Tables and Graphs of Photon- Interaction Cross Sections From 0.1 keV to 100 MeV Derived From the LLL Evaluated- Nuclear-Data Library

E. F. Plechaty

D. E. Cullen

R. J. Howerton

MASTER

November 11, 1981

**Lawrence
Livermore
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FOREWORD

The UCRL-50400 series describes an integrated and computer-oriented system for the production and application of neutronics and photonics calculational constants.

The system must supply reliable up-to-date data, select specific types of data on request, provide output in a variety of forms (ultimately in the form of input to other computer codes), and function rapidly and efficiently. The system has now been developed to a point where we are achieving these goals.

The UCRL-50400 series, *An Integrated System for Production of Neutronics and Photonics Calculational Constants*, comprises the following volumes:

- Vol. 1, Part A, Rev. 3, *ECSIL: A System for Storage, Retrieval, and Display of Experimental Neutron Data*, September 1976.
- Vol. 1, Part B, *Program ECSX4 (Version 78-1): Conversion of Experimentally Measured Cross Section Data from the Four-Center-Exchange (X-4) Format to the Livermore ECSIL Format*, 1979.
- Vol. 2, Rev. 2, *A Bibliography of the Experimental Data of Neutron-Induced Interactions*, July 1976.
- Vol. 3, Rev. 2, *An Index of the Experimental Data of Neutron-Induced Interactions*, July 1976.
- Vol. 4, *Evaluated Nuclear Cross-Section Library*, April 1971.
- Vol. 5, Part A, Rev. 1, *CLYDE: A Code for the Production of Calculational Constants from Nuclear Data*, September 1975.
- Vol. 5, Part B, Rev. 1, *Relativistic Transformations between Center-of-Mass and Laboratory Systems for Two-Body Nuclear Reactions*, April 1978.
- Vol. 6, Rev. 2, *Tables and Graphs of Photon-Interaction Cross Sections from 1 keV to 100 MeV*, December 1978.
- Vol. 7, Part A, Rev. 1, *Major Neutron-Induced Interactions ($Z \leq 55$): Graphical, Experimental Data*, July 1976.
- Vol. 7, Part B, Rev. 1, *Major Neutron-Induced Interactions ($Z > 55$): Graphical, Experimental Data*, July 1976.
- Vol. 8, Part A, Rev. 1, *Supplemental Neutron-Induced Interactions ($Z \leq 35$): Graphical, Experimental Data*, July 1976.
- Vol. 8, Part B, Rev. 1, *Supplemental Neutron-Induced Interactions ($Z > 35$): Graphical, Experimental Data*, July 1976.
- Vol. 9, *Thresholds of Nuclear Reactions Induced by Neutrons, Photons, Deuterons, Tritons, and Alpha Particles*, September 1970.
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- Vol. 11, *Experimental Data, Indexes, and Techniques of Obtaining a Selected Set of Neutron Resonance Parameters*, May 1972.
- Vol. 12, *An Atlas of Resolved Neutron Resonance Parameters*, July 1972.
- Vol. 13, *An Atlas of Unresolved Neutron Resonance Parameters*, September 1972.
- Vol. 14, *TARTNP: A Coupled Neutron-Photon Monte Carlo Transport Code*, February 1976.
- Vol. 15, Part A, *The LLL Evaluated-Nuclear-Data Library (ENDL): Evaluation Techniques, Reaction Index, and Descriptions of Individual Evaluations*, September 1975.
- Vol. 15, Part B, Rev. 1, *The LLL Evaluated-Nuclear-Data Library (ENDL): Graphs of Cross Sections from the Library*, October 1978.
- Vol. 15, Part C, *The LLL Evaluated-Nuclear-Data Library (ENDL): Translation of ENDL Neutron-Induced Interaction Data into the ENDF/B Format*, April 1976.
- Vol. 15, Part D, Rev. 1, *The LLL Evaluated-Nuclear-Data Library (ENDL): Descriptions of Individual Evaluations for $Z = 0-98$* , May 1978.
- Vol. 16, Rev. 2, *Tabular and Graphical Presentation of 175 Neutron-Group Constants Derived from the LLL Evaluated-Nuclear-Data Library (ENDL)*, October 1978.

- Vol. 17, Part A, Program *LINEAR* (Version 77-1): *Linearize Data in the Evaluated-Nuclear-Data File/Version B (ENDF/B) Format*, January 1977.
- Vol. 17, Part B, Program *SIGMA1* (Version 77-1): *Doppler Broaden Evaluated Cross Sections in the Evaluated-Nuclear-Data File/Version B (ENDF/B) Format*, January 1977.
- Vol. 18, *ACTL: Evaluated Neutron Activation Cross-Section Library*, 1979.
- Vol. 19, *Neutron-Induced Angular and Energy Distributions: Graphical Experimental Data*, April 1977.
- Vol. 20, *Bonderenkko Self-Shielded Cross Sections and Multiband Parameters Derived from the LLL Evaluated-Nuclear-Data Library (ENDL)*, July 1978.

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TABLES AND GRAPHS OF PHOTON-INTERACTION CROSS SECTIONS FROM 0.1 keV TO 100 MeV DERIVED FROM THE LLL EVALUATED- NUCLEAR-DATA LIBRARY

ABSTRACT

Energy-dependent evaluated photon interaction cross sections and related parameters are presented for elements H through Cf ($Z = 1-98$). Data are given over the energy range from 0.1 keV to 100 MeV. The related parameters include form factors and average energy deposits per collision (with and without fluorescence). Fluorescence information is given for all atomic shells that can emit a photon with a kinetic energy of 0.1 keV or more. In addition, the following macroscopic properties are given: total mean free path and energy deposit per centimeter. This information is derived from the Livermore Evaluated-Nuclear-Data Library (ENDL) as of October 1978.

1978 EDITION

The photon energy range now extends from 0.1 keV to 100 MeV. In previous editions, the range was from 1.0 keV to 100 MeV. Except for the last decade of the photon energy range (0.1 to 1.0 keV), the cross sections are identical with those of the 1975 edition.

SOURCES OF EVALUATED CROSS-SECTION DATA

The data for coherent, incoherent, photoelectric, pair-production, and total cross sections are presented on an energy grid that accurately defines the cross section between tabulated points by using log-log interpolation. Fluorescence information is given for all atomic shells with photoelectric absorption edges of 0.1 keV or more.

FORM FACTORS, COHERENT CROSS SECTIONS, AND INCOHERENT CROSS SECTIONS

The form factors presented here are those of Hubbell et al.¹ Coherent and incoherent cross sections were obtained by integrating the angular distributions derived from the form factors. Log-log quadratic interpolation was used for the integration, as recommended in Ref. 1. The resulting cross sections differ somewhat from those one would obtain using simple log-log interpolation.

PAIR-PRODUCTION CROSS SECTIONS

The pair-production cross sections are basically those of Hubbell and Berger,² interpolated to the appropriate energy grid and extrapolated from $Z = 92$ to $Z = 98$.

PHOTOELECTRIC CROSS SECTIONS

The photoelectric cross sections for $Z = 84, 85, 87-89, 91, 93,$ and $95-98$ are taken from the work of Storm and Israel.³ The evaluated data for the remaining 87 elements are those of McMasters et al.⁴ below 1 MeV and those of Hubbell and Berger² above 1 MeV (normalized to the McMasters et al.⁴ values at 1 MeV). The photoelectric cross sections below 1.0 keV were derived from the works of Scofield⁵ and Veigele⁶ for all elements.

FLUORESCENCE DATA^{3, 4, 7-13}

The photoelectric absorption edges for photon energies greater than 1 keV are derived from the jumps in the photoelectric cross sections of either Storm and Israel³ or McMasters et al.⁴ for each specific atomic number, as defined above. The energies of the photoelectric absorption edges between 0.1 and 1.0 keV are derived from either the jumps in the photoelectric cross sections or the tables of Storm and Israel³ if the cross sections did not permit unambiguous identification of the edges. Only edges at 0.1 keV or higher energy are presented.

Photoelectric cross sections for individual shells have not been widely measured over a significant range of energy or atomic number. We have used theoretical calculations⁷ to develop a systematic method of predicting the probability of a vacancy for each shell. Specifically, we used the ratio of the photoelectric cross section above each edge to that below it (i.e., the jump ratio) to define the vacancy probability for each shell. These probabilities are then assumed to be energy independent (e.g., above the K edge the photoelectric cross section is energy dependent, although the ratio of cross sections for individual shells are energy independent). Vacancy probabilities are only given for edges above 0.1 keV; therefore, if the sum of the vacancy probabilities from all shells is not one, it is because the remaining edges lie below 0.1 keV.

If we define the jump ratios for the K, L, and M edges as

$$\begin{aligned} P_K &= \frac{\sigma_{ps}(e_K + \delta)}{\sigma_{ps}(e_K - \delta)} \quad (\text{product over 3 subshells}), \\ P_L &= \prod_{i=1,3} \frac{\sigma_{ps}(e_{L-i} + \delta)}{\sigma_{ps}(e_{L-i} - \delta)} \quad (\text{product over 3 subshells}), \\ P_M &= \prod_{i=1,5} \frac{\sigma_{ps}(e_{M-i} + \delta)}{\sigma_{ps}(e_{M-i} - \delta)} \quad (\text{product over 5 subshells}), \end{aligned} \quad (1)$$

then the vacancy probabilities for incident photon energies above the K edge are

$$\begin{aligned} V_K &= (1 - 1/P_K), \\ V_L &= (1 - 1/P_L)P_K, \\ V_M &= (1 - 1/P_M)(P_K P_L). \end{aligned} \quad (2)$$

Similarly, for incident photon energies below the K edge,

$$\begin{aligned} V_L &= (1 - 1/P_L), \\ V_M &= (1 - 1/P_M)P_L. \end{aligned} \quad (3)$$

For a vacancy in any given shell, the atom may emit either fluorescence or an Auger electron.⁹ Auger electrons are predominant for low-Z elements, and fluorescence is predominant for high-Z elements. Because of the subshell structure, the actual distribution of vacancies depends on the energy of the incident photon, which, in turn, affects the competition between fluorescence and Auger.⁸ Therefore, fluorescence probability for the L shell is given for two incident photon energy ranges ($E > K$, $K > E > L$).

The fluorescence transitions considered in this report are

$$\begin{aligned} (\infty) &\rightarrow (M-v) \rightarrow (L-iii) \rightarrow (K) , \\ (\infty) &\rightarrow (M-iv) \rightarrow (L-ii) \rightarrow (K) , \\ (\infty) &\rightarrow (M-iii) \rightarrow (K) . \end{aligned} \tag{4}$$

The three transitions that are energetically most important in the filling of a K-shell vacancy are given for each atomic number. In the case of an L-shell vacancy, the probability of L-ii and L-iii vacancies may be assumed to be 0.371 and 0.629, respectively, independent of atomic number. In the case of an M-shell vacancy, a vacancy in all subshells may be considered equally probable. This prescription is adequate to describe most important transitions to within the uncertainty of the available fluorescence data.

PROCEDURES USED TO DERIVE DATA

The data that were derived from the *ENDL* photon-interaction cross section include total mean free path, energy deposit (with and without fluorescence), and the bremsstrahlung energy radiated by the electron.

TOTAL MEAN FREE PATH

The total mean free path is derived from the total microscopic cross section via the relationship

$$\lambda_R(e) = \frac{A}{\rho N_0 \sigma_T(e)} \text{ (cm)} , \tag{5}$$

where

A = atomic weight (based on $C^{12} = 12$),

ρ = density in g/cm^3 ,

N_0 = Avogadro's number ($0.6022169 \times 10^{24} \text{ mole}^{-1}$),

$\sigma_T(e)$ = microscopic total cross section in barns.

Both the atomic number and the density used in this calculation are given in the data tables. Standard temperature and pressure (STP) values of the density are used when available. If the density was unknown or poorly known, a value of 13.5 g/cm^3 is assumed and is indicated as ASSUMED DENSITY on plots.

ENERGY DEPOSITION

For an incident photon of energy ϵ (MeV), the average deposit for each reaction is calculated below.

Incoherent Energy Deposition

$$E_{inc}(\epsilon) = \frac{\int_{-1}^{+1} P(\epsilon, \mu) [\epsilon - \epsilon(\mu)] d\mu}{\int_{-1}^{+1} P(\epsilon, \mu) d\mu} \quad (6)$$

where

μ = cosine of the scattering angle,

$P(\epsilon, \mu)$ = probability of the photon scattering through an angle whose cosine is μ ,

$$\epsilon(\mu) = \frac{\epsilon}{1 + \frac{\epsilon}{0.511}(1 - \mu)} = \text{exact energy-angle correlation.} \quad (7)$$

E_{inc} is the recoil energy which is assumed deposited at the site of collision.

Coherent Energy Deposition

By definition of "coherent," no energy loss occurs.

Pair-Production Energy Deposition

$$E_{pp} = \epsilon - 1.022. \quad (8)$$

The remaining 1.022 MeV is the energy equivalent of the mass of the electron and the positron.

E_{pp} is divided equally between the electron and positron and deposited at the point of interaction.

Photoelectric Energy Deposition

$$E_{pe} = \epsilon. \quad (9)$$

Unlike all the preceding processes, in which the energy deposit is electron or positron kinetic energy, the photoelectric process leads to electron kinetic energy and, possibly, to fluorescence. The sum of the kinetic energy deposit and the fluorescence energy deposit per collision is therefore

$$E_t(\epsilon) = \frac{E_{inc}(\epsilon)\sigma_{inc}(\epsilon) + \epsilon\sigma_{pe}(\epsilon) + (\epsilon - 1.022)\sigma_{pp}(\epsilon)}{\sigma_t(\epsilon)} \quad (10)$$

By defining $F(\epsilon)$ as the fluorescence energy deposit per collision, the kinetic energy deposit per collision is less than the above energy deposit and is simply given by

$$E_{ke}(\epsilon) = E_t(\epsilon) - \frac{F(\epsilon)\sigma_{pe}(\epsilon)}{\sigma_t(\epsilon)} \quad (11)$$

The value of $F(\epsilon)$ may be derived from the data in the volume by defining

E_i = Binding energy of the i th absorption edge (see pp. 491-497).

V_{ij} = Probability of creating a vacancy in the j shell (see pp. 498-501) when an incident photon has an energy in the range $E_i > E > E_{i+1}$.

F_{ij} = Probability of fluorescence when an incident photon has an energy in the range $E_i < E < E_{i+1}$ given a vacancy in the j shell (i.e., competition between fluorescence and Auger; see pp. 502-503).

T_{ij} = Transition probability from subshell i to shell K (see pp. 504-505) when an incident photon has an energy in the range $E_K < E$. All subsequent transition probabilities and transitions of photons with incident energies $E < E_K$ are independent of atomic number. $T_{L_{III}M_{III}M_{III}}$ is 0.629, $T_{L_{III}M_{III}M_{III}}$ is 0.371, and the transition probability from all M subshells are equally probable ($T_{M_{III}M_{III}M_{III}} = T_{M_{III}M_{III}M_{III}} = \dots = T_{M_{III}M_{III}M_{III}} = 1/5$).

The amount of photon energy in fluorescence is

$$E > E_K$$

$$\begin{aligned}
 F(e) = & V_{K,K} F_{K,K} T_{K,L-II} \left\{ (E_K - E_{L-III}) + F_{K,L} [(E_{L-II} - E_{M-V}) + F_{K,M} (E_{M-V})] \right\} \\
 & + V_{K,K} F_{K,K} T_{K,L-II} \left\{ (E_K - E_{L-II}) + F_{K,L} [(E_{L-II} - E_{M-IV}) + F_{K,M} (E_{M-IV})] \right\} \\
 & + V_{K,K} F_{K,K} T_{K,M-III} \left\{ (E_K - E_{M-III}) + F_{K,M} (E_{M-III}) \right\} \\
 & + V_{K,L} F_{K,L} (0.629) \left\{ (E_{L-III} - E_{M-V}) + F_{K,M} (E_{M-V}) \right\} \\
 & + V_{K,L} F_{K,L} (0.371) \left\{ (E_{L-II} - E_{M-IV}) + F_{K,M} (E_{M-IV}) \right\} \\
 & + V_{K,M} F_{K,M} \left(\frac{1}{3} \right) \left\{ E_{M-I} + E_{M-II} + E_{M-III} + E_{M-IV} + E_{M-V} \right\} . \quad (12)
 \end{aligned}$$

$$E_K > E > E_{L-III}$$

$$\begin{aligned}
 F(e) = & V_{L,L} F_{L,L} (0.629) \left\{ (E_{L-III} - E_{M-V}) + F_{L,M} (E_{M-V}) \right\} \\
 & + V_{L,L} F_{L,L} (0.371) \left\{ (E_{L-II} - E_{M-IV}) + F_{L,M} (E_{M-IV}) \right\} \\
 & + V_{L,M} F_{L,M} \left(\frac{1}{3} \right) \left\{ E_{M-I} + E_{M-II} + E_{M-III} + E_{M-IV} + E_{M-V} \right\} . \quad (13)
 \end{aligned}$$

$$E_{L-III} > E > E_{M-V}$$

$$F(e) = F_{M,M} \left(\frac{1}{3} \right) \left\{ E_{M-I} + E_{M-II} + E_{M-III} + E_{M-IV} + E_{M-V} \right\} . \quad (14)$$

BREMSSTRAHLUNG ENERGY

Part of the electron kinetic energy (MeV/collision) will be deposited by ionization (or leak from the system), and part will be re-emitted as bremsstrahlung energy. For electrons, the ratio of bremsstrahlung to ionization energy loss per unit track length is approximately⁹

$$\frac{(dT/dS)_{br}}{(dT/dS)_{ion}} \approx \frac{ZT}{800} \quad (15)$$

Starting with an electron of energy E and integrating over the entire track length of the electron, the total energy loss due to ionization and bremsstrahlung will be approximately

$$E_{ion} = \frac{E}{1 + \frac{ZT}{800}} \quad (16)$$

$$E_{\text{rad}} = \frac{\frac{ZE^2}{1600}}{1 + \frac{ZE}{1600}} \quad (17)$$

Equation (17) has been used to estimate the bremsstrahlung from an electron of initial energy E.

TABLE AND GRAPH CONVENTIONS

The pair production at 1.022 MeV has been arbitrarily set to 10^{-6} barns. Individual cross sections less than 10^{-5} barns, or less than 5×10^{-4} of the total cross section, are not included on the plots.

PRODUCTION OF THE VOLUME

The graphs and tables in this volume were produced by the program PHOTONPLOT.¹⁴ The program required a single noninteractive pass through the ENDL photon-interaction cross-section library, requiring 1.6 min of CDC 7600 time, to produce a single roll of 35-mm film and 105-mm microfiche containing all graphs and tables in correct atomic number order, ready for photo-offset printing.

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TABLES AND GRAPHS

12/07/78

Energy Deposition

1-H

12/07/78

ENCL Evaluated Photon Data

1-H

ATOMIC WEIGHT 1.008		CROSS SECTION (BARN)							DENSITY 0.3750 - 5 GRAMS/CC		
ENERGY MEV	TOTAL WFF		NEV/COLLISION							K.E.	NEV/CM
	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.		
1.000-4	1.335-0	1.153-4	1.930-4	8.850-1	9.561-4	1.930-4		1.000-4	1.000-4	6.250-12	9.857-5
1.250-4	2.389-0	5.773-3	9.683-3	8.841-1	1.482-3	9.682-3		1.250-4	1.250-4	9.784-12	6.043-5
1.500-4	3.367-0	3.257-3	5.451-3	8.634-1	2.145-3	5.450-3		1.500-4	1.500-4	1.406-11	4.091-5
1.750-4	5.338-0	2.011-3	2.388-3	8.625-1	2.916-3	3.305-3		1.750-4	1.750-4	1.913-11	2.948-5
2.000-4	9.381-0	1.315-3	2.201-3	8.618-1	3.804-3	2.200-3		1.999-4	1.999-4	2.498-11	2.202-5
2.500-4	1.367-1	6.397-2	1.071-3	8.590-1	5.922-3	1.070-3		2.498-4	2.498-4	3.901-11	1.338-5
3.000-4	3.305-1	3.613-2	6.047-2	8.568-1	8.501-3	6.040-2		2.997-4	2.997-4	5.613-11	9.067-6
3.500-4	5.498-1	2.173-2	3.637-2	8.533-1	1.151-2	3.630-2		3.494-4	3.494-4	7.628-11	6.397-6
4.000-4	8.990-1	1.390-2	2.327-2	8.503-1	1.487-2	2.320-2		3.989-4	3.989-4	9.943-11	4.843-6
4.500-4	1.238-2	9.699-1	1.617-2	8.459-1	1.983-2	1.610-2		4.481-4	4.481-4	1.255-10	3.625-6
5.000-4	1.798-2	8.791-1	1.137-2	8.421-1	2.312-2	1.130-2		4.971-4	4.971-4	1.544-10	2.827-6
5.500-4	2.441-2	4.891-1	8.186-1	8.389-1	2.778-2	8.120-1		5.455-4	5.455-4	1.860-10	2.235-6
6.000-4	3.215-2	3.714-1	6.217-1	8.323-1	3.284-2	6.150-1		5.935-4	5.935-4	2.202-10	1.846-6
6.500-4	4.032-2	2.951-1	4.958-1	8.256-1	3.817-2	4.890-1		6.413-4	6.413-4	2.570-10	1.590-6
7.000-4	5.129-2	2.328-1	3.698-1	8.195-1	4.388-2	3.930-1		6.881-4	6.881-4	2.959-10	1.341-6
8.000-4	8.298-2	1.450-1	2.427-1	8.080-1	5.840-2	2.360-1		7.781-4	7.781-4	3.784-10	9.447-7
1.000-3	1.632-3	7.316-0	1.224-3	5.805-1	8.443-2	1.158-1		9.457-4	9.457-4	5.590-10	5.447-7
1.250-3	3.886-3	3.696-0	6.119-0	5.338-1	1.223-1	5.463-0		1.116-3	1.116-3	7.785-10	3.417-7
1.500-3	5.519-3	2.163-0	3.621-0	4.984-1	1.655-1	2.957-0		1.225-3	1.225-3	9.383-10	2.220-7
1.750-3	8.294-3	1.440-0	2.410-0	4.513-1	2.058-1	1.793-0		1.273-3	1.273-3	1.014-9	1.535-7
2.000-3	1.125-4	1.081-0	1.777-0	4.141-1	2.482-1	1.114-0		1.293-3	1.293-3	9.851-10	1.116-7
2.500-3	1.713-4	6.989-1	1.187-0	3.315-1	3.154-1	5.197-1		1.118-3	1.118-3	7.811-10	6.525-8
3.000-3	2.137-4	5.605-1	8.382-1	2.783-1	3.822-1	2.787-1		9.002-4	9.002-4	5.008-10	4.826-8
3.500-3	2.452-4	4.873-1	8.157-1	2.849-1	4.267-1	1.842-1		7.197-4	7.197-4	3.237-10	2.827-8
4.000-3	2.829-4	4.542-1	7.502-1	1.881-1	4.683-1	1.038-1		5.691-4	5.691-4	2.024-10	2.655-8
4.500-3	3.271-4	4.308-1	7.211-1	1.573-1	4.946-1	6.919-2		4.634-4	4.634-4	1.342-10	1.672-8
5.000-3	3.849-4	4.116-1	7.018-1	1.341-1	5.194-1	4.814-2		3.844-4	3.844-4	9.237-11	1.350-8
5.500-3	4.517-4	4.083-1	6.851-1	1.149-1	5.355-1	3.485-2		3.301-4	3.301-4	8.809-11	1.132-8
6.000-3	5.295-4	4.041-1	6.763-1	9.888-2	5.508-1	2.587-2		2.910-4	2.910-4	5.294-11	9.848-9
6.500-3	6.288-4	3.982-1	6.685-1	8.717-2	5.598-1	1.947-2		2.655-4	2.655-4	4.405-11	8.854-9
7.000-3	7.388-4	3.945-1	6.604-1	7.885-2	5.684-1	1.508-2		2.485-4	2.485-4	3.880-11	8.212-9
7.500-3	8.531-4	3.913-1	6.550-1	6.125-2	5.842-1	9.509-3		2.335-4	2.335-4	3.408-11	7.853-9
8.000-3	9.789-4	3.853-1	6.490-1	4.120-2	5.984-1	4.400-3		2.531-4	2.531-4	4.005-11	6.189-9
1.250-2	3.151-4	3.788-1	8.348-1	2.724-2	6.050-1	2.036-3		3.887-4	3.887-4	6.753-11	1.043-8
1.500-2	3.172-4	3.784-1	8.301-1	1.842-2	6.086-1	1.085-3		4.380-4	4.380-4	1.199-10	1.381-8
1.750-2	3.207-4	3.723-1	8.232-1	1.445-2	6.081-1	6.381-4		5.743-4	5.743-4	2.081-10	1.781-8
2.000-2	3.252-4	3.694-1	8.184-1	1.119-2	6.088-1	4.029-4		7.331-4	7.331-4	3.359-10	2.868-8
2.500-2	3.297-4	3.622-1	8.082-1	7.230-3	5.988-1	1.873-4		1.111-3	1.111-3	7.713-10	3.370-8
3.000-2	3.344-4	3.570-1	7.978-1	5.081-3	5.884-1	1.062-4		1.588-3	1.588-3	1.532-9	4.881-8
3.500-2	3.403-4	3.509-1	7.873-1	3.732-3	5.835-1	5.917-5		2.087-3	2.087-3	2.722-9	6.133-8
4.000-2	3.453-4	3.498-1	7.788-1	2.888-3	5.759-1	3.749-5		2.677-3	2.677-3	4.150-9	7.753-8
4.500-2	3.509-4	3.403-1	7.695-1	2.288-3	5.672-1	2.512-5		3.325-3	3.325-3	6.911-9	9.476-8
5.000-2	3.593-4	3.393-1	7.615-1	1.840-3	5.597-1	1.756-5		4.037-3	4.037-3	1.018-8	1.134-7
5.500-2	3.613-4	3.305-1	7.531-1	1.522-3	5.516-1	1.272-5		4.798-3	4.798-3	1.439-8	1.328-7
6.000-2	3.683-4	3.260-1	7.452-1	1.280-3	5.443-1	9.470-6		5.618-3	5.618-3	1.873-8	1.534-7
6.500-2	3.718-4	3.212-1	7.375-1	1.091-3	5.384-1	7.233-6		6.478-3	6.478-3	2.623-8	1.742-7
7.000-2	3.789-4	3.188-1	7.302-1	9.410-4	5.293-1	5.636-6		7.390-3	7.390-3	3.414-8	1.981-7
8.000-2	3.883-4	3.091-1	7.173-1	7.210-4	5.188-1	3.595-6		9.370-3	9.370-3	5.488-8	2.425-7
1.000-1	4.058-4	2.944-1	6.926-1	4.818-4	4.963-1	1.705-6		1.380-2	1.380-2	1.190-7	3.403-7
1.250-1	4.287-4	2.779-1	6.651-1	2.857-4	4.648-1	8.146-7		2.008-2	2.008-2	2.515-7	4.888-7
1.500-1	4.505-4	2.651-1	6.438-1	2.039-4	4.434-1	4.455-7		2.723-2	2.723-2	4.835-7	6.045-7
1.750-1	4.721-4	2.529-1	6.233-1	1.509-4	4.232-1	2.881-7		3.490-2	3.490-2	7.813-7	7.393-7
2.000-1	4.915-4	2.429-1	6.045-1	1.158-4	4.084-1	1.739-7		4.327-2	4.327-2	1.170-6	8.881-7
2.500-1	5.389-4	2.249-1	5.784-1	7.397-5	3.784-1	8.472-8		6.104-2	6.104-2	2.330-6	1.150-6
3.000-1	5.853-4	2.112-1	5.535-1	5.138-5	3.535-1	4.788-8		8.089-2	8.089-2	4.050-6	1.431-6
3.500-1	6.308-4	1.982-1	5.333-1	3.775-5	3.333-1	2.887-8		1.018-1	1.018-1	6.455-6	1.895-6
4.000-1	6.769-4	1.883-1	5.188-1	2.888-5	3.188-1	1.888-8		1.238-1	1.238-1	9.588-6	1.963-6
4.500-1	7.219-4	1.804-1	5.063-1	2.284-5	3.019-1	1.307-8		1.467-1	1.467-1	1.345-5	2.218-6
5.000-1	7.688-4	1.726-1	4.983-1	1.688-5	2.883-1	9.387-9		1.707-1	1.707-1	1.821-5	2.471-6
5.500-1	8.155-4	1.688-1	4.928-1	1.229-5	2.777-1	8.995-9		1.951-1	1.951-1	2.379-5	2.718-6
6.000-1	8.627-4	1.598-1	4.878-1	1.084-5	2.676-1	5.593-9		2.205-1	2.205-1	3.038-5	2.933-6
6.500-1	9.091-4	1.542-1	4.838-1	1.008-5	2.581-1	4.188-9		2.466-1	2.466-1	3.783-5	3.178-6
7.000-1	9.554-4	1.482-1	4.797-1	9.437-6	2.487-1	3.337-9		2.723-1	2.723-1	4.534-5	3.488-6

12/37/78

ENDL Evaluated Photon Data

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ATOMIC WEIGHT 1.008				DENSITY 0.3750- 5 GRAMS/CC					
ENERGY	TOTAL MFP		CROSS SECTION (BARNS)				MEV/COLLISION		MEV/CM
MEV	CH	CH/CH/ON	TOTAL	COHERENT	INCOHER	PHOTOL PAIR PROD	K.E.-FLOR	K.E. BREMSSTR	K.E.
0.000-1	8.500+4	1.405-1	2.331-1	7.226-6	2.351-1	2.219-9	3.269-1	3.269-1	6.678-5
1.000-0	9.494+4	1.283-1	2.114-1	4.624-6	2.114-1	1.134-9	4.400-1	4.400-1	6.659-6
1.022-0	9.555+4	1.250-1	2.082-1	4.427-6	2.091-1		4.529-1	4.529-1	6.739-6
1.250-0	1.057+5	1.125-1	1.890-1	2.980-6	1.890-1	1.000-6	5.881-1	5.881-1	5.563-6
1.500-0	1.163+5	1.027-1	1.716-1	2.055-6	1.716-1	4.350-5	7.419-1	7.419-1	6.379-6
1.750-0	1.284+5	9.445-2	1.501-1	1.510-6	1.500-1	1.084+4	8.999-1	8.999-1	7.119-6
2.000-0	1.352+5	8.789-2	1.408-1	1.156-6	1.405-1	1.790+4	1.062+0	1.062+0	7.039-6
2.044-0	1.379+5	8.681-2	1.450-1	1.107-6	1.448-1	1.894+4	1.090+0	1.090+0	7.909-6
2.500-0	1.548+5	7.713-2	1.291-1	7.399-7	1.287-1	3.459+4	1.393+0	1.393+0	8.996-6
3.000-0	1.725+5	6.923-2	1.159-1	5.158-7	1.153-1	5.522+4	1.733+0	1.733+0	1.005-5
3.500-0	1.894+5	6.305-2	1.055-1	3.775-7	1.048-1	7.696+4	2.080+0	2.080+0	1.098-5
4.000-0	2.056+5	5.807-2	9.719-2	2.890-7	9.820-2	9.950+4	2.433+0	2.433+0	1.183-5
4.500-0	2.213+5	5.395-2	9.031-2	2.284-7	8.908-2	1.224+3	2.791+0	2.791+0	1.261-5
5.000-0	2.365+5	5.048-2	8.451-2	1.850-7	8.307-2	1.434+3	3.154+0	3.154+0	1.334-5
5.500-0	2.513+5	4.751-2	7.951-2	1.529-7	7.791-2	1.602+3	3.520+0	3.520+0	1.401-5
6.000-0	2.658+5	4.493-2	7.520-2	1.285-7	7.342-2	1.775+3	3.890+0	3.890+0	1.484-5
6.500-0	2.798+5	4.268-2	7.143-2	1.095-7	6.948-2	1.952+3	4.263+0	4.263+0	1.524-5
7.000-0	2.934+5	4.070-2	6.812-2	9.438-8	6.599-2	2.133+3	4.640+0	4.640+0	1.582-5
8.000-0	3.194+5	3.738-2	6.257-2	7.226-8	6.006-2	2.511+3	5.403+0	5.403+0	1.698-5
1.000+1	3.683+5	3.254-2	5.447-2	4.824-8	5.115-2	3.317+3	6.988+0	6.988+0	3.020-2
1.250+1	4.223+5	2.826-2	4.733-2	2.960-8	4.340-2	3.927+3	8.980+0	8.980+0	2.122-2
1.500+1	4.717+5	2.532-2	4.237-2	2.055-8	3.786-2	4.513+3	1.100+1	1.100+1	2.333-5
1.750+1	5.153+5	2.317-2	3.878-2	1.510-8	3.387-2	5.113+3	1.310+1	1.310+1	2.542-5
2.000+1	5.548+5	2.152-2	3.602-2	1.158-8	3.039-2	5.633+3	1.523+1	1.523+1	2.744-5
2.500+1	6.250+5	1.911-2	3.188-2	7.398-9	2.594-2	6.437+3	1.957+1	1.957+1	3.131-5
3.000+1	6.846+5	1.746-2	2.922-2	5.138-9	2.212-2	7.088+3	2.401+1	2.401+1	3.510-5
3.500+1	7.350+5	1.625-2	2.718-2	3.775-9	1.957-2	7.625+3	2.852+1	2.852+1	3.881-5
4.000+1	7.778+5	1.535-2	2.583-2	2.890-9	1.758-2	8.114+3	3.311+1	3.311+1	4.257-5
4.500+1	8.130+5	1.468-2	2.458-2	2.284-9	1.598-2	8.598+3	3.777+1	3.777+1	4.645-5
5.000+1	8.440+5	1.415-2	2.366-2	1.850-9	1.467-2	9.005+3	4.248+1	4.248+1	5.031-5
5.500+1	8.728+5	1.368-2	2.250-2		1.357-2	9.325+3	4.718+1	4.718+1	5.408-5
6.000+1	9.074+5	1.331-2	2.127-2	1.285-9		9.627+3	5.184+1	5.184+1	5.833-5
6.500+1	9.388+5	1.299-2	2.075-2		1.183-2	9.914+3	5.672+1	5.672+1	6.173-5
7.000+1	9.674+5	1.274-2	2.032-2		1.113-2	1.019+4	6.194+1	6.194+1	6.502-5
8.000+1	9.888+5	1.235-2	2.067-2		9.971-3	1.070+4	7.123+1	7.123+1	7.388-5
1.000+2	1.005+6	1.188-2	1.889-2		8.278-3	1.182+4	9.083+1	9.083+1	9.040-5

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Form Factors

1-H

SIN(Θ/2)/λ COHERENT INCOHERENT			SIN(Θ/2)/λ COHERENT INCOHERENT			SIN(Θ/2)/λ COHERENT INCOHERENT			SIN(Θ/2)/λ COHERENT INCOHERENT		
1/A			1/A			1/A			1/A		
0.000	0	1.300	0	0.000	0	1.250	1	7.271	1	4.713	1
5.000	3	9.395	1	1.105	3	1.500	1	6.413	1	5.087	1
1.000	2	9.378	1	4.410	3	1.750	1	5.381	1	6.085	1
1.500	2	9.350	1	9.088	3	2.000	1	4.008	1	7.088	1
2.000	2	9.318	1	1.749	2	2.500	1	3.498	1	8.777	1
2.500	2	9.383	1	2.717	2	3.000	1	2.513	1	9.389	1
3.000	2	9.304	1	3.683	2	4.000	1	1.304	1	9.630	1
4.000	2	9.225	1	6.773	2	5.000	1	7.060	2	9.950	1
5.000	2	9.489	1	1.033	1	6.000	1	4.033	2	9.984	1
7.000	2	9.799	1	1.902	1	7.000	1	2.429	2	9.994	1
9.000	2	9.424	1	2.904	1	8.000	1	1.534	2	9.998	1
1.000	1	8.108	1	3.426	1	9.000	1	1.009	2	9.999	1
1.000	0	8.882	3	1.000	0	1.000	0	8.882	3	1.000	0
1.500	0	8.995	3	1.500	0	1.250	0	2.995	3	1.000	0
2.000	0	1.494	3	1.500	0	1.500	0	1.494	3	1.000	0
2.500	0	4.891	4	2.000	0	2.000	0	4.891	4	1.000	0
3.000	0	2.035	4	2.500	0	2.500	0	2.035	4	1.000	0
3.000	0	9.902	5	3.000	0	3.000	0	9.902	5	1.000	0
3.500	0	5.373	5	3.500	0	3.500	0	5.373	5	1.000	0
4.000	0	3.161	5	4.000	0	4.000	0	3.161	5	1.000	0
5.000	0	1.300	5	5.000	0	5.000	0	1.300	5	1.000	0
6.000	0	6.282	6	6.000	0	6.000	0	6.282	6	1.000	0
7.000	0	3.398	6	7.000	0	7.000	0	3.398	6	1.000	0
8.000	0	1.942	6	8.000	0	8.000	0	1.942	6	1.000	0
1.000	1	8.188	7	1.000	1	1.000	1	8.188	7	1.000	0
1.500	1	1.615	7	1.500	1	1.500	1	1.615	7	1.000	0
2.000	1	5.112	8	2.000	1	2.000	1	5.112	8	1.000	0
5.000	1	1.309	9	5.000	1	5.000	1	1.309	9	1.000	0
8.000	1	1.928	10	8.000	1	8.000	1	1.928	10	1.000	0
1.000	2	8.183	11	1.000	2	1.000	2	8.183	11	1.000	0
1.000	3	8.183	15	1.000	3	1.000	3	8.183	15	1.000	0
1.000	6	8.183	27	1.000	6	1.000	6	8.183	27	1.000	0
1.000	9	8.183	39	1.000	9	1.000	9	8.183	39	1.000	0

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ENDL Evaluated Photon Cross Sections

2-He

12/07/78

Energy Deposition

2-He

12/07/78

ENDL Evaluated Photon Data

2-Ho

ATOMIC WEIGHT 4.0026				DENSITY 1.7850-4 GRAMS/CC							
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARNS)					NEV/COLLISION		NEV/CM	
	CH	CH/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. -FLOR	K.E. BREMSSTR	K.E.	
1.000-4	1.037-1	5.401-4	3.590-5	2.860-0	1.528-3	3.590-5		1.000-4	1.000-4	1.250-11	9.641-4
1.250-4	1.824-1	3.022-4	2.009-5	2.859-0	2.030-3	2.009-5		1.250-4	1.250-4	1.953-11	8.744-4
1.500-4	2.979-1	1.881-4	1.250-5	2.858-0	2.561-3	1.250-5		1.500-4	1.500-4	2.812-11	5.038-4
1.750-4	4.528-1	1.237-4	8.222-4	2.856-0	3.162-3	8.222-4		1.750-4	1.750-4	3.828-11	3.684-4
2.000-4	6.509-1	8.607-3	5.720-4	2.855-0	3.795-3	5.720-4		2.000-4	2.000-4	5.000-11	3.072-4
2.500-4	1.234-0	4.941-3	3.018-4	2.851-0	5.352-3	3.018-4		2.500-4	2.500-4	7.811-11	2.026-4
3.000-4	2.080-0	2.894-3	1.790-4	2.847-0	7.086-3	1.790-4		3.000-4	3.000-4	1.125-10	1.442-4
3.500-4	3.310-0	1.893-3	1.125-4	2.842-0	9.329-3	1.125-4		3.500-4	3.500-4	1.531-10	1.057-4
4.000-4	4.950-0	1.132-3	7.523-3	2.837-0	1.184-2	7.520-3		4.000-4	3.999-4	1.999-10	8.078-5
4.500-4	7.115-0	7.874-2	5.233-3	2.830-0	1.476-2	5.230-3		4.500-4	4.498-4	2.529-10	6.321-5
5.000-4	9.644-0	5.891-2	3.783-3	2.824-0	1.799-2	3.780-3		4.997-4	4.997-4	3.121-10	5.078-5
5.500-4	1.335-1	4.197-2	2.790-3	2.815-0	2.158-2	2.787-3		5.495-4	5.495-4	3.774-10	4.117-5
6.000-4	1.762-1	3.179-2	2.113-3	2.807-0	2.547-2	2.110-3		5.993-4	5.993-4	4.489-10	3.400-5
6.500-4	2.275-1	2.463-2	1.637-3	2.796-0	2.972-2	1.634-3		6.490-4	6.490-4	5.264-10	2.853-5
7.000-4	2.881-1	1.945-2	1.293-3	2.786-0	3.429-2	1.290-3		6.986-4	6.986-4	6.100-10	2.425-5
8.000-4	4.456-1	1.257-2	8.358-2	2.567-0	4.435-2	8.330-2		7.975-4	7.975-4	7.950-10	1.790-5
1.000-3	3.598-1	6.516-1	4.331-2	2.517-0	6.784-2	4.305-2		9.940-4	9.940-4	1.235-9	1.156-5
1.250-3	1.797-2	3.118-1	2.072-2	2.427-0	1.020-1	2.047-2		1.235-3	1.235-3	1.906-9	6.871-6
1.500-3	3.266-2	1.715-1	1.140-2	2.356-0	1.424-1	1.115-2		1.487-3	1.487-3	2.691-9	4.482-6
1.750-3	5.435-2	1.031-1	6.831-1	2.250-0	1.853-1	6.807-1		1.688-3	1.688-3	3.561-9	3.105-6
2.000-3	8.389-2	6.389-0	4.438-1	2.181-0	2.327-1	4.199-1		1.892-3	1.892-3	4.475-9	2.259-6
2.500-3	1.718-3	3.265-0	2.170-1	1.920-0	3.242-1	1.948-1		2.242-3	2.242-3	6.262-9	1.307-6
3.000-3	2.967-3	1.888-0	1.255-1	1.743-0	4.250-1	1.038-1		2.482-3	2.482-3	7.703-9	8.308-7
3.500-3	4.598-3	1.219-0	8.102-0	1.531-0	5.102-1	8.060-0		2.620-3	2.620-3	9.580-9	5.701-7
4.000-3	6.495-3	8.679-1	5.788-0	1.389-0	5.978-1	3.802-0		2.841-3	2.841-3	9.716-9	4.091-7
4.500-3	8.494-3	6.598-1	4.384-0	1.203-0	6.670-1	2.514-0		2.988-3	2.988-3	8.371-9	3.047-7
5.000-3	1.051-4	5.332-1	3.944-0	1.072-0	7.359-1	1.738-0		2.482-3	2.482-3	7.575-9	2.343-7
5.500-3	1.250-4	4.481-1	2.978-0	9.491-1	7.894-1	1.240-0		2.309-3	2.309-3	6.663-9	1.847-7
6.000-3	1.431-4	3.411-1	2.603-0	8.491-1	8.418-1	9.119-1		2.130-3	2.130-3	5.869-9	1.489-7
6.500-3	1.604-4	3.492-1	2.321-0	7.559-1	8.783-1	8.887-1		1.980-3	1.980-3	4.803-9	1.222-7
7.000-3	1.786-4	3.181-1	2.121-0	6.788-1	9.136-1	5.898-1		1.798-3	1.798-3	4.013-9	1.020-7
7.500-3	1.968-4	2.812-1	1.889-0	5.591-1	9.811-1	3.291-1		1.483-3	1.483-3	2.750-9	7.446-8
8.000-3	2.325-4	2.410-1	1.602-0	3.921-1	1.061-0	1.489-1		1.071-3	1.071-3	1.434-9	4.607-8
1.250-2	2.583-4	2.189-1	1.448-0	2.678-1	1.107-0	6.738-2		8.300-4	8.300-4	8.611-10	3.214-8
1.500-2	2.704-4	2.071-1	1.377-0	1.862-1	1.145-0	3.523-2		7.554-4	7.554-4	7.133-10	2.793-8
1.750-2	2.807-4	1.988-1	1.328-0	1.484-1	1.158-0	2.038-2		7.883-4	7.883-4	7.729-10	2.601-8
2.000-2	2.870-4	1.952-1	1.298-0	1.186-1	1.188-0	1.269-2		8.778-4	8.778-4	9.832-10	3.059-8
2.500-2	2.984-4	1.877-1	1.248-0	7.098-2	1.185-0	5.770-3		1.184-3	1.184-3	1.752-9	3.987-8
3.000-2	3.051-4	1.836-1	1.220-0	5.431-2	1.183-0	3.030-3		1.601-3	1.601-3	3.202-9	5.246-8
3.500-2	3.123-4	1.794-1	1.198-0	4.030-2	1.150-0	1.785-3		2.102-3	2.102-3	5.525-9	6.731-8
4.000-2	3.179-4	1.762-1	1.171-0	3.112-2	1.139-0	1.105-3		2.680-3	2.680-3	8.978-9	8.429-8
4.500-2	3.239-4	1.730-1	1.150-0	2.471-2	1.124-0	7.334-4		3.320-3	3.320-3	1.378-8	1.025-7
5.000-2	3.290-4	1.703-1	1.132-0	2.010-2	1.111-0	5.083-4		4.026-3	4.026-3	2.026-8	1.224-7
5.500-2	3.345-4	1.675-1	1.113-0	1.686-2	1.096-0	3.827-4		4.784-3	4.784-3	2.681-8	1.430-7
6.000-2	3.394-4	1.651-1	1.097-0	1.403-2	1.083-0	2.708-4		5.601-3	5.601-3	3.321-8	1.650-7
6.500-2	3.448-4	1.625-1	1.080-0	1.197-2	1.068-0	2.099-4		6.459-3	6.459-3	5.215-8	1.874-7
7.000-2	3.450-4	1.602-1	1.065-0	1.034-2	1.054-0	1.598-4		7.370-3	7.370-3	6.790-8	2.107-7
8.000-2	3.588-4	1.581-1	1.038-0	7.932-3	1.030-0	1.012-4		9.347-3	9.347-3	1.092-7	2.605-7
1.000-1	3.770-4	1.486-1	9.876-1	5.088-3	9.825-1	4.761-5		1.377-2	1.377-2	2.372-7	3.894-7
1.250-1	3.998-4	1.401-1	9.314-1	3.261-3	9.281-1	2.270-5		2.004-2	2.004-2	5.019-7	5.018-7
1.500-1	4.192-4	1.338-1	8.882-1	2.267-3	8.899-1	1.239-5		2.721-2	2.721-2	9.253-7	6.490-7
1.750-1	4.394-4	1.275-1	8.473-1	1.888-3	8.457-1	7.515-8		3.488-2	3.488-2	1.520-6	7.937-7
2.000-1	4.577-4	1.224-1	8.138-1	1.276-3	8.123-1	4.874-8		4.324-2	4.324-2	2.337-6	9.448-7
2.500-1	4.944-4	1.133-1	7.538-1	8.170-4	7.524-1	4.409-8		6.103-2	6.103-2	4.698-6	1.235-6
3.000-1	5.285-4	1.089-1	7.873-1	5.875-4	7.067-1	1.394-8		8.087-2	8.087-2	8.174-6	1.535-6
3.500-1	5.594-4	1.063-1	6.888-1	4.170-4	6.884-1	8.445-7		1.018-1	1.018-1	1.280-5	1.620-6
4.000-1	5.878-4	9.574-2	6.337-1	3.193-4	6.334-1	5.811-7		1.238-1	1.238-1	1.918-5	2.107-6
4.500-1	6.165-4	9.888-2	6.840-1	2.523-4	6.038-1	3.947-7		1.467-1	1.467-1	2.888-5	2.378-6
5.000-1	6.453-4	9.788-2	5.787-1	2.044-4	5.785-1	2.882-7		1.708-1	1.708-1	3.839-5	2.692-6
5.500-1	6.742-4	9.398-2	5.598-1	1.889-4	5.594-1	2.182-7		1.951-1	1.951-1	4.757-5	2.911-6
6.000-1	6.998-4	8.894-2	5.353-1	1.419-4	5.352-1	1.693-7		2.205-1	2.205-1	6.073-5	3.170-6
6.500-1	7.211-4	7.789-2	5.184-1	1.249-4	5.182-1	1.348-7		2.480-1	2.480-1	7.283-5	3.412-6
7.000-1	7.438-4	7.514-2	4.984-1	1.043-4	4.983-1	1.093-7		2.723-1	2.723-1	9.284-5	3.692-6

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ENOL Evaluated Photon Data

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ATOMIC WEIGHT 4.0026				DENSITY 1.7850-4 GRAMS/CC							
ENERGY		TOTAL MP		CROSS SECTION (BARN)				MEV/COLLISION			MEV/CM
MEV		CH	CH/CH/CH	TOTAL	COHERENT	INCOHER	PHOTOL PAIR PROD	K.C.+FLOR	K.E.	BREHSSIR	K.E.
0.000-1	7.918-4	7.078-2		4.703-1	7.985-5	4.702-1	7.478-8	3.289-1	3.289-1	1.335-4	4.129-6
1.000-0	8.807-4	8.381-2		4.228-1	5.110-5	4.227-1	4.052-8	4.400-1	4.400-1	2.419-4	4.998-6
1.022-0	8.901-4	8.294-2		4.183-1	4.893-5	4.183-1	3.900-8	4.528-1	4.528-1	2.581-4	5.087-6
1.250-0	9.848-4	5.889-2		3.781-1	3.271-5	3.780-1	2.761-8	5.881-1	5.881-1	4.320-4	5.972-6
1.500-0	1.083-3	5.172-2		3.438-1	2.271-5	3.438-1	1.891-8	7.418-1	7.418-1	6.873-4	6.849-6
1.750-0	1.177-3	4.780-2		3.184-1	1.888-5	3.184-1	1.505-8	8.988-1	8.988-1	1.011-3	7.640-6
2.000-0	1.267-3	4.422-2		2.939-1	1.278-5	2.932-1	1.203-8	7.180-4	1.061-0	1.406-3	8.378-6
2.044-0	1.283-3	4.388-2		2.903-1	1.223-5	2.898-1	1.184-8	7.575-4	1.090-0	1.484-3	8.500-6
2.500-0	1.438-3	3.895-2		2.588-1	8.177-6	2.575-1	8.887-9	1.362-3	1.393-0	2.421-3	9.685-6
3.000-0	1.600-3	3.502-2		2.328-1	5.678-6	2.306-1	6.748-9	2.128-3	1.734-0	3.751-3	1.084-5
3.500-0	1.753-3	3.188-2		2.124-1	4.172-6	2.095-1	5.558-9	2.885-3	2.083-0	5.408-3	1.188-5
4.000-0	1.899-3	2.950-2		1.980-1	3.194-6	1.924-1	4.895-9	3.649-3	2.438-0	7.407-3	1.284-5
4.500-0	2.039-3	2.747-2		1.866-1	2.524-6	1.782-1	4.034-9	4.405-3	2.799-0	9.757-3	1.372-5
5.000-0	2.174-3	2.576-2		1.712-1	2.044-6	1.681-1	3.544-9	5.088-3	3.185-0	1.247-2	1.455-5
5.500-0	2.308-3	2.429-2		1.615-1	1.689-6	1.598-1	3.177-9	5.635-3	3.535-0	1.555-2	1.533-5
6.000-0	2.433-3	2.303-2		1.530-1	1.418-6	1.488-1	2.875-9	6.190-3	3.908-0	1.901-2	1.607-5
6.500-0	2.558-3	2.192-2		1.457-1	1.210-6	1.330-1	2.622-9	6.753-3	4.287-0	2.285-2	1.678-5
7.000-0	2.673-3	2.088-2		1.393-1	1.043-6	1.320-1	2.408-9	7.324-3	4.670-0	2.710-2	1.747-5
8.000-0	2.895-3	1.935-2		1.288-1	7.985-7	1.201-1	2.088-9	8.492-3	5.448-0	3.682-2	1.881-5
1.000-1	3.288-3	1.704-2		1.132-1	5.110-7	1.023-1	1.599-9	1.063-2	7.042-0	6.145-2	2.142-5
1.250-1	3.739-3	1.498-2		9.958-2	3.271-7	8.881-2	1.278-2	9.084-0	9.084-0	1.020-1	2.430-5
1.500-1	4.125-3	1.338-2		9.028-2	2.271-7	7.572-2	1.454-2	1.119-1	1.119-1	1.543-1	2.712-5
1.750-1	4.451-3	1.239-2		8.388-2	1.888-7	6.734-2	1.632-2	1.334-1	1.334-1	2.189-1	2.998-5
2.000-1	4.736-3	1.183-2		7.883-2	1.278-7	6.077-2	1.795-2	1.554-1	1.554-1	2.981-1	3.282-5
2.500-1	5.223-3	1.073-2		7.128-2	8.177-8	5.108-2	2.021-2	2.002-1	2.002-1	4.888-1	3.833-5
3.000-1	5.809-3	9.889-3		6.838-2	5.678-8	4.424-2	2.214-2	2.480-1	2.480-1	7.341-1	4.387-5
3.500-1	5.988-3	9.450-3		6.281-2	4.178-8	3.913-2	2.388-2	2.825-1	2.825-1	1.032-0	4.935-5
4.000-1	6.180-3	9.085-3		5.805-2	3.194-8	3.518-2	2.510-2	3.397-1	3.397-1	1.384-0	5.487-5
4.500-1	6.389-3	8.798-3		5.848-2	2.524-8	3.197-2	2.849-2	3.875-1	3.875-1	1.791-0	6.085-5
5.000-1	6.531-3	8.577-3		5.781-2	2.044-8	2.935-2	2.788-2	4.358-1	4.358-1	2.250-0	6.870-5
5.500-1	6.688-3	8.384-3		5.573-2	1.888-8	2.715-2	2.858-2	4.838-1	4.838-1	2.780-0	7.842-5
6.000-1	6.804-3	8.234-3		5.473-2	1.418-8	2.528-2	2.944-2	5.325-1	5.325-1	3.323-0	7.885-5
6.500-1	6.905-3	8.114-3		5.393-2	1.210-8	2.387-2	3.028-2	5.813-1	5.813-1	3.877-0	8.419-5
7.000-1	6.988-3	8.020-3		5.330-2	1.043-8	2.227-2	3.104-2	6.303-1	6.303-1	4.603-0	9.022-5
8.000-1	7.101-3	7.889-3		5.243-2	7.985-9	1.894-2	3.249-2	7.287-1	7.287-1	6.084-0	1.088-4
1.000-2	7.212-3	7.788-3		5.183-2	5.110-9	1.895-2	3.508-2	8.270-1	8.270-1	9.626-0	1.295-4

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Form Factors

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SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT
1/Å		1/Å		1/Å		1/Å	
0.000+0	1.000+0	0.000+0	1.250+1	0.776-1	2.181-1	1.000+0	4.808-2
5.000-3	9.998-1	1.050-3	1.500+1	0.306-1	2.918-1	1.250+0	2.420-2
1.000-2	9.991-1	2.500-3	1.750+1	7.802-1	3.880-1	1.500+0	1.325-2
1.500-2	9.980-1	4.400-3	2.000+1	7.293-1	4.403-1	2.000+0	4.820-3
2.000-2	9.965-1	7.050-3	2.500+1	6.281-1	5.729-1	2.500+0	2.098-3
2.500-2	9.946-1	1.029-2	3.000+1	5.293-1	6.812-1	3.000+0	1.047-3
3.000-2	9.922-1	1.495-2	4.000+1	3.890-1	8.783-1	3.500+0	5.789-4
4.000-2	9.862-1	2.395-2	5.000+1	2.948-1	9.088-1	4.000+0	3.428-4
5.000-2	9.785-1	4.027-2	6.000+1	1.771-1	9.512-1	5.000+0	1.427-4
7.000-2	9.585-1	7.674-2	7.000+1	1.248-1	9.734-1	6.000+0	6.945-5
9.000-2	9.330-1	1.825-1	8.000+1	8.930-2	9.851-1	7.000+0	3.770-5
1.000-1	9.182-1	1.479-1	9.000+1	6.498-2	9.915-1	8.000+0	2.218-5

12/07/78

ENDL Evaluated Photon Cross Sections

3-Li

12/07/78

Energy Deposition

3-L1

12/07/78

ENDL Evaluated Photon Data

3-L1

ATOMIC WEIGHT 8.939										DENSITY 0.534 GRAMS/CC			
ENERGY MEV	TOTAL MFP			CROSS SECTION (BARNS)						MEV/COLLISION			MEV/CM K.E.
	CH	CH+CH/OM	CH/OM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	K.E.	
1.000-4	1.534-5	1.198-5	5	1.380-6	5.982-0	5.747-3	1.380-6		1.000-4	1.000-4	1.875-11	8.398-0	0
1.250-4	2.851-5	7.038-5	4	8.108-5	5.987-0	8.953-3	8.108-5		1.250-4	1.250-4	2.930-11	4.897-0	0
1.500-4	4.110-5	4.958-5	4	5.250-5	5.995-0	1.288-2	5.250-5		1.500-4	1.500-4	4.219-11	3.850-0	0
1.750-4	6.077-5	3.081-4	3	3.950-5	5.937-0	1.740-2	3.950-5		1.750-4	1.750-4	5.740-11	2.879-0	0
2.000-4	8.528-5	2.186-4	2	2.530-5	5.982-0	2.261-2	2.530-5		2.000-4	2.000-4	7.500-11	2.345-0	0
2.500-4	1.541-4	1.215-4	1	1.400-5	5.875-0	3.479-2	1.400-5		2.500-4	2.500-4	1.172-10	1.622-0	0
3.000-4	2.500-4	7.490-3	0	8.631-4	5.837-0	4.948-2	8.630-4		3.000-4	3.000-4	1.887-10	1.200-0	0
3.500-4	3.842-4	8.874-3	0	5.818-4	5.778-0	6.599-2	5.815-4		3.500-4	3.500-4	2.298-10	9.108-1	0
4.000-4	5.575-4	3.399-3	0	3.871-4	5.724-0	8.470-2	3.870-4		3.999-4	3.999-4	2.999-10	7.174-1	0
4.500-4	7.786-4	2.402-3	0	2.788-4	5.652-0	1.045-1	2.787-4		4.499-4	4.499-4	3.795-10	5.771-1	0
5.000-4	1.052-3	1.780-3	0	2.051-4	5.588-0	1.262-1	2.050-4		4.999-4	4.999-4	4.885-10	4.750-1	0
5.500-4	1.386-3	1.351-3	0	1.957-4	5.508-0	1.482-1	1.956-4		5.499-4	5.499-4	5.888-10	3.967-1	0
6.000-4	1.782-3	1.051-3	0	1.211-4	5.435-0	1.718-1	1.210-4		5.997-4	5.997-4	6.744-10	3.385-1	0
6.500-4	2.255-3	8.304-2	0	9.588-3	5.339-0	1.938-1	9.582-3		6.498-4	6.498-4	7.913-10	2.881-1	0
7.000-4	2.804-3	6.879-2	0	7.893-3	5.281-0	2.170-1	7.890-3		6.995-4	6.995-4	9.174-10	2.495-1	0
8.000-4	4.189-3	4.482-2	0	5.179-3	5.036-0	2.899-1	5.170-3		7.992-4	7.992-4	1.188-9	1.917-1	0
1.000-3	9.241-3	2.027-2	0	2.335-3	4.744-0	3.954-1	2.330-3		8.978-4	8.978-4	1.887-9	1.080-1	0
1.250-3	1.786-2	1.080-2	0	1.221-3	4.290-0	4.418-1	1.217-3		1.245-3	1.245-3	2.907-9	7.049-2	0
1.500-3	2.987-2	6.249-1	0	7.201-2	3.951-0	5.279-1	7.196-2		1.491-3	1.491-3	4.186-9	4.975-2	0
1.750-3	4.787-2	3.912-1	0	4.508-2	3.831-0	5.845-1	4.485-2		1.734-3	1.734-3	5.635-9	3.622-2	0
2.000-3	7.173-2	2.611-1	0	3.008-2	3.375-0	6.384-1	2.888-2		1.973-3	1.973-3	7.301-9	2.751-2	0
2.500-3	1.444-1	1.287-1	0	1.444-2	2.889-0	7.820-1	1.458-2		2.438-3	2.438-3	1.115-8	1.889-2	0
3.000-3	2.539-1	7.378-0	0	8.499-1	2.675-0	7.984-1	8.152-1		2.878-3	2.878-3	1.553-8	1.132-2	0
3.500-3	4.122-1	4.943-0	0	5.234-1	2.488-0	8.708-1	4.804-1		3.280-3	3.280-3	2.017-8	7.958-3	0
4.000-3	6.209-1	3.018-0	0	3.475-1	2.233-0	9.385-1	3.158-1		3.638-3	3.638-3	2.478-8	5.858-3	0
4.500-3	8.883-1	2.108-0	0	2.429-1	2.045-0	1.004-0	2.124-1		3.937-3	3.937-3	2.968-8	4.432-3	0
5.000-3	1.208-0	1.930-0	0	1.788-1	1.890-0	1.087-0	1.450-1		4.175-3	4.175-3	3.289-8	3.455-3	0
5.500-3	1.584-0	1.182-0	0	1.388-1	1.733-0	1.185-0	1.078-1		4.371-3	4.371-3	3.950-8	2.747-3	0
6.000-3	2.001-0	9.399-0	1	1.078-1	1.603-0	1.181-0	8.995-0		4.480-3	4.480-3	3.730-8	2.838-3	0
6.500-3	2.463-0	7.803-0	1	8.780-0	1.488-0	1.289-0	8.088-0		4.714-3	4.714-3	3.880-8	1.838-3	0
7.000-3	2.948-0	6.352-0	1	7.319-0	1.350-0	1.275-0	4.894-0		4.908-3	4.908-3	3.811-8	1.529-3	0
7.500-3	3.375-0	4.759-0	1	5.444-0	1.183-0	1.382-0	2.998-0		4.950-3	4.950-3	3.548-8	1.105-3	0
1.000-2	5.823-0	3.216-1	0	3.708-0	8.830-1	1.488-0	1.395-0		3.742-3	3.742-3	2.686-8	6.448-4	0
1.250-2	7.702-0	2.431-1	0	2.802-0	6.124-1	1.573-0	6.158-1		3.829-3	3.829-3	1.808-8	3.803-4	0
1.500-2	9.887-0	2.112-1	0	2.433-0	4.827-1	1.847-0	3.233-1		3.900-3	3.900-3	9.817-8	2.994-4	0
1.750-2	9.73-0	1.888-1	0	2.882-0	3.570-1	1.878-0	1.889-1		1.927-3	1.927-3	8.984-8	1.984-4	0
2.000-2	1.025-1	1.887-1	0	2.188-0	2.851-1	1.704-0	1.183-1		1.728-3	1.728-3	5.597-8	1.888-4	0
2.500-2	1.103-1	1.898-1	0	1.998-0	1.914-1	1.712-0	5.257-2		1.887-3	1.887-3	5.332-8	1.529-4	0
3.000-2	1.145-1	1.835-1	0	1.884-0	1.382-1	1.718-0	2.748-2		1.915-3	1.915-3	8.875-8	1.872-4	0
3.500-2	1.183-1	1.583-1	0	1.824-0	1.037-1	1.705-0	1.992-2		2.311-3	2.311-3	1.001-8	1.954-4	0
4.000-2	1.210-1	1.348-1	0	1.783-0	8.878-2	1.883-0	9.920-3		2.882-3	2.882-3	1.493-8	2.332-4	0
4.500-2	1.237-1	1.514-1	0	1.744-0	8.448-2	1.873-0	8.923-3		3.420-3	3.420-3	2.193-8	2.785-4	0
5.000-2	1.260-1	1.487-1	0	1.713-0	5.772-2	1.888-0	4.525-3		4.088-3	4.088-3	3.148-8	3.232-4	0
5.500-2	1.283-1	1.460-1	0	1.682-0	4.383-2	1.875-0	3.244-3		4.834-3	4.834-3	4.382-8	3.787-4	0
6.000-2	1.303-1	1.437-1	0	1.658-0	3.703-2	1.817-0	2.394-3		5.636-3	5.636-3	5.958-8	4.326-4	0
6.500-2	1.325-1	1.413-1	0	1.629-0	3.189-2	1.995-0	1.818-3		6.484-3	6.484-3	7.882-8	4.894-4	0
7.000-2	1.345-1	1.382-1	0	1.604-0	2.737-2	1.975-0	1.406-3		7.387-3	7.387-3	1.023-7	5.491-4	0
8.000-2	1.381-1	1.336-1	0	1.582-0	2.107-2	1.940-0	8.870-4		9.351-3	9.351-3	1.639-7	6.770-4	0
1.000-1	1.533-1	1.288-1	0	1.485-0	1.758-2	1.471-0	4.154-4		1.377-2	1.377-2	3.953-7	9.472-4	0
1.250-1	1.942-1	1.214-1	0	1.398-0	8.788-3	1.388-0	1.988-4		2.002-2	2.002-2	7.517-7	1.888-3	0
1.500-1	1.616-1	1.158-1	0	1.334-0	6.881-3	1.328-0	1.881-4		2.719-2	2.719-2	1.386-6	1.888-3	0
1.750-1	1.898-1	1.184-1	0	1.272-0	4.458-3	1.288-0	8.982-5		3.488-2	3.488-2	2.278-6	2.892-3	0
2.000-1	1.787-1	1.088-1	0	1.221-0	3.416-3	1.218-0	4.283-5		4.322-2	4.322-2	3.502-6	2.448-3	0
2.500-1	1.589-1	9.889-2	0	1.138-0	2.188-3	1.128-0	2.148-5		6.101-2	6.101-2	8.978-6	3.188-3	0
3.000-1	2.033-1	9.210-2	0	1.061-0	1.520-3	1.088-0	1.822-5		6.889-2	6.889-2	1.285-5	3.978-3	0
3.500-1	2.157-1	8.883-2	0	1.000-0	1.117-3	9.989-1	7.753-6		1.918-1	1.918-1	1.925-5	4.718-3	0
4.000-1	2.278-1	8.251-2	0	9.587-1	8.956-1	9.489-1	9.288-6		1.238-1	1.238-1	2.873-5	5.422-3	0
4.500-1	2.381-1	7.684-2	0	9.082-1	8.781-1	9.895-1	3.744-6		1.488-1	1.488-1	4.031-5	6.198-3	0
5.000-1	2.488-1	7.534-2	0	8.881-1	5.477-1	8.873-1	2.777-6		1.788-1	1.788-1	5.457-5	8.885-3	0
5.500-1	2.588-1	7.233-2	0	8.336-1	4.327-1	8.336-1	2.148-6		1.951-1	1.951-1	7.133-5	7.536-3	0
6.000-1	2.687-1	6.978-2	0	8.031-1	3.684-1	8.887-1	1.887-6		2.845-1	2.845-1	9.189-5	8.285-3	0
6.500-1	2.788-1	6.723-2	0	7.748-1	3.242-1	7.743-1	1.389-6		2.488-1	2.488-1	1.174-5	8.871-3	0
7.000-1	2.888-1	6.582-2	0	7.482-1	2.798-1	7.489-1	1.128-6		2.783-1	2.783-1	1.389-5	9.453-3	0

