volatile radionuclides). This effectively mobilizes the source of radon toward the groundwater. However, the decay chain for uranium-238 to radium-226 to radon-222 is an extremely long process (billions of years). Therefore, the amount of radon-222 produced from uranium-238 in 1,000 years is extremely small; no radon-222 is simulated to reach the groundwater in 1,000 years, even when it is included as progeny of uranium-238.

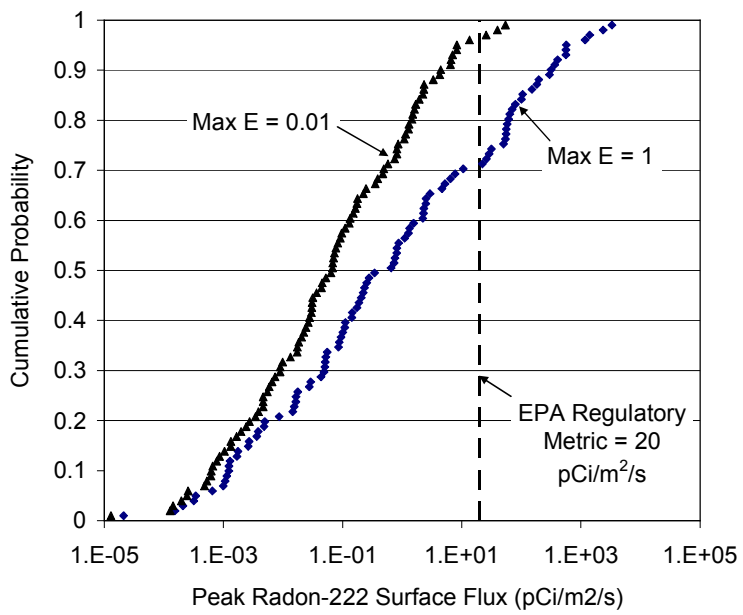

Figure 14. Cumulative probability for simulated peak radon-222 surface flux for 100 realizations using two different maximum values for the emanation factor, E.

3.6.2.3 Sensitivity Analysis

A sensitivity analysis (as described in Section 2.2.1) was performed to determine the stochastic input parameters that were most important to the simulated radon surface flux. Figure 15 presents a chart that summarizes the results of the stepwise linear rank regression analysis. The emanation factor was by far the most significant variable that influenced the variability in the simulated radon surface flux. The waste volume, cover thickness, and effective diffusion coefficient were also shown to be statistically correlated to the simulated radon surface flux, but to a much lower degree.

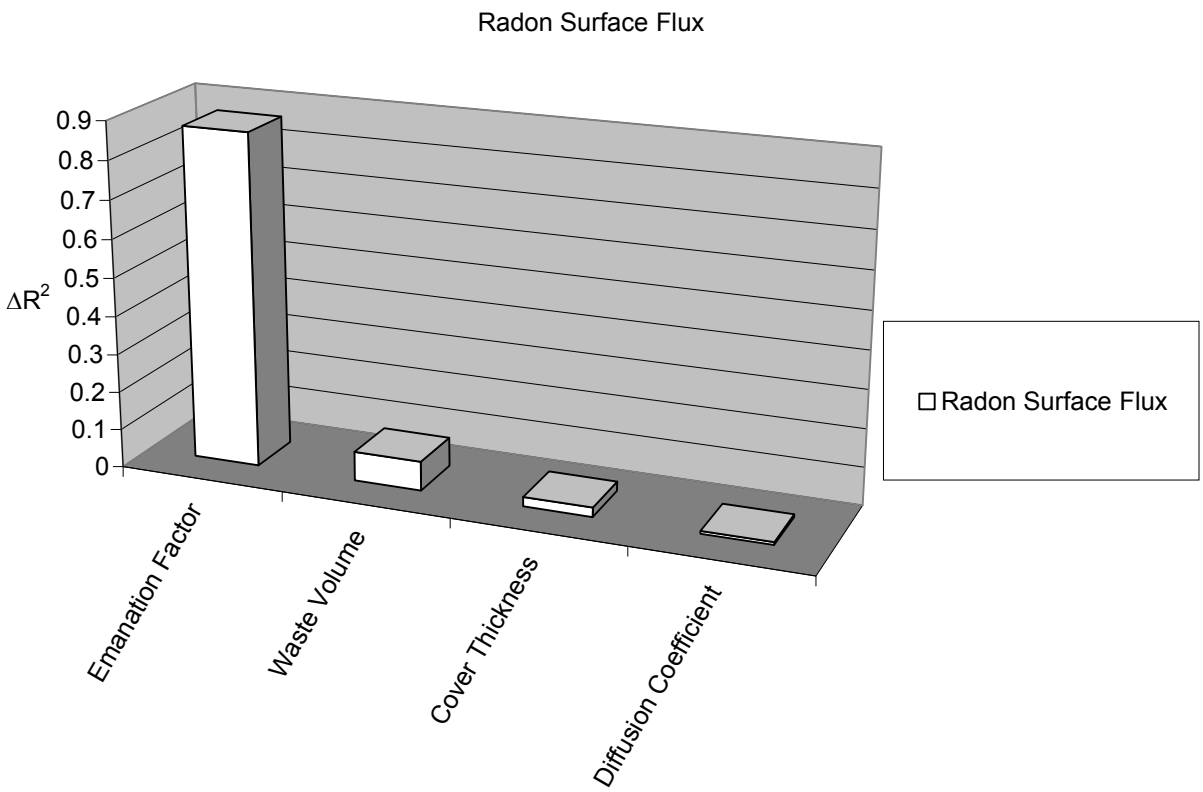

Figure 15. Analysis of sensitivity of simulated radon surface flux to uncertain input parameters.

3.6.3 Summary of Key Results and Assumptions

- Sensitivity studies show that the emanation factor, which depends on the integrity of the radium-226 containment, is important to the performance of the landfill with regard to surface radon fluxes.

- For a maximum radon emanation factor of 0.01 (1% of the radium-226 containers fail), the simulated radon surface fluxes exceed the design standard of 20 pCi/m^2/s in about 3% of the realizations. For a maximum radon emanation factor of 1 (100% of the radium-226 containers fail), the simulated radon surface fluxes exceed the design standard in about 30% of the realizations.

- Simulated radon concentrations in the groundwater were negligible.

- Key Assumptions:

    - Sealed sources of radium-226 allowed to degrade in 1,000 years (emanation factor allowed to increase)
    - Cover allowed to erode completely
    - 1-D model: maximum transport to surface

3.7 Fate and Transport of Other Radionuclides

3.7.1 Model Description

The FRAMES/MEPAS source-term and vadose-zone models (see Section 3.2.1) were used to evaluate the aqueous-phase transport of the following radionuclides to the groundwater: amercium-241, cesium-137, cobalt-60, plutonium-238, plutonium-239, radium-226, strontium-90, thorium-232, tritium, and uranium-238. Although tritium was simulated separately using the model of Jury et al. (1983, 1990), it was also included in the FRAMES/MEPAS model. Decay products of plutonium-238 (e.g., uranium-234), radium-226 (e.g., radon-222), and uranium-238 (e.g., uranium-234, radium-226) are also simulated in the FRAMES/MEPAS model (see Whelan et al., 1996).

3.7.2 Model Results

3.7.2.1 Comparison to Field Data

Other than the detection of tritium and radon in the atmosphere and subsurface as discussed in previous sections, no other radionuclides have been detected at the surface or in the subsurface beyond the extent of the landfill. The inventory for each of the radionuclides shown in Table 2 was estimated based on past records regarding the content of the MWL (SNL, 1993). The upper value for the inventory distribution of each radionuclide was conservatively assumed to be equal to twice the estimated value from past records.

3.7.2.2 Comparison to Performance Objectives

In all realizations, none of the radionuclides were simulated to reach the groundwater in 1,000 years.[4] All of the radionuclides were retarded sufficiently by adsorption to prevent significant migration in 1,000 years, even with the realistically conservative distributions used for model inputs (Table 2). In order to assess potential failure mechanisms, additional scenarios were performed.

Alternative Scenario: Increased Infiltration

First, the infiltration was increased while holding all other input parameters at fixed, conservative values. After 1,000 years, uranium (uranium-238, uranium-234) reached the groundwater when the Darcy infiltration through the vadose-zone was increased by an order of magnitude over its maximum stochastic value (6.12×10^{-11} m/s) to 6.12×10^{-10} m/s, but the groundwater concentrations were still less than the regulatory metric of 30 μg/L. Groundwater concentrations of uranium exceeded the regulatory metric when the simulated Darcy infiltration increased by two orders of magnitude over the maximum stochastic value to 6.12×10^{-9} m/s.

[4] Tritium was simulated to reach the groundwater when vapor-phase transport was included in Section 3.5, but simulated tritium groundwater concentrations and dose were well below the regulatory metrics.

Alternative Scenario: Increased Simulation Period

FRAMES/MEPAS was allowed to run past 1,000 years to assess the potential travel times of the different radionuclides to the groundwater using the original distributions and parameter values (Table 2). Only uranium-238 and its decay products (uranium-234, radon-222) were simulated to reach the groundwater after ~10,000 years. The other radionuclides were retarded by their relatively large adsorption coefficients. The radon-222 that reached the groundwater was a decay product of uranium-238. As shown in previous simulations of radon originating from the waste zone (Section 3.6), radon originating from the MWL was not simulated to reach the water table because of its short half-life (3.8 days). However, since uranium-238 has a small distribution coefficient (K_d) and long half-life, a number of realizations showed that uranium-238 and some of its daughter products (uranium-234 and radon-222) could reach the water table after ~10,000 years. Although the decay of uranium-238 to radon-222 is extremely slow, some small but finite amount of radon-222 is generated from uranium-238 as it moves toward the water table. In MEPAS, the Bateman equation (Bateman, 1910) is used to estimate the relative concentrations of the daughter products as a function of the concentration of the parent, the half lives of the parent and daughter products, and the time elapsed.

Figure 16 shows the cumulative probability for simulated peak radon-222 (progeny from uranium-238) aquifer concentrations for 100 realizations after a simulated period greater than 10,000 years. Although the radon-222 reached the water table as a result of the transport of its parent product, uranium-238, the concentration of radon-222 in the groundwater is still well below the proposed limit of 300 pCi/L.