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 6.939										DENSITY 0.534 GRAMS/CC			
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARNS)				NEV/COLLISION			NEV/CM			
	CH	CH/CM/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR	K.E. BREMSSTR	K.E.				
9.000-1	3.059-1	6.129-2	7.055-1	2.140-4	7.052-1	7.582-7	3.269-1	3.269-1	2.002-4	1.089-2			
1.000-0	3.402-1	5.504-2	6.342-1	1.370-4	6.341-1	4.293-7	4.400-1	4.400-1	3.627-4	1.293-2			
1.022-0	3.439-1	5.446-2	6.275-1	1.312-4	6.274-1	4.421-7	4.527-1	4.527-1	3.840-4	1.317-2			
1.250-0	3.804-1	4.922-2	5.672-1	8.788-5	5.670-1	3.108-7	4.113-5	5.881-1	6.477-4	1.948-2			
1.500-0	4.183-1	4.478-2	5.158-1	8.089-5	5.153-1	2.258-7	3.922-4	7.418-1	1.030-3	1.773-2			
1.750-0	4.543-1	4.122-2	4.749-1	4.473-5	4.739-1	1.708-7	9.798-4	8.998-1	1.515-3	1.980-2			
2.000-0	4.888-1	3.831-2	4.414-1	3.425-5	4.397-1	1.305-7	1.811-3	1.081-0	2.108-3	2.171-2			
2.044-0	4.948-1	3.784-2	4.361-1	3.279-5	4.343-1	1.320-7	1.704-3	1.090-0	2.223-3	2.203-2			
2.500-0	5.542-1	3.378-2	3.893-1	2.192-5	3.862-1	9.826-8	3.048-3	1.393-0	3.630-3	2.514-2			
3.000-0	6.153-1	3.044-2	3.507-1	1.522-5	3.460-1	7.645-8	4.725-3	1.735-0	5.627-3	2.620-2			
3.500-0	6.730-1	2.783-2	3.206-1	1.118-5	3.143-1	6.289-8	6.345-3	2.085-0	6.120-3	3.098-2			
4.000-0	7.278-1	2.574-2	2.905-1	8.562-6	2.886-1	5.311-8	7.980-3	2.442-0	1.113-2	3.357-2			
4.500-0	7.795-1	2.402-2	2.788-1	6.785-6	2.673-1	4.598-8	9.940-3	2.806-0	1.489-2	3.599-2			
5.000-0	8.293-1	2.258-2	2.682-1	5.480-6	2.492-1	4.003-8	1.096-2	3.175-0	1.679-2	3.829-2			
5.500-0	8.777-1	2.133-2	2.458-1	4.589-6	2.337-1	3.588-8	1.210-2	3.549-0	2.348-2	4.043-2			
6.000-0	9.240-1	2.027-2	2.335-1	3.805-6	2.203-1	3.247-8	1.324-2	3.927-0	2.871-2	4.250-2			
6.500-0	9.683-1	1.934-2	2.228-1	3.242-6	2.084-1	2.962-8	1.440-2	4.310-0	3.455-2	4.431-2			
7.000-0	1.011-1	1.853-2	2.135-1	2.798-6	1.980-1	2.720-8	1.557-2	4.698-0	4.101-2	4.648-2			
8.000-0	1.088-1	1.718-2	1.981-1	2.191-6	1.802-1	2.333-8	1.794-2	5.486-0	5.586-2	5.037-2			
1.000-1	1.224-1	1.530-2	1.783-1	1.370-6	1.535-1	1.908-8	2.281-2	7.113-0	9.381-2	5.811-2			
1.250-1	1.377-1	1.380-2	1.677-1	8.788-7	1.302-1	1.451-8	2.854-2	9.197-0	1.529-1	6.861-2			
1.500-1	1.502-1	1.247-2	1.438-1	6.089-7	1.136-1	1.171-8	3.006-2	1.135-1	2.384-1	7.353-2			
1.750-1	1.603-1	1.188-2	1.346-1	4.473-7	1.010-1	1.005-8	3.359-2	1.358-1	3.380-1	8.458-2			
2.000-1	1.688-1	1.128-2	1.278-1	3.425-7	9.118-7	8.741-9	3.683-2	1.581-1	4.548-1	9.380-2			
2.500-1	1.830-1	1.023-2	1.176-1	2.192-7	7.862-7	6.920-9	4.130-2	2.039-1	7.508-1	1.114-1			
3.000-1	1.938-1	9.473-3	1.115-1	1.522-7	6.837-7	5.718-9	4.508-2	2.507-1	1.125-1	1.295-1			
3.500-1	2.021-1	9.288-3	1.088-1	1.118-7	5.870-7	4.888-9	4.808-2	2.981-1	1.578-1	1.475-1			
4.000-1	2.083-1	9.090-3	1.036-1	8.982-8	5.874-7	4.231-9	5.085-2	3.481-1	2.108-1	1.882-1			
4.500-1	2.125-1	8.811-3	1.015-1	6.785-8	4.785-7	3.740-9	5.398-2	3.947-1	2.719-1	1.957-1			
5.000-1	2.161-1	8.688-3	9.885-3	5.480-8	4.482-7	3.350-9	5.884-2	4.434-1	3.424-1	2.052-1			
5.500-1	2.192-1	8.533-3	9.832-3	4.529-8	4.072-7	3.032-9	6.380-2	4.883-1	4.180-1	2.243-1			
6.000-1	2.220-1	8.439-3	9.719-3	3.805-8	3.783-7	2.788-9	6.885-2	5.414-1	4.888-1	2.438-1			
6.500-1	2.244-1	8.365-3	9.633-3	3.249-8	3.590-7	2.548-9	7.403-2	5.968-1	5.888-1	2.637-1			
7.000-1	2.259-1	8.307-3	9.572-3	2.788-8	3.340-7	2.328-9	7.932-2	6.481-1	6.828-1	2.839-1			
8.000-1	2.274-1	8.248-3	9.561-3	2.191-8	2.981-7	2.048-9	8.510-2	7.382-1	8.998-1	3.225-1			
1.000-2	2.274-1	8.233-3	9.487-3	1.378-8	2.483-7	1.822-9	9.385-2	9.385-1	1.404-1	4.128-1			

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Form Factors

3-L1

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250+1	6.798-1	3.907-1	1.000+0	1.068-1	9.759-1	1.000+1	3.477-5	1.000+0
5.000-3	9.989-1	2.200-3	1.500+1	6.353-1	4.153-1	1.250+0	6.125-2	9.911-1	1.500+1	6.945-6	1.000+0
1.000-2	9.995-1	8.833-3	1.750+1	6.061-1	4.432-1	1.500+0	3.673-2	9.964-1	2.000+1	2.209-6	1.000+0
1.500-2	9.900-1	1.949-2	2.000+1	5.808-1	4.725-1	2.000+0	1.494-2	9.993-1	5.000+1	5.748-6	1.000+0
2.000-2	9.824-1	3.407-2	2.500+1	5.419-1	5.351-1	2.500+0	6.964-3	9.998-1	8.000+1	8.884-9	1.000+0
2.500-2	9.730-1	5.150-2	3.000+1	5.038-1	5.984-1	3.000+0	3.840-3	9.999-1	1.000+2	3.669-9	1.000+0
3.000-2	9.617-1	7.213-2	4.000+1	4.229-1	7.143-1	3.500+0	2.064-3	1.000+0	1.000+3	4.998-13	1.000+0
4.000-2	9.348-1	1.180-1	5.000+1	3.438-1	8.055-1	4.000+0	1.248-3	1.000+0	1.000+6	1.480-22	1.000+0
5.000-2	9.035-1	1.686-1	6.000+1	2.752-1	8.710-1	5.000+0	5.290-4	1.000+0	1.000+9	1.481-31	1.000+0
7.000-2	8.357-1	2.551-1	7.000+1	2.187-1	9.154-1	6.000+0	2.602-4	1.000+0			
9.000-2	7.697-1	3.210-1	8.000+1	1.708-1	9.446-1	7.000+0	1.422-4	1.000+0			
1.000-1	7.397-1	3.443-1	9.000+1	1.348-1	9.636-1	8.000+0	8.403-5	1.000+0

12/07/78

ENDL Evaluated Photon Cross Sections

4-Be

12/07/78

Energy Deposition

4-Be

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ENDL Evaluated Photon Data

4-8e

ATOMIC WEIGHT 9.0128										DENSITY 1.896 GRAMS/CC			
ENERGY MEV	TOTAL NFP			CROSS SECTION (BARNs)					PAIR PROD	NEUT/COLLISION			NEUT/CM
	CH	CH ² /CM	CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD		K.E. *FLOR	K.E.	BREMSSTR	
1.000-4	6.746-5	8.019-3	1.200-5	1.004-1	1.004-1	3.777-3	1.200-5	1.200-5	9.999-5	9.999-5	2.500-11	1.402-0	1.402-0
1.103-4	8.406-5	8.436-3	9.831-4	1.063-1	1.063-1	4.806-3	9.830-4	9.830-4	1.103-4	1.103-4	3.041-11	1.312-0	1.312-0
1.117-4	3.446-5	1.570-5	2.350-5	1.063-1	1.063-1	4.725-3	2.350-5	2.350-5	1.117-4	1.117-4	3.119-11	3.241-0	3.241-0
1.250-4	4.398-5	1.242-5	1.098-5	1.062-1	1.062-1	5.932-3	1.098-5	1.098-5	1.250-4	1.250-4	3.906-11	2.000-0	2.000-0
1.500-4	6.376-5	8.467-4	1.270-5	1.061-1	1.061-1	8.579-3	1.270-5	1.270-5	1.500-4	1.500-4	5.625-11	2.352-0	2.352-0
1.750-4	8.975-5	8.083-4	9.023-5	1.058-1	1.058-1	1.188-2	9.023-5	9.023-5	1.750-4	1.750-4	7.058-11	1.950-0	1.950-0
2.000-4	1.207-5	4.484-4	6.710-5	1.057-1	1.057-1	1.525-2	6.710-5	6.710-5	2.000-4	2.000-4	1.000-10	1.657-0	1.657-0
2.500-4	2.101-5	2.575-4	3.69-5	1.051-1	1.051-1	2.372-2	3.69-5	3.69-5	2.500-4	2.500-4	1.562-10	1.190-0	1.190-0
3.000-4	3.305-5	1.637-4	2.450-5	1.046-1	1.046-1	3.404-2	2.450-5	2.450-5	3.000-4	3.000-4	2.250-10	9.078-0	9.078-0
3.500-4	4.934-5	1.097-4	1.641-5	1.039-1	1.039-1	4.598-2	1.641-5	1.641-5	3.500-4	3.500-4	3.062-10	7.094-0	7.094-0
4.000-4	6.980-5	7.752-3	1.160-5	1.032-1	1.032-1	5.967-2	1.160-5	1.160-5	4.000-4	4.000-4	3.999-10	5.730-0	5.730-0
4.500-4	9.650-5	5.807-3	8.398-4	1.023-1	1.023-1	7.477-2	8.391-4	8.391-4	4.499-4	4.499-4	5.061-10	4.683-0	4.683-0
5.000-4	1.289-4	4.197-3	6.261-4	1.015-1	1.015-1	9.149-2	6.280-4	6.280-4	4.999-4	4.999-4	6.248-10	3.878-0	3.878-0
5.500-4	1.676-4	3.228-3	4.83-4	1.004-1	1.004-1	1.093-1	4.830-4	4.830-4	5.499-4	5.499-4	7.559-10	3.280-0	3.280-0
6.000-4	2.130-4	2.540-3	3.801-4	9.948-4	9.948-4	1.287-1	3.800-4	3.800-4	5.998-4	5.998-4	8.995-10	2.616-0	2.616-0
6.500-4	2.699-4	2.035-3	3.046-4	9.813-4	9.813-4	1.486-1	3.045-4	3.045-4	6.498-4	6.498-4	1.058-9	2.444-0	2.444-0
7.000-4	3.264-4	1.698-3	2.481-4	9.690-4	9.690-4	1.697-1	2.480-4	2.480-4	6.997-4	6.997-4	1.224-9	2.144-0	2.144-0
8.000-4	4.846-4	1.117-3	1.871-4	9.473-4	9.473-4	2.156-1	1.870-4	1.870-4	7.995-4	7.995-4	1.598-9	1.650-0	1.650-0
1.000-3	9.942-4	5.671-2	8.468-3	8.935-3	8.935-3	3.135-1	8.477-3	8.477-3	9.989-4	9.989-4	2.405-9	1.047-0	1.047-0
1.250-3	1.828-3	2.960-2	4.430-3	9.122-3	9.122-3	4.351-1	4.422-3	4.422-3	1.248-3	1.248-3	3.821-9	6.625-1	6.625-1
1.500-3	3.107-3	1.741-2	2.608-3	7.513-3	7.513-3	5.688-1	2.598-3	2.598-3	1.495-3	1.495-3	5.590-9	4.812-1	4.812-1
1.750-3	4.961-3	1.091-2	1.632-3	6.805-3	6.805-3	6.794-1	1.625-3	1.625-3	1.742-3	1.742-3	7.586-9	3.511-1	3.511-1
2.000-3	7.436-3	7.277-1	1.089-3	6.246-3	6.246-3	7.925-1	1.082-3	1.082-3	1.987-3	1.987-3	9.871-9	2.672-1	2.672-1
2.500-3	1.496-2	3.618-1	5.415-2	5.219-3	5.219-3	9.500-1	5.353-2	5.353-2	2.472-3	2.472-3	1.527-8	1.853-1	1.853-1
3.000-3	2.635-2	2.050-1	3.088-2	4.507-3	4.507-3	1.102-2	3.012-2	3.012-2	2.945-3	2.945-3	2.169-8	1.118-1	1.118-1
3.500-3	4.316-2	1.294-1	1.878-2	3.950-3	3.950-3	1.200-2	1.825-2	1.825-2	3.404-3	3.404-3	2.897-8	7.087-2	7.087-2
4.000-3	6.583-2	8.220-0	1.230-2	3.523-3	3.523-3	1.293-2	1.182-2	1.182-2	3.844-3	3.844-3	3.694-8	5.839-2	5.839-2
4.500-3	9.571-2	5.854-0	8.481-1	3.189-3	3.189-3	1.386-2	8.008-1	8.008-1	4.258-3	4.258-3	4.534-8	4.450-2	4.450-2
5.000-3	1.331-1	4.066-0	6.085-1	2.918-3	2.918-3	1.474-2	5.850-1	5.850-1	4.644-3	4.644-3	5.391-8	3.490-2	3.490-2
5.500-3	1.790-1	3.083-0	4.524-1	2.687-3	2.687-3	1.495-2	4.108-1	4.108-1	4.994-3	4.994-3	6.824-8	2.790-2	2.790-2
6.000-3	2.330-1	2.320-0	3.472-1	2.483-3	2.483-3	1.552-2	3.088-1	3.088-1	5.305-3	5.305-3	7.035-8	2.275-2	2.275-2
6.500-3	2.986-1	1.864-0	2.730-1	2.308-3	2.308-3	1.604-2	2.339-1	2.339-1	5.674-3	5.674-3	7.787-8	1.678-2	1.678-2
7.000-3	3.681-1	1.470-0	2.200-1	2.150-3	2.150-3	1.653-2	1.619-1	1.619-1	5.798-3	5.798-3	8.403-8	1.575-2	1.575-2
8.000-3	5.325-1	1.016-0	1.521-1	1.891-3	1.891-3	1.746-2	1.157-1	1.157-1	6.102-3	6.102-3	9.309-8	1.148-2	1.148-2
1.000-2	9.253-1	5.848-1	8.752-0	1.488-3	1.488-3	1.895-2	5.389-0	5.389-0	6.203-3	6.203-3	9.620-8	6.704-3	6.704-3
1.250-2	4.449-0	3.735-1	5.989-0	1.081-3	1.081-3	2.015-2	2.493-0	2.493-0	5.692-3	5.692-3	8.099-8	3.928-3	3.928-3
1.500-2	1.888-0	2.885-1	4.288-0	8.418-1	8.418-1	2.119-2	1.328-0	1.328-0	4.870-3	4.870-3	5.928-8	2.579-3	2.579-3
1.750-2	2.245-0	2.410-1	3.607-0	6.998-1	6.998-1	2.170-2	7.716-1	7.716-1	4.137-3	4.137-3	4.278-8	1.843-3	1.843-3
2.000-2	2.50-0	2.184-1	3.238-0	5.342-1	5.342-1	2.215-2	4.691-1	4.691-1	3.552-3	3.552-3	3.154-8	1.420-3	1.420-3
2.500-2	2.883-0	1.890-1	2.829-0	3.848-1	3.848-1	2.239-2	2.253-1	2.253-1	2.917-3	2.917-3	2.127-8	1.019-3	1.019-3
3.000-2	3.082-0	1.787-1	2.845-0	2.671-1	2.671-1	2.258-2	1.198-1	1.198-1	2.752-3	2.752-3	1.894-8	8.989-4	8.989-4
3.500-2	3.215-0	1.683-1	2.519-0	2.025-1	2.025-1	2.248-2	7.019-2	7.019-2	2.905-3	2.905-3	2.110-8	9.035-4	9.035-4
4.000-2	3.320-0	1.630-1	2.439-0	1.990-1	1.990-1	2.238-2	4.424-2	4.424-2	3.254-3	3.254-3	2.847-8	9.800-4	9.800-4
4.500-2	3.418-0	1.584-1	2.370-0	1.277-1	1.277-1	2.213-2	2.952-2	2.952-2	3.745-3	3.745-3	3.505-8	1.028-3	1.028-3
5.000-2	3.482-0	1.550-1	2.318-0	1.050-1	1.050-1	2.193-2	2.095-2	2.095-2	4.344-3	4.344-3	4.716-8	1.244-3	1.244-3
5.500-2	3.567-0	1.517-1	2.270-0	8.763-2	8.763-2	2.186-2	1.404-2	1.404-2	5.027-3	5.027-3	6.318-8	1.409-3	1.409-3
6.000-2	3.631-0	1.490-1	2.230-0	7.428-2	7.428-2	2.145-2	1.103-2	1.103-2	5.788-3	5.788-3	6.374-8	1.594-3	1.594-3
6.500-2	3.699-0	1.463-1	2.189-0	6.384-2	6.384-2	2.117-2	8.417-3	8.417-3	6.605-3	6.605-3	1.091-7	1.786-3	1.786-3
7.000-2	3.763-0	1.439-1	2.154-0	5.516-2	5.516-2	2.092-2	6.953-3	6.953-3	7.484-3	7.484-3	1.400-7	1.991-3	1.991-3
8.000-2	3.887-0	1.399-1	2.094-0	4.282-2	4.282-2	2.047-2	4.174-3	4.174-3	9.413-3	9.413-3	2.215-7	2.434-3	2.434-3
1.000-1	4.078-0	1.327-1	1.987-0	2.794-2	2.794-2	1.957-2	1.985-3	1.985-3	1.379-2	1.379-2	4.794-7	3.383-3	3.383-3
1.250-1	4.332-0	1.249-1	1.889-0	1.772-2	1.772-2	1.851-2	9.985-4	9.985-4	2.003-2	2.003-2	1.002-6	4.623-3	4.623-3
1.500-1	4.547-0	1.190-1	1.781-0	1.236-2	1.236-2	1.788-2	5.268-4	5.268-4	2.718-2	2.718-2	1.846-6	5.977-3	5.977-3
1.750-1	4.783-0	1.135-1	1.688-0	9.099-3	9.099-3	1.688-2	3.244-4	3.244-4	3.484-2	3.484-2	3.034-6	7.305-3	7.305-3
2.000-1	4.983-0	1.099-1	1.638-0	8.978-3	8.978-3	1.623-2	2.125-4	2.125-4	4.320-2	4.320-2	4.085-6	6.893-3	6.893-3
2.500-1	5.370-0	1.008-1	1.508-0	4.473-3	4.473-3	1.503-2	1.073-4	1.073-4	6.099-2	6.099-2	2.937-6	1.136-2	1.136-2
3.000-1	5.720-0	9.410-2	1.416-0	3.110-3	3.110-3	1.413-2	8.142-5	8.142-5	6.082-2	6.082-2	1.833-5	1.413-2	1.413-2
3.500-1	6.088-0	8.987-2	1.334-0	2.888-3	2.888-3	1.332-2	3.986-5	3.986-5	1.018-1	1.018-1	2.578-5	1.673-2	1.673-2
4.000-1	6.387-0	8.473-2	1.288-0	1.751-3	1.751-3	1.288-2	2.678-5	2.678-5	1.238-1	1.238-1	3.086-5	1.938-2	1.938-2
4.500-1	6.701-0	8.076-2	1.269-0	1.384-3	1.384-3	1.207-2	1.888-5	1.888-5	1.468-1	1.468-1	5.372-5	2.188-2	2.188-2
5.000-1	6.995-0	7.738-2	1.198-0	1.121-3	1.121-3	1.157-2	1.402-5	1.402-5	1.708-1	1.708-1	7.873-5	2.439-2	2.439-2
5.500-1	7.265-0	7.427-2	1.111-0	9.285-4	9.285-4	1.111-2	1.378-5	1.378-5	1.951-1	1.951-1	9.507-5	2.677-2	2.677-2
6.000-1	7.582-0	7.158-2	1.071-0	7.788-4	7.788-4	1.070-2	8.981-5	8.981-5	2.204-1	2.204-1	1.214-4	2.915-2	2.915-2

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4-8e

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ENDL Evaluated Photon Data

4-B_e

ATOMIC WEIGHT 9.0129				DENSITY 1.848 GRAMS/CC							
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARNs)						MEV/COLLISION		MEV/CM
	CM	CM ² /CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. - FLOR	K.E.	BREMSSTR	K.E.
8.500-1	7.840-0	8.902-2	1.033-0	6.834-4	1.032-0	6.884-6		2.480-1	2.480-1	1.511-4	3.137-2
7.000-1	8.108-0	8.876-2	9.980-1	5.721-4	9.984-1	5.862-6		2.722-1	2.722-1	1.851-4	3.328-2
6.000-1	8.809-0	8.286-2	9.407-1	4.381-4	9.403-1	3.982-6		3.288-1	3.288-1	2.869-4	3.797-2
1.000-0	9.575-0	5.851-2	8.457-1	2.804-4	8.454-1	2.275-6		4.400-1	4.400-1	4.834-4	4.595-2
1.022-0	9.678-0	5.591-2	8.367-1	2.884-4	8.365-1	2.190-6	1.000-6	4.527-1	4.527-1	5.118-4	4.878-2
1.250-0	1.071-1	5.054-2	7.963-1	1.795-4	7.960-1	1.540-6	6.043-5	5.880-1	5.880-1	6.632-4	5.492-2
1.500-0	1.177-1	4.597-2	6.879-1	1.248-4	6.871-1	1.119-6	6.979-4	7.417-1	7.417-1	1.373-3	6.300-2
1.750-0	1.278-1	4.235-2	6.337-1	9.156-5	6.319-1	8.485-7	1.735-3	8.995-1	8.995-1	2.018-3	7.039-2
2.000-0	1.374-1	3.938-2	5.893-1	7.019-5	5.883-1	6.785-7	2.884-3	1.081-0	1.081-0	2.808-3	7.722-2
2.044-0	1.391-1	3.890-2	5.822-1	6.712-5	5.791-1	6.544-7	3.030-3	1.090-0	1.090-0	2.982-3	7.838-2
2.500-0	1.556-1	3.478-2	5.204-1	4.487-5	5.150-1	4.888-7	5.404-3	1.393-0	1.393-0	4.837-3	8.925-2
3.000-0	1.724-1	3.138-2	4.697-1	3.116-5	4.613-1	3.795-7	6.343-3	1.738-0	1.738-0	7.504-3	1.007-1
3.500-0	1.882-1	2.875-2	4.302-1	2.289-5	4.190-1	3.112-7	1.115-2	2.088-0	2.088-0	1.084-2	1.109-1
4.000-0	2.031-1	2.664-2	3.987-1	1.753-5	3.848-1	2.626-7	1.393-2	2.447-0	2.447-0	1.488-2	1.205-1
4.500-0	2.171-1	2.492-2	3.730-1	1.385-5	3.563-1	2.253-7	1.663-2	2.813-0	2.813-0	1.964-2	1.296-1
5.000-0	2.305-1	2.348-2	3.514-1	1.122-5	3.323-1	1.978-7	1.906-2	3.185-0	3.185-0	2.517-2	1.382-1
5.500-0	2.434-1	2.223-2	3.326-1	9.271-6	3.116-1	1.773-7	2.099-2	3.562-0	3.562-0	3.144-2	1.463-1
6.000-0	2.557-1	2.118-2	3.166-1	7.790-6	2.937-1	1.604-7	2.293-2	3.945-0	3.945-0	3.852-2	1.542-1
6.500-0	2.674-1	2.024-2	3.028-1	6.637-6	2.779-1	1.463-7	2.489-2	4.332-0	4.332-0	4.641-2	1.620-1
7.000-0	2.785-1	1.943-2	2.908-1	5.723-6	2.640-1	1.344-7	2.686-2	4.724-0	4.724-0	5.515-2	1.697-1
8.000-0	2.937-1	1.812-2	2.711-1	4.382-6	2.408-1	1.152-7	3.084-2	5.524-0	5.524-0	7.525-2	1.849-1
1.000-1	3.325-1	1.528-2	2.436-1	2.804-6	2.046-1	8.919-8	3.897-2	7.178-0	7.178-0	1.255-1	2.159-1
1.250-1	3.731-1	1.482-2	2.188-1	1.795-6	1.738-1	7.050-8	4.520-2	9.299-0	9.299-0	2.113-1	2.513-1
1.500-1	3.939-1	1.353-2	2.025-1	1.246-6	1.514-1	5.832-8	5.105-2	1.149-1	1.149-1	3.208-1	2.873-1
1.750-1	4.227-1	1.260-2	1.916-1	9.157-7	1.347-1	4.982-8	5.691-2	1.374-1	1.374-1	4.563-1	3.251-1
2.000-1	4.413-1	1.206-2	1.835-1	7.010-7	1.216-1	4.315-8	6.194-2	1.603-1	1.603-1	6.178-1	3.633-1
2.500-1	4.713-1	1.148-2	1.719-1	4.487-7	1.022-1	3.415-8	6.985-2	2.069-1	2.069-1	1.018-0	4.331-1
3.000-1	4.926-1	1.098-2	1.644-1	3.118-7	8.849-8	2.821-8	7.989-2	2.544-1	2.544-1	1.522-0	5.165-1
3.500-1	5.091-1	1.063-2	1.591-1	2.289-7	7.827-8	2.401-8	8.079-2	3.025-1	3.025-1	2.126-0	5.941-1
4.000-1	5.204-1	1.040-2	1.556-1	1.753-7	7.032-8	2.087-8	8.529-2	3.510-1	3.510-1	2.832-0	6.745-1
4.500-1	5.270-1	1.027-2	1.537-1	1.385-7	6.394-8	1.845-8	8.973-2	4.000-1	4.000-1	3.637-0	7.591-1
5.000-1	5.324-1	1.016-2	1.521-1	1.122-7	5.870-8	1.852-8	9.340-2	4.482-1	4.482-1	4.532-0	8.437-1
5.500-1	5.380-1	1.008-2	1.505-1	9.272-8	5.430-8	1.495-8	9.623-2	4.984-1	4.984-1	5.522-0	9.285-1
6.000-1	5.418-1	9.988-3	1.495-1	7.790-8	5.057-8	1.385-8	9.890-2	5.478-1	5.478-1	6.599-0	1.011-0
6.500-1	5.444-1	9.940-3	1.488-1	6.638-8	4.734-8	1.235-8	1.014-1	5.974-1	5.974-1	7.782-0	1.037-0
7.000-1	5.459-1	9.912-3	1.483-1	5.723-8	4.453-8	1.161-8	1.038-1	6.470-1	6.470-1	9.008-0	1.185-0
8.000-1	5.488-1	9.899-3	1.481-1	4.382-8	3.888-8	1.010-8	1.083-1	7.485-1	7.485-1	1.174-1	1.366-0
1.000-2	5.426-1	9.973-3	1.493-1	2.804-8	3.310-8	7.993-9	1.161-1	9.463-1	9.463-1	1.810-1	1.744-0

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Form Factors

4-Be

SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT		
1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ		
0.000	0	1.000	0	0.000	0	1.250	1	0.981	1	3.757	1	1.000	0	1.951	1	9.443	1	1.000	1	0.704	5	1.000	0
5.000	3	9.993	1	1.075	3	1.500	1	0.830	1	4.435	1	1.250	0	1.070	1	9.730	1	1.500	1	1.700	5	1.000	0
1.000	2	9.970	1	4.425	3	1.750	1	5.057	1	4.914	1	1.500	0	0.999	2	9.805	1	2.000	1	5.044	6	1.000	0
1.500	2	9.935	1	9.950	3	2.000	1	5.193	1	5.302	1	2.000	0	2.985	2	9.873	1	5.000	1	1.479	7	1.000	0
2.000	2	9.881	1	1.755	2	2.500	1	4.588	1	5.804	1	2.500	0	1.499	2	9.993	1	8.000	1	2.296	8	1.000	0
2.500	2	9.816	1	2.708	2	3.000	1	4.238	1	6.176	1	3.000	0	0.180	3	9.998	1	1.000	2	9.507	9	1.000	0
3.000	2	9.737	1	3.880	2	4.000	1	3.799	1	6.899	1	3.500	0	4.771	3	9.999	1	1.000	3	1.405	12	1.000	0
4.000	2	9.542	1	6.040	2	5.000	1	3.401	1	7.513	1	4.000	0	2.952	3	1.000	0	1.000	6	5.062	22	1.000	0
5.000	2	9.304	1	9.953	2	6.000	1	2.982	1	8.093	1	5.000	0	1.288	3	1.000	0	1.000	9	5.083	31	1.000	0
7.000	2	8.731	1	1.750	1	7.000	1	2.569	1	8.573	1	6.000	0	6.429	4	1.000	0						
9.000	2	8.181	1	2.941	1	8.000	1	2.188	1	8.949	1	7.000	0	3.945	4	1.000	0						
1.000	1	7.144	1	2.927	1	9.000	1	1.845	1	9.233	1	8.000	0	2.108	4	1.000	0

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ENDL Evaluated Photon Cross Sections

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12/07/78

Energy Deposition

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12/07/73

ENDL Evaluated Photon Data

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ATOMIC WEIGHT 10.811		DENSITY 2.34 GRAMS/CC									
ENERGY	TOTAL MFP	CROSS SECTION (EASNS)								NEUT/COLLISION	NEUT/CM
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E. BREMSSTR	K.E.	K.E.
1.000-4	2.062-5	1.493-4	2.060-5	1.662-5	1.385-3	2.680-5		9.999-5	9.999-5	3.125-11	3.493-0
1.250-4	4.649-5	9.192-5	1.650-5	1.660-5	5.285-3	1.650-5		1.250-4	1.250-4	4.882-11	2.888-0
1.500-4	6.910-5	6.184-5	1.110-5	1.658-5	7.607-3	1.110-5		1.500-4	1.500-4	7.029-11	2.170-0
1.750-4	9.934-5	4.302-5	7.783-5	1.656-5	1.034-2	7.781-4		1.750-4	1.750-4	9.586-11	1.761-0
1.873-4	1.165-4	3.865-5	6.582-4	1.655-5	1.183-2	6.580-4		1.873-4	1.873-4	1.096-10	1.606-0
1.987-4	6.219-5	6.189-5	1.470-6	1.655-5	1.201-2	1.470-6		1.987-4	1.987-4	1.113-10	3.616-1
2.000-4	6.393-5	6.685-5	1.200-6	1.654-5	1.348-2	1.200-6		2.000-4	2.000-4	1.250-10	3.126-1
2.500-4	1.016-5	4.206-5	7.550-5	1.647-5	2.097-2	7.550-5		2.500-4	2.500-4	1.953-10	2.450-1
3.000-4	1.484-5	2.880-4	5.170-5	1.641-5	3.009-2	5.170-5		3.000-4	3.000-4	2.612-10	2.022-1
3.500-4	2.167-5	1.972-4	3.940-5	1.632-5	4.071-2	3.940-5		3.500-4	3.500-4	3.626-10	1.615-1
4.000-4	3.006-5	1.421-4	2.550-5	1.624-5	5.289-2	2.550-5		4.000-4	4.000-4	4.999-10	1.330-1
4.500-4	4.062-5	1.047-4	1.879-5	1.613-5	6.642-2	1.879-5		4.500-4	4.500-4	6.327-10	1.102-1
5.000-4	5.384-5	7.967-5	1.430-5	1.603-5	8.143-2	1.430-5		5.000-4	5.000-4	7.811-10	9.320-0
5.500-4	6.906-5	6.188-5	1.111-5	1.590-5	9.761-2	1.111-5		5.500-4	5.500-4	9.450-10	7.963-0
6.000-4	8.697-5	4.914-5	0.862-4	1.578-5	1.152-1	0.862-4		5.999-4	5.999-4	1.125-9	6.898-0
6.500-4	1.060-4	3.957-5	7.103-5	1.561-5	1.335-1	7.101-4		6.499-4	6.499-4	1.320-9	6.017-0
7.000-4	1.320-4	3.237-5	5.612-5	1.546-5	1.531-1	5.610-4		6.998-4	6.998-4	1.530-9	5.301-0
8.000-4	1.908-4	2.240-5	4.022-4	1.518-5	1.958-1	4.020-4		7.997-4	7.997-4	1.999-9	4.192-0
1.000-3	3.638-4	1.168-5	2.097-4	1.448-5	2.899-1	2.096-4		9.993-4	9.993-4	3.121-9	2.732-0
1.250-3	6.066-4	6.224-5	1.117-4	1.336-5	4.145-1	1.116-4		1.248-3	1.248-3	4.871-9	1.818-0
1.500-3	1.148-3	3.722-4	6.681-3	1.252-5	5.552-1	6.668-3		1.497-3	1.497-3	7.009-9	1.304-0
1.750-3	1.810-3	2.361-4	4.239-3	1.144-5	6.894-1	4.227-3		1.745-3	1.745-3	9.516-9	9.642-1
2.000-3	2.613-3	1.593-4	2.859-3	1.059-5	8.225-1	2.648-3		1.992-3	1.992-3	1.240-9	7.425-1
2.500-3	5.319-3	0.049-4	1.445-3	8.617-0	1.043-0	1.435-3		2.483-3	2.483-3	1.927-9	4.677-1
3.000-3	9.258-3	4.618-4	8.287-2	7.593-0	1.267-0	8.198-2		2.968-3	2.968-3	2.753-9	3.206-1
3.500-3	1.512-2	2.845-5	5.108-2	6.524-0	1.422-0	5.028-2		3.446-3	3.446-3	3.710-9	2.294-1
4.000-3	2.279-2	1.875-5	3.386-2	5.720-0	1.571-0	3.293-2		3.914-3	3.914-3	4.786-9	1.717-1
4.500-3	3.370-2	1.297-5	2.318-2	5.071-0	1.877-0	2.250-2		4.369-3	4.369-3	5.668-9	1.320-1
5.000-3	4.670-2	9.871-5	1.864-2	4.553-0	1.777-0	1.601-2		4.810-3	4.810-3	7.231-9	1.044-1
5.500-3	6.230-2	6.860-5	1.231-2	4.132-0	1.854-0	1.172-2		5.234-3	5.234-3	8.580-9	8.401-1
6.000-3	8.178-2	5.226-5	9.381-1	3.781-0	1.928-0	8.810-1		5.636-3	5.636-3	9.928-9	6.652-1
6.500-3	1.051-1	4.068-5	7.302-1	3.484-0	1.988-0	6.755-1		6.015-3	6.015-3	1.131-7	5.726-2
7.000-3	1.320-1	3.237-5	5.910-1	3.230-0	2.045-0	5.283-1		6.368-3	6.368-3	1.267-7	4.623-2
8.000-3	1.973-1	2.186-5	3.689-1	2.618-0	2.152-0	3.392-1		6.985-3	6.985-3	1.525-7	3.541-2
1.000-2	3.749-1	1.148-5	2.057-1	2.212-0	2.319-0	1.604-1		7.821-3	7.821-3	1.911-7	2.097-2
1.250-2	6.910-1	6.494-5	1.186-1	1.666-0	2.484-0	7.529-0		8.139-3	8.139-3	2.070-7	1.237-2
1.500-2	9.627-1	4.439-5	7.989-0	1.321-0	2.590-0	4.058-0		7.786-3	7.786-3	1.894-7	8.087-2
1.750-2	1.257-0	3.401-1	6.105-0	1.048-0	2.659-0	2.398-0		7.136-3	7.136-3	1.591-7	5.679-3
2.000-2	1.515-0	2.840-1	5.094-0	0.860-0	1.721-0	1.520-0		6.377-3	6.377-3	1.271-7	4.239-3
2.500-2	1.888-0	2.263-1	4.063-0	5.928-0	1.761-0	7.091-1		5.161-3	5.161-3	8.323-8	2.733-3
3.000-2	2.183-0	2.013-1	3.613-0	4.383-0	2.794-0	3.603-1		4.428-3	4.428-3	6.128-8	2.085-3
3.500-2	2.295-0	1.862-1	3.743-0	3.341-0	2.784-0	2.249-1		4.165-3	4.165-3	5.420-8	1.815-3
4.000-2	2.411-0	1.773-1	3.183-0	2.642-0	2.778-0	1.427-1		4.210-3	4.210-3	5.539-8	1.746-3
4.500-2	2.508-0	1.704-1	3.059-0	2.132-0	2.751-0	9.570-2		4.487-3	4.487-3	6.291-8	1.789-3
5.000-2	2.582-0	1.653-1	2.971-0	1.760-0	2.728-0	6.697-2		4.928-3	4.928-3	7.508-8	1.908-3
5.500-2	2.651-0	1.612-1	2.894-0	1.473-0	2.698-0	4.958-2		5.496-3	5.496-3	9.435-8	2.073-3
6.000-2	2.708-0	1.578-1	2.833-0	1.253-0	2.671-0	3.624-2		6.168-3	6.168-3	1.183-7	2.277-3
6.500-2	2.736-0	1.545-1	2.773-0	1.075-0	2.638-0	2.774-2		6.918-3	6.918-3	1.496-7	2.501-3
7.000-2	2.818-0	1.517-1	2.723-0	9.338-2	2.608-0	2.166-2		7.744-3	7.744-3	1.874-7	2.748-3
8.000-2	2.936-0	1.470-1	2.640-0	7.241-2	2.553-0	1.387-2		9.595-3	9.595-3	2.877-7	3.301-3
1.000-1	3.074-0	1.390-1	2.496-0	4.698-2	2.442-0	6.852-3		1.388-2	1.388-2	6.023-7	4.517-3
1.250-1	3.273-0	1.306-1	2.344-0	3.031-2	2.311-0	3.236-3		2.007-2	2.007-2	1.258-6	6.132-3
1.500-1	3.438-0	1.243-1	2.231-0	2.118-2	2.208-0	1.796-3		2.719-2	2.719-2	2.310-6	7.909-3
1.750-1	3.638-0	1.184-1	2.126-0	1.561-2	2.109-0	1.106-3		3.484-2	3.484-2	3.792-6	9.654-3
2.000-1	3.751-0	1.136-1	2.040-0	1.198-2	2.027-0	7.271-4		4.319-2	4.319-2	5.627-6	1.148-2
2.500-1	4.037-0	1.021-1	1.887-0	7.882-2	1.878-0	3.890-4		6.056-2	6.056-2	1.181-5	1.498-2
3.000-1	4.332-0	9.889-2	1.771-0	5.344-2	1.785-0	2.120-5		8.079-2	8.079-2	2.039-5	1.887-2
3.500-1	4.537-0	9.296-2	1.669-0	3.989-2	1.685-0	1.352-4		1.015-1	1.015-1	3.220-5	2.208-2
4.000-1	4.838-0	8.632-2	1.588-0	3.010-3	1.583-0	9.153-5		1.257-1	1.257-1	4.782-5	2.687-2
4.500-1	5.277-0	8.417-2	1.511-0	2.379-3	1.508-0	8.585-5		1.486-1	1.486-1	6.711-5	2.887-2
5.000-1	5.300-0	8.883-2	1.447-0	1.967-3	1.448-0	8.677-5		1.706-1	1.706-1	9.088-5	3.218-2
5.500-1	5.521-0	7.741-2	1.390-0	1.593-3	1.388-0	3.757-5		1.950-1	1.950-1	1.188-4	3.532-2
6.000-1	5.730-0	7.438-2	1.339-0	1.339-3	1.337-0	2.981-5		2.204-1	2.204-1	1.517-4	3.846-2

12/07/78

ENDL Evaluated Photon Data

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ATOMIC WEIGHT 10.811										DENSITY 2.34 GRAMS/CC			
ENERGY		TOTAL HP		CROSS SECTION (BARN)						NEUT/COLLISION		MEV/CM	
MEV	CH	CH/CM/CH	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	K.E.		
6.580-1	5.841-0	7.189-2	1.291-0	1.141-3	1.290-0	2.399-5		2.459-1	2.459-1	1.889-4	4.140-2		
7.000-1	6.142-0	6.957-2	1.249-0	9.839-4	1.248-0	1.974-5		2.722-1	2.722-1	2.313-4	4.431-2		
8.000-1	6.523-0	6.951-2	1.178-0	7.534-4	1.175-0	1.389-5		3.208-1	3.208-1	3.334-4	5.010-2		
1.000+0	7.257-0	5.888-2	1.057-0	4.823-4	1.057-0	7.935-6		4.399-1	4.399-1	6.040-4	6.062-2		
1.022+0	7.235-0	5.827-2	1.048-0	4.817-4	1.048-0	7.839-6	1.000-8	4.527-1	4.527-1	6.395-4	6.172-2		
1.250+0	8.115-0	5.898-2	9.439-1	3.087-4	9.450-1	5.371-6	8.147-5	5.880-1	5.880-1	1.078-3	7.246-2		
1.500+0	8.519-0	4.791-2	8.802-1	2.144-4	8.989-1	3.904-6	1.091-3	7.416-1	7.416-1	1.715-3	8.315-2		
1.750+0	9.678-0	4.418-2	7.927-1	1.575-4	7.898-1	2.954-6	2.712-3	8.993-1	8.993-1	2.520-3	9.293-2		
2.000+0	1.140-1	4.108-2	7.375-1	1.206-4	7.329-1	2.380-6	4.475-3	1.061-0	1.061-0	3.506-3	1.020-1		
2.044+0	1.153-1	4.059-2	7.267-1	1.195-4	7.239-1	2.284-6	4.473-3	1.090-0	1.090-0	3.699-3	1.035-1		
2.500+0	1.178-1	3.633-2	6.522-1	7.718-5	6.437-1	1.898-6	8.428-3	1.394-0	1.394-0	6.042-3	1.185-1		
3.000+0	1.301-1	3.285-2	5.895-1	5.380-5	5.785-1	1.320-6	1.298-2	1.737-0	1.737-0	9.381-3	1.335-1		
3.500+0	1.418-1	3.014-2	5.411-1	3.938-5	5.238-1	1.085-6	1.730-2	2.090-0	2.090-0	1.356-2	1.474-1		
4.000+0	1.527-1	2.799-2	5.026-1	3.015-5	4.810-1	9.150-7	2.158-2	2.451-0	2.451-0	1.863-2	1.606-1		
4.500+0	1.628-1	2.624-2	4.711-1	2.382-5	4.494-1	7.845-7	2.568-2	2.820-0	2.820-0	2.463-2	1.732-1		
5.000+0	1.725-1	2.477-2	4.448-1	1.930-5	4.154-1	6.888-7	2.937-2	3.195-0	3.195-0	3.199-2	1.852-1		
5.500+0	1.819-1	2.350-2	4.219-1	1.595-5	3.895-1	6.171-7	3.231-2	3.575-0	3.575-0	3.951-2	1.986-1		
6.000+0	1.907-1	2.241-2	4.024-1	1.340-5	3.571-1	5.584-7	3.526-2	3.961-0	3.961-0	4.844-2	2.078-1		
6.500+0	1.989-1	2.148-2	3.898-1	1.142-5	3.474-1	5.093-7	3.822-2	4.353-0	4.353-0	5.842-2	2.188-1		
7.000+0	2.067-1	2.067-2	3.711-1	9.845-6	3.299-1	4.677-7	4.120-2	4.750-0	4.750-0	6.948-2	2.298-1		
8.000+0	2.208-1	1.936-2	3.475-1	7.538-6	3.003-1	4.012-7	4.720-2	5.560-0	5.560-0	9.948-2	2.519-1		
1.000+1	2.434-1	1.758-2	3.152-1	4.824-6	2.558-1	3.104-7	5.938-2	7.239-0	7.239-0	1.601-1	2.974-1		
1.250+1	2.385-1	1.592-2	2.858-1	3.087-6	2.170-1	2.457-7	6.874-2	9.392-0	9.392-0	2.678-1	3.498-1		
1.500+1	2.375-1	1.488-2	2.688-1	2.144-6	1.893-1	2.029-7	7.751-2	1.182-1	1.182-1	4.069-1	4.040-1		
1.750+1	3.313-1	1.418-2	2.548-1	1.575-6	1.684-1	1.727-7	8.628-2	1.390-1	1.390-1	5.789-1	4.814-1		
2.000+1	3.122-1	1.389-2	2.457-1	1.206-6	1.519-1	1.501-7	9.378-2	1.623-1	1.623-1	7.832-1	5.197-1		
2.500+1	3.293-1	1.288-2	2.330-1	7.718-7	1.277-1	1.188-7	1.056-1	2.095-1	2.095-1	1.287-0	6.382-1		
3.000+1	3.408-1	1.194-2	2.251-1	5.380-7	1.188-1	9.813-8	1.145-1	2.575-1	2.575-1	1.918-0	7.558-1		
3.500+1	3.495-1	1.123-2	2.185-1	3.938-7	9.783-8	8.348-8	1.217-1	3.080-1	3.080-1	2.671-0	8.756-1		
4.000+1	3.548-1	1.074-2	2.122-1	3.015-7	8.790-8	7.298-8	1.283-1	3.549-1	3.549-1	3.543-0	1.000+0		
4.500+1	3.572-1	1.082-2	2.148-1	2.382-7	7.992-8	6.415-8	1.349-1	4.042-1	4.042-1	4.534-0	1.132+0		
5.000+1	3.582-1	1.090-2	2.132-1	1.930-7	7.337-8	5.744-8	1.408-1	4.537-1	4.537-1	5.633-0	1.263+0		
5.500+1	3.618-1	1.088-2	2.118-1	1.595-7	6.787-8	5.186-8	1.443-1	5.031-1	5.031-1	6.835-0	1.391+0		
6.000+1	3.629-1	1.178-2	2.114-1	1.340-7	6.322-8	4.745-8	1.488-1	5.527-1	5.527-1	8.140-0	1.523+0		
6.500+1	3.638-1	1.175-2	2.110-1	1.142-7	5.917-8	4.383-8	1.518-1	6.024-1	6.024-1	9.543-0	1.657+0		
7.000+1	3.637-1	1.175-2	2.109-1	9.845-8	5.988-8	4.037-8	1.553-1	6.522-1	6.522-1	1.104+1	1.793+0		
8.000+1	3.627-1	1.178-2	2.115-1	7.538-8	4.988-8	3.508-8	1.617-1	7.519-1	7.519-1	1.431+1	2.073+0		
1.000+2	3.578-1	1.194-2	2.144-1	4.824-8	4.138-8	2.777-8	1.731-1	9.520-1	9.520-1	2.183+1	2.881+0		

5-B

[illegible]

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ENDL Evaluated Photon Cross Sections

6-C

12/07/78

Energy Deposition

6-C

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ENCL Evaluated Photon Data

6-C

ATOMIC WEIGHT 12.011				DENSITY 2.25 GRAMS/CC				
ENERGY MEV	TOTAL HFP		CROSS SECTION (BARNs)				MEV/COLLISION	
	CH	CYMO/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. + FLOR	K.E. BREMSSTR
MEV	CH	CYMO/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. + FLOR	K.E. BREMSSTR
1.000	4	1.67E-5	2.85E-4	5.28E-5	2.39E-4	3.04E-3	5.29E-3	5.98E-3
1.250	4	2.75E-5	1.81E-4	3.22E-5	2.39E-4	4.81E-3	3.22E-3	4.94E-3
1.500	4	4.12E-5	1.07E-4	2.15E-5	2.39E-4	6.47E-3	2.15E-3	3.63E-3
1.750	4	5.67E-5	7.38E-5	1.50E-5	2.38E-4	8.76E-3	1.50E-3	2.97E-3
2.000	4	7.38E-5	5.36E-5	1.11E-5	2.38E-4	1.14E-2	1.11E-3	2.50E-3
2.500	4	1.32E-4	3.35E-5	8.09E-6	2.37E-4	1.78E-2	8.63E-4	1.88E-3
2.831	4	1.79E-4	2.53E-5	5.05E-6	2.37E-4	2.25E-2	5.05E-4	1.81E-3
3.045	4	2.07E-4	2.09E-5	4.77E-6	2.37E-4	2.72E-2	4.77E-4	1.73E-3
3.000	4	1.09E-4	4.19E-5	8.37E-6	2.37E-4	2.52E-2	8.37E-4	2.83E-3
3.500	4	1.48E-4	3.03E-5	6.09E-6	2.36E-4	3.41E-2	6.09E-4	2.73E-3
4.000	4	1.93E-4	2.29E-5	4.58E-6	2.35E-4	4.45E-2	4.58E-4	2.67E-3
4.500	4	2.38E-4	1.73E-5	3.45E-6	2.34E-4	5.60E-2	3.45E-4	2.59E-3
5.000	4	3.30E-4	1.34E-5	2.68E-6	2.33E-4	6.87E-2	2.68E-4	2.50E-3
5.500	4	4.28E-4	1.05E-5	2.10E-6	2.31E-4	8.28E-2	2.09E-4	2.41E-3
6.000	4	5.27E-4	8.44E-6	1.68E-6	2.30E-4	9.78E-2	1.68E-4	2.32E-3
6.500	4	6.48E-4	6.95E-6	1.38E-6	2.28E-4	1.13E-1	1.38E-4	2.23E-3
7.000	4	7.94E-4	5.86E-6	1.13E-6	2.26E-4	1.30E-1	1.13E-4	2.13E-3
8.000	4	1.12E-3	3.94E-6	7.87E-7	2.23E-4	1.68E-1	7.87E-5	2.03E-3
1.000	3	2.03E-4	2.18E-5	4.38E-6	2.15E-4	2.52E-2	4.38E-4	3.04E-3
1.250	3	3.78E-4	1.18E-5	2.35E-6	2.02E-4	3.69E-2	2.35E-4	3.15E-3
1.500	3	6.28E-4	7.09E-6	1.41E-6	1.92E-4	5.01E-2	1.41E-4	2.91E-3
1.750	3	9.81E-4	4.52E-6	9.03E-7	1.78E-4	6.32E-2	9.03E-5	2.78E-3
2.000	3	1.44E-3	3.07E-6	6.12E-7	1.68E-4	7.73E-2	6.12E-5	2.68E-3
2.500	3	2.83E-3	1.58E-6	3.12E-7	1.41E-4	1.02E-1	3.12E-5	2.57E-3
3.000	3	4.90E-3	9.28E-7	1.60E-7	1.23E-4	1.28E-1	1.23E-5	2.46E-3
3.500	3	7.98E-3	5.82E-7	1.12E-7	1.09E-4	1.48E-1	1.09E-5	2.35E-3
4.000	3	1.19E-2	3.72E-7	7.42E-8	9.24E-5	1.69E-1	9.24E-6	2.24E-3
4.500	3	1.72E-2	2.57E-7	5.13E-8	8.11E-5	1.84E-1	8.11E-6	2.13E-3
5.000	3	2.39E-2	1.65E-7	3.89E-8	7.21E-5	1.99E-1	7.21E-6	2.02E-3
5.500	3	3.23E-2	1.17E-7	2.73E-8	6.47E-5	2.10E-1	6.47E-6	1.91E-3
6.000	3	4.28E-2	7.95E-8	1.94E-8	5.65E-5	2.20E-1	5.65E-6	1.80E-3
6.500	3	5.47E-2	5.12E-8	1.28E-8	4.90E-5	2.28E-1	4.90E-6	1.69E-3
7.000	3	6.89E-2	3.44E-8	8.44E-9	4.23E-5	2.36E-1	4.23E-6	1.58E-3
8.000	3	1.04E-1	2.27E-8	5.52E-9	3.29E-5	2.50E-1	3.29E-6	1.47E-3
1.000	2	2.03E-4	2.18E-5	4.38E-6	2.15E-4	2.52E-2	4.38E-4	3.04E-3
1.250	2	3.81E-4	1.18E-5	2.35E-6	2.02E-4	3.69E-2	2.35E-4	3.15E-3
1.500	2	6.09E-4	7.39E-6	1.41E-6	1.92E-4	5.01E-2	1.41E-4	2.91E-3
1.750	2	9.81E-4	4.52E-6	9.03E-7	1.78E-4	6.32E-2	9.03E-5	2.78E-3
2.000	2	1.44E-3	3.07E-6	6.12E-7	1.68E-4	7.73E-2	6.12E-5	2.68E-3
2.500	2	2.83E-3	1.58E-6	3.12E-7	1.41E-4	1.02E-1	3.12E-5	2.57E-3
3.000	2	4.90E-3	9.28E-7	1.60E-7	1.23E-4	1.28E-1	1.23E-5	2.46E-3
3.500	2	7.98E-3	5.82E-7	1.12E-7	1.09E-4	1.48E-1	1.09E-5	2.35E-3
4.000	2	1.19E-2	3.72E-7	7.42E-8	9.24E-5	1.69E-1	9.24E-6	2.24E-3
4.500	2	1.72E-2	2.57E-7	5.13E-8	8.11E-5	1.84E-1	8.11E-6	2.13E-3
5.000	2	2.39E-2	1.65E-7	3.89E-8	7.21E-5	1.99E-1	7.21E-6	2.02E-3
5.500	2	3.23E-2	1.17E-7	2.73E-8	6.47E-5	2.10E-1	6.47E-6	1.91E-3
6.000	2	4.28E-2	7.95E-8	1.94E-8	5.65E-5	2.20E-1	5.65E-6	1.80E-3
6.500	2	5.47E-2	5.12E-8	1.28E-8	4.90E-5	2.28E-1	4.90E-6	1.69E-3
7.000	2	6.89E-2	3.44E-8	8.44E-9	4.23E-5	2.36E-1	4.23E-6	1.58E-3
8.000	2	1.04E-1	2.27E-8	5.52E-9	3.29E-5	2.50E-1	3.29E-6	1.47E-3
1.000	1	2.03E-4	2.18E-5	4.38E-6	2.15E-4	2.52E-2	4.38E-4	3.04E-3
1.250	1	3.81E-4	1.18E-5	2.35E-6	2.02E-4	3.69E-2	2.35E-4	3.15E-3
1.500	1	6.09E-4	7.39E-6	1.41E-6	1.92E-4	5.01E-2	1.41E-4	2.91E-3
1.750	1	9.81E-4	4.52E-6	9.03E-7	1.78E-4	6.32E-2	9.03E-5	2.78E-3
2.000	1	1.44E-3	3.07E-6	6.12E-7	1.68E-4	7.73E-2	6.12E-5	2.68E-3
2.500	1	2.83E-3	1.58E-6	3.12E-7	1.41E-4	1.02E-1	3.12E-5	2.57E-3
3.000	1	4.90E-3	9.28E-7	1.60E-7	1.23E-4	1.28E-1	1.23E-5	2.46E-3
3.500	1	7.98E-3	5.82E-7	1.12E-7	1.09E-4	1.48E-1	1.09E-5	2.35E-3
4.000	1	1.19E-2	3.72E-7	7.42E-8	9.24E-5	1.69E-1	9.24E-6	2.24E-3
4.500	1	1.72E-2	2.57E-7	5.13E-8	8.11E-5	1.84E-1	8.11E-6	2.13E-3
5.000	1	2.39E-2	1.65E-7	3.89E-8	7.21E-5	1.99E-1	7.21E-6	2.02E-3
5.500	1	3.23E-2	1.17E-7	2.73E-8	6.47E-5	2.10E-1	6.47E-6	1.91E-3
6.000	1	4.28E-2	7.95E-8	1.94E-8	5.65E-5	2.20E-1	5.65E-6	1.80E-3
6.500	1	5.47E-2	5.12E-8	1.28E-8	4.90E-5	2.28E-1	4.90E-6	1.69E-3
7.000	1	6.89E-2	3.44E-8	8.44E-9	4.23E-5	2.36E-1	4.23E-6	1.58E-3
8.000	1	1.04E-1	2.27E-8	5.52E-9	3.29E-5	2.50E-1	3.29E-6	1.47E-3
1.000	0	2.03E-4	2.18E-5	4.38E-6	2.15E-4	2.52E-2	4.38E-4	3.04E-3
1.250	0	3.81E-4	1.18E-5	2.35E-6	2.02E-4	3.69E-2	2.35E-4	3.15E-3
1.500	0	6.09E-4	7.39E-6	1.41E-6	1.92E-4	5.01E-2	1.41E-4	2.91E-3
1.750	0	9.81E-4	4.52E-6	9.03E-7	1.78E-4	6.32E-2	9.03E-5	2.78E-3
2.000	0	1.44E-3	3.07E-6	6.12E-7	1.68E-4	7.73E-2	6.12E-5	2.68E-3
2.500	0	2.83E-3	1.58E-6	3.12E-7	1.41E-4	1.02E-1	3.12E-5	2.57E-3
3.000	0	4.90E-3	9.28E-7	1.60E-7	1.23E-4	1.28E-1	1.23E-5	2.46E-3
3.500	0	7.98E-3	5.82E-7	1.12E-7	1.09E-4	1.48E-1	1.09E-5	2.35E-3
4.000	0	1.19E-2	3.72E-7	7.42E-8	9.24E-5	1.69E-1	9.24E-6	2.24E-3
4.500	0	1.72E-2	2.57E-7	5.13E-8	8.11E-5	1.84E-1	8.11E-6	2.13E-3
5.000	0	2.39E-2	1.65E-7	3.89E-8	7.21E-5	1.99E-1	7.21E-6	2.02E-3
5.500	0	3.23E-2	1.17E-7	2.73E-8	6.47E-5	2.10E-1	6.47E-6	1.91E-3
6.000	0	4.28E-2	7.95E-8	1.94E-8	5.65E-5	2.20E-1	5.65E-6	1.80E-3
6.500	0	5.47E-2	5.12E-8	1.28E-8	4.90E-5	2.28E-1	4.90E-6	1.69E-3
7.000	0	6.89E-2	3.44E-8	8.44E-9	4.23E-5	2.36E-1	4.23E-6	1.58E-3
8.000	0	1.04E-1	2.27E-8	5.52E-9	3.29E-5	2.50E-1	3.29E-6	1.47E-3
1.000	0	2.03E-4	2.18E-5	4.38E-6	2.15E-4	2.52E-2	4.38E-4	3.04E-3
1.250	0	3.81E-4	1.18E-5	2.35E-6	2.02E-4	3.69E-2	2.35E-4	3.15E-3
1.500	0	6.09E-4	7.39E-6	1.41E-6	1.92E-4	5.01E-2	1.41E-4	2.91E-3
1.750	0	9.81E-4	4.52E-6	9.03E-7	1.78E-4	6.32E-2	9.03E-5	2.78E-3
2.000	0	1.44E-3	3.07E-6	6.12E-7	1.68E-4	7.73E-2	6.12E-5	2.68E-3
2.500	0	2.83E-3	1.58E-6	3.12E-7	1.41E-4	1.02E-1	3.12E-5	2.57E-3
3.000	0	4.90E-3	9.28E-7	1.60E-7	1.23E-4	1.28E-1	1.23E-5	2.46E-3
3.500	0	7.98E-3	5.82E-7	1.12E-7	1.09E-4	1.48E-1	1.09E-5	2.35E-3
4.000	0	1.19E-2	3.72E-7	7.42E-8	9.24E-5	1.69E-1	9.24E-6	2.24E-3
4.500	0	1.72E-2	2.57E-7	5.13E-8	8.11E-5	1.84E-1	8.11E-6	2.13E-3
5.000	0	2.39E-2	1.65E-7	3.89E-8	7.21E-5	1.99E-1	7.21E-6	2.02E-3
5.500	0	3.23E-2	1.17E-7	2.73E-8	6.47E-5	2.10E-1	6.47E-6	1.91E-3
6.000	0	4.28E-2	7.95E-8	1.94E-8	5.65E-5	2.20E-1	5.65E-6	1.80E-3
6.500	0	5.47E-2	5.12E-8	1.28E-8	4.90E-5	2.28E-1	4.90E-6	1.69E-3
7.000	0	6.89E-2	3.44E-8	8.44E-9	4.23E-5	2.36E-1	4.23E-6	1.58E-3
8.000	0	1.04E-1	2.27E-8	5.52E-9	3.29E-5	2.50E-1	3.29E-6	1.47E-3
1.000	0	2.03E-4	2.18E-5	4.38E-6	2.15E-4	2.52E-2	4.38E-4	3.04E-3
1.250	0	3.81E-4	1.18E-5	2.35E-6	2.02E-4	3.69E-2	2.35E-4	3.15E-3
1.500	0	6.09E-4	7.39E-6	1.41E-6	1.92E-4	5.01E-2	1.41E-4	2.91E-3
1.750	0	9.81E-4	4.52E-6	9.03E-7	1.78E-4	6.32E-2	9.03E-5	2.78E-3
2.000	0	1.44E-3	3.07E-6	6.12E-7	1.68E-4	7.73E-2	6.12E-5	2.68E-3
2.500	0	2.83E-3	1.58E-6	3.12E-7	1.41E-4	1.02E-1	3.12E-5	2.57E-3
3.000	0	4.90E-3	9.28E-7	1.60E-7	1.23E-4	1.28E-1	1.23E-5	2.46E-3
3.500	0	7.98E-3	5.82E-7	1.12E-7	1.09E-4	1.48E-1	1.09E-5	2.35E-3
4.000	0	1.19E-2	3.72E-7	7.42E-8	9.24E-5	1.69E-1	9.24E-6	2.24E-3
4.500	0	1.72E-2	2.57E-7	5.13E-8	8.11E-5	1.84E-1	8.11E-6	2.13E-3
5.000	0	2.39E-2	1.65E-7	3.89E-8	7.21E-5	1.99E-1	7.21E-6	2.02E-3
5.500	0	3.23E-2	1.17E-7	2.73E-8	6.47E-5	2.10E-1	6.47E-6	1.91E-3
6.000	0	4.28E-2	7.95E-8	1.94E-8	5.65E-5	2.20E-1	5.65E-6	1.80E-3
6.500	0	5.47E-2	5.12E-8	1.28E-8	4.90E-5	2.28E-1	4.90E-6	1.69E-3
7.000	0	6.89E-2	3.44E-8	8.44E-9	4.23E-5	2.36E-1	4.23E-6	

12/07/76

ENDL Evaluated Photon Data

6-C

ATOMIC WEIGHT 12.011			DENSITY 2.25 GRAMS/CC									
ENERGY	TOTAL MFP		CROSS SECTION (BARNs)				MEV/COLLISION					
MEV	CM	CM-CH/CM	TOTAL	COHERENT	INCOHER	PHOTOEL PAIR PROD	K.E. *FLOr	K.E.	SPRMSSTR	K.E.	MEV/CM	K.E.
6.500-1	5.719-0	7.771-2	1.950-0	1.817-3	1.948-0	6.325-5	2.459-1	2.459-1	2.265-4	4.300-2		
7.000-1	5.913-0	7.518-2	1.998-0	1.967-3	1.997-0	5.187-5	2.722-1	2.722-1	2.775-4	4.602-2		
8.000-1	6.280-0	7.077-2	1.911-0	1.900-3	1.910-0	3.629-5	3.268-1	3.268-1	3.999-4	5.203-2		
1.000+0	8.987-0	6.361-2	1.899-0	7.879-4	1.898-0	2.048-5	4.399-1	4.399-1	7.245-4	6.298-2		
1.022+0	7.081-0	6.294-2	1.895-0	7.332-4	1.895-0	1.970-5	4.526-1	4.526-1	7.870-4	6.410-2		
1.250+0	7.813-0	5.888-2	1.135-0	4.915-4	1.134-0	1.385-5	5.880-1	5.880-1	1.294-3	7.529-2		
1.500+0	8.985-0	5.177-2	1.033-0	3.414-4	1.031-0	1.007-5	7.415-1	7.415-1	2.058-3	8.637-2		
1.750+0	9.312-0	4.773-2	9.519-1	2.508-4	9.478-1	7.619-6	8.998-1	8.998-1	3.022-3	9.657-2		
2.000+0	1.000+1	4.443-2	8.881-1	1.920-4	8.795-1	6.089-6	1.081+0	1.081+0	4.204-3	1.081-1		
2.044+0	1.012+1	4.390-2	8.798-1	1.839-4	8.686-1	5.890-6	1.090+0	1.090+0	4.435-3	1.078-1		
2.500+0	1.130+1	3.934-2	7.847-1	1.229-4	7.725-1	4.379-6	1.394+0	1.394+0	7.246-3	1.234-1		
3.000+0	1.247+1	3.563-2	7.106-1	8.536-5	6.919-1	3.402-6	1.738+0	1.738+0	1.126-2	1.394-1		
3.500+0	1.357+1	3.278-2	6.534-1	6.271-5	6.285-1	2.795-6	2.092+0	2.092+0	1.629-2	1.542-1		
4.000+0	1.498+1	3.049-2	6.080-1	4.801-5	5.772-1	2.357-6	2.456+0	2.456+0	2.240-2	1.684-1		
4.500+0	1.952+1	2.887-2	5.712-1	3.794-5	5.345-1	2.020-6	2.627+0	2.627+0	2.985-2	1.821-1		
5.000+0	1.840+1	2.703-2	5.404-1	3.073-5	4.994-1	1.773-6	3.205+0	3.205+0	3.806-2	1.994-1		
5.500+0	1.788+1	2.579-2	5.135-1	2.940-5	4.875-1	1.589-6	3.588+0	3.588+0	4.784-2	2.079-1		
6.000+0	1.806+1	2.461-2	4.908-1	2.134-5	4.405-1	1.438-6	3.978+0	3.978+0	5.848-2	2.202-1		
6.500+0	1.881+1	2.363-2	4.713-1	1.818-5	4.169-1	1.311-6	4.373+0	4.373+0	7.057-2	2.325-1		
7.000+0	1.950+1	2.279-2	4.495-1	1.588-5	3.959-1	1.204-6	4.775+0	4.775+0	8.359-2	2.448-1		
8.000+0	2.074+1	2.143-2	4.274-1	1.200-5	3.804-1	1.033-6	5.595+0	5.595+0	1.150-1	2.697-1		
1.000+1	2.267+1	1.980-2	3.910-1	7.882-6	3.089-1	7.992-7	7.290+0	7.290+0	1.943-1	3.218-1		
1.250+1	2.478+1	1.783-2	3.578-1	4.917-6	2.604-1	6.324-7	9.478+0	9.478+0	3.253-1	3.623-1		
1.500+1	2.834+1	1.687-2	3.388-1	3.414-6	2.272-1	5.223-7	1.173+1	1.173+1	4.944-1	4.455-1		
1.750+1	2.739+1	1.623-2	3.238-1	2.508-6	2.020-1	4.443-7	1.405+1	1.405+1	7.029-1	5.129-1		
2.000+1	2.880+1	1.578-2	3.144-1	1.880-6	1.823-1	3.883-7	1.640+1	1.640+1	9.501-1	5.818-1		
2.500+1	2.942+1	1.511-2	3.013-1	1.299-6	1.532-1	3.057-7	2.117+1	2.117+1	1.597+0	7.195-1		
3.000+1	3.016+1	1.478-2	2.938-1	8.536-7	1.327-1	2.525-7	2.601+1	2.601+1	2.312+0	8.614-1		
3.500+1	3.078+1	1.445-2	2.881-1	6.271-7	1.174-1	2.148-7	3.089+1	3.089+1	3.807+0	1.004+0		
4.000+1	3.187+1	1.430-2	2.863-1	4.901-7	1.095-1	1.867-7	3.581+1	3.581+1	4.277+0	1.152+0		
4.500+1	3.111+1	1.408-2	2.849-1	3.784-7	9.590-7	1.650-7	4.078+1	4.078+1	5.444+0	1.309+0		
5.000+1	3.115+1	1.425-2	2.848-1	3.073-7	8.804-7	1.477-7	4.572+1	4.572+1	8.891+0	1.486+0		
5.500+1	3.131+1	1.420-2	2.871-1	2.940-7	8.145-7	1.337-7	5.086+1	5.086+1	8.093+0	1.619+0		
6.000+1	3.135+1	1.418-2	2.889-1	2.134-7	7.588-7	1.220-7	5.585+1	5.585+1	9.808+0	1.775+0		
6.500+1	3.134+1	1.418-2	2.889-1	1.818-7	7.101-7	1.122-7	6.083+1	6.083+1	1.123+1	1.935+0		
7.000+1	3.125+1	1.420-2	2.837-1	1.588-7	6.880-7	1.038-7	6.582+1	6.582+1	1.298+1	2.087+0		
8.000+1	3.111+1	1.428-2	2.890-1	1.200-7	5.983-7	9.034-8	7.581+1	7.581+1	1.870+1	2.430+0		
1.000+2	3.092+1	1.434-2	2.901-1	7.883-8	4.985-7	7.141-8	9.582+1	9.582+1	2.584+1	3.129+0		

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Form Factors

6-C

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	7.901-1	2.413-1	1.000+0	1.053-1	0.914-1	1.000+1	3.061-4	1.000+0
5.000-3	9.999-1	0.317-4	1.250-1	7.210-1	3.110-1	1.250+0	1.441-1	0.339-1	1.500+1	6.293-5	1.000+0
1.000-2	9.993-1	2.105-3	1.750-1	6.582-1	3.799-1	1.500+0	1.094-1	0.634-1	2.000+1	2.020-5	1.000+0
1.500-2	9.982-1	4.925-3	2.000-1	5.983-1	4.340-1	2.000+0	0.800-2	0.084-1	5.000+1	5.398-7	1.000+0
2.000-2	9.972-1	8.807-3	2.500-1	4.938-1	5.330-1	2.500+0	0.570-2	0.002-1	8.000+1	0.450-8	1.000+0
2.500-2	9.955-1	1.340-2	3.000-1	4.189-1	6.071-1	3.000+0	0.347-2	0.000-1	1.000+2	3.321-8	1.000+0
3.000-2	9.949-1	1.900-2	4.000-1	3.052-1	6.973-1	3.500+0	0.241-2	0.000-1	1.000+3	5.994-10	1.000+0
4.000-2	9.734-1	3.390-2	5.000-1	2.809-1	7.463-1	4.000+0	0.1705-3	0.000-1	1.000+6	2.700-21	1.000+0
5.000-2	9.501-1	5.143-2	6.000-1	2.580-1	7.817-1	5.000+0	0.095-3	1.000+0	1.000+9	2.802-30	1.000+0
7.000-2	9.220-1	9.400-2	7.000-1	2.374-1	9.130-1	6.000+0	0.2100-3	1.000+0			
9.000-2	8.764-1	1.499-1	8.000-1	2.201-1	8.418-1	7.000+0	0.1191-3	1.000+0			
1.000-1	0.530-1	1.732-1	9.000-1	2.027-1	8.681-1	8.000+0	0.7199-4	1.000+0

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

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ENOL Evaluated Photon Data

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ATOMIC WEIGHT 14.007										DENSITY 0.00125 GRAMS/CC			
ENERGY		TOTAL WFP		CROSS SECTION (BARNS)						MEV/COLLISION		MEV/CM	
MEV		CM	CM-CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E.	BREMSSTR	K.E.	
1.000	1.605	2	4.423	1.030	6	3.255	1	2.701	3	1.030	6	5.538	
1.250	2.999	2	2.888	8.204	5	3.253	1	4.291	3	8.204	5	4.188	
1.500	4.536	2	1.783	4.100	5	3.251	1	6.284	3	4.100	5	3.305	
1.750	6.494	2	1.232	2.885	5	3.249	1	8.547	3	2.885	5	2.894	
2.000	8.859	2	8.030	2.100	5	3.247	1	1.119	2	2.100	5	2.257	
2.500	1.513	1	5.280	1.230	5	3.240	1	1.745	2	1.230	5	1.852	
3.000	2.942	1	3.415	7.943	4	3.234	1	2.510	2	7.940	4	1.280	
3.500	3.405	1	2.350	5.405	4	3.224	1	3.405	2	5.402	4	1.027	
4.000	4.707	1	1.700	3.953	4	3.215	1	4.433	2	3.950	4	0.491	
4.008	4.731	1	1.691	3.933	4	3.215	1	4.452	2	3.930	4	0.468	
4.023	4.689	2	2.975	6.920	5	3.214	1	4.493	2	6.920	5	1.496	
4.500	3.391	2	2.359	5.486	5	3.202	1	5.584	2	5.486	5	1.327	
5.000	4.219	2	1.896	4.410	5	3.191	1	6.865	2	4.410	5	1.185	
5.500	5.500	2	1.509	3.510	5	3.178	1	8.262	2	3.510	5	1.038	
6.000	6.528	2	1.265	2.850	5	3.182	1	9.785	2	2.850	5	0.919	
6.500	7.952	2	1.001	2.328	5	3.141	1	1.140	1	2.328	5	0.832	
7.000	9.639	2	0.839	1.930	5	3.123	1	1.314	1	1.930	5	0.761	
8.000	1.358	1	5.882	1.370	5	3.090	1	1.698	1	1.370	5	0.890	
1.000	2.355	1	3.396	7.898	4	3.022	1	2.885	1	7.898	4	4.243	
1.250	4.313	1	1.946	4.254	4	2.852	1	3.791	1	4.254	4	2.803	
1.500	7.127	1	1.123	2.611	4	2.735	1	5.245	1	2.608	4	2.102	
1.750	1.106	0	7.232	1.692	4	2.589	1	6.844	1	1.679	4	1.579	
2.000	3.1619	0	4.942	1.150	4	2.433	1	8.195	1	1.147	4	1.233	
2.500	3.112	0	2.955	5.942	3	2.099	1	1.099	0	5.920	3	0.491	
3.000	5.365	0	1.491	2	3.488	3	1.861	1	1.398	0	3.448	3	
3.500	8.577	0	9.327	2	2.189	3	1.611	1	1.835	0	2.152	3	
4.000	1.267	1	8.217	1	1.446	3	1.421	1	1.873	0	1.430	3	
4.500	1.851	1	4.321	1	1.005	3	1.247	1	2.095	0	9.804	2	
5.000	2.561	1	3.123	1	7.284	2	1.110	1	2.233	0	7.131	2	
5.500	3.447	1	2.321	1	5.399	2	9.904	0	2.389	0	5.278	2	
6.000	4.515	1	1.772	1	4.121	2	8.985	0	2.501	0	4.007	2	
6.500	5.861	1	1.379	1	3.207	2	8.080	0	2.598	0	3.101	2	
7.000	7.369	1	1.095	1	2.548	2	7.370	0	2.690	0	2.445	2	
8.000	3.110	2	7.845	0	1.885	2	6.243	0	2.885	0	1.594	2	
1.000	2.106	2	3.880	0	8.513	1	4.722	0	3.102	0	7.731	1	
1.250	4.216	2	1.893	0	4.402	1	3.543	0	3.294	0	3.719	1	
1.500	6.965	2	1.149	0	2.871	1	2.802	0	3.481	0	2.045	1	
1.750	2.1618	3	7.783	1	1.810	1	2.254	0	3.985	1	1.288	1	
2.000	1.308	3	5.771	1	1.342	1	1.867	0	3.858	0	7.899	0	
2.500	2.133	3	3.791	1	8.817	0	1.310	0	3.741	0	3.788	0	
3.000	2.778	3	2.944	1	6.847	0	9.810	1	3.810	0	2.096	0	
3.500	3.207	3	2.494	1	5.801	0	7.548	1	3.814	0	1.233	0	
4.000	3.571	3	2.240	1	5.210	0	6.015	1	3.817	0	7.917	1	
4.500	3.863	3	2.071	1	4.818	0	4.877	1	3.792	0	5.363	1	
5.000	4.087	3	1.957	1	4.553	0	4.043	1	3.770	0	3.789	1	
5.500	4.276	3	1.871	1	4.351	0	3.400	1	3.735	0	2.765	1	
6.000	4.430	3	1.806	1	4.201	0	2.903	1	3.703	0	2.076	1	
6.500	4.572	3	1.750	1	4.070	0	2.501	1	3.660	0	1.598	1	
7.000	4.694	3	1.704	1	3.964	0	2.178	1	3.621	0	1.254	1	
8.000	4.893	3	1.635	1	3.803	0	1.898	1	3.552	0	8.102	2	
1.000	5.235	3	1.528	1	3.594	0	1.111	1	3.404	0	3.933	2	
1.250	5.612	3	1.425	1	3.315	0	7.202	2	3.224	0	1.931	2	
1.500	5.915	3	1.353	1	3.146	0	5.055	2	3.085	0	1.080	2	
1.750	6.230	3	1.286	1	2.991	0	3.732	2	2.947	0	0.675	3	
2.000	6.490	3	1.233	1	2.867	0	2.889	2	2.834	0	4.400	3	
2.500	7.038	3	1.138	1	2.648	0	1.843	2	2.627	0	2.235	3	
3.000	7.432	3	1.088	1	2.483	0	1.294	2	2.489	0	1.895	3	
3.500	7.933	3	1.006	1	2.340	0	9.444	3	2.329	0	8.189	4	
4.000	8.373	3	9.799	2	2.222	0	7.239	3	2.214	0	5.518	4	
4.500	8.738	3	9.103	2	2.117	0	5.723	3	2.111	0	3.941	4	
5.000	9.175	3	8.719	2	2.028	0	4.638	3	2.023	0	2.917	4	
5.500	9.538	3	8.370	2	1.947	0	3.834	3	1.943	0	2.237	4	
6.000	9.921	3	8.064	2	1.875	0	3.223	3	1.872	0	1.725	4	
1.000	1.000	4	4.375	11	5.538	3							
1.250	1.250	4	6.835	11	4.188	3							
1.500	1.500	4	9.842	11	3.305	3							
1.750	1.750	4	1.340	10	2.894	3							
2.000	2.000	4	1.749	10	2.257	3							
2.500	2.499	4	2.733	10	1.852	3							
3.000	2.999	4	3.934	10	1.280	3							
3.500	3.498	4	5.353	10	1.027	3							
4.000	3.997	4	6.989	10	0.491	4							
4.008	4.006	4	7.020	10	0.468	4							
4.023	4.023	4	7.080	10	1.496	2							
4.500	4.500	4	6.858	10	1.327	2							
5.000	5.000	4	1.094	9	1.185	2							
5.500	5.500	4	1.323	9	1.038	2							
6.000	5.999	4	1.575	9	0.919	3							
6.499	6.499	4	1.848	9	0.832	3							
6.999	6.999	4	2.143	9	0.761	3							
7.998	7.998	4	2.799	9	0.890	3							
8.998	8.998	4	3.722	9	1.027	3							
1.249	1.249	3	6.827	8	2.803	3							
1.498	1.498	3	9.823	8	2.102	3							
1.747	1.747	3	1.336	8	1.579	3							
1.996	1.996	3	1.742	8	1.233	3							
2.491	2.491	3	2.714	8	0.953	4							
2.983	2.983	3	3.692	8	0.655	4							
3.471	3.471	3	5.272	8	0.407	4							
3.956	3.956	3	6.845	8	0.274	4							
4.435	4.435	3	8.605	8	0.195	4							
4.908	4.908	3	1.054	7	1.916	4							
5.375	5.375	3	1.284	7	1.560	4							
5.834	5.834	3	1.489	7	1.292	4							
6.284	6.284	3	1.728	7	1.083	4							
6.725	6.725	3	1.978	7	0.920	5							
7.570	7.570	3	2.507	7	0.856	5							
9.089	9.089	3	3.514	7	0.744	5							
1.058	1.058	2	4.899	7	0.504	5							
1.154	1.154	2	5.828	7	0.407	5							
1.199	1.199	2	6.294	7	0.317	5							
1.198	1.198	2	6.280	7	0.233	5							
1.118	1.118	2	5.468	7	0.167	5							
9.930	9.930	3	4.314	7	0.125	5							
8.880	8.880	3	3.450	7	0.086	5							
8.127	8.127	3	2.890	7	0.064	5							
7.732	7.732	3	2.615	7	0.049	5							
7.614	7.614	3	2.536	7	0.038	5							
7.738	7.738	3	2.820	7	0.029	5							
8.050	8.050	3	3.174	7	0.022	5							
8.518	8.518	3	3.174	7	0.017	5							
9.112	9.112	3	3.632	7	0.013	5		</					

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 14.007		DENSITY 0.00125 GRAMS/CC									
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARNs)					NEV/COLLISION			MEV/CM K.E.
	CM	CM ² /CM	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	
0.500-1	1.029+4	7.777-2	1.808+0	2.747-3	1.808+0	1.414-4		2.459-1	2.459-1	2.842-4	2.390-5
7.000-1	1.054+4	7.521-2	1.749+0	2.388-3	1.747+0	1.158-4		2.721-1	2.721-1	3.236-4	2.598-5
9.000-1	1.130+4	7.081-2	1.847+0	1.814-3	1.845+0	8.073-5		3.267-1	3.267-1	4.894-4	2.892-5
1.000+0	1.217+4	6.385-2	1.480+0	1.181-3	1.478+0	4.323-5		4.398-1	4.398-1	6.448-4	3.459-5
1.029+0	1.270+4	6.257-2	1.485+0	1.112-3	1.484+0	4.234-5	1.000-6	4.526-1	4.526-1	6.944-4	3.563-5
1.250+0	1.406+4	5.891-2	1.324+0	7.433-4	1.323+0	3.060-5	1.280-4	5.879-1	5.879-1	1.508-3	4.183-5
1.500+0	1.544+4	5.191-2	1.205+0	5.162-4	1.202+0	2.224-5	2.147-3	7.414-1	7.414-1	2.397-3	4.801-5
1.750+0	1.674+4	4.778-2	1.111+0	3.792-4	1.108+0	1.882-5	5.328-3	8.991-1	8.991-1	3.523-3	5.370-5
2.000+0	1.798+4	4.450-2	1.035+0	2.904-4	1.028+0	1.344-5	8.785-3	1.081+0	1.081+0	4.900-3	5.901-5
2.044+0	1.819+4	4.398-2	1.023+0	2.780-4	1.013+0	1.300-5	9.293-3	1.090+0	1.090+0	5.169-3	5.990-5
2.500+0	2.027+4	3.946-2	9.179-1	1.859-4	9.012-1	9.856-6	1.650-2	1.394+0	1.394+0	8.449-3	8.878-5
3.000+0	2.235+4	3.580-2	8.327-1	1.291-4	8.072-1	7.458-6	2.533-2	1.739+0	1.739+0	1.313-2	7.783-5
3.500+0	2.456+4	3.298-2	7.670-1	9.484-5	7.333-1	6.158-6	3.362-2	2.095+0	2.095+0	1.902-2	8.634-5
4.000+0	2.612+4	3.075-2	7.152-1	7.261-5	6.733-1	5.192-6	4.177-2	2.480+0	2.480+0	2.619-2	9.454-5
4.500+0	2.714+4	2.895-2	6.733-1	5.738-5	6.236-1	4.450-6	4.984-2	2.833+0	2.833+0	3.489-2	1.025-4
5.000+0	2.916+4	2.744-2	6.382-1	4.848-5	5.815-1	3.905-6	5.886-2	3.214+0	3.214+0	4.457-2	1.102-4
5.500+0	3.012+4	2.612-2	6.078-1	3.841-5	5.454-1	3.498-6	6.822-2	3.601+0	3.601+0	5.584-2	1.178-4
6.000+0	3.118+4	2.501-2	5.818-1	3.227-5	5.140-1	3.184-6	8.780-2	3.994+0	3.994+0	6.858-2	1.249-4
6.500+0	3.234+4	2.407-2	5.598-1	2.750-5	4.884-1	2.885-6	7.338-2	4.393+0	4.393+0	8.293-2	1.322-4
7.000+0	3.440+4	2.326-2	5.409-1	2.371-5	4.619-1	2.649-6	7.898-2	4.798+0	4.798+0	9.866-2	1.395-4
8.000+0	3.894+4	2.198-2	5.107-1	1.815-5	4.204-1	2.271-6	9.022-2	5.627+0	5.627+0	1.352-1	1.544-4
1.000+1	3.951+4	2.055-2	4.710-1	1.182-5	3.581-1	1.758-6	1.129-1	7.349+0	7.349+0	2.293-1	1.860-4
1.250+1	4.216+4	1.867-2	4.341-1	7.436-6	3.038-1	1.389-6	1.303-1	9.528+0	9.528+0	3.835-1	2.230-4
1.500+1	4.510+4	1.770-2	4.116-1	5.184-6	2.850-1	1.147-6	1.468-1	1.184+0	1.184+0	5.827-1	2.618-4
1.750+1	4.819+4	1.713-2	3.985-1	3.794-6	2.357-1	9.757-7	1.628-1	1.417+0	1.417+0	8.277-1	3.036-4
2.000+1	4.778+4	1.674-2	3.894-1	2.904-6	2.187-1	8.482-7	1.767-1	1.655+0	1.655+0	1.117+0	3.463-4
2.500+1	4.910+4	1.619-2	3.767-1	1.859-6	1.788-1	8.711-7	1.979-1	2.136+0	2.136+0	1.825+0	4.323-4
3.000+1	5.073+4	1.589-2	3.697-1	1.291-6	1.518-1	5.542-7	2.148-1	2.623+0	2.623+0	2.700+0	5.211-4
3.500+1	5.019+4	1.589-2	3.649-1	9.484-7	1.370-1	4.714-7	2.279-1	3.113+0	3.113+0	3.732+0	8.105-4
4.000+1	5.126+4	1.581-2	3.630-1	7.262-7	1.231-1	4.098-7	2.400-1	3.607+0	3.607+0	4.916+0	7.037-4
4.500+1	5.115+4	1.584-2	3.637-1	5.732-7	1.119-1	3.621-7	2.519-1	4.104+0	4.104+0	6.247+0	8.023-4
5.000+1	5.118+4	1.586-2	3.642-1	4.648-7	1.027-1	3.242-7	2.615-1	4.601+0	4.601+0	7.710+0	9.007-4
5.500+1	5.114+4	1.584-2	3.638-1	3.841-7	9.502-7	2.933-7	2.888-1	5.098+0	5.098+0	9.298+0	9.989-4
6.000+1	5.119+4	1.586-2	3.642-1	3.227-7	8.850-7	2.877-7	2.757-1	5.596+0	5.596+0	1.101+1	1.052-3
6.500+1	5.018+4	1.589-2	3.650-1	2.750-7	8.284-7	2.482-7	2.821-1	6.095+0	6.095+0	1.293+1	1.196-3
7.000+1	5.011+4	1.574-2	3.662-1	2.371-7	7.793-7	2.277-7	2.882-1	6.595+0	6.595+0	1.477+1	1.298-3
8.000+1	5.077+4	1.588-2	3.694-1	1.815-7	6.980-7	1.980-7	2.998-1	7.594+0	7.594+0	1.894+1	1.508-3
1.000+2	4.918+4	1.623-2	3.778-1	1.162-7	5.793-7	1.586-7	3.198-1	9.597+0	9.597+0	2.838+1	1.947-3

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Form Factors

7-N

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
0.000+0	1.000-0	0.000+0	1.250-1	8.280-1	2.250-1	1.000+0	1.803-1	8.733-1	1.000+1	5.857-4	1.000+0
5.000-3	9.991-1	4.286-4	1.500-1	7.896-1	2.861-1	1.250+0	1.494-1	9.165-1	1.500+1	1.087-4	1.000+0
1.000-2	9.991-1	1.857-3	1.750-1	7.099-1	3.495-1	1.500+0	1.197-1	9.471-1	2.000+1	3.519-5	1.000+0
1.500-2	9.970-1	4.171-3	2.000-1	6.515-1	4.083-1	2.000+0	7.481-2	9.800-1	5.000+1	9.463-7	1.000+0
2.000-2	9.948-1	7.386-3	2.500-1	5.484-1	5.084-1	2.500+0	4.620-2	9.924-1	8.000+1	1.489-7	1.000+0
2.500-2	9.918-1	1.149-2	3.000-1	4.398-1	5.853-1	3.000+0	3.250-2	9.970-1	1.000+2	6.218-8	1.000+0
3.000-2	9.833-1	1.044-2	4.000-1	3.420-1	8.848-1	3.500+0	1.881-2	9.988-1	1.000+3	1.127-11	1.000+0
4.000-2	9.733-1	2.881-2	5.000-1	2.788-1	7.403-1	4.000+0	1.457-2	9.994-1	1.000+6	5.671-21	1.000+0
5.000-2	9.630-1	4.429-2	6.000-1	2.421-1	7.767-1	5.000+0	6.071-3	9.999-1	1.000+9	5.768-30	1.000+0
7.000-2	9.332-1	8.281-2	7.000-1	2.217-1	8.050-1	6.000+0	3.214-3	1.000+0			
9.000-2	9.031-1	1.292-1	8.000-1	2.086-1	8.299-1	7.000+0	1.871-3	1.000+0			
1.000-1	8.835-1	1.543-1	9.000-1	1.932-1	8.526-1	8.000+0	1.443-3	1.000+0

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ENDL Evaluated Photon Cross Sections

8-0

12/07/78

Energy Deposition

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12/07/76

ENDL Evaluated Photon Data

8-0

ATOMIC WEIGHT 15.999		CROSS SECTION (BARNs)							DENSITY 0.001429 GRAMS/CC			
ENERGY	TOTAL NFP	CROSS SECTION (BARNs)							DENSITY 0.001429 GRAMS/CC			
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	HEV/COLLISION	K.E. FLOR	K.E.	BREMSSTR	HEV/CH
1.000-4	1.127-2	6.211-4	1.850-8	4.298-1	2.482-3	1.850-8		1.000-4	1.000-4	5.000-11	8.875-3	
1.250-4	1.834-2	3.816-4	1.014-6	4.253-1	3.821-3	1.014-6		1.250-4	1.250-4	7.812-11	6.816-3	
1.500-4	2.730-2	2.563-4	6.810-5	4.251-1	5.436-3	6.810-5		1.500-4	1.500-4	1.125-10	5.494-3	
1.750-4	3.889-2	1.800-4	4.782-5	4.249-1	7.414-3	4.782-5		1.750-4	1.750-4	1.531-10	4.501-3	
2.000-4	5.291-2	1.325-4	3.520-5	4.246-1	9.701-3	3.520-5		2.000-4	2.000-4	2.000-10	3.787-3	
2.500-4	9.022-2	7.798-3	2.081-5	4.238-1	1.513-2	2.080-5		2.499-4	2.499-4	3.124-10	2.770-3	
3.000-4	1.397-1	5.008-3	1.330-5	4.232-1	2.176-2	1.330-5		2.999-4	2.999-4	4.487-10	2.148-3	
3.500-4	2.034-1	3.441-3	9.141-4	4.221-1	2.955-2	9.137-4		3.498-4	3.498-4	6.119-10	1.720-3	
4.000-4	2.815-1	2.408-3	6.804-4	4.212-1	3.851-2	6.800-4		3.997-4	3.997-4	7.990-10	1.420-3	
4.500-4	3.78-1	1.880-3	4.243-4	4.199-1	4.857-2	4.238-4		4.498-4	4.498-4	1.011-9	1.192-3	
5.000-4	4.874-1	1.436-3	3.814-4	4.187-1	5.970-2	3.810-4		4.995-4	4.995-4	1.247-9	1.025-3	
5.313-4	5.896-1	1.220-3	3.294-4	4.177-1	6.731-2	3.280-4		5.306-4	5.306-4	1.408-9	9.316-4	
5.327-4	3.674-2	1.905-3	5.080-5	4.176-1	6.786-2	5.080-5		5.327-4	5.327-4	1.419-9	1.450-2	
5.500-4	3.850-2	1.818-3	4.829-5	4.171-1	7.201-2	4.828-5		5.500-4	5.500-4	1.512-9	1.428-2	
6.000-4	4.374-2	1.800-3	4.250-5	4.156-1	8.535-2	4.250-5		5.999-4	5.999-4	1.800-9	1.372-2	
6.500-4	5.321-2	1.314-3	3.492-5	4.135-1	9.961-2	3.491-5		6.499-4	6.499-4	2.112-9	1.221-2	
7.000-4	6.380-2	1.095-3	2.910-5	4.116-1	1.149-1	2.910-5		6.999-4	6.999-4	2.449-9	1.096-2	
8.000-4	8.810-2	7.944-3	2.110-5	4.081-1	1.487-1	2.110-5		7.998-4	7.998-4	3.199-9	9.079-3	
1.000-3	1.522-1	4.597-3	1.221-5	3.989-1	2.266-1	1.221-5		9.997-4	9.997-4	4.997-9	6.567-3	
1.250-3	2.750-1	2.295-3	6.781-4	3.885-1	3.392-1	6.757-4		1.249-3	1.249-3	7.804-9	4.543-3	
1.500-3	4.498-1	1.570-3	4.171-4	3.857-1	4.713-1	4.167-4		1.499-3	1.499-3	1.123-8	3.362-3	
1.750-3	6.839-1	1.023-3	2.718-4	3.509-1	6.08-1	2.718-4		1.748-3	1.748-3	1.587-8	2.555-3	
2.000-3	9.900-1	7.083-2	1.876-4	3.355-1	7.590-1	1.873-4		1.998-3	1.998-3	1.993-8	2.015-3	
2.500-3	1.887-0	3.708-2	9.632-3	2.953-1	1.045-0	9.632-3		2.492-3	2.492-3	3.108-8	1.321-3	
3.000-3	3.198-0	2.192-2	5.824-3	2.881-1	1.758-0	5.796-3		2.988-3	2.988-3	4.457-8	9.353-4	
3.500-3	5.053-0	1.385-2	3.880-3	2.331-1	1.625-0	3.855-3		3.478-3	3.478-3	6.042-8	6.880-4	
4.000-3	7.516-0	9.311-1	2.474-3	2.079-1	1.895-0	2.451-3		3.963-3	3.963-3	7.854-8	5.273-4	
4.500-3	1.074-1	6.518-1	1.731-3	1.834-1	2.115-0	1.711-3		4.447-3	4.447-3	9.887-8	4.140-4	
5.000-3	1.477-1	4.738-1	1.258-3	1.840-1	2.333-0	1.240-3		4.928-3	4.928-3	1.213-7	3.335-4	
5.500-3	1.978-1	3.538-1	9.399-2	1.484-1	2.506-0	9.228-2		5.400-3	5.400-3	1.458-7	2.730-4	
6.000-3	2.580-1	2.712-1	7.205-2	1.321-1	2.675-0	7.048-2		5.888-3	5.888-3	1.722-7	2.274-4	
6.500-3	3.305-1	2.117-1	5.625-2	1.192-1	2.799-0	5.478-2		6.330-3	6.330-3	2.004-7	1.915-4	
7.000-3	4.153-1	1.885-1	4.477-2	1.084-1	2.919-0	4.339-2		6.786-3	6.786-3	2.302-7	1.634-4	
8.000-3	6.252-1	1.119-1	2.974-2	9.143-0	3.149-0	2.851-2		7.671-3	7.671-3	2.942-7	1.227-4	
1.000-2	1.237-2	5.838-0	1.503-2	6.804-0	3.449-0	1.400-2		9.323-3	9.323-3	4.345-7	7.534-5	
1.250-2	2.419-2	2.882-0	7.884-1	5.038-0	4.678-0	6.813-1		1.110-2	1.110-2	6.158-7	4.587-5	
1.500-2	4.074-2	1.718-0	4.284-1	3.941-0	5.877-0	3.782-1		1.247-2	1.247-2	7.774-7	3.081-5	
1.750-2	6.187-2	1.131-0	3.005-1	3.188-0	6.988-0	2.288-1		1.341-2	1.341-2	8.988-7	2.187-5	
2.000-2	8.632-2	6.107-1	2.154-1	2.622-0	4.107-0	1.481-1		1.390-2	1.390-2	9.661-7	1.810-5	
2.500-2	1.410-1	4.984-1	1.319-1	1.848-0	4.212-0	7.127-0		1.389-2	1.389-2	9.646-7	9.852-6	
3.000-2	1.935-1	3.517-1	9.610-0	1.389-0	4.300-0	3.921-0		1.298-2	1.298-2	8.429-7	6.711-6	
3.500-2	2.398-1	2.917-1	7.748-0	1.071-0	4.313-0	2.385-0		1.191-2	1.191-2	7.088-7	4.862-6	
4.000-2	2.773-1	2.524-1	6.705-0	8.552-1	4.324-0	1.526-0		1.091-2	1.091-2	5.955-7	3.938-6	
4.500-2	3.086-1	2.271-1	6.033-0	8.942-1	4.301-0	1.038-0		1.021-2	1.021-2	5.215-7	3.314-6	
5.000-2	3.324-1	2.105-1	5.588-0	5.781-1	4.281-0	7.350-1		9.780-3	9.780-3	4.782-7	2.941-6	
5.500-2	3.530-1	1.983-1	5.267-0	4.850-1	4.244-0	5.385-1		9.620-3	9.620-3	4.627-7	2.726-6	
6.000-2	3.690-1	1.893-1	5.030-0	4.144-1	4.210-0	4.059-1		9.680-3	9.680-3	4.685-7	2.619-6	
6.500-2	3.840-1	1.820-1	4.834-0	3.573-1	4.184-0	3.127-1		9.938-3	9.938-3	4.938-7	2.584-6	
7.000-2	3.974-1	1.761-1	4.678-0	3.115-1	4.121-0	2.498-1		1.035-2	1.035-2	5.358-7	2.675-6	
8.000-2	4.179-1	1.674-1	4.448-0	2.432-1	4.048-0	1.595-1		1.156-2	1.156-2	6.884-7	2.767-6	
1.000-1	4.515-1	1.550-1	4.118-0	1.585-1	3.881-0	7.788-2		1.508-2	1.508-2	1.137-6	3.341-6	
1.250-1	4.887-1	1.438-1	3.880-0	1.036-1	3.678-0	3.637-2		2.078-2	2.078-2	2.158-6	4.270-6	
1.500-1	5.143-1	1.361-1	3.615-0	7.286-2	3.521-0	2.153-2		2.762-2	2.762-2	3.814-6	5.371-6	
1.750-1	5.417-1	1.292-1	3.432-0	5.383-2	3.363-0	1.334-2		3.511-2	3.511-2	6.183-6	6.482-6	
2.000-1	5.657-1	1.237-1	3.288-0	4.142-2	3.236-0	8.607-3		4.335-2	4.335-2	9.395-6	7.863-6	
2.500-1	6.133-1	1.141-1	3.032-0	2.882-2	3.001-0	4.481-3		6.102-2	6.102-2	1.881-5	9.949-6	
3.000-1	6.544-1	1.070-1	2.842-0	1.856-2	2.821-0	2.588-3		8.077-2	8.077-2	3.261-5	1.235-5	
3.500-1	6.946-1	1.007-1	2.678-0	1.385-2	2.681-0	1.841-3		1.015-1	1.015-1	5.146-5	1.481-5	
4.000-1	7.315-1	9.287-2	2.542-0	1.077-2	2.538-0	1.189-3		1.237-1	1.237-1	7.841-5	1.891-5	
4.500-1	7.578-1	9.114-2	2.481-0	8.278-3	2.412-0	7.818-4		1.489-1	1.489-1	1.072-4	1.988-5	
5.000-1	8.017-1	8.789-2	2.318-0	6.789-3	2.312-0	6.699-4		1.705-1	1.705-1	1.145-4	2.185-5	
5.500-1	8.353-1	8.378-2	2.228-0	5.947-3	2.240-0	4.498-4		1.949-1	1.949-1	1.088-4	2.333-5	
6.000-1	8.67-1	8.071-2	2.144-0	4.883-3	2.139-0	3.522-4		2.203-1	2.203-1	2.231-4	2.540-5	

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 15.999										DENSITY 0.001429 GRAMS/CC											
ENERGY		TOTAL HFP		CROSS SECTION (BARNs)								MEV/COLLISION				MEV/CM					
MEV		CM	CM ² /CM	TOTAL	COHERENT	INCOHERENT	PHOTON	PAIR PROD	K.E. FLOR	K.E. BREMSSTR			K.E.								
6.500	-1	6.991	-3	7.784	-2	2.088	-0	3.974	-3	2.084	-0	2.636	-4	2.458	-1	2.458	-1	3.017	-4	2.734	-5
7.000	-1	9.297	-3	7.527	-2	2.000	-0	3.427	-3	1.986	-0	2.320	-4	2.721	-1	2.721	-1	3.896	-4	2.927	-5
8.000	-1	9.875	-3	7.086	-2	1.883	-0	2.625	-3	1.880	-0	1.518	-4	3.267	-1	3.267	-1	5.327	-4	3.308	-5
1.000	0	1.099	-4	6.370	-2	1.892	-0	1.890	-3	1.891	-0	9.026	-5	4.398	-1	4.398	-1	9.650	-4	4.003	-5
1.022	0	1.110	-4	6.302	-2	1.874	-0	1.869	-3	1.873	-0	8.688	-5	4.525	-1	4.525	-1	1.022	-3	4.075	-5
1.250	0	1.289	-4	5.895	-2	1.513	-0	1.076	-3	1.512	-0	8.104	-5	5.133	-1	5.133	-1	1.723	-3	4.784	-5
1.500	0	1.350	-4	5.185	-2	1.378	-0	7.372	-4	1.374	-0	4.434	-5	5.812	-1	5.812	-1	2.427	-3	4.707	-5
1.750	0	1.483	-4	4.785	-2	1.271	-0	5.488	-4	1.264	-0	3.354	-5	6.985	-1	6.985	-1	4.022	-3	4.146	-5
2.000	0	1.570	-4	4.458	-2	1.184	-0	4.202	-4	1.172	-0	2.678	-5	1.149	-2	1.081	-0	5.595	-3	6.757	-5
2.044	0	1.588	-4	4.406	-2	1.171	-0	4.023	-4	1.158	-0	2.590	-5	1.216	-2	1.089	-0	5.902	-3	6.860	-5
2.500	0	1.788	-4	3.999	-2	1.052	-0	2.890	-4	1.030	-0	1.922	-5	2.157	-2	1.394	-0	9.850	-3	7.887	-5
3.000	0	1.942	-4	3.598	-2	9.558	-1	1.868	-4	9.225	-1	1.492	-5	3.306	-1	1.740	-0	1.501	-2	8.947	-5
3.500	0	2.108	-4	3.320	-2	8.819	-1	1.372	-4	8.380	-1	1.225	-5	4.379	-2	2.097	-0	2.176	-2	9.947	-5
4.000	0	2.258	-4	3.101	-2	8.240	-1	1.051	-4	7.895	-1	1.033	-5	5.435	-2	2.464	-0	2.998	-2	1.092	-4
4.500	0	2.392	-4	2.926	-2	7.773	-1	8.303	-5	7.122	-1	8.852	-6	6.455	-2	2.840	-0	3.975	-2	1.187	-4
5.000	0	2.518	-4	2.779	-2	7.383	-1	6.726	-5	6.848	-1	7.785	-6	7.384	-2	3.223	-0	5.112	-2	1.280	-4
5.500	0	2.640	-4	2.650	-2	7.041	-1	5.558	-5	6.233	-1	6.955	-6	8.082	-2	3.613	-0	6.410	-2	1.368	-4
6.000	0	2.753	-4	2.542	-2	6.754	-1	4.670	-5	5.874	-1	6.289	-6	8.800	-2	4.009	-0	7.879	-2	1.456	-4
6.500	0	2.856	-4	2.451	-2	6.511	-1	3.980	-5	5.558	-1	5.733	-6	9.519	-2	4.412	-0	9.522	-2	1.545	-4
7.000	0	2.945	-4	2.373	-2	6.303	-1	3.431	-5	5.279	-1	5.262	-6	1.024	-1	4.821	-0	1.135	-1	6.635	-4
8.000	0	3.112	-4	2.249	-2	5.974	-1	2.627	-5	4.805	-1	4.509	-6	1.168	-1	5.658	-0	1.557	-1	6.818	-4
1.000	1	3.345	-4	2.090	-2	5.552	-1	1.881	-5	4.092	-1	3.483	-6	1.459	-1	7.399	-0	2.639	-1	2.209	-4
1.250	1	3.606	-4	1.940	-2	5.155	-1	1.076	-5	3.472	-1	2.756	-6	1.683	-1	9.629	-0	4.423	-1	2.670	-4
1.500	1	3.776	-4	1.852	-2	4.921	-1	7.473	-6	3.029	-1	2.275	-6	1.892	-1	1.193	-1	1.193	-1	3.157	-4
1.750	1	3.875	-4	1.804	-2	4.793	-1	5.490	-6	2.894	-1	1.935	-6	2.099	-1	1.429	-1	1.429	-1	3.684	-4
2.000	1	3.945	-4	1.772	-2	4.708	-1	4.203	-6	2.431	-1	1.682	-6	2.277	-1	1.668	-1	1.284	-1	4.224	-4
2.500	1	4.052	-4	1.728	-2	4.591	-1	2.690	-6	2.043	-1	1.331	-6	2.547	-1	2.152	-1	2.091	-1	5.314	-4
3.000	1	4.101	-4	1.708	-2	4.534	-1	1.888	-6	1.770	-1	1.099	-6	2.764	-1	2.642	-1	3.082	-1	6.442	-4
3.500	1	4.134	-4	1.693	-2	4.497	-1	1.372	-6	1.585	-1	9.346	-7	2.932	-1	3.134	-1	4.245	-1	7.580	-4
4.000	1	4.135	-4	1.691	-2	4.491	-1	1.051	-6	1.406	-1	8.123	-7	3.085	-1	3.629	-1	5.574	-1	8.768	-4
4.500	1	4.117	-4	1.700	-2	4.516	-1	8.304	-7	1.279	-1	7.178	-7	3.237	-1	4.127	-1	7.080	-1	1.002	-3
5.000	1	4.100	-4	1.707	-2	4.534	-1	6.726	-7	1.174	-1	6.426	-7	3.360	-1	4.285	-1	8.088	-1	1.128	-3
5.500	1	4.092	-4	1.708	-2	4.539	-1	5.558	-7	1.088	-1	5.814	-7	3.453	-1	5.233	-1	8.045	-1	1.254	-3
6.000	1	4.082	-4	1.713	-2	4.551	-1	4.670	-7	1.011	-1	5.308	-7	3.540	-1	5.622	-1	8.234	-1	1.776	-3
6.500	1	4.065	-4	1.720	-2	4.569	-1	3.980	-7	9.468	-2	4.878	-7	3.622	-1	6.122	-1	1.435	-1	1.504	-3
7.000	1	4.052	-4	1.728	-2	4.590	-1	3.431	-7	8.906	-2	4.513	-7	3.699	-1	6.621	-1	1.647	-1	1.635	-3
8.000	1	4.008	-4	1.747	-2	4.841	-1	2.827	-7	7.977	-2	3.923	-7	3.843	-1	7.622	-1	2.103	-1	1.903	-3
1.000	2	3.906	-4	1.791	-2	4.759	-1	1.681	-7	6.621	-2	3.103	-7	4.097	-1	9.625	-1	3.127	-1	2.454	-3

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SIN(0/2)/s COHERENT		INCOHERENT		SIN(0/2)/s COHERENT		INCOHERENT		SIN(0/2)/s COHERENT		INCOHERENT	
1/A				1/A				1/A			
0.000 0	1.000 0	0.000 0	1.250 -	0.593 -	1.775 -	1.800 0	1.7 0 -	0.028 -	1.000 -	6.900 -	1.000 0
5.000 3	9.997 1	3.758 +	1.280 -	0.087 -	2.358 -	1.250 0	1.477 -	0.002 -	1.500 -	1.800 +	1.000 0
1.000 2	9.999 1	1.375 3	1.738 -	7.958 -	2.937 -	1.500 0	1.245 -	9.328 -	2.000 -	5.239 5	1.000 0
1.508 2	9.977 -	3.182 3	2.006 -	7.025 -	3.498 -	2.000 0	0.800 -	9.705 -	5.000 -	1.423 6	1.000 0
2.000 2	9.999 -	5.000 3	2.500 -	6.006 -	4.517 -	2.500 0	5.321 -	2.875 -	8.000 -	2.251 7	1.000 0
2.500 2	9.998 -	8.755 3	3.080 -	5.107 -	5.388 -	3.000 0	3.880 -	2.946 -	1.000 2	9.421 0	1.000 0
3.000 2	9.996 -	1.251 4	4.000 -	4.000 -	6.571 -	3.500 0	2.439 -	2.876 -	1.000 3	1.059 -11	1.000 0
4.000 2	9.977 -	3.333 4	5.000 -	3.333 -	7.919 -	4.000 0	1.900 -	2.876 -	1.000 4	9.911 -11	1.000 0
5.000 2	9.977 -	3.388 2	6.000 -	2.431 -	7.719 -	5.000 0	0.383 3	3.927 -	1.000 5	1.000 -29	1.000 0
7.000 2	9.915 -	0.421 2	7.000 -	2.411 -	0.014 -	6.000 0	4.582 3	9.999 -			
9.000 2	9.921 -	1.015 -	8.000 -	1.938 -	0.245 -	7.000 0	2.637 3	1.000 0			
1.000 -	9.095 -	1.221 -	9.000 -	1.028 -	0.444 -	8.000 0	1.975 3	1.000 0

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 18.998		DENSITY 1.14 GRAMS/CC					
ENERGY	TOTAL MP	CROSS SECTION (BARN)					
MEV	CM	CH	CHCH/GH	TOTAL	COHERENT	INCOHER	PAIR PROD
MEV	CH	CHCH/GH	TOTAL	COHERENT	INCOHER	PAIR PROD	K.E. FLOR
MEV	CH	CHCH/GH	TOTAL	COHERENT	INCOHER	PAIR PROD	K.E. FLOR
1.000-4	1.014-5	0.892-4	2.730-6	5.387-3	1.936-3	2.730-6	1.000-4
1.250-4	1.638-5	5.352-4	1.088-6	5.389-3	3.169-3	1.688-6	1.250-4
1.500-4	2.427-5	3.614-4	1.140-6	5.382-3	4.739-3	1.140-6	1.500-4
1.750-4	3.438-5	2.537-4	0.003-5	5.379-3	6.496-3	0.003-5	1.750-4
2.000-4	4.638-5	1.867-4	5.891-5	5.377-3	8.538-3	5.890-5	2.000-4
2.500-4	6.037-5	1.091-4	3.443-5	5.369-3	1.336-2	3.443-5	2.500-4
3.000-4	1.246-4	7.039-3	2.221-5	5.362-3	1.927-2	2.220-5	3.000-4
3.500-4	1.824-4	4.808-3	1.517-5	5.351-3	2.618-2	1.516-5	3.500-4
4.000-4	2.538-4	3.457-3	1.091-5	5.342-3	3.414-2	1.090-5	4.000-4
4.500-4	3.414-4	2.589-3	8.105-4	5.328-3	4.308-2	8.093-4	4.500-4
5.000-4	4.452-4	1.970-3	6.215-4	5.318-3	5.306-2	6.210-4	5.000-4
5.500-4	5.684-4	1.343-3	4.688-4	5.299-3	6.398-2	4.683-4	5.500-4
6.000-4	7.104-4	1.235-3	3.895-4	5.284-3	7.591-2	3.890-4	6.000-4
6.500-4	8.725-4	1.005-3	3.172-4	5.263-3	8.869-2	3.166-4	6.500-4
6.947-4	9.971-4	8.797-2	2.775-4	5.249-3	9.813-2	2.770-4	6.947-4
6.861-4	7.187-4	1.221-4	3.851-5	5.248-3	9.852-2	3.850-5	6.861-4
7.000-4	6.997-5	1.255-4	3.961-5	5.243-3	1.024-1	3.960-5	7.000-4
8.000-4	9.013-5	9.733-3	3.071-5	5.207-3	1.328-1	3.070-5	8.000-4
1.000-3	1.544-4	5.682-3	1.793-5	5.110-3	2.034-1	1.792-5	1.000-3
1.250-3	2.716-4	3.229-3	1.019-5	4.937-3	3.065-1	1.018-5	1.250-3
1.500-3	4.309-4	2.036-3	6.482-4	4.800-3	4.285-1	6.417-4	1.500-3
1.750-3	6.510-4	1.347-3	4.251-4	4.595-3	5.581-1	4.246-4	1.750-3
2.000-3	9.307-4	9.425-2	2.973-4	4.425-3	7.017-1	2.963-4	2.000-3
2.500-3	1.739-3	5.043-2	1.591-4	3.963-3	9.851-1	1.567-4	2.500-3
3.000-3	2.898-3	3.027-2	9.249-3	3.622-3	1.300-0	9.511-3	3.000-3
3.500-3	4.540-3	1.932-2	6.095-3	3.215-3	1.580-0	6.061-3	3.500-3
4.000-3	6.694-3	1.310-2	4.134-3	2.899-3	1.871-0	4.103-3	4.000-3
4.500-3	9.506-3	9.228-1	2.911-3	2.579-3	2.119-0	2.883-3	4.500-3
5.000-3	1.300-2	6.747-1	2.129-3	2.322-3	2.387-0	2.103-3	5.000-3
5.500-3	1.734-2	5.059-1	1.598-3	2.081-3	2.572-0	1.573-3	5.500-3
6.000-3	2.254-2	3.891-1	1.228-3	1.783-3	2.776-0	1.206-3	6.000-3
6.500-3	2.880-2	3.046-1	9.606-2	1.700-3	2.929-0	9.409-2	6.500-3
7.000-3	3.611-2	2.428-1	7.883-2	1.547-3	3.078-0	7.477-2	7.000-3
8.000-3	5.420-2	1.619-1	5.106-2	1.304-3	3.387-0	4.942-2	8.000-3
1.000-2	1.073-1	8.177-0	2.580-2	9.629-0	3.748-0	2.446-2	1.000-2
1.250-2	2.116-1	4.148-0	1.508-2	7.346-0	4.028-0	1.197-2	1.250-2
1.500-2	3.617-1	2.425-0	7.850-1	5.459-0	4.271-0	6.677-1	1.500-2
1.750-2	5.615-1	1.562-0	4.969-1	4.389-0	4.413-0	4.050-1	1.750-2
2.000-2	8.041-1	1.091-0	3.441-1	3.803-0	4.540-0	2.627-1	2.000-2
2.500-2	1.292-0	6.303-1	1.989-1	2.544-0	4.689-0	1.267-1	2.500-2
3.000-2	2.024-0	4.335-1	1.388-1	1.915-0	4.776-0	6.985-0	3.000-2
3.500-2	2.837-0	3.326-1	1.049-1	1.478-0	4.800-0	4.216-0	3.500-2
4.000-2	3.172-0	2.786-1	8.725-0	1.182-0	4.821-0	2.722-0	4.000-2
4.500-2	3.635-0	2.413-1	7.613-0	9.600-0	4.801-0	1.852-0	4.500-2
5.000-2	4.015-0	2.185-1	6.893-0	7.971-0	4.784-0	1.312-0	5.000-2
5.500-2	4.138-0	2.022-1	6.379-0	6.714-0	4.746-0	9.612-1	5.500-2
6.000-2	4.605-0	1.905-1	6.010-0	5.740-0	4.712-0	7.236-1	6.000-2
6.500-2	4.942-0	1.812-1	5.716-0	4.952-0	4.663-0	5.580-1	6.500-2
7.000-2	5.143-0	1.739-1	5.488-0	4.318-0	4.617-0	4.387-1	7.000-2
8.000-2	5.285-0	1.635-1	5.158-0	3.775-0	4.536-0	2.844-1	8.000-2
1.000-1	5.689-0	1.495-1	4.715-0	2.217-0	4.355-0	1.387-1	1.000-1
1.250-1	6.372-0	1.377-1	4.347-0	1.443-0	4.130-0	6.833-2	1.250-1
1.500-1	6.570-0	1.298-1	4.095-0	1.016-0	3.956-0	3.832-2	1.500-1
1.750-1	7.131-0	1.230-1	3.881-0	7.511-0	3.782-0	2.373-2	1.750-1
2.000-1	7.457-0	1.176-1	3.711-0	5.783-0	3.537-0	1.567-2	2.000-1
2.500-1	8.195-0	1.084-1	3.419-0	3.720-0	3.373-0	7.974-3	2.500-1
3.000-1	8.741-0	1.015-1	3.203-0	2.594-0	3.172-0	4.592-3	3.000-1
3.500-1	9.179-0	9.596-2	3.015-0	1.909-0	2.993-0	2.923-3	3.500-1
4.000-1	9.689-0	9.072-2	2.862-0	1.484-0	2.845-0	1.978-3	4.000-1
4.500-1	1.15-0	8.842-2	2.726-0	1.158-0	2.712-0	1.412-3	4.500-1
5.000-1	1.60-0	8.275-2	2.611-0	9.384-0	2.600-0	1.046-3	5.000-1
5.500-1	1.105-1	7.942-2	2.505-0	7.793-0	2.497-0	8.127-4	5.500-1
6.000-1	1.147-1	7.850-2	2.413-0	6.522-0	2.406-0	6.304-4	6.000-1
1.000-4	1.000-4	5.625-11	9.885-0	1.250-4	1.250-4	8.788-11	7.626-0
1.500-4	1.500-4	1.266-10	6.179-0	1.750-4	1.750-4	1.722-10	5.061-0
2.000-4	2.000-4	2.250-10	4.257-0	2.500-4	2.500-4	3.515-10	3.110-0
2.999-4	2.999-4	5.060-10	2.407-0	3.499-4	3.499-4	6.886-10	1.218-0
3.999-4	3.999-4	8.991-10	1.576-0	4.997-4	4.997-4	1.138-9	1.317-0
4.995-4	4.995-4	1.404-9	1.122-0	5.994-4	5.994-4	1.698-9	9.665-1
5.992-4	5.992-4	2.019-9	8.434-1	6.489-4	6.489-4	2.369-9	7.437-1
6.834-4	6.834-4	2.627-9	6.854-1	6.860-4	6.860-4	2.647-9	9.545-0
6.999-4	6.999-4	2.758-9	1.002-1	7.999-4	7.999-4	3.599-9	8.875-0
9.997-4	9.997-4	5.622-9	6.476-0	1.249-3	1.249-3	8.780-9	4.600-0
1.499-3	1.499-3	1.264-8	3.478-0	1.748-3	1.748-3	1.719-8	2.685-0
1.997-3	1.997-3	2.243-8	2.146-0	2.494-3	2.494-3	3.498-8	1.434-0
2.988-3	2.988-3	5.023-8	1.031-0	3.481-3	3.481-3	6.814-8	7.656-1
3.970-3	3.970-3	8.866-8	5.931-1	4.457-3	4.457-3	1.117-7	4.689-1
4.940-3	4.940-3	1.373-7	3.800-1	5.420-3	5.420-3	1.652-7	3.125-1
5.895-3	5.895-3	1.954-7	2.615-1	6.385-3	6.385-3	2.279-7	2.210-1
6.831-3	6.831-3	2.626-7	1.892-1	7.744-3	7.744-3	3.373-7	1.429-1
7.485-3	7.485-3	5.060-7	8.642-2	1.145-2	1.145-2	7.376-7	4.412-2
1.312-2	1.312-2	9.679-7	3.626-2	1.444-2	1.444-2	1.172-6	2.571-2
1.537-2	1.537-2	1.329-6	1.912-2	1.621-2	1.621-2	1.478-6	1.165-2
1.591-2	1.591-2	1.423-6	7.860-3	1.507-2	1.507-2	1.277-6	5.715-3
1.404-2	1.404-2	1.108-6	4.425-3	1.314-2	1.314-2	9.712-7	3.615-3
1.243-2	1.243-2	8.697-7	3.057-3	1.199-2	1.199-2	8.088-7	2.784-3
1.178-2	1.178-2	7.801-7	2.558-3	1.179-2	1.179-2	7.820-7	2.435-3
1.199-2	1.199-2	8.081-7	2.377-3	1.284-2	1.284-2	9.272-7	2.193-3
1.590-2	1.590-2	1.421-6	2.709-3	2.128-2	2.128-2	2.547-6	3.340-3
2.794-2	2.794-2	4.390-6	4.135-3	3.533-2	3.533-2	7.018-6	4.954-3
4.350-2	4.350-2	1.064-5	5.833-3	6.108-2	6.108-2	2.098-5	7.566-3
6.079-2	6.079-2	3.670-5	9.350-3	1.015-1	1.015-1	5.768-5	1.105-2
1.236-1	1.236-1	8.592-5	1.279-2	1.465-1	1.465-1	1.206-4	1.443-2
1.704-1	1.704-1	1.632-4	1.608-2	1.949-1	1.949-1	2.134-4	1.784-2
2.202-1	2.202-1	2.725-4	1.921-2				

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 18.998		DENSITY 1.14 GRAMS/CC						
ENERGY	TOTAL NFP	CROSS SECTION (BARN)						
MEV	CH CH*CH/CH	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	NEV/COLLISION	NEV/CH
							K.E. FLOR	K.E. M/CNSTR
								K.E.
8.500-1	1.198-1	7.377-2	2.327-0	5.598-3	2.321-0	5.083-4	2.458-1	2.458-1
7.000-1	1.230-1	7.134-2	2.251-0	4.794-3	2.245-0	4.184-4	2.720-1	2.720-1
6.000-1	1.336-1	6.718-2	2.119-0	3.672-3	2.115-0	2.907-4	3.288-1	3.288-1
1.000-0	1.453-1	6.038-2	1.984-0	2.351-3	1.902-0	1.632-4	4.397-1	4.397-1
1.022-0	1.459-1	5.972-2	1.984-0	2.251-3	1.881-0	1.571-4	4.525-1	4.525-1
1.250-0	1.626-1	5.398-2	1.762-0	1.505-3	1.701-0	1.103-4	5.878-1	5.878-1
1.500-0	1.735-1	4.914-2	1.550-0	1.045-3	1.546-0	8.012-5	7.411-1	7.411-1
1.750-0	1.994-1	4.537-2	1.431-0	7.679-4	1.422-0	6.058-5	8.987-1	8.987-1
2.000-0	2.074-1	4.230-2	1.334-0	5.879-4	1.319-0	4.838-5	1.080-0	1.080-0
2.044-0	2.038-1	4.181-2	1.319-0	5.828-4	1.303-0	4.677-5	1.068-0	1.068-0
2.500-0	2.333-1	3.780-2	1.198-0	3.780-4	1.159-0	3.488-5	1.394-0	1.394-0
3.000-0	2.553-1	3.423-2	1.080-0	2.614-4	1.038-0	2.690-5	1.741-0	1.741-0
3.500-0	2.772-1	3.184-2	9.883-1	1.920-4	9.427-1	2.209-5	2.099-0	2.099-0
4.000-0	2.931-1	2.982-2	9.345-1	1.470-4	8.657-1	1.862-5	2.468-0	2.468-0
4.500-0	3.133-1	2.800-2	8.833-1	1.162-4	8.017-1	1.596-5	2.848-0	2.848-0
5.000-0	3.282-1	2.684-2	8.406-1	9.411-5	7.476-1	1.400-5	3.232-0	3.232-0
5.500-0	3.446-1	2.546-2	8.031-1	7.778-5	7.012-1	1.253-5	3.624-0	3.624-0
6.000-0	3.536-1	2.446-2	7.717-1	6.535-5	6.608-1	1.133-5	4.024-0	4.024-0
6.500-0	3.714-1	2.362-2	7.452-1	5.569-5	6.253-1	1.032-5	4.430-0	4.430-0
7.000-0	3.829-1	2.291-2	7.228-1	4.802-5	5.939-1	9.474-6	4.843-0	4.843-0
8.000-0	4.025-1	2.179-2	6.875-1	3.676-5	5.405-1	8.115-6	5.888-0	5.888-0
1.000-1	4.330-1	2.040-2	6.435-1	2.353-5	4.604-1	6.282-6	1.831-0	1.831-0
1.250-1	4.539-1	1.907-2	6.017-1	1.508-5	3.908-1	4.926-6	2.110-0	2.110-0
1.500-1	4.739-1	1.832-2	5.778-1	1.048-5	3.407-1	4.062-6	2.370-0	2.370-0
1.750-1	4.830-1	1.794-2	5.659-1	7.688-6	3.030-1	3.480-6	2.629-0	2.629-0
2.000-1	4.938-1	1.770-2	5.584-1	5.881-6	2.735-1	3.024-6	2.849-0	2.849-0
2.500-1	5.046-1	1.739-2	5.445-1	3.763-6	2.299-1	2.392-6	3.186-0	3.186-0
3.000-1	5.031-1	1.728-2	5.448-1	2.813-6	1.991-1	1.975-6	3.479-0	3.479-0
3.500-1	5.122-1	1.719-2	5.424-1	1.921-6	1.781-1	1.680-6	3.863-0	3.863-0
4.000-1	5.031-1	1.723-2	5.436-1	1.471-6	1.582-1	1.460-6	3.854-0	3.854-0
4.500-1	5.048-1	1.738-2	5.482-1	1.162-6	1.439-1	1.290-6	4.043-0	4.043-0
5.000-1	5.016-1	1.749-2	5.517-1	9.411-7	1.321-1	1.135-6	4.196-0	4.196-0
5.500-1	5.032-1	1.754-2	5.532-1	7.778-7	1.222-1	1.045-6	4.310-0	4.310-0
6.000-1	5.931-1	1.781-2	5.958-1	6.535-7	1.138-1	9.534-7	4.418-0	4.418-0
6.500-1	4.936-1	1.770-2	5.984-1	5.939-7	1.085-1	8.785-7	4.519-0	4.519-0
7.000-1	4.927-1	1.780-2	5.617-1	4.802-7	1.002-1	8.106-7	4.815-0	4.815-0
8.000-1	4.894-1	1.804-2	5.880-1	3.678-7	8.874-7	7.047-7	4.792-0	4.792-0
1.000-2	4.731-1	1.854-2	5.850-1	2.353-7	7.448-7	5.574-7	5.105-0	5.105-0

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Form Factors

9-F

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	0.833-1	1.424-1	1.000+0	1.646-1	0.959-1	1.000+1	1.011-3	1.000+0
5.000-3	9.997-1	2.222-4	1.500-1	0.398-1	1.957-1	1.250+0	1.430-1	0.918-1	1.500+1	2.200-4	1.000+0
1.000-2	9.991-1	1.111-3	1.750-1	7.932-1	2.475-1	1.500+0	1.244-1	9.209-1	2.000+1	7.433-5	1.000+0
1.500-2	9.981-1	2.409-3	2.000-1	7.451-1	2.990-1	2.000+0	0.978-2	9.609-1	5.000+1	2.042-6	1.000+0
2.000-2	9.967-1	4.411-3	2.500-1	6.487-1	3.988-1	2.500+0	0.6248-2	9.816-1	8.000+1	3.245-7	1.000+0
2.500-2	9.948-1	6.878-3	3.000-1	5.611-1	4.830-1	3.000+0	4.618-2	9.914-1	1.000+2	1.362-7	1.000+0
3.000-2	9.923-1	9.867-3	4.000-1	4.172-1	6.159-1	3.500+0	2.988-2	9.959-1	1.000+3	2.780-11	1.000+0
4.000-2	9.888-1	1.739-2	5.000-1	3.189-1	7.043-1	4.000+0	2.354-2	9.980-1	1.000+6	1.589-20	1.000+0
5.000-2	9.849-1	2.889-2	6.000-1	2.582-1	7.591-1	5.000+0	1.091-2	9.995-1	1.000+9	1.631-29	1.000+0
7.000-2	9.645-1	5.122-2	7.000-1	2.172-1	7.946-1	6.000+0	6.078-3	9.998-1			
9.000-2	9.382-1	8.186-2	8.000-1	1.925-1	8.196-1	7.000+0	3.611-3	9.999-1			
1.000-1	9.223-1	9.067-2	9.000-1	1.762-1	8.391-1	8.000+0	2.744-3	1.000+0

10-N.

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Energy Deposition

10-Ne

12/07/78

ENDL Evaluated Photon Data

10-Ne

ATOMIC WEIGHT 20.179		DENSITY 8.9980 - 4 GRAMS/CC							
ENERGY	TOTAL HP	CROSS SECTION (BARNS)						NEUT/COLLISION	
MEV	CH	CH/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E. BREMSSTR
1.000-4	9.099-3	1.227-5	4.110-8	6.850-1	1.837-3	4.110-8		1.000-4	6.250-11
1.200-4	1.280-2	8.005-4	2.910-8	6.040-1	2.096-3	2.910-8		1.200-4	9.000-11
1.250-4	1.394-2	7.970-4	2.871-8	6.040-1	2.938-3	2.871-8		1.250-4	9.785-11
1.500-4	2.046-2	5.432-4	1.820-8	6.040-1	4.311-3	1.820-8		1.500-4	1.408-10
1.750-4	2.687-2	3.849-4	1.290-8	6.043-1	5.883-3	1.290-8		1.750-4	1.914-10
2.000-4	3.891-2	2.836-4	9.571-5	6.040-1	7.700-3	9.570-5		2.000-4	2.500-10
2.500-4	6.586-2	1.892-4	5.871-5	6.832-1	1.203-2	5.870-5		2.500-4	3.905-10
3.000-4	1.026-1	1.084-4	3.831-5	6.825-1	1.733-2	3.830-5		3.000-4	5.823-10
3.500-4	1.507-1	7.374-4	2.471-5	6.814-1	2.354-2	2.470-5		3.500-4	7.852-10
4.000-4	2.103-1	5.284-4	1.771-5	6.805-1	3.071-2	1.770-5		4.000-4	9.993-10
4.500-4	2.842-1	3.910-4	1.310-5	6.591-1	3.877-2	1.309-5		4.500-4	1.264-9
5.000-4	3.721-1	2.986-4	1.001-5	6.578-1	4.776-2	1.000-5		5.000-4	1.560-9
5.500-4	4.753-1	2.338-4	7.835-4	6.561-1	5.761-2	7.828-4		5.500-4	1.867-9
6.000-4	5.942-1	1.870-4	6.267-4	6.546-1	6.836-2	6.260-4		6.000-4	2.245-9
6.500-4	7.326-1	1.517-4	5.062-4	6.524-1	7.991-2	5.076-4		6.500-4	2.634-9
7.000-4	8.894-1	1.249-4	4.187-4	6.503-1	9.234-2	4.180-4		7.000-4	3.053-9
8.000-4	1.298-0	8.784-2	2.938-4	6.486-1	1.198-1	2.930-4		8.000-4	3.962-9
8.662-4	1.557-0	7.092-2	2.376-4	6.430-1	1.396-1	2.370-4		8.662-4	4.664-9
8.737-4	1.149-1	9.674-3	3.242-5	6.427-1	1.420-1	3.241-5		8.737-4	5.153-9
9.000-4	1.149-1	9.671-3	3.241-5	6.423-1	1.439-1	3.240-5		9.000-4	5.757-9
9.000-4	1.156-1	9.616-3	3.221-5	6.413-1	1.503-1	3.220-5		9.000-4	6.247-9
1.000-3	1.480-1	7.609-3	2.850-5	6.387-1	1.841-1	2.849-5		1.000-3	6.846-8
1.250-3	2.575-1	4.318-3	1.448-5	6.186-1	2.789-1	1.448-5		1.250-3	7.757-8
1.500-3	4.031-1	2.718-3	9.101-4	6.042-1	3.716-1	9.095-4		1.500-3	8.683-8
1.750-3	6.176-1	1.799-3	6.029-4	5.823-1	5.129-1	6.023-4		1.750-3	9.810-8
2.000-3	8.822-1	1.260-3	4.221-4	5.640-1	6.480-1	4.215-4		2.000-3	1.093-8
2.500-3	1.643-0	6.763-2	2.286-4	5.126-1	9.209-1	2.281-4		2.500-3	1.518-8
3.000-3	2.780-0	4.070-2	1.384-4	4.740-1	1.227-0	1.359-4		3.000-3	1.895-8
3.500-3	4.259-0	2.609-2	8.743-3	4.280-1	1.510-0	8.898-3		3.500-3	2.279-8
4.000-3	6.237-0	1.778-2	5.951-3	3.883-1	1.807-0	5.910-3		4.000-3	2.674-8
4.500-3	8.633-0	1.255-2	4.208-3	3.485-1	2.088-0	4.189-3		4.500-3	3.073-8
5.000-3	1.237-1	9.207-2	3.085-3	3.183-1	2.334-0	3.051-3		5.000-3	3.481-8
5.500-3	1.634-1	6.926-2	2.321-3	2.850-1	2.582-0	2.290-3		5.500-3	3.894-8
6.000-3	2.079-1	5.344-2	1.791-3	2.591-1	2.790-0	1.782-3		6.000-3	4.318-8
6.500-3	2.649-1	4.192-2	1.408-3	2.344-1	2.970-0	1.379-3		6.500-3	4.752-8
7.000-3	3.313-1	3.325-2	1.124-3	2.137-1	3.146-0	1.100-3		7.000-3	5.197-8
8.000-3	4.949-1	2.245-2	7.524-2	1.808-1	3.491-0	7.308-2		8.000-3	5.774-8
1.000-2	9.750-1	1.142-2	3.827-2	1.333-1	3.968-0	3.854-2		9.550-3	6.404-8
1.250-2	1.911-2	8.815-0	1.948-2	9.874-0	4.313-0	1.809-2		1.181-2	6.875-8
1.500-2	3.270-2	3.398-0	1.135-2	7.446-0	4.620-0	1.018-2		1.343-2	7.407-8
1.750-2	5.134-2	2.177-0	7.296-1	5.923-0	4.781-0	6.224-1		1.497-2	7.933-8
2.000-2	7.330-2	1.508-0	5.045-1	4.888-0	4.944-0	4.064-1		1.619-2	8.468-8
2.500-2	1.312-3	8.467-1	2.837-1	3.434-0	5.101-0	1.984-1		1.789-2	8.957-8
3.000-2	1.975-3	5.627-1	1.886-1	2.583-0	5.233-0	1.104-1		1.803-2	9.430-8
3.500-2	2.633-3	4.173-1	1.398-1	1.998-0	5.271-0	6.716-0		1.785-2	9.946-8
4.000-2	3.335-3	3.362-1	1.127-1	1.597-0	5.303-0	4.386-0		1.683-2	1.053-8
4.500-2	3.899-3	2.857-1	9.573-0	1.298-0	5.289-0	2.987-0		1.597-2	1.594-8
5.000-2	4.330-3	2.531-1	8.481-0	1.078-0	5.278-0	2.127-0		1.516-2	2.137-8
5.500-2	4.827-3	2.302-1	7.713-0	9.082-0	5.259-0	1.386-0		1.456-2	2.722-8
6.000-2	5.136-3	2.139-1	7.187-0	7.787-0	5.206-0	1.184-0		1.414-2	3.250-8
6.500-2	5.534-3	2.012-1	6.740-0	6.701-0	5.154-0	9.183-1		1.386-2	3.782-8
7.000-2	5.836-3	1.914-1	6.413-0	5.845-0	5.106-0	7.227-1		1.393-2	4.303-8
8.000-2	6.239-3	1.775-1	5.945-0	4.389-0	5.021-0	4.713-1		1.445-2	4.805-8
1.001-1	6.544-3	1.599-1	5.358-0	3.005-1	4.366-0	2.319-1		1.639-2	5.245-8
1.250-1	7.613-3	1.480-1	4.881-0	1.938-1	4.580-0	1.151-1		2.199-2	5.689-8
1.500-1	8.110-3	1.370-1	4.581-0	1.380-1	4.368-0	8.494-2		2.642-2	6.146-8
1.750-1	8.931-3	1.293-1	4.339-0	1.021-1	4.197-0	4.838-2		3.286-2	6.616-8
2.000-1	9.977-3	1.236-1	4.143-0	7.889-2	4.038-0	2.675-2		4.374-2	7.195-8
2.500-1	9.773-3	1.137-1	3.818-0	5.081-2	3.746-0	1.388-2		6.121-2	7.743-8
3.000-1	1.244-4	1.084-1	3.588-0	3.531-2	3.523-0	7.886-3		6.085-2	8.284-8
3.500-1	1.110-4	1.081-1	3.395-0	2.888-2	3.384-0	5.021-3		1.015-1	8.434-8
4.000-1	1.188-4	9.942-2	3.186-0	1.988-2	3.181-0	3.984-3		1.238-1	8.957-8
4.500-1	1.258-4	9.849-2	3.032-0	1.577-2	3.514-0	2.446-3		1.449-1	9.484-8

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ENDL Evaluated Photon Data

10-Ne

ATOMIC WEIGHT 20.179										DENSITY 8.9990 - 4 GRAMS/CC			
ENERGY		TOTAL MPF		CROSS SECTION (BARNs)						MEV/COLLISION		MEV/CM	
MEV	CH	CH/CM/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E.	BREMSSTR	K.E.		
5.000-1	1.280-4	8.883-2	2.903-0	1.278-2	2.888-0	1.795-3		1.704-1	1.704-1	1.813-4	1.328-5		
5.980-1	1.337-4	8.313-2	2.788-0	1.057-2	2.774-0	1.375-3		1.948-1	1.948-1	2.389-4	1.498-5		
6.000-1	1.388-4	8.007-2	2.693-0	8.888-3	2.673-0	1.078-3		2.202-1	2.202-1	3.028-4	1.587-5		
6.500-1	1.439-4	7.721-2	2.587-0	7.573-3	2.579-0	8.674-4		2.457-1	2.457-1	3.788-4	1.707-5		
7.000-1	1.488-4	7.488-2	2.502-0	6.532-3	2.494-0	7.098-4		2.720-1	2.720-1	4.615-4	1.827-5		
8.000-1	1.581-4	7.089-2	2.333-0	5.004-3	2.349-0	4.935-4		3.286-1	3.286-1	6.852-4	2.085-5		
1.000-0	1.759-4	6.318-2	2.116-0	3.204-3	2.113-0	2.747-4		4.397-1	4.397-1	1.205-3	2.499-5		
1.022-0	1.778-4	6.249-2	2.094-0	3.067-3	2.090-0	2.844-4	1.000-6	4.524-1	4.524-1	1.276-3	2.544-5		
1.250-0	1.988-4	5.846-2	1.892-0	2.051-3	1.890-0	1.856-4	2.072-4	5.877-1	5.877-1	2.151-3	2.986-5		
1.500-0	2.181-4	5.143-2	1.723-0	1.425-3	1.717-0	1.348-4	4.416-5	7.410-1	7.410-1	3.416-3	3.430-5		
1.750-0	2.394-4	4.750-2	1.598-0	1.046-3	1.579-0	1.019-4	1.094-2	9.986-1	9.986-1	5.018-3	3.841-5		
2.000-0	2.508-4	4.430-2	1.488-0	9.012-4	1.468-0	8.131-5	1.801-2	1.060-0	1.060-0	6.981-3	4.227-5		
2.044-0	2.537-4	4.379-2	1.467-0	7.671-4	1.448-0	7.863-5	1.905-2	1.089-0	1.089-0	7.384-3	4.292-5		
2.500-0	2.817-4	3.944-2	1.322-0	5.129-4	1.287-0	5.826-5	3.374-2	1.394-0	1.394-0	1.205-2	4.949-5		
3.000-0	3.090-4	3.597-2	1.205-0	3.582-4	1.153-0	4.517-5	5.162-2	1.742-0	1.742-0	1.877-2	5.639-5		
3.500-0	3.337-4	3.330-2	1.118-0	2.617-4	1.047-0	3.708-5	6.819-2	2.101-0	2.101-0	2.724-2	6.298-5		
4.000-0	3.558-4	3.123-2	1.047-0	2.004-4	9.619-5	3.126-5	8.447-2	2.472-0	2.472-0	3.761-2	6.948-5		
4.500-0	3.757-4	2.958-2	9.912-1	1.583-4	8.908-5	2.679-5	1.002-1	2.852-0	2.852-0	4.995-2	7.593-5		
5.000-0	3.941-4	2.821-2	9.451-1	1.282-4	8.307-5	2.349-5	1.142-1	3.241-0	3.241-0	6.435-2	8.226-5		
5.500-0	4.117-4	2.699-2	9.045-1	1.060-4	7.791-5	2.103-5	1.253-1	3.636-0	3.636-0	8.078-2	8.831-5		
6.000-0	4.277-4	2.598-2	8.706-1	8.906-5	7.342-5	1.900-5	1.363-1	4.038-0	4.038-0	9.941-2	9.442-5		
6.500-0	4.421-4	2.513-2	8.422-1	7.588-5	6.948-5	1.732-5	1.473-1	4.447-0	4.447-0	1.203-1	1.006-4		
7.000-0	4.551-4	2.442-2	8.182-1	6.943-5	6.599-5	1.589-5	1.583-1	4.864-0	4.864-0	1.435-1	1.089-4		
8.000-0	4.788-4	2.331-2	7.810-1	5.010-5	6.008-5	1.380-5	1.803-1	5.716-0	5.716-0	1.972-1	1.199-4		
1.000-1	5.058-4	2.197-2	7.361-1	3.206-5	5.115-5	1.049-5	2.245-1	7.489-0	7.489-0	3.348-1	1.480-4		
1.250-1	5.376-4	2.067-2	6.926-1	2.052-5	4.340-5	8.300-6	2.585-1	9.757-0	9.757-0	5.608-1	1.815-4		
1.500-1	5.587-4	1.996-2	6.688-1	1.425-5	3.788-5	6.852-6	2.902-1	1.209-1	1.209-1	8.500-1	2.172-4		
1.750-1	5.856-4	1.965-2	6.584-1	1.047-5	3.387-5	5.827-6	3.216-1	1.449-1	1.449-1	1.203-0	2.561-4		
2.000-1	5.706-4	1.947-2	6.523-1	8.015-6	3.039-5	5.084-6	3.484-1	1.691-1	1.691-1	1.616-0	2.962-4		
2.500-1	5.775-4	1.924-2	6.448-1	5.129-6	2.594-5	4.005-6	3.894-1	2.179-1	2.179-1	2.612-0	3.773-4		
3.000-1	5.788-4	1.920-2	6.433-1	3.982-6	2.212-5	3.308-6	4.221-1	2.672-1	2.672-1	3.824-0	4.616-4		
3.500-1	5.791-4	1.919-2	6.431-1	2.617-6	1.957-5	2.812-6	4.474-1	3.167-1	3.167-1	5.233-0	5.470-4		
4.000-1	5.781-4	1.928-2	6.448-1	2.004-6	1.758-5	2.443-6	4.708-1	3.685-1	3.685-1	6.829-0	6.382-4		
4.500-1	5.858-4	1.950-2	6.534-1	1.583-6	1.598-5	2.159-6	4.938-1	4.184-1	4.184-1	8.559-0	7.307-4		
5.000-1	5.851-4	1.968-2	6.588-1	1.282-6	1.487-5	1.933-6	5.121-1	4.684-1	4.684-1	1.053-0	6.292-4		
5.500-1	5.827-4	1.975-2	6.617-1	1.050-6	1.357-5	1.748-6	5.280-1	5.163-1	5.163-1	1.259-0	9.175-4		
6.000-1	5.998-4	1.986-2	6.894-1	8.906-7	1.264-5	1.595-6	5.389-1	5.662-1	5.662-1	1.480-0	1.012-3		
6.500-1	5.965-4	1.998-2	6.895-1	7.589-7	1.193-5	1.467-6	5.512-1	6.162-1	6.162-1	1.713-0	1.108-3		
7.000-1	5.524-4	2.012-2	6.740-1	6.943-7	1.113-5	1.357-6	5.627-1	6.662-1	6.662-1	1.959-0	1.206-3		
8.000-1	5.445-4	2.041-2	6.839-1	5.010-7	9.971-7	1.179-6	5.842-1	7.664-1	7.664-1	2.482-0	1.408-3		
1.000-2	5.284-4	2.103-2	7.047-1	3.206-7	8.276-7	9.325-7	6.219-1	9.668-1	9.668-1	3.641-0	1.830-3		