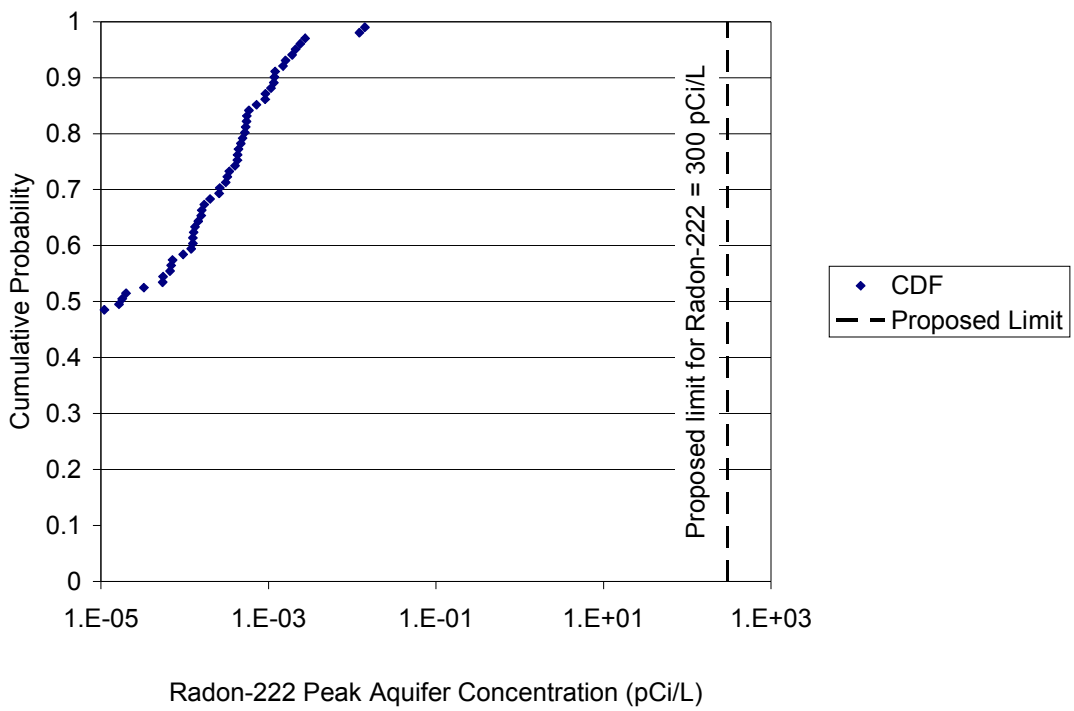

Figure 16. Cumulative probability for simulated peak radon-222 (progeny from U-238) aquifer concentrations for 100 realizations for a time period extending beyond 10,000 years.

Figure 17 shows the cumulative probability for the simulated peak uranium concentration in the groundwater for 100 realizations after a simulated time period greater than 10,000 years. The total uranium concentration is comprised of both uranium-234 (decay product of plutonium-238 and uranium-238) and uranium-238. All realizations yielded peak uranium aquifer concentrations that were less than the EPA regulatory metric of 30 μg/L.

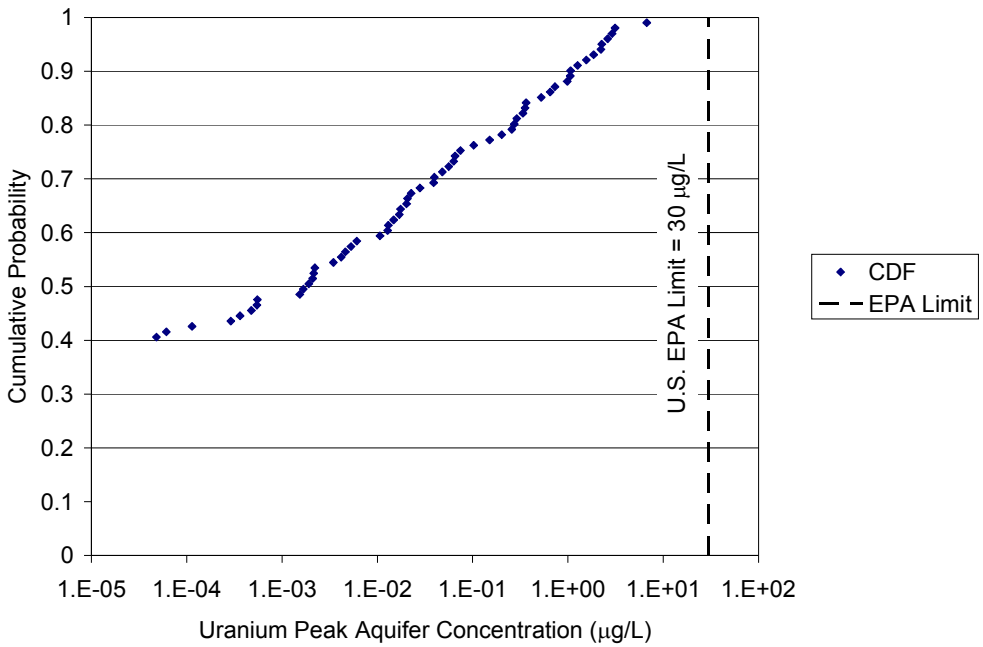

Figure 17. Cumulative probability for simulated peak uranium aquifer concentrations for 100 realizations for a time period extending beyond 10,000 years.

The total groundwater dose for extended periods of time (past 10,000 years) is calculated from the peak aquifer concentrations of uranium (uranium-234 and uranium-238) and radon. The groundwater consumption is assumed to be a conservative 10 L/day to account for drinking water, indirect ingestion through irrigation of vegetables and intake by food-producing animals, and absorption via showering. Figure 18 shows the cumulative probability for the simulated total peak groundwater dose for 100 realizations after a simulated period greater than 10,000 years. The EPA regulatory metric of 4 mrem/year (for beta particles) is shown for reference, but it does not actually apply to the primary constituents contributing to the dose, uranium-234 and uranium-238, which are alpha particles.

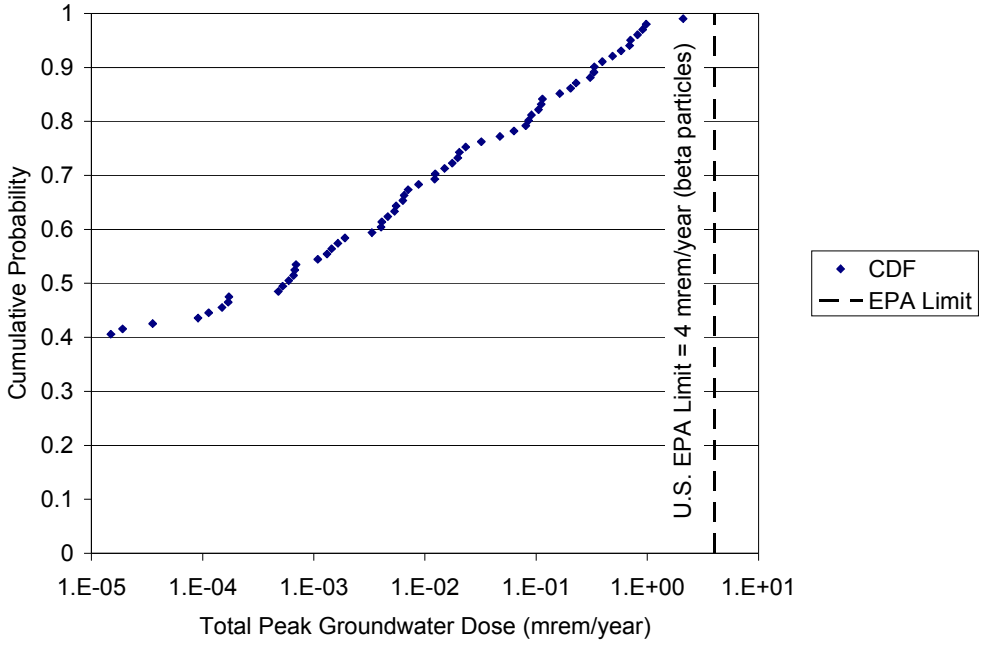

Figure 18. Cumulative probability for simulated peak groundwater dose for all radionuclides for 100 realizations for time periods extending beyond 10,000 years.

3.7.2.3 Sensitivity Analysis

Although no radionuclides were simulated to reach the groundwater within 1,000 years, sensitivity analyses were performed on the extended simulations (>10,000 years) to identify important parameters and processes (Figure 19). Sensitivity analyses show that the infiltration is the primary parameter impacting the variability in the simulated aquifer concentrations for uranium-238, its decay products (uranium-234, radon-222), and the simulated dose via groundwater. A "one-off" sensitivity analysis showed that the infiltration would have to be increased by two orders of magnitude to increase the uranium concentrations above the regulatory metric of 30 μg/L within 1,000 years. Other parameters that were found to be statistically correlated to the variability in the simulated performance metrics were waste length and width, uranium-238 K_d, and the bulk density (which, together with the K_d value, impacts the retardation).

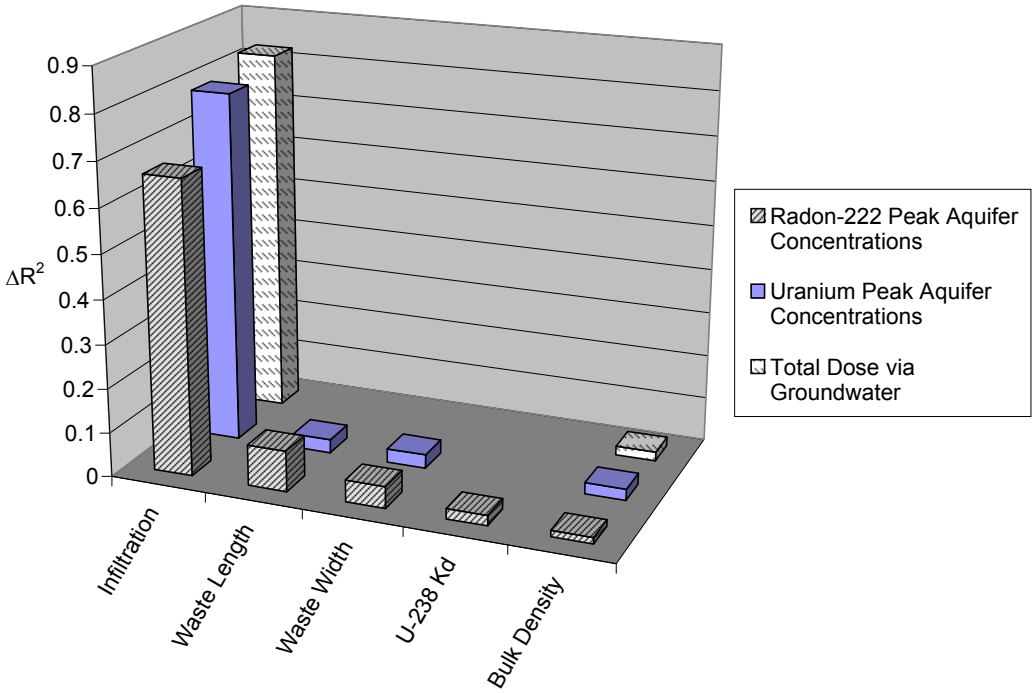

Figure 19. Analysis of sensitivity of simulated peak radon aquifer concentrations, peak uranium aquifer concentrations, and total dose via groundwater to uncertain input parameters for a time period extending beyond 10,000 years.