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Form Factors

10-No

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.200-1	9.019-1	1.205-1	1.000-0	1.007-1	0.490-1	1.000-1	1.380-3	1.000-0
0.000-3	9.999-1	2.800-4	1.500-1	0.043-1	1.637-1	1.200-0	1.379-1	0.838-1	1.500-1	3.075-4	1.000-0
1.000-2	9.993-1	9.800-4	1.700-1	0.233-1	2.080-1	1.500-0	1.217-1	9.113-1	2.000-1	1.015-4	1.000-0
1.500-2	9.985-1	2.010-3	2.000-1	7.603-1	2.947-1	2.000-0	9.206-2	9.510-1	5.000-1	2.822-8	1.000-0
2.000-2	9.972-1	3.570-3	2.500-1	6.985-1	3.442-1	2.500-0	6.781-2	9.752-1	0.000-1	4.507-7	1.000-0
2.500-2	9.957-1	5.590-3	3.000-1	6.076-1	4.209-1	3.000-0	5.138-2	9.875-1	1.000-2	1.897-7	1.000-0
3.000-2	9.938-1	7.990-3	4.000-1	4.814-1	5.844-1	3.500-0	3.491-2	9.937-1	1.000-3	4.044-11	1.000-0
4.000-2	9.891-1	1.410-2	5.000-1	3.531-1	8.040-1	4.000-0	2.782-2	9.967-1	1.000-8	2.447-20	1.000-0
5.000-2	9.830-1	2.180-2	6.000-1	2.706-1	7.320-1	5.000-0	1.383-2	9.991-1	1.000-9	2.537-29	1.000-0
7.000-2	9.672-1	4.177-2	7.000-1	2.293-1	7.774-1	6.000-0	7.790-3	9.997-1			
9.000-2	9.408-1	6.894-2	8.000-1	1.909-1	8.005-1	7.000-0	4.090-3	9.999-1			
1.000-1	9.352-1	0.120-2	9.000-1	1.794-1	0.312-1	8.000-0	3.580-3	1.000-0

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ENDL Evaluated Photon Cross Sections

11-Na

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Energy Deposition

11-Na

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ENDL Evaluated Photon Data

11-Na

ATOMIC WEIGHT 22.99		DENSITY 0.9712 GRAMS/CC							
ENERGY	TOTAL HP	CROSS SECTION (BARN)				MEV/COLLISION			
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOR	MEV/CM
1.000-4	0.345-6	1.234-5	4.710-6	0.037-1	7.005-3	4.710-6		1.000-4	1.000-4
1.250-4	1.235-5	0.336-4	3.182-6	0.029-1	1.218-2	3.182-6		1.250-4	1.250-4
1.500-4	1.702-5	0.051-4	2.310-6	0.024-1	1.748-2	2.310-6		1.500-4	1.500-4
1.750-4	2.335-5	0.410-4	1.889-6	0.018-1	2.383-2	1.889-6		1.750-4	1.750-4
2.000-4	3.071-5	3.353-4	1.290-6	0.009-1	3.009-2	1.290-6		2.000-4	2.000-4
2.500-4	5.090-5	2.023-4	7.723-5	7.985-5	4.714-2	7.722-5		2.500-4	2.500-4
3.000-4	7.091-5	1.378-4	5.111-5	7.985-5	6.094-2	5.110-5		3.000-4	3.000-4
3.500-4	1.109-4	9.293-3	3.544-5	7.932-5	8.915-2	3.543-5		3.500-4	3.500-4
4.000-4	1.523-4	6.780-3	2.581-5	7.903-5	1.143-1	2.580-5		4.000-4	4.000-4
4.500-4	2.042-4	5.042-3	1.825-5	7.863-5	1.409-1	1.824-5		4.500-4	4.500-4
5.000-4	2.694-4	3.679-3	1.481-5	7.828-5	1.700-1	1.480-5		5.000-4	5.000-4
5.500-4	3.374-4	3.051-3	1.185-5	7.783-5	1.996-1	1.184-5		5.500-4	5.500-4
6.000-4	4.201-4	2.451-3	9.358-5	7.742-5	2.311-1	9.350-5		6.000-4	6.000-4
6.500-4	5.181-4	1.887-3	7.587-5	7.687-5	2.614-1	7.579-5		6.500-4	6.500-4
7.000-4	6.238-4	1.437-3	6.248-5	7.638-5	2.929-1	6.240-5		7.000-4	7.000-4
8.000-4	8.838-4	1.025-3	4.448-5	7.595-5	3.597-1	4.440-5		8.000-4	8.000-4
9.000-4	1.210-3	0.507-2	3.247-4	7.428-5	4.214-1	3.240-4		9.000-4	9.000-4
1.000-3	1.407-3	7.320-2	2.794-4	7.325-5	4.895-1	2.787-4		1.000-3	1.000-3
1.071-3	1.677-3	6.141-2	2.344-4	7.229-5	5.240-1	2.337-4		1.071-3	1.071-3
1.072-3	1.435-4	7.174-2	2.739-4	7.228-5	5.246-1	2.738-4		1.072-3	1.072-3
1.250-3	2.085-4	4.985-2	1.903-3	7.018-5	6.224-1	1.902-3		1.250-3	1.250-3
1.500-3	3.181-4	3.237-2	1.236-3	6.773-5	7.626-1	1.235-3		1.500-3	1.500-3
1.750-3	4.893-4	2.194-2	8.375-4	6.494-5	8.884-1	8.369-4		1.750-3	1.750-3
2.000-3	6.573-4	1.587-2	5.980-4	6.263-5	1.010-1	5.974-4		2.000-3	2.000-3
2.500-3	1.194-3	8.627-2	3.293-4	5.745-5	1.281-1	3.288-4		2.500-3	2.500-3
3.000-3	1.943-3	5.301-2	2.024-4	5.353-5	1.513-1	2.018-4		3.000-3	3.000-3
3.500-3	2.993-3	3.440-2	1.313-4	4.890-5	1.770-1	1.308-4		3.500-3	3.500-3
4.000-3	4.350-3	2.367-2	9.035-4	4.581-5	2.027-1	8.988-4		4.000-3	4.000-3
4.500-3	6.138-3	1.685-2	6.411-4	4.118-5	2.272-1	6.388-4		4.500-3	4.500-3
5.000-3	8.288-3	1.243-2	4.746-4	3.785-5	2.517-1	4.708-4		5.000-3	5.000-3
5.500-3	1.098-2	5.338-1	3.588-4	3.448-5	2.742-1	3.548-4		5.500-3	5.500-3
6.000-3	1.418-2	7.273-1	2.777-4	3.188-5	2.984-1	2.742-4		6.000-3	6.000-3
6.500-3	1.800-2	5.721-1	2.184-4	2.883-5	3.151-1	2.152-4		6.500-3	6.500-3
7.000-3	2.247-2	4.583-1	1.749-4	2.643-5	3.338-1	1.720-4		7.000-3	7.000-3
8.000-3	3.347-2	3.078-1	1.174-4	2.280-5	3.695-1	1.148-4		8.000-3	8.000-3
1.000-2	6.584-2	1.584-1	5.970-2	1.880-5	4.225-1	5.780-2		1.000-2	1.000-2
1.250-2	1.301-1	7.912-0	3.020-2	1.221-5	4.626-1	2.852-2		1.250-2	1.250-2
1.500-2	2.248-1	4.584-0	1.750-2	9.411-0	4.982-1	1.806-2		1.500-2	1.500-2
1.750-2	3.951-1	2.800-0	1.107-2	7.487-0	5.179-1	9.803-1		1.750-2	1.750-2
2.000-2	5.212-1	1.978-0	7.942-1	8.141-0	5.355-1	6.398-1		2.000-2	2.000-2
2.500-2	9.605-1	1.072-0	4.094-1	4.343-0	5.536-1	3.108-1		2.500-2	2.500-2
3.000-2	1.501-0	6.898-1	2.818-1	3.272-0	5.689-1	1.722-1		3.000-2	3.000-2
3.500-2	2.101-0	4.901-1	1.871-1	2.535-0	5.738-1	1.044-1		3.500-2	3.500-2
4.000-2	2.697-0	3.818-1	1.458-1	2.033-0	5.781-1	6.762-0		4.000-2	4.000-2
4.500-2	3.285-0	3.153-1	1.204-1	1.695-0	5.772-1	4.611-0		4.500-2	4.500-2
5.000-2	3.774-0	2.728-1	1.041-1	1.377-0	5.784-1	3.274-0		5.000-2	5.000-2
5.500-2	4.230-0	2.434-1	9.293-0	1.161-0	5.728-1	2.404-0		5.500-2	5.500-2
6.000-2	4.623-0	2.227-1	8.503-0	9.937-0	5.856-1	1.813-0		6.000-2	6.000-2
6.500-2	4.976-0	2.089-1	7.900-0	8.577-0	5.842-1	1.400-0		6.500-2	6.500-2
7.000-2	5.281-0	1.950-1	7.443-0	7.485-0	5.598-1	1.103-0		7.000-2	7.000-2
8.000-2	5.776-0	1.783-1	6.885-0	5.898-0	5.503-1	7.187-1		8.000-2	8.000-2
1.000-1	6.517-0	1.580-1	6.031-0	3.857-1	5.294-1	3.510-1		1.000-1	1.000-1
1.250-1	7.208-0	1.429-1	5.453-0	2.517-1	5.028-1	1.737-1		1.250-1	1.250-1
1.500-1	7.714-0	1.335-1	5.086-0	1.778-1	4.820-1	9.779-2		1.500-1	1.500-1
1.750-1	8.183-0	1.266-1	4.804-0	1.315-1	4.611-1	8.080-2		1.750-1	1.750-1
2.000-1	8.584-0	1.199-1	4.579-0	1.014-1	4.437-1	4.028-2		2.000-1	2.000-1
2.500-1	9.352-0	1.101-1	4.203-0	6.530-2	4.117-1	2.084-2		2.500-1	2.500-1
3.000-1	1.004-1	1.030-1	3.931-0	4.928-2	3.873-1	1.195-2		3.000-1	3.000-1
3.500-1	1.083-1	9.688-2	3.696-0	3.357-2	3.695-1	7.852-3		3.500-1	3.500-1
4.000-1	1.121-1	9.188-2	3.587-0	2.575-2	3.476-1	5.201-3		4.000-1	4.000-1
4.500-1	1.177-1	8.745-2	3.338-0	2.037-2	3.314-1	3.738-3		4.500-1	4.500-1
5.000-1	1.230-1	8.371-2	3.198-0	1.652-2	3.178-1	2.782-3		5.000-1	5.000-1
5.500-1	1.288-1	8.038-2	3.088-0	1.388-2	3.051-1	2.148-3		5.500-1	5.500-1

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 22.99										DENSITY 0.9712 GRAMS/CC			
ENERGY		TOTAL NFP		CROSS SECTION (BARN)				MEV/COLLISION		MEV/CM			
MEV	CM	CM	CM	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E. * FLOR	K.E.	BREMSSTR	K.E.	
0.000-1	1.331-1	7.730-2	2.953-0	0.1140-2	2.940-0	1.093-3			2.202-1	2.202-1	3.327-4	1.094-2	
0.500-1	1.380-1	7.450-2	2.847-0	0.978-3	2.838-0	1.372-3			2.457-1	2.457-1	4.700-4	1.780-2	
7.000-1	1.420-1	7.212-2	2.753-0	0.8441-3	2.744-0	1.129-3			2.719-1	2.719-1	5.075-4	1.905-2	
0.000-1	1.517-1	6.700-2	2.581-0	0.467-3	2.569-0	7.946-4			3.205-1	3.205-1	7.314-4	2.153-2	
1.000-0	1.600-1	6.090-2	2.380-0	0.141-3	2.324-0	4.535-4			4.300-1	4.300-1	1.325-3	2.604-2	
1.000-0	1.700-1	6.034-2	2.304-0	0.3405-3	2.290-0	4.305-4	1.000-6		4.524-1	4.524-1	1.403-3	2.651-2	
1.250-0	1.800-1	5.453-2	2.002-0	0.2051-3	2.070-0	3.004-4	2.350-4		5.077-1	5.077-1	2.305-3	3.112-2	
1.500-0	2.073-1	4.980-2	1.897-0	0.1841-3	1.889-0	2.223-4	5.357-3		7.409-1	7.409-1	3.795-3	3.575-2	
1.750-0	2.243-1	4.580-2	1.752-0	0.1353-3	1.737-0	1.680-4	1.320-2		8.984-1	8.984-1	5.515-3	4.004-2	
2.000-0	2.409-1	4.263-2	1.635-0	0.1036-3	1.612-0	1.341-4	2.183-2		1.080-0	1.080-0	7.672-3	4.410-2	
2.000-0	2.432-1	4.234-2	1.616-0	0.915-4	1.592-0	1.286-4	2.309-2		1.080-0	1.080-0	8.093-3	4.478-2	
2.500-0	2.697-1	3.818-2	1.450-0	0.8629-4	1.416-0	9.600-5	4.086-2		1.395-0	1.395-0	1.320-3	5.171-2	
3.000-0	2.952-1	3.400-2	1.331-0	0.4145-4	1.280-0	7.441-5	6.245-2		1.743-0	1.743-0	2.204-3	5.904-2	
3.500-0	3.183-1	3.235-2	1.235-0	0.3383-4	1.152-0	8.100-5	8.240-2		2.104-0	2.104-0	2.999-2	5.610-2	
4.000-0	3.387-1	3.040-2	1.180-0	0.2990-4	1.050-0	5.147-5	1.020-1		2.478-0	2.478-0	4.144-2	7.309-2	
4.500-0	3.570-1	2.884-2	1.101-0	0.2047-4	9.799-5	4.411-5	1.210-1		2.858-0	2.858-0	5.500-2	8.007-2	
5.000-0	3.737-1	2.755-2	1.052-0	0.1050-4	9.130-5	3.800-5	1.379-1		3.250-0	3.250-0	7.101-2	8.895-2	
5.500-0	3.899-1	2.641-2	1.000-0	0.1370-4	8.570-5	3.481-5	1.511-1		3.647-0	3.647-0	9.920-2	9.354-2	
6.000-0	4.043-1	2.540-2	9.721-1	0.1151-4	8.070-5	3.127-5	1.643-1		4.052-0	4.052-0	1.090-1	1.002-1	
6.500-0	4.173-1	2.467-2	9.419-1	0.9809-5	7.843-5	2.849-5	1.775-1		4.484-0	4.484-0	1.329-1	1.070-1	
7.000-0	4.288-1	2.401-2	9.187-1	0.8450-5	7.290-5	2.613-5	1.907-1		4.884-0	4.884-0	1.587-1	1.139-1	
8.000-0	4.477-1	2.300-2	8.779-1	0.6478-5	6.607-5	2.237-5	2.172-1		5.743-0	5.743-0	2.181-1	1.203-1	
1.000-1	4.720-1	2.181-2	8.320-1	0.4145-5	5.627-5	1.725-5	2.700-1		7.530-0	7.530-0	3.204-1	1.295-1	
1.250-1	4.987-1	2.095-2	7.882-1	0.2853-5	4.774-5	1.384-5	3.107-1		9.815-0	9.815-0	4.206-1	1.380-1	
1.500-1	5.130-1	2.004-2	7.651-1	0.1842-5	4.184-5	1.126-5	3.486-1		1.217-1	1.217-1	9.391-1	2.380-1	
1.750-1	5.195-1	1.902-2	7.506-1	0.1353-5	3.704-5	9.574-5	3.862-1		1.457-1	1.457-1	1.327-0	2.805-1	
2.000-1	5.284-1	1.871-2	7.525-1	0.1036-5	3.343-5	8.319-5	4.182-1		1.700-1	1.700-1	1.779-0	3.255-1	
2.500-1	5.295-1	1.999-2	7.480-1	0.8630-6	2.609-5	8.579-5	4.870-1		2.190-1	2.190-1	2.867-0	4.180-1	
3.000-1	5.245-1	1.983-2	7.449-1	0.4804-6	2.433-5	5.431-5	5.081-1		2.805-1	2.805-1	4.183-0	5.119-1	
3.500-1	5.230-1	1.989-2	7.516-1	0.3383-6	2.152-5	4.616-5	5.383-1		3.181-1	3.181-1	5.707-0	5.082-1	
4.000-1	5.190-1	1.984-2	7.574-1	0.2990-6	1.934-5	4.013-5	5.840-1		3.679-1	3.679-1	7.426-0	7.089-1	
4.500-1	5.123-1	2.010-2	7.673-1	0.2047-6	1.750-5	3.945-5	5.915-1		4.179-1	4.179-1	9.326-0	8.157-1	
5.000-1	5.072-1	2.030-2	7.750-1	0.1896-6	1.614-5	3.173-5	6.138-1		4.679-1	4.679-1	1.139-1	9.225-1	
5.500-1	5.044-1	2.041-2	7.783-1	0.1370-6	1.493-5	2.871-5	6.300-1		5.178-1	5.178-1	1.359-1	1.027-0	
6.000-1	5.111-1	2.055-2	7.845-1	0.1151-6	1.391-5	2.620-5	6.454-1		5.678-1	5.678-1	1.137-0	1.137-0	
6.500-1	4.375-1	2.070-2	7.901-1	0.9809-7	1.302-5	2.400-5	6.599-1		6.178-1	6.178-1	1.042-1	1.242-0	
7.000-1	4.338-1	2.085-2	7.980-1	0.8450-7	1.225-5	2.200-5	6.736-1		6.679-1	6.679-1	2.102-1	1.353-0	
8.000-1	4.380-1	2.118-2	8.087-1	0.6478-7	1.097-5	1.936-5	6.990-1		7.880-1	7.880-1	2.654-1	1.580-0	
1.000-2	4.709-1	2.187-2	8.348-1	0.4144-7	9.103-2	1.531-6	7.438-1		9.884-1	9.884-1	3.871-1	2.057-0	

12/07/78

Form Factors

11-Na

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000	0	1.000	0	0.000	0	1.250	1	0.527	1	1.000	1
0.000	3	0.990	1	0.182	4	1.500	1	0.201	1	1.250	0
1.000	2	0.977	1	3.273	3	1.750	1	7.001	1	1.500	0
1.500	2	0.970	1	7.299	3	2.000	1	7.500	1	2.000	0
2.000	2	0.979	1	1.253	2	2.500	1	6.904	1	2.500	0
2.500	2	0.971	1	1.982	2	3.000	1	6.252	1	3.000	0
3.000	2	0.975	1	2.847	2	4.000	1	4.988	1	4.000	0
4.000	2	0.973	1	4.331	2	5.000	1	3.899	1	5.000	0
5.000	2	0.972	1	6.127	2	6.000	1	3.086	1	6.000	0
7.000	2	0.978	1	9.538	2	7.000	1	2.498	1	7.000	0
9.000	2	0.977	1	1.248	1	8.000	1	2.090	1	8.000	0
1.000	1	0.019	1	1.388	1	9.000	1	1.811	1	9.000	0

12-rig

12/07/76

Energy Deposition

12-Mg

12/07/78

ENCL Evaluated Photon Data

12-Mg

ATOMIC WEIGHT 24.312		DENSITY 1.74 GRAMS/CC					
ENERGY		TOTAL HP		CROSS SECTION (BARN)			
MEV	CH	CH/CH/CH	TOTAL	COMPONENT	INCOHER	PHOTOL	FAIR PROD
MEV	CH	CH/CH/CH	TOTAL	COMPONENT	INCOHER	PHOTOL	FAIR PROD
1.000-4	5.886-6	1.475-5	5.970-6	9.570-1	8.863-3	5.970-6	1.000-4
1.250-4	5.496-6	1.046-5	4.221-6	9.980-1	1.353-2	4.221-6	1.250-4
1.500-4	7.296-6	7.677-4	3.180-6	9.953-1	1.948-2	3.180-6	1.500-4
1.750-4	9.886-6	5.824-4	2.351-6	9.542-1	2.846-2	2.351-6	1.750-4
2.000-4	1.582-5	4.484-4	1.810-6	9.533-1	3.452-2	1.810-6	2.000-4
2.500-4	2.100-5	2.737-4	1.105-6	9.503-1	5.242-2	1.105-6	2.500-4
3.000-4	3.143-5	1.828-4	7.381-5	9.478-1	7.632-2	7.380-5	3.000-4
3.500-4	4.511-5	1.274-4	5.143-5	9.438-1	1.024-1	5.142-5	3.500-4
4.000-4	6.169-5	9.316-3	3.781-5	9.404-1	1.321-1	3.780-5	4.000-4
4.500-4	8.245-5	6.970-3	2.814-5	9.355-1	1.643-1	2.813-5	4.500-4
5.000-4	1.069-4	5.377-3	2.171-5	9.311-1	1.996-1	2.170-5	5.000-4
5.500-4	1.354-4	4.245-3	1.714-5	9.254-1	2.366-1	1.713-5	5.500-4
6.000-4	1.680-4	3.421-3	1.381-5	9.202-1	2.763-1	1.380-5	6.000-4
6.500-4	2.071-4	2.775-3	1.120-5	9.130-1	3.158-1	1.119-5	6.500-4
7.000-4	2.514-4	2.286-3	9.229-4	9.084-1	3.573-1	9.220-4	7.000-4
8.000-4	3.500-4	1.842-3	6.629-4	8.948-1	4.465-1	6.620-4	8.000-4
9.000-4	4.815-4	1.194-3	4.819-4	8.793-1	5.327-1	4.810-4	9.000-4
1.000-3	5.785-4	9.935-2	4.011-4	8.659-1	6.239-1	4.002-4	1.000-3
1.250-3	1.107-3	5.285-2	2.134-4	8.224-1	6.199-1	2.125-4	1.250-3
1.304-3	1.226-3	4.690-2	1.893-4	8.144-1	6.634-1	1.885-4	1.304-3
1.305-3	1.063-4	5.404-3	2.182-5	8.143-1	6.642-1	2.181-5	1.305-3
1.500-3	1.469-4	3.913-3	1.500-5	7.885-1	1.025-0	1.579-5	1.500-3
1.750-3	2.135-4	2.691-3	1.007-5	7.493-1	1.182-0	1.086-5	1.750-3
2.000-3	2.953-4	1.946-3	7.857-4	7.189-1	1.339-0	7.850-4	2.000-3
2.500-3	5.268-4	1.091-3	4.404-4	6.522-1	1.598-0	4.398-4	2.500-3
3.000-3	8.452-4	6.800-2	2.745-4	6.036-1	1.848-0	2.739-4	3.000-3
3.500-3	1.289-3	4.459-2	1.600-4	5.541-1	2.087-0	1.794-4	3.500-3
4.000-3	1.867-3	3.095-2	1.249-4	5.146-1	2.320-0	1.244-4	4.000-3
4.500-3	2.593-3	2.217-2	8.949-3	4.732-1	2.550-0	8.899-3	4.500-3
5.000-3	3.493-3	1.645-2	6.842-3	4.390-1	2.775-0	6.595-3	5.000-3
5.500-3	4.603-3	1.249-2	5.041-3	4.039-1	2.989-0	4.997-3	5.500-3
6.000-3	5.919-3	9.709-2	3.920-3	3.742-1	3.200-0	3.879-3	6.000-3
6.500-3	7.502-3	7.660-2	3.093-3	3.431-1	3.380-0	3.055-3	6.500-3
7.000-3	9.340-3	6.153-2	2.404-3	3.185-1	3.572-0	2.449-3	7.000-3
8.000-3	1.385-2	4.150-1	1.675-3	2.738-1	3.930-0	1.644-3	8.000-3
1.000-2	2.707-2	2.123-1	8.572-2	2.058-1	4.492-0	8.321-2	1.000-2
1.250-2	5.137-2	1.077-1	4.347-2	1.501-1	4.941-0	4.147-2	1.250-2
1.500-2	9.216-2	6.236-0	2.517-2	1.180-1	5.342-0	2.348-2	1.500-2
1.750-2	1.463-1	3.929-0	1.586-2	9.226-0	5.564-0	1.438-2	1.750-2
2.000-2	2.181-1	2.660-0	1.074-2	7.567-0	5.784-0	9.405-1	2.000-2
2.500-2	4.057-1	1.416-0	5.718-1	5.359-0	5.968-0	4.586-1	2.500-2
3.000-2	6.502-1	8.839-1	3.568-1	4.043-0	6.140-0	2.550-1	3.000-2
3.500-2	9.746-1	6.149-1	2.482-1	3.141-0	6.201-0	1.548-1	3.500-2
4.000-2	1.232-0	4.663-1	1.803-1	2.523-0	6.253-0	1.005-1	4.000-2
4.500-2	1.930-0	3.757-1	1.517-1	2.059-0	6.250-0	6.859-0	4.500-2
5.000-2	1.307-0	3.180-1	1.284-1	1.716-0	6.247-0	4.874-0	5.000-2
5.500-2	2.064-0	2.785-1	1.124-1	1.449-0	6.212-0	3.581-0	5.500-2
6.000-2	2.992-0	2.508-1	1.012-1	1.241-0	6.181-0	2.702-0	6.000-2
6.500-2	2.499-0	2.300-1	9.285-0	1.072-0	6.125-0	2.088-0	6.500-2
7.000-2	2.581-0	2.144-1	8.654-0	9.357-1	6.074-0	1.845-0	7.000-2
8.000-2	2.380-0	1.928-1	7.795-0	7.327-1	5.982-0	1.070-0	8.000-2
1.000-1	3.428-0	1.677-1	6.769-0	4.834-1	5.761-0	5.244-1	1.000-1
1.250-1	3.335-0	1.499-1	6.050-0	3.159-1	5.474-0	2.597-1	1.250-1
1.500-1	4.128-0	1.392-1	5.620-0	2.232-1	5.251-0	1.463-1	1.500-1
1.750-1	4.394-0	1.308-1	5.281-0	1.654-1	5.024-0	9.104-2	1.750-1
2.000-1	4.318-0	1.244-1	5.024-0	1.276-1	4.836-0	6.036-2	2.000-1
2.500-1	5.342-0	1.140-1	4.602-0	8.225-2	4.488-0	3.099-2	2.500-1
3.000-1	5.398-0	1.085-1	4.298-0	5.745-2	4.223-0	1.797-2	3.000-1
3.500-1	5.744-0	1.001-1	4.039-0	4.232-2	3.985-0	1.153-2	3.500-1
4.000-1	6.257-0	9.489-2	3.831-0	3.248-2	3.790-0	7.844-3	4.000-1
4.500-1	6.380-0	9.031-2	3.946-0	2.985-2	3.615-0	5.947-3	4.500-1
5.000-1	6.349-0	8.843-2	3.488-0	2.083-2	3.484-0	4.209-3	5.000-1
5.500-1	6.331-0	8.292-2	3.348-0	1.723-2	3.327-0	3.252-3	5.500-1
1.000-4	1.000-4	1.000-4	7.500-11	2.573-1	1.000-4	1.000-4	1.000-4
1.250-4	1.250-4	1.172-10	2.274-1	1.000-4	1.250-4	1.172-10	1.250-4
1.500-4	1.500-4	1.687-10	2.056-1	1.000-4	1.500-4	1.687-10	1.500-4
1.750-4	1.750-4	2.297-10	1.773-1	1.000-4	1.750-4	2.297-10	1.750-4
2.000-4	2.000-4	3.000-10	1.580-1	1.000-4	2.000-4	3.000-10	2.000-4
2.500-4	2.500-4	4.687-10	1.190-1	1.000-4	2.500-4	4.687-10	2.500-4
3.000-4	3.000-4	6.748-10	9.542-0	1.000-4	3.000-4	6.748-10	3.000-4
3.500-4	3.500-4	9.184-10	7.757-0	1.000-4	3.500-4	9.184-10	3.500-4
4.000-4	3.999-4	1.199-9	6.482-0	1.000-4	3.999-4	1.199-9	4.000-4
4.500-4	4.499-4	1.518-9	5.458-0	1.000-4	4.499-4	1.518-9	4.500-4
5.000-4	4.999-4	1.873-9	4.676-0	1.000-4	4.999-4	1.873-9	5.000-4
5.500-4	5.497-4	2.286-9	4.080-0	1.000-4	5.497-4	2.286-9	5.500-4
6.000-4	5.996-4	2.696-9	3.589-0	1.000-4	5.996-4	2.696-9	6.000-4
6.500-4	6.495-4	3.184-9	3.136-0	1.000-4	6.495-4	3.184-9	6.500-4
7.000-4	6.993-4	3.688-9	2.782-0	1.000-4	6.993-4	3.688-9	7.000-4
8.000-4	7.989-4	4.787-9	2.283-0	1.000-4	7.989-4	4.787-9	8.000-4
9.000-4	8.983-4	5.853-9	1.866-0	1.000-4	8.983-4	5.853-9	9.000-4
1.000-3	9.978-4	7.457-9	1.725-0	1.000-4	9.978-4	7.457-9	1.000-3
1.250-3	1.245-3	1.153-8	1.145-0	1.000-4	1.245-3	1.153-8	1.250-3
1.304-3	1.298-3	1.254-8	1.059-0	1.000-4	1.298-3	1.254-8	1.304-3
1.305-3	1.274-3	1.217-8	1.198-1	1.000-4	1.305-3	1.274-3	1.305-3
1.500-3	1.469-3	1.618-8	1.000-1	1.000-4	1.499-3	1.469-3	1.500-3
1.750-3	1.718-3	2.214-8	8.047-0	1.000-4	1.749-3	1.718-3	1.750-3
2.000-3	1.968-3	2.904-8	6.684-0	1.000-4	1.998-3	1.968-3	2.000-3
2.500-3	2.466-3	4.560-8	4.681-0	1.000-4	2.496-3	2.466-3	2.500-3
3.000-3	2.963-3	6.583-8	3.506-0	1.000-4	2.993-3	2.963-3	3.000-3
3.500-3	3.468-3	8.970-8	2.683-0	1.000-4	3.498-3	3.468-3	3.500-3
4.000-3	3.963-3	1.172-7	2.129-0	1.000-4	3.993-3	3.963-3	4.000-3
4.500-3	4.445-3	1.482-7	1.714-0	1.000-4	4.475-3	4.445-3	4.500-3
5.000-3	4.935-3	1.826-7	1.413-0	1.000-4	4.965-3	4.935-3	5.000-3
5.500-3	5.422-3	2.205-7	1.178-0	1.000-4	5.453-3	5.422-3	5.500-3
6.000-3	5.908-3	2.617-7	9.980-1	1.000-4	5.938-3	5.908-3	6.000-3
6.500-3	6.391-3	3.063-7	8.518-1	1.000-4	6.421-3	6.391-3	6.500-3
7.000-3	6.871-3	3.540-7	7.356-1	1.000-4	6.901-3	6.871-3	7.000-3
8.000-3	7.821-3	4.587-7	5.647-1	1.000-4	7.851-3	7.821-3	8.000-3
9.000-3	9.679-3	7.026-7	3.576-1	1.000-4	9.709-3	9.679-3	9.000-3
1.000-2	1.193-2	1.062-6	2.230-1	1.000-4	1.193-2	1.190-2	1.000-2
1.250-2	1.400-2	1.464-6	1.516-1	1.000-4	1.400-2	1.397-2	1.250-2
1.500-2	1.589-2	1.887-6	1.084-1	1.000-4	1.589-2	1.586-2	1.500-2
1.750-2	1.756-2	2.305-6	8.115-2	1.000-4	1.756-2	1.753-2	1.750-2
2.000-2	2.015-2	3.045-6	4.966-2	1.000-4	2.017-2	2.015-2	2.000-2
2.500-2	2.173-2	3.533-6	3.338-2	1.000-4	2.173-2	2.171-2	2.500-2
3.000-2	2.237-2	3.752-6	2.393-2	1.000-4	2.239-2	2.237-2	3.000-2
4.000-2	2.230-2	3.723-6	1.808-2	1.000-4	2.230-2	2.228-2	4.000-2
4.500-2	2.180-2	3.558-6	1.424-2	1.000-4	2.180-2	2.178-2	4.500-2
5.000-2	2.105-2	3.319-6	1.164-2	1.000-4	2.105-2	2.104-2	5.000-2
5.500-2	2.029-2	3.085-6	9.828-3	1.000-4	2.029-2	2.028-2	5.500-2
6.000-2	1.959-2	2.875-6	8.544-3	1.000-4	1.959-2	1.958-2	6.000-2
6.500-2	1.906-2	2.722-6	7.624-3	1.000-4	1.906-2	1.905-2	6.500-2
7.000-2	1.866-2	2.614-6	6.984-3	1.000-4	1.866-2	1.867-2	7.000-2
8.000-2	1.841-2	2.542-6	6.177-3	1.000-4	1.841-2	1.841-2	8.000-2
9.000-2	1.976-2	2.927-6	5.763-3	1.000-4	1.976-2	1.976-2	9.000-2
1.000-1	2.383-2	4.258-6	6.213-3	1.000-4	2.383-2	2.383-2	1.000-1
1.250-1	2.967-2	6.601-6	7.187-3	1.000-			

12/07/78

ENDL Evaluated Photon Data

12-Mg

ATOMIC WEIGHT 24.312		DENSITY 1.74 GRAMS/CC									
ENERGY	TOTAL NFP	CROSS SECTION (BARNS)								NEV/COLLISION	
NEV	CM	CM ² /CM	TOTAL	COHERENT	INCOHER	PHOTOL	PAIR PROD	K.E. + FLOR	K.E.	SPRINTSTR	NEV/CM
0.000-1	7.137-0	7.985-2	3.224-0	1.448-2	3.207-0	2.988-3		2.201-1	2.201-1	3.629-4	3.029-2
0.500-1	7.405-0	7.899-2	3.108-0	1.235-2	3.084-0	2.885-3		2.457-1	2.457-1	4.518-4	3.291-2
1.000-1	7.721-0	7.443-2	3.005-0	1.085-2	2.993-0	1.719-3		2.718-1	2.718-1	5.534-4	3.528-2
0.000-1	0.234-0	7.005-2	2.829-0	0.180-3	2.819-0	1.214-3		3.285-1	3.285-1	7.976-4	3.980-2
1.000-0	9.132-0	6.294-2	2.541-0	5.225-3	2.535-0	6.986-4		4.398-1	4.398-1	1.445-3	4.814-2
1.025-0	9.290-0	6.227-2	2.514-0	5.003-3	2.508-0	6.707-4	1.000-6	4.523-1	4.523-1	1.529-3	4.901-2
1.250-0	1.032-1	5.626-2	2.271-0	3.346-3	2.267-0	4.707-4	2.053-4	5.077-1	5.077-1	2.579-3	5.753-2
1.500-0	1.121-1	5.127-2	2.070-0	2.324-3	2.061-0	3.415-4	6.392-3	7.408-1	7.408-1	4.093-3	6.608-2
1.750-0	1.213-1	4.738-2	1.913-0	1.707-3	1.895-0	2.590-4	1.981-2	8.982-1	8.982-1	5.010-3	7.405-2
2.000-0	1.249-1	4.424-2	1.788-0	1.307-3	1.759-0	2.059-4	2.602-2	1.060-0	1.060-0	8.361-3	8.160-2
2.044-0	1.344-1	4.374-2	1.788-0	1.251-3	1.737-0	1.990-4	2.752-2	1.089-0	1.089-0	8.820-3	8.287-2
2.500-0	1.495-1	3.949-2	1.594-0	0.386-4	1.545-0	1.473-4	4.888-2	1.395-0	1.395-0	1.444-2	9.505-2
3.000-0	1.591-1	3.613-2	1.459-0	5.810-4	1.384-0	1.141-4	7.431-2	1.744-0	1.744-0	2.252-2	1.097-1
3.500-0	1.722-1	3.357-2	1.355-0	4.269-4	1.257-0	9.305-5	9.795-2	2.106-0	2.106-0	3.274-2	1.230-1
4.000-0	1.893-1	3.160-2	1.275-0	3.269-4	1.154-0	7.892-5	1.212-1	2.480-0	2.480-0	4.527-2	1.363-1
4.500-0	1.933-1	3.005-2	1.213-0	2.583-4	1.059-0	6.782-5	1.438-1	2.864-0	2.864-0	6.023-2	1.497-1
5.000-0	1.999-1	2.875-2	1.161-0	2.092-4	9.968-5	5.929-5	1.637-1	3.258-0	3.258-0	7.770-2	1.630-1
5.500-0	2.042-1	2.781-2	1.114-0	1.725-4	9.349-5	5.304-5	1.794-1	3.658-0	3.658-0	9.766-2	1.757-1
6.000-0	2.156-1	2.686-2	1.075-0	1.453-4	8.810-5	4.792-5	1.950-1	4.066-0	4.066-0	1.203-1	1.886-1
6.500-0	2.231-1	2.587-2	1.045-0	1.238-4	8.337-5	4.364-5	2.106-1	4.481-0	4.481-0	1.457-1	2.017-1
7.000-0	2.279-1	2.522-2	1.018-0	1.067-4	7.918-5	4.003-5	2.262-1	4.904-0	4.904-0	1.739-1	2.152-1
8.000-0	2.372-1	2.423-2	9.782-1	8.173-5	7.207-1	3.425-5	2.574-1	5.789-0	5.789-0	2.393-1	2.432-1
1.000-1	2.445-1	2.313-2	9.336-1	5.231-5	6.138-1	2.839-5	3.197-1	7.569-0	7.569-0	4.066-1	3.048-1
1.250-1	2.611-1	2.201-2	8.885-1	3.348-5	5.208-1	2.087-5	3.678-1	9.868-0	9.868-0	6.800-1	3.779-1
1.500-1	2.677-1	2.147-2	8.680-1	2.325-5	4.543-1	1.723-5	4.122-1	1.223-1	1.223-1	1.028-0	4.569-1
1.750-1	2.816-1	2.132-2	8.805-1	1.708-5	4.040-1	1.465-5	4.564-1	1.465-1	1.465-1	1.450-0	5.433-1
2.000-1	2.710-1	2.127-2	8.588-1	1.308-5	3.846-1	1.273-5	4.941-1	1.709-1	1.709-1	1.942-0	6.325-1
2.500-1	2.714-1	2.125-2	8.581-1	0.367-6	3.065-1	1.006-5	5.515-1	2.201-1	2.201-1	3.117-0	8.138-1
3.000-1	2.619-1	2.138-2	8.629-1	5.811-6	2.655-1	8.307-6	5.975-1	2.696-1	2.696-1	4.534-0	1.003-0
3.500-1	2.673-1	2.150-2	8.678-1	4.270-6	2.348-1	7.063-6	5.330-1	3.193-1	3.193-1	6.168-0	1.194-0
4.000-1	2.647-1	2.171-2	8.765-1	3.269-6	2.109-1	6.137-6	5.658-1	3.691-1	3.691-1	8.004-0	1.395-0
4.500-1	2.608-1	2.204-2	8.897-1	2.583-6	1.918-1	5.422-6	5.979-1	4.192-1	4.192-1	1.003-1	1.607-0
5.000-1	2.578-1	2.229-2	8.999-1	2.092-6	1.761-1	4.853-6	7.238-1	4.692-1	4.692-1	1.221-1	1.820-0
5.500-1	2.561-1	2.244-2	9.059-1	1.729-6	1.629-1	4.390-6	7.430-1	5.192-1	5.192-1	1.455-1	2.027-0
6.000-1	2.542-1	2.261-2	9.128-1	1.453-6	1.517-1	4.006-6	7.810-1	5.692-1	5.692-1	1.703-1	2.239-0
6.500-1	2.522-1	2.279-2	9.200-1	1.238-6	1.420-1	3.682-6	7.780-1	6.192-1	6.192-1	1.964-1	2.455-0
7.000-1	2.501-1	2.298-2	9.276-1	1.087-6	1.335-1	3.406-6	7.940-1	6.693-1	6.693-1	2.237-1	2.676-0
8.000-1	2.459-1	2.337-2	9.434-1	8.173-7	1.197-1	2.959-6	8.237-1	7.694-1	7.694-1	2.815-1	3.128-0
1.000-2	2.379-1	2.416-2	9.752-1	5.230-7	9.931-2	2.340-6	8.759-1	9.696-1	9.696-1	4.084-1	4.077-0

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Form Factors

12-Mg

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000-0	1.000-0	0.000-0	1.250-1	0.250-1	2.078-1	1.000-0	1.000-1	0.312-1	1.000-1	2.233-3	1.000-0
5.000-3	9.993-1	0.333-3	1.500-1	7.894-1	2.357-1	1.250-0	1.330-1	0.707-1	1.500-1	5.180-4	1.000-0
1.000-2	0.979-1	3.333-3	1.750-1	7.579-1	2.613-1	1.500-0	1.161-1	0.978-1	2.000-1	1.735-4	1.000-0
1.500-2	0.959-1	7.475-3	2.000-1	7.261-1	2.870-1	2.000-0	0.9315-2	0.9398-1	5.000-1	4.951-4	1.000-0
2.000-2	0.939-1	1.318-2	2.500-1	6.729-1	3.413-1	2.500-0	0.7403-2	0.619-1	0.000-1	7.985-7	1.000-0
2.500-2	0.919-1	2.009-2	3.000-1	6.190-1	3.978-1	3.000-0	0.5803-2	0.708-1	1.000-2	3.370-7	1.000-0
3.000-2	0.893-1	2.887-2	4.000-1	5.157-1	5.053-1	3.500-0	0.4383-2	0.677-1	1.000-3	7.908-11	1.000-0
4.000-2	0.728-1	4.732-2	5.000-1	4.193-1	6.084-1	4.000-0	0.3594-2	0.630-1	1.000-6	5.269-20	1.000-0
5.000-2	0.590-1	6.965-2	6.000-1	3.377-1	6.730-1	5.000-0	0.1937-2	0.577-1	1.000-9	5.511-29	1.000-0
7.000-2	0.262-1	1.143-1	7.000-1	2.739-1	7.320-1	6.000-0	0.1162-2	0.506-1			
9.000-2	0.904-1	1.548-1	8.000-1	2.267-1	7.753-1	7.000-0	0.7298-3	0.957-1			
1.000-1	0.712-1	1.722-1	9.000-1	1.928-1	8.074-1	8.000-0	5.503-3	0.998-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

13-A1

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ENDL Evaluated Photon Data

13-A1

ATOMIC WEIGHT 26.982										DENSITY 2.699 GRAMS/CC			
ENERGY		TOTAL WFF		CROSS SECTION (BARNs)				REV/COLLISION		REV/CM		REV/CM	
REV	CH	CH/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BRNYSSTR	K.E.	K.E.	K.E.
1.000 -4	3.085 -6	1.201 -5	5.386 -6	1.123 -2	0.586 -3	5.380 -6		1.000 -4	1.000 -4	8.175 -11	3.241 -1		
1.170 -4	3.347 -6	1.107 -5	4.454 -6	1.123 -2	1.167 -2	4.560 -6		1.170 -4	1.170 -4	1.112 -10	3.498 -1		
1.184 -4	3.024 -6	1.225 -5	4.249 -6	1.123 -2	1.194 -2	4.490 -6		1.184 -4	1.184 -4	1.139 -10	3.916 -1		
1.250 -4	3.261 -6	1.138 -5	4.399 -6	1.122 -2	1.329 -2	4.591 -6		1.250 -4	1.250 -4	1.209 -10	3.833 -1		
1.500 -4	4.202 -6	0.817 -4	5.019 -6	1.121 -2	1.503 -2	3.950 -6		1.500 -4	1.500 -4	1.828 -10	3.589 -1		
1.750 -4	5.051 -6	0.575 -4	5.626 -6	1.120 -2	2.000 -2	3.591 -6		1.750 -4	1.750 -4	2.408 -10	3.153 -1		
2.000 -4	7.084 -6	0.245 -4	7.329 -6	1.118 -2	2.380 -2	2.750 -6		2.000 -4	2.000 -4	3.250 -10	2.831 -1		
2.500 -4	1.132 -5	3.272 -4	4.404 -6	1.115 -2	5.201 -2	1.406 -6		2.500 -4	2.500 -4	5.077 -10	2.208 -1		
3.000 -4	1.885 -5	2.268 -4	4.153 -6	1.112 -2	7.433 -2	9.970 -5		3.000 -4	3.000 -4	7.311 -10	1.802 -1		
3.500 -4	2.372 -5	1.962 -4	4.334 -6	1.107 -2	9.994 -2	8.998 -5		3.500 -4	3.500 -4	9.950 -10	1.475 -1		
4.000 -4	3.223 -5	1.150 -4	4.373 -6	1.103 -2	1.298 -1	5.150 -5		4.000 -4	4.000 -4	1.299 -9	1.241 -1		
4.500 -4	4.206 -5	0.645 -4	4.851 -6	1.097 -2	1.611 -1	3.672 -5		4.500 -4	4.500 -4	1.644 -9	1.050 -1		
5.000 -4	5.531 -5	0.098 -4	5.629 -6	1.091 -2	1.963 -1	3.000 -5		5.000 -4	5.000 -4	2.030 -9	9.036 -0		
5.500 -4	6.984 -5	5.305 -3	2.377 -5	1.084 -2	2.334 -1	2.378 -5		5.500 -4	5.500 -4	2.456 -9	7.871 -0		
6.000 -4	8.641 -5	4.288 -3	1.981 -5	1.078 -2	2.734 -1	1.920 -5		6.000 -4	6.000 -4	2.922 -9	6.940 -0		
6.500 -4	1.058 -4	3.502 -3	1.589 -5	1.069 -2	3.139 -1	1.588 -5		6.500 -4	6.500 -4	3.428 -9	6.140 -0		
7.000 -4	1.278 -4	2.804 -3	1.301 -5	1.061 -2	3.567 -1	1.300 -5		7.000 -4	7.000 -4	3.994 -9	5.482 -0		
8.000 -4	1.789 -4	2.085 -3	9.251 -6	1.046 -2	4.402 -1	9.240 -6		8.000 -4	8.000 -4	5.188 -9	4.453 -0		
9.000 -4	2.430 -4	1.525 -3	6.830 -6	1.027 -2	5.418 -1	6.820 -6		9.000 -4	9.000 -4	6.568 -9	3.628 -0		
1.000 -3	3.148 -4	1.177 -3	5.273 -6	1.010 -2	6.408 -1	5.263 -6		1.000 -3	1.000 -3	8.094 -9	3.170 -0		
1.250 -3	5.751 -4	6.442 -2	2.886 -6	9.957 -1	8.679 -1	2.877 -6		1.250 -3	1.250 -3	1.261 -8	2.166 -0		
1.500 -3	9.404 -4	3.940 -2	1.785 -6	9.134 -1	1.112 -0	1.756 -6		1.500 -3	1.500 -3	1.492 -8	1.809 -0		
1.750 -3	1.040 -3	3.582 -2	1.986 -6	9.007 -1	1.199 -0	1.587 -6		1.750 -3	1.750 -3	1.952 -8	1.490 -0		
1.580 -3	0.737 -3	4.241 -2	1.900 -6	9.005 -1	1.160 -0	1.899 -6		1.580 -3	1.580 -3	1.510 -8	1.729 -0		
1.750 -3	1.158 -4	3.199 -2	1.433 -6	8.638 -1	1.313 -0	1.432 -6		1.750 -3	1.750 -3	2.348 -8	1.468 -0		
2.000 -3	1.607 -4	2.305 -2	1.033 -6	8.230 -1	1.515 -0	1.032 -6		2.000 -3	2.000 -3	3.088 -8	1.213 -0		
2.500 -3	2.884 -4	1.293 -2	5.795 -6	7.419 -1	1.825 -0	5.788 -6		2.500 -3	2.500 -3	4.869 -8	8.546 -0		
3.000 -3	4.592 -4	0.688 -2	3.615 -6	6.817 -1	2.125 -0	3.608 -6		3.000 -3	3.000 -3	7.049 -8	6.414 -0		
3.500 -3	6.880 -4	5.308 -2	2.378 -6	6.250 -1	2.373 -0	2.372 -6		3.500 -3	3.500 -3	9.624 -8	4.931 -0		
4.000 -3	1.003 -3	3.694 -2	1.695 -6	5.797 -1	2.611 -0	1.649 -6		4.000 -3	4.000 -3	1.259 -7	3.925 -0		
4.500 -3	1.395 -3	2.657 -2	1.180 -6	5.358 -1	2.836 -0	1.185 -6		4.500 -3	4.500 -3	1.594 -7	3.177 -0		
5.000 -3	1.872 -3	1.978 -2	0.887 -6	4.993 -1	3.094 -0	0.814 -6		5.000 -3	5.000 -3	1.984 -7	2.629 -0		
5.500 -3	2.456 -3	1.508 -2	6.795 -6	4.625 -1	3.282 -0	6.705 -6		5.500 -3	5.500 -3	2.439 -7	2.202 -0		
6.000 -3	3.154 -3	1.178 -2	5.271 -6	4.313 -1	3.485 -0	5.224 -6		6.000 -3	6.000 -3	2.927 -7	1.873 -0		
6.500 -3	3.977 -3	9.316 -1	4.174 -6	3.981 -1	3.652 -0	4.131 -6		6.500 -3	6.500 -3	3.511 -7	1.605 -0		
7.000 -3	4.934 -3	7.509 -1	3.384 -6	3.698 -1	3.834 -0	3.323 -6		7.000 -3	7.000 -3	4.261 -7	1.396 -0		
8.000 -3	7.273 -3	5.095 -1	2.283 -6	3.234 -1	4.186 -0	2.246 -6		8.000 -3	8.000 -3	5.974 -7	1.076 -0		
1.000 -2	1.406 -2	2.635 -1	1.180 -6	2.405 -1	4.788 -0	1.151 -6		1.000 -2	1.000 -2	7.851 -7	6.900 -0		
1.250 -2	2.744 -2	1.350 -1	6.050 -6	1.807 -1	5.257 -0	5.816 -6		1.250 -2	1.250 -2	1.185 -6	4.384 -0		
1.500 -2	4.706 -2	7.873 -0	3.527 -6	1.402 -1	5.695 -0	3.330 -6		1.500 -2	1.500 -2	1.620 -6	3.001 -0		
1.750 -2	7.441 -2	4.980 -0	2.231 -6	1.115 -1	5.944 -0	2.060 -6		1.750 -2	1.750 -2	2.114 -6	2.168 -0		
2.000 -2	1.058 -1	3.375 -0	1.512 -6	9.145 -0	6.189 -0	1.359 -6		2.000 -2	2.000 -2	2.621 -6	1.636 -0		
2.500 -2	2.072 -1	1.788 -0	0.012 -6	6.483 -0	6.396 -0	6.724 -6		2.500 -2	2.500 -2	3.595 -6	1.015 -0		
3.000 -2	3.366 -1	1.101 -0	4.932 -6	4.894 -0	8.588 -0	3.784 -6		3.000 -2	3.000 -2	4.374 -6	6.894 -0		
3.500 -2	4.932 -1	7.512 -0	3.366 -6	3.816 -0	6.859 -0	2.319 -6		3.500 -2	3.500 -2	5.507 -6	4.972 -0		
4.000 -2	6.651 -1	5.571 -0	2.496 -6	3.067 -0	6.721 -0	1.517 -6		4.000 -2	4.000 -2	7.052 -6	3.786 -0		
4.500 -2	8.446 -1	4.387 -0	1.986 -6	2.507 -0	6.723 -0	1.042 -6		4.500 -2	4.500 -2	8.931 -6	2.415 -0		
5.000 -2	1.021 -0	3.632 -0	1.627 -6	1.094 -0	6.725 -0	7.453 -0		5.000 -2	5.000 -2	1.104 -5	2.024 -0		
5.500 -2	1.189 -0	3.117 -0	1.356 -6	1.769 -0	6.692 -0	5.502 -0		5.500 -2	5.500 -2	1.406 -5	1.742 -0		
6.000 -2	1.344 -0	2.757 -0	1.235 -6	1.517 -0	6.663 -0	4.171 -0		6.000 -2	6.000 -2	1.742 -5	1.534 -0		
6.500 -2	1.489 -0	2.489 -0	1.115 -6	1.311 -0	6.605 -0	3.235 -0		6.500 -2	6.500 -2	2.137 -5	1.380 -0		
7.000 -2	1.619 -0	2.289 -0	1.025 -6	1.145 -0	6.552 -0	2.557 -0		7.000 -2	7.000 -2	2.582 -5	1.182 -0		
8.000 -2	1.839 -0	2.015 -1	9.028 -0	0.974 -1	6.458 -0	1.673 -0		8.000 -2	8.000 -2	3.087 -5	1.028 -0		
1.000 -1	2.172 -0	1.706 -1	7.644 -0	5.929 -1	6.225 -0	0.286 -1		1.000 -1	1.000 -1	3.647 -5	0.894 -0		
1.250 -1	2.471 -0	1.499 -1	6.718 -0	5.880 -1	5.919 -0	4.115 -1		1.250 -1	1.250 -1	4.374 -5	0.738 -0		
1.500 -1	2.883 -0	1.381 -1	6.187 -0	5.744 -1	5.680 -0	2.327 -1		1.500 -1	1.500 -1	5.188 -5	0.629 -0		
1.750 -1	2.870 -0	1.291 -1	5.785 -0	5.637 -1	5.437 -0	1.449 -1		1.750 -1	1.750 -1	6.156 -5	0.542 -0		
2.000 -1	3.025 -0	1.225 -1	5.487 -0	5.571 -1	5.234 -0	9.609 -2		2.000 -1	2.000 -1	7.229 -5	0.473 -0		
2.500 -1	3.314 -0	1.118 -1	5.009 -0	5.013 -1	4.858 -0	4.912 -2		2.500 -1	2.500 -1	8.594 -5	0.420 -0		
3.000 -1	3.553 -0	1.043 -1	4.672 -0	4.702 -1	4.573 -0	2.839 -2		3.000 -1	3.000 -1	1.018 -4	0.378 -0		
3.500 -1	3.785 -0	9.789 -2	4.386 -0	5.219 -2	4.316 -0	1.609 -2		3.500 -1	3.500 -1	1.245 -4	0.342 -0		
4.000 -1	3.995 -0	9.279 -2	4.157 -0	4.006 -2	4.105 -0	1.224 -2		4.000 -1	4.000 -1	1.466 -4	0.310 -0		
4.500 -1	4.197 -0	8.826 -2	3.995 -0	3.170 -2	3.915 -0	0.747 -2		4.500 -1	4.500 -1	1.666 -4	0.284 -0		

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ATOMIC WEIGHT 26.987						DENSITY 2.698 GRAMS/CC					
ENERGY		TOTAL MPF		CROSS SECTION (BARNS)				NEUT/COLLISION		MEV/CM	
MEV	CH	CH+CH/BN	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	K.E.+FLOR	K.E. BREMSTR	MEV/CM	K.E.
5.000 -	4.388 -	8.447 - 2	3.709 - 0	2.571 - 2	3.752 - 0	8.477 - 3		1.705 - 1	1.705 - 1	2.738 - 4	3.888 - 2
5.500 -	4.573 -	8.10E - 2	3.638 - 0	2.128 - 2	3.684 - 0	4.885 - 3		1.948 - 1	1.948 - 1	3.688 - 4	4.261 - 2
6.000 -	4.758 -	7.80E - 2	3.506 - 0	1.787 - 2	3.473 - 0	3.995 - 3		2.20E - 1	2.20E - 1	3.33E - 4	4.83E - 2
6.500 -	4.927 -	7.50E - 2	3.389 - 0	1.53E - 2	3.351 - 0	3.178 - 3		2.457 - 1	2.457 - 1	4.08E - 4	4.95E - 2
7.000 -	5.097 -	7.20E - 2	3.272 - 0	1.31E - 2	3.251 - 0	2.588 - 3		2.721 - 1	2.721 - 1	5.33E - 4	5.20E - 2
7.500 -	5.218 -	6.94E - 2	3.165 - 0	1.007 - 2	3.153 - 0	1.787 - 3		3.005 - 1	3.005 - 1	6.63E - 4	5.68E - 2
8.000 -	5.363 -	6.14E - 2	2.733 - 0	6.44E - 3	2.74E - 0	9.970 - 4		3.395 - 1	3.395 - 1	1.38E - 3	7.28E - 2
8.50E -	5.694 -	6.68E - 2	2.72E - 0	6.17E - 3	2.717 - 0	9.995 - 4	1.000 - 6	4.523 - 1	4.523 - 1	1.67E - 3	7.42E - 2
1.250 -	6.705 -	5.49E - 2	2.481 - 0	4.12E - 3	2.458 - 0	6.731 - 4	2.928 - 4	5.878 - 1	5.878 - 1	2.78E - 3	8.71E - 2
1.500 -	7.400 -	5.007 - 2	2.243 - 0	2.88E - 3	2.23E - 0	4.883 - 4	7.521 - 3	7.40E - 1	7.40E - 1	4.43E - 3	1.001 - 1
1.750 -	8.804 -	4.62E - 2	2.079 - 0	2.107 - 3	2.053 - 0	3.889 - 4	1.080 - 2	8.981 - 1	8.981 - 1	8.50E - 3	1.12E - 1
2.000 -	9.387 -	4.32E - 2	1.938 - 0	1.61E - 3	1.905 - 0	2.94E - 4	3.05E - 2	1.060 - 1	1.060 - 1	9.05E - 3	1.23E - 1
2.244 -	8.895 -	4.27E - 2	1.918 - 0	1.59E - 3	1.88E - 0	2.89E - 4	3.25E - 2	1.089 - 1	1.089 - 1	9.97E - 3	1.25E - 1
2.500 -	9.383 -	3.80E - 2	1.73E - 0	1.37E - 3	1.673 - 0	2.103 - 5	1.39E - 2	1.39E - 1	1.39E - 1	1.58E - 2	1.49E - 1
3.000 -	1.08E -	3.2E - 2	1.58E - 0	7.17E - 4	1.58E - 0	8.72E - 5	1.68E - 2	2.00E - 1	2.00E - 1	1.11E - 2	1.61E - 1
3.500 -	1.12E -	3.29E - 2	1.477 - 0	5.27E - 4	1.38E - 0	1.33E - 4	1.14E - 2	2.10E - 1	2.10E - 1	3.95E - 2	2.07E - 1
4.000 -	1.19E -	3.10E - 2	1.393 - 0	4.03E - 4	1.250 - 0	1.12E - 4	1.42E - 2	2.48E - 1	2.48E - 1	4.91E - 2	2.88E - 1
4.500 -	1.251 -	2.96E - 2	1.327 - 0	3.18E - 4	1.158 - 0	9.65E - 5	1.68E - 2	2.870 - 1	2.870 - 1	6.54E - 2	2.29E - 1
5.000 -	1.305 -	2.83E - 2	1.272 - 0	2.58E - 4	1.080 - 0	8.46E - 5	1.91E - 2	3.28E - 1	3.28E - 1	8.44E - 2	2.50E - 1
5.500 -	1.357 -	2.73E - 2	1.223 - 0	2.13E - 4	1.013 - 0	7.59E - 5	2.101 - 2	3.68E - 1	3.68E - 1	1.04E - 2	2.70E - 1
6.000 -	1.403 -	2.64E - 2	1.183 - 0	1.79E - 4	9.94E - 5	6.837 - 5	2.283 - 2	4.07E - 1	4.07E - 1	1.30E - 2	2.90E - 1
6.500 -	1.444 -	2.587 - 2	1.150 - 0	1.52E - 4	9.03E - 5	6.28E - 5	2.485 - 2	4.497 - 1	4.497 - 1	1.58E - 2	3.11E - 1
7.000 -	1.479 -	2.568 - 2	1.123 - 0	1.31E - 4	8.57E - 5	5.70E - 5	2.897 - 2	4.92E - 1	4.92E - 1	1.89E - 2	3.32E - 1
8.000 -	1.534 -	2.41E - 2	1.08E - 0	1.00E - 4	7.80E - 5	4.883 - 5	3.010 - 2	5.79E - 1	5.79E - 1	2.60E - 2	3.77E - 1
1.000 -	1.598 -	2.25E - 2	9.87E - 1	8.27E - 5	7.00E - 5	3.781 - 5	3.73E - 2	6.58E - 1	6.58E - 1	3.79E - 2	
1.250 -	1.661 -	2.17E - 2	9.63E - 1	4.13E - 5	5.68E - 5	3.29E - 5	4.29E - 2	9.91E - 1	9.91E - 1	7.397 - 2	5.69E - 1
1.500 -	1.708 -	2.12E - 2	9.73E - 1	2.87E - 5	4.88E - 5	2.49E - 5	4.81E - 2	1.23E - 1	1.23E - 1	1.11E - 1	7.20E - 1
1.750 -	1.711 -	2.10E - 2	9.70E - 1	2.10E - 5	4.377 - 5	2.087 - 5	5.32E - 2	1.47E - 1	1.47E - 1	1.57E - 1	8.60E - 1
2.000 -	1.708 -	2.18E - 2	9.71E - 1	1.61E - 5	3.95E - 5	1.61E - 5	5.76E - 2	1.71E - 1	1.71E - 1	2.10E - 1	1.00E + 0
2.500 -	1.703 -	2.17E - 2	9.74E - 1	1.03E - 5	3.32E - 5	1.43E - 5	6.42E - 2	2.21E - 1	2.21E - 1	3.38E - 1	1.29E + 0
3.000 -	1.887 -	2.19E - 2	9.837 - 1	7.17E - 6	2.87E - 5	1.18E - 5	6.98E - 2	2.70E - 1	2.70E - 1	4.877 - 1	1.60E + 0
3.500 -	1.874 -	2.21E - 2	9.818 - 1	5.27E - 6	2.59E - 5	1.06E - 5	7.37E - 2	3.20E - 1	3.20E - 1	6.81E - 1	1.91E + 0
4.000 -	1.894 -	2.24E - 2	1.009 - 1	4.03E - 6	2.20E - 5	8.74E - 6	7.75E - 2	3.70E - 1	3.70E - 1	8.56E - 1	2.27E + 0
4.500 -	1.827 -	2.27E - 2	1.021 - 1	3.18E - 6	2.07E - 5	7.72E - 6	8.12E - 2	4.20E - 1	4.20E - 1	1.07E - 1	2.98E + 0
5.000 -	1.806 -	2.307 - 2	1.034 - 1	2.58E - 6	1.90E - 5	6.91E - 6	8.42E - 2	4.70E - 1	4.70E - 1	1.30E - 1	3.29E + 0
5.500 -	1.994 -	2.32E - 2	1.049 - 1	1.79E - 6	1.70E - 5	6.25E - 6	8.65E - 2	5.20E - 1	5.20E - 1	1.54E - 1	3.92E + 0
6.000 -	1.924 -	2.35E - 2	1.060 - 1	1.26E - 6	1.58E - 5	5.70E - 6	8.79E - 2	5.70E - 1	5.70E - 1	1.60E - 1	3.68E + 0
6.500 -	2.387 -	2.38E - 2	1.099 - 1	1.52E - 6	1.53E - 5	5.24E - 6	9.05E - 2	6.20E - 1	6.20E - 1	2.07E - 1	3.92E + 0
7.000 -	1.953 -	2.39E - 2	1.073 - 1	1.31E - 6	1.47E - 5	4.84E - 6	9.23E - 2	6.70E - 1	6.70E - 1	2.36E - 1	4.31E + 0
8.000 -	1.528 -	2.42E - 2	1.089 - 1	1.00E - 6	1.29E - 5	4.21E - 6	9.58E - 2	7.70E - 1	7.70E - 1	2.967 - 1	5.05E + 0
1.000 - 2	1.474 -	2.51E - 2	1.128 - 1	6.45E - 7	1.07E - 5	3.33E - 6	1.01E - 0	9.71E - 1	9.71E - 1	4.28E - 1	1.658E + 0

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Form Factors

13-A1

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.250-1	8.182-1	2.193-1	1.000-0	1.789-1	8.194-1	1.000-1	2.895-3	9.999-1
5.000-3	9.999-1	7.892-4	1.500-1	7.734-1	2.557-1	1.250-0	1.349-1	8.841-1	1.500-1	6.488-4	1.000-0
1.000-2	9.998-1	3.000-3	1.750-1	7.362-1	2.856-1	1.500-0	1.139-1	8.917-1	2.000-1	2.191-4	1.000-0
1.500-2	9.998-1	6.700-3	2.000-1	7.042-1	3.113-1	2.000-0	9.172-2	9.295-1	5.000-1	6.341-6	1.000-0
2.000-2	9.995-1	1.177-2	2.500-1	6.508-1	3.580-1	2.500-0	7.504-2	9.558-1	8.000-1	1.028-6	1.000-0
2.500-2	9.989-1	1.810-2	3.000-1	6.052-1	4.038-1	3.000-0	6.101-2	9.732-1	1.000-2	4.361-7	1.000-0
3.000-2	9.975-1	2.558-2	4.000-1	5.201-1	4.950-1	3.500-0	4.898-2	9.842-1	1.000-3	1.086-10	1.000-0
4.000-2	9.714-1	4.340-2	5.000-1	4.374-1	4.787-1	4.000-0	3.885-2	9.907-1	1.000-6	7.725-20	1.000-0
5.000-2	9.588-1	6.400-2	6.000-1	3.619-1	6.507-1	5.000-0	2.200-2	9.967-1	1.000-9	7.792-29	1.000-0
7.000-2	9.218-1	1.092-1	7.000-1	2.980-1	7.098-1	6.000-0	1.358-2	9.988-1			
9.000-2	8.832-1	1.536-1	8.000-1	2.470-1	7.562-1	7.000-0	8.892-3	9.995-1			
1.000-1	8.635-1	1.742-1	9.000-1	2.080-1	7.920-1	8.000-0	6.652-3	9.998-1

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ENDL Evaluated Photon Cross Sections