3.7.3 Summary of Key Results and Assumptions

- None of the radionuclides were simulated to reach the groundwater within 1,000 years for all realizations.

- Only uranium-238 (and some of its decay products) were simulated to reach the water table for extended periods (>10,000 years). All peak aquifer concentrations were still less than the EPA regulatory metric of 30 µg/L.

- Infiltration rate was found to be the most significant parameter impacting the variability in the simulated groundwater concentrations and dose via groundwater. Uranium groundwater concentrations were simulated to exceed the regulatory metric of 30 µg/L if the infiltration increased two orders of magnitude above the maximum stochastic value to 6.12×10^{-9} m/s.

- Key Assumptions:
    - 1-D model: maximum transport to groundwater
    - Receptor assumed to be located at MWL. Water intake assumed to be 10 L/d (5 times greater than EPA standards)

3.8 Fate and Transport of Heavy Metals

3.8.1 Model Description

The fate and transport of two heavy metals, lead and cadmium, were simulated using FRAMES/MEPAS (see Section 3.2.1). The inventory of lead was estimated from previous records (SNL, 1993), and uncertainty in the inventory was captured by using a uniform distribution with the estimated value as a lower bound (see Table 2). There were no records of cadmium being disposed of at the MWL, but soil samples revealed concentrations of cadmium in the subsurface (Peace et al., 2002). The maximum soil concentrations of cadmium were used with the bulk density of the soil and maximum simulated penetration of coolant water (Wolford, 1997) to estimate the mass of cadmium in the MWL. This value was then used as a lower bound in a uniform distribution (see Table 3).

3.8.2 Model Results

Neither lead nor cadmium were simulated to reach the groundwater in all 100 realizations for 1,000 years. Extended simulation periods (>10,000 years) also did not yield any breakthrough of lead or cadmium to the water table. Therefore, comparisons to the regulatory metrics of 15 μg/L and 5 μg/L for lead and cadmium, respectively, are not plotted. Both lead and cadmium have relatively large adsorption coefficients (see Table 2), which retard their transport through the thick vadose zone.

3.8.2.1 Sensitivity Analysis

A "one-off" sensitivity analysis was performed to determine the impact of infiltration on the transport of lead and cadmium while holding all other parameters at constant conservative values. Results showed that cadmium could reach the groundwater in 1,000 years and exceed its regulatory metric if the Darcy infiltration were increased by three orders of magnitude over the maximum expected infiltration, which is based on future climate scenarios (i.e., from $6x10^{-11}$ m/s to $6x10^{-8}$ m/s). Lead was simulated to reach the water table in 1,000 years if the infiltration were increased by four orders of magnitude over the maximum expected infiltration. Although this additional increase in infiltration is not expected to occur based on detailed infiltration simulations (see Section 3.4), the infiltration at the MWL should be monitored in the future. Significant increases (by several orders of magnitude or more) may lead to increased potential for migration of heavy metals and other contaminants to the groundwater.

3.8.3 Summary of Key Results and Assumptions

- Neither lead nor cadmium were simulated to reach the groundwater in 1,000 years (or extended periods past 10,000 years)
- Additional increases in infiltration would (3-4 orders of magnitude over expected maximum infiltration rates) allow cadmium and lead to reach the groundwater in 1,000 years.
- Key Assumptions:
    - 1-D model: maximum transport to groundwater

3.9 Fate and Transport of Volatile Organic Compounds

3.9.1 Model Description

Volatile organic compounds (VOCs) were used as cleaners and solvents for machining and other industrial processes at Sandia National Laboratories. Rags, residual containers, and other wastes contaminated with these contaminants were disposed of at the MWL. Although no quantitative estimates of the volumes of these contaminants disposed of in the MWL exists, soil samples provide an estimate of the extent and concentration of the region contaminated with VOCs at the MWL. Previous studies have shown that VOCs such as trichloroethylene (TCE) and tetrachloroethylene (PCE) can migrate long distances in the vapor phase. Klavetter (1995a) showed that among the VOCs of concern at the MWL, PCE was the only VOC that posed a threat to exceeding regulatory metrics in the groundwater (PCE has a greater Henry's constant and, hence, greater gas-phase transport rate than TCE for the same aqueous source concentration). However, because there is still a potential for other VOCs from the MWL to migrate to groundwater due to their mobility, PCE was modeled in this study as a proxy for other VOCs detected in soil gas and in soils beneath the MWL.

In this study, PCE is simulated using the transient model of Jury et al. (1983, 1990), which accounts for aqueous-phase advection, gas-phase diffusion, adsorption, and decay (see Section 3.2.2). Table 2 summarizes the uncertainty distributions that were used in the model. The inventory was calculated based on the maximum measured soil gas concentration (5,900 ppb) at 30 feet (Peace et al., 2002). We assumed that the PCE vapor was in equilibrium with its aqueous phase (using Henry's constant). The maximum measured gas concentration (5,900 ppb) was used as a minimum value in a uniform distribution increasing to ten times this value to develop a range of equilibrium aqueous concentrations. The maximum value was based on calibrations with measured data (see next section). The total mass of PCE was then calculated using the moisture content, maximum areal extent of the MWL (430 feet x 300 feet), and an uncertain thickness ranging from 10-27 feet. Other values in Table 2 were taken from conservative values and ranges found in the literature for PCE.

3.9.2 Model Results

3.9.2.1 Comparison to Field Data

Samples of PCE soil-gas concentrations were taken at the MWL in 1993 (Johnson et al., 1995). The ranges of measured values at two different depths (10 feet and 30 feet) were compared to simulated soil-gas concentrations using the transient PCE transport model described in the previous section. Figure 20 and Figure 21 show the comparisons for all 100 simulated realizations. As discussed in previous sections, the measured values in 1993 are shown spanning a time period between 5 and 33 years, which accounts for the uncertainty in the time of emplacement. Results show the majority of simulated soil-gas concentrations during this time period at the two depths are between the maximum and minimum values measured in 1993.

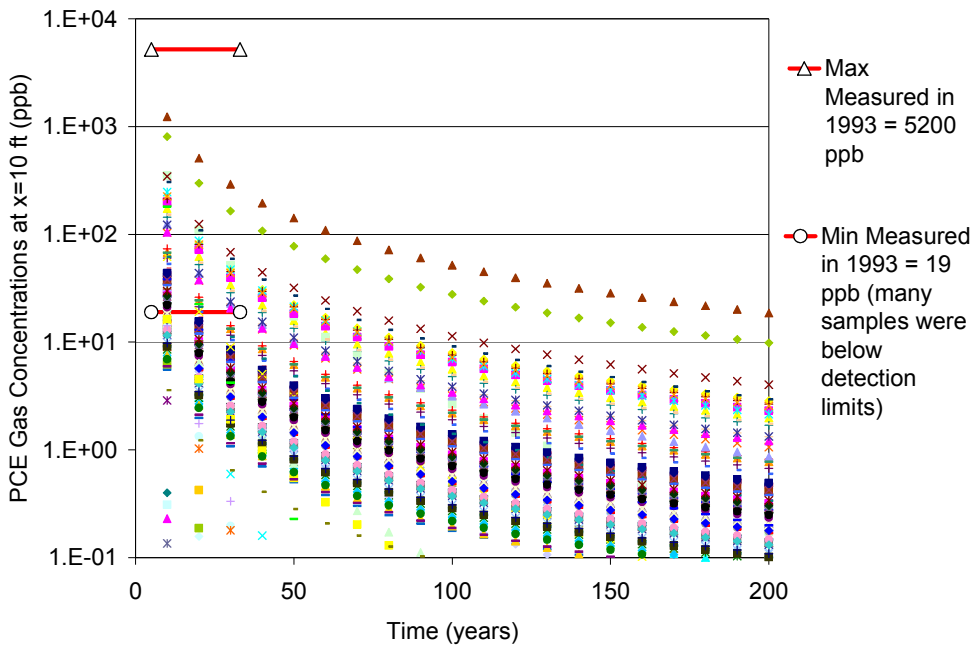

Figure 20. Simulated PCE gas concentration at a depth of 10 feet as a function of time for 100 realizations with a range of measured values in 1993.

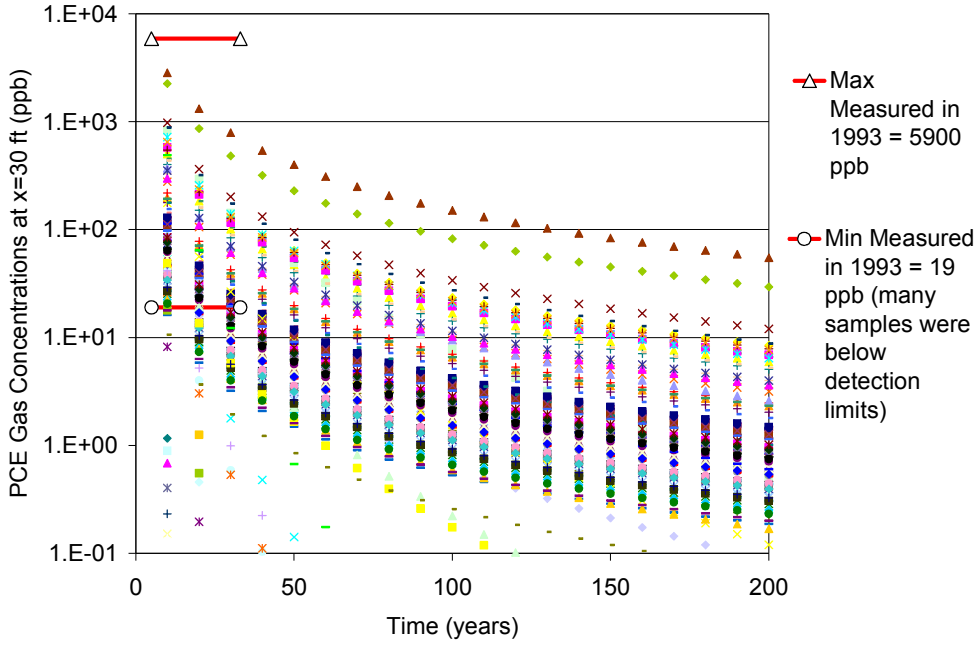

Figure 21. Simulated PCE gas concentration at a depth of 30 feet as a function of time for 100 realizations with a range of measured values in 1993.

3.9.2.2 Comparison to Performance Objectives

Figure 22 shows the simulated PCE concentrations in the groundwater as a function of time for all 100 realizations. The majority of the realizations show the aquifer concentrations peaking before 50 years. Depending on the time of disposal, this corresponds to peak concentrations occurring by 2010 – 2040. So far, no detectable amounts of PCE have been found in the groundwater at the MWL. This is still consistent with the simulations, which show a large amount of variability in the simulated concentrations resulting from uncertainty included in the input parameters (see next section).

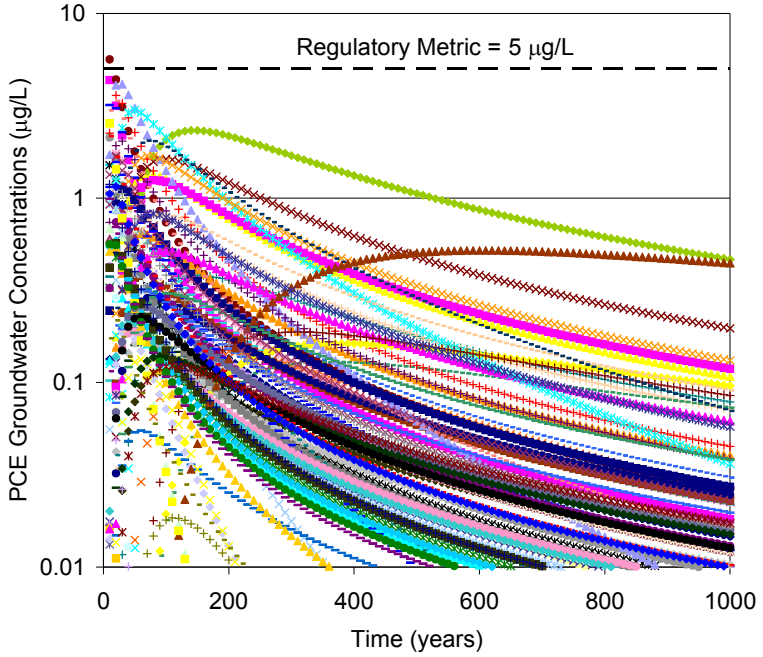

Figure 22. Simulated PCE groundwater concentrations for 100 realizations.

The cumulative probability of the peak PCE groundwater concentration for all 100 realizations is shown in Figure 23. The results show that approximately 99% of the realizations yield groundwater concentrations less than the regulatory metric of 5 μg/L. Only 1% of the realizations yielded groundwater concentrations that exceeded the regulatory metric.

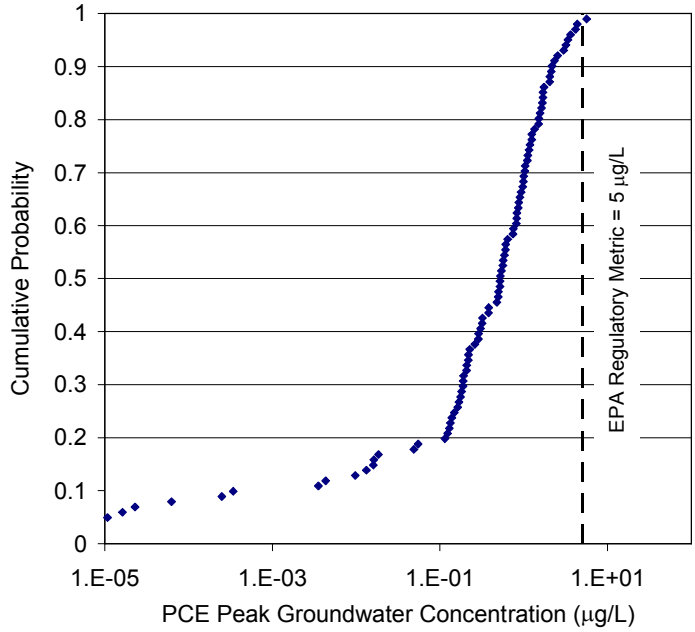

Figure 23. Cumulative probability for simulated PCE peak groundwater concentrations for 100 realizations.

3.9.2.3 Sensitivity Analysis

The uncertainty in the PCE K_d, half-life (degradation), inventory concentration, source thickness, and cover thickness values were found to be the most statistically significant parameters that impacted the variability in the simulated PCE aquifer concentrations. As stated in previous sections, the adsorption coefficient, K_d, plays an important role in the retardation and mobility of the constituent. The half-life and inventory both govern the persistence and availability of the PCE during migration to the groundwater. The source thickness also contributes to the overall inventory of PCE since the inventory concentration is applied to the entire source volume.

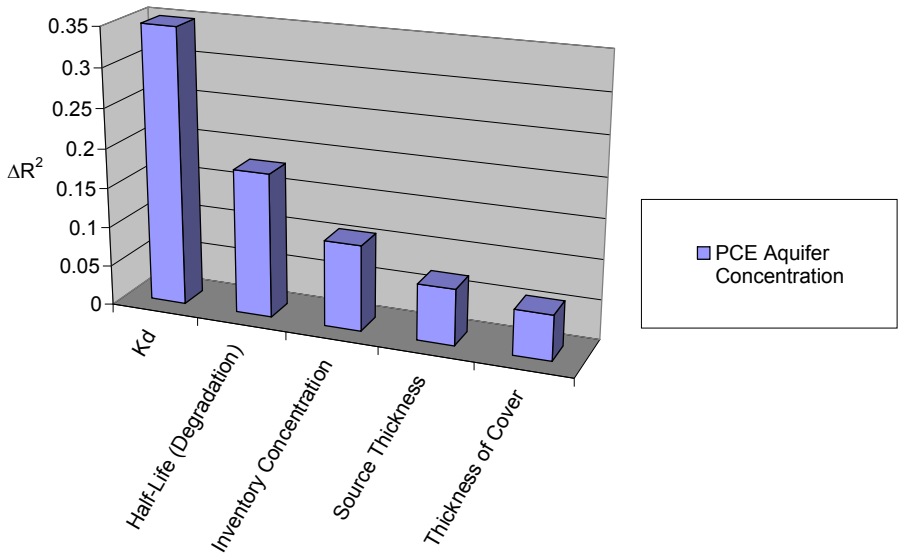

Figure 24. Analysis of sensitivity of simulated PCE peak aquifer concentrations to uncertain input parameters.

3.9.3 Summary of Key Results and Assumptions

- 99% of the realizations yielded peak PCE concentrations in the groundwater that were less than the regulatory metric of 5 µg/L. The majority of the realizations showed that the peak PCE groundwater concentration occurred within 100 years.
- Uncertainty in the PCE adsorption coefficient, half-life, inventory concentration, source thickness, and cover thickness were found to be significantly correlated to the simulated groundwater concentrations.
- Key Assumptions:
    - 1-D model: maximum transport to groundwater

4. Recommended Triggers for Long-Term Monitoring

The NMED's Class 3 permit modification (NMED, May 2005) requires that the MWL CMI Plan include triggers for future action that identify and detail specific monitoring results that will require additional testing or the implementation of an additional or different remedy. Based on the results of the probabilistic performance-assessment modeling for the MWL, the following parameters were identified as important for meeting the performance metrics:

- Surface emissions of tritium and radon
- Infiltration through the MWL cover
- Concentrations of uranium in groundwater
- Concentrations of VOCs in the vadose zone and in groundwater

Monitoring triggers are proposed for these parameters to ensure that the MWL performance metrics and corrective action objectives are met. The proposed triggers are based on EPA and DOE regulatory standards, and are discussed in Section 4.2. To address concerns regarding potential mobilization of contaminants by biota, additional monitoring triggers are proposed for metals and radionuclides in surface soil near animal burrows and ant nests.

A trigger evaluation process is proposed in Section 4.1. This process will be initiated if a trigger is exceeded during long-term monitoring at the MWL. The logic and rationale behind specific triggers are presented in Section 4.2.

Additional details regarding long-term monitoring at the MWL will be presented in the MWL Long Term Monitoring and Maintenance Plan. This plan will be submitted within 180 days after the NMED's approval of the MWL CMI Report. The plan will include all necessary physical and institutional controls to be implemented in the future, and will also include contingency procedures to be implemented if the MWL remedy fails to be protective of human health and the environment.

4.1 Trigger Evaluation Process

A trigger evaluation process is recommended for the MWL during long-term monitoring activities at the site. The process will be a phased approach designed to ensure the protection of human health and the environment, while allowing adequate data collection to evaluate whether corrective action is warranted. This process is based upon the "Conceptual Corrective Measure Evaluation Process' proposed in the Post-Closure Care Plan for the Chemical Waste Landfill (SNL, September 2005).

In the event that a trigger level is exceeded, the process shown in Figure 25 will be used to ensure that adequate data are collected to determine whether additional corrective action is warranted. The increased frequency of data collection proposed in the trigger evaluation process (see Step 3 in Figure 25 and the corresponding explanation on the reverse side of the figure) will ensure that adequate data are collected to eliminate field sampling error, laboratory error, or short-term exceedances that do not reflect long-term trends. Thus, any recommendations for corrective action because of trigger exceedances will be based upon data trends rather than upon single detection values above the trigger level. If data trends in the monitored parameters indicate an established trend above the proposed trigger value, the process requires that a technical letter report be submitted to the NMED recommending whether or not corrective action should be implemented.