14-Si

12/07/76

Energy Deposition

14-Si

12/07/78

ENDL Evaluated Photon Data

14-S1

ATOMIC WEIGHT 28.086							DENSITY 2.33 GRAMS/CC				
ENERGY		TOTAL NFP		CROSS SECTION (BARNs)				NEV/COLLISION		NEV/CM	
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E. BREMSSTR	K.E.	
1.000-4	7.525-6	5.704-4	2.860-6	1.303-2	7.883-2	2.860-6		1.000-4	1.000-4	8.749-11	1.329-1
1.200-4	4.179-6	1.027-5	4.780-6	1.302-2	1.101-2	4.780-6		1.200-4	1.200-4	1.260-10	2.872-1
1.250-4	4.246-6	1.011-5	4.714-6	1.302-2	1.194-2	4.714-6		1.250-4	1.250-4	1.367-10	2.944-1
1.400-4	4.438-6	9.671-5	4.510-6	1.301-2	1.493-2	4.510-6		1.400-4	1.400-4	1.715-10	3.154-1
1.480-4	4.698-6	9.135-5	4.280-6	1.301-2	1.887-2	4.280-6		1.480-4	1.480-4	1.916-10	3.150-1
1.494-4	4.233-6	1.008-5	4.700-6	1.301-2	1.898-2	4.700-6		1.494-4	1.494-4	1.953-10	3.508-1
1.500-4	4.277-6	1.004-5	4.680-6	1.301-2	1.711-2	4.680-6		1.500-4	1.500-4	1.989-10	3.507-1
1.700-4	5.106-6	8.405-5	3.920-6	1.300-2	2.197-2	3.920-6		1.700-4	1.700-4	2.529-10	3.329-1
1.750-4	5.339-6	8.039-5	3.749-6	1.299-2	2.327-2	3.749-6		1.750-4	1.750-4	2.679-10	3.278-1
1.800-4	5.575-6	7.688-5	3.590-6	1.299-2	2.452-2	3.590-6		1.800-4	1.800-4	2.835-10	3.228-1
2.000-4	6.872-6	6.433-5	3.000-6	1.298-2	3.038-2	3.000-6		2.000-4	2.000-4	3.500-10	2.998-1
2.400-4	9.466-6	6.525-5	2.110-6	1.295-2	4.352-2	2.110-6		2.400-4	2.400-4	5.039-10	2.530-1
2.500-4	1.034-5	4.152-4	1.937-6	1.294-2	4.716-2	1.936-6		2.500-4	2.500-4	5.448-10	2.419-1
3.000-4	1.518-5	2.831-4	1.320-6	1.291-2	6.756-2	1.320-6		3.000-4	3.000-4	7.873-10	1.978-1
3.500-4	2.150-5	1.998-4	9.311-5	1.286-2	9.112-2	9.310-5		3.500-4	3.500-4	1.072-9	1.628-1
4.000-4	2.909-5	1.475-4	6.081-5	1.281-2	1.181-1	6.080-5		3.999-4	3.999-4	1.399-9	1.375-1
4.500-4	3.842-5	1.117-4	5.209-5	1.275-2	1.478-1	5.208-5		4.499-4	4.499-4	1.771-9	1.171-1
5.000-4	4.989-5	8.708-3	4.061-5	1.269-2	1.806-1	4.060-5		4.998-4	4.998-4	2.186-9	1.014-1
5.500-4	6.221-5	6.899-3	3.217-5	1.261-2	2.156-1	3.216-5		5.498-4	5.498-4	2.645-9	8.837-0
6.000-4	7.695-5	5.578-3	2.601-5	1.254-2	2.535-1	2.600-5		5.997-4	5.997-4	3.147-9	7.794-0
6.500-4	9.394-5	4.589-3	2.131-5	1.244-2	2.984-1	2.129-5		6.496-4	6.496-4	3.693-9	6.815-0
7.000-4	1.130-4	3.788-3	1.771-5	1.235-2	3.338-1	1.770-5		6.995-4	6.995-4	4.281-9	6.190-0
8.000-4	1.587-4	2.704-3	1.261-5	1.220-2	4.237-1	1.260-5		7.992-4	7.992-4	5.589-9	5.036-0
9.000-4	2.143-4	2.003-3	9.342-5	1.198-2	5.160-1	9.330-4		8.988-4	8.988-4	7.069-9	4.195-0
1.000-3	2.889-4	1.608-3	7.500-4	1.179-2	6.153-1	7.488-4		9.984-4	9.984-4	8.722-9	3.741-0
1.250-3	4.853-4	8.843-2	4.124-4	1.115-2	8.549-1	4.113-4		1.247-3	1.247-3	1.360-8	2.969-0
1.500-3	7.906-4	5.429-2	2.532-4	1.088-2	1.118-1	2.521-4		1.494-3	1.494-3	1.952-8	1.889-0
1.750-3	1.180-3	3.638-2	1.897-4	1.005-2	1.347-1	1.887-4		1.739-3	1.739-3	2.648-8	1.478-0
1.838-3	1.340-3	3.203-2	1.494-4	9.888-1	1.430-1	1.484-4		1.826-3	1.826-3	2.916-8	1.363-0
1.839-3	1.293-3	3.319-2	1.948-5	9.886-1	1.431-1	1.947-5		1.838-3	1.764-3	2.722-8	1.364-1
2.000-3	1.576-4	2.723-3	1.270-5	9.958-1	1.383-1	1.269-5		1.998-3	1.924-3	3.241-8	1.221-1
2.500-3	2.741-4	1.588-3	7.302-4	8.534-1	1.994-1	7.294-4		2.497-3	2.423-3	5.137-8	8.840-0
3.000-3	4.307-4	9.984-2	4.647-4	7.781-1	2.319-1	4.639-4		2.995-3	2.921-3	7.465-8	6.781-0
3.500-3	6.469-4	6.634-2	3.094-4	7.091-1	2.599-1	3.087-4		3.492-3	3.418-3	1.022-7	5.283-0
4.000-3	9.199-4	4.885-2	2.176-4	6.543-1	2.889-1	2.189-4		3.987-3	3.914-3	1.340-7	4.254-0
4.500-3	1.270-3	3.379-2	1.576-4	6.045-1	3.103-1	1.569-4		4.482-3	4.408-3	1.700-7	3.470-0
5.000-3	1.695-3	2.532-2	1.181-4	5.532-1	3.328-1	1.175-4		4.975-3	4.901-3	2.102-7	2.892-0
5.500-3	2.215-3	1.938-2	9.036-3	5.235-1	3.537-1	8.980-3		5.466-3	5.392-3	2.544-7	2.434-0
6.000-3	2.828-3	1.518-2	7.079-3	4.898-1	3.739-1	7.026-3		5.955-3	5.882-3	3.027-7	2.080-0
6.500-3	3.562-3	1.205-2	5.820-3	4.545-1	3.926-1	5.570-3		6.443-3	6.370-3	3.550-7	1.788-0
7.000-3	4.410-3	9.733-1	4.539-3	4.241-1	4.108-1	4.493-3		6.928-3	6.855-3	4.112-7	1.555-0
8.000-3	6.474-3	6.630-1	3.092-3	3.744-1	4.457-1	3.050-3		7.912-3	7.819-3	5.349-7	1.208-0
1.000-2	1.248-2	3.439-1	1.604-3	2.897-1	5.050-1	1.570-3		8.789-3	9.716-3	8.260-7	7.786-1
1.250-2	2.437-2	1.781-1	8.214-2	2.138-1	5.574-1	7.945-2		1.209-2	1.202-2	1.264-6	4.933-1
1.500-2	4.186-2	1.025-1	4.781-2	1.689-1	6.042-1	4.594-2		1.429-2	1.422-2	1.770-6	3.397-1
1.750-2	6.847-2	6.457-0	3.011-2	1.328-1	6.318-1	2.615-2		1.537-2	1.631-2	2.326-6	2.453-1
2.000-2	9.857-2	4.394-0	2.031-2	1.089-1	6.568-1	1.896-2		1.331-2	1.824-2	2.910-6	1.850-1
2.500-2	1.887-1	2.274-0	1.061-2	7.725-0	6.819-1	9.153-1		2.65-2	2.159-2	4.076-6	1.144-1
3.000-2	3.114-1	1.377-0	6.424-1	5.834-0	7.032-1	5.137-1		2.418-2	2.412-2	5.088-6	7.740-2
3.500-2	4.649-1	9.232-1	4.306-1	4.950-0	7.114-1	3.139-1		2.199-2	2.583-2	5.839-6	5.557-2
4.000-2	6.385-1	6.721-1	3.134-1	3.888-0	7.185-1	2.048-1		2.640-2	2.676-2	6.262-6	4.190-2
4.500-2	8.257-1	5.198-1	2.424-1	3.004-0	7.192-1	1.405-1		2.712-2	2.708-2	6.413-6	3.279-2
5.000-2	1.014-1	4.231-1	1.973-1	2.513-0	7.198-1	1.002-1		2.691-2	2.691-2	6.333-6	2.852-2
5.500-2	1.200-1	3.578-1	1.688-1	2.126-0	7.187-1	7.386-0		2.651-2	2.649-2	6.138-6	2.207-2
6.000-2	1.375-1	3.121-1	1.456-1	1.825-0	7.190-1	5.991-0		2.591-2	2.590-2	5.869-6	1.884-2
6.500-2	1.541-1	2.785-1	1.289-1	1.578-0	7.081-1	4.330-0		2.537-2	2.531-2	5.612-6	1.644-2
7.000-2	1.693-1	2.535-1	1.182-1	1.379-0	7.027-1	3.418-0		2.481-2	2.478-2	5.372-6	1.484-2
8.000-2	1.954-1	2.187-1	1.024-1	1.082-0	6.931-1	2.232-0		2.398-2	2.397-2	5.026-6	1.227-2
1.000-1	2.394-1	1.823-1	8.582-0	7.157-1	6.886-1	1.100-0		2.407-2	2.406-2	5.088-6	1.022-2
1.250-1	2.713-1	1.588-1	7.376-0	6.889-1	6.382-1	5.471-1		2.692-2	2.691-2	6.375-6	9.919-3
1.500-1	2.888-1	1.447-1	6.750-0	3.318-1	6.188-1	3.094-1		3.189-2	3.189-2	8.895-6	1.075-2
1.750-1	3.184-1	1.348-1	6.287-0	2.464-1	5.848-1	1.329-1		3.823-2	3.823-2	1.278-5	1.201-2
2.000-1	3.384-1	1.276-1	5.950-0	1.903-1	5.631-1	1.281-1		4.586-2	4.586-2	1.824-5	1.357-2

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 20.086							DENSITY 2.33 GRAMS/CC					
ENERGY		TOTAL MPF		CROSS SECTION (BARN)				MEV/COLLISION			MEV/CM	
MEV	C-9	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	K.E.	
2.500-1	3.895-3	1.182-1	5.418-0	1.229-1	5.229-0	6.387-2		6.240-2	6.240-2	3.408-5	1.889-2	
3.000-1	3.887-3	1.088-1	5.048-0	8.388-2	4.382-0	5.385-2		8.180-2	8.180-2	5.082-5	2.057-2	
3.500-1	4.229-3	1.015-1	4.739-0	8.333-2	4.846-0	2.439-2		1.020-1	1.020-1	9.095-5	2.412-2	
4.000-1	4.483-3	9.615-2	4.489-0	4.883-2	4.419-0	1.871-2		1.240-1	1.240-1	1.343-5	2.777-2	
4.500-1	4.693-3	9.145-2	4.285-0	3.848-2	4.215-0	1.203-2		1.467-1	1.467-1	1.879-5	3.125-2	
5.000-1	4.886-3	8.748-2	4.080-0	3.121-2	4.040-0	8.970-3		1.705-1	1.705-1	2.940-4	3.476-2	
5.500-1	5.116-3	8.390-2	3.913-0	2.582-2	3.880-0	6.969-3		1.949-1	1.949-1	3.318-4	3.810-2	
6.000-1	5.314-3	8.077-2	3.787-0	2.171-2	3.740-0	5.472-3		2.202-1	2.202-1	4.239-4	4.144-2	
6.500-1	5.513-3	7.788-2	3.631-0	1.851-2	3.608-0	4.440-3		2.457-1	2.457-1	5.270-4	4.457-2	
7.000-1	5.703-3	7.528-2	3.510-0	1.598-2	3.490-0	3.898-3		2.719-1	2.719-1	6.454-4	4.788-2	
8.000-1	6.081-3	7.081-2	3.303-0	1.223-2	3.288-0	2.581-3		3.285-1	3.285-1	9.299-4	5.386-2	
1.000-0	6.748-0	6.360-2	2.988-0	7.839-3	2.957-0	1.480-3		4.395-1	4.395-1	1.689-3	6.513-2	
1.022-0	6.821-0	6.298-2	2.935-0	7.501-3	2.926-0	1.429-3	1.000-6	4.523-1	4.523-1	1.783-3	6.631-2	
1.250-0	7.950-0	5.684-2	2.851-0	5.016-3	2.845-0	9.985-4	3.280-4	5.876-1	5.876-1	3.006-3	7.782-2	
1.500-0	8.282-0	5.182-2	2.417-0	3.485-3	2.404-0	7.240-4	8.770-3	7.406-1	7.406-1	4.758-3	6.942-2	
1.750-0	8.953-0	4.799-2	2.238-0	2.580-3	2.211-0	5.486-4	2.164-2	8.979-1	8.979-1	7.000-3	1.003-1	
2.000-0	9.579-0	4.480-2	2.090-0	1.960-3	2.052-0	4.359-4	3.156-2	1.060-0	1.060-0	9.737-3	1.106-1	
2.044-0	9.687-0	4.430-2	2.086-0	1.877-3	2.026-0	4.214-4	3.760-2	1.089-0	1.089-0	1.027-2	1.124-1	
2.500-0	1.070-1	4.010-2	1.870-0	1.255-3	1.802-0	3.118-4	6.637-2	1.395-0	1.395-0	1.682-2	1.303-1	
3.000-0	1.186-1	3.681-2	1.717-0	8.713-4	1.614-0	2.415-4	1.012-1	1.746-0	1.746-0	2.627-2	1.497-1	
3.500-0	1.251-1	3.432-2	1.600-0	6.402-4	1.466-0	1.980-4	1.332-1	2.110-0	2.110-0	3.826-2	1.687-1	
4.000-0	1.324-1	3.242-2	1.512-0	4.902-4	1.347-0	1.667-4	1.646-1	2.487-0	2.487-0	5.299-2	1.879-1	
4.500-0	1.387-1	3.093-2	1.443-0	3.873-4	1.247-0	1.428-4	1.951-1	2.876-0	2.876-0	7.059-2	2.073-1	
5.000-0	1.445-1	2.971-2	1.385-0	3.137-4	1.163-0	1.251-4	2.221-1	3.274-0	3.274-0	9.118-2	2.268-1	
5.500-0	1.500-1	2.861-2	1.334-0	2.593-4	1.091-0	1.119-4	2.432-1	3.678-0	3.678-0	1.147-1	2.452-1	
6.000-0	1.549-1	2.771-2	1.282-0	2.179-4	1.028-0	1.010-4	2.842-1	4.091-0	4.091-0	1.414-1	2.642-1	
6.500-0	1.591-1	2.698-2	1.258-0	1.857-4	9.727-5	9.200-5	2.852-1	4.512-0	4.512-0	1.714-1	2.836-1	
7.000-0	1.627-1	2.638-2	1.230-0	1.601-4	9.238-5	8.435-5	3.061-1	4.940-0	4.940-0	2.047-1	3.036-1	
8.000-0	1.684-1	2.549-2	1.189-0	1.226-4	8.408-5	7.213-5	3.479-1	5.817-0	5.817-0	2.818-1	3.455-1	
1.000-1	1.744-1	2.461-2	1.148-0	7.845-5	7.181-5	5.553-5	4.313-1	7.641-0	7.641-0	4.788-1	4.380-1	
1.250-1	1.814-1	2.386-2	1.103-0	5.021-5	6.076-5	4.390-5	4.956-1	9.966-0	9.966-0	7.993-1	5.493-1	
1.500-1	1.884-1	2.327-2	1.085-0	3.486-5	5.300-5	3.623-5	5.553-1	1.235-1	1.235-1	1.205-0	6.699-1	
1.750-1	1.943-1	2.326-2	1.086-0	2.561-5	4.714-5	3.083-5	6.145-1	1.479-1	1.479-1	1.694-0	8.022-1	
2.000-1	1.996-1	2.336-2	1.090-0	1.981-5	4.254-5	2.610-5	6.648-1	1.724-1	1.724-1	2.260-0	9.392-1	
2.500-1	1.821-1	2.357-2	1.099-0	1.255-5	3.576-5	2.115-5	7.416-1	2.218-1	2.218-1	3.605-0	1.218-0	
3.000-1	1.799-1	2.386-2	1.113-0	8.715-6	3.097-5	1.746-5	8.029-1	2.715-1	2.715-1	5.212-0	1.589-0	
3.500-1	1.780-1	2.411-2	1.124-0	6.403-6	2.739-5	1.489-5	8.503-1	3.213-1	3.213-1	7.051-0	1.805-0	
4.000-1	1.756-1	2.444-2	1.140-0	4.902-6	2.461-5	1.289-5	8.938-1	3.713-1	3.713-1	9.103-0	2.114-0	
4.500-1	1.725-1	2.480-2	1.160-0	3.874-6	2.238-5	1.139-5	9.385-1	4.214-1	4.214-1	1.135-1	2.443-0	
5.000-1	1.711-1	2.523-2	1.178-0	3.178-6	2.054-5	1.019-5	9.710-1	4.714-1	4.714-1	1.377-1	2.771-0	
5.500-1	1.687-1	2.544-2	1.186-0	2.593-6	1.900-5	1.219-5	9.964-1	5.214-1	5.214-1	1.634-1	3.091-0	
6.000-1	1.672-1	2.567-2	1.197-0	2.179-6	1.770-5	8.412-5	1.020-0	5.714-1	5.714-1	1.905-1	3.418-0	
6.500-1	1.657-1	2.591-2	1.208-0	1.857-6	1.657-5	7.732-5	1.043-0	6.215-1	6.215-1	2.189-1	3.752-0	
7.000-1	1.641-1	2.615-2	1.220-0	1.601-6	1.553-5	7.151-5	1.064-0	6.716-1	6.716-1	2.486-1	4.092-0	
8.000-1	1.611-1	2.664-2	1.243-0	1.226-6	1.396-5	6.213-5	1.103-0	7.717-1	7.717-1	3.111-1	4.791-0	
1.000-2	1.594-1	2.761-2	1.268-0	7.844-7	1.159-5	4.911-5	1.172-0	9.722-1	9.722-1	4.468-1	6.254-0	

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Form Factors

14-S1

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000	0	0.000	0	0.000	0	1.000	0	1.000	1	3.257	3
0.000	3	9.999	1	6.429	4	1.250	0	1.400	1	7.940	4
1.000	2	9.982	1	2.500	3	1.500	0	1.137	1	8.863	1
1.500	2	9.961	1	5.643	3	2.000	0	9.003	2	9.241	1
2.000	2	9.932	1	9.936	3	2.500	0	7.509	2	9.501	1
2.500	2	9.894	1	1.534	2	3.000	0	6.212	2	9.684	1
3.000	2	9.849	1	2.178	2	4.000	0	4.954	2	9.804	1
4.000	2	9.738	1	3.735	2	5.000	0	4.124	2	9.880	1
5.000	2	9.599	1	5.288	2	6.000	0	3.788	2	9.925	1
7.000	2	9.281	1	9.803	2	7.000	0	3.186	1	9.985	1
9.000	2	8.874	1	1.422	1	8.000	0	2.875	1	9.993	1
1.000	1	8.671	1	1.638	1	9.000	0	2.253	1	9.998	1

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ENDL Evaluated Photon Cross Sections

15-P

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Energy Deposition

15-P

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ENDL Evaluated Photon Data

15-P

ATOMIC WEIGHT 30.974										DENSITY 1.83 GRAMS/CC			
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARN)						NEUTRON COLLISION		NEUTRON K.E.	BREMSSTR K.E.	
	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. - FLOR	K.E. BREMSSTR					
1.000-4	5.414-5	1.009-4	5.191-5	1.498-2	8.941-3	5.190-5	9.997-5	9.997-5	9.370-11	1.847-0	0		
1.200-4	7.113-5	7.883-3	3.951-5	1.495-2	9.975-3	3.950-5	1.200-4	1.200-4	1.349-10	1.847-0	0		
1.250-4	7.599-5	7.195-3	3.701-5	1.495-2	1.082-2	3.899-5	1.249-4	1.249-4	1.454-10	1.845-0	0		
1.315-4	8.238-5	6.633-3	3.411-5	1.494-2	1.197-2	3.410-5	1.314-4	1.314-4	1.620-10	1.995-0	0		
1.329-4	1.022-5	5.347-4	2.750-6	1.494-2	1.222-2	2.750-6	1.329-4	1.329-4	1.656-10	1.300-1	0		
1.400-4	5.436-5	1.005-5	5.170-6	1.494-2	1.355-2	5.170-6	1.400-4	1.400-4	1.837-10	2.575-1	0		
1.500-4	8.163-5	8.886-4	4.560-6	1.494-2	1.555-2	4.560-6	1.500-4	1.500-4	2.109-10	2.434-1	0		
1.700-4	6.708-6	8.147-4	4.190-6	1.493-2	1.991-2	4.190-6	1.700-4	1.700-4	2.709-10	2.534-1	0		
1.750-4	6.911-6	7.907-4	4.067-6	1.492-2	2.109-2	4.067-6	1.750-4	1.750-4	2.871-10	2.532-1	0		
1.800-4	7.115-6	7.680-4	3.950-6	1.492-2	2.229-2	3.950-6	1.800-4	1.800-4	3.037-10	2.530-1	0		
1.886-4	7.596-6	7.194-4	3.700-6	1.492-2	2.445-2	3.700-6	1.886-4	1.886-4	3.334-10	2.483-1	0		
1.900-4	6.871-6	7.952-4	4.090-6	1.491-2	2.481-2	4.090-6	1.900-4	1.900-4	3.384-10	2.765-1	0		
2.000-4	7.415-6	7.369-4	3.790-6	1.491-2	2.745-2	3.790-6	2.000-4	2.000-4	3.750-10	2.697-1	0		
2.400-4	1.011-5	5.405-4	2.780-6	1.488-2	3.933-2	2.780-6	2.400-4	2.400-4	5.399-10	2.374-1	0		
2.500-4	1.099-5	4.972-4	2.557-6	1.487-2	4.262-2	2.557-6	2.500-4	2.500-4	5.859-10	2.274-1	0		
3.000-4	1.597-5	3.422-4	1.760-6	1.484-2	6.106-2	1.760-6	3.000-4	3.000-4	8.436-10	1.879-1	0		
3.500-4	2.250-5	2.429-4	1.249-6	1.478-2	8.246-2	1.249-6	3.500-4	3.500-4	1.148-9	1.555-1	0		
4.000-4	3.020-5	1.805-4	9.281-5	1.473-2	1.070-1	9.280-5	3.999-4	3.999-4	1.500-9	1.321-1	0		
4.500-4	3.991-5	1.369-4	7.042-5	1.467-2	1.341-1	7.041-5	4.499-4	4.499-4	1.898-9	1.127-1	0		
5.000-4	5.109-5	1.070-4	5.501-5	1.461-2	1.642-1	5.500-5	4.999-4	4.999-4	2.342-9	9.785-0	0		
5.500-4	6.441-5	8.484-3	4.363-5	1.453-2	1.964-1	4.362-5	5.498-4	5.498-4	2.834-9	8.536-0	0		
6.000-4	7.959-5	6.866-3	3.531-5	1.446-2	2.314-1	3.530-5	5.998-4	5.998-4	3.372-9	7.536-0	0		
6.500-4	9.702-5	5.632-3	2.897-5	1.435-2	2.677-1	2.895-5	6.497-4	6.497-4	3.957-9	6.896-0	0		
7.000-4	1.166-4	4.688-3	2.411-5	1.426-2	3.063-1	2.410-5	6.996-4	6.996-4	4.588-9	6.002-0	0		
8.000-4	1.633-4	3.347-3	1.721-5	1.409-2	3.906-1	1.720-5	7.993-4	7.993-4	5.990-9	4.896-0	0		
9.000-4	2.211-4	2.472-3	1.271-5	1.386-2	4.784-1	1.270-5	8.990-4	8.990-4	7.577-9	4.067-0	0		
1.000-3	2.701-4	2.023-3	1.040-5	1.366-2	5.738-1	1.039-5	9.987-4	9.987-4	9.350-9	3.697-0	0		
1.250-3	5.063-4	1.079-3	5.551-4	1.296-2	8.095-1	5.538-4	1.247-3	1.247-3	1.458-8	2.463-0	0		
1.500-3	8.454-4	6.464-2	3.325-4	1.241-2	1.073-0	3.312-4	1.494-3	1.494-3	2.093-8	1.768-0	0		
1.750-3	1.268-3	4.309-2	2.216-4	1.170-2	1.311-0	2.204-4	1.741-3	1.741-3	2.840-8	1.372-0	0		
2.000-3	1.801-3	3.034-2	1.560-4	1.113-2	1.561-0	1.549-4	1.986-3	1.986-3	3.696-8	1.102-0	0		
2.148-3	2.159-3	2.531-2	1.302-4	1.071-2	1.683-0	1.291-4	2.130-3	2.130-3	4.253-8	9.867-1	0		
2.149-3	2.189-3	2.497-2	1.284-4	1.071-2	1.683-0	1.283-4	2.147-3	2.037-3	3.890-8	9.306-0	0		
2.500-3	3.155-4	1.732-3	8.907-4	9.879-1	1.974-0	8.897-4	2.497-3	2.387-3	5.341-8	7.564-0	0		
3.000-3	4.903-4	1.114-3	5.732-4	8.964-1	2.392-0	5.723-4	2.995-3	2.865-3	7.803-8	5.884-0	0		
3.500-3	7.284-4	7.502-2	3.858-4	8.111-1	2.719-0	3.850-4	3.492-3	3.382-3	1.072-7	4.643-0	0		
4.000-3	1.026-3	5.325-2	2.739-4	7.438-1	3.037-0	2.731-4	3.989-3	3.879-3	1.410-7	3.780-0	0		
4.500-3	1.407-3	3.884-2	1.998-4	6.845-1	3.298-0	1.991-4	4.484-3	4.374-3	1.793-7	3.109-0	0		
5.000-3	1.865-3	2.929-2	1.507-4	6.355-1	3.550-0	1.500-4	4.978-3	4.868-3	2.221-7	2.610-0	0		
5.500-3	2.426-3	2.252-2	1.158-4	5.908-1	3.771-0	1.152-4	5.470-3	5.360-3	2.694-7	2.209-0	0		
6.000-3	3.084-3	1.772-2	9.114-3	5.528-1	3.965-0	9.055-3	5.961-3	5.851-3	3.210-7	1.898-0	0		
6.500-3	3.870-3	1.412-2	7.262-3	5.147-1	4.177-0	7.207-3	6.450-3	6.341-3	3.769-7	1.638-0	0		
7.000-3	4.775-3	1.144-2	5.886-3	4.818-1	4.364-0	5.834-3	6.938-3	6.828-3	4.371-7	1.430-0	0		
8.000-3	6.968-3	7.842-1	4.033-3	4.277-1	4.721-0	3.986-3	7.906-3	7.797-3	5.699-7	1.119-0	0		
1.000-2	1.332-2	4.102-1	2.110-3	3.356-1	5.327-0	2.071-3	9.816-3	9.708-3	8.835-7	7.288-0	0		
1.250-2	2.586-2	2.113-1	1.087-3	2.497-1	5.882-0	1.056-3	1.215-2	1.204-2	1.359-6	4.655-1	0		
1.500-2	4.427-2	1.234-1	6.349-2	1.962-1	6.378-0	6.089-2	1.439-2	1.428-2	1.913-6	3.227-1	0		
1.750-2	7.023-2	7.781-0	4.002-2	1.562-1	6.682-0	3.779-2	1.654-2	1.643-2	2.531-6	2.340-1	0		
2.000-2	1.042-1	5.245-0	2.698-2	1.283-1	6.957-0	2.500-2	1.855-2	1.845-2	3.191-6	1.771-1	0		
2.500-2	2.005-1	2.726-0	1.402-2	9.100-0	7.236-0	1.239-2	2.215-2	2.205-2	4.558-6	1.100-1	0		
3.000-2	3.341-1	1.636-0	8.414-1	6.874-0	7.472-0	6.979-1	2.504-2	2.494-2	5.832-6	7.457-2	0		
3.500-2	5.048-1	1.082-0	5.567-1	5.367-0	7.563-0	4.274-1	2.718-2	2.709-2	6.879-6	5.356-2	0		
4.000-2	7.039-1	7.763-1	3.993-1	4.332-0	7.644-0	2.795-1	2.855-2	2.847-2	7.598-6	4.045-2	0		
4.500-2	9.245-1	5.911-1	3.040-1	3.555-0	7.656-0	1.919-1	2.930-2	2.923-2	8.005-6	3.161-2	0		
5.000-2	1.154-0	4.735-1	2.435-1	2.978-0	7.667-0	1.371-1	2.943-2	2.943-2	8.116-6	2.550-2	0		
5.500-2	1.386-0	3.942-1	2.028-1	2.523-0	7.638-0	1.012-1	2.934-2	2.928-2	8.039-6	2.113-2	0		
6.000-2	1.611-0	3.331-1	1.744-1	2.168-0	7.613-0	7.663-0	2.893-2	2.888-2	7.817-6	1.792-2	0		
6.500-2	1.829-0	2.988-1	1.537-1	1.876-0	7.553-0	5.939-0	2.845-2	2.840-2	7.561-6	1.553-2	0		
7.000-2	2.032-0	2.689-1	1.383-1	1.640-0	7.498-0	4.691-0	2.792-2	2.788-2	7.285-6	1.372-2	0		
8.000-2	2.391-0	2.285-1	1.176-1	1.288-0	7.401-0	3.066-0	2.698-2	2.695-2	6.807-6	1.127-2	0		
1.000-1	2.954-0	1.850-1	9.513-0	8.532-1	7.146-0	1.514-0	2.657-2	2.655-2	6.607-6	8.986-3	0		
1.250-1	3.463-0	1.578-1	8.117-0	5.596-1	6.803-0	7.341-1	2.879-2	2.878-2	7.761-6	8.310-3	0		
1.500-1	3.820-0	1.431-1	7.358-0	3.965-1	6.535-0	4.267-1	3.328-2	3.327-2	1.037-5	8.710-3	0		

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 30.974										DENSITY 1.83 GRAMS/CC			
ENERGY KEV	TOTAL MP		CROSS SECTION (BARNs)							NEV/COLLISION		NEV/CM	
	CM	CM/CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	K.E. FLOR		K.E. BREMSSTR	K.E.	K.E.	
1.750-1	4.12E+0	1.32E-1	8.81E+0	2.94E-1	8.25E+0	2.88E-1	3.92E-2	3.92E-2	1.44E-5	9.531-3	9.531-3	1.00E-2	1.00E-2
2.000-1	4.30E+0	1.251-1	8.43E+0	2.27E-1	8.02E+0	1.70E-1	4.84E-2	4.84E-2	2.02E-5	1.00E-2	1.00E-2	1.00E-2	1.00E-2
2.500-1	4.81E+0	1.13E-1	5.83E+0	1.471-1	5.59E+0	9.11E-2	8.29E-2	8.29E-2	3.711-5	1.307-2	1.307-2	1.00E-2	1.00E-2
3.000-1	5.18E+0	1.05E-1	5.42E+0	1.02E-1	5.27E+0	5.29E-2	8.19E-2	8.19E-2	8.29E-5	2.857-2	2.857-2	1.00E-2	1.00E-2
3.500-1	5.52E+0	9.68E-2	5.08E+0	7.38E-2	4.97E+0	3.40E-2	1.02E-1	1.02E-1	9.79E-5	1.850-2	1.850-2	1.00E-2	1.00E-2
4.000-1	5.83E+0	9.38E-2	4.81E+0	5.87E-2	4.73E+0	2.32E-2	1.241-1	1.241-1	1.44E-4	2.127-2	2.127-2	1.00E-2	1.00E-2
4.500-1	6.14E+0	8.88E-2	4.57E+0	4.81E-2	4.51E+0	1.67E-2	1.48E-1	1.48E-1	2.01E-4	2.391-2	2.391-2	1.00E-2	1.00E-2
5.000-1	6.42E+0	8.51E-2	4.37E+0	3.74E-2	4.32E+0	1.24E-2	1.70E-1	1.70E-1	2.72E-4	2.657-2	2.657-2	1.00E-2	1.00E-2
5.500-1	6.69E+0	8.18E-2	4.19E+0	3.09E-2	4.19E+0	9.65E-3	1.95E-1	1.95E-1	3.55E-4	2.911-2	2.911-2	1.00E-2	1.00E-2
6.000-1	6.95E+0	7.89E-2	4.04E+0	2.60E-2	4.00E+0	7.83E-3	2.20E-1	2.20E-1	4.53E-4	3.188-2	3.188-2	1.00E-2	1.00E-2
6.500-1	7.21E+0	7.57E-2	3.89E+0	2.21E-2	3.85E+0	6.19E-3	2.45E-1	2.45E-1	5.84E-4	3.404-2	3.404-2	1.00E-2	1.00E-2
7.000-1	7.48E+0	7.31E-2	3.78E+0	1.91E-2	3.73E+0	5.11E-3	2.71E-1	2.71E-1	8.91E-4	3.641-2	3.641-2	1.00E-2	1.00E-2
8.000-1	7.93E+0	6.88E-2	3.54E+0	1.48E-2	3.52E+0	3.61E-3	3.26E-1	3.26E-1	9.98E-4	4.11E-2	4.11E-2	1.00E-2	1.00E-2
1.000+0	8.84E+0	6.18E-2	3.17E+0	9.39E-3	3.16E+0	2.08E-3	4.39E-1	4.39E-1	1.80E-3	4.97E-2	4.97E-2	1.00E-2	1.00E-2
1.02E+0	8.93E+0	6.11E-2	3.14E+0	8.99E-3	3.13E+0	2.00E-3	4.52E-1	4.52E-1	1.91E-3	5.061-2	5.061-2	1.00E-2	1.00E-2
1.250+0	9.89E+0	5.52E-2	2.84E+0	6.01E-3	2.83E+0	1.40E-3	5.87E-1	5.87E-1	3.21E-3	5.94E-2	5.94E-2	1.00E-2	1.00E-2
1.500+0	1.08E+1	5.03E-2	2.59E+0	4.17E-3	2.57E+0	1.01E-3	7.40E-1	7.40E-1	5.10E-3	6.82E-2	6.82E-2	1.00E-2	1.00E-2
1.750+0	1.17E+1	4.68E-2	2.39E+0	3.07E-3	2.38E+0	7.67E-4	8.97E-1	8.97E-1	7.49E-3	7.65E-2	7.65E-2	1.00E-2	1.00E-2
2.000+0	1.25E+1	4.35E-2	2.24E+0	2.35E-3	2.19E+0	6.12E-4	1.05E+1	1.05E+1	1.04E-2	8.45E-2	8.45E-2	1.00E-2	1.00E-2
2.04E+0	1.26E+1	4.31E-2	2.21E+0	2.25E-3	2.17E+0	5.91E-4	1.08E+1	1.08E+1	1.10E-2	8.58E-2	8.58E-2	1.00E-2	1.00E-2
2.500+0	1.39E+1	3.90E-2	2.00E+0	1.50E-3	1.93E+0	4.38E-4	1.39E+1	1.39E+1	1.80E-2	9.97E-2	9.97E-2	1.00E-2	1.00E-2
3.000+0	1.52E+1	3.59E-2	1.84E+0	1.04E-3	1.73E+0	3.39E-4	1.62E+1	1.62E+1	2.81E-2	1.14E-1	1.14E-1	1.00E-2	1.00E-2
3.500+0	1.62E+1	3.35E-2	1.72E+0	7.67E-4	1.57E+0	2.78E-4	2.11E+1	2.11E+1	4.10E-2	1.25E-1	1.25E-1	1.00E-2	1.00E-2
4.000+0	1.72E+1	3.17E-2	1.63E+0	5.87E-4	1.44E+0	2.33E-4	2.49E+1	2.49E+1	5.69E-2	1.44E-1	1.44E-1	1.00E-2	1.00E-2
4.500+0	1.80E+1	3.03E-2	1.58E+0	4.64E-4	1.33E+0	2.00E-4	2.88E+1	2.88E+1	7.57E-2	1.60E-1	1.60E-1	1.00E-2	1.00E-2
5.000+0	1.87E+1	2.91E-2	1.50E+0	3.76E-4	1.24E+0	1.75E-4	3.28E+1	3.28E+1	9.79E-2	1.75E-1	1.75E-1	1.00E-2	1.00E-2
5.500+0	1.94E+1	2.81E-2	1.44E+0	3.11E-4	1.16E+0	1.50E-4	3.68E+1	3.68E+1	1.23E-1	1.90E-1	1.90E-1	1.00E-2	1.00E-2
6.000+0	2.00E+1	2.73E-2	1.40E+0	2.61E-4	1.10E+0	1.41E-4	4.10E+1	4.10E+1	1.52E-1	2.05E-1	2.05E-1	1.00E-2	1.00E-2
6.500+0	2.05E+1	2.66E-2	1.36E+0	2.22E-4	1.04E+0	1.28E-4	4.52E+1	4.52E+1	1.84E-1	2.20E-1	2.20E-1	1.00E-2	1.00E-2
7.000+0	2.09E+1	2.60E-2	1.34E+0	1.92E-4	9.89E-4	1.18E-4	4.95E+1	4.95E+1	2.20E-1	2.36E-1	2.36E-1	1.00E-2	1.00E-2
8.000+0	2.16E+1	2.52E-2	1.29E+0	1.47E-4	9.00E-4	1.01E-4	5.84E+1	5.84E+1	3.03E-1	2.70E-1	2.70E-1	1.00E-2	1.00E-2
1.000+1	2.22E+1	2.45E-2	1.26E+0	9.40E-5	7.67E-4	7.77E-5	7.67E+1	7.67E+1	5.15E-1	3.44E-1	3.44E-1	1.00E-2	1.00E-2
1.250+1	2.30E+1	2.38E-2	1.21E+0	6.02E-5	6.51E-4	8.14E-5	1.00E+1	1.00E+1	8.98E-1	4.33E-1	4.33E-1	1.00E-2	1.00E-2
1.500+1	2.37E+1	2.33E-2	1.20E+0	4.18E-5	5.87E-4	5.08E-5	1.24E+1	1.24E+1	1.29E+0	5.31E-1	5.31E-1	1.00E-2	1.00E-2
1.750+1	2.32E+1	2.34E-2	1.20E+0	3.07E-5	5.05E-4	4.30E-5	1.48E+1	1.48E+1	1.81E+0	6.37E-1	6.37E-1	1.00E-2	1.00E-2
2.000+1	2.31E+1	2.36E-2	1.21E+0	2.35E-5	4.95E-4	3.74E-5	1.73E+1	1.73E+1	2.41E+0	7.48E-1	7.48E-1	1.00E-2	1.00E-2
2.500+1	2.29E+1	2.39E-2	1.23E+0	1.50E-5	3.83E-4	2.95E-5	2.22E+1	2.22E+1	3.84E+0	9.74E-1	9.74E-1	1.00E-2	1.00E-2
3.000+1	2.25E+1	2.42E-2	1.24E+0	1.04E-5	3.31E-4	2.44E-5	2.72E+1	2.72E+1	5.53E+0	1.21E+0	1.21E+0	1.00E-2	1.00E-2
3.500+1	2.22E+1	2.45E-2	1.26E+0	7.88E-6	2.93E-4	2.07E-5	3.22E+1	3.22E+1	7.47E+0	1.44E+0	1.44E+0	1.00E-2	1.00E-2
4.000+1	2.19E+1	2.49E-2	1.26E+0	5.88E-6	2.63E-4	1.80E-5	3.72E+1	3.72E+1	9.62E+0	1.70E+0	1.70E+0	1.00E-2	1.00E-2
4.500+1	2.14E+1	2.54E-2	1.30E+0	4.64E-6	2.39E-4	1.59E-5	4.22E+1	4.22E+1	1.19E+1	1.96E+0	1.96E+0	1.00E-2	1.00E-2
5.000+1	2.11E+1	2.58E-2	1.32E+0	3.76E-6	2.20E-4	1.42E-5	4.72E+1	4.72E+1	1.45E+1	2.23E+0	2.23E+0	1.00E-2	1.00E-2
5.500+1	2.07E+1	2.60E-2	1.34E+0	3.11E-6	2.03E-4	1.26E-5	5.22E+1	5.22E+1	1.71E+1	2.49E+0	2.49E+0	1.00E-2	1.00E-2
6.000+1	2.07E+1	2.63E-2	1.35E+0	2.61E-6	1.89E-4	1.17E-5	5.72E+1	5.72E+1	1.99E+1	2.75E+0	2.75E+0	1.00E-2	1.00E-2
6.500+1	2.05E+1	2.65E-2	1.36E+0	2.27E-6	1.77E-4	1.08E-5	6.22E+1	6.22E+1	2.29E+1	3.02E+0	3.02E+0	1.00E-2	1.00E-2
7.000+1	2.03E+1	2.68E-2	1.38E+0	1.92E-6	1.67E-4	9.99E-6	6.72E+1	6.72E+1	2.60E+1	3.30E+0	3.30E+0	1.00E-2	1.00E-2
8.000+1	1.99E+1	2.73E-2	1.40E+0	1.47E-6	1.49E-4	8.83E-6	7.27E+1	7.27E+1	3.24E+1	3.86E+0	3.86E+0	1.00E-2	1.00E-2
1.000+2	1.92E+1	2.83E-2	1.46E+0	9.40E-7	1.24E-4	6.86E-6	9.73E+1	9.73E+1	4.64E+1	5.05E+0	5.05E+0	1.00E-2	1.00E-2

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Form Factors

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SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.250-1	8.247-1	1.962-1	1.000-0	2.073-1	7.925-1	1.500-1	3.880-3	9.999-1
5.000-3	9.995-1	5.333-4	1.500-1	7.749-1	2.407-1	1.250-0	1.477-1	8.477-1	1.500-1	9.587-4	1.000-0
1.000-2	9.984-1	2.133-3	1.750-1	7.269-1	2.860-1	1.500-0	1.159-1	8.808-1	2.000-1	3.311-4	1.000-0
1.500-2	9.968-1	4.747-3	2.000-1	6.880-1	3.155-1	2.000-0	8.658-2	9.193-1	5.000-1	9.884-5	1.000-0
2.000-2	9.939-1	8.373-3	2.500-1	6.218-1	3.740-1	2.500-0	7.449-2	9.451-1	6.000-1	1.620-5	1.000-0
2.500-2	9.905-1	1.236-2	3.000-1	5.727-1	4.208-1	3.000-0	6.297-2	9.638-1	1.000-2	6.908-7	1.000-0
3.000-2	9.865-1	1.844-2	4.000-1	5.027-1	4.957-1	3.500-0	5.145-2	9.767-1	1.000-3	1.830-10	1.000-0
4.000-2	9.784-1	3.188-2	5.000-1	4.445-1	5.613-1	4.000-0	4.333-2	9.852-1	1.000-6	1.348-19	1.000-0
5.000-2	9.639-1	4.793-2	6.000-1	3.879-1	6.215-1	5.000-0	2.710-2	9.941-1	1.000-9	1.484-28	1.000-0
7.000-2	9.328-1	8.580-2	7.000-1	3.339-1	6.754-1	6.000-0	1.759-2	9.975-1			
9.000-2	8.955-1	1.288-1	8.000-1	2.849-1	7.218-1	7.000-0	1.181-2	9.989-1			
1.000-1	8.757-1	1.471-1	9.000-1	2.425-1	7.607-1	8.000-0	9.027-3	9.995-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 32.064										Density 2.07 GRAMS/CC				
ENERGY		TOTAL MFP			CROSS SECTION (EAPARS)						MEV/COLLISION		MEV/CM	
MEV		CH	CH+CH/CM		TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD		K.E. FLOR	K.E.	MEV/STR	K.E.
1.000	4	3.443	5	1.403	7.472	5	1.702	2	6.176	3	7.470	5	9.998	5
1.200	4	4.381	5	1.103	5.872	5	1.701	2	8.931	3	5.870	5	1.200	4
1.250	4	4.657	5	1.037	5.524	5	1.701	2	9.700	3	5.522	5	1.250	4
1.400	4	5.518	5	0.795	4.862	5	1.700	2	1.220	2	4.860	5	1.399	4
1.500	4	6.151	5	0.759	4.182	5	1.700	2	1.403	2	4.180	5	1.499	4
1.641	4	7.161	5	0.746	3.592	5	1.699	2	1.677	2	3.590	5	1.640	4
1.750	4	8.742	6	0.959	2.840	6	1.699	2	1.706	2	2.840	6	1.655	4
1.800	4	9.817	6	1.003	5.340	6	1.699	2	1.799	2	5.340	6	1.655	4
1.750	4	5.277	6	0.194	4.874	6	1.699	2	1.906	2	4.874	6	1.750	4
1.800	4	5.767	6	0.377	4.460	6	1.698	2	2.016	2	4.460	6	1.800	4
2.000	4	6.751	6	1.156	3.810	6	1.697	2	2.486	2	3.810	6	2.000	4
2.285	4	8.012	6	0.029	3.210	6	1.695	2	3.236	2	3.210	6	2.285	4
2.299	4	7.266	6	0.649	3.940	6	1.695	2	3.276	2	3.940	6	2.299	4
2.400	4	7.770	6	0.217	3.310	6	1.694	2	3.567	2	3.310	6	2.400	4
2.500	4	8.306	6	5.774	3.074	6	1.693	2	3.667	2	3.074	6	2.500	4
3.000	4	1.164	5	4.151	2.210	6	1.690	2	5.548	2	2.210	6	3.000	4
3.500	4	1.621	5	2.979	1.586	6	1.684	2	7.505	2	1.586	6	3.500	4
4.000	4	2.161	5	2.235	1.190	6	1.679	2	9.751	2	1.190	6	3.999	4
4.500	4	2.843	5	1.700	9.049	5	1.673	2	1.225	1	9.047	5	4.499	4
5.000	4	3.632	5	1.330	7.082	5	1.667	2	1.502	1	7.080	5	4.999	4
5.500	4	4.561	5	1.059	5.640	5	1.658	2	1.802	1	5.638	5	5.498	4
6.000	4	5.614	5	0.605	4.582	5	1.651	2	2.127	1	4.580	5	5.998	4
6.500	4	6.840	5	0.062	3.760	5	1.641	2	2.468	1	3.759	5	6.497	4
6.800	4	8.213	5	5.982	3.132	5	1.631	2	2.832	1	3.130	5	6.996	4
6.800	4	1.147	4	4.210	2.242	5	1.614	2	3.629	1	2.240	5	7.594	4
9.000	4	1.548	4	3.121	1.662	5	1.590	2	4.774	1	1.660	5	8.981	4
1.000	3	1.893	4	2.552	1.359	5	1.569	2	5.395	1	1.357	5	9.988	4
1.250	3	3.444	4	1.403	7.467	4	1.493	2	7.751	1	7.452	4	1.247	3
1.500	3	5.614	4	0.605	4.581	4	1.434	2	1.042	0	4.567	4	1.495	3
1.750	3	8.569	4	5.638	3.002	4	1.356	2	1.293	0	2.988	4	1.742	3
2.000	3	1.235	3	3.910	2.082	4	1.291	2	1.558	0	2.069	4	1.987	3
2.471	3	2.226	3	2.171	1.156	4	1.151	2	1.985	0	1.144	4	2.466	3
2.472	3	2.176	4	2.220	1.182	5	1.151	2	1.985	0	1.181	5	2.470	3
2.500	3	2.239	4	2.158	1.149	5	1.144	2	2.011	0	1.148	5	2.497	3
3.000	3	3.946	4	1.362	7.294	4	1.037	2	2.477	0	7.243	4	2.996	3
3.500	3	5.307	4	9.102	4.846	4	9.326	1	2.845	0	4.837	4	3.493	3
4.000	3	7.526	4	6.419	3.418	4	8.508	1	3.207	0	3.409	4	3.990	3
4.500	3	1.035	3	4.667	2.485	4	7.789	1	3.497	0	2.477	4	4.485	3
5.000	3	1.377	3	3.510	1.869	4	7.197	1	3.779	0	1.861	4	4.980	3
5.500	3	1.792	3	2.656	1.438	4	6.675	1	4.017	0	1.428	4	5.473	3
6.000	3	2.279	3	2.120	1.129	4	6.231	1	4.246	0	1.122	4	5.965	3
6.200	3	2.659	3	1.690	8.996	3	5.809	1	4.445	0	8.933	3	6.455	3
7.000	3	3.527	3	1.370	7.293	3	5.443	1	4.638	0	7.234	3	6.943	3
7.000	3	5.145	3	0.930	4.999	3	4.842	1	5.006	0	4.946	3	7.915	3
1.000	2	9.799	3	0.930	1.625	3	3.840	1	5.622	0	2.581	3	9.833	3
1.250	2	1.889	2	2.557	1.362	3	2.885	1	6.201	0	1.327	3	1.218	2
1.500	2	3.217	2	1.502	7.996	2	2.283	1	6.717	0	7.701	2	1.445	2
1.750	2	5.075	2	9.520	5.059	2	1.821	1	7.046	0	4.816	2	1.664	2
2.000	2	7.499	2	6.442	4.340	2	1.498	1	7.345	0	3.207	2	1.872	2
2.500	2	1.435	1	3.367	0.792	1	1.062	1	7.650	0	1.610	2	2.250	2
3.000	2	2.391	1	2.021	0.1076	0	0.023	0	7.909	0	9.166	1	2.568	2
3.500	2	3.625	1	1.333	0.096	1	6.270	0	8.011	0	5.668	1	2.821	2
4.000	2	5.089	1	0.493	1.055	1	5.065	0	8.100	0	3.738	1	3.004	2
4.500	2	6.744	1	7.163	1.814	1	4.162	0	8.117	0	2.586	1	3.126	2
5.000	2	8.510	1	5.677	3.022	1	3.492	0	8.133	0	1.860	1	3.192	2
5.500	2	1.034	0	4.671	2.497	1	2.961	0	8.106	0	1.380	1	3.217	2
6.000	2	1.217	0	3.970	2.114	1	2.547	0	8.082	0	1.051	1	3.203	2
6.500	2	1.397	0	3.458	1.841	1	2.206	0	8.022	0	8.195	0	3.185	2
7.000	2	1.569	0	3.078	1.639	1	1.930	0	7.957	0	6.494	0	3.148	2
8.000	2	1.962	0	2.566	1.366	1	1.518	0	7.868	0	4.279	0	3.065	2
1.000	1	2.393	0	2.018	1.075	1	1.006	0	7.603	0	2.137	0	2.993	2
1.250	1	2.865	0	1.686	0.978	0	5.606	1	7.242	0	1.075	0	3.152	2
1.500	1	3.198	0	1.510	0.842	0	4.884	1	6.961	0	6.132	1	3.541	2

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 32.06				DENSITY 2.07 GRAMS/CC			
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARN)				NEV/COLLISION
	CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	
MEV	CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	NEV/CM
1.750-1	3.478-0	1.398-1	7.400-0	3.482-1	8.887-0	3.843-1	4.098-2
2.000-1	3.701-0	1.395-1	6.948-0	2.893-1	6.423-0	2.984-1	4.784-2
2.500-1	4.100-0	1.178-1	6.275-0	1.741-1	5.967-0	1.323-1	6.305-2
3.000-1	4.421-0	1.093-1	5.818-0	1.219-1	5.619-0	7.703-2	8.280-2
3.500-1	4.725-0	1.022-1	5.444-0	8.930-2	5.305-0	4.938-2	1.027-1
4.000-1	4.995-0	9.672-2	5.150-0	6.906-2	5.047-0	3.360-2	1.245-1
4.500-1	5.257-0	9.189-2	4.893-0	5.487-2	4.814-0	2.413-2	1.471-1
5.000-1	5.500-0	8.784-2	4.677-0	4.435-2	4.615-0	1.794-2	1.708-1
5.500-1	5.738-0	8.420-2	4.483-0	3.889-2	4.432-0	1.380-2	1.951-1
6.000-1	5.962-0	8.103-2	4.314-0	3.086-2	4.272-0	1.088-2	2.204-1
6.500-1	6.187-0	7.808-2	4.157-0	2.631-2	4.122-0	8.770-3	2.458-1
7.000-1	6.402-0	7.546-2	4.018-0	2.270-2	3.988-0	7.196-3	2.720-1
8.000-1	6.807-0	7.097-2	3.779-0	1.739-2	3.756-0	5.038-3	3.285-1
1.000-0	7.581-0	6.372-2	3.393-0	1.114-2	3.379-0	2.836-3	4.395-1
1.022-0	7.863-0	6.304-2	3.356-0	1.067-2	3.343-0	2.729-3	4.523-1
1.250-0	8.444-0	5.694-2	3.032-0	7.135-3	3.022-0	1.911-3	5.876-1
1.500-0	9.302-0	5.193-2	2.765-0	4.957-3	2.747-0	1.384-3	7.404-1
1.750-0	1.005-1	4.807-2	2.560-0	3.642-3	2.526-0	1.044-3	8.976-1
2.000-0	1.074-1	4.498-2	2.395-0	2.789-3	2.344-0	8.320-4	1.060-0
2.044-0	1.086-1	4.448-2	2.368-0	2.670-3	2.316-0	8.046-4	1.088-0
2.500-0	1.197-1	4.036-2	2.149-0	1.785-3	2.059-0	5.959-4	1.396-0
3.000-0	1.300-1	3.717-2	1.979-0	1.240-3	1.845-0	4.614-4	1.748-0
3.500-0	1.390-1	3.476-2	1.851-0	9.109-4	1.678-0	3.778-4	2.114-0
4.000-0	1.466-1	3.295-2	1.754-0	6.974-4	1.539-0	3.178-4	2.495-0
4.500-0	1.531-1	3.156-2	1.680-0	5.510-4	1.425-0	2.718-4	2.887-0
5.000-0	1.589-1	3.041-2	1.619-0	4.483-4	1.329-0	2.380-4	3.289-0
5.500-0	1.645-1	2.937-2	1.564-0	3.689-4	1.246-0	2.127-4	3.698-0
6.000-0	1.693-1	2.853-2	1.519-0	3.100-4	1.175-0	1.921-4	4.116-0
6.500-0	1.734-1	2.785-2	1.483-0	2.641-4	1.112-0	1.748-4	4.541-0
7.000-0	1.769-1	2.731-2	1.454-0	2.278-4	1.056-0	1.602-4	4.975-0
8.000-0	1.820-1	2.654-2	1.413-0	1.744-4	9.609-5	1.389-4	5.862-0
1.000-1	1.867-1	2.588-2	1.378-0	1.116-4	8.184-5	1.053-4	7.705-0
1.250-1	1.924-1	2.511-2	1.337-0	7.143-5	6.944-5	8.324-5	1.005-0
1.500-1	1.941-1	2.489-2	1.325-0	4.960-5	6.057-5	6.868-5	1.246-0
1.750-1	1.927-1	2.507-2	1.335-0	3.644-5	5.387-5	5.838-5	1.491-0
2.000-1	1.909-1	2.530-2	1.347-0	2.790-5	4.862-5	5.071-5	1.737-0
2.500-1	1.879-1	2.571-2	1.389-0	1.786-5	4.086-5	4.007-5	2.233-0
3.000-1	1.847-1	2.616-2	1.393-0	1.240-5	3.540-5	3.306-5	2.731-0
3.500-1	1.821-1	2.653-2	1.412-0	9.110-6	3.131-5	2.810-5	3.230-0
4.000-1	1.791-1	2.697-2	1.436-0	6.975-6	2.813-5	2.441-5	3.730-0
4.500-1	1.755-1	2.752-2	1.465-0	5.511-6	2.557-5	2.156-5	4.231-0
5.000-1	1.728-1	2.795-2	1.488-0	4.464-6	2.348-5	1.929-5	4.732-0
5.500-1	1.711-1	2.823-2	1.503-0	3.689-6	2.172-5	1.745-5	5.232-0
6.000-1	1.694-1	2.852-2	1.519-0	3.100-6	2.023-5	1.592-5	5.733-0
6.500-1	1.676-1	2.882-2	1.534-0	2.641-6	1.894-5	1.463-5	6.233-0
7.000-1	1.659-1	2.911-2	1.550-0	2.278-6	1.781-5	1.353-5	6.734-0
8.000-1	1.626-1	2.971-2	1.582-0	1.744-6	1.595-5	1.175-5	7.736-0
1.000-2	1.568-1	3.085-2	1.642-0	1.116-6	1.324-5	9.287-6	9.740-0

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Form Factors

16-S

SIN(Θ/2)/λ COHERENT		INCOHERENT	SIN(Θ/2)/λ COHERENT		INCOHERENT	SIN(Θ/2)/λ COHERENT		INCOHERENT	SIN(Θ/2)/λ COHERENT		INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	0.1000-0	0.000-0	1.250-1	8.381-1	1.837-1	1.000-0	2.224-1	7.795-1	1.000-1	4.537-3	9.998-1
5.000-3	9.998-1	4.375-4	1.500-1	7.899-1	2.300-1	1.250-0	1.575-1	8.384-1	1.500-1	1.141-3	1.000-0
1.000-2	9.998-1	1.813-3	1.750-1	7.378-1	2.728-1	1.500-0	1.805-1	8.744-1	2.000-1	3.988-4	1.000-0
1.500-2	9.970-1	4.037-3	2.000-1	6.937-1	3.100-1	2.000-0	2.777-2	9.151-1	5.000-1	1.208-5	1.000-0
2.000-2	9.946-1	7.138-3	2.500-1	6.198-1	3.740-1	2.500-0	7.396-2	9.407-1	8.000-1	1.991-6	1.000-0
2.500-2	9.916-1	1.108-2	3.000-1	5.643-1	4.247-1	3.000-0	8.313-2	9.594-1	1.000-2	8.514-7	1.000-0
3.000-2	9.880-1	1.578-2	4.000-1	4.505-1	5.001-1	3.500-0	5.271-2	9.728-1	1.000-3	2.342-10	1.000-0
4.000-2	9.730-1	2.742-2	5.000-1	4.388-1	5.600-1	4.000-0	4.488-2	9.823-1	1.000-6	1.782-19	1.000-0
5.000-2	9.677-1	4.182-2	6.000-1	3.901-1	6.143-1	5.000-0	2.924-2	9.925-1	1.000-9	1.928-28	1.000-0
7.000-2	9.398-1	7.579-2	7.000-1	3.431-1	6.841-1	6.000-0	1.936-2	9.988-1			
9.000-2	9.048-1	1.145-1	8.000-1	2.985-1	7.085-1	7.000-0	1.311-2	9.988-1			
1.000-1	8.898-1	1.344-1	9.000-1	2.579-1	7.470-1	8.000-0	1.026-2	9.993-1

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ENDL Evaluated Photon Cross Sections

17-Cl

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Energy Deposition

17-C1

17-C1

ATOMIC WEIGHT 35.453				DENSITY 0.003214 GRAMS/CC															
ENERGY		TOTAL MPF		CRUSS SECTION (GAWNS)				NEV/COLLISION		MEV/CM									
MEV	CM	CH	CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	K.E.							
1.000	4.795	2.1733	4	1.020	6	1.922	2	5.642	3	1.020	6	9.998	5	9.998	5	1.062	10	5.569	3
1.200	4.220	2.1402	4	8.252	5	1.921	2	8.312	3	8.250	5	1.200	4	1.200	4	1.529	10	5.405	3
1.250	4.346	2.1326	4	7.806	5	1.921	2	8.995	3	7.805	5	1.250	4	1.250	4	1.659	10	5.326	3
1.400	4.237	2.1137	4	6.898	5	1.920	2	1.120	2	6.890	5	1.400	4	1.400	4	2.081	10	5.133	3
1.500	4.027	2.1028	4	6.052	5	1.920	2	1.280	2	6.050	5	1.500	4	1.500	4	2.399	10	4.994	3
1.700	4.399	2.8111	3	4.952	5	1.918	2	1.822	2	4.950	5	1.699	4	1.699	4	3.058	10	4.594	3
1.750	4.382	2.8015	3	4.718	5	1.918	2	1.740	2	4.716	5	1.749	4	1.749	4	3.251	10	4.506	3
1.800	4.099	2.7925	3	4.505	5	1.917	2	1.500	2	4.500	5	1.799	4	1.799	4	3.440	10	4.423	3
1.900	4.082	2.7733	3	3.755	5	1.917	2	2.265	2	3.750	5	1.997	4	1.997	4	4.237	10	4.090	3
2.000	4.082	2.7733	3	3.752	5	1.917	2	2.270	2	3.750	5	1.999	4	1.999	4	4.246	10	4.095	3
2.012	4.731	4.0774	4	2.000	6	1.917	2	2.297	2	2.000	6	2.012	4	2.012	4	4.300	10	4.236	2
2.200	4.602	3.6761	4	3.980	6	1.915	2	2.742	2	3.980	6	2.200	4	2.200	4	5.142	10	4.780	2
2.400	4.597	3.5776	4	3.400	6	1.913	2	3.248	2	3.400	6	2.400	4	2.400	4	6.119	10	4.455	2
2.500	4.725	3.4534	4	3.193	6	1.913	2	3.532	2	3.193	6	2.500	4	2.500	4	6.640	10	4.366	2
2.695	4.604	3.4858	4	2.680	6	1.911	2	4.099	2	2.680	6	2.695	4	2.695	4	7.716	10	4.208	2
2.709	4.515	3.5514	4	3.150	6	1.911	2	4.141	2	3.150	6	2.709	4	2.709	4	7.796	10	4.659	2
3.000	4.866	3.4519	4	2.680	6	1.909	2	5.069	2	2.680	6	3.000	4	3.000	4	9.561	10	4.357	2
3.500	9.427	3.3014	4	1.943	6	1.904	2	6.866	2	1.943	6	3.500	4	3.500	4	1.301	9	3.712	2
4.000	1.237	2.5144	4	1.480	6	1.899	2	8.930	2	1.480	6	3.999	4	3.999	4	1.700	9	3.232	2
4.500	1.615	1.9274	4	1.134	6	1.892	2	1.123	1	1.134	6	4.499	4	4.499	4	2.151	9	2.787	2
5.000	2.048	2.1519	4	8.942	5	1.886	2	1.379	1	8.940	5	4.999	4	4.999	4	2.655	9	2.440	2
5.500	2.566	2.1213	4	7.139	5	1.878	2	1.657	1	7.137	5	5.499	4	5.499	4	3.212	9	2.143	2
6.000	3.152	9.8712	3	5.812	5	1.870	2	1.960	1	5.800	5	5.998	4	5.998	4	3.823	9	1.903	2
6.500	3.832	9.8300	3	4.769	5	1.860	2	2.278	1	4.760	5	6.499	4	6.499	4	4.436	9	1.696	2
7.000	4.589	6.7811	3	3.998	5	1.850	2	2.619	1	3.990	5	6.997	4	6.997	4	5.201	9	1.525	2
8.000	4.678	4.678	3	2.872	5	1.832	2	3.368	1	2.870	5	7.995	4	7.995	4	6.791	9	1.253	2
9.000	8.592	3.6213	3	2.132	5	1.808	2	4.171	1	2.130	5	8.992	4	8.992	4	8.992	9	1.047	2
1.000	3.120	2.777	3	1.635	5	1.788	2	5.049	1	1.633	5	9.989	4	9.989	4	1.080	8	8.915	3
1.250	3.162	1.585	3	9.334	4	1.707	2	7.349	1	9.317	4	1.248	3	1.248	3	1.654	8	6.358	3
1.500	3.101	1.003	3	5.907	4	1.645	2	9.986	1	5.890	4	1.496	3	1.496	3	2.377	8	4.823	3
1.750	3.683	8.644	2	3.911	4	1.559	2	1.254	0	3.898	4	1.743	3	1.743	3	3.269	8	3.722	3
2.000	3.690	4.651	2	2.738	4	1.489	2	1.527	0	2.723	4	1.989	3	1.989	3	4.203	8	2.973	3
2.500	3.125	0.240	2	1.480	4	1.321	2	2.008	0	1.448	4	2.477	3	2.477	3	6.519	8	1.974	3
2.821	3.782	1.768	2	1.040	4	1.238	2	2.348	0	1.027	4	2.787	3	2.787	3	8.261	8	1.582	3
2.822	3.879	1.858	3	9.750	4	1.239	2	2.329	0	9.737	4	2.818	3	2.818	3	7.161	8	1.382	2
3.000	3.172	1.452	3	6.432	4	1.198	2	2.511	0	6.420	4	2.996	3	2.996	3	6.173	8	1.277	2
3.500	3.175	9.801	2	5.770	4	1.074	2	2.917	0	5.759	4	3.493	3	3.493	3	3.271	7	1.030	2
4.000	3.409	7.058	2	4.159	3	9.789	1	3.321	0	4.144	3	3.999	3	3.999	3	3.788	7	8.848	3
4.500	3.575	5.208	2	3.088	4	8.996	0	3.648	0	3.057	4	4.486	3	4.486	3	4.203	7	1.932	7
5.000	3.833	7.639	2	2.337	3	8.181	1	3.829	0	2.324	3	4.982	3	4.982	3	5.780	7	8.072	3
5.500	3.010	3.080	2	1.813	4	7.560	1	4.226	0	1.805	4	5.576	3	5.576	3	6.935	7	5.211	3
6.000	3.273	2.443	2	1.339	4	7.034	1	4.480	0	1.331	4	5.969	3	5.969	3	7.748	7	4.511	3
6.500	3.587	1.960	2	1.194	4	6.552	1	4.890	0	1.147	4	6.460	3	6.460	3	6.239	7	3.931	3
7.000	3.946	0.159	2	9.412	3	6.136	1	4.874	0	9.345	3	6.951	3	6.951	3	6.730	7	3.458	3
8.000	3.809	0.108	2	6.521	3	5.451	1	5.284	0	6.481	3	7.927	3	7.927	3	7.706	7	6.309	7
1.000	2.581	0.592	1	3.488	3	4.354	1	5.917	0	3.419	3	9.858	3	9.858	3	9.870	7	1.625	3
1.250	2.011	3.078	1	1.812	3	3.301	1	6.517	0	1.772	3	1.223	2	1.201	2	1.533	6	1.198	3
1.500	2.713	1.818	1	1.063	3	2.633	1	7.052	0	1.036	3	1.453	2	1.432	2	2.178	6	8.360	4
1.750	2.702	1.152	1	6.779	2	2.105	1	7.405	0	6.995	2	1.677	2	1.656	2	2.913	6	6.129	4
2.000	2.995	1.798	0	4.585	2	1.734	1	7.726	0	4.334	2	1.892	2	1.871	2	3.719	6	4.683	4
2.500	2.702	1.040	0	2.378	2	1.230	1	8.059	0	2.175	2	2.290	2	2.270	2	5.473	6	2.947	4
3.000	2.295	2.240	2	2.416	2	9.266	0	8.342	1	2.238	2	2.636	2	2.617	2	7.273	6	2.020	4
3.500	2.989	2.199	0	9.208	1	7.262	0	8.425	0	7.637	1	2.923	2	2.905	2	8.983	6	1.460	4
4.000	2.832	2.059	0	6.467	1	5.899	0	8.994	0	6.025	1	3.146	2	3.129	2	1.040	5	1.105	4
4.500	3.810	8.167	1	5.808	1	4.829	0	9.776	0	3.467	1	3.309	2	3.293	2	1.151	5	8.642	5
5.000	4.981	6.170	1	3.723	1	4.059	0	9.525	0	2.488	1	4.413	2	4.398	2	1.226	5	9.962	5
5.500	6.020	5.188	1	3.043	1	3.442	0	8.571	0	1.841	1	4.471	2	4.456	2	1.270	5	5.744	5
6.000	2.718	4.432	1	2.550	1	2.984	0	8.949	1	1.399	1	3.489	2	3.477	2	1.284	5	4.081	5
6.500	2.839	3.724	1	2.193	1	2.568	0	8.408	1	1.087	1	3.485	2	3.474	2	1.282	5	4.584	5
7.000	2.958	3.276	1	1.929	1	2.249	0	8.432	0	8.604	0	3.460	2	3.451	2	1.295	5	3.833	5
8.000	2.163	2.675	1	1.575	1	1.771	0	8.332	0	5.847	0	3.383	2	3.375	2	1.210	5	2.902	5
1.000	1.528	2.043	1	1.204	1	1.176	0	8.098	0	2.803	0	3.281	2	3.278	2	1.140	5	2.153	5
1.250	1.878	1.874	1	9.099	0	7.724	1	7.881	0	4.401	0	3.378	2	3.375	2	1.210	5	1.018	5

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ATOMIC WEIGHT 35.453										DENSITY 0.003214 GRAMS/CC				
ENERGY			TOTAL HPF			CROSS SECTION (EAPNS)				NEUT/COLLISION			MEV/CM	
MEV	CH	CH+CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	SPRMSSTR		K.E.		
1.500 - 1	2.099 - 3	1.403 - 1	8.728 - 0	5.481 - 1	7.305 - 0	7.952 - 1		3.713 - 2	3.711 - 2	1.483 - 5		1.708 - 5		
1.750 - 1	2.295 - 3	1.356 - 1	7.980 - 0	4.076 - 1	7.078 - 0	4.368 - 1		4.231 - 2	4.229 - 2	1.900 - 5		1.043 - 5		
2.000 - 1	2.454 - 3	1.286 - 1	7.484 - 0	3.184 - 1	6.818 - 0	3.305 - 1		4.687 - 2	4.686 - 2	2.355 - 5		1.991 - 5		
2.500 - 1	2.730 - 3	1.142 - 1	6.710 - 0	2.090 - 1	6.336 - 0	2.702 - 1		6.453 - 2	6.452 - 2	4.350 - 5		2.354 - 5		
3.000 - 1	2.950 - 3	1.025 - 1	6.203 - 0	1.429 - 1	5.967 - 0	2.697 - 2		6.305 - 2	6.305 - 2	7.322 - 5		2.815 - 5		
3.500 - 1	3.157 - 3	9.657 - 2	5.803 - 0	1.055 - 1	5.634 - 0	6.351 - 2		1.031 - 1	1.030 - 1	1.127 - 4		3.265 - 5		
4.000 - 1	3.340 - 3	9.317 - 2	5.405 - 0	8.104 - 2	5.361 - 0	4.325 - 2		1.247 - 1	1.247 - 1	1.651 - 4		3.735 - 5		
4.500 - 1	3.517 - 3	8.647 - 2	5.203 - 0	6.416 - 2	5.113 - 0	3.113 - 2		1.477 - 1	1.472 - 1	2.300 - 4		4.187 - 5		
5.000 - 1	3.680 - 3	8.044 - 2	4.977 - 0	5.206 - 2	4.902 - 0	2.320 - 2		1.710 - 1	1.710 - 1	3.100 - 4		4.645 - 5		
5.500 - 1	3.841 - 3	8.101 - 2	4.789 - 0	4.307 - 2	4.708 - 0	1.791 - 2		1.952 - 1	1.952 - 1	4.041 - 4		5.083 - 5		
6.000 - 1	3.952 - 3	7.757 - 2	4.589 - 0	3.623 - 2	4.538 - 0	1.414 - 2		2.205 - 1	2.205 - 1	5.152 - 4		5.523 - 5		
6.500 - 1	4.143 - 3	7.143 - 2	4.382 - 0	3.082 - 2	4.336 - 0	1.197 - 2		2.458 - 1	2.458 - 1	6.427 - 4		6.000 - 5		
7.000 - 1	4.267 - 3	7.257 - 2	4.272 - 0	2.685 - 2	4.236 - 0	9.943 - 3		2.721 - 1	2.721 - 1	7.893 - 4		6.346 - 5		
7.500 - 1	4.359 - 3	6.825 - 2	4.018 - 0	2.042 - 2	3.991 - 0	6.656 - 3		3.205 - 1	3.265 - 1	1.129 - 3		7.163 - 5		
8.000 - 1	4.579 - 3	6.126 - 2	3.806 - 0	1.308 - 2	3.590 - 0	3.806 - 3		4.301 - 1	4.395 - 1	2.093 - 3		8.654 - 5		
8.500 - 1	4.734 - 3	5.601 - 2	3.580 - 0	1.253 - 2	3.552 - 0	3.664 - 3	1.000 - 6	4.523 - 1	4.523 - 1	2.163 - 3		8.809 - 5		
9.000 - 1	4.885 - 3	5.473 - 2	3.222 - 0	8.379 - 3	3.211 - 0	2.589 - 3		5.676 - 1	5.676 - 1	3.695 - 3		1.034 - 4		
9.500 - 1	5.032 - 3	4.993 - 2	2.939 - 0	5.821 - 3	2.919 - 0	1.957 - 3		7.403 - 1	7.403 - 1	5.777 - 3		1.188 - 4		
1.750 - 0	6.729 - 3	4.684 - 2	2.722 - 0	4.277 - 3	2.684 - 0	1.399 - 3		8.976 - 1	8.976 - 1	8.477 - 3		1.334 - 4		
2.000 - 0	7.186 - 3	4.181 - 2	2.548 - 0	3.675 - 3	2.515 - 0	1.115 - 3		1.059 - 1	1.059 - 1	1.179 - 2		1.497 - 4		
2.250 - 0	7.268 - 3	4.281 - 2	2.520 - 0	3.136 - 3	2.460 - 0	1.078 - 3	5.562 - 2	1.088 - 0	1.088 - 0	1.244 - 2		1.497 - 4		
2.500 - 0	8.001 - 3	3.869 - 2	2.289 - 0	2.096 - 3	2.108 - 0	7.991 - 4	9.826 - 2	1.396 - 0	1.396 - 0	2.039 - 2		1.744 - 4		
3.000 - 0	8.674 - 3	3.587 - 2	2.112 - 0	1.456 - 3	1.960 - 0	6.187 - 4	1.494 - 1	1.749 - 0	1.749 - 0	3.190 - 2		2.016 - 4		
3.500 - 0	9.259 - 3	3.360 - 2	1.978 - 0	1.070 - 3	1.781 - 0	5.103 - 4	1.962 - 1	2.117 - 0	2.117 - 0	4.655 - 2		2.286 - 4		
4.000 - 0	9.751 - 3	3.191 - 2	1.878 - 0	8.190 - 4	1.835 - 0	4.258 - 4	2.421 - 1	2.498 - 0	2.498 - 0	6.460 - 2		2.562 - 4		
4.500 - 0	1.016 - 4	3.061 - 2	1.802 - 0	6.471 - 4	1.514 - 0	3.638 - 4	2.869 - 1	2.993 - 0	2.993 - 0	8.624 - 2		2.846 - 4		
5.000 - 0	1.053 - 4	2.994 - 2	1.739 - 0	5.242 - 4	1.112 - 0	3.184 - 4	3.263 - 1	3.297 - 0	3.297 - 0	1.116 - 1		3.130 - 4		
5.500 - 0	1.089 - 4	2.857 - 2	1.682 - 0	3.640 - 4	1.324 - 0	2.846 - 4	3.570 - 1	3.608 - 0	3.608 - 0	1.405 - 1		3.405 - 4		
6.000 - 0	1.125 - 4	2.717 - 2	1.630 - 0	2.892 - 4	1.436 - 0	2.493 - 4	3.875 - 1	3.918 - 0	3.918 - 0	1.659 - 1		3.659 - 4		
6.500 - 0	1.163 - 4	2.717 - 2	1.600 - 0	3.102 - 4	1.181 - 0	2.337 - 4	4.179 - 1	4.555 - 0	4.555 - 0	2.102 - 1		3.978 - 4		
7.000 - 0	1.166 - 4	2.668 - 2	1.570 - 0	2.675 - 4	1.122 - 0	2.142 - 4	4.483 - 1	4.991 - 0	4.991 - 0	2.513 - 1		4.279 - 4		
7.500 - 0	1.197 - 4	2.593 - 2	1.530 - 0	2.048 - 4	1.021 - 0	1.830 - 4	5.086 - 1	5.883 - 0	5.883 - 0	3.461 - 1		4.914 - 4		
8.000 - 0	1.222 - 4	2.548 - 2	1.499 - 0	1.311 - 4	8.696 - 1	1.407 - 4	6.262 - 1	7.735 - 0	7.735 - 0	5.874 - 1		6.330 - 4		
8.500 - 0	1.254 - 4	2.481 - 2	1.461 - 0	8.388 - 1	7.378 - 1	1.112 - 4	7.226 - 1	1.009 - 1	1.009 - 1	9.771 - 1		8.046 - 4		
9.000 - 0	1.261 - 4	2.468 - 2	1.453 - 0	8.625 - 5	8.438 - 1	9.175 - 5	8.093 - 1	1.250 - 1	1.250 - 1	1.486 - 0		9.919 - 4		
1.750 - 1	2.248 - 3	2.493 - 2	1.739 - 0	4.280 - 3	5.724 - 0	7.797 - 5	8.952 - 1	1.438 - 1	1.438 - 1	2.051 - 0		1.199 - 3		
2.000 - 1	2.234 - 3	2.232 - 2	1.682 - 0	3.465 - 3	5.678 - 0	6.177 - 5	9.681 - 1	1.496 - 1	1.496 - 1	2.785 - 0		1.199 - 3		
2.500 - 1	2.210 - 3	2.310 - 2	1.581 - 0	2.097 - 3	4.336 - 1	5.352 - 5	1.079 - 0	2.250 - 0	2.250 - 0	4.650 - 0		1.650 - 3		
3.000 - 1	1.167 - 4	2.622 - 2	1.544 - 0	1.456 - 5	3.761 - 1	4.415 - 5	1.168 - 0	2.738 - 0	2.738 - 0	6.170 - 0		2.307 - 3		
3.500 - 1	1.168 - 4	2.654 - 2	1.568 - 0	1.070 - 5	3.326 - 1	3.752 - 5	1.235 - 0	3.237 - 0	3.237 - 0	8.284 - 0		2.771 - 3		
4.000 - 1	1.148 - 4	2.711 - 2	1.596 - 0	8.191 - 6	2.988 - 1	3.259 - 5	1.297 - 0	3.737 - 0	3.737 - 1	1.062 - 1		3.257 - 3		
4.500 - 1	1.123 - 4	2.769 - 2	1.630 - 0	6.472 - 6	2.717 - 1	2.878 - 5	1.399 - 0	4.239 - 0	4.239 - 1	1.316 - 1		3.773 - 3		
5.000 - 1	1.105 - 4	2.815 - 2	1.657 - 0	5.242 - 6	2.494 - 1	2.575 - 5	1.408 - 0	4.739 - 0	4.739 - 1	1.597 - 1		4.298 - 3		
5.500 - 1	1.094 - 4	2.845 - 2	1.675 - 0	4.333 - 6	2.308 - 1	2.324 - 5	1.444 - 0	5.240 - 0	5.240 - 1	1.874 - 1		4.791 - 3		
6.000 - 1	1.082 - 4	2.876 - 2	1.693 - 0	3.640 - 6	2.112 - 1	2.126 - 5	1.478 - 0	5.740 - 0	5.740 - 1	2.175 - 1		5.308 - 3		
6.500 - 1	1.070 - 4	2.910 - 2	1.710 - 0	2.875 - 6	1.912 - 1	1.912 - 5	1.510 - 0	6.252 - 0	6.252 - 1	2.484 - 1		5.834 - 3		
7.000 - 1	1.059 - 4	2.938 - 2	1.728 - 0	2.672 - 6	1.893 - 1	1.805 - 5	1.540 - 0	6.742 - 0	6.742 - 1	2.814 - 1		6.352 - 3		
7.500 - 1	1.037 - 4	2.999 - 2	1.766 - 0	2.048 - 6	1.695 - 1	1.568 - 5	1.596 - 0	7.744 - 0	7.744 - 1	3.495 - 1		7.464 - 3		
8.000 - 1	9.983 - 3	3.117 - 2	1.835 - 0	1.311 - 6	1.407 - 1	1.239 - 5	1.694 - 0	9.748 - 0	9.748 - 1	4.959 - 1		9.764 - 3		

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Form Factors

17-C1

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
0.000-0	1.000-0	0.000-0	1.250-1	0.485-1	1.092-1	1.000-0	2.359-1	7.676-1	1.000-1	5.135-3	9.99
5.000-3	9.996-1	4.118-4	1.500-1	7.992-1	2.196-1	1.250-0	1.664-1	8.267-1	1.500-1	1.340-3	1.00
1.000-2	9.988-1	1.529-3	1.750-1	7.507-1	2.588-1	1.500-0	1.288-1	8.676-1	2.000-1	4.728-4	1.00
1.500-2	9.973-1	3.471-3	2.000-1	7.047-1	2.985-1	2.000-0	8.789-2	9.110-1	5.000-1	1.480-5	1.00
2.000-2	9.952-1	5.135-3	2.500-1	6.248-1	3.670-1	2.500-0	7.259-2	9.367-1	8.000-1	2.418-6	1.00
2.500-2	9.926-1	9.529-3	3.000-1	5.626-1	4.225-1	3.000-0	6.301-2	9.555-1	1.000-2	1.037-6	1.00
3.000-2	9.894-1	1.362-2	4.000-1	4.905-1	5.031-1	3.500-0	5.342-2	9.694-1	1.000-3	2.958-10	1.00
4.000-2	9.813-1	2.377-2	5.000-1	4.293-1	5.611-1	4.000-0	4.598-2	9.793-1	1.000-6	2.322-19	1.00
5.000-2	9.711-1	3.629-2	6.000-1	3.673-1	6.107-1	5.000-0	3.108-2	9.908-1	1.000-9	2.582-28	1.00
7.000-2	9.453-1	6.893-2	7.000-1	3.470-1	6.564-1	6.000-0	2.126-2	9.959-1			
9.000-2	9.135-1	1.026-1	8.000-1	3.075-1	6.981-1	7.000-0	1.452-2	9.981-1			
1.000-1	8.958-1	1.215-1	9.000-1	2.701-1	7.352-1	8.000-0	1.139-2	9.991-1

12/07/78

ENDL Evaluated Photon Cross Sections

18-Ar

12/07/78

Energy Deposition

18-Ar

12/07/78

ENDL Evaluated Photon Data

18-Ar

ATOMIC HEIGHT 39.946				DENSITY 0.001626 GRAMS/CC									
ENERGY MEV	TOTAL HPF			CROSS SECTION (BARNs)				MEV/COLLISION					
	CM	CM ² /GM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E.-FLOR	K.E.	BREMSSTR	K.E.	MEV/CM	K.E.
1.000-4	3	1.975-4	1.310-6	2.154-2	5.190-3	1.310-6		9.998-5	9.998-5	1.125-10	3.211-3		
1.250-4	3	1.967-4	1.040-6	2.153-2	8.114-3	1.039-6		1.250-4	1.250-4	1.757-10	3.185-3		
1.500-4	4	1.967-4	9.982-6	2.153-2	8.777-3	9.980-6		1.500-4	1.500-4	1.900-10	3.160-3		
1.750-4	4	1.967-4	8.282-6	2.152-2	1.189-3	8.280-6		1.750-4	1.750-4	2.530-10	3.044-3		
2.000-4	6	1.967-4	6.582-6	2.151-2	1.592-3	6.582-6		1.749-4	1.749-4	3.443-10	2.799-3		
2.250-4	6	1.967-4	5.312-6	2.149-2	2.081-3	5.310-6		1.999-4	1.999-4	4.496-10	2.603-3		
2.500-4	6	1.967-4	4.892-6	2.149-2	2.293-3	4.890-6		2.099-4	2.099-4	4.957-10	2.517-3		
2.750-4	1	1.105-1	3.892-6	2.146-2	3.120-3	3.890-6		2.451-4	2.451-4	6.756-10	2.218-3		
3.000-4	1	1.942-2	2.100-6	2.146-2	3.195-3	2.100-6		2.466-4	2.466-4	6.840-10	1.269-2		
3.250-4	1	1.942-2	5.170-6	2.145-2	3.243-3	5.170-6		2.500-4	2.500-4	7.031-10	3.188-2		
3.500-4	1	1.942-2	4.960-6	2.143-2	4.082-3	3.290-6		2.800-4	2.800-4	8.819-10	2.258-2		
3.750-4	1	1.942-2	2.950-6	2.142-2	4.659-3	2.950-6		3.000-4	3.000-4	1.012-9	2.189-2		
4.000-4	1	1.942-2	2.630-6	2.140-2	5.269-3	2.630-6		3.193-4	3.193-4	1.147-9	2.058-2		
4.250-4	1	1.942-2	2.890-6	2.140-2	5.315-3	2.890-6		3.207-4	3.207-4	1.157-9	2.272-2		
4.500-4	1	1.942-2	3.631-6	2.138-2	6.315-3	2.448-6		3.500-4	3.500-4	1.378-9	2.100-2		
4.750-4	2	1.942-2	1.930-6	2.132-2	8.219-3	1.930-6		4.000-4	4.000-4	1.800-9	1.883-2		
5.000-4	2	1.942-2	1.458-6	2.125-2	1.035-1	1.458-6		4.499-4	4.499-4	2.277-9	1.608-2		
5.250-4	2	1.942-2	1.150-6	2.119-2	1.271-1	1.150-6		4.999-4	4.999-4	2.611-9	1.409-2		
5.500-4	4	1.942-2	9.193-6	2.110-2	1.529-1	9.193-6		5.499-4	5.499-4	3.402-9	1.230-2		
5.750-4	5	1.942-2	1.129-4	2.103-2	1.808-1	7.490-5		5.999-4	5.999-4	4.048-9	1.102-2		
6.000-4	6	1.942-2	9.259-6	2.092-2	2.106-1	6.186-5		6.498-4	6.498-4	4.750-9	9.824-3		
6.250-4	7	1.942-2	7.787-6	2.082-2	2.424-1	5.150-5		6.997-4	6.997-4	5.508-9	8.837-3		
6.500-4	1	1.102-1	5.581-6	2.084-2	3.123-1	3.700-5		7.998-4	7.998-4	7.194-9	7.258-3		
6.750-4	1	1.482-1	4.148-6	2.039-2	3.878-1	2.750-5		8.993-4	8.993-4	9.099-9	6.067-3		
7.000-4	1	1.863-1	3.301-6	2.017-2	4.708-1	2.188-5		9.991-4	9.991-4	1.123-8	5.383-3		
7.250-4	3	1.863-1	1.824-6	1.935-2	6.808-1	1.208-5		1.248-3	1.248-3	1.752-8	3.701-3		
7.500-4	3	1.863-1	1.124-6	1.871-2	7.451-1	7.434-4		1.498-3	1.498-3	2.518-8	2.733-3		
7.750-4	3	1.863-1	7.402-6	1.778-2	1.188-0	4.882-4		1.744-3	1.744-3	3.480-8	2.099-3		
8.000-4	3	1.182-0	5.159-6	1.704-2	1.488-0	3.405-4		1.990-3	1.990-3	4.455-8	1.889-3		
8.250-4	3	1.803-0	2.783-6	1.653-2	1.857-0	1.837-4		2.479-3	2.479-3	6.815-8	1.188-3		
8.500-4	3	1.628-0	1.685-6	1.184-2	1.380-0	1.110-4		2.963-3	2.963-3	9.873-8	8.183-4		
8.750-4	3	1.344-0	1.418-6	9.381-3	1.317-2	8.850-0		3.155-3	3.155-3	1.180-7	7.283-4		
9.000-4	3	1.443-0	1.384-6	9.178-3	1.317-2	8.850-0		3.197-3	3.197-3	9.393-8	6.501-4		
9.250-4	3	1.584-0	1.105-6	7.332-4	1.235-2	8.810-0		3.494-3	3.494-3	1.144-7	5.786-4		
9.500-4	3	1.794-0	7.851-6	5.235-4	1.122-2	3.348-0		3.891-3	3.891-3	1.526-7	4.782-4		
9.750-4	3	1.981-0	5.797-6	3.845-4	1.018-2	3.707-0		4.488-3	4.488-3	1.986-7	3.940-4		
1.000-3	3	1.398-0	4.400-6	2.919-4	9.330-1	4.083-0		5.083-3	5.083-3	2.480-7	3.345-4		
1.050-3	3	1.607-0	3.403-6	2.257-4	8.585-1	4.357-0		5.478-3	5.478-3	3.008-7	2.861-4		
1.100-3	3	2.285-0	2.892-6	1.785-4	7.958-1	4.644-0		5.972-3	5.972-3	3.810-7	2.479-4		
1.150-3	3	2.894-0	2.125-6	1.430-4	7.397-1	4.874-0		6.464-3	6.464-3	4.285-7	2.158-4		
1.200-3	3	3.505-0	1.755-6	1.184-4	6.814-1	5.097-0		6.955-3	6.955-3	4.973-7	1.887-4		
1.250-3	3	5.075-0	1.212-6	8.039-3	6.122-1	5.525-0		7.934-3	7.934-3	6.945-7	1.503-4		
1.300-3	3	9.581-0	6.418-1	4.258-3	4.904-1	8.191-0		9.871-3	9.871-3	1.029-6	9.985-4		
1.350-3	1	1.838-1	2.348-6	1.220-3	3.749-1	8.817-0		1.225-2	1.195-2	1.808-6	6.501-4		
1.400-3	2	3.123-1	1.971-6	1.307-3	3.011-1	7.375-0		1.457-2	1.447-2	2.282-6	4.579-4		
1.450-3	2	4.527-1	1.248-6	8.281-2	2.414-1	7.752-0		1.883-2	1.854-2	3.075-6	3.358-4		
1.500-3	2	7.294-1	8.432-0	5.993-2	1.993-1	6.694-0		1.901-2	1.872-2	3.940-6	2.288-4		
1.550-3	2	1.403-2	4.386-0	2.884-2	1.413-1	6.499-0		2.305-2	2.280-2	5.847-6	1.619-4		
1.600-3	2	2.377-2	2.588-0	1.716-2	1.087-1	6.789-0		2.689-2	2.642-2	7.848-6	1.111-4		
1.650-3	2	3.684-2	1.679-0	1.113-2	8.350-0	8.893-0		2.978-2	2.950-2	9.787-6	8.052-5		
1.700-3	2	5.244-2	1.173-0	7.788-1	6.750-0	9.002-0		3.223-2	3.199-2	1.151-5	6.100-5		
1.750-3	2	7.096-2	8.886-1	5.749-1	5.957-0	9.029-0		3.414-2	3.391-2	1.293-5	4.778-5		
1.800-3	2	9.195-2	6.718-1	4.458-1	4.670-0	9.099-0		3.547-2	3.526-2	1.398-5	3.831-5		
1.850-3	2	1.137-3	5.488-1	3.387-1	3.989-0	9.031-0		3.634-2	3.615-2	1.489-5	3.178-5		
1.900-3	2	1.387-3	4.498-1	2.984-1	3.421-0	9.011-0		3.679-2	3.681-2	1.587-5	2.678-5		
1.950-3	2	1.682-3	3.839-1	2.347-1	2.967-0	8.998-0		3.697-2	3.681-2	1.524-5	2.280-5		
2.000-3	2	1.835-3	3.352-1	2.264-1	2.688-0	8.999-0		3.691-2	3.678-2	1.530-5	2.904-5		
2.050-3	2	2.271-3	2.781-1	1.752-1	2.650-0	8.999-0		3.637-2	3.624-2	1.470-5	1.282-5		
2.100-3	2	3.044-3	2.869-1	1.348-1	1.441-0	8.511-0		3.517-2	3.529-2	1.401-5	1.158-5		
2.150-3	2	3.742-3	1.888-1	1.079-1	8.999-1	8.117-0		3.884-2	3.908-2	1.438-5	9.913-6		
2.200-3	2	4.314-3	1.423-1	9.428-0	6.381-1	7.888-0		3.888-2	3.894-2	1.795-5	9.888-6		
2.250-3	2	4.749-3	1.259-1	8.991-0	4.734-1	7.463-0		4.382-2	4.386-2	2.137-5	9.923-6		
2.300-3	2	5.098-3	1.268-1	8.603-0	3.685-1	7.212-0		5.018-2	5.068-2	2.824-5	9.884-6		

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 39.948				DENSITY 0.001828 GRAMS/CC							
ENERGY	TOTAL NFP		CROSS SECTION (BARN)					MEV/COLLISION		MEV/CM	
MEV	CM	CM ² /CM ²	TOTAL	COHERENT	INCOHERENT	PHOTOE	PAIR PROD	K.E. *FLO	K.E. BREMSSTR	K.E.	K.E.
2.500-1	5.898-3	1.079-1	7.180-0	2.372-1	6.703-0	2.198-1		8.539-2	6.538-2	4.808-5	1.148-5
3.000-1	6.173-3	9.963-2	6.609-0	1.863-1	6.314-0	1.283-1		8.368-2	6.367-2	7.869-5	1.335-5
3.500-1	6.614-3	9.298-2	6.188-0	1.227-1	5.963-0	8.263-2		1.035-1	1.035-1	1.204-4	1.585-5
4.000-1	7.004-3	8.780-2	5.824-0	9.433-2	5.874-0	5.844-2		1.251-1	1.251-1	1.758-4	1.786-5
4.500-1	7.380-3	8.333-2	5.528-0	7.489-2	5.412-0	4.073-2		1.475-1	1.475-1	2.444-4	1.999-5
5.000-1	7.727-3	7.999-2	5.280-0	6.062-2	5.189-0	3.042-2		1.712-1	1.712-1	3.290-4	2.215-5
5.500-1	8.086-3	7.629-2	5.058-0	5.016-2	4.984-0	2.352-2		1.954-1	1.954-1	4.287-4	2.423-5
6.000-1	8.395-3	7.333-2	4.885-0	4.219-2	4.805-0	1.880-2		2.208-1	2.208-1	5.482-4	2.631-5
6.500-1	8.704-3	7.005-2	4.697-0	3.597-2	4.636-0	1.510-2		2.480-1	2.480-1	6.791-4	2.855-5
7.000-1	9.009-3	6.626-2	4.528-0	3.104-2	4.485-0	1.248-2		2.722-1	2.722-1	8.309-4	3.021-5
8.000-1	9.582-3	6.418-2	4.237-0	2.379-2	4.225-0	8.800-3		3.286-1	3.286-1	1.196-3	3.409-5
1.000-0	1.068-4	5.760-2	3.821-0	1.524-2	3.900-0	5.049-3		4.395-1	4.395-1	2.163-3	4.116-5
1.022-0	1.079-4	5.698-2	3.780-0	1.459-2	3.760-0	4.858-3	1.000-6	4.523-1	4.523-1	2.290-3	4.190-5
1.250-0	1.195-4	5.145-2	3.413-0	9.781-3	3.400-0	3.398-3	4.863-4	5.876-1	5.876-1	3.899-3	4.916-5
1.500-0	1.310-4	4.695-2	3.114-0	6.781-3	3.090-0	2.459-3	1.491-2	7.402-1	7.402-1	5.113-3	5.651-5
1.750-0	1.414-4	4.349-2	2.885-0	4.983-3	2.942-0	1.893-3	3.824-2	8.973-1	8.973-1	6.968-3	6.346-5
2.000-0	1.510-4	4.073-2	2.702-0	3.816-3	2.637-0	1.478-3	5.934-2	1.059-0	1.059-0	1.247-2	7.016-5
2.044-0	1.526-4	4.029-2	2.673-0	3.653-3	2.605-0	1.427-3	6.273-2	1.088-0	1.088-0	1.316-2	7.129-5
2.500-0	1.678-4	3.684-2	2.431-0	2.443-3	2.317-0	1.058-3	1.103-1	1.396-0	1.396-0	2.158-2	8.317-5
3.000-0	1.817-4	3.385-2	2.245-0	1.896-3	2.075-0	8.192-4	1.678-1	1.750-0	1.750-0	3.378-2	9.631-5
3.500-0	1.936-4	3.178-2	2.107-0	1.246-3	1.885-0	6.899-4	2.199-1	2.119-0	2.119-0	4.932-2	1.094-4
4.000-0	2.036-4	3.021-2	2.004-0	9.548-4	1.731-0	5.628-4	2.713-1	2.502-0	2.502-0	6.849-2	1.228-4
4.500-0	2.118-4	2.903-2	1.928-0	7.540-4	1.603-0	4.808-4	3.214-1	2.698-0	2.698-0	9.149-2	1.380-4
5.000-0	2.191-4	2.806-2	1.862-0	6.107-4	1.495-0	4.206-4	3.653-1	3.304-0	3.304-0	1.184-1	1.508-4
5.500-0	2.263-4	2.718-2	1.803-0	5.047-4	1.402-0	3.799-4	3.987-1	3.717-0	3.717-0	1.482-1	1.643-4
6.000-0	2.323-4	2.647-2	1.758-0	4.241-4	1.321-0	3.393-4	4.338-1	4.139-0	4.139-0	1.841-1	1.782-4
6.500-0	2.373-4	2.591-2	1.719-0	3.814-4	1.251-0	3.087-4	4.678-1	4.589-0	4.589-0	2.234-1	1.925-4
7.000-0	2.414-4	2.547-2	1.680-0	3.118-4	1.188-0	2.828-4	5.018-1	5.007-0	5.007-0	2.670-1	2.074-4
8.000-0	2.472-4	2.488-2	1.651-0	2.388-4	1.081-0	2.418-4	5.891-1	5.903-0	5.903-0	3.678-1	2.388-4
1.000-1	2.512-4	2.448-2	1.624-0	1.587-4	9.207-1	1.857-4	7.032-1	7.763-0	7.763-0	8.235-1	3.091-4
1.250-1	2.587-4	2.395-2	1.589-0	9.773-5	7.812-1	1.487-4	8.078-1	1.013-1	1.013-1	1.038-0	3.945-4
1.500-1	2.572-4	2.391-2	1.588-0	8.787-5	8.815-1	1.810-4	9.043-1	1.255-1	1.255-1	1.952-0	4.678-4
1.750-1	2.540-4	2.421-2	1.608-0	4.888-5	8.081-1	1.028-4	1.020-0	1.501-1	1.501-1	2.168-0	5.809-4
2.000-1	2.505-4	2.455-2	1.629-0	3.818-5	5.470-1	8.933-5	1.081-0	1.748-1	1.748-1	2.874-0	6.980-4
2.500-1	2.450-4	2.511-2	1.695-0	2.443-5	4.597-1	7.058-5	1.208-0	2.245-1	2.245-1	4.588-0	9.168-4
3.000-1	2.397-4	2.588-2	1.702-0	1.697-5	3.982-1	5.322-5	1.304-0	2.744-1	2.744-1	6.474-0	1.145-3
3.500-1	2.356-4	2.610-2	1.731-0	1.246-5	3.522-1	4.947-5	1.378-0	3.244-1	3.244-1	8.672-0	1.377-3
4.000-1	2.312-4	2.680-2	1.784-0	9.544-6	3.184-1	4.297-5	1.448-0	3.744-1	3.744-1	1.110-1	1.819-3
4.500-1	2.262-4	2.719-2	1.804-0	7.941-6	2.877-1	3.794-5	1.516-0	4.245-1	4.245-1	1.372-1	1.877-3
5.000-1	2.224-4	2.786-2	1.835-0	6.108-6	2.841-1	3.395-5	1.571-0	4.746-1	4.746-1	1.652-1	2.135-3
5.500-1	2.198-4	2.797-2	1.899-0	5.048-6	2.443-1	3.070-5	1.611-0	5.247-1	5.247-1	1.947-1	2.386-3
6.000-1	2.175-4	2.828-2	1.878-0	4.241-6	2.276-1	2.800-5	1.649-0	5.747-1	5.747-1	2.237-1	2.643-3
6.500-1	2.151-4	2.860-2	1.897-0	3.614-6	2.130-1	2.575-5	1.684-0	6.248-1	6.248-1	2.579-1	2.905-3
7.000-1	2.127-4	2.891-2	1.918-0	3.116-6	2.004-1	2.380-5	1.717-0	6.749-1	6.749-1	2.913-1	3.173-3
8.000-1	2.083-4	2.953-2	1.999-0	2.386-6	1.795-1	2.067-5	1.778-0	7.751-1	7.751-1	3.610-1	3.728-3
1.000-2	2.002-4	3.071-2	2.037-0	1.527-6	1.490-1	1.633-5	1.888-0	9.795-1	9.795-1	5.104-1	4.871-3

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	8.808-1	1.533-1	1.000+0	2.468-1	7.572-1	1.000+1	5.872-3	9.997-1
5.000-3	9.997-1	3.333-4	1.500-1	8.133-1	1.977-1	1.250+0	1.795-1	8.192-1	1.500+1	1.555-3	1.000+0
1.000-2	9.989-1	1.333-3	1.750-1	7.053-1	2.400-1	1.500+0	1.343-1	8.805-1	2.000+1	5.553-4	1.000+0
1.500-2	9.978-1	3.011-3	2.000-1	7.187-1	2.798-1	2.000+0	8.908-2	9.065-1	5.000+1	1.745-5	1.000+0
2.000-2	9.950-1	5.328-3	2.500-1	6.349-1	3.502-1	2.500+0	7.183-2	9.331-1	8.000+1	2.907-6	1.000+0
2.500-2	9.934-1	8.283-3	3.000-1	5.629-1	4.098-1	3.000+0	6.277-2	9.518-1	1.000+2	1.250-6	1.000+0
3.000-2	9.905-1	1.185-2	4.000-1	4.748-1	4.999-1	3.500+0	5.371-2	9.659-1	1.000+3	3.893-10	1.000+0
4.000-2	9.833-1	2.073-2	5.000-1	4.202-1	5.814-1	4.000+0	4.672-2	9.783-1	1.000+8	2.987-19	1.000+0
5.000-2	9.742-1	3.172-2	6.000-1	3.814-1	6.093-1	5.000+0	3.272-2	9.889-1	1.000+9	3.386-28	1.000+0
7.000-2	9.538-1	5.903-2	7.000-1	3.465-1	6.514-1	6.000+0	2.292-2	9.948-1			
9.000-2	9.218-1	9.138-2	8.000-1	3.122-1	6.902-1	7.000+0	1.596-2	9.978-1			
1.000-1	9.053-1	1.087-1	9.000-1	2.787-1	7.256-1	8.000+0	1.260-2	9.988-1

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ENDL Evaluated Photon Cross Sections

19-K

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Energy Deposition

19-K

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ENDL Evaluated Photon Data

19-K

ATOMIC WEIGHT 39.102				DENSITY 0.86 GRAMS/CC			
ENERGY	TOTAL MFP		CROSS SECTION (BARN)				MEV/COLLISION
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	MEV/CM
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR
1.000-4	5.354-5	2.172-4	1.410-6	2.400-2	1.388-2	1.410-6	9.998-5
1.250-4	5.861-5	1.746-4	1.134-6	2.397-2	2.119-2	1.133-6	1.250-4
1.500-4	7.562-5	1.460-4	9.432-6	2.395-2	3.030-2	9.480-5	1.500-4
1.750-4	9.877-5	1.177-4	7.844-6	2.392-2	4.098-2	7.842-5	1.749-4
2.000-4	1.190-4	9.768-5	6.342-6	2.390-2	5.324-2	6.340-5	1.999-4
2.500-4	1.738-4	6.889-5	4.343-6	2.381-2	6.152-2	4.341-5	2.499-4
2.938-4	2.286-4	5.086-5	3.302-6	2.375-2	1.109-1	3.300-5	2.938-4
2.980-4	1.483-5	7.947-4	5.180-6	2.375-2	1.140-1	5.180-5	2.980-4
3.000-4	1.776-5	6.546-4	4.250-6	2.375-2	1.154-1	4.250-5	3.000-4
3.200-4	2.500-5	4.852-4	3.020-6	2.370-2	1.299-1	3.020-5	3.200-4
3.500-4	2.984-5	3.897-4	2.930-6	2.369-2	1.530-1	2.930-5	3.500-4
3.784-4	3.479-5	3.342-4	2.170-6	2.359-2	1.747-1	2.170-5	3.784-4
3.778-4	3.132-5	3.718-4	2.410-6	2.359-2	1.759-1	2.410-5	3.778-4
4.000-4	3.401-5	3.419-4	2.220-6	2.359-2	1.952-1	2.220-5	4.000-4
4.500-4	4.370-5	2.861-4	1.728-6	2.342-2	2.393-1	1.727-5	4.499-4
5.000-4	5.470-5	2.126-4	1.380-6	2.330-2	2.871-1	1.380-5	4.999-4
5.500-4	6.616-5	1.706-4	1.108-6	2.316-2	3.351-1	1.108-5	5.499-4
6.000-4	6.331-5	1.396-4	9.062-6	2.303-2	3.880-1	9.060-5	5.999-4
6.500-4	1.007-4	1.155-4	7.498-6	2.289-2	4.344-1	7.498-5	6.498-4
7.000-4	1.200-4	9.691-5	6.292-6	2.280-2	4.845-1	6.290-5	6.997-4
8.000-4	1.862-4	6.996-5	4.742-6	2.240-2	5.901-1	4.540-5	7.996-4
9.000-4	2.232-4	5.209-5	3.382-6	2.204-2	6.885-1	3.380-5	8.994-4
1.000-3	2.846-4	4.086-5	2.653-6	2.172-2	7.904-1	2.651-5	9.992-4
1.250-3	5.057-4	2.899-5	1.433-6	2.074-2	1.028-0	1.431-5	1.248-3
1.500-3	8.087-4	1.438-5	9.336-6	1.897-2	1.273-0	9.316-5	1.497-3
1.750-3	1.216-3	9.983-5	6.808-6	1.804-2	1.514-0	6.190-5	1.745-3
2.000-3	1.731-3	6.718-5	4.827-6	1.827-2	1.780-0	4.344-5	1.992-3
2.500-3	3.170-3	3.888-5	2.382-6	1.845-2	2.233-0	2.385-5	2.483-3
3.000-3	5.191-3	2.240-5	1.494-6	1.508-2	2.712-0	1.439-5	2.988-3
3.500-3	7.942-3	1.484-5	9.506-6	1.380-2	3.138-0	8.387-5	3.448-3
3.808-3	8.822-3	1.349-5	8.798-6	1.333-2	3.888-0	8.680-5	3.950-3
3.807-3	9.893-3	1.175-5	7.832-6	1.332-2	3.228-0	7.818-5	3.801-3
4.000-3	1.270-3	9.194-5	5.944-6	1.242-2	3.582-0	5.931-5	3.991-3
4.500-3	1.705-3	6.819-5	4.488-6	1.129-2	3.888-0	4.418-5	4.488-3
5.000-3	2.219-3	5.241-5	3.403-6	1.038-2	4.288-0	3.398-5	4.984-3
5.500-3	2.841-3	4.082-5	2.657-6	9.518-2	4.698-0	2.647-5	5.479-3
6.000-3	3.581-3	3.268-5	2.120-6	8.812-2	4.899-0	2.111-5	5.974-3
6.500-3	4.418-3	2.832-5	1.708-6	8.181-2	5.138-0	1.700-5	6.467-3
7.000-3	5.394-3	2.196-5	1.400-6	7.837-2	5.373-0	1.392-5	6.958-3
8.000-3	7.725-3	1.503-5	9.773-6	6.747-2	5.884-0	9.700-5	7.940-3
1.000-2	1.438-2	6.087-1	5.851-3	5.415-1	6.512-0	5.190-3	9.685-3
1.250-2	2.733-2	4.234-1	2.782-3	4.177-1	7.152-0	2.713-3	1.228-2
1.500-2	4.808-2	2.523-1	1.638-3	3.378-1	7.721-0	1.587-3	1.482-2
1.750-2	7.252-2	1.603-1	1.041-3	2.719-1	8.115-0	1.006-3	1.691-2
2.000-2	1.071-1	1.085-1	7.048-2	2.253-1	8.473-0	6.738-2	1.913-2
2.500-2	2.071-1	5.614-0	3.845-2	1.988-1	8.885-0	3.397-2	2.333-2
3.000-2	3.505-1	3.317-0	2.194-2	1.208-1	9.188-0	1.941-2	2.711-2
3.500-2	5.438-1	2.138-0	1.388-2	9.498-0	9.333-0	1.201-2	3.041-2
4.000-2	7.842-1	1.483-0	9.628-1	7.850-0	9.452-0	7.918-1	3.318-2
4.500-2	1.071-0	1.088-0	7.051-1	6.303-0	9.483-0	5.472-1	3.540-2
5.000-2	1.385-0	6.337-1	5.413-1	5.301-0	9.512-0	3.932-1	3.707-2
5.500-2	1.798-0	6.845-1	4.314-1	4.505-0	9.491-0	2.914-1	3.887-2
6.000-2	2.125-0	5.473-1	3.953-1	3.898-0	9.473-0	2.217-1	3.901-2
6.500-2	2.514-0	4.623-1	3.863-1	3.377-0	9.411-0	1.724-1	3.945-2
7.000-2	2.988-0	4.061-1	2.998-1	2.982-0	9.395-0	1.388-1	3.980-2
8.000-2	3.887-0	3.189-1	2.878-1	2.338-0	9.294-0	0.984-1	3.932-2
1.000-1	5.638-0	2.389-1	1.499-1	1.557-0	9.883-0	4.473-0	3.883-2
1.250-1	6.387-0	1.821-1	1.102-1	1.023-0	9.792-0	2.245-0	3.883-2
1.500-1	7.376-0	1.578-1	1.024-1	7.269-0	9.278-0	1.278-0	4.187-2
1.750-1	8.777-0	1.422-1	9.733-0	5.421-1	7.889-0	8.818-1	4.522-2
2.000-1	8.820-0	1.310-1	8.388-0	4.198-1	7.885-0	5.351-1	5.148-2
2.500-1	9.988-0	1.174-1	7.620-0	2.784-1	7.678-0	2.773-1	6.675-2
3.000-1	1.878-1	1.084-1	7.814-0	1.988-1	8.881-0	1.623-1	8.478-2

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 39.102										DENSITY 0.86 GRAMS/CC			
ENERGY		TOTAL MFP		CROSS SECTION (BARNs)						MEV/COLLISION		MEV/CM	
MEV	CM	CH/CM/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	K.E.		
3.500-1	1.195+1	1.007-1	8.537+0	1.408-1	6.291+0	1.049-1		1.040-1	1.040-1	1.289-4		9.008-3	
4.000-1	1.224+1	9.498-2	8.167+0	1.083-1	5.987+0	7.182-2		1.255-1	1.255-1	1.868-4		1.025-2	
4.500-1	1.291+1	9.008-2	5.849+0	8.575-2	5.711+0	5.201-2		1.479-1	1.479-1	2.592-4		1.145-2	
5.000-1	1.352+1	8.600-2	5.284+0	8.980-2	5.478+0	3.897-2		1.715-1	1.715-1	3.484-4		1.268-2	
5.500-1	1.412+1	8.236-2	5.348+0	5.759-2	5.260+0	3.025-2		1.957-1	1.956-1	4.535-4		1.386-2	
6.000-1	1.468+1	7.921-2	5.143+0	4.845-2	5.071+0	2.401-2		2.208-1	2.208-1	5.774-4		1.504-2	
6.500-1	1.524+1	7.629-2	4.853+0	4.131-2	4.892+0	1.958-2		2.462-1	2.462-1	7.177-4		1.615-2	
7.000-1	1.578+1	7.369-2	4.785+0	3.585-2	4.733+0	1.621-2		2.723-1	2.723-1	8.779-4		1.726-2	
8.000-1	1.679+1	6.927-2	4.498+0	2.732-2	4.459+0	1.154-2		3.267-1	3.267-1	1.263-3		1.946-2	
1.000+0	1.871+1	6.215-2	4.035+0	1.751-2	4.011+0	6.725-3		4.398-1	4.396-1	2.293-3		2.350-2	
1.022+0	1.891+1	6.148-2	3.992+0	1.676-2	3.989+0	6.470-3	1.000-6	4.524-1	4.524-1	2.417-3		2.392-2	
1.250+0	2.095+1	5.951-2	3.604+0	1.121-2	3.588+0	4.524-3	5.033-4	5.078-1	5.076-1	4.072-3		2.805-2	
1.500+0	2.295+1	5.686-2	3.289+0	7.790-3	3.262+0	3.272-3	1.859-2	7.402-1	7.402-1	6.450-3		3.225-2	
1.750+0	2.477+1	4.695-2	3.049+0	5.725-3	3.000+0	2.484-3	4.052-2	8.973-1	8.973-1	9.480-3		3.623-2	
2.000+0	2.643+1	4.399-2	2.857+0	4.384-3	2.784+0	1.962-3	5.627-2	1.059+0	1.059+0	1.316-2		4.008-2	
2.044+0	2.672+1	4.352-2	2.886+0	4.197-3	2.750+0	1.898-3	7.005-2	1.088+0	1.088+0	1.388-2		4.073-2	
2.500+0	2.935+1	3.982-2	2.573+0	2.806-3	2.445+0	1.408-3	1.231-1	1.398+0	1.396+0	2.277-2		4.758-2	
3.000+0	3.172+1	3.688-2	2.361+0	1.949-3	2.191+0	1.090-3	1.889-1	1.751+0	1.751+0	3.596-2		5.520-2	
3.500+0	3.375+1	3.448-2	2.237+0	1.432-3	1.990+0	8.908-4	2.450-1	2.121+0	2.121+0	5.210-2		6.294-2	
4.000+0	3.543+1	3.282-2	2.131+0	1.098-3	1.827+0	7.479-4	3.020-1	2.505+0	2.505+0	7.238-2		7.072-2	
4.500+0	3.680+1	3.180-2	2.052+0	8.882-4	1.682+0	6.384-4	3.578-1	2.903+0	2.903+0	9.075-2		7.989-2	
5.000+0	3.801+1	3.099-2	1.926+0	7.017-4	1.578+0	5.584-4	4.089-1	3.311+0	3.311+0	1.053-1		8.712-2	
5.500+0	3.920+1	2.988-2	1.826+0	5.789-4	1.480+0	4.889-4	4.448-1	3.728+0	3.728+0	1.578-1		9.506-2	
6.000+0	4.019+1	2.893-2	1.879+0	4.873-4	1.395+0	4.502-4	4.827-1	4.150+0	4.150+0	1.948-1		1.033-1	
6.500+0	4.101+1	2.838-2	1.941+0	4.152-4	1.320+0	4.088-4	5.204-1	4.588+0	4.588+0	2.385-1		1.117-1	
7.000+0	4.188+1	2.781-2	1.812+0	3.580-4	1.254+0	3.728-4	5.579-1	5.022+0	5.022+0	2.828-1		1.205-1	
8.000+0	4.255+1	2.733-2	1.774+0	2.741-4	1.141+0	3.205-4	6.327-1	5.822+0	5.822+0	3.891-1		1.392-1	
1.000+1	4.308+1	2.701-2	1.754+0	1.754-4	9.719-1	2.482-4	7.813-1	7.780+0	7.780+0	6.598-1		1.604-1	
1.250+1	4.384+1	2.652-2	1.722+0	1.123-4	8.248-1	1.945-4	8.871-1	1.018+1	1.018+1	1.059+0		2.318-1	
1.500+1	4.379+1	2.652-2	1.724+0	7.787-5	7.183-1	1.804-4	1.004+0	1.259+1	1.259+1	1.837+0		3.075-1	
1.750+1	4.313+1	2.688-2	1.751+0	5.729-5	6.397-1	1.383-4	1.111+0	1.505+1	1.505+1	2.893+0		3.491-1	
2.000+1	4.245+1	2.739-2	1.778+0	4.388-5	5.774-1	1.184-4	1.201+0	1.753+1	1.753+1	3.029+0		4.131-1	
2.500+1	4.139+1	2.805-2	1.824+0	2.807-5	4.853-1	9.358-5	1.339+0	2.251+1	2.251+1	4.747+0		5.438-1	
3.000+1	4.042+1	2.877-2	1.888+0	1.949-5	4.203-1	7.713-5	1.448+0	2.750+1	2.750+1	6.770+0		8.804-1	
3.500+1	3.989+1	2.930-2	1.902+0	1.432-5	3.718-1	6.554-5	1.531+0	3.250+1	3.250+1	9.048+0		1.188+0	
4.000+1	3.881+1	2.989-2	1.941+0	1.097-5	3.340-1	5.898-5	1.608+0	3.750+1	3.750+1	1.195+1		9.639-1	
4.500+1	3.803+1	3.098-2	1.988+0	8.884-5	3.037-1	5.326-5	1.688+0	4.252+1	4.252+1	1.428+1		1.118+0	
5.000+1	3.738+1	3.112-2	2.021+0	7.018-5	2.788-1	4.488-5	1.748+0	4.753+1	4.753+1	1.719+1		1.272+0	
5.500+1	3.683+1	3.148-2	2.044+0	5.800-5	2.579-1	4.088-5	1.788+0	5.253+1	5.253+1	2.018+1		1.422+0	
6.000+1	3.651+1	3.182-2	2.088+0	4.873-5	2.462-1	3.709-5	1.828+0	5.794+1	5.794+1	2.338+1		1.578+0	
6.500+1	3.609+1	3.222-2	2.092+0	4.152-5	2.249-1	3.408-5	1.867+0	6.294+1	6.294+1	2.886+1		1.733+0	
7.000+1	3.589+1	3.258-2	2.118+0	3.580-5	2.115-1	3.151-5	1.904+0	6.795+1	6.795+1	3.607+1		1.893+0	
8.000+1	3.482+1	3.330-2	2.182+0	2.741-5	1.885-1	2.737-5	1.972+0	7.757+1	7.757+1	3.718+1		2.221+0	
1.000+2	3.356+1	3.485-2	2.250+0	1.754-5	1.572-1	2.182-5	2.092+0	9.761+1	9.761+1	5.240+1		2.908+0	

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Form Factors

19-K

SIN(Θ/2)/λ COHERENT				SIN(Θ/2)/λ COHERENT				SIN(Θ/2)/λ COHERENT				SIN(Θ/2)/λ COHERENT			
1/λ		INCOHERENT		1/λ		INCOHERENT		1/λ		INCOHERENT		1/λ		INCOHERENT	
0.000+0	1.000+0	0.000+0	0	1.250-1	8.412-1	1.679-1	1	1.000+0	2.544-1	7.484-1	1	1.000+1	6.584-3	9.996-1	1
5.000-3	9.994-1	8.421-4	4	1.500-1	8.019-1	2.055-1	1	1.250+0	1.900-1	8.102-1	1	1.500+1	1.787-3	9.999-1	1
1.000-2	9.979-1	3.263-3	3	1.750-1	7.519-1	2.430-1	1	1.500+0	1.416-1	8.533-1	1	2.000+1	6.455-4	1.000+0	0
1.500-2	9.956-1	7.247-3	3	2.000-1	7.218-1	2.790-1	1	2.000+0	9.133-2	9.027-1	1	5.000+1	2.066-5	1.000+0	0
2.000-2	9.923-1	1.252-2	2	2.500-1	6.449-1	3.450-1	1	2.500+0	7.146-2	9.297-1	1	8.000+1	3.483-6	1.000+0	0
2.500-2	9.881-1	1.088-2	2	3.000-1	5.770-1	4.027-1	1	3.000+0	6.257-2	9.484-1	1	1.000+2	1.493-6	1.000+0	0
3.000-2	9.832-1	2.603-2	2	4.000-1	4.759-1	4.950-1	1	3.500+0	5.369-2	9.626-1	1	1.000+3	4.564-10	1.000+0	0
4.000-2	9.715-1	4.182-2	2	5.000-1	4.143-1	5.805-1	1	4.000+0	4.716-2	9.734-1	1	1.000+6	3.800-19	1.000+0	0
5.000-2	9.580-1	5.816-2	2	6.000-1	3.746-1	6.088-1	1	5.000+0	3.412-2	9.889-1	1	1.000+9	4.341-28	1.000+0	0
7.000-2	9.276-1	8.906-2	2	7.000-1	3.427-1	6.489-1	1	6.000+0	2.428-2	9.937-1	1				
9.000-2	8.961-1	1.175-1	1	8.000-1	3.126-1	6.849-1	1	7.000+0	1.735-2	9.989-1	1				
1.000-1	8.803-1	1.316-1	1	9.000-1	2.831-1	7.182-1	1	8.000+0	1.376-2	9.994-1	1

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ENDL Evaluated Photon Cross Sections

20-Ca

12/07/78

Energy Deposition

20-Ca

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ENOL Evaluated Photon Data

20-Ca

ATOMIC WEIGHT 40.08			DENSITY 1.55 GRAMS/CC				
ENERGY	TOTAL HPF		CROSS SECTION (BARNs)				MEV/COLLISION
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	MEV/CM
						K.E. + FLOR	K.E. BREMSSTR
1.000-4	2.752-5	2.344-4	1.960-6	2.659-2	1.562-2	1.560-6	9.998-5
1.250-4	3.335-5	1.934-4	1.267-6	2.656-2	2.436-2	1.267-6	1.250-4
1.500-4	3.903-5	1.653-4	1.100-6	2.654-2	3.501-2	1.100-6	1.500-4
1.750-4	4.771-5	1.352-4	9.000-6	2.650-2	4.743-2	9.997-5	1.749-4
2.000-4	5.678-5	1.136-4	7.963-6	2.647-2	6.169-2	7.960-5	1.999-4
2.500-4	8.149-5	7.917-3	5.269-6	2.637-2	9.495-2	5.267-5	2.499-4
3.000-4	1.095-4	5.694-3	3.923-6	2.630-2	1.350-1	3.920-5	2.999-4
3.469-4	1.430-4	4.512-3	3.003-6	2.618-2	1.771-1	3.000-5	3.466-4
3.483-4	1.745-5	3.697-4	2.480-6	2.617-2	1.705-1	2.480-5	3.483-4
3.500-4	1.851-5	3.907-4	2.600-6	2.617-2	1.601-1	2.600-5	3.500-4
3.700-4	1.671-5	3.662-4	2.570-6	2.612-2	1.998-1	2.570-5	3.700-4
4.000-4	1.917-5	3.366-4	2.240-6	2.606-2	2.311-1	2.240-5	4.000-4
4.371-4	2.321-5	2.780-4	1.850-6	2.594-2	2.708-1	1.850-5	4.370-4
4.385-4	2.035-5	3.171-4	2.110-6	2.594-2	2.724-1	2.110-5	4.384-4
4.500-4	2.149-5	3.002-4	1.998-6	2.591-2	2.853-1	1.998-5	4.499-4
5.000-4	2.663-5	2.404-4	1.600-6	2.577-2	3.445-1	1.600-5	4.999-4
5.500-4	3.311-5	1.946-4	1.297-6	2.560-2	4.051-1	1.297-5	5.499-4
6.000-4	4.012-5	1.606-4	1.070-6	2.544-2	4.696-1	1.070-5	5.999-4
6.500-4	4.815-5	1.340-4	8.918-6	2.522-2	5.318-1	8.918-5	6.499-4
7.000-4	5.700-5	1.132-4	7.533-6	2.502-2	5.968-1	7.530-5	6.999-4
8.000-4	7.861-5	8.208-3	5.482-6	2.461-2	7.346-1	5.480-5	7.999-4
9.000-4	1.052-4	6.134-3	4.062-6	2.442-2	8.626-1	4.060-5	8.999-4
1.000-3	1.303-4	4.950-3	3.294-6	2.382-2	9.999-1	3.292-5	9.993-4
1.250-3	2.321-4	2.780-3	1.850-6	2.261-2	1.280-0	1.848-5	1.248-3
1.500-3	3.717-4	1.736-3	1.155-6	2.167-2	1.571-0	1.153-5	1.497-3
1.750-3	5.592-4	1.154-3	7.678-6	2.059-2	1.820-0	7.658-4	1.745-3
2.000-3	7.563-4	8.102-2	5.392-6	1.970-2	2.068-0	5.372-4	1.993-3
2.500-3	1.457-3	4.927-2	2.947-6	1.779-2	2.534-0	2.929-4	2.485-3
3.000-3	2.385-3	2.708-2	1.801-6	1.636-2	2.991-0	1.784-4	2.972-3
3.500-3	3.650-3	1.788-2	1.178-6	1.483-2	3.409-0	1.181-4	3.455-3
4.000-3	5.271-3	1.224-2	8.146-6	1.362-2	3.818-0	8.006-3	3.931-3
4.037-3	5.408-3	1.193-2	7.940-6	1.352-2	3.848-0	7.901-3	3.966-3
4.039-3	6.032-4	1.069-3	7.118-6	1.352-2	3.847-0	7.104-4	4.030-3
4.500-3	7.979-4	8.085-2	5.381-6	1.241-2	4.184-0	5.368-4	4.489-3
5.000-3	1.047-3	6.180-2	4.100-6	1.142-2	4.541-0	4.088-4	4.980-3
5.500-3	1.348-3	4.788-2	3.185-6	1.050-2	4.895-0	3.174-4	5.481-3
6.000-3	1.697-3	3.602-2	2.530-6	9.721-1	5.161-0	2.520-4	5.976-3
6.500-3	2.110-3	3.058-2	2.035-6	9.013-1	5.415-0	2.025-4	6.470-3
7.000-3	2.581-3	2.498-2	1.663-6	8.403-1	5.661-0	1.654-4	6.962-3
8.000-3	3.711-3	1.738-2	1.157-6	7.407-1	6.132-0	1.149-4	7.945-3
1.000-2	6.911-3	9.336-1	6.213-6	5.940-1	6.845-0	6.147-3	9.894-3
1.250-2	1.307-2	4.936-1	3.285-6	4.615-1	7.497-0	3.232-3	1.230-2
1.500-2	2.195-2	2.940-1	1.957-6	3.755-1	8.076-0	1.911-3	1.465-2
1.750-2	3.431-2	1.880-1	1.251-6	3.037-1	8.484-0	1.213-3	1.696-2
2.000-2	5.041-2	1.280-1	8.518-6	2.528-1	8.855-0	8.177-2	1.921-2
2.500-2	9.842-2	6.631-0	4.433-6	1.797-1	9.272-0	4.181-2	2.350-2
3.000-2	1.621-1	3.981-0	2.843-6	1.359-1	9.627-0	2.417-2	2.743-2
3.500-2	2.502-1	2.578-0	1.716-6	1.065-1	9.773-0	1.512-2	3.096-2
4.000-2	3.605-1	1.791-0	1.182-6	8.614-0	9.901-0	1.007-2	3.403-2
4.500-2	4.921-1	1.311-0	8.725-6	7.102-0	9.936-0	7.021-1	3.662-2
5.000-2	6.428-1	1.004-0	6.679-6	5.975-0	9.989-0	5.085-1	3.871-2
5.500-2	8.103-1	7.862-0	5.298-6	5.088-0	9.950-0	3.795-1	4.035-2
6.000-2	9.897-1	6.519-0	4.379-6	4.394-0	9.933-0	2.906-1	4.154-2
6.500-2	1.179-0	5.471-1	3.841-6	3.617-0	9.871-0	2.273-1	4.241-2
7.000-2	1.373-0	4.698-1	3.126-6	3.351-0	9.813-0	1.810-1	4.296-2
7.500-2	1.762-0	3.862-1	2.437-6	2.850-0	9.711-0	1.201-1	4.332-2
8.000-2	2.491-0	2.990-1	1.724-6	1.767-0	9.613-0	8.061-0	4.295-2
1.250-1	3.247-0	1.987-1	1.326-6	1.184-0	9.588-0	3.073-0	4.305-2
1.500-1	3.819-0	1.688-1	1.124-6	8.278-0	9.551-0	1.794-0	4.490-2
1.750-1	4.385-0	1.508-1	1.062-6	6.167-0	9.293-0	1.110-0	4.878-2
2.000-1	4.898-0	1.385-1	9.219-6	4.773-0	9.998-0	7.429-1	5.420-2
2.500-1	5.781-0	1.022-1	6.131-6	3.698-0	7.437-0	3.344-1	6.868-2
3.000-1	5.763-0	1.119-1	7.456-6	2.174-1	7.068-0	2.244-1	8.578-2

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 40.08						DENSITY 1.95 GRAMS/CC					
ENERGY	TOTAL HP		CROSS SECTION (BARN)				MEV/COLLISION			MEV/CM	
MEV	CH	CH+CH/ON	TOTAL	COHERENT	INCOHER	PHOTOEL PAIR PROD	K.E.*FLOR	K.E.	AREASSTR	K.E.	
3.500-1	6.202+0	1.040-1	6.924+0	1.606-1	6.619+0	1.439-1	1.051-1	1.051-1	1.378-4	1.694-2	
4.000-1	6.594+0	9.798-2	6.521+0	1.235-1	6.300+0	9.795-2	1.263-1	1.263-1	1.991-4	1.918-2	
4.500-1	6.950+0	9.263-2	6.178+0	9.781-2	6.010+0	7.026-2	1.485-1	1.485-1	2.750-4	2.136-2	
5.000-1	7.265+0	8.856-2	5.894+0	7.940-2	5.762+0	5.220-2	1.719-1	1.719-1	3.687-4	2.360-2	
5.500-1	7.611+0	8.476-2	5.641+0	6.571-2	5.536+0	4.011-2	1.960-1	1.960-1	4.792-4	2.576-2	
6.000-1	7.918+0	8.148-2	5.423+0	5.529-2	5.336+0	3.194-2	2.211-1	2.211-1	6.094-4	2.793-2	
6.500-1	8.223+0	7.848-2	5.222+0	4.714-2	5.149+0	2.542-2	2.484-1	2.484-1	7.568-4	2.997-2	
7.000-1	8.515+0	7.577-2	5.043+0	4.088-2	4.981+0	2.082-2	2.725-1	2.725-1	9.252-4	3.201-2	
8.000-1	9.061+0	7.120-2	4.739+0	3.118-2	4.693+0	1.453-2	3.268-1	3.268-1	1.133-3	3.607-2	
1.000+0	1.010+1	6.386-2	4.250+0	1.998-2	4.222+0	9.125-3	4.396-1	4.396-1	2.403-3	4.351-2	
1.022+0	1.021+1	6.317-2	4.204+0	1.913-2	4.177+0	7.816-3	4.524-1	4.524-1	2.544-3	4.429-2	
1.250+0	1.131+1	5.703-2	3.796+0	1.280-2	3.777+0	5.462-3	5.876-1	5.876-1	4.265-3	5.194-2	
1.500+0	1.239+1	5.206-2	3.485+0	8.893-3	3.433+0	3.949-3	7.401-1	7.401-1	6.785-3	5.972-2	
1.750+0	1.337+1	4.826-2	3.212+0	6.535-3	3.158+0	2.972-3	8.971-1	8.971-1	9.949-3	6.711-2	
2.000+0	1.426+1	4.525-2	3.011+0	5.004-3	2.930+0	2.367-3	7.360-2	1.059+0	1.059+0	7.428-2	
2.044+0	1.441+1	4.476-2	2.979+0	4.792-3	2.894+0	2.290-3	7.779-2	1.088+0	1.088+0	7.549-2	
2.500+0	1.581+1	4.080-2	2.716+0	3.204-3	2.574+0	1.899-3	1.396+0	1.396+0	2.395-2	6.831-2	
3.000+0	1.706+1	3.781-2	2.517+0	2.225-3	2.306+0	1.315-3	2.072-1	1.752+0	1.752+0	1.027-1	
3.500+0	1.813+1	3.559-2	2.369+0	1.635-3	2.095+0	1.074-3	2.115-1	2.123+0	2.123+0	5.487-2	
4.000+0	1.900+1	3.396-2	2.260+0	1.251-3	1.924+0	9.013-4	2.346-1	2.509+0	2.509+0	7.629-2	
4.500+0	1.970+1	3.275-2	2.179+0	9.689-4	1.781+0	7.691-4	2.963-1	2.908+0	2.908+0	1.020-1	
5.000+0	2.032+1	3.175-2	2.113+0	8.011-4	1.661+0	6.724-4	3.318-1	3.318+0	1.322-1	1.633-1	
5.500+0	2.093+1	3.083-2	2.052+0	6.620-4	1.558+0	6.007-4	3.735-1	3.735+0	1.666-1	1.785-1	
6.000+0	2.143+1	3.010-2	2.004+0	5.563-4	1.468+0	5.419-4	4.161-1	4.161+0	2.057-1	1.942-1	
6.500+0	2.184+1	2.954-2	1.966+0	4.740-4	1.389+0	4.930-4	4.757-1	4.595+0	4.595+0	2.496-1	
7.000+0	2.216+1	2.911-2	1.938+0	4.087-4	1.320+0	4.516-4	5.171-1	5.037+0	5.037+0	2.983-1	
8.000+0	2.258+1	2.857-2	1.901+0	3.130-4	1.201+0	3.856-4	5.996-1	5.941+0	5.941+0	4.107-1	
1.000+1	2.276+1	2.835-2	1.887+0	2.003-4	1.023+0	2.961-4	8.833-1	7.818+0	7.818+0	6.956-1	
1.250+1	2.309+1	2.794-2	1.859+0	1.282-4	8.880-1	2.339-4	9.911-1	1.020+1	1.020+1	1.153+0	
1.500+1	2.300+1	2.805-2	1.867+0	8.902-5	7.572-1	1.929-4	1.110+0	1.263+1	1.263+1	1.722+0	
1.750+1	2.259+1	2.856-2	1.901+0	6.940-5	6.734-1	1.639-4	1.227+0	1.510+1	1.510+1	2.397+0	
2.000+1	2.219+1	2.927-2	1.935+0	5.006-5	6.077-1	1.423-4	1.327+0	1.758+1	1.758+1	3.167+0	
2.500+1	2.138+1	2.988-2	1.888+0	3.205-5	5.108-1	1.124-4	1.476+0	2.256+1	2.256+1	4.868+0	
3.000+1	2.104+1	3.086-2	2.041+0	2.285-5	4.424-1	9.271-5	1.598+0	2.755+1	2.755+1	7.059+0	
3.500+1	2.083+1	3.127-2	2.081+0	1.635-5	3.913-1	7.877-5	1.690+0	3.255+1	3.255+1	9.415+0	
4.000+1	2.021+1	3.192-2	2.125+0	1.252-5	3.516-1	8.840-5	1.773+0	3.756+1	3.756+1	1.200+1	
4.500+1	1.974+1	3.268-2	2.175+0	9.891-6	3.187-1	8.039-5	1.856+0	4.257+1	4.257+1	1.479+1	
5.000+1	1.938+1	3.328-2	2.215+0	8.012-6	2.935-1	5.403-5	1.922+0	4.798+1	4.798+1	1.775+1	
5.500+1	1.915+1	3.389-2	2.242+0	6.621-6	2.715-1	4.885-5	1.970+0	5.259+1	5.259+1	2.088+1	
6.000+1	1.892+1	3.409-2	2.269+0	5.563-6	2.529-1	4.456-5	2.016+0	5.760+1	5.760+1	2.411+1	
6.500+1	1.870+1	3.449-2	2.296+0	4.740-6	2.367-1	4.094-5	2.059+0	6.260+1	6.260+1	2.748+1	
7.000+1	1.849+1	3.489-2	2.322+0	4.087-6	2.227-1	3.788-5	2.100+0	6.761+1	6.761+1	3.097+1	
8.000+1	1.809+1	3.567-2	2.374+0	3.130-6	1.994-1	3.287-5	2.175+0	7.763+1	7.763+1	3.823+1	
1.000+2	1.737+1	2.714-2	2.472+0	2.003-6	1.655-1	2.596-5	2.306+0	9.767+1	9.767+1	5.369+1	

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	8.241-1	1.881-1	1.000+0	2.591-1	7.415-1	1.000+1	7.360-3	9.995-1
5.000-3	9.994-1	9.000-4	1.500-1	7.850-1	2.200-1	1.250+0	1.991-1	8.019-1	1.500+1	2.034-3	1.000+0
1.000-2	9.979-1	3.800-3	1.750-1	7.495-1	2.524-1	1.500+0	1.501-1	8.481-1	2.000+1	7.437-4	1.000+0
1.500-2	9.954-1	7.990-3	2.000-1	7.146-1	2.845-1	2.000+0	9.459-2	8.985-1	5.000+1	2.428-5	1.000+0
2.000-2	9.919-1	1.391-2	2.500-1	6.474-1	3.450-1	2.500+0	7.159-2	9.285-1	8.000+1	4.090-6	1.000+0
2.500-2	9.874-1	2.115-2	3.000-1	5.845-1	3.991-1	3.000+0	6.251-2	9.433-1	1.000+2	1.769-6	1.000+0
3.000-2	9.822-1	2.949-2	4.000-1	4.815-1	4.895-1	3.500+0	5.342-2	9.598-1	1.000+3	5.587-10	1.000+0
4.000-2	9.654-1	4.842-2	5.000-1	4.128-1	5.573-1	4.000+0	4.737-2	9.708-1	1.000+8	4.788-19	1.000+0
5.000-2	9.544-1	6.875-2	6.000-1	3.688-1	6.082-1	5.000+0	3.528-2	9.849-1	1.000+9	5.549-28	1.000+0
7.000-2	9.199-1	1.079-1	7.000-1	3.375-1	6.477-1	6.000+0	2.572-2	9.924-1			
9.000-2	8.837-1	1.409-1	8.000-1	3.105-1	6.818-1	7.000+0	1.861-2	9.962-1			
1.000-1	8.859-1	1.553-1	9.000-1	2.845-1	7.126-1	8.000+0	1.486-2	9.981-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