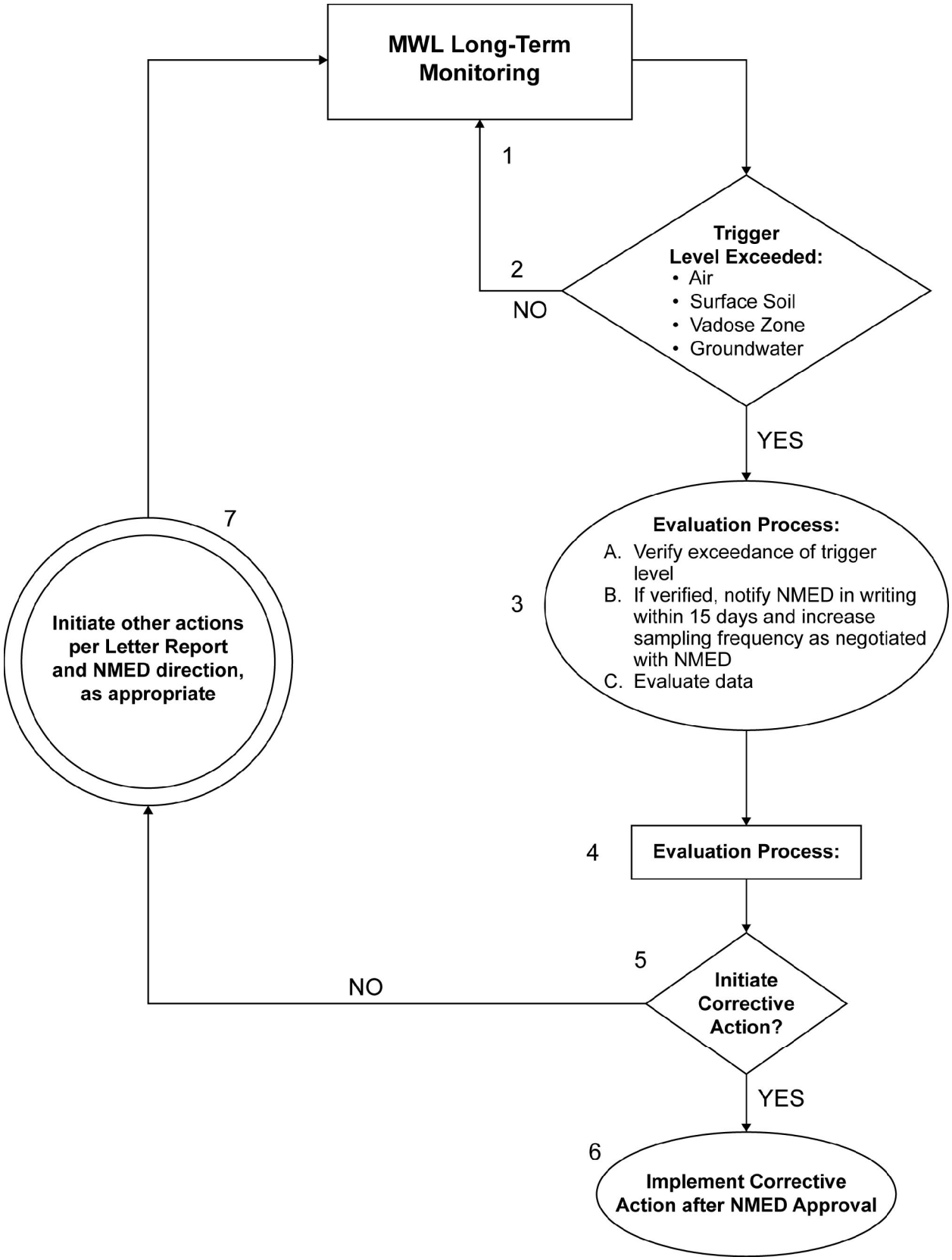

Figure 25. Trigger evaluation process for the Mixed Waste Landfill.

The steps outlined in Figure 25 are explained below:

1. Long-term monitoring of the air, surface soil, vadose zone, and groundwater at the MWL.

2. Exceedance of one or more trigger levels initiates the specific actions described below.

3. Step A of the evaluation process initiates resampling to verify the result(s) that exceeded the trigger level. Step B is based upon the conceptual model for the MWL. Because infiltration through the MWL cover is expected to be very low, and contaminant transport times in the vadose zone and groundwater are anticipated to be relatively slow, a longer period for data collection at an increased sampling frequency is recommended to determine trends. The length of this period and the increased sampling frequency will be negotiated with the NMED. Once the increased sampling data have been collected, the data and any resulting trends will be evaluated to determine the significance of the exceedance (Step C).

4. After the resulting trends have been evaluated, a brief technical letter report will be prepared and submitted to the NMED within three months of receiving the final data set that summarizes the trigger exceedance(s), presents the results of the increased monitoring, and provides recommendations regarding corrective action.

5. NMED Decision Point: after the technical letter report is submitted to the NMED, a meeting will be held to discuss the data evaluation and the recommendations regarding corrective action. If the NMED determines that further investigation of the trigger exceedance is needed, NMED may require corrective action based on a finding that releases of contaminants have occurred, are occurring, or are likely to occur.

6. If the data trend is increasing and higher than the proposed trigger value, corrective action may be necessary. The technical letter report will address appropriate options and form the basis for further discussion with NMED to determine the final corrective action.

7. If the data trend is not clear or is decreasing, corrective action may not be necessary, but other actions may be required as proposed in the technical letter report or requested by the NMED.

4.2 Proposed Triggers

Based on the results of the probabilistic performance-assessment modeling conducted for the MWL, and on subsequent input received from the NMED, monitoring triggers are proposed for the air, surface soil, vadose zone, and groundwater at the MWL These triggers are listed in Table 6, and are discussed below.

Table 6. Proposed Monitoring Triggers for the Mixed Waste Landfill.

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Air	Radon	Humans	4 pCi/L (measured by Track-Etch radon detectors)	MWL Perimeter	Average flux of radon-222 gas shall be less than 20 pCi/m^2/s at the landfill surface (design standard)	EPA Action Threshold for radon in air (U.S. EPA 2005)
Surface Soil	Tritium	Humans and ecological receptors	20,000 pCi/L tritium in soil moisture	MWL Perimeter	Dose to the public via the air pathway shall be less than 10 mrem/yr	DOE Order 5400.5, 10 CFR 61 Subpart H, 40 CFR 141.66
Surface Soil	Cs-137	Humans and ecological receptors	0.664 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)
Surface Soil	Ra-226	Humans and ecological receptors	2.30 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)
Surface Soil	Th-232	Humans and ecological receptors	1.01 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)
Surface Soil	U-235	Humans and ecological receptors	0.16 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)

Table 6 (continued)

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Surface Soil	U-238	Humans and ecological receptors	1.4 pCi/g	Animal burrows & ant nests on the cover	Radionuclide concentrations in soil shall not exceed NMED-Approved Maximum Background Concentrations	NMED-Approved Maximum Background Concentrations (Dinwiddie 1997)
Surface Soil	Arsenic	Humans and ecological receptors	17.7 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Barium	Humans and ecological receptors	100,000 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Cadmium	Humans and ecological receptors	56.4 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Chromium	Humans and ecological receptors	3400 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Lead	Humans and ecological receptors	800 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Mercury	Humans and ecological receptors	100,000 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)

Table 6 (continued)

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Surface Soil	Selenium	Humans and ecological receptors	5680 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Surface Soil	Silver	Humans and ecological receptors	5680 mg/kg	Animal burrows & ant nests on the cover	RCRA metal concentrations in soil shall not exceed NMED Industrial/Occupational Soil Screening Levels	NMED Industrial/Occupational Soil Screening Levels (NMED 2006)
Subsurface Soil	Moisture Content	Humans via groundwater	23 percent by volume	Linear depths of 10 ft to 100 ft along neutron probe access holes beneath the MWL	Infiltration through the cover shall be less than the EPA-prescribed technical equivalence criterion of 31.5 mm/yr [10E-7 cm/s]	RCRA 40 CFR Part 264.301
Subsurface Soil Gas	PCE	Humans via groundwater	20 ppmv	Deepest FLUTe Sampling Port	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Subsurface Soil Gas	TCE	Humans via groundwater	20 ppmv	Deepest FLUTe Sampling Port	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Subsurface Soil Gas	Total Volatile Organic Compounds	Humans via groundwater	25 ppmv	Deepest FLUTe Sampling Port	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Uranium	Humans via groundwater	15 µg/L	Downgradient monitoring well locations	Uranium concentrations in groundwater shall not exceed the EPA MCL of 30 µg/L	EPA Primary Drinking Water Standard
Groundwater	1,1,1-Trichloroethane (1,1,1-TCA)	Humans via groundwater	100 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	1,1,2-Trichloroethane	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard

Table 6 (continued)

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Groundwater	1,1-Dichloroethene	Humans via groundwater	3.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	1,2-Dichloroethane	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	1,2-Dichloropropane	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Benzene	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Carbon tetrachloride	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Chlorobenzene	Humans via groundwater	50 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Ethyl benzene	Humans via groundwater	350 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Methylene chloride	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Styrene	Humans via groundwater	50 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Tetrachloroethene (PCE)	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Toluene	Humans via groundwater	500 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard

Table 6 (continued)

Environmental Medium	Monitoring Parameter	Main Potential Receptors	Proposed Trigger Value	Sampling Points	Performance Objective	Applicable Guideline or Regulation
Groundwater	Trichloroethene (TCE)	Humans via groundwater	2.5 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Vinyl Chloride	Humans via groundwater	1.0 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Xylenes (Total)	Humans via groundwater	5,000 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	cis-1,2-Dichloroethene	Humans via groundwater	35 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Trans-1,2-Dichloroethene	Humans via groundwater	50 µg/L	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA MCLs	EPA Primary Drinking Water Standard
Groundwater	Method 8260 VOCs with no MCLs	Humans via groundwater	EPA Region 6 Human Health Medium-Specific Screening Levels	Downgradient monitoring well locations	VOC concentrations in groundwater shall not exceed EPA Region 6 Human Health Medium-Specific Screening Levels	EPA Region 6 Human Health Medium-Specific Screening Levels

CFR = Code of Federal Regulations.
cm = Centimeter(s).
DOE = U.S. Department of Energy.
EPA = U.S. Environmental Protection Agency.
ft = Foot (feet).
L = Liter(s).
m = Meter(s).
m^2 = Square meter(s).
µg = Microgram(s).
MCL = Maximum contaminant level.
mm = Millimeter(s).
mrem = Millirem.
MWL = Mixed Waste Landfill.
pCi = Picocurie(s).
RCRA = Resource Conservation and Recovery Act.
s = Second(s).
TCA = Trichloroethane.
VOC = Volatile organic compound.
yr = Year(s).

4.2.1 Surface Soil and Air Monitoring Triggers

Proposed surface soil and air monitoring triggers include a trigger for tritium concentrations in soil collected at select locations along the MWL perimeter, and a trigger for radon emissions from the MWL. Triggers are also proposed for radionuclides and metals in surface soil near animal burrows and ant nests to address concerns regarding potential mobilization of contaminants by biota.

4.2.1.1 Tritium

Tritium is the most mobile radionuclide disposed of at the MWL, and the performance-assessment modeling indicates that there is a possibility that tritium emitted from the MWL may exceed the performance objective of 10 mrem/yr dose to the public via the air pathway. For this reason, a trigger is proposed for tritium emitted from the MWL. Figure 12 shows that the simulated peak tritium dose via air exceeded the performance objective in only 2% of the realizations. Figure 6 reveals that the maximum simulated surface concentration of tritium for the realizations that yielded the peak doses via air are on the order of 10^9-10^{10} pCi/L. Therefore, we propose a conservative trigger value of 20,000 pCi/L in surface soils at the MWL perimeter.

The proposed tritium trigger would apply to surface soil samples currently collected annually at select locations along the MWL perimeter by Sandia's Environmental Monitoring group. Soil samples have been collected from these locations and analyzed for tritium on an annual basis since 1985. Soil moisture is extracted from these samples, and tritium concentrations in the soil moisture are determined using liquid scintillation. Any increase in tritium emissions from the MWL would be indicated by elevated tritium concentrations in these soil samples.

Figure 26 shows a comparison between historical tritium concentrations measured in samples from the four perimeter locations, and the proposed trigger value of 20,000 pCi/L. All exceedances of the trigger value occurred prior to 1998, and exceedances are not anticipated in the future due to radioactive decay and the relatively short (12.3 year) half-life of tritium. If measured concentrations of tritium at the surface exceed 20,000 pCi/L, this would indicate a significant increase relative to present-day values, and the trigger evaluation process (Figure 25) would be followed. Because the proposed trigger value is 4-5 orders of magnitude less than simulated concentrations that yielded exceedances in the dose via air, the proposed trigger value serves as a conservative early-warning indicator for potential exceedances of tritium dose via air.