21-Sc

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ENDL Evaluated Photon Data

21-Sc

ATOMIC WEIGHT 44.958						DENSITY 7.3 GRAMS/CC					
ENERGY		TOTAL HPF		CROSS SECTION (BARNS)				MEV/COLLISION		MEV/CM	
MEV	CM	CM/CM/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.-FLOR	K.E. BREMSSTR	K.E.	K.E.
1.000-4	1.261-5	2.853-4	1.980-8	2.931-2	1.485-2	1.980-8	9.999-5	9.999-5	1.312-10	7.930-0	
1.250-4	1.557-5	2.149-4	1.804-8	2.929-2	2.277-2	1.604-8	1.250-4	1.250-4	2.050-10	8.029-0	
1.500-4	1.849-5	1.809-4	1.350-8	2.926-2	3.263-2	1.350-8	1.500-4	1.500-4	2.952-10	8.110-0	
1.750-4	2.267-5	1.475-4	1.101-8	2.923-2	4.419-2	1.101-8	1.750-4	1.750-4	4.017-10	7.718-0	
2.000-4	2.704-5	1.237-4	9.233-5	2.920-2	5.747-2	9.230-5	1.999-4	1.999-4	5.247-10	7.393-0	
2.500-4	3.875-5	8.631-3	6.444-5	2.910-2	8.898-2	6.441-5	2.499-4	2.499-4	8.196-10	6.449-0	
3.000-4	5.199-5	6.434-3	4.803-5	2.902-2	1.261-1	4.800-5	2.998-4	2.998-4	1.180-9	5.767-0	
3.500-4	6.825-5	4.830-3	3.606-5	2.890-2	1.686-1	3.603-5	3.497-4	3.497-4	1.605-9	5.050-0	
4.000-4	8.878-5	3.788-3	2.813-5	2.879-2	2.188-1	2.810-5	3.998-4	3.998-4	2.096-9	4.502-0	
4.030-4	9.004-5	3.714-3	2.773-5	2.878-2	2.198-1	2.770-5	4.026-4	4.026-4	2.127-9	4.471-0	
4.044-4	1.274-5	2.826-4	1.960-8	2.877-2	2.212-1	1.960-8	4.043-4	4.043-4	2.146-9	3.175-1	
4.200-4	1.032-5	3.242-4	2.420-8	2.873-2	2.389-1	2.420-8	4.200-4	4.200-4	2.315-9	4.071-1	
4.500-4	1.189-5	2.813-4	2.100-8	2.864-2	2.685-1	2.100-8	4.499-4	4.499-4	2.657-9	3.785-1	
4.800-4	1.372-5	2.438-4	1.820-8	2.855-2	3.019-1	1.820-8	4.799-4	4.799-4	3.023-9	3.499-1	
4.997-4	1.495-5	2.237-4	1.670-8	2.850-2	3.247-1	1.670-8	4.996-4	4.996-4	3.276-9	3.342-1	
5.000-4	1.504-5	2.224-4	1.660-8	2.850-2	3.251-1	1.660-8	4.999-4	4.999-4	3.280-9	3.324-1	
5.011-4	1.307-5	2.559-4	1.910-8	2.850-2	3.263-1	1.910-8	5.010-4	5.010-4	3.295-9	3.633-1	
5.500-4	1.600-5	2.090-4	1.560-8	2.832-2	3.835-1	1.560-8	5.499-4	5.499-4	3.969-9	3.436-1	
5.600-4	1.684-5	2.010-4	1.500-8	2.829-2	3.957-1	1.500-8	5.599-4	5.599-4	4.114-9	3.364-1	
6.000-4	1.935-5	1.728-4	1.290-8	2.816-2	4.459-1	1.290-8	5.999-4	5.999-4	4.723-9	3.100-1	
6.500-4	2.322-5	1.440-4	1.075-8	2.794-2	5.071-1	1.075-8	6.498-4	6.498-4	5.542-9	2.799-1	
7.000-4	2.749-5	1.217-4	9.083-5	2.774-2	5.711-1	9.080-5	6.998-4	6.998-4	6.427-9	2.846-1	
8.000-4	3.770-5	8.871-3	6.623-5	2.738-2	7.076-1	6.620-5	7.997-4	7.997-4	8.393-9	2.121-1	
9.000-4	5.031-5	6.648-3	4.963-5	2.691-2	8.371-1	4.960-5	8.995-4	8.995-4	1.062-8	1.788-1	
1.000-3	6.264-5	5.339-3	3.986-5	2.650-2	9.728-1	3.983-5	9.993-4	9.993-4	1.311-8	1.595-1	
1.250-3	1.089-4	3.072-3	2.293-5	2.620-2	1.267-0	2.291-5	1.249-3	1.249-3	2.046-8	1.147-1	
1.500-3	1.710-4	1.956-3	1.460-5	2.419-2	1.573-0	1.458-5	1.497-3	1.497-3	2.943-8	8.759-0	
1.750-3	2.551-4	1.311-3	9.787-4	2.300-2	1.832-0	9.784-4	1.746-3	1.746-3	4.000-8	6.844-0	
2.000-3	3.607-4	9.271-2	6.821-4	2.202-2	2.091-0	6.899-4	1.994-3	1.994-3	5.218-8	5.526-0	
2.500-3	6.811-4	5.059-2	3.777-4	1.989-2	2.570-0	3.756-4	2.487-3	2.487-3	8.118-8	3.761-0	
3.000-3	1.083-3	3.087-2	2.305-4	1.831-2	3.041-0	2.888-4	2.978-3	2.978-3	1.162-7	2.747-0	
3.500-3	1.675-3	1.996-2	1.450-4	1.661-2	3.473-0	1.473-4	3.460-3	3.460-3	1.571-7	2.085-0	
4.000-3	2.441-3	1.370-2	1.023-4	1.566-2	3.898-0	1.007-4	3.839-3	3.839-3	2.038-7	1.613-0	
4.492-3	3.409-3	9.810-1	7.324-3	1.394-2	4.270-0	7.180-3	4.404-3	4.404-3	2.545-7	1.292-0	
4.493-3	4.048-4	8.265-2	6.170-4	1.393-2	4.271-0	6.156-4	4.483-3	4.483-3	2.866-7	9.387-0	
4.500-3	4.062-4	8.234-2	6.147-4	1.392-2	4.278-0	6.133-4	4.480-3	4.480-3	1.893-7	8.349-0	
5.000-3	5.258-4	6.360-2	4.744-4	1.281-2	4.847-0	4.735-4	4.886-3	4.886-3	2.420-7	8.114-0	
5.500-3	6.888-4	5.001-2	3.733-4	1.178-2	4.978-0	3.721-4	5.482-3	5.482-3	3.012-7	7.163-0	
6.000-3	8.330-4	4.015-2	2.997-4	1.086-2	5.301-0	2.988-4	5.977-3	5.977-3	3.867-7	6.346-0	
6.500-3	1.028-3	3.253-2	2.429-4	1.007-2	5.572-0	2.418-4	6.472-3	6.472-3	4.386-7	5.623-0	
7.000-3	1.249-3	2.678-2	1.999-4	9.375-1	5.836-0	1.989-4	6.985-3	6.985-3	5.167-7	5.024-0	
8.000-3	1.773-3	1.888-2	1.408-4	8.238-1	6.343-0	1.399-4	7.950-3	7.950-3	6.918-7	4.094-0	
1.000-2	3.260-3	1.026-2	7.859-3	6.574-1	7.111-0	7.586-3	9.905-3	9.905-3	1.115-6	2.828-0	
1.250-2	6.132-3	5.454-1	4.072-3	5.120-1	7.795-0	4.013-3	1.832-2	1.184-2	1.777-6	1.898-0	
1.500-2	1.025-2	3.262-1	2.435-3	4.174-1	8.402-0	2.385-3	1.469-2	1.401-2	2.577-6	1.367-0	
1.750-2	1.606-2	2.083-1	1.525-3	3.391-1	8.830-0	1.512-3	1.702-2	1.635-2	3.507-6	1.018-0	
2.000-2	2.363-2	1.415-1	1.057-3	2.833-1	9.218-0	1.019-3	1.930-2	1.863-2	4.553-6	7.882-1	
2.500-2	4.558-2	7.338-0	5.478-2	2.016-1	9.885-0	5.180-2	2.386-2	2.300-2	6.944-6	5.047-1	
3.000-2	7.723-2	4.331-0	3.233-2	1.527-1	1.005-1	2.980-2	2.770-2	2.706-2	9.611-6	3.505-1	
3.500-2	1.204-1	2.778-0	2.074-2	1.198-1	1.021-1	1.852-2	3.137-2	3.075-2	1.241-5	2.594-1	
4.000-2	1.749-1	1.912-0	1.427-2	9.678-0	1.034-1	1.227-2	3.480-2	3.400-2	1.517-5	1.944-1	
4.500-2	2.414-1	1.385-0	1.034-2	7.980-0	1.039-1	6.507-1	3.737-2	3.680-2	1.778-5	1.524-1	
5.000-2	3.183-1	1.051-0	7.844-1	6.718-0	1.042-1	6.130-1	3.985-2	3.910-2	2.006-5	1.228-1	
5.500-2	4.049-1	8.261-1	6.157-1	7.723-0	1.041-1	5.551-1	4.147-2	4.055-2	2.201-5	1.012-1	
6.000-2	4.988-1	6.705-1	5.005-1	4.945-0	1.039-1	3.782-1	4.285-2	4.237-2	2.325-5	8.494-2	
6.500-2	5.931-1	5.583-1	4.188-1	4.299-0	1.033-1	2.705-1	4.388-2	4.343-2	2.474-5	7.249-2	
7.000-2	7.030-1	4.728-1	3.552-1	3.777-0	1.027-1	2.147-1	4.451-2	4.406-2	2.558-5	6.278-2	
8.000-2	9.140-1	3.699-1	2.732-1	2.991-0	1.017-1	1.418-1	4.511-2	4.475-2	2.628-5	4.688-2	
1.000-1	1.319-0	2.536-1	1.899-1	1.997-0	9.861-0	1.077-0	4.481-2	4.455-2	2.804-5	3.578-2	
1.250-1	1.746-0	1.916-1	1.430-1	1.317-0	9.418-0	3.985-0	4.474-2	4.457-2	2.808-5	2.553-2	
1.500-1	2.073-0	1.613-1	1.204-1	9.373-0	9.071-0	2.038-0	4.632-2	4.620-2	2.800-5	2.229-2	
1.750-1	2.398-0	1.430-1	1.088-1	8.988-0	8.700-0	1.279-0	4.993-2	4.984-2	2.599-5	2.132-2	
2.000-1	2.951-0	1.311-1	9.787-0	8.418-1	8.390-0	8.951-1	5.514-2	5.507-2	3.978-5	8.199-2	

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 44.956		DENSITY 2.99 GRAMS/CC									
ENERGY	TOTAL NFP	CROSS SECTION (BARN)						MEV/COLLISION			MEV/CM
MEV	CH	CH/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.-FLOR	K.E.	BREMSSTR	K.E.
2.500-1	2.903+0	1.152-1	8.599+0	3.513-1	7.803+0	4.448-1		8.898-2	8.899-2	8.232-5	2.374-2
3.000-1	3.176+0	1.053-1	7.862+0	2.487-1	7.355+0	2.808-1		8.628-2	8.629-2	9.759-5	2.716-2
3.500-1	3.421+0	9.778-2	7.298+0	1.822-1	6.947+0	1.988-1		1.025-1	1.025-1	1.459-4	3.084-2
4.000-1	3.635+0	9.200-2	6.808+0	1.402-1	6.612+0	1.190-1		1.287-1	1.288-1	2.102-4	3.484-2
4.500-1	3.839+0	8.712-2	6.504+0	1.111-1	6.309+0	8.383-2		1.488-1	1.489-1	2.900-4	3.875-2
5.000-1	4.026+0	8.308-2	6.202+0	9.017-2	6.049+0	6.288-2		1.722-1	1.722-1	3.884-4	4.278-2
5.500-1	4.207+0	7.949-2	5.935+0	7.483-2	5.811+0	4.887-2		1.963-1	1.963-1	5.044-4	4.685-2
6.000-1	4.378+0	7.640-2	5.704+0	6.280-2	5.602+0	3.882-2		2.213-1	2.213-1	6.411-4	5.056-2
6.500-1	4.547+0	7.395-2	5.491+0	5.355-2	5.405+0	3.189-2		2.487-1	2.487-1	7.959-4	5.424-2
7.000-1	4.709+0	7.102-2	5.302+0	4.621-2	5.230+0	2.625-2		2.727-1	2.727-1	9.728-4	5.792-2
8.000-1	5.012+0	6.673-2	4.981+0	3.943-2	4.927+0	1.871-2		3.270-1	3.270-1	1.398-3	6.525-2
1.000+0	5.591+0	5.982-2	4.486+0	2.270-2	4.432+0	1.093-2		4.398-1	4.398-1	2.524-3	7.867-2
1.022+0	5.651+0	5.918-2	4.418+0	2.174-2	4.386+0	1.051-2	1.000-6	4.526-1	4.526-1	2.672-3	8.008-2
1.250+0	6.281+0	5.342-2	3.988+0	1.459-2	3.985+0	7.343-3	5.806-4	5.878-1	5.878-1	4.500-3	9.388-2
1.500+0	6.950+0	4.877-2	3.641+0	1.010-2	3.605+0	5.306-3	2.051-2	7.402-1	7.402-1	7.121-3	1.079-1
1.750+0	7.339+0	4.523-2	3.377+0	7.428-3	3.315+0	3.992-3	4.990-2	8.971-1	8.971-1	1.044-3	1.213-1
2.000+0	7.688+0	4.242-2	3.167+0	5.687-3	3.077+0	3.177-3	8.144-2	1.059+0	1.059+0	1.452-2	1.343-1
2.044+0	7.988+0	4.197-2	3.133+0	5.445-3	3.039+0	3.073-3	8.606-2	1.088+0	1.088+0	1.532-2	1.365-1
2.500+0	8.732+0	3.630-2	2.860+0	3.641-3	2.703+0	2.279-3	1.508-1	1.397+0	1.397+0	2.514-2	1.600-1
3.000+0	9.408+0	3.555-2	2.694+0	2.329-3	2.421+0	1.782-3	2.268-1	1.753+0	1.753+0	3.942-2	1.863-1
3.500+0	9.979+0	3.352-2	2.502+0	1.858-3	2.199+0	1.439-3	2.994-1	2.125+0	2.125+0	5.766-2	2.129-1
4.000+0	1.044+1	3.203-2	2.391+0	1.422-3	2.020+0	1.207-3	3.688-1	2.512+0	2.512+0	8.020-2	2.408-1
4.500+0	1.081+1	3.093-2	2.309+0	1.124-3	1.870+0	1.029-3	4.352-1	2.913+0	2.913+0	1.073-1	2.694-1
5.000+0	1.114+1	3.003-2	2.242+0	9.103-4	1.744+0	8.998-4	4.956-1	3.325+0	3.325+0	1.390-1	2.985-1
5.500+0	1.146+1	2.919-2	2.179+0	7.523-4	1.636+0	8.036-4	5.417-1	3.743+0	3.743+0	1.753-1	3.267-1
6.000+0	1.178+1	2.854-2	2.131+0	6.322-4	1.542+0	7.247-4	5.877-1	4.171+0	4.171+0	2.185-1	3.580-1
6.500+0	1.193+1	2.804-2	2.094+0	5.387-4	1.459+0	6.581-4	6.334-1	4.607+0	4.607+0	2.627-1	3.863-1
7.000+0	1.209+1	2.767-2	2.068+0	4.645-4	1.388+0	6.036-4	6.780-1	5.051+0	5.051+0	3.140-1	4.178-1
8.000+0	1.259+1	2.722-2	2.032+0	3.558-4	1.281+0	5.152-4	7.697-1	5.959+0	5.959+0	4.323-1	4.849-1
1.000+0	1.233+1	2.712-2	2.025+0	2.278-4	1.074+0	3.954-4	9.499-1	7.841+0	7.841+0	7.318-1	4.358-1
1.250+0	1.247+1	2.682-2	2.002+0	1.457-4	9.114-1	3.123-4	1.090+0	1.023+0	1.023+0	1.210+0	8.200-1
1.500+0	1.239+1	2.700-2	2.015+0	1.012-4	7.950-1	2.575-4	1.220+0	1.267+0	1.267+0	1.805+0	1.022+0
1.750+0	1.214+1	2.754-2	2.026+0	7.432-5	7.071-1	2.188-4	1.349+0	1.514+0	1.514+0	2.509+0	1.247+0
2.000+0	1.191+1	2.806-2	2.098+0	5.691-5	6.381-1	1.900-4	1.498+0	1.762+0	1.762+0	3.311+0	1.480+0
2.500+0	1.156+1	2.894-2	2.160+0	3.642-5	5.383-1	1.500-4	1.624+0	2.261+0	2.261+0	5.173+0	1.958+0
3.000+0	1.125+1	2.973-2	2.220+0	2.529-5	4.845-1	1.237-4	1.795+0	2.780+0	2.780+0	7.341+0	2.454+0
3.500+0	1.102+1	3.036-2	2.288+0	1.858-5	4.109-1	1.051-4	1.855+0	3.260+0	3.260+0	9.771+0	2.959+0
4.000+0	1.078+1	3.102-2	2.318+0	1.423-5	3.898-1	9.129-5	1.947+0	3.761+0	3.761+0	1.243+1	3.489+0
4.500+0	1.052+1	3.179-2	2.373+0	1.124-5	3.357-1	8.060-5	2.037+0	4.263+0	4.263+0	1.529+1	4.051+0
5.000+0	1.033+1	3.239-2	2.448+0	9.105-6	3.081-1	7.210-5	2.110+0	4.784+0	4.784+0	1.833+1	4.813+0
5.500+0	1.020+1	3.280-2	2.448+0	7.524-6	2.851-1	6.519-5	2.183+0	5.284+0	5.284+0	2.151+1	5.162+0
6.000+0	1.007+1	3.320-2	2.479+0	6.326-6	2.655-1	5.946-5	2.213+0	5.785+0	5.785+0	2.483+1	5.723+0
6.500+0	9.922+0	3.361-2	2.509+0	5.387-6	2.485-1	5.484-5	2.260+0	6.286+0	6.286+0	2.828+1	6.296+0
7.000+0	9.836+0	3.400-2	2.538+0	4.645-6	2.338-1	5.052-5	2.305+0	6.767+0	6.767+0	3.183+1	6.880+0
8.000+0	9.617+0	3.478-2	2.588+0	3.556-6	2.094-1	4.387-5	2.387+0	7.768+0	7.768+0	3.922+1	8.078+0
1.000+2	9.231+0	3.623-2	2.705+0	2.276-6	1.738-1	3.485-5	2.531+0	9.772+0	9.772+0	5.491+1	1.059+1

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Form Factors

21-Sc

SIN(Θ/2)/λ COHERENT		INCOHERENT	SIN(Θ/2)/λ COHERENT		INCOHERENT	SIN(Θ/2)/λ COHERENT		INCOHERENT	SIN(Θ/2)/λ COHERENT		INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.250-1	8.313-1	1.826-1	1.000-0	2.606-1	7.362-1	1.000-1	8.110-3	9.993-1
5.000-3	9.994-1	8.095-4	1.500-1	7.920-1	2.139-1	1.250-0	2.057-1	7.950-1	1.500-1	2.299-3	1.000-0
1.000-2	9.990-1	3.190-3	1.750-1	7.552-1	2.451-1	1.500-0	1.979-1	8.355-1	2.000-1	8.498-4	1.000-0
1.500-2	9.959-1	7.086-3	2.000-1	7.202-1	2.762-1	2.000-0	1.853-1	8.944-1	5.000-1	2.628-5	1.000-0
2.000-2	9.927-1	1.237-2	2.500-1	6.531-1	3.355-1	2.500-0	1.721-1	9.237-1	8.000-1	4.798-6	1.000-0
2.500-2	9.887-1	1.867-2	3.000-1	5.906-1	3.890-1	3.000-0	1.589-1	9.426-1	1.000-2	2.079-6	1.000-0
3.000-2	9.839-1	2.841-2	4.000-1	4.860-1	4.798-1	3.500-0	1.407-1	9.568-1	1.000-3	5.783-10	1.000-0
4.000-2	9.723-1	4.381-2	5.000-1	4.125-1	5.505-1	4.000-0	1.174-1	9.679-1	1.000-6	5.979-19	1.000-0
5.000-2	9.586-1	6.290-2	6.000-1	3.647-1	6.040-1	5.000-0	1.012-1	9.829-1	1.000-9	7.038-28	1.000-0
7.000-2	9.260-1	1.010-1	7.000-1	3.324-1	6.450-1	6.000-0	8.699-2	9.911-1			
9.000-2	8.910-1	1.345-1	8.000-1	3.068-1	6.789-1	7.000-0	1.979-2	9.954-1			
1.000-1	8.734-1	1.493-1	9.000-1	2.834-1	7.088-1	8.000-0	1.590-2	9.976-1

12/07/78

ENDL Evaluated Photon Cross Sections

22-Tl

12/07/7E

Energy Deposition

22-T1

12/07/78

ENDL Evaluated Photon Data

22-T1

ATOMIC WEIGHT 47.9		DENSITY 4.507 GRAMS/CC					
ENERGY	TOTAL NFP	CROSS SECTION (BARNS)					
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD
1.000-4	7.941-6	2.942-4	2.940-6	3.217-2	1.380-2	2.340-6	9.999-5
1.250-4	9.459-6	2.348-4	1.888-6	3.214-2	2.141-2	1.885-6	1.250-4
1.500-4	1.138-5	1.949-4	1.950-6	3.212-2	3.085-2	1.950-6	1.500-4
1.750-4	1.395-5	1.590-4	1.895-6	3.209-2	4.144-2	1.284-6	1.750-4
2.000-4	1.684-5	1.333-4	1.080-6	3.206-2	5.381-2	1.080-6	2.000-4
2.500-4	2.374-5	8.347-3	7.435-5	3.198-2	8.258-2	7.432-5	2.500-4
3.000-4	3.172-5	6.994-3	5.963-5	3.189-2	1.182-1	5.580-5	3.000-4
3.500-4	4.206-5	5.272-3	4.194-5	3.178-2	1.593-1	4.190-5	3.500-4
4.000-4	5.375-5	4.188-3	3.283-5	3.165-2	2.038-1	3.280-5	4.000-4
4.500-4	6.759-5	3.285-3	2.613-5	3.150-2	2.529-1	2.610-5	4.500-4
4.982-4	8.967-5	3.185-3	2.533-5	3.148-2	2.999-1	2.530-5	4.982-4
5.482-4	1.103-5	2.012-4	1.800-6	3.148-2	2.614-1	1.800-6	5.482-4
6.000-4	8.403-6	2.641-4	2.100-6	3.142-2	2.846-1	2.100-6	6.000-4
6.500-4	9.190-6	2.414-4	1.920-6	3.136-2	3.068-1	1.920-6	6.500-4
7.000-4	1.131-5	1.962-4	1.960-6	3.119-2	3.628-1	1.580-6	7.000-4
7.500-4	1.178-5	1.888-4	1.500-6	3.115-2	3.744-1	1.500-6	7.500-4
8.000-4	1.192-5	1.881-4	1.480-6	3.114-2	3.780-1	1.480-6	8.000-4
8.500-4	1.032-5	2.150-4	1.710-6	3.114-2	3.798-1	1.710-6	8.500-4
9.000-4	1.184-5	1.874-4	1.480-6	3.103-2	4.226-1	1.480-6	9.000-4
9.500-4	1.413-5	1.570-4	1.240-6	3.081-2	4.821-1	1.240-6	9.500-4
1.000-3	1.684-5	1.333-4	1.080-6	3.060-2	5.444-1	1.080-6	1.000-3
1.000-4	2.276-5	9.747-3	7.713-5	3.024-2	6.778-1	7.750-5	1.000-4
1.000-3	3.010-5	7.371-3	5.883-5	2.978-2	8.081-1	5.880-5	1.000-3
1.000-3	3.580-5	6.197-3	4.924-5	2.933-2	9.413-1	4.926-5	1.000-3
1.250-3	6.338-5	3.490-3	2.778-5	2.797-2	1.240-0	2.773-5	1.250-3
1.500-3	1.016-4	2.183-3	1.737-5	2.890-2	1.953-0	1.734-5	1.500-3
1.750-3	1.526-4	1.494-3	1.157-5	2.982-2	2.819-0	1.154-5	1.750-3
2.000-3	2.189-4	1.023-3	8.138-4	2.958-2	2.088-0	8.113-4	2.000-3
2.500-3	3.980-4	5.803-2	4.457-4	2.823-2	2.576-0	4.434-4	2.500-3
3.000-3	6.470-4	3.728-3	2.728-4	2.648-2	3.081-0	2.707-4	3.000-3
3.500-3	9.891-4	2.243-3	1.784-4	1.881-2	3.508-0	1.785-4	3.500-3
4.000-3	1.427-3	1.593-2	1.237-4	1.712-2	3.943-0	1.219-4	4.000-3
4.500-3	1.952-3	1.118-2	8.903-3	1.581-2	4.337-0	8.749-3	4.500-3
4.982-3	2.604-3	8.519-1	6.778-3	1.448-2	4.889-0	6.827-3	4.982-3
5.482-3	3.115-3	7.188-1	5.685-3	1.448-2	5.486-0	5.650-3	5.482-3
6.000-3	3.171-3	6.988-1	5.585-3	1.438-2	6.173-0	5.550-3	6.000-3
6.500-3	4.047-3	5.488-2	4.381-3	1.320-2	6.889-0	4.347-3	6.500-3
7.000-3	5.056-3	4.388-2	3.491-3	1.221-2	7.608-0	3.478-3	7.000-3
7.500-3	6.248-3	3.951-2	2.825-3	1.128-2	8.332-0	2.813-3	7.500-3
8.000-3	7.600-3	2.920-2	2.322-3	1.048-2	9.077-0	2.311-3	8.000-3
8.500-3	9.081-3	2.052-2	1.832-3	9.188-1	9.816-0	1.822-3	8.500-3
9.000-3	1.081-2	1.117-2	8.885-3	7.288-1	1.734-0	8.805-3	9.000-3
1.000-2	3.718-3	5.177-1	4.747-3	5.670-1	8.077-0	4.682-3	1.000-2
1.250-2	8.192-3	2.583-1	2.850-3	4.828-1	8.714-0	2.795-3	1.250-2
1.500-2	9.840-3	2.382-1	1.831-3	3.774-1	9.189-0	1.784-3	1.500-2
2.000-2	1.412-2	1.578-1	1.250-3	3.183-1	9.572-0	1.209-3	2.000-2
2.500-2	2.887-2	8.288-0	6.544-2	2.234-1	1.005-1	6.218-2	2.500-2
3.000-2	4.940-2	4.888-0	3.688-2	1.709-1	1.048-1	3.612-2	3.000-2
3.500-2	7.042-2	3.151-0	2.508-2	1.339-1	1.083-1	2.288-2	3.500-2
4.000-2	1.021-1	2.174-0	1.729-2	1.083-1	1.079-1	1.513-2	4.000-2
4.500-2	1.487-1	1.577-0	1.234-2	8.934-0	1.083-1	1.057-2	4.500-2
5.000-2	1.857-1	1.195-0	9.583-1	7.518-0	1.087-1	7.884-1	5.000-2
5.500-2	2.388-1	9.371-1	7.453-1	6.409-0	1.088-1	5.727-1	5.500-2
6.000-2	2.928-1	7.578-1	6.827-1	5.571-0	1.084-1	4.388-1	6.000-2
6.500-2	3.533-1	6.281-1	4.988-1	4.821-0	1.078-1	3.438-1	6.500-2
7.000-2	4.167-1	5.324-1	4.235-1	4.238-0	1.072-1	2.739-1	7.000-2
7.500-2	5.484-1	4.484-1	3.218-1	3.359-0	1.062-1	1.884-1	7.500-2
8.000-2	6.811-1	2.739-1	2.178-1	2.247-0	1.031-1	9.243-0	8.000-2
8.500-2	8.188-1	2.013-1	1.601-1	1.483-0	9.049-0	8.878-0	8.500-2
9.000-2	9.577-1	1.333-0	1.124-1	1.038-0	9.038-0	8.861-0	9.000-2
1.000-1	1.263-0	1.427-1	1.139-1	7.873-1	9.184-0	1.087-0	1.000-1
2.000-1	1.878-0	1.324-1	1.063-1	6.178-1	8.781-0	1.138-0	2.000-1
2.500-1	1.927-0	1.151-1	9.157-0	3.983-1	8.189-0	9.917-1	2.500-1

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 47.9		DENSITY 4.507 GRAMS/CC							
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARN)				REV/COLLISION		
	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR	K.E.	MEV/CM
3.000-1	2.120+0	1.047-1	8.328+0	2.784-1	7.701+0	3.488-1	3.800-2	8.795-2	1.083-4
3.500-1	2.291+0	9.865-2	7.704+0	2.057-1	7.275+0	2.235-1	1.008-2	1.008-1	1.587-4
4.000-1	2.438+0	9.097-2	7.238+0	1.583-1	6.925+0	1.527-1	1.277-1	1.277-1	2.237-4
4.500-1	2.579+0	8.803-2	6.843+0	1.254-1	6.607+0	1.100-1	1.486-1	1.486-1	3.071-4
5.000-1	2.707+0	8.198-2	6.519+0	1.018-1	6.335+0	8.207-2	1.729-1	1.729-1	4.100-4
5.500-1	2.831+0	7.838-2	6.234+0	8.430-2	6.088+0	6.334-2	1.988-1	1.988-1	5.212-4
6.000-1	2.947+0	7.529-2	5.989+0	7.094-2	5.888+0	5.000-2	2.218-1	2.218-1	6.742-4
6.500-1	3.062+0	7.245-2	5.783+0	6.050-2	5.682+0	4.049-2	2.470-1	2.470-1	8.361-4
7.000-1	3.172+0	6.994-2	5.583+0	5.221-2	5.478+0	3.330-2	2.730-1	2.730-1	1.021-3
8.000-1	3.378+0	6.389-2	5.253+0	4.003-2	5.181+0	2.342-2	3.272-1	3.272-1	1.488-3
1.000+0	3.789+0	5.687-2	4.888+0	2.986-2	4.843+0	1.329-2	4.399-1	4.399-1	2.845-3
1.022+0	3.810+0	5.623-2	4.832+0	2.457-2	4.594+0	1.278-2	4.526-1	4.526-1	2.800-3
1.250+0	4.229+0	5.255-2	4.180+0	1.844-2	4.154+0	9.922-3	5.878-1	5.878-1	4.713-3
1.500+0	4.624+0	4.798-2	3.817+0	1.142-2	3.776+0	6.443-3	7.401-1	7.401-1	7.458-3
1.750+0	4.983+0	4.452-2	3.541+0	8.393-3	3.473+0	4.845-3	8.970-1	8.970-1	1.093-2
2.000+0	5.311+0	4.178-2	3.323+0	6.427-3	3.223+0	3.823-3	1.059+0	1.059+0	1.520-2
2.044+0	5.367+0	4.134-2	3.288+0	6.153-3	3.183+0	3.728-3	1.088+0	1.088+0	1.804-2
2.500+0	5.675+0	3.777-2	3.004+0	4.115-3	2.831+0	2.762-3	1.397+0	1.397+0	2.633-2
3.000+0	6.320+0	3.511-2	2.792+0	2.858-3	2.538+0	2.135-3	2.511-1	1.754+0	4.130-2
3.500+0	6.893+0	3.315-2	2.637+0	2.099-3	2.304+0	1.742-3	2.127+0	2.127+0	6.044-2
4.000+0	6.993+0	3.173-2	2.524+0	1.807-3	2.116+0	1.461-3	2.516+0	2.516+0	8.411-2
4.500+0	7.233+0	3.088-2	2.440+0	1.270-3	1.959+0	1.248-3	2.918+0	2.918+0	1.128-1
5.000+0	7.440+0	2.988-2	2.372+0	1.029-3	1.827+0	1.088-3	3.332+0	3.332+0	1.459-1
5.500+0	7.643+0	2.903-2	2.309+0	8.503-4	1.714+0	9.717-4	3.752+0	3.752+0	1.840-1
6.000+0	7.808+0	2.842-2	2.260+0	7.145-4	1.615+0	8.781-4	4.181+0	4.181+0	2.273-1
6.500+0	7.937+0	2.798-2	2.224+0	6.088-4	1.528+0	7.885-4	4.619+0	4.619+0	2.758-1
7.000+0	8.035+0	2.762-2	2.198+0	5.250-4	1.452+0	7.293-4	5.065+0	5.065+0	3.297-1
8.000+0	8.150+0	2.722-2	2.185+0	4.019-4	1.321+0	6.222-4	5.978+0	5.978+0	4.538-1
1.000+1	8.148+0	2.724-2	2.186+0	2.572-4	1.125+0	4.771-4	7.885+0	7.885+0	7.675-1
1.250+1	8.212+0	2.702-2	2.149+0	1.848-4	9.548-1	3.788-4	1.194+0	1.025+0	1.808+0
1.500+1	8.138+0	2.727-2	2.189+0	1.143-4	8.328-1	3.107-4	1.336+0	1.270+0	1.888+0
1.750+1	7.999+0	2.768-2	2.217+0	8.400-5	7.407-1	2.840-4	1.478+0	1.518+0	2.820+0
2.000+1	7.782+0	2.847-2	2.284+0	8.432-5	6.885-1	2.298-4	1.738+0	1.788+0	3.452+0
2.500+1	7.548+0	2.839-2	2.388+0	4.118-5	5.819-1	1.811-4	2.295+0	2.295+0	5.379+0
3.000+1	7.336+0	3.025-2	2.408+0	2.858-5	4.887-1	1.493-4	2.785+0	2.785+0	7.818+0
3.500+1	7.177+0	3.091-2	2.498+0	2.100-5	4.305-1	1.288-4	3.285+0	3.285+0	1.012+1
4.000+1	7.017+0	3.182-2	2.515+0	1.808-5	3.887-1	1.101-4	3.788+0	3.788+0	1.285+1
4.500+1	6.843+0	3.242-2	2.578+0	1.270-5	3.516-1	9.723-5	4.288+0	4.288+0	1.578+1
5.000+1	6.712+0	3.308-2	2.629+0	1.029-5	3.228-1	8.898-5	4.783+0	4.783+0	1.888+1
5.500+1	6.626+0	3.348-2	2.683+0	8.504-6	2.988-1	7.888-5	5.289+0	5.289+0	2.214+1
6.000+1	6.543+0	3.391-2	2.697+0	7.145-6	2.781-1	7.173-5	5.770+0	5.770+0	2.553+1
6.500+1	6.463+0	3.433-2	2.731+0	6.088-6	2.604-1	6.591-5	6.271+0	6.271+0	2.903+1
7.000+1	6.388+0	3.475-2	2.784+0	5.250-6	2.449-1	6.094-5	6.772+0	6.772+0	3.285+1
8.000+1	6.241+0	3.595-2	2.888+0	4.019-6	2.194-1	5.291-5	7.773+0	7.773+0	4.018+1
1.000+2	5.987+0	3.708-2	2.948+0	2.572-6	1.821-1	4.179-5	9.777+0	9.777+0	5.808+1

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	8.402-1	1.748-1	1.000+0	2.602-1	7.318-1	1.000+1	8.777-3	9.991-1
5.000-3	9.994-1	7.273-4	1.500-1	8.008-1	2.058-1	1.250+0	2.103-1	7.688-1	1.500+1	2.589-3	9.999-1
1.000-2	9.981-1	2.884-3	1.750-1	7.639-1	2.380-1	1.500+0	1.847-1	8.334-1	2.000+1	9.637-4	1.000+0
1.500-2	9.963-1	6.323-3	2.000-1	7.289-1	2.684-1	2.000+0	1.030-1	8.902-1	2.000+1	3.273-5	1.000+0
2.000-2	9.934-1	1.105-2	2.500-1	6.818-1	3.247-1	2.500+0	7.359-2	8.209-1	8.000+1	5.584-6	1.000+0
2.500-2	9.898-1	1.891-2	3.000-1	6.368-1	3.778-1	3.000+0	6.315-2	9.401-1	1.000+2	2.428-6	1.000+0
3.000-2	9.855-1	2.374-2	4.000-1	4.922-1	4.684-1	3.500+0	5.271-2	9.543-1	1.000+3	8.173-10	1.000+0
4.000-2	9.748-1	3.984-2	5.000-1	4.147-1	5.410-1	4.000+0	4.738-2	9.654-1	1.000+6	7.408-19	1.000+0
5.000-2	9.623-1	5.741-2	6.000-1	3.627-1	5.973-1	5.000+0	3.673-2	9.809-1	1.000+9	8.859-28	1.000+0
7.000-2	9.319-1	9.375-2	7.000-1	3.281-1	6.408-1	6.000+0	2.798-2	9.897-1			
9.000-2	8.985-1	1.288-1	8.000-1	3.028-1	6.753-1	7.000+0	2.092-2	9.945-1			
1.000-1	8.618-1	1.415-1	9.000-1	2.808-1	7.050-1	8.000+0	1.687-2	9.970-1

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ENDL Evaluated Photon Cross Sections

23-V

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Energy Deposition

23-V

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ENDL Evaluated Photon Data

23-V

ATOMIC WEIGHT 50.942										DENSITY 8.1 GRAMS/CC										
ENERGY		TOTAL NFP		CROSS SECTION (BARNs)						NEUT/COLLISION		MEV/CM								
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	K.E.									
1.000	4.970	8	3.298	4	2.790	6	3.518	2	1.292	2	2.790	6	9.999	5	9.999	5	1.437	10	2.012	1
1.250	4.808	6	2.800	4	2.199	6	3.513	2	2.006	2	2.199	6	1.250	4	1.250	4	2.243	10	1.982	1
1.500	4.650	6	2.140	4	1.810	6	3.511	2	2.873	2	1.810	6	1.500	4	1.500	4	3.233	10	1.958	1
1.750	4.491	6	1.740	4	1.472	6	3.508	2	3.867	2	1.472	6	1.750	4	1.750	4	4.400	10	1.857	1
2.000	4.127	5	1.429	4	1.230	6	3.505	2	5.052	2	1.230	6	1.999	4	1.999	4	5.747	10	1.774	1
2.500	4.106	5	1.021	4	0.633	5	3.496	2	7.797	2	0.630	5	2.499	4	2.499	4	8.977	10	1.556	1
3.000	4.145	5	0.841	3	0.463	5	3.488	2	1.112	1	0.460	5	2.998	4	2.998	4	1.292	9	1.398	1
3.500	4.289	5	0.775	3	0.489	5	3.475	2	1.491	1	0.482	5	3.498	4	3.498	4	1.798	9	1.232	1
4.000	4.3617	5	0.532	3	0.333	5	3.465	2	1.922	1	0.330	5	3.998	4	3.998	4	2.298	9	1.105	1
4.500	4.492	5	0.3610	3	0.053	5	3.450	2	2.389	1	0.050	5	4.495	4	4.495	4	2.904	9	0.897	0
4.800	4.549	5	0.3184	3	0.093	5	3.441	2	2.691	1	0.090	5	4.794	4	4.794	4	3.304	9	0.811	0
5.000	4.607	5	0.284	3	0.133	5	3.430	2	2.901	1	0.130	5	4.993	4	4.993	4	3.584	9	0.808	0
5.147	4.543	5	0.278	3	0.133	5	3.431	2	3.055	1	0.130	5	5.139	4	5.139	4	3.797	9	0.848	0
5.181	4.050	5	1.581	4	1.320	6	3.430	2	3.070	1	1.320	6	5.130	4	5.160	4	3.827	9	0.913	1
5.500	4.463	6	1.936	4	1.637	6	3.418	2	3.437	1	1.637	6	5.499	4	5.499	4	3.57	9	0.493	1
5.600	4.768	6	2.057	4	1.740	6	3.415	2	3.549	1	1.740	6	5.599	4	5.599	4	4.068	9	0.027	1
6.000	4.305	6	1.762	4	1.490	6	3.402	2	4.013	1	1.490	6	5.999	4	5.999	4	5.173	9	0.447	1
6.275	4.035	5	1.984	4	1.340	6	3.390	2	4.324	1	1.340	6	6.273	4	6.273	4	5.657	9	0.064	1
6.289	6.945	6	1.833	4	1.750	6	3.389	2	4.340	1	1.750	6	6.288	4	6.288	4	5.683	9	0.029	1
6.500	4.629	6	1.702	4	1.440	6	3.380	2	4.586	1	1.440	6	6.498	4	6.498	4	6.071	9	0.749	1
7.000	4.136	5	1.443	4	1.220	6	3.359	2	5.189	1	1.220	6	6.998	4	6.998	4	7.040	9	0.158	1
8.000	4.540	5	1.084	4	0.003	5	3.323	2	6.483	1	0.000	5	7.997	4	7.997	4	9.193	9	0.192	1
9.000	4.026	5	0.050	3	0.043	5	3.274	2	7.744	1	0.040	5	8.998	4	8.998	4	1.183	8	0.439	1
1.000	3.436	5	6.788	3	5.692	5	3.230	2	9.078	1	0.009	5	9.994	4	9.994	4	1.436	8	0.102	1
1.250	3.493	5	3.819	3	3.231	5	3.089	2	1.207	0	3.227	5	1.240	3	1.240	3	2.242	8	2.909	1
1.500	3.616	5	2.403	3	2.034	5	2.978	2	1.522	0	2.031	5	1.498	3	1.498	3	3.225	8	2.197	1
1.750	3.020	4	1.808	3	1.380	5	2.841	2	1.782	0	1.397	5	1.748	3	1.748	3	4.384	8	1.713	1
2.000	3.1445	4	1.135	3	0.998	4	2.728	2	2.084	0	0.971	4	1.994	3	1.994	3	5.717	8	1.380	1
2.500	3.627	4	0.240	2	0.278	4	2.475	2	2.599	0	0.253	4	2.488	3	2.488	3	0.899	8	9.471	0
3.000	3.278	4	0.832	2	0.241	4	2.288	2	3.051	0	0.218	4	2.879	3	2.879	3	1.275	7	6.962	0
3.500	3.530	4	0.510	2	0.124	4	2.080	2	3.504	0	0.102	4	3.405	3	3.405	3	1.728	7	5.308	0
4.000	3.411	4	1.742	2	1.474	4	1.910	2	3.932	0	1.494	4	3.947	3	3.947	3	2.239	7	4.194	0
4.500	3.307	3	1.255	2	1.061	4	1.749	2	4.328	0	1.043	4	4.424	3	4.424	3	2.813	7	3.388	0
5.000	3.1781	3	0.384	1	0.381	3	1.013	2	4.726	0	0.795	3	4.892	3	4.892	3	3.444	7	2.788	0
5.489	3.245	3	0.301	1	0.176	3	1.489	2	5.090	0	0.029	3	5.328	3	5.328	3	4.080	7	2.373	0
5.485	3.620	4	0.258	2	0.293	4	1.489	2	5.091	0	0.278	4	5.448	3	5.448	3	4.344	7	1.856	1
5.500	3.684	4	0.153	2	0.205	4	1.480	2	5.118	0	0.190	4	5.489	3	5.479	3	2.756	7	1.643	1
6.000	3.350	4	0.693	2	0.139	4	1.389	2	5.489	0	0.125	4	5.879	3	5.875	3	3.418	7	1.495	1
6.500	3.156	4	0.945	2	0.337	4	1.263	2	5.773	0	0.324	4	6.474	3	6.370	3	4.145	7	1.292	1
7.000	3.073	4	0.232	2	0.734	4	1.173	2	6.071	0	0.721	4	6.988	3	6.885	3	4.944	7	1.156	1
8.000	3.7264	4	0.257	2	1.909	4	1.026	2	6.845	0	1.098	4	7.994	3	6.852	3	6.748	7	9.432	0
1.000	2.144	3	1.220	2	1.032	4	0.090	1	7.537	0	1.023	4	9.914	3	8.815	3	1.117	6	8.559	0
1.250	2.523	3	0.486	1	0.495	3	0.289	1	8.311	0	0.424	3	1.234	2	1.124	2	1.617	6	4.456	0
1.500	2.215	3	0.890	1	0.290	3	0.120	1	9.002	0	0.320	3	1.473	2	1.384	2	2.673	6	3.236	0
1.750	2.581	3	0.489	1	0.114	3	0.187	1	9.477	0	0.082	3	1.708	2	1.600	2	3.677	6	2.438	0
2.000	2.809	3	1.708	3	1.443	3	0.118	1	9.908	0	1.396	3	1.938	2	1.831	2	4.816	6	1.905	0
2.500	2.832	2	0.948	0	0.569	2	0.512	1	1.042	1	0.213	2	2.384	2	2.279	2	7.461	6	1.244	0
3.000	2.381	2	0.320	0	0.500	2	1.908	1	1.086	1	0.201	2	2.605	2	2.701	2	1.046	5	8.786	1
3.500	2.475	2	0.344	0	0.204	2	1.494	1	1.105	1	0.244	2	3.195	2	3.094	2	1.378	5	6.481	1
4.000	2.619	2	0.389	0	0.004	2	1.203	1	1.122	1	1.771	2	3.951	2	3.453	2	1.713	5	4.980	1
4.500	2.942	2	1.718	0	1.453	2	0.988	0	1.127	1	1.241	2	3.870	2	3.775	2	2.048	5	3.957	1
5.000	2.261	1	1.300	0	1.100	2	0.388	0	1.132	1	0.028	1	4.149	2	4.058	2	2.385	5	3.218	1
5.500	2.810	1	1.018	0	0.611	1	0.712	0	1.131	1	0.705	1	4.388	2	4.301	2	2.857	5	2.671	1
6.000	2.996	1	0.211	1	0.348	1	0.185	0	1.129	1	0.198	1	4.587	2	4.504	2	2.914	5	2.256	1
6.500	2.416	1	0.788	1	0.570	1	0.384	0	1.123	1	0.078	1	4.752	2	4.673	2	3.137	5	1.934	1
7.000	2.880	1	0.732	1	0.489	1	0.735	0	1.117	1	0.258	1	4.902	2	4.806	2	3.321	5	1.881	1
8.000	2.782	1	0.323	1	0.357	1	0.757	0	1.107	1	0.174	1	5.053	2	4.987	2	3.572	5	1.315	1
1.000	5.088	1	0.877	1	2.434	1	0.517	0	1.075	1	1.107	1	5.181	2	5.130	2	3.781	5	0.004	2
1.250	7.878	1	0.061	1	1.788	1	1.682	0	1.058	1	0.761	0	5.227	2	5.191	2	3.671	5	0.288	2
1.500	9.753	1	0.088	1	1.437	1	1.185	0	0.988	0	0.273	0	5.341	2	5.315	2	4.058	5	0.508	2
1.750	1.113	0	1.473	1	1.248	1	0.838	1	0.907	0	0.071	0	5.624	2	5.608	2	4.514	5	0.837	2
2.000	1.233	0	1.330	1	1.129	1	0.695	1	0.172	0	1.393	0	6.083	2	6.048	2	5.255	5	0.607	2
2.500	1.428	0	1.167	1	0.785	0	0.452	1	0.534	0	0.288	1	7.388	2	7.289	2	7.851	5	5.108	2

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ENDL Evaluated Photon Data

23-V

ATOMIC WEIGHT 90.942							DENSITY 8.1 GRAMS/CC				
ENERGY	TOTAL NFP		CROSS SECTION (BARN)				REV/COLLISION		REV/CM		
MEV	CM	CM/CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	K.E.
3.000	1.578	1.039	8.785	3.128	8.045	4.263	1	8.936	8.936	1.145	5.098
3.500	1.710	9.985	8.108	2.312	7.802	2.745	1	1.079	1.079	1.670	6.306
4.000	1.864	9.987	7.802	1.780	7.237	1.875	1	1.265	1.265	2.363	7.044
4.500	1.931	8.489	7.181	1.410	6.905	1.348	1	1.503	1.503	3.238	7.781
5.000	2.028	8.082	6.837	1.145	6.624	1.005	1	1.734	1.734	4.312	8.593
5.500	2.110	7.774	6.534	9.483	6.382	7.738	2	1.973	1.973	5.578	9.294
6.000	2.210	7.417	6.274	7.981	6.133	6.095	2	2.221	2.221	7.071	1.005
6.500	2.298	7.135	6.035	6.808	5.918	4.980	2	2.473	2.473	8.781	1.078
7.000	2.381	6.886	5.825	5.874	5.728	4.035	2	2.733	2.733	1.089	1.146
8.000	2.536	6.484	5.488	4.504	5.395	2.823	2	3.274	3.274	1.534	1.291
1.000	2.831	5.791	4.889	2.887	4.854	1.583	2	4.400	4.400	2.785	1.554
1.022	2.862	5.728	4.845	2.785	4.803	1.523	2	4.527	4.527	2.927	1.582
1.250	3.172	5.188	4.372	1.850	4.342	1.082	2	5.879	5.879	4.927	1.854
1.500	3.473	4.720	3.993	1.285	3.949	7.885	3	7.401	7.401	7.791	2.131
1.750	3.741	4.382	3.708	9.445	3.631	5.761	3	8.969	8.969	1.142	2.397
2.000	3.985	4.114	3.480	7.233	3.370	4.582	3	1.059	1.059	1.988	2.657
2.044	4.027	4.071	3.443	6.925	3.326	4.431	3	1.080	1.080	1.675	2.701
2.500	4.403	3.723	3.149	4.831	3.080	3.281	3	1.337	1.337	2.751	3.173
3.000	4.730	3.486	2.932	3.217	2.851	2.534	3	1.755	1.755	4.317	3.710
3.500	5.011	3.278	2.773	2.363	2.409	2.067	3	2.129	2.129	6.322	4.257
4.000	5.218	3.142	2.658	1.809	2.212	1.732	3	2.519	2.519	8.804	4.828
4.500	5.386	3.042	2.573	1.430	2.049	1.477	3	2.923	2.923	1.179	5.424
5.000	5.536	2.961	2.509	1.158	1.910	1.290	3	3.338	3.338	1.528	6.029
5.500	5.681	2.888	2.441	9.570	1.792	1.191	3	3.780	3.780	1.928	6.618
6.000	5.796	2.828	2.382	8.042	1.684	1.038	3	4.191	4.191	2.381	7.230
6.500	5.885	2.785	2.356	6.852	1.588	9.431	4	4.630	4.630	2.890	7.888
7.000	5.951	2.755	2.330	5.909	1.518	8.833	4	5.078	5.078	3.454	8.533
8.000	6.023	2.722	2.302	4.524	1.381	7.382	4	5.993	5.993	4.753	9.950
1.000	5.997	2.734	2.312	2.895	1.178	5.841	4	7.887	7.887	8.032	1.315
1.250	6.028	2.720	2.301	1.853	9.888	4.455	4	1.029	1.029	1.325	1.707
1.500	5.958	2.752	2.328	1.287	8.707	3.574	4	1.273	1.273	1.970	2.137
1.750	5.817	2.818	2.384	9.455	7.744	3.121	4	1.521	1.521	2.730	2.615
2.000	5.688	2.882	2.438	7.238	6.888	2.710	4	1.770	1.770	3.591	3.118
2.500	5.498	2.982	2.582	4.633	5.874	2.140	4	2.288	2.288	5.581	4.127
3.000	5.236	3.072	2.788	3.217	5.088	1.785	4	2.789	2.789	7.883	5.189
3.500	5.018	3.143	2.858	2.384	4.500	1.488	4	3.288	3.288	1.045	6.288
4.000	5.095	3.218	2.722	1.810	4.043	1.302	4	3.770	3.770	1.325	7.400
4.500	4.986	3.301	2.783	1.430	3.678	1.148	4	4.272	4.272	1.625	8.603
5.000	4.888	3.388	2.848	1.158	3.375	1.028	4	4.773	4.773	1.942	9.805
5.500	4.804	3.412	2.887	9.571	3.122	9.294	5	5.274	5.274	2.274	1.098
6.000	4.742	3.457	2.924	8.042	2.908	8.477	5	5.774	5.774	2.619	1.218
6.500	4.683	3.501	2.961	6.853	2.722	7.789	5	6.275	6.275	2.978	1.340
7.000	4.628	3.544	2.998	5.909	2.560	7.202	5	6.776	6.776	3.344	1.485
8.000	4.519	3.628	3.069	4.524	2.293	6.253	5	7.778	7.778	4.108	1.721
1.000	4.333	3.783	3.200	2.895	1.903	4.939	5	9.781	9.781	5.718	2.257

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Form Factors

23-V

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-1	0.000-0	1.250-1	9.493-1	1.001-1	1.000-0	2.985-1	7.270-1	1.000-1	9.943-3	9.998-1
5.000-3	9.983-1	6.522-4	1.500-1	8.104-1	1.981-1	1.250-0	2.131-1	7.630-1	1.500-1	2.826-3	9.999-1
1.000-2	9.982-1	2.385-3	1.750-1	7.738-1	2.254-1	1.500-0	1.704-1	8.275-1	2.000-1	1.005-3	1.000-0
1.500-2	9.986-1	5.893-3	2.000-1	7.388-1	2.547-1	2.000-0	1.078-1	8.860-1	5.000-1	3.784-5	1.000-0
2.000-2	9.940-1	9.943-3	2.500-1	6.716-1	3.116-1	2.500-0	7.539-2	9.181-1	8.000-1	8.462-6	1.000-0
2.500-2	9.907-1	1.524-2	3.000-1	6.087-1	3.841-1	3.000-0	6.367-2	9.378-1	1.000-2	2.818-6	1.000-0
3.000-2	9.867-1	2.144-2	4.000-1	5.001-1	4.945-1	3.500-0	5.236-2	9.520-1	1.000-3	9.779-10	1.000-0
4.000-2	9.771-1	3.800-2	5.000-1	4.189-1	6.285-1	4.000-0	4.730-2	9.631-1	1.000-6	9.114-19	1.000-0
5.000-2	9.628-1	5.243-2	6.000-1	3.627-1	8.876-1	5.000-0	3.719-2	9.789-1	1.000-9	1.108-27	1.000-0
7.000-2	9.373-1	9.880-2	7.000-1	3.251-1	1.537-1	6.000-0	2.877-2	9.883-1			
9.000-2	9.038-1	1.188-1	8.000-1	2.985-1	6.701-1	7.000-0	2.198-2	9.938-1			
1.000-1	8.696-1	1.333-1	9.000-1	2.775-1	7.005-1	8.000-0	1.782-2	9.985-1

12/07/78

ENDL Evaluated Photon Cross Sections

24-Cr

12/07/78

Energy Deposition

²⁴Cr

12/07/78

ENDL Evaluated Photon Data

24-Cr

ATOMIC WEIGHT 51.996		DENSITY 7.19 GRAMS/CC					
ENERGY KEV	TOTAL NFP		CROSS SECTION (BARNs)				NEV/COLLISION
	CH	CH+CH/CH	TOTAL	COMPONENT	INCOHER	PHOTOEL PAIR PROD	NEV/CM
							K.E. + FLOW K.E. BREMSSTR K.E.
1.000-4	3.185-6	4.367-4	3.770-8	3.826-2	1.018-2	3.770-6	9.999-5 9.999-5 1.500-10 3.139-1
1.250-4	4.151-8	3.351-4	2.893-0	3.826-2	1.575-2	2.893-6	1.250-4 1.250-4 2.343-10 3.011-1
1.500-4	5.153-6	2.899-4	2.330-6	3.824-2	2.253-2	2.330-6	1.500-4 1.500-4 3.374-10 2.910-1
1.750-4	6.433-6	2.162-4	1.867-8	3.821-2	3.059-2	1.866-6	1.750-4 1.750-4 4.582-10 2.720-1
2.000-4	7.798-6	1.784-4	1.540-8	3.819-2	3.987-2	1.540-6	2.000-4 2.000-4 5.997-10 2.565-1
2.500-4	1.129-5	1.231-4	1.063-8	3.811-2	5.166-2	1.063-6	2.499-4 2.499-4 9.368-10 2.213-1
3.000-4	1.529-5	9.058-3	7.824-5	3.804-2	6.810-2	7.820-5	2.999-4 2.999-4 1.349-9 1.981-1
3.500-4	2.038-5	6.824-3	5.892-5	3.793-2	1.183-1	5.888-5	3.498-4 3.498-4 1.835-9 1.716-1
4.000-4	2.614-5	5.321-3	4.594-5	3.784-2	1.526-1	4.590-5	3.997-4 3.997-4 2.396-9 1.559-1
4.500-4	3.300-5	4.214-3	3.635-5	3.770-2	1.899-1	3.635-5	4.495-4 4.495-4 3.031-9 1.362-1
5.000-4	4.085-5	3.421-3	2.954-5	3.759-2	2.310-1	2.950-5	4.994-4 4.994-4 3.740-9 1.228-1
5.500-4	4.972-5	2.797-3	2.415-5	3.743-2	2.741-1	2.412-5	5.491-4 5.491-4 4.523-9 1.105-1
5.789-4	5.499-5	2.529-3	2.184-5	3.735-2	2.986-1	2.180-5	5.789-4 5.789-4 4.975-9 1.047-1
5.783-4	7.898-6	1.761-4	1.520-6	3.735-2	2.999-1	1.520-6	5.782-4 5.782-4 5.014-9 7.320-1
5.900-4	6.597-6	2.108-4	1.820-6	3.732-2	3.108-1	1.820-6	5.899-4 5.899-4 5.219-9 6.942-1
6.000-4	6.525-6	2.132-4	1.840-6	3.729-2	3.204-1	1.840-6	5.999-4 5.999-4 5.398-9 6.194-1
6.500-4	7.997-6	1.739-4	1.502-6	3.709-2	3.689-1	1.501-6	6.498-4 6.498-4 6.334-9 8.126-1
6.700-4	8.637-6	1.610-4	1.350-6	3.701-2	3.683-1	1.350-6	6.696-4 6.696-4 6.730-9 7.755-1
6.939-4	9.379-6	1.483-4	1.260-6	3.692-2	4.099-1	1.260-6	6.937-4 6.937-4 7.218-9 7.306-1
6.953-4	8.290-6	1.680-4	1.450-6	3.692-2	4.113-1	1.450-6	6.951-4 6.951-4 7.248-9 8.338-1
7.000-4	8.337-6	1.688-4	1.440-6	3.690-2	4.161-1	1.440-6	6.998-4 6.998-4 7.346-9 8.394-1
7.500-4	9.760-6	1.425-4	1.230-6	3.673-2	4.677-1	1.230-6	7.498-4 7.498-4 8.432-9 7.882-1
8.000-4	1.132-5	1.288-4	1.060-6	3.657-2	5.218-1	1.060-6	7.997-4 7.997-4 9.593-9 7.082-1
9.000-4	1.484-5	9.374-3	8.094-5	3.613-2	6.271-1	8.090-5	8.996-4 8.996-4 1.214-8 6.063-1
1.000-3	1.776-5	7.830-3	6.761-5	3.573-2	7.391-1	6.757-5	9.995-4 9.995-4 1.498-8 5.627-1
1.250-3	3.142-5	4.427-3	3.622-5	3.440-2	1.004-0	3.619-5	1.249-3 1.249-3 2.339-8 3.975-1
1.500-3	5.005-5	2.779-3	2.399-5	3.334-2	1.290-0	2.398-5	1.498-3 1.498-3 3.366-8 2.993-1
1.750-3	7.500-5	1.894-3	1.601-5	3.197-2	1.552-0	1.598-5	1.748-3 1.748-3 4.575-8 2.329-1
2.000-3	1.084-4	1.307-3	1.128-5	3.082-2	1.823-0	1.125-5	1.995-3 1.995-3 5.987-8 1.874-1
2.500-3	1.940-4	7.171-2	8.191-4	2.808-2	2.358-0	6.163-4	2.489-3 2.489-3 9.289-7 1.283-1
3.000-3	3.184-4	4.336-2	3.725-4	2.603-2	2.842-0	3.789-4	2.979-3 2.979-3 1.331-7 9.416-0
3.500-3	4.836-4	2.876-2	2.483-4	2.369-2	3.311-0	2.459-4	3.488-3 3.488-3 1.808-7 7.188-0
4.000-3	6.977-4	1.983-2	1.721-4	2.183-2	3.779-0	1.899-4	3.948-3 3.948-3 2.339-7 5.859-0
4.500-3	9.691-4	1.435-2	1.239-4	1.991-2	4.203-0	1.218-4	4.428-3 4.428-3 2.938-7 4.567-0
5.000-3	1.299-3	1.071-2	9.243-3	1.834-2	4.623-0	3.055-3	4.898-3 4.898-3 3.599-7 3.770-0
5.500-3	1.899-3	8.185-1	7.067-3	1.681-2	5.004-0	8.894-3	5.385-3 5.385-3 4.318-7 2.157-0
5.988-3	2.157-3	8.447-1	5.588-3	1.556-2	5.371-0	5.405-3	5.815-3 5.815-3 5.071-7 2.895-0
5.989-3	2.523-4	5.512-2	4.799-4	1.596-2	5.372-0	4.743-4	5.989-3 4.606-3 3.182-7 1.825-1
6.000-3	2.536-4	5.485-2	4.736-4	1.594-2	5.380-0	4.720-4	5.980-3 4.617-3 3.197-7 1.821-1
6.500-3	3.138-4	4.436-2	3.830-4	1.431-2	5.707-0	3.815-4	6.475-3 5.112-3 3.920-7 1.830-1
7.000-3	3.817-4	3.844-2	3.148-4	1.327-2	6.027-0	3.132-4	6.969-3 5.607-3 4.718-7 1.459-1
8.000-3	5.438-4	2.598-2	2.208-4	1.157-2	6.850-0	2.196-4	7.958-3 6.596-3 6.525-7 1.213-1
1.000-2	9.984-4	1.393-2	1.203-4	9.086-1	7.629-0	1.193-4	9.918-3 8.562-3 1.099-6 8.576-0
1.250-2	1.862-3	7.468-1	6.448-3	7.016-1	8.474-0	6.369-3	1.235-2 1.100-2 1.814-6 5.905-0
1.500-2	3.095-3	4.434-1	3.880-3	5.890-1	9.234-0	3.814-3	1.475-2 1.340-2 2.633-6 4.330-0
1.750-2	4.801-3	2.837-1	2.501-3	4.860-1	9.745-0	2.445-3	1.711-2 1.277-2 2.730-6 3.260-0
2.000-2	7.013-3	1.983-1	1.712-3	3.920-1	1.021-1	1.863-3	1.943-2 1.810-2 4.913-6 2.581-0
2.500-2	1.332-2	1.044-1	9.013-2	2.803-1	1.077-1	8.825-2	2.394-2 2.263-2 7.679-6 1.898-0
3.000-2	2.236-2	6.219-0	5.370-2	2.131-1	1.124-1	5.044-2	2.822-2 2.693-2 1.088-6 1.204-0
3.500-2	3.485-2	4.014-0	3.486-2	1.688-1	1.145-1	3.184-2	3.223-2 3.098-2 1.439-5 8.940-1
4.000-2	5.026-2	2.767-0	2.388-2	1.349-1	1.184-1	2.138-2	3.593-2 3.471-2 1.806-5 6.906-1
4.500-2	6.944-2	2.003-0	1.729-2	1.112-1	1.170-1	1.501-2	3.930-2 3.812-2 2.178-5 5.489-1
5.000-2	9.201-2	1.512-0	1.305-2	9.349-0	1.178-1	1.094-2	4.230-2 4.116-2 2.539-5 4.473-1
5.500-2	1.180-1	1.179-0	1.018-2	7.974-0	1.175-1	8.207-1	4.493-2 4.383-2 2.880-5 3.715-1
6.000-2	1.489-1	9.470-1	8.177-1	6.898-0	1.174-1	8.313-1	4.718-2 4.612-2 3.189-5 3.141-1
6.500-2	1.785-1	7.790-1	8.728-1	6.805-0	1.188-1	4.958-1	4.910-2 4.809-2 3.487-5 2.941-1
7.000-2	2.124-1	6.349-1	5.874-1	5.893-0	1.182-1	3.984-1	5.067-2 4.971-2 3.704-5 2.391-1
8.000-2	2.845-1	4.888-1	4.220-1	4.195-0	1.153-1	2.849-1	5.288-2 5.203-2 4.028-5 1.889-1
1.000-1	3.362-1	3.188-1	2.753-1	2.614-0	1.119-1	1.352-1	5.494-2 5.423-2 4.414-5 1.244-1
1.250-1	8.183-1	2.257-1	1.849-1	1.880-0	1.071-1	8.860-0	5.575-2 5.527-2 4.578-5 8.988-2
1.500-1	7.671-1	1.813-1	1.585-1	1.328-0	1.032-1	4.064-0	5.677-2 5.642-2 4.771-5 7.375-2
1.750-1	8.341-1	1.598-1	1.343-1	9.894-0	9.988-0	2.533-0	5.928-2 5.903-2 5.223-5 6.802-2
2.000-1	9.980-1	1.394-1	1.203-1	7.678-1	9.981-0	1.704-0	6.330-2 6.311-2 5.988-5 6.323-2

24-Cr

ATOMIC WEIGHT 51.990							DENSITY 7.19 GRAMS/CC				
ENERGY		TOTAL MPF		CROSS SECTION (G/CM ²)				MEV/COLL (G/CM)		MEV/CM	
MEV	CH	CH+CM/GM	TOTAL	COMPONENT	INCOHER	PHOTOL	PAIR PROD	K.E.+FLOR	K.E.	MPH/STR	K.E.
2.500-1	1.108	0.1191	1.029	4.988	0.899	0.899	0.899	7.511	2.799	0.477	6.423
3.000-1	1.296	0.1073	0.983	3.507	0.391	0.391	0.391	9.090	2.083	2.136	7.008
3.500-1	1.409	0.0972	0.926	0.524	0.299	0.299	0.299	1.091	1.090	1.781	7.740
4.000-1	1.505	0.0939	0.977	0.777	0.196	0.196	0.196	1.295	1.294	2.508	8.598
4.500-1	1.596	0.0717	0.986	0.586	0.203	0.203	0.203	1.511	1.510	3.414	9.405
5.000-1	1.677	0.291	0.199	1.295	0.698	0.698	0.698	1.791	1.790	4.531	1.037
5.500-1	1.756	0.2919	0.837	1.094	0.837	0.837	0.837	1.978	1.978	5.705	1.126
6.000-1	1.835	0.7800	0.902	0.995	0.995	0.995	0.995	2.226	2.226	7.408	3.18
6.500-1	1.903	0.709	0.737	0.617	0.996	0.996	0.996	2.477	2.477	9.188	1.302
7.000-1	1.972	0.7052	0.699	0.591	0.974	0.974	0.974	2.736	2.736	1.118	1.387
8.000-1	2.162	0.618	0.571	0.595	0.529	0.529	0.529	3.277	3.276	1.602	1.599
1.000-0	2.347	0.5925	0.5116	0.240	0.064	0.064	0.064	4.401	4.401	2.086	3.175
1.022-0	2.373	0.5851	0.5060	0.103	0.011	0.011	0.011	4.526	4.526	3.055	3.908
1.250-0	2.631	0.5267	0.4995	0.076	0.031	0.031	0.031	5.090	5.090	5.191	2.235
1.500-0	2.880	0.4930	0.4170	0.443	0.419	0.419	0.419	6.734	6.701	8.126	2.570
1.750-0	3.101	0.4485	0.3872	0.060	0.379	0.379	0.379	8.968	8.968	1.190	2.692
2.000-0	3.302	0.4212	0.537	0.119	0.536	0.536	0.536	1.075	1.075	0.655	3.207
2.044-0	3.336	0.4169	0.599	0.773	0.347	0.347	0.347	1.136	1.098	0.086	3.261
2.500-0	3.643	0.3817	0.296	0.519	0.309	0.309	0.309	1.981	1.397	0.869	3.895
3.000-0	3.908	0.3593	0.373	0.073	0.811	0.787	0.787	2.993	1.796	0.505	4.493
3.500-0	4.126	0.371	0.910	0.852	0.213	0.213	0.213	3.917	2.131	0.131	5.165
4.000-0	4.290	0.336	0.798	0.281	0.336	0.336	0.336	4.818	2.922	9.265	5.606
4.500-0	4.439	0.307	0.708	0.605	0.338	0.338	0.338	5.779	3.673	2.332	6.603
5.000-0	4.599	0.287	0.640	0.300	0.993	0.993	0.993	6.433	3.344	0.597	7.551
5.500-0	4.663	0.2963	0.575	0.1074	0.870	0.866	0.866	7.033	3.768	2.015	8.080
6.000-0	4.752	0.2927	0.527	0.027	0.762	0.762	0.762	7.630	4.200	0.240	8.639
6.500-0	4.819	0.2866	0.492	0.657	0.135	0.135	0.135	8.225	4.642	0.021	9.631
7.000-0	4.898	0.287	0.467	0.632	0.593	0.593	0.593	8.817	5.091	0.591	1.048
8.000-0	4.917	0.2829	0.442	0.578	0.441	0.441	0.441	9.997	6.009	0.009	1.222
1.000-1	4.877	0.2852	0.462	0.350	0.228	0.228	0.228	7.909	7.909	6.398	1.622
1.250-1	4.880	0.2846	0.457	0.280	0.042	0.042	0.042	8.145	1.031	1.382	2.110
1.500-1	4.821	0.2805	0.291	0.144	0.086	0.086	0.086	1.276	1.276	2.051	2.648
1.750-1	4.698	0.2960	0.296	0.081	0.081	0.081	0.081	1.747	1.525	2.038	3.245
2.000-1	4.588	0.3031	0.617	0.129	0.293	0.293	0.293	1.889	1.774	1.774	3.898
2.500-1	4.427	0.3142	0.713	0.285	0.810	0.810	0.810	2.099	2.273	2.273	5.134
3.000-1	4.291	0.3241	0.798	0.611	0.509	0.509	0.509	2.267	2.773	0.147	6.483
3.500-1	4.190	0.3319	0.888	0.853	0.498	1.801	4.396	3.274	3.274	1.078	7.813
4.000-1	4.090	0.3401	0.936	0.936	0.219	1.563	5.214	3.779	3.779	1.365	9.229
4.500-1	3.988	0.3471	1.005	0.595	0.377	1.891	6.017	4.371	4.371	1.010	1.010
5.000-1	3.904	0.3563	1.076	0.300	0.582	2.235	6.724	4.777	4.777	1.994	1.244
5.500-1	3.851	0.3612	1.118	0.1074	0.258	1.118	2.792	5.278	5.278	2.332	1.371
6.000-1	3.803	0.3660	1.160	0.927	0.304	1.018	2.658	5.779	5.779	2.683	1.521
6.500-1	3.752	0.3707	1.201	0.692	0.240	0.939	2.917	6.279	6.279	3.048	1.674
7.000-1	3.705	0.3754	1.241	0.632	0.272	0.849	3.974	6.780	6.780	3.419	1.830
8.000-1	3.619	0.3843	1.318	0.578	0.293	0.710	5.079	7.282	7.282	4.191	2.151
1.000-2	3.486	0.4010	1.462	0.350	0.986	5.931	3.264	9.785	9.785	5.020	2.621

12/07/78

Form Factors

24-Cr

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	8.709-1	1.407-1	1.000+0	2.581-1	7.218-1	1.000+1	1.027-2	9.999-1
5.000-3	9.994-1	5.000-4	1.500-1	8.325-1	1.718-1	1.250+0	2.143-1	7.778-1	1.500+1	3.194-3	9.999-1
1.000-2	9.985-1	1.917-3	1.750-1	7.989-1	2.084-1	1.500+0	1.746-1	8.221-1	2.000+1	1.215-3	1.000+0
1.500-2	9.973-1	4.312-3	2.000-1	7.606-1	2.324-1	2.000+0	1.121-1	8.880-1	5.000+1	4.304-5	1.000+0
2.000-2	9.952-1	7.938-3	2.500-1	6.894-1	2.895-1	2.500+0	7.738-2	9.154-1	8.000+1	7.438-6	1.000+0
2.500-2	9.925-1	1.180-2	3.000-1	6.265-1	3.419-1	3.000+0	6.484-2	9.357-1	1.000+2	3.251-8	1.000+0
3.000-2	9.893-1	1.634-2	4.000-1	5.082-1	4.340-1	3.500+0	5.211-2	9.499-1	1.000+3	1.163-9	1.000+0
4.000-2	9.815-1	2.734-2	5.000-1	4.230-1	5.110-1	4.000+0	4.723-2	9.810-1	1.000+6	1.114-18	1.000+0
5.000-2	9.721-1	4.833-2	6.000-1	3.635-1	5.738-1	5.000+0	3.747-2	9.770-1	1.000+9	1.379-27	1.000+0
7.000-2	9.485-1	8.797-2	7.000-1	3.232-1	6.233-1	6.000+0	2.952-2	9.889-1			
9.000-2	9.217-1	9.945-2	8.000-1	2.894-1	6.626-1	7.000+0	2.282-2	9.926-1			
1.000-1	9.075-1	1.087-1	9.000-1	2.742-1	6.946-1	8.000+0	1.864-2	9.958-1