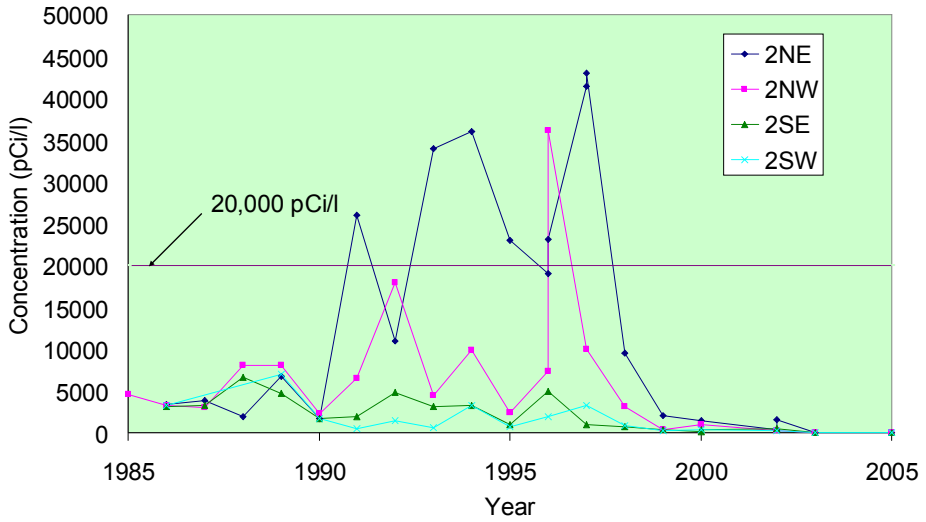

Figure 26. Comparison between historical tritium concentrations measured in samples from the four perimeter locations, and the proposed trigger value of 20,000 pCi/L.

4.2.1.2 Gamma-Emitting Radionuclides and Heavy Metals

NMED has requested that surface soil near animal burrows and ant nests be monitored for radionuclides and heavy metals (NMED, Nov 2006). Triggers proposed for gamma-emitting radionuclides are the NMED-HWB Approved Background Values (Dinwiddie 1997). Triggers proposed for RCRA metals concentrations in surface soil are the NMED Industrial/Occupational Soil Screening Levels (NMED June 2006).

Triggers for gamma-emitting radionuclides and RCRA metals are listed in Table 6. Specific details regarding monitoring frequency and locations will be included in the MWL Long Term Monitoring and Maintenance Plan, to be submitted following completion of the MWL cover.

4.2.1.3 Radon

A trigger for radon is also recommended based on the results of the probabilistic performance-assessment modeling. The modeling indicates that there is a possibility that the radon-222 flux from the MWL to the atmosphere will exceed the design standard of 20 pCi/m^2/s at the landfill surface. Commercially-available Track-Etch radon detectors are recommended to measure the radon concentration in air along the MWL perimeter. These detectors provide an integrated average concentration of radon in air over long exposure periods, on the order of 3 to 6 months. The alternative monitoring detectors, charcoal canisters, are useful only for short exposure periods, on the order of a few days.

The proposed trigger for radon in air is 4 pCi/L, and the proposed point of compliance is the MWL perimeter. The 4 pCi/L value is the EPA "action threshold" for radon in household air (U.S. EPA, 2005). This proposed value is much lower than the simulated radon-gas

concentrations (>10,000 pCi/L) at the surface of the MWL that yielded fluxes that exceeded the design standard of 20 pCi/m^2/s. Should the radon trigger of 4 pCi/L be exceeded in air at the MWL point of compliance, then the trigger evaluation process shown in Figure 25 will be implemented. Additional details regarding long-term monitoring of radon at the MWL will be presented in the MWL Long Term Monitoring and Maintenance Plan.

4.2.2 Vadose Zone Monitoring Triggers

The vadose zone beneath the MWL extends nearly 500 ft from ground surface to groundwater. Because VOCs released from the MWL have the potential to migrate to groundwater, a robust monitoring system is planned for the vadose zone at the MWL to serve as an early warning system for protecting groundwater. This system will provide early evidence of potential threats to groundwater, and it will allow corrective action to be initiated long before groundwater contamination occurs.

Long-term-monitoring of the vadose zone is planned for VOCs and for moisture content to ensure that the MWL remedy remains protective of human health and the environment. Details of the proposed monitoring systems for VOCs, moisture content, and trigger values are discussed below. Additional details regarding the frequency and extent of long-term monitoring activities will be included in the MWL Long-Term Monitoring and Maintenance Plan.

4.2.2.1 Volatile Organic Compounds

Volatile organic compounds (VOCs) are the most mobile of the hazardous constituents detected in soils beneath the MWL. Two passive and three active soil-gas surveys at the MWL have shown the presence of low concentrations of VOCs in soil gas (Peace et al., 2002). In addition, low concentrations of VOCs were detected in a 1993 study of VOC and tritium fluxes to the atmosphere from MWL soils (Radian Corp., 1993). Low concentrations of VOCs were also detected in subsurface soil samples collected from boreholes drilled during the MWL Phase 2 RFI.

VOC concentrations with depth will be monitored using three Flexible Liner Underground Technologies (FLUTe™) sampling wells. The FLUTes™ are proposed to be constructed in vertical boreholes located immediately outside the perimeter of the MWL cover with the locations selected near areas where the highest concentrations of VOCs were detected during earlier studies at the MWL. Actual locations of the FLUTe™ boreholes will be selected in conjunction with NMED. Soil gas sampling ports are proposed to be installed in each FLUTe™ at depths of 50 ft, 100 ft, 200 ft, 300 ft, and 400 ft below ground surface. Soil gas data collected from the FLUTes™ will be used to assess current VOC distributions with depth, and to monitor VOC concentrations over time, allowing early identification of any potential threats to groundwater.

Triggers are proposed for PCE, TCE, and total VOCs in soil gas at the MWL. The proposed triggers are 20 ppmv for PCE and TCE, and 25 ppmv for total VOCs. These triggers, although not based on risk or regulatory limits, are sufficiently low to protect groundwater quality of the

aquifer. All triggers would apply to samples collected from the deepest sampling port in each FLUTe™. Triggers would not apply to samples collected from shallower ports.

4.2.2.2 Moisture Content

Moisture content with depth will be monitored using a neutron moisture meter in three neutron probe access boreholes that were installed to a linear depth of 200 ft at a 30 degree angle directly below the waste disposal cells. The moisture content data will be used to evaluate infiltration through the MWL disposal cell cover. Infiltration is an important parameter for determining whether or not MWL performance objectives are met.

Infiltration through the cover will be indirectly monitored by monitoring the moisture content in the vadose zone beneath the MWL. A significant increase in moisture content beneath the landfill may indicate that the disposal cell cover may not be performing as originally designed, and that infiltration through the cover is greater than originally predicted.

Moisture contents will be measured using neutron logging, and data will be compared to baseline moisture content data collected prior to deployment of the MWL cover. A significant increase in moisture content within the vadose zone may indicate that corrective action is warranted in order to prevent the downward movement of liquid water through the disposal cell. Moisture content data will be evaluated to ensure that the performance objective of infiltration through the MWL cover is less than the EPA-prescribed technical equivalence criteria of 10^{-7} cm/s (31.5 mm/yr), as detailed below.

Infiltration may be estimated indirectly using Darcy's Law. The method is based on soil-physics and the relationship between unsaturated hydraulic conductivity and volumetric moisture content of subsurface soils. The method is described in detail in the MWL Phase 2 RFI SAND Report (Peace et al., 2002). Assumptions required for this method include one-dimensional, steady-state flow, a vertical hydraulic gradient of unity, and the assumption that the downward flux of water beneath the root zone will eventually reach groundwater.

If one applies these assumptions, then the downward flux at a particular depth is equivalent to the unsaturated hydraulic conductivity as a function of the moisture content at that depth. Thus, by monitoring the moisture content of the vadose zone beneath the MWL, one can also indirectly monitor the downward flux through the vadose zone. If infiltration through the cover increases significantly, than the downward flux through the vadose zone would increase as well, resulting in higher moisture content in the vadose zone beneath the landfill. Hence, by monitoring moisture content in the vadose zone, one can indirectly monitor the performance of the MWL cover. A significant increase in moisture content beneath the MWL may indicate that the cover is not performing as designed.

Figure 27 shows the calculated unsaturated hydraulic conductivity curves for 18 subsurface soil samples collected from the IP Test site, located approximately 500 ft west of the MWL. Based on this figure, and assuming a unit gradient in the vadose zone, if infiltration through the MWL cover exceeds the EPA-prescribed technical equivalence criteria of 10^{-7} cm/s (31.5 mm/yr), then volumetric moisture content in the underlying soils will exceed approximately 23 percent.

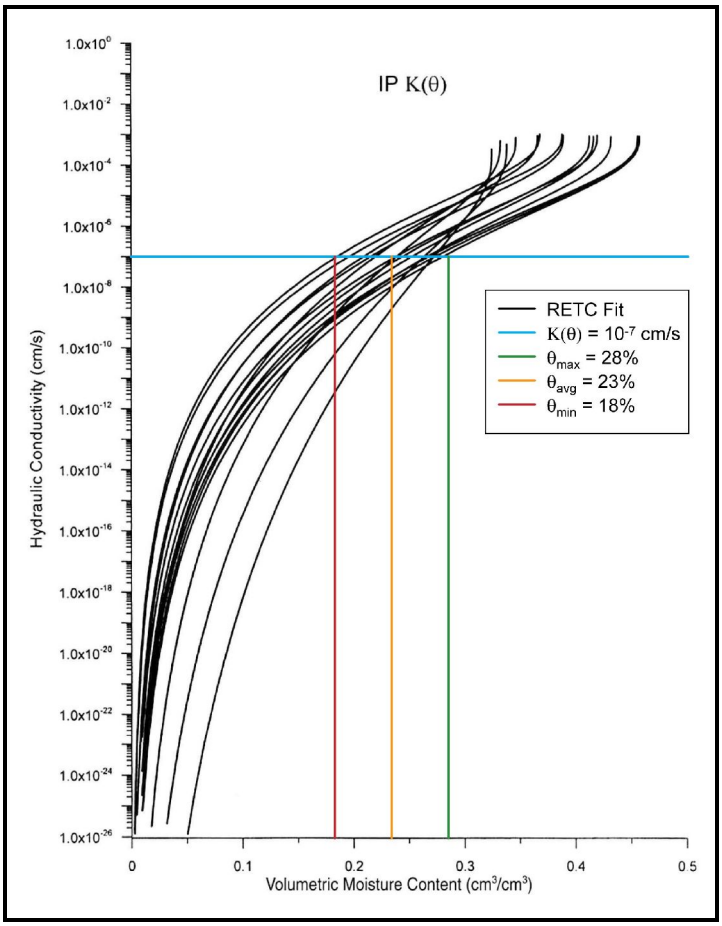

Figure 27. Hydraulic conductivity as a function of volumetric moisture content for different soil samples at the site

The recommended trigger level is the moisture content which corresponds to an unsaturated hydraulic conductivity equal to the EPA-prescribed technical equivalence criteria of 10^{-7} cm/s (31.5 mm/yr). The moisture content at which this occurs is 23 percent by volume, and the proposed trigger level for moisture content in the vadose zone is, therefore, 23 percent by volume. This value is based arbitrarily on the EPA-prescribed technical equivalence criteria, and does not necessarily indicate that hazardous constituents or radionuclides are migrating from the landfill.

The 23-percent trigger is proposed for linear depths of 10 ft and 100 ft (vertical depths of 8.7 ft to 86.6 ft) along the neutron probe access holes in the vadose zone beneath the MWL. This interval is proposed as the "regulated interval" because it lies beneath the root zone, and yet is shallow enough that a response would be detected fairly rapidly if there is a significant increase in infiltration through the cover. Should this 23-percent trigger level be exceeded in the regulated interval, then the process shown in Figure 25 will be implemented. Additional details regarding vadose zone monitoring at the MWL will be presented in the MWL Long Term Monitoring and Maintenance Plan.

4.2.3 Groundwater Monitoring Triggers

Based on the results of the probabilistic performance-assessment modeling, monitoring triggers are proposed for uranium and VOCs in groundwater at the MWL. These proposed triggers are discussed below.

4.2.3.1 Uranium

Uranium occurs naturally in MWL groundwater at concentrations ranging from 1.34 to 9.23 µg/L, and averaging 5.97 µg/L. Total uranium concentrations in groundwater beneath the MWL are well within the total uranium ranges established by the United States Geological Survey (USGS) for the Middle Rio Grande Basin (USGS, 2002). Isotopic analyses of uranium have demonstrated that it is of natural origin (Goering et al., 2002).

The probabilistic performance-assessment modeling for the MWL indicates that there is a possibility that uranium will reach the groundwater (although none of the simulations showed the uranium concentrations exceeding the regulatory metric of 30 µg/L). For this reason, a monitoring trigger of 15 µg/L (1/2 of the EPA MCL) is proposed for uranium in MWL groundwater at the point of compliance. The proposed point of compliance is at the downgradient monitoring wells. Should the uranium trigger value be exceeded in MWL groundwater at the point of compliance, then the trigger evaluation process shown in Figure 25 will be implemented. Additional details regarding long-term monitoring of uranium in groundwater will be presented in the MWL Long Term Monitoring and Maintenance Plan.

4.2.3.2 Volatile Organic Compound Triggers for Groundwater

Groundwater monitoring for VOCs at the MWL has been conducted for sixteen years, since September 1990, and there is no evidence that wastes from the MWL have contaminated groundwater. However, earlier studies as well as the current probabilistic performance-assessment modeling have shown that there is a potential for VOCs to contaminate groundwater at the MWL.

The potential downward vertical transport of six organic compounds to groundwater by both aqueous-phase transport and vapor-phase transport was evaluated in 1995 (Klavetter, 1995). The study showed that PCE could eventually migrate to groundwater through vapor-phase transport. Although the modeling predicted that the most likely PCE concentrations in groundwater would be considerably lower than the detection limit of 0.5 ppb, sensitivity analyses suggested that PCE concentrations could potentially reach 1 to 5 ppb within 50 years (Klavetter, 1995a).

The current probabilistic performance-assessment modeling also simulated the migration of PCE to groundwater and arrived at similar conclusions regarding the potential contamination of groundwater by PCE through vapor-phase transport. Because PCE was modeled in this study as a proxy for other VOCs detected in soil gas and in soils beneath the MWL, there is a potential for other VOCs from the MWL to also migrate to groundwater in the future. For this reason, continued groundwater monitoring for VOCs at the MWL is recommended.

Groundwater trigger levels are proposed for all Target Compound List VOCs for which there are primary EPA MCLs, or for which there are EPA Region 6 Human Health Medium-Specific Screening Levels. The proposed groundwater trigger levels for VOCs with MCLs are equal to ½ of the EPA MCLs; concentrations of VOCs with no corresponding MCLs will be compared to the EPA Region 6 Human Health Medium-Specific Screening Levels.

The proposed point of compliance is the downgradient monitoring wells. Should any VOC trigger values be exceeded in MWL groundwater at the point of compliance, then the trigger evaluation process shown in Figure 25 will be implemented. Additional details regarding long-term monitoring of VOCs in groundwater will be presented in the MWL Long Term Monitoring and Maintenance Plan.

4.3 Summary of Recommended Triggers

Based on the results of the probabilistic performance-assessment modeling conducted for the MWL, monitoring triggers have been proposed for the air, surface soil, vadose zone, and groundwater at the MWL. Specific triggers include numerical thresholds for (1) radon concentrations in the air, (2) tritium, gamma-emitting radionuclides, and heavy metal concentrations in surface soil, (3) VOC concentrations and moisture content in the vadose zone, and (4) uranium and VOC concentrations in groundwater. The proposed triggers are based on EPA, DOE and NMED regulatory standards, as well as on NMED maximum background concentrations for select radionuclides. If a trigger is exceeded, then SNL/DOE will initiate a trigger evaluation process which will allow sufficient data to be collected to assess trends and recommend corrective action, if necessary.

By utilizing these triggers during long-term monitoring at the MWL, SNL/DOE will ensure that the MWL remedy continues to protect human health and the environment, while meeting the performance objectives for the cover and the corrective action objectives established in the MWL Corrective Measures Study.

5. Summary and Conclusions

A probabilistic performance assessment has been conducted to evaluate the fate and transport of contaminants of concern at the Mixed Waste Landfill. The contaminants that were simulated include radionuclides (amercium-241, cesium-137, cobalt-60, plutonium-238, plutonium-239, radium-226, radon-222, strontium-90, thorium-232, tritium, and uranium-238), heavy metals (lead and cadmium), and a volatile organic compound (PCE). The current analysis differs from previous analyses in several ways: (1) probabilistic analyses[5] were performed to quantify uncertainties inherent in the system and models; (2) a comprehensive analysis of the performance of the MWL was evaluated and compared against relevant regulatory metrics; (3) sensitivity analyses were performed to identify parameters and processes that were most important to the simulated performance metrics; and (4) long-term monitoring requirements and

[5] One hundred realizations were used in the probabilistic analyses. A preliminary comparison between the results of 100 vs. 200 realizations revealed that the output distribution was adequately represented by 100 realizations.

triggers were recommended based on the results of the quantified uncertainty and sensitivity analyses. The key results of this study are summarized below:

Infiltration through the Cover:

- Net infiltration through the engineered cover at the MWL was simulated to be less than the regulatory metric of 10^{-7} cm/s for all conditions and scenarios.

- Predicted average infiltration rates through the MWL cover are expected to range from 1.18×10^{-9} cm/s for present conditions to 6.12×10^{-9} cm/s for future conditions. These values were used in a uniform distribution for the performance-assessment simulations.

- To ensure that future infiltration rates will not exceed the regulatory metric of 10^{-7} cm/s, the moisture content of the vadose zone will be monitored. Based on the site-specific two-phase characteristic curves of the soil, a moisture content of 23 percent by volume will be used as a trigger to indicate if the infiltration metric is exceeded.

Release of Radionuclides to the Atmosphere:

- A small percentage (2%) of the simulated dose due to exposure to tritium via the air pathway exceeded the regulatory metric of 10 mrem/year.

- Parameters impacting tritium diffusion through both the liquid and gas phases (e.g., tortuosity coefficient, moisture content, cover thickness, atmospheric boundary-layer thickness) were found to be important to the simulated inhalation dose.

- Sensitivity studies show that the emanation factor, which depends on the integrity of the radium-226 containment, is important to the performance of the landfill with regard to surface radon fluxes.

- For a maximum radon emanation factor of 0.01 (1% of the radium-226 containers fail), the simulated radon surface fluxes exceed the design standard of 20 pCi/m^2/s in about 3% of the realizations. For a maximum radon emanation factor of 1 (100% of the radium-226 containers fail), the simulated radon surface fluxes exceed the design standard in about 30% of the realizations.

- Based on these results, both radon and tritium concentrations are recommended to be monitored at the surface of the MWL in the future. In addition, other radionuclides that may be brought to the surface by burrowing animals or insects are also proposed to be monitored. Specific triggers are identified in Table 6.

Release of Radionuclides to the Groundwater:

- None of the radionuclides were simulated to reach the groundwater within 1,000 years for all realizations.

- Only uranium-238 (and some of its decay products) were simulated to reach the water table for extended periods (>10,000 years). All peak aquifer concentrations were still less than the EPA regulatory metric of 30 μg/L.

- Infiltration rate was found to be the most significant parameter impacting the variability in the simulated groundwater concentrations and dose via groundwater. Uranium groundwater concentrations were simulated to exceed the regulatory metric of 30 μg/L if the infiltration increased two orders of magnitude above the maximum stochastic value to 6.12×10^{-9} m/s.

- Uranium in the groundwater will be monitored in the future and a trigger value of 15 μg/L, equal to ½ of the U.S. EPA maximum contaminant level in drinking water, is proposed.

Release of Heavy Metals to the Groundwater:

- Neither lead nor cadmium were simulated to reach the groundwater in 1,000 years (or extended periods past 10,000 years)

- Additional increases in infiltration (3-4 orders of magnitude over expected maximum infiltration rates) allowed cadmium and lead to reach the groundwater in 1,000 years.

- No triggers are recommended for lead or cadmium in groundwater at this time. However, heavy metals are proposed to be monitored in surface soils to account for transport by burrowing animals or instects (see Table 6).

Release of VOCs to the Groundwater:

- Only 1% of the realizations yielded peak PCE concentrations in the groundwater that exceeded the regulatory metric of 5 μg/L. The majority of the realizations showed that the peak PCE groundwater concentration occurred within 100 years.

- Uncertainty in the PCE adsorption coefficient, half-life (degradation), inventory concentration, source thickness, and cover thickness were found to be significantly correlated to the simulated groundwater concentrations.

- Based on these results, PCE and other volatile organic compounds are recommended to be monitored in the vadose zone and in groundwater at the MWL in the future (see Table 6). Trigger values for the soil gas in the vadose zone will be 20 ppmv for TCE and PCE, and 25 ppmv for total VOCs. Trigger values in groundwater will be based on values equal to ½ of the U.S. EPA maximum contaminant levels in drinking water. Concentrations of VOCs with no corresponding MCLs will be compared to the EPA Region 6 Human Health Medium-Specific Screening Levels.

Key Assumptions:

- Receptor located adjacent to MWL
    - Tritium dose caused by continuous inhalation and exposure of tritium flux directly above MWL.
    - Groundwater dose calculated based on concentrations in aquifer directly beneath MWL. Water intake assumed to be 10 L/day (five times EPA standard of 2 L/day for drinking water).
- Maximum waste inventory set equal to twice estimated values based on historical records.
- Sealed sources of radium-226 allowed to degrade in 1,000 years (emanation factor for radon-222 allowed to increase).
- Cover allowed to completely erode in 1,000 years.
- 1-D model: yields maximum transport to surface and groundwater.
- Bounding tortuosity coefficients: yields maximum diffusion rates.

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7. Appendix A: Derivation of a Steady-State Gas and Liquid-Phase Radon Transport Model

A steady-state radon transport model is derived here to account for advection in the liquid phase, diffusion in both the liquid and gas phases, and decay of radon-222. Because radium-226, which is the source of radon-222, has a half-life of 1,600 years, we assume steady-state conditions (e.g., the source of radon-222 is constant and the resulting long-term radon-222 concentration profile does not change with time). Assuming steady-state conditions is conservative because the radon-222 concentration profile is assumed to develop instantaneously.

We define three regions in the model: (1) a clean overburden (or cover) free of radium-226 that extends to a depth, L_1, beneath the surface; (2) a contaminated source zone of radium-226 that extends to a depth, L_2, from the surface; and (3) a vadose zone free of radium-226 that extends a distance, L_3, to the water table (see Figure 28). The radon-222 generated by the radium-226 is free to diffuse and advect upward to the atmosphere and downward toward the water table. Downward liquid advection also carries aqueous-phase radon toward the water table. Partitioning of radon between the gas and liquid phases is assumed to occur instantaneously and can be described by a liquid/gas partitioning coefficient, k (this is the inverse of Henry's constant, K_H). The steady-state governing equations for the transport of radon-222 in these two regions is as follows:

$$D_{eff}^{(1)} \frac{d^2 C_g^{(1)}}{dx^2} - kq \frac{dC_g^{(1)}}{dx} - \lambda C_g^{(1)} \left(\theta_g^{(1)} + k\theta_w^{(1)} \right) = 0 \tag{1}$$

$$D_{eff}^{(2)} \frac{d^2 C_g^{(2)}}{dx^2} - kq \frac{dC_g^{(2)}}{dx} - \lambda C_g^{(2)} \left(\theta_g^{(2)} + k\theta_w^{(2)} \right) + \dot{Q} = 0 \tag{2}$$

$$D_{eff}^{(3)} \frac{d^2 C_g^{(3)}}{dx^2} - kq \frac{dC_g^{(3)}}{dx} - \lambda C_g^{(3)} \left(\theta_g^{(3)} + k\theta_w^{(3)} \right) = 0 \tag{3}$$

where

$$D_{eff} = \frac{0.07}{10^4} e^{\left[-4\left(S_l - S_l\phi^2 + S_l^5\right)\right]} \tag{4}$$

$$\dot{Q} = \frac{E\ Ci_{226}}{SA_{226} 1000} \frac{\lambda_{226}}{V} \tag{5}$$

where the superscripts (1), (2), and (3) denote the three regions shown in Figure 28, C_g is the radon gas-phase concentration [kg/m^3], x is the distance from the surface [m] (positive downward), D_{eff} is the effective diffusion coefficient [m^2/s] for combined gas and aqueous phases (Rogers et al., 1984), S_l is the liquid saturation [-], k is the water/gas partitioning coefficient (i.e., water concentration/gas concentration) [-], q is the Darcy infiltration rate [m/s], λ is the decay

coefficient for radon-222 and is calculated as ln(2)/half-life [1/s], θ_g and θ_w are the gas and moisture volumetric contents, respectively, $\dot{Q}$ is the volumetric generation rate of radon-222 [kg/m^3/s], E is the emanation factor for radon-222 that accounts for containment of the radium-226 (0 = complete containment; 1 = no containment), Ci_{226} is the concentration of radium-226 in curies, SA_{226} is the specific activity of radium-226 [Ci/g], λ_{226} is the decay coefficient for radium-226 [1/s], and V is the total volume of the contaminated waste zone (region 2). In this derivation, we assume local equilibrium between the gas and aqueous phases; therefore, the equation can be expressed entirely in terms of the gas concentration, C_g, and the partitioning coefficient, k, is used to convert between the gas concentration and aqueous concentration.

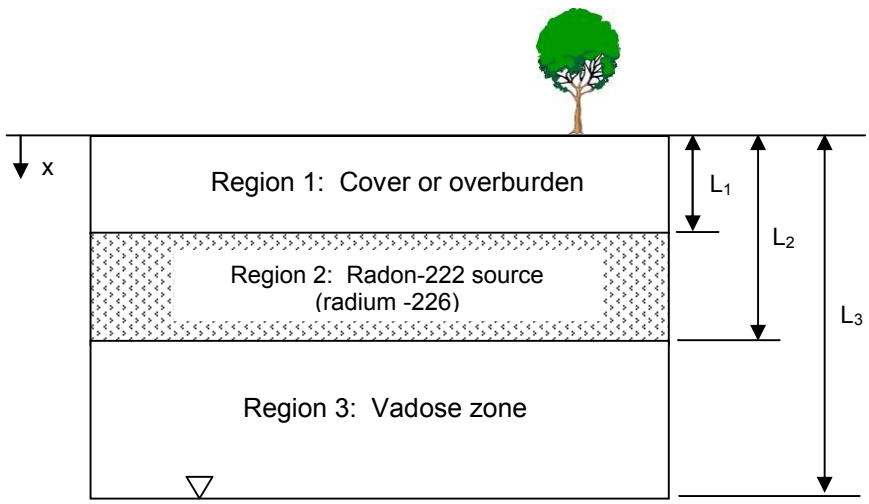

Figure 28. Conceptual model of three-region radon-transport model.

The boundary conditions for this system are as follows: (1) the radon concentration at the surface in region 1 is zero (this is conservative because it creates the largest gradient for radon flux to the atmosphere); (2) the radon concentration in region 1 is equal to the radon concentration in region 2 at the interface of regions 1 and 2; (3) the radon flux in region 1 reaching the interface between regions 1 and 2 must be equal to the radon flux entering region 2; (4) the radon concentration in region 2 is equal to the radon concentration in region 3 at the interface of regions 2 and 3; (5) the radon flux in region 2 reaching the interface between regions 2 and 3 must be equal to the radon flux entering region 3; and (6) the radon concentration infinitely far away from the source (as $x \rightarrow \infty$) goes to zero. These boundary conditions can be expressed as follows:

$$C_g^{(1)}(x=0)=0 \tag{6}$$

$$\begin{aligned} C_g^{(1)}(x=L_s) &= C_g^{(2)}(x=L_s) \\ C_w^{(1)}(x=L_s) &= C_w^{(2)}(x=L_s) \end{aligned} \tag{7}$$

$$D_{eff}^{(1)} \left. \frac{dC_g^{(1)}}{dx} \right|_{x=L_s} = D_{eff}^{(2)} \left. \frac{dC_g^{(2)}}{dx} \right|_{x=L_s} \tag{8}$$

$$\begin{aligned} C_g^{(2)}(x = L_s) &= C_g^{(3)}(x = L_s) \\ C_w^{(2)}(x = L_s) &= C_w^{(3)}(x = L_s) \end{aligned} \tag{9}$$

$$D_{eff}^{(2)} \left. \frac{dC_g^{(2)}}{dx} \right|_{x=L_s} = D_{eff}^{(3)} \left. \frac{dC_g^{(3)}}{dx} \right|_{x=L_s} \tag{10}$$

$$C_g^{(3)}(x \to \infty) = 0 \tag{11}$$

If we assume that the soil properties and hydrologic conditions are the same in all three regions, the solutions to the ordinary differential equations (1) - (3) for the three regions can be expressed as follows:

$$C_g^{(1)} = c_1 e^{r_1 x} + c_2 e^{r_2 x} \tag{12}$$

$$C_g^{(2)} = c_3 e^{r_1 x} + c_4 e^{r_2 x} + Q_{source} \tag{13}$$

$$C_g^{(3)} = c_5 e^{r_1 x} + c_6 e^{r_2 x} \tag{14}$$

where

$$c_1 = -c_2 \tag{15}$$

$$c_2 = \frac{c_3 e^{r_1 L_1} \left(r_1 - r_2 \right) - r_2 Q_{source}}{e^{r_1 L_1} \left(r_2 - r_1 \right)} \tag{16}$$

$$c_3 = \frac{r_2 Q_{source}}{e^{r_1 L_2} \left(r_1 - r_2 \right)} \tag{17}$$

$$c_4 = \frac{c_2 \left(e^{r_2 L_1} - e^{r_1 L_1} \right) - c_3 e^{r_1 L_1} - Q_{source}}{e^{r_2 L_1}} \tag{18}$$

$$c_5 = 0 \tag{19}$$

$$c_6 = \frac{c_3 e^{r_1 L_2} + c_4 e^{r_2 L_2} Q_{source}}{e^{r_2 L_2}} \tag{20}$$

$$r_1 = \frac{kq + \sqrt{(kq)^2 + 4D_{eff}\lambda_{eff}}}{2D_{eff}} \tag{21}$$

$$r_2 = \frac{kq - \sqrt{(kq)^2 + 4D_{eff}\lambda_{eff}}}{2D_{eff}} \tag{22}$$

$$\lambda_{eff} = \lambda\left(\theta_g + k\theta_w\right) \tag{23}$$

$$Q_{source} = \frac{\dot{Q}}{\lambda_{eff}} \tag{24}$$

Equations (12) - (24) yield the solutions for the gas concentrations in the three regions defined in Figure 28. The aqueous concentration can be obtained by multiplying the gas concentration at any location by the liquid/gas partition coefficient, *k*. The groundwater concentration at the interface of the vadose zone and the water table, $C_w^{(3)}(L_3)$, can be expressed as follows:

$$C_w^{(3)}(L_3) = k\, C_g^{(3)}(L_3) \tag{25}$$

The upward flux of radon-222 gas at the surface, q_s [kg/m^2/s] can be determined by evaluating the gas-phase concentration gradient at the surface (region 1) using Fick's Law:

$$q_s = -\left(-D_{eff}\left.\frac{dC_g^{(1)}}{dx}\right|_{x=0}\right) = D_{eff}c_2(r_2 - r_1) \tag{26}$$

The negative sign preceding the term in parentheses is to account for the positive downward direction of *x*. Equation (26) is used to estimate the radon gas flux at the surface in the performance assessment, and Equation (25) is used to determine the radon groundwater concentration. The concentration and flux of radon can be converted to pCi/L and pCi/m^2/s using the specific activity of radon (see Table 2) and appropriate unit conversions.

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