12/07/78

ENDL Evaluated Photon Cross Sections

25-Mn

12/07/78

Energy Deposition

25-Mn

12/07/78

ENDL Evaluated Photon Data

25-Mn

ATOMIC WEIGHT 94.938										DENSITY 7.43 GRAMS/CC			
ENERGY		TOTAL HP		CROSS SECTION (BARN)					PAIR PROD	NEUTR. COLLISION		NEUTR. CH	
MEV	CH	CH/CH/CH	CH/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD		K.E. FLOR	K.E. BREMSSTR	K.E.	K.E.
1.000	4	2.987	8	4.505	4	4.110	8	4.15	2	1.125	2	4.110	8
1.250	4	3.027	8	4.517	4	4.125	8	4.15	2	1.250	2	4.125	8
1.500	4	3.068	8	4.529	4	4.140	8	4.15	2	1.500	2	4.140	8
1.750	4	3.109	8	4.541	4	4.155	8	4.15	2	1.750	2	4.155	8
2.000	4	3.150	8	4.553	4	4.170	8	4.15	2	2.000	2	4.170	8
2.250	4	3.191	8	4.565	4	4.185	8	4.15	2	2.250	2	4.185	8
2.500	4	3.232	8	4.577	4	4.200	8	4.15	2	2.500	2	4.200	8
2.750	4	3.273	8	4.589	4	4.215	8	4.15	2	2.750	2	4.215	8
3.000	4	3.314	8	4.601	4	4.230	8	4.15	2	3.000	2	4.230	8
3.250	4	3.355	8	4.613	4	4.245	8	4.15	2	3.250	2	4.245	8
3.500	4	3.396	8	4.625	4	4.260	8	4.15	2	3.500	2	4.260	8
3.750	4	3.437	8	4.637	4	4.275	8	4.15	2	3.750	2	4.275	8
4.000	4	3.478	8	4.649	4	4.290	8	4.15	2	4.000	2	4.290	8
4.250	4	3.519	8	4.661	4	4.305	8	4.15	2	4.250	2	4.305	8
4.500	4	3.560	8	4.673	4	4.320	8	4.15	2	4.500	2	4.320	8
4.750	4	3.601	8	4.685	4	4.335	8	4.15	2	4.750	2	4.335	8
5.000	4	3.642	8	4.697	4	4.350	8	4.15	2	5.000	2	4.350	8
5.250	4	3.683	8	4.709	4	4.365	8	4.15	2	5.250	2	4.365	8
5.500	4	3.724	8	4.721	4	4.380	8	4.15	2	5.500	2	4.380	8
5.750	4	3.765	8	4.733	4	4.395	8	4.15	2	5.750	2	4.395	8
6.000	4	3.806	8	4.745	4	4.410	8	4.15	2	6.000	2	4.410	8
6.250	4	3.847	8	4.757	4	4.425	8	4.15	2	6.250	2	4.425	8
6.500	4	3.888	8	4.769	4	4.440	8	4.15	2	6.500	2	4.440	8
6.750	4	3.929	8	4.781	4	4.455	8	4.15	2	6.750	2	4.455	8
7.000	4	3.970	8	4.793	4	4.470	8	4.15	2	7.000	2	4.470	8
7.250	4	4.011	8	4.805	4	4.485	8	4.15	2	7.250	2	4.485	8
7.500	4	4.052	8	4.817	4	4.500	8	4.15	2	7.500	2	4.500	8
7.750	4	4.093	8	4.829	4	4.515	8	4.15	2	7.750	2	4.515	8
8.000	4	4.134	8	4.841	4	4.530	8	4.15	2	8.000	2	4.530	8
8.250	4	4.175	8	4.853	4	4.545	8	4.15	2	8.250	2	4.545	8
8.500	4	4.216	8	4.865	4	4.560	8	4.15	2	8.500	2	4.560	8
8.750	4	4.257	8	4.877	4	4.575	8	4.15	2	8.750	2	4.575	8
9.000	4	4.298	8	4.889	4	4.590	8	4.15	2	9.000	2	4.590	8
9.250	4	4.339	8	4.901	4	4.605	8	4.15	2	9.250	2	4.605	8
9.500	4	4.380	8	4.913	4	4.620	8	4.15	2	9.500	2	4.620	8
9.750	4	4.421	8	4.925	4	4.635	8	4.15	2	9.750	2	4.635	8
10.000	4	4.462	8	4.937	4	4.650	8	4.15	2	10.000	2	4.650	8
10.250	4	4.503	8	4.949	4	4.665	8	4.15	2	10.250	2	4.665	8
10.500	4	4.544	8	4.961	4	4.680	8	4.15	2	10.500	2	4.680	8
10.750	4	4.585	8	4.973	4	4.695	8	4.15	2	10.750	2	4.695	8
11.000	4	4.626	8	4.985	4	4.710	8	4.15	2	11.000	2	4.710	8
11.250	4	4.667	8	4.997	4	4.725	8	4.15	2	11.250	2	4.725	8
11.500	4	4.708	8	5.009	4	4.740	8	4.15	2	11.500	2	4.740	8
11.750	4	4.749	8	5.021	4	4.755	8	4.15	2	11.750	2	4.755	8
12.000	4	4.790	8	5.033	4	4.770	8	4.15	2	12.000	2	4.770	8
12.250	4	4.831	8	5.045	4	4.785	8	4.15	2	12.250	2	4.785	8
12.500	4	4.872	8	5.057	4	4.800	8	4.15	2	12.500	2	4.800	8
12.750	4	4.913	8	5.069	4	4.815	8	4.15	2	12.750	2	4.815	8
13.000	4	4.954	8	5.081	4	4.830	8	4.15	2	13.000	2	4.830	8
13.250	4	4.995	8	5.093	4	4.845	8	4.15	2	13.250	2	4.845	8
13.500	4	5.036	8	5.105	4	4.860	8	4.15	2	13.500	2	4.860	8
13.750	4	5.077	8	5.117	4	4.875	8	4.15	2	13.750	2	4.875	8
14.000	4	5.118	8	5.129	4	4.890	8	4.15	2	14.000	2	4.890	8
14.250	4	5.159	8	5.141	4	4.905	8	4.15	2	14.250	2	4.905	8
14.500	4	5.200	8	5.153	4	4.920	8	4.15	2	14.500	2	4.920	8
14.750	4	5.241	8	5.165	4	4.935	8	4.15	2	14.750	2	4.935	8
15.000	4	5.282	8	5.177	4	4.950	8	4.15	2	15.000	2	4.950	8
15.250	4	5.323	8	5.189	4	4.965	8	4.15	2	15.250	2	4.965	8
15.500	4	5.364	8	5.201	4	4.980	8	4.15	2	15.500	2	4.980	8
15.750	4	5.405	8	5.213	4	4.995	8	4.15	2	15.750	2	4.995	8
16.000	4	5.446	8	5.225	4	5.010	8	4.15	2	16.000	2	5.010	8
16.250	4	5.487	8	5.237	4	5.025	8	4.15	2	16.250	2	5.025	8
16.500	4	5.528	8	5.249	4	5.040	8	4.15	2	16.500	2	5.040	8
16.750	4	5.569	8	5.261	4	5.055	8	4.15	2	16.750	2	5.055	8
17.000	4	5.610	8	5.273	4	5.070	8	4.15	2	17.000	2	5.070	8
17.250	4	5.651	8	5.285	4	5.085	8	4.15	2	17.250	2	5.085	8
17.500	4	5.692	8	5.297	4	5.100	8	4.15	2	17.500	2	5.100	8
17.750	4	5.733	8	5.309	4	5.115	8	4.15	2	17.750	2	5.115	8
18.000	4	5.774	8	5.321	4	5.130	8	4.15	2	18.000	2	5.130	8
18.250	4	5.815	8	5.333	4	5.145	8	4.15	2	18.250	2	5.145	8
18.500	4	5.856	8	5.345	4	5.160	8	4.15	2	18.500	2	5.160	8
18.750	4	5.897	8	5.357	4	5.175	8	4.15	2	18.750	2	5.175	8
19.000	4	5.938	8	5.369	4	5.190	8	4.15	2	19.000	2	5.190	8
19.250	4	5.979	8	5.381	4	5.205	8	4.15	2	19.250	2	5.205	8
19.500	4	6.020	8	5.393	4	5.220	8	4.15	2	19.500	2	5.220	8
19.750	4	6.061	8	5.405	4	5.235	8	4.15	2	19.750	2	5.235	8
20.000	4	6.102	8	5.417	4	5.250	8	4.15	2	20.000	2	5.250	8

123

25-Mn

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ENDL Evaluated Photon Data

25-Mn

ATOMIC WEIGHT 54.938				DENSITY 7.43 GRAMS/CC							
ENERGY	TOTAL HFP			CROSS SECTION (BARNS)				MEV/COLLISION			
MEV	CH	CH/CM/GR		TOTAL	COHERENT	INCOHER	PHOTOEL PAIR PROD	K.E. +FLOR	K.E. BREMSSTR	MEV/CM	
										K.E.	K.E.
2.500	1	1.129	0	1.129	1	5.250	1	9.253	0	1.081	0
3.000	1	1.238	0	1.238	1	5.751	0	9.246	2	9.235	2
3.500	1	1.372	0	1.372	0	6.249	1	9.235	2	1.331	4
4.000	1	1.548	0	1.548	0	6.735	0	1.104	1	1.103	1
4.500	1	1.768	0	1.768	0	7.202	1	1.305	1	1.304	1
5.000	1	2.038	0	2.038	0	7.650	0	1.519	1	1.519	1
5.500	1	2.358	0	2.358	0	8.081	1	1.748	1	1.748	1
6.000	1	2.728	0	2.728	0	8.494	0	1.984	1	1.984	1
6.500	1	3.148	0	3.148	0	8.889	0	2.231	1	2.231	1
7.000	1	3.618	0	3.618	0	9.266	0	2.482	1	2.482	1
7.500	1	4.138	0	4.138	0	9.625	0	2.740	1	2.740	1
8.000	1	4.708	0	4.708	0	9.966	0	3.000	1	3.000	1
8.500	1	5.338	0	5.338	0	10.289	0	3.260	1	3.260	1
9.000	1	6.028	0	6.028	0	10.594	0	3.531	1	3.531	1
9.500	1	6.778	0	6.778	0	10.881	0	3.802	1	3.802	1
1.000	0	2.302	0	2.302	0	3.611	2	4.403	1	4.403	1
1.025	0	2.327	0	2.327	0	3.627	2	4.431	1	4.431	1
1.250	0	2.580	0	2.580	0	3.928	2	4.831	1	4.831	1
1.500	0	2.864	0	2.864	0	4.240	2	5.262	1	5.262	1
1.750	0	3.180	0	3.180	0	4.573	2	5.724	1	5.724	1
2.000	0	3.528	0	3.528	0	4.928	2	6.216	1	6.216	1
2.044	0	3.589	0	3.589	0	4.989	2	6.287	1	6.287	1
2.500	0	3.988	0	3.988	0	5.388	2	6.686	1	6.686	1
3.000	0	4.487	0	4.487	0	5.887	2	7.185	1	7.185	1
3.500	0	5.086	0	5.086	0	6.486	2	7.784	1	7.784	1
4.000	0	5.685	0	5.685	0	7.085	2	8.383	1	8.383	1
4.500	0	6.284	0	6.284	0	7.684	2	8.982	1	8.982	1
5.000	0	6.883	0	6.883	0	8.283	2	9.581	1	9.581	1
5.500	0	7.482	0	7.482	0	8.882	2	10.180	1	10.180	1
6.000	0	8.081	0	8.081	0	9.481	2	10.779	1	10.779	1
6.500	0	8.680	0	8.680	0	10.080	2	11.378	1	11.378	1
7.000	0	9.279	0	9.279	0	10.679	2	11.977	1	11.977	1
7.500	0	9.878	0	9.878	0	11.278	2	12.576	1	12.576	1
8.000	0	10.477	0	10.477	0	11.877	2	13.175	1	13.175	1
8.500	0	11.076	0	11.076	0	12.476	2	13.774	1	13.774	1
9.000	0	11.675	0	11.675	0	13.075	2	14.373	1	14.373	1
9.500	0	12.274	0	12.274	0	13.674	2	14.972	1	14.972	1
1.000	1	4.093	0	4.093	0	8.186	4	1.034	1	1.034	1
1.250	1	4.592	0	4.592	0	9.185	4	1.034	1	1.034	1
1.500	1	5.091	0	5.091	0	10.186	4	1.034	1	1.034	1
1.750	1	5.590	0	5.590	0	11.187	4	1.034	1	1.034	1
2.000	1	6.089	0	6.089	0	12.188	4	1.034	1	1.034	1
2.500	1	7.088	0	7.088	0	13.189	4	1.034	1	1.034	1
3.000	1	8.087	0	8.087	0	14.190	4	1.034	1	1.034	1
3.500	1	9.086	0	9.086	0	15.191	4	1.034	1	1.034	1
4.000	1	10.085	0	10.085	0	16.192	4	1.034	1	1.034	1
4.500	1	11.084	0	11.084	0	17.193	4	1.034	1	1.034	1
5.000	1	12.083	0	12.083	0	18.194	4	1.034	1	1.034	1
5.500	1	13.082	0	13.082	0	19.195	4	1.034	1	1.034	1
6.000	1	14.081	0	14.081	0	20.196	4	1.034	1	1.034	1
6.500	1	15.080	0	15.080	0	21.197	4	1.034	1	1.034	1
7.000	1	16.079	0	16.079	0	22.198	4	1.034	1	1.034	1
7.500	1	17.078	0	17.078	0	23.199	4	1.034	1	1.034	1
8.000	1	18.077	0	18.077	0	24.200	4	1.034	1	1.034	1
8.500	1	19.076	0	19.076	0	25.201	4	1.034	1	1.034	1
9.000	1	20.075	0	20.075	0	26.202	4	1.034	1	1.034	1
9.500	1	21.074	0	21.074	0	27.203	4	1.034	1	1.034	1
1.000	2	3.288	0	3.288	0	6.576	5	3.327	0	3.327	0

12/07/78

Form Factors

25-Mn

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	8.036-1	1.491-1	1.000+0	2.832-1	7.184-1	1.000+1	1.054-2	9.984-1
5.000-3	9.994-1	5.200-4	1.500-1	8.296-1	1.774-1	1.250+0	2.146-1	7.725-1	1.500+1	3.462-3	9.998-1
1.000-2	9.984-1	2.080-3	1.750-1	7.943-1	2.048-1	1.500+0	1.781-1	8.184-1	2.000+1	1.351-3	1.000+0
1.500-2	9.972-1	4.688-3	2.000-1	7.620-1	2.316-1	2.000+0	1.189-1	8.775-1	5.000+1	4.895-5	1.000+0
2.000-2	9.950-1	9.188-3	2.500-1	6.939-1	2.849-1	2.500+0	8.022-2	9.125-1	8.000+1	8.512-6	1.000+0
2.500-2	9.922-1	1.298-2	3.000-1	6.314-1	3.352-1	3.000+0	6.612-2	9.335-1	1.000+2	3.732-6	1.000+0
3.000-2	9.889-1	1.776-2	4.000-1	5.199-1	4.242-1	3.500+0	5.203-2	9.479-1	1.000+3	1.375-9	1.000+0
4.000-2	9.807-1	3.005-2	5.000-1	4.324-1	4.994-1	4.000+0	4.722-2	9.590-1	1.000+6	1.354-18	1.000+0
5.000-2	9.710-1	4.416-2	6.000-1	3.684-1	5.625-1	5.000+0	3.762-2	9.752-1	1.000+9	1.707-27	1.000+0
7.000-2	9.484-1	7.485-2	7.000-1	3.239-1	6.138-1	6.000+0	3.014-2	9.854-1			
9.000-2	9.185-1	1.042-1	8.000-1	2.933-1	6.550-1	7.000+0	2.361-2	9.916-1			
1.000-1	9.039-1	1.180-1	9.000-1	2.711-1	6.884-1	8.000+0	1.939-2	9.952-1

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ENDL Evaluated Photon Cross Sections

26-Fe

12/07-78

Energy Deposition

26-Fe

26-F.

26-F.

12/07/78

ENDL Evaluated Photon Data

26-Fa

ATOMIC WEIGHT 95.947		DENSITY 7.87 GRAMS/CC							
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARNS)					MEV/COLLISION	
	CM	CM/CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E. SPECTR
2.500-1	1.030+0	1.233-1	1.144+1	8.180-1	9.626+0	1.196+0		7.606-2	7.605-2
3.000-1	1.153+0	1.102-1	1.022+1	4.338-1	9.081+0	7.021-1		9.331-2	9.317-2
3.500-1	1.299+0	1.009-1	9.326+0	3.209-1	8.982+0	4.537-1		1.110-1	1.109-1
4.000-1	1.350+0	9.413-2	8.729+0	2.471-1	8.171+0	3.108-1		1.310-1	1.310-1
4.500-1	1.434+0	8.853-2	8.219+0	1.959-1	7.798+0	2.248-1		1.524-1	1.523-1
5.000-1	1.509+0	8.418-2	7.807+0	1.592-1	7.479+0	1.882-1		1.752-1	1.751-1
5.500-1	1.582+0	8.032-2	7.448+0	1.318-1	7.188+0	1.303-1		1.988-1	1.987-1
6.000-1	1.650+0	7.702-2	7.143+0	1.110-1	6.929+0	1.032-1		2.234-1	2.234-1
6.500-1	1.718+0	7.403-2	6.895+0	9.468-2	6.680+0	8.392-2		2.485-1	2.484-1
7.000-1	1.780+0	7.139-2	6.650+0	8.171-2	6.469+0	6.929-2		2.743-1	2.743-1
8.000-1	1.898+0	6.894-2	6.206+0	6.267-2	6.096+0	4.907-2		3.262-1	3.262-1
1.000+0	2.122+0	5.989-2	5.954+0	4.019-2	5.485+0	2.820-2		4.405-1	4.405-1
1.022+0	2.145+0	5.923-2	5.493+0	3.848-2	5.427+0	2.720-2	1.000-6	4.533-1	4.533-1
1.250+0	2.379+0	5.341-2	4.953+0	2.575-2	4.908+0	1.894-2	7.919-4	5.804-1	5.804-1
1.500+0	2.604+0	4.880-2	4.526+0	1.789-2	4.462+0	1.384-2	3.252-2	7.403-1	7.402-1
1.750+0	2.802+0	4.535-2	4.206+0	1.315-2	4.104+0	1.024-2	7.831-2	8.969-1	8.968-1
2.000+0	2.980+0	4.264-2	3.924+0	1.007-2	3.809+0	8.135-3	1.271-1	1.059+0	1.059+0
2.044+0	3.011+0	4.220-2	3.913+0	9.642-3	3.762+0	7.865-3	1.342-1	1.088+0	1.088+0
2.500+0	3.281+0	3.873-2	3.591+0	6.448-3	3.346+0	5.811-3	2.334-1	1.398+0	1.398+0
3.000+0	3.509+0	3.621-2	3.358+0	4.479-3	2.997+0	4.481-3	3.519-1	1.758+0	1.758+0
3.500+0	3.694+0	3.440-2	3.190+0	3.290-3	2.723+0	3.850-3	4.602-1	2.135+0	2.135+0
4.000+0	3.857+0	3.312-2	3.071+0	2.519-3	2.500+0	3.095-3	5.850-1	2.529+0	2.529+0
4.500+0	3.949+0	3.218-2	2.984+0	1.991-3	2.316+0	2.602-3	6.840-1	2.937+0	2.937+0
5.000+0	4.042+0	3.144-2	2.915+0	1.613-3	2.159+0	2.270-3	7.920-1	3.356+0	3.356+0
5.500+0	4.133+0	3.074-2	2.851+0	1.333-3	2.025+0	2.024-3	8.222-1	3.783+0	3.783+0
6.000+0	4.203+0	3.023-2	2.804+0	1.120-3	1.909+0	1.823-3	8.921-1	4.219+0	4.219+0
6.500+0	4.253+0	2.988-2	2.771+0	9.942-4	1.806+0	1.696-3	9.810-1	4.663+0	4.663+0
7.000+0	4.287+0	2.964-2	2.749+0	8.228-4	1.715+0	1.514-3	1.031+0	5.115+0	5.115+0
8.000+0	4.312+0	2.947-2	2.733+0	6.300-4	1.561+0	1.290-3	1.169+0	6.040+0	6.040+0
1.000+0	4.247+0	2.932-2	2.774+0	4.032-4	1.330+0	9.859-4	1.443+0	7.950+0	7.950+0
1.250+0	4.234+0	3.001-2	2.783+0	2.500-4	1.188+0	7.705-4	1.624+0	1.036+0	1.036+0
1.500+0	4.159+0	3.055-2	2.833+0	1.792-4	9.943-4	5.419-4	1.848+0	1.262+0	1.262+0
1.750+0	4.040+0	3.149-2	2.917+0	1.317-4	8.754-4	5.453-4	2.041+0	1.531+0	1.531+0
2.000+0	3.935+0	3.229-2	2.994+0	1.008-4	7.900-4	4.734-4	2.204+0	1.780+0	1.780+0
2.500+0	3.736+0	3.357-2	3.113+0	6.450-5	6.640-4	3.738-4	2.448+0	2.260+0	2.260+0
3.000+0	3.661+0	3.470-2	3.218+0	4.479-5	5.752-4	3.082-4	2.643+0	2.780+0	2.780+0
3.500+0	3.589+0	3.561-2	3.302+0	3.291-5	5.087-4	2.618-4	2.793+0	3.281+0	3.281+0
4.000+0	3.479+0	3.653-2	3.387+0	2.520-5	4.570-4	2.273-4	2.930+0	3.782+0	3.782+0
4.500+0	3.395+0	3.754-2	3.481+0	1.991-5	4.156-4	2.007-4	3.086+0	4.284+0	4.284+0
5.000+0	3.314+0	3.834-2	3.556+0	1.613-5	3.815-4	1.795-4	3.174+0	4.785+0	4.785+0
5.500+0	3.267+0	3.889-2	3.607+0	1.333-5	3.529-4	1.623-4	3.254+0	5.286+0	5.286+0
6.000+0	3.222+0	3.943-2	3.657+0	1.120-5	3.267-4	1.480-4	3.328+0	5.786+0	5.786+0
6.500+0	3.180+0	3.956-2	3.706+0	9.543-6	3.077-4	1.360-4	3.398+0	6.287+0	6.287+0
7.000+0	3.139+0	4.048-2	3.754+0	8.228-6	2.894-4	1.257-4	3.469+0	6.788+0	6.788+0
8.000+0	3.084+0	4.147-2	3.846+0	6.300-6	2.592-4	1.092-4	3.586+0	7.790+0	7.790+0
1.000+0	2.934+0	4.330-2	4.016+0	4.032-6	2.152-4	8.620-5	3.600+0	9.793+0	9.793+0

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Form Factors

26-Fe

SIN(θ/2)/λ COHERENT			INCOHERENT			SIN(θ/2)/λ COHERENT			INCOHERENT			SIN(θ/2)/λ COHERENT			INCOHERENT			SIN(θ/2)/λ COHERENT			INCOHERENT		
1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.250-1	8.745-1	1.417-1	1.000-0	2.506-1	7.111-1	1.000-1	1.172-2	9.990-1	1.000-1	1.172-2	9.990-1	1.000-1	1.172-2	9.990-1	1.000-1	1.172-2	9.990-1	1.000-1	1.172-2	9.990-1
5.000-3	9.993-1	4.615-4	1.500-1	8.388-1	1.894-1	1.250-0	2.137-1	7.677-1	1.500-1	3.773-3	9.998-1	1.500-1	3.773-3	9.998-1	1.500-1	3.773-3	9.998-1	1.500-1	3.773-3	9.998-1	1.500-1	3.773-3	9.998-1
1.000-2	9.995-1	1.923-3	1.750-1	8.745-1	1.980-1	1.500-0	1.803-1	8.114-1	2.000-1	1.495-3	1.000-0	2.000-1	1.495-3	1.000-0	2.000-1	1.495-3	1.000-0	2.000-1	1.495-3	1.000-0	2.000-1	1.495-3	1.000-0
1.500-2	9.974-1	4.285-3	2.000-1	7.455-1	2.223-1	2.000-0	1.211-1	8.732-1	2.500-1	5.340-5	1.000-0	2.500-1	5.340-5	1.000-0	2.500-1	5.340-5	1.000-0	2.500-1	5.340-5	1.000-0	2.500-1	5.340-5	1.000-0
2.000-2	9.929-1	7.488-3	2.500-1	7.054-1	2.745-1	2.500-0	8.305-2	9.098-1	3.000-1	9.597-6	1.000-0	3.000-1	9.597-6	1.000-0	3.000-1	9.597-6	1.000-0	3.000-1	9.597-6	1.000-0	3.000-1	9.597-6	1.000-0
2.500-2	9.868-1	1.152-2	3.000-1	6.434-1	3.243-1	3.000-0	6.781-2	9.314-1	3.500-1	4.284-6	1.000-0	3.500-1	4.284-6	1.000-0	3.500-1	4.284-6	1.000-0	3.500-1	4.284-6	1.000-0	3.500-1	4.284-6	1.000-0
3.000-2	9.788-1	1.626-2	4.000-1	5.311-1	4.128-1	3.500-0	5.218-2	9.481-1	4.000-1	1.616-9	1.000-0	4.000-1	1.616-9	1.000-0	4.000-1	1.616-9	1.000-0	4.000-1	1.616-9	1.000-0	4.000-1	1.616-9	1.000-0
4.000-2	9.622-1	2.763-2	5.000-1	4.411-1	4.880-1	4.000-0	4.732-2	9.572-1	5.000-1	1.638-18	1.000-0	5.000-1	1.638-18	1.000-0	5.000-1	1.638-18	1.000-0	5.000-1	1.638-18	1.000-0	5.000-1	1.638-18	1.000-0
5.000-2	9.732-1	4.077-2	6.000-1	3.737-1	5.517-1	5.000-0	3.785-2	9.739-1	6.000-1	2.105-27	1.000-0	6.000-1	2.105-27	1.000-0	6.000-1	2.105-27	1.000-0	6.000-1	2.105-27	1.000-0	6.000-1	2.105-27	1.000-0
7.000-2	9.503-1	6.948-2	7.000-1	3.258-1	6.045-1	6.000-0	3.059-2	9.840-1	8.000-1			8.000-1			8.000-1			8.000-1			8.000-1		
9.000-2	9.240-1	9.785-2	8.000-1	2.925-1	6.473-1	7.000-0	2.430-2	9.906-1	9.000-1			9.000-1			9.000-1			9.000-1			9.000-1		
1.000-1	9.102-1	1.112-1	9.000-1	2.688-1	6.822-1	8.000-0	2.010-2	9.945-1

12/07/78

ENDL Evaluated Photon Cross Sections

27-Co

12/07/78

Energy Deposition

27-Co

12/07/78

ENOL Evaluated Photon Data

27-Co

ATOMIC WEIGHT 58.933										DENSITY 8.85 GRAMS/CC			
ENERGY MEV	TOTAL MFP			CROSS SECTION (BARNs)				NEV/COLLISION		K.E.		NEV/CM	
	CM	CM/CH/CM	CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E.	K.E.	BREMSSTR	K.E.	K.E.	K.E.
1.000-4	2.181-6	5.181-4	5.070-8	4.844-2	1.029-2	5.070-8	9.999-5	9.999-5	1.087-10	4.985-1			
1.014-4	2.063-6	5.478-4	5.360-8	4.844-2	1.057-2	5.360-8	1.014-4	1.002-4	1.094-10	4.857-1			
1.250-4	2.587-6	4.402-4	4.308-8	4.842-2	1.600-2	4.307-8	1.250-4	1.238-4	2.588-10	4.682-1			
1.500-4	3.108-6	3.839-4	3.980-8	4.840-2	2.289-2	3.980-8	1.500-4	1.488-4	3.735-10	4.730-1			
1.750-4	3.628-6	2.952-4	2.889-8	4.837-2	3.117-2	2.888-8	1.750-4	1.738-4	5.095-10	4.940-1			
2.000-4	4.087-6	2.483-4	2.410-8	4.835-2	4.085-2	2.410-8	2.000-4	1.988-4	6.888-10	4.333-1			
2.500-4	6.812-6	1.709-4	1.672-8	4.826-2	6.301-2	1.672-8	2.498-4	2.487-4	1.044-9	3.762-1			
3.000-4	8.914-6	1.288-4	1.240-8	4.818-2	9.014-2	1.240-8	2.999-4	2.987-4	1.505-9	3.351-1			
3.500-4	1.165-5	9.537-3	9.333-5	4.808-2	1.213-1	9.328-5	3.498-4	3.486-4	2.051-9	2.942-1			
4.000-4	1.518-5	7.459-3	7.295-5	4.796-2	1.589-1	7.290-5	3.997-4	3.985-4	2.680-9	2.629-1			
4.500-4	1.915-5	5.900-3	5.774-5	4.781-2	1.959-1	5.769-5	4.498-4	4.484-4	3.393-9	2.342-1			
5.000-4	2.380-5	4.787-3	4.685-5	4.767-2	2.380-1	4.680-5	4.995-4	4.983-4	4.190-9	2.111-1			
5.500-4	2.879-5	3.825-3	3.841-5	4.750-2	2.844-1	3.837-5	5.493-4	5.481-4	5.070-9	1.904-1			
6.000-4	3.450-5	3.275-3	3.205-5	4.734-2	3.335-1	3.200-5	5.991-4	5.979-4	6.033-9	1.733-1			
6.500-4	4.086-5	2.788-3	2.707-5	4.711-2	3.834-1	2.702-5	6.489-4	6.477-4	7.079-9	1.585-1			
7.000-4	4.777-5	2.389-3	2.315-5	4.690-2	4.362-1	2.310-5	6.988-4	6.974-4	8.207-9	1.480-1			
7.829-4	6.094-5	1.854-3	1.815-5	4.658-2	5.301-1	1.810-5	7.829-4	7.797-4	1.026-9	1.280-1			
7.843-4	1.579-5	7.158-3	7.005-5	4.658-2	5.318-1	7.000-5	7.838-4	7.826-4	1.033-9	4.957-1			
7.900-4	1.033-5	1.094-3	1.070-5	4.658-2	5.389-1	1.070-5	7.897-4	7.885-4	1.049-9	7.833-1			
8.000-4	8.438-6	1.338-4	1.310-8	4.652-2	5.505-1	1.310-8	7.997-4	7.985-4	1.076-9	9.463-1			
8.500-4	9.289-6	1.218-4	1.190-8	4.628-2	6.089-1	1.190-8	8.497-4	8.485-4	1.215-9	9.135-1			
9.000-4	1.083-5	1.083-4	1.040-8	4.601-2	6.674-1	1.040-8	8.998-4	8.984-4	1.362-9	8.433-1			
9.249-4	1.142-5	9.898-3	9.885-5	4.580-2	8.263-1	9.880-5	9.249-4	9.233-4	1.438-9	8.086-1			
9.263-4	9.782-6	1.195-4	1.130-8	4.568-2	8.870-1	1.130-8	9.259-4	9.247-4	1.444-9	9.454-1			
1.000-3	1.047-5	1.080-4	1.056-8	4.555-2	7.889-1	1.056-8	9.998-4	9.984-4	1.682-9	9.538-1			
1.250-3	1.845-5	8.124-3	5.993-5	4.399-2	1.077-0	5.988-5	1.249-3	1.248-3	2.628-9	6.783-1			
1.500-3	2.932-5	3.894-3	3.771-5	4.275-2	1.391-0	3.767-5	1.498-3	1.497-3	3.782-9	5.108-1			
1.750-3	4.377-5	2.988-3	2.526-5	4.113-2	1.889-0	2.522-5	1.747-3	1.746-3	5.144-9	3.989-1			
2.000-3	6.191-5	1.825-3	1.786-5	3.977-2	1.948-0	1.782-5	1.996-3	1.994-3	6.712-9	3.221-1			
2.500-3	1.120-4	1.009-3	9.874-4	3.858-2	2.454-0	9.837-4	2.491-3	2.489-3	1.046-7	2.223-1			
3.000-3	1.818-4	6.222-2	6.088-4	3.413-2	2.985-0	6.054-4	2.983-3	2.982-3	1.500-7	1.842-1			
3.500-3	2.757-4	4.098-2	4.011-4	3.135-2	3.444-0	3.979-4	3.472-3	3.471-3	2.033-7	1.259-1			
4.000-3	3.955-4	2.857-2	2.788-4	2.913-2	3.920-0	2.788-4	3.958-3	3.957-3	2.642-7	1.000-1			
4.500-3	5.483-4	2.088-2	2.024-4	2.677-2	4.383-0	1.997-4	4.440-3	4.438-3	3.324-7	9.124-0			
5.000-3	7.288-4	1.950-2	1.517-4	2.482-2	4.801-0	1.488-4	4.917-3	4.915-3	4.077-7	8.745-0			
5.500-3	9.488-4	1.191-2	1.185-4	2.286-2	5.205-0	1.148-4	5.390-3	5.389-3	4.899-7	5.879-0			
6.000-3	1.206-3	9.388-1	9.186-3	2.121-2	5.603-0	8.948-3	5.858-3	5.856-3	5.787-7	4.854-0			
6.500-3	1.509-3	7.490-1	7.330-3	1.956-2	5.957-0	7.129-3	6.321-3	6.320-3	6.740-7	4.180-0			
7.000-3	1.854-3	6.094-1	5.883-3	1.814-2	6.308-0	5.776-3	6.780-3	6.779-3	7.753-7	3.658-0			
7.708-3	2.423-3	4.884-1	4.584-3	1.846-2	6.789-0	4.393-3	7.419-3	7.418-3	9.284-7	3.082-0			
7.709-3	2.982-4	3.778-2	3.695-4	1.845-2	6.790-0	3.678-4	7.673-3	7.672-3	4.563-7	1.738-1			
8.000-3	3.293-4	3.431-2	3.398-4	1.985-2	6.985-0	3.341-4	7.981-3	7.980-3	5.083-7	1.667-1			
1.000-2	5.932-4	1.905-2	1.884-4	1.231-2	8.106-0	1.051-4	9.930-3	9.929-3	9.397-7	1.258-1			
1.250-2	1.093-3	1.033-2	1.011-4	9.419-1	9.104-0	1.001-4	1.237-2	9.914-3	1.858-6	9.067-0			
1.500-2	1.800-3	8.278-1	8.144-3	7.571-1	1.001-1	8.058-3	1.479-2	1.234-2	2.570-6	6.857-0			
1.750-2	2.782-3	4.062-1	3.975-3	6.213-1	1.061-1	3.902-3	1.718-2	1.474-2	3.687-6	5.300-0			
2.000-2	4.051-3	2.789-1	2.730-3	5.236-1	1.115-1	2.686-3	1.954-2	1.711-2	4.940-6	4.224-0			
2.500-2	7.702-3	1.467-1	1.436-3	3.771-1	1.182-1	1.366-3	2.415-2	2.175-2	7.979-6	2.824-0			
3.000-2	1.295-2	8.723-0	8.536-2	2.884-1	1.239-1	8.124-2	2.858-2	2.621-2	1.159-5	2.023-0			
3.500-2	2.018-2	5.999-0	5.479-2	2.258-1	1.286-1	5.127-2	3.280-2	3.048-2	1.587-5	1.510-0			
4.000-2	2.947-2	3.335-0	3.753-2	1.827-1	1.290-1	3.441-2	3.678-2	3.450-2	2.007-5	1.171-0			
4.500-2	4.107-2	2.752-0	2.893-2	1.503-1	1.299-1	2.413-2	4.049-2	3.827-2	2.469-5	9.318-1			
5.000-2	5.493-2	2.057-0	2.013-2	1.262-1	1.306-1	1.798-2	4.390-2	4.173-2	2.937-5	7.987-1			
5.500-2	7.115-2	1.988-0	1.394-2	1.077-1	1.307-1	1.318-2	4.700-2	4.489-2	3.398-5	6.310-1			
6.000-2	8.995-2	1.262-0	1.235-2	9.310-0	1.307-1	1.011-2	4.978-2	4.772-2	3.840-5	5.328-1			
6.500-2	1.101-1	1.026-0	1.004-2	8.114-0	1.301-1	7.932-1	5.222-2	5.026-2	4.299-5	4.985-1			
7.000-2	1.325-1	8.329-1	8.346-1	7.144-0	1.299-1	8.337-1	5.436-2	5.247-2	4.642-5	3.961-1			
8.000-2	1.818-1	6.214-1	6.081-1	5.679-0	1.295-1	4.288-1	5.770-2	5.597-2	5.288-5	3.078-1			
1.000-1	2.821-1	3.688-1	3.785-1	3.884-0	1.291-1	2.152-1	6.180-2	6.019-2	6.107-5	2.080-1			
1.250-1	4.332-1	2.808-1	2.553-1	3.533-0	1.198-1	1.101-1	6.388-2	6.258-2	6.602-5	1.445-1			
1.503-1	5.880-1	2.018-1	1.875-1	1.810-0	1.157-1	8.370-0	6.477-2	6.397-2	8.899-5	1.142-1			
1.750-1	6.762-1	1.688-1	1.650-1	1.351-0	1.111-1	4.338-0	6.887-2	6.827-2	7.402-5	9.887-2			
2.000-1	7.828-1	1.481-1	1.450-1	1.049-0	1.073-1	2.721-0	7.317-2	6.971-2	8.190-5	9.139-2			

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ENDL Evaluated Photon Data

27-Co

ATOMIC WEIGHT 58.933							DENSITY 8.05 GRAMS/CC					
ENERGY		TOTAL NFP		CROSS SECTION (BARNES)				NEUTRON COLLISION			NEUTRON CM	
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E.+FLOR	K.E.	BREHSTR	K.E.		
2.500-1	9.139-1	1.238-1	1.218-1	6.888-1	9.989-0	1.428-0	8.067-2	8.037-2	1.089-4	8.799-2		
3.000-1	1.029-0	1.058-0	1.075-0	4.804-0	9.425-0	8.434-1	9.528-2	9.509-2	1.523-4	9.243-2		
3.500-1	1.127-0	1.003-0	9.811-0	3.559-0	8.908-0	5.478-1	1.127-1	1.125-1	2.134-4	9.988-2		
4.000-1	1.211-0	9.333-2	8.133-0	2.738-1	8.483-0	3.770-1	1.324-1	1.323-1	2.948-4	1.093-1		
4.500-1	1.288-0	8.774-2	8.587-0	2.171-1	8.088-0	2.737-1	1.538-1	1.535-1	3.985-4	1.186-1		
5.000-1	1.357-0	8.325-2	8.147-0	1.784-1	7.785-0	2.055-1	1.782-1	1.781-1	5.220-4	1.298-1		
5.500-1	1.424-0	7.938-2	7.787-0	1.461-1	7.481-0	1.597-1	1.997-1	1.996-1	6.702-4	1.402-1		
6.000-1	1.488-0	7.608-2	7.443-0	1.230-1	7.194-0	1.288-1	2.242-1	2.242-1	8.450-4	1.509-1		
6.500-1	1.548-0	7.307-2	7.150-0	1.049-1	6.942-0	1.034-1	2.492-1	2.492-1	1.043-3	1.611-1		
7.000-1	1.604-0	7.044-2	6.893-0	9.058-2	6.717-0	8.954-2	2.750-1	2.749-1	1.270-3	1.714-1		
8.000-1	1.712-0	6.601-2	6.480-0	8.947-2	6.330-0	8.083-2	3.288-1	3.287-1	1.814-3	1.921-1		
1.000-0	1.915-0	5.962-2	5.775-0	4.455-2	5.896-0	3.527-2	4.409-1	4.409-1	3.257-3	2.303-1		
1.025-0	1.938-0	5.837-2	5.712-0	4.288-2	5.838-0	3.392-2	4.537-1	4.537-1	3.446-3	2.343-1		
1.250-0	2.148-0	5.262-2	5.149-0	2.895-2	5.056-0	2.361-2	5.887-1	5.887-1	5.791-3	2.741-1		
1.500-0	2.350-0	4.808-2	4.705-0	1.984-2	4.633-0	1.700-2	7.405-1	7.405-1	9.138-3	3.151-1		
1.750-0	2.528-0	4.469-2	4.374-0	1.438-2	4.281-0	1.278-2	8.488-2	8.970-1	1.338-2	3.549-1		
2.000-0	2.688-0	4.204-2	4.114-0	1.116-2	3.995-0	1.013-2	1.375-1	1.059-0	1.860-2	3.940-1		
2.044-0	2.716-0	4.181-2	4.072-0	1.069-2	3.906-0	9.795-3	1.452-1	1.088-0	1.962-2	4.007-1		
2.500-0	2.998-0	3.823-2	3.741-0	7.149-3	3.474-0	7.220-3	2.522-1	1.399-0	1.399-0	3.224-2	4.731-1	
3.000-0	3.157-0	3.579-2	3.503-0	4.988-3	3.112-0	5.566-3	3.789-1	1.799-0	1.799-0	5.070-2	5.572-1	
3.500-0	3.318-0	3.405-2	3.332-0	3.848-3	2.827-0	4.534-3	4.485-1	2.137-0	2.137-0	7.440-2	6.440-1	
4.000-0	3.442-0	3.283-2	3.212-0	2.793-3	2.598-0	3.797-3	5.093-1	2.532-0	2.532-0	1.038-1	7.357-1	
4.500-0	3.537-0	3.194-2	3.128-0	2.207-3	2.405-0	3.234-3	7.159-1	3.482-0	3.482-0	1.391-1	8.318-1	
5.000-0	3.616-0	3.125-2	3.058-0	1.788-3	2.242-0	2.822-3	8.108-1	3.362-0	3.362-0	1.805-1	9.298-1	
5.500-0	3.694-0	3.059-2	2.993-0	1.478-3	2.103-0	2.516-3	8.861-1	3.790-0	3.790-0	2.279-1	1.026-0	
6.000-0	3.752-0	3.011-2	2.947-0	1.242-3	1.982-0	2.285-3	9.612-1	4.228-0	4.228-0	2.815-1	1.127-0	
6.500-0	3.794-0	2.979-2	2.915-0	1.058-3	1.878-0	2.057-3	1.036-0	4.674-0	4.674-0	3.417-1	1.232-0	
7.000-0	3.820-0	2.958-2	2.895-0	9.123-4	1.781-0	1.881-3	5.127-0	5.127-0	4.083-1	1.342-0		
8.000-0	3.836-0	2.946-2	2.883-0	8.985-4	1.622-0	1.802-3	1.259-0	6.054-0	6.054-0	5.612-1	1.578-0	
1.000-1	3.787-0	3.000-2	2.935-0	4.470-4	1.381-0	1.224-3	1.553-0	7.969-0	7.969-0	9.447-1	2.116-0	
1.250-1	3.746-0	3.016-2	2.952-0	2.861-4	1.172-0	9.887-4	1.779-0	1.039-0	1.039-0	1.549-0	2.773-0	
1.500-1	3.673-0	3.077-2	3.011-0	1.987-4	1.028-0	7.970-4	1.988-0	1.285-0	1.285-0	2.289-0	3.498-0	
1.750-1	3.582-0	3.172-2	3.104-0	1.480-4	9.091-1	6.789-4	2.184-0	1.534-0	1.534-0	3.153-0	4.305-0	
2.000-1	3.486-0	3.260-2	3.190-0	1.118-4	8.204-1	5.876-4	2.369-0	1.783-0	1.783-0	4.126-0	5.145-0	
2.500-1	3.328-0	3.397-2	3.324-0	7.152-5	6.898-1	4.639-4	2.834-0	2.283-0	2.283-0	6.350-0	6.884-0	
3.000-1	3.213-0	3.517-2	3.442-0	4.987-5	5.973-1	3.825-4	2.844-0	2.784-0	2.784-0	8.898-0	8.885-0	
3.500-1	3.129-0	3.611-2	3.534-0	3.849-5	5.283-1	3.294-4	3.005-0	3.284-0	3.284-0	1.171-0	1.050-1	
4.000-1	3.049-0	3.708-2	3.627-0	2.794-5	4.746-1	2.820-4	3.152-0	3.786-0	3.786-0	1.478-0	1.242-1	
4.500-1	2.985-0	3.811-2	3.729-0	2.208-5	4.316-1	2.489-4	3.286-0	4.287-0	4.287-0	1.800-0	1.448-1	
5.000-1	2.902-0	3.902-2	3.810-0	1.788-5	3.982-1	2.225-4	3.414-0	4.788-0	4.788-0	2.140-0	1.650-1	
5.500-1	2.860-0	3.950-2	3.868-0	1.478-5	3.685-1	2.013-4	3.499-0	5.289-0	5.289-0	2.494-0	1.849-1	
6.000-1	2.821-0	4.006-2	3.920-0	1.242-5	3.414-1	1.835-4	3.578-0	5.790-0	5.790-0	2.861-0	2.053-1	
6.500-1	2.783-0	4.060-2	3.973-0	1.058-5	3.195-1	1.686-4	3.854-0	6.291-0	6.291-0	3.239-0	2.260-1	
7.000-1	2.747-0	4.113-2	4.025-0	9.123-6	3.006-1	1.559-4	3.725-0	6.791-0	6.791-0	3.627-0	2.472-1	
8.000-1	2.681-0	4.215-2	4.125-0	6.985-6	2.892-1	1.353-4	3.856-0	7.793-0	7.793-0	4.427-0	2.907-1	
1.000-2	2.586-0	4.403-2	4.309-0	4.470-6	2.234-1	1.088-4	4.085-0	9.796-0	9.796-0	6.104-1	3.817-1	

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Form Factors

27-Co

SIN(θ/2)/λ COHERENT				SIN(θ/2)/λ COHERENT				SIN(θ/2)/λ COHERENT				SIN(θ/2)/λ COHERENT			
I/A		INCOHERENT		I/A		INCOHERENT		I/A		INCOHERENT		I/A		INCOHERENT	
0.000	0	1.000	0	0.000	0	1.000	0	0.000	0	1.000	0	0.000	0	1.000	0
5.000	-3	5.994	-1	4.444	-4	1.500	-1	8.818	-1	1.347	-1	1.000	0	2.483	-1
1.000	-2	9.988	-1	1.741	-3	1.750	-1	8.471	-1	1.818	-1	1.250	0	2.124	-1
1.500	-2	9.978	-1	3.911	-3	2.000	-1	8.138	-1	1.878	-1	1.500	0	1.814	-1
2.000	-2	9.974	-1	6.874	-3	2.500	-1	7.807	-1	2.135	-1	2.000	0	1.249	-1
2.500	-2	9.971	-1	1.028	-2	3.000	-1	7.487	-1	2.405	-1	2.500	0	8.802	-2
3.000	-2	9.968	-1	1.488	-2	4.000	-1	6.995	-1	3.137	-1	3.000	0	6.985	-2
4.000	-2	9.963	-1	2.948	-2	5.000	-1	6.408	-1	4.018	-1	3.500	0	5.248	-2
5.000	-2	9.957	-1	3.774	-2	6.000	-1	5.804	-1	4.785	-1	4.000	0	4.752	-2
7.000	-2	9.937	-1	6.480	-2	7.000	-1	5.290	-1	5.406	-1	5.000	0	3.781	-2
9.000	-2	9.920	-1	9.198	-2	8.000	-1	4.829	-1	5.944	-1	6.000	0	3.094	-2
1.000	-1	9.180	-1	1.049	-1	9.000	-1	2.674	-1	6.389	-1	7.000	0	2.493	-2
												8.000	0	2.071	-2

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ENDL Evaluated Photon Cross Sections

28-Ni

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Energy Deposition

28-Ni

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ENDL Evaluated Photon Data

28-NI

ATOMIC WEIGHT 58.71		DENSITY 8.902 GRAMS/CC					
ENERGY	TOTAL MFP	CROSS SECTION (BARNS)					
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD
1.000-4	1.984-6	5.688-4	5.751-6	5.210-2	9.632-3	5.790-8	9.999-5
1.111-4	2.106-6	5.334-4	5.801-6	5.209-2	1.191-2	5.200-8	1.111-4
1.125-4	1.985-6	5.632-4	5.491-6	5.209-2	1.222-2	5.490-8	1.125-4
1.250-4	2.210-6	5.083-4	5.686-6	5.208-2	1.511-2	4.999-8	1.250-4
1.500-4	2.639-6	4.257-4	5.151-6	5.208-2	2.184-2	4.150-8	1.500-4
1.750-4	3.258-6	3.448-4	3.382-6	5.203-2	2.971-2	3.361-8	1.750-4
2.000-4	3.911-6	2.873-4	2.801-6	5.201-2	3.879-2	2.800-8	2.000-4
2.500-4	5.617-6	2.060-4	1.950-6	5.198-2	6.017-2	1.949-8	2.499-4
3.000-4	7.950-6	1.468-4	1.451-6	5.195-2	8.614-2	1.450-8	2.999-4
3.500-4	1.005-5	1.118-4	1.090-6	5.172-2	1.180-1	1.089-8	3.498-4
4.000-4	1.268-5	8.724-5	8.505-6	5.162-2	1.562-1	8.500-8	3.998-4
4.500-4	1.614-5	6.981-5	6.788-6	5.147-2	1.878-1	6.781-8	4.497-4
5.000-4	1.975-5	5.688-5	5.545-6	5.133-2	2.289-1	5.510-8	4.995-4
5.500-4	2.401-5	4.678-5	4.580-6	5.116-2	2.728-1	4.555-8	5.494-4
6.000-4	2.871-5	3.913-5	3.815-6	5.100-2	3.201-1	3.810-8	5.992-4
6.500-4	3.408-5	3.248-5	3.167-6	5.077-2	3.684-1	3.162-8	6.490-4
7.000-4	4.109-5	2.734-5	2.685-6	5.056-2	4.198-1	2.680-8	6.987-4
8.000-4	5.375-5	2.098-5	2.045-6	5.018-2	5.304-1	2.040-8	7.980-4
8.597-4	6.499-5	1.726-5	1.685-6	4.988-2	5.984-1	1.680-8	8.572-4
9.000-4	7.787-5	1.452-5	1.405-6	4.965-2	6.679-1	1.400-8	9.064-4
9.000-4	9.199-5	1.281-5	1.190-6	4.948-2	7.408-1	1.190-8	9.998-4
1.000-3	1.072-5	1.040-5	1.021-6	4.920-2	7.628-1	1.021-8	1.010-3
1.011-3	1.102-5	1.020-5	9.942-6	4.912-2	7.748-1	9.937-8	1.012-3
1.012-3	9.519-6	1.180-5	1.150-6	4.911-2	7.799-1	1.150-8	1.012-3
1.250-3	1.620-5	8.935-5	6.781-6	4.781-2	1.048-0	6.758-8	1.249-3
1.500-3	2.583-5	6.384-5	4.274-6	4.635-2	1.399-0	4.269-8	1.498-3
1.750-3	3.812-5	4.947-5	2.873-6	4.488-2	1.633-0	2.868-8	1.747-3
2.000-3	5.375-5	2.980-5	2.037-6	4.328-2	1.915-0	2.033-8	1.996-3
2.500-3	9.674-5	1.161-5	1.132-6	3.981-2	2.423-0	1.128-8	2.491-3
3.000-3	1.583-4	7.189-5	7.009-6	3.738-2	2.937-0	6.971-8	2.984-3
3.500-3	2.384-4	4.751-5	4.632-6	3.441-2	3.420-0	4.597-8	3.474-3
4.000-3	3.383-4	3.321-5	3.237-6	3.205-2	3.901-0	3.205-8	3.960-3
4.500-3	4.683-4	2.409-5	2.348-6	2.951-2	4.350-0	2.319-8	4.443-3
5.000-3	6.209-4	1.809-5	1.784-6	2.741-2	4.798-0	1.738-8	4.921-3
5.500-3	8.089-4	1.392-5	1.357-6	2.529-2	5.207-0	1.331-8	5.395-3
6.000-3	1.024-4	1.097-5	1.089-6	2.279-2	5.614-0	1.045-8	5.885-3
6.500-3	1.280-4	8.779-5	8.599-6	2.180-2	5.978-0	8.336-8	6.331-3
7.000-3	1.571-4	7.149-5	6.970-6	2.012-2	6.338-0	6.782-8	6.792-3
8.000-3	2.272-4	4.943-5	4.801-6	1.799-2	7.036-0	4.638-8	7.697-3
8.332-3	2.944-4	4.416-5	4.305-6	1.679-2	7.236-0	4.130-8	7.993-3
8.333-3	3.393-4	3.344-5	3.261-6	1.678-2	7.238-0	3.243-8	8.288-3
1.000-2	5.333-4	2.108-5	2.053-6	1.384-2	8.203-0	2.039-8	9.930-3
1.250-2	9.853-4	1.184-5	1.134-6	1.040-2	9.258-0	1.123-8	1.238-2
1.500-2	1.586-4	7.174-5	6.994-6	8.332-1	1.025-0	6.900-8	1.480-2
1.750-2	2.402-4	4.678-5	4.580-6	6.832-1	1.085-0	4.481-8	1.720-2
2.000-2	3.474-4	3.233-5	3.152-6	5.752-1	1.143-0	3.083-8	1.957-2
2.500-2	6.588-4	1.710-5	1.667-6	4.150-1	1.214-0	1.614-8	2.420-2
3.000-2	1.100-4	1.021-5	9.995-6	3.179-1	1.275-0	9.510-8	2.868-2
3.500-2	1.714-4	6.955-5	6.790-6	2.489-1	1.304-0	6.011-8	3.297-2
4.000-2	2.504-4	4.487-5	4.374-6	2.014-1	1.330-0	4.040-8	3.703-2
4.500-2	3.486-4	3.213-5	3.132-6	1.856-1	1.340-0	2.833-8	4.085-2
5.000-2	4.688-4	2.396-5	2.336-6	1.790-1	1.349-0	2.062-8	4.439-2
5.500-2	6.092-4	1.844-5	1.788-6	1.185-1	1.350-0	1.944-8	4.763-2
6.000-2	7.693-4	1.486-5	1.426-6	1.025-1	1.350-0	1.188-8	5.058-2
6.500-2	9.498-4	1.183-5	1.153-6	8.932-0	1.344-0	9.293-8	5.319-2
7.000-2	1.148-4	9.785-5	9.579-6	7.884-0	1.339-0	7.414-8	5.550-2
8.000-2	1.590-4	7.087-5	6.889-6	6.252-0	1.329-0	4.935-8	5.921-2
1.000-1	2.587-4	4.325-5	4.217-6	4.214-0	1.294-0	2.501-8	6.373-2
1.250-1	3.921-4	2.885-5	2.793-6	2.793-0	1.240-0	1.274-8	6.621-2
1.500-1	5.381-4	2.188-5	2.131-6	1.997-0	1.198-0	7.339-8	6.738-2
1.750-1	6.210-4	1.889-5	1.784-6	1.498-0	1.151-0	4.628-8	6.933-2
2.000-1	7.118-4	1.578-5	1.539-6	1.198-0	1.111-0	3.118-8	7.238-2
2.500-1	8.999-4	1.308-5	1.274-6	7.578-1	1.035-0	1.631-8	8.240-2
9.999-5	9.999-5	1.750-10	9.250-1	1.111-4	1.111-4	2.160-10	5.275-1
1.125-4	1.125-4	1.110-4	2.126-10	5.585-1	1.250-4	1.235-4	2.889-10
1.250-4	1.250-4	1.485-4	3.899-10	5.828-1	1.500-4	1.485-4	3.899-10
1.750-4	1.750-4	1.735-4	5.267-10	5.325-1	1.750-4	1.735-4	5.267-10
2.000-4	2.000-4	1.985-4	6.894-10	5.078-1	2.499-4	2.484-4	1.080-9
2.499-4	2.499-4	2.984-4	1.958-9	3.952-1	2.999-4	2.984-4	1.958-9
3.498-4	3.498-4	3.483-4	2.124-9	3.486-1	3.998-4	3.983-4	2.778-9
4.497-4	4.497-4	4.482-4	3.515-9	2.777-1	4.995-4	4.981-4	4.341-9
5.494-4	5.494-4	5.479-4	5.253-9	2.788-1	5.992-4	5.977-4	6.252-9
6.490-4	6.490-4	6.475-4	7.338-9	1.872-1	6.987-4	6.972-4	8.506-9
7.980-4	7.980-4	7.966-4	1.110-8	1.487-1	8.998-4	8.984-4	1.110-8
8.998-4	8.998-4	8.984-4	1.291-8	4.780-1	9.998-4	9.984-4	1.412-8
9.998-4	9.998-4	9.984-4	1.743-8	9.309-1	1.010-3	1.009-3	1.782-8
1.010-3	1.010-3	1.010-3	1.785-8	5.160-1	1.012-3	1.012-3	2.724-8
1.249-3	1.249-3	1.249-3	3.921-8	5.841-1	1.498-3	1.497-3	3.921-8
1.747-3	1.747-3	1.746-3	5.333-8	4.580-1	1.996-3	1.994-3	5.960-8
2.491-3	2.491-3	2.490-3	1.085-7	2.574-1	2.984-3	2.982-3	1.557-7
3.474-3	3.474-3	3.472-3	2.110-7	1.489-1	3.960-3	3.958-3	2.742-7
4.443-3	4.443-3	4.441-3	3.451-7	9.528-1	4.921-3	4.919-3	4.235-7
5.394-3	5.394-3	5.394-3	5.091-7	6.889-1	5.885-3	5.884-3	6.016-7
6.331-3	6.331-3	6.329-3	7.010-7	4.947-1	6.792-3	6.790-3	8.088-7
7.697-3	7.697-3	7.695-3	1.036-6	3.388-1	7.993-3	7.992-3	1.116-6
8.288-3	8.288-3	8.286-3	5.113-7	1.613-1	8.930-3	8.928-3	8.728-7
9.930-3	9.930-3	9.928-3	1.585-6	9.859-1	1.238-2	1.236-2	1.585-6
1.480-2	1.480-2	1.478-2	2.439-6	7.832-0	1.720-2	1.718-2	3.608-6
1.957-2	1.957-2	1.954-2	4.903-6	4.810-0	2.420-2	2.417-2	8.019-6
2.868-2	2.868-2	2.862-2	1.175-5	2.356-0	3.297-2	3.295-2	1.601-5
3.703-2	3.703-2	3.702-2	2.065-5	1.373-0	4.439-2	4.436-2	2.557-5
4.085-2	4.085-2	4.084-2	3.061-5	1.094-0	4.763-2	4.762-2	3.585-5
5.058-2	5.058-2	5.055-2	4.054-5	6.299-1	5.319-2	5.318-2	4.523-5
5.920-2	5.920-2	5.919-2	4.679-5	5.949-1	6.621-2	6.620-2	6.723-5
6.621-2	6.621-2	6.620-2	1.075-5	1.075-1	7.238-2	7.237-2	9.049-5
7.238-2	7.238-2	7.237-2	9.049-5	9.049-1	8.240-2	8.239-2	9.542-5

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 98.71		DENSITY 8.902 GRAMS/CC					
ENERGY MEV	TOTAL MFP		CROSS SECTION (BARNES)				MEV/COLLISION
	CM	CM/ON/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR K.E. BREMSSTR K.E.
3.000	1	9.728	1	1.128	5.307	1	9.800
3.500	1	1.000	0	1.021	1.000	1	1.130
4.000	1	1.130	0	9.771	9.385	1	1.333
4.500	1	1.270	0	9.175	8.945	1	1.543
5.000	1	1.420	0	8.682	8.479	1	1.768
5.500	1	1.580	0	8.287	8.079	1	2.001
6.000	1	1.745	0	7.939	7.740	1	2.247
6.500	1	1.923	0	7.624	7.432	1	2.498
7.000	1	2.112	0	7.340	7.183	1	2.753
7.500	1	2.312	0	7.083	6.910	1	3.011
8.000	1	2.522	0	6.853	6.670	1	3.270
8.500	1	2.742	0	6.643	6.450	1	3.530
9.000	1	2.972	0	6.453	6.250	1	3.790
9.500	1	3.212	0	6.283	6.070	1	4.050
10.000	1	3.462	0	6.133	5.910	1	4.310
10.500	1	3.722	0	6.003	5.780	1	4.570
11.000	1	3.992	0	5.883	5.660	1	4.830
11.500	1	4.272	0	5.773	5.550	1	5.090
12.000	1	4.562	0	5.673	5.450	1	5.350
12.500	1	4.862	0	5.583	5.360	1	5.610
13.000	1	5.172	0	5.503	5.280	1	5.870
13.500	1	5.492	0	5.433	5.210	1	6.130
14.000	1	5.822	0	5.373	5.150	1	6.390
14.500	1	6.162	0	5.323	5.100	1	6.650
15.000	1	6.512	0	5.283	5.060	1	6.910
15.500	1	6.872	0	5.253	5.030	1	7.170
16.000	1	7.242	0	5.233	5.010	1	7.430
16.500	1	7.622	0	5.223	5.000	1	7.690
17.000	1	8.012	0	5.223	5.000	1	7.950
17.500	1	8.412	0	5.233	5.010	1	8.210
18.000	1	8.822	0	5.253	5.030	1	8.470
18.500	1	9.242	0	5.283	5.060	1	8.730
19.000	1	9.672	0	5.323	5.100	1	8.990
19.500	1	10.112	0	5.373	5.150	1	9.250
20.000	1	10.562	0	5.433	5.210	1	9.510
20.500	1	11.022	0	5.503	5.280	1	9.770
21.000	1	11.492	0	5.583	5.360	1	10.030
21.500	1	11.972	0	5.673	5.450	1	10.290
22.000	1	12.462	0	5.773	5.550	1	10.550
22.500	1	12.962	0	5.883	5.660	1	10.810
23.000	1	13.472	0	6.003	5.780	1	11.070
23.500	1	13.992	0	6.133	5.910	1	11.330
24.000	1	14.522	0	6.283	6.070	1	11.590
24.500	1	15.062	0	6.453	6.250	1	11.850
25.000	1	15.612	0	6.643	6.450	1	12.110
25.500	1	16.172	0	6.853	6.670	1	12.370
26.000	1	16.742	0	7.083	6.910	1	12.630
26.500	1	17.322	0	7.340	7.183	1	12.890
27.000	1	17.912	0	7.624	7.432	1	13.150
27.500	1	18.512	0	7.939	7.740	1	13.410
28.000	1	19.122	0	8.287	8.079	1	13.670
28.500	1	19.742	0	8.682	8.479	1	13.930
29.000	1	20.372	0	9.115	8.945	1	14.190
29.500	1	21.012	0	9.587	9.451	1	14.450
30.000	1	21.662	0	10.099	9.999	1	14.710
30.500	1	22.322	0	10.641	10.589	1	14.970
31.000	1	22.992	0	11.213	11.213	1	15.230
31.500	1	23.672	0	11.815	11.815	1	15.490
32.000	1	24.362	0	12.447	12.447	1	15.750
32.500	1	25.062	0	13.109	13.109	1	16.010
33.000	1	25.772	0	13.791	13.791	1	16.270
33.500	1	26.492	0	14.493	14.493	1	16.530
34.000	1	27.222	0	15.215	15.215	1	16.790
34.500	1	27.962	0	15.957	15.957	1	17.050
35.000	1	28.712	0	16.719	16.719	1	17.310
35.500	1	29.472	0	17.491	17.491	1	17.570
36.000	1	30.242	0	18.273	18.273	1	17.830
36.500	1	31.022	0	19.075	19.075	1	18.090
37.000	1	31.812	0	19.897	19.897	1	18.350
37.500	1	32.612	0	20.739	20.739	1	18.610
38.000	1	33.422	0	21.601	21.601	1	18.870
38.500	1	34.242	0	22.483	22.483	1	19.130
39.000	1	35.072	0	23.385	23.385	1	19.390
39.500	1	35.912	0	24.307	24.307	1	19.650
40.000	1	36.762	0	25.249	25.249	1	19.910
40.500	1	37.622	0	26.211	26.211	1	20.170
41.000	1	38.492	0	27.193	27.193	1	20.430
41.500	1	39.372	0	28.195	28.195	1	20.690
42.000	1	40.262	0	29.217	29.217	1	20.950
42.500	1	41.162	0	30.259	30.259	1	21.210
43.000	1	42.072	0	31.321	31.321	1	21.470
43.500	1	42.992	0	32.393	32.393	1	21.730
44.000	1	43.922	0	33.485	33.485	1	21.990
44.500	1	44.862	0	34.597	34.597	1	22.250
45.000	1	45.812	0	35.729	35.729	1	22.510
45.500	1	46.772	0	36.881	36.881	1	22.770
46.000	1	47.842	0	38.053	38.053	1	23.030
46.500	1	48.922	0	39.245	39.245	1	23.290
47.000	1	50.012	0	40.457	40.457	1	23.550
47.500	1	51.112	0	41.689	41.689	1	23.810
48.000	1	52.222	0	42.941	42.941	1	24.070
48.500	1	53.342	0	44.213	44.213	1	24.330
49.000	1	54.472	0	45.505	45.505	1	24.590
49.500	1	55.612	0	46.817	46.817	1	24.850
50.000	1	56.762	0	48.149	48.149	1	25.110
50.500	1	57.922	0	49.501	49.501	1	25.370
51.000	1	59.092	0	50.873	50.873	1	25.630
51.500	1	60.272	0	52.265	52.265	1	25.890
52.000	1	61.462	0	53.677	53.677	1	26.150
52.500	1	62.662	0	55.109	55.109	1	26.410
53.000	1	63.872	0	56.561	56.561	1	26.670
53.500	1	65.092	0	58.033	58.033	1	26.930
54.000	1	66.322	0	59.525	59.525	1	27.190
54.500	1	67.562	0	61.037	61.037	1	27.450
55.000	1	68.812	0	62.569	62.569	1	27.710
55.500	1	70.072	0	64.121	64.121	1	27.970
56.000	1	71.342	0	65.693	65.693	1	28.230
56.500	1	72.622	0	67.285	67.285	1	28.490
57.000	1	73.912	0	68.897	68.897	1	28.750
57.500	1	75.212	0	70.529	70.529	1	29.010
58.000	1	76.522	0	72.181	72.181	1	29.270
58.500	1	77.842	0	73.853	73.853	1	29.530
59.000	1	79.172	0	75.545	75.545	1	29.790
59.500	1	80.512	0	77.257	77.257	1	30.050
60.000	1	81.862	0	78.989	78.989	1	30.310
60.500	1	83.222	0	80.741	80.741	1	30.570
61.000	1	84.592	0	82.513	82.513	1	30.830
61.500	1	85.972	0	84.305	84.305	1	31.090
62.000	1	87.362	0	86.117	86.117	1	31.350
62.500	1	88.762	0	87.949	87.949	1	31.610
63.000	1	90.172	0	89.801	89.801	1	31.870
63.500	1	91.592	0	91.673	91.673	1	32.130
64.000	1	93.022	0	93.565	93.565	1	32.390
64.500	1	94.462	0	95.477	95.477	1	32.650
65.000	1	95.912	0	97.409	97.409	1	32.910
65.500	1	97.372	0	99.361	99.361	1	33.170
66.000	1	98.842	0	101.333	101.333	1	33.430
66.500	1	100.322	0	103.325	103.325	1	33.690
67.000	1	101.812	0	105.337	105.337	1	33.950
67.500	1	103.312	0	107.369	107.369	1	34.210
68.000	1	104.822	0	109.421	109.421	1	34.470
68.500	1	106.342	0	111.493	111.493	1	34.730
69.000	1	107.872	0	113.585	113.585	1	34.990
69.500	1	109.412	0	115.697	115.697	1	35.250
70.000	1	110.962	0	117.829	117.829	1	35.510
70.500	1	112.522	0	119.981	119.981	1	35.770
71.000	1	114.092	0	122.153	122.153	1	36.030
71.500	1	115.672	0	124.345	124.345	1	36.290
72.000	1	117.262	0	126.557	126.557	1	36.550
72.500	1	118.862	0	128.789	128.789	1	36.810
73.000	1	120.472	0	131.041	131.041	1	37.070
73.500	1	122.092	0	133.313	133.313	1	37.330
74.000	1	123.722	0	135.605	135.605	1	37.590
74.500	1	125.362	0	137.917	137.917	1	37.850
75.000	1	127.012	0	140.249	140.249	1	38.110
75.500	1	128.672	0	142.601	142.601	1	38.370
76.000	1	130.342	0	144.973	144.973	1	38.630
76.500	1	132.022	0	147.365	147.365	1	38.890
77.000	1	133.712	0	149.777	149.777	1	39.150
77.500	1	135.412	0	152.209	152.209	1	39.410
78.000	1	137.122	0	154.661	154.661	1	39.670
78.500	1	138.842	0	157.133	157.133	1	39.930
79.000	1	140.572	0	159.625	159.625	1	40.190
79.500	1	142.312	0	162.137	162.137	1	40.450
80.000	1	144.062	0	164			

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Form Factors

28-N1

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	8.888-1	1.279-1	1.000+0	2.488-1	8.988-1	1.000+1	1.300-2	9.974-1
5.000-3	9.999-1	3.329-4	1.500-1	8.552-1	1.544-1	1.250+0	2.108-1	7.573-1	1.500+1	4.432-3	9.997-1
1.000-2	9.997-1	1.667-3	1.750-1	8.228-1	1.736-1	1.500+0	1.818-1	6.616-1	2.000+1	1.803-3	1.000+0
1.500-2	9.978-1	3.804-3	2.000-1	7.905-1	2.045-1	2.000+0	1.282-1	8.847-1	5.000+1	7.002-5	1.000+0
2.000-2	9.961-1	6.336-3	2.500-1	7.273-1	2.541-1	2.500+0	8.903-2	9.036-1	8.000+1	1.242-5	1.000+0
2.500-2	9.939-1	9.794-3	3.000-1	6.673-1	3.022-1	3.000+0	7.101-2	9.272-1	1.000+2	5.494-6	1.000+0
3.000-2	9.913-1	1.383-2	4.000-1	5.951-1	3.881-1	3.500+0	5.220-2	9.428-1	1.000+3	2.203-6	1.000+0
4.000-2	9.848-1	2.359-2	5.000-1	4.814-1	4.838-1	4.000+0	4.782-2	9.539-1	1.000+8	2.383-18	1.000+0
5.000-2	9.789-1	3.504-2	6.000-1	3.881-1	5.279-1	5.000+0	3.751-2	9.702-1	1.000+9	3.162-27	1.000+0
7.000-2	9.589-1	8.095-2	7.000-1	3.337-1	5.828-1	6.000+0	3.116-2	9.813-1			
9.000-2	9.335-1	8.894-2	8.000-1	2.946-1	6.286-1	7.000+0	2.949-2	9.884-1			
1.000-1	9.213-1	9.900-2	9.000-1	2.669-1	6.686-1	8.000+0	2.133-2	9.929-1

12/07/78

ENDL Evaluated Photon Cross Sections

29-Cu

12/07/78

Energy Deposition

29-Cu

12/07/78

ENDL Evaluated Photon Data

29-Cu

ATOMIC WEIGHT 63.54										DENSITY 8.96 GRAMS/CC			
ENERGY	TOTAL HP		CROSS SECTION (BARN)				REV/COLLISION		REV/CM				
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOL PAIR PROD	K.E. FLO	K.E. STR	GREY/STR	K.E.			
1.000	4	1.734	6	6.436	4	8.791	6	5.988	2	7.785	3	6.780	6
1.191	4	2.122	6	5.261	4	5.951	6	5.387	2	1.105	2	5.550	6
1.205	4	2.637	6	5.478	4	5.781	6	5.287	2	1.131	2	5.780	6
1.250	4	2.688	6	5.346	4	5.844	6	5.287	2	1.217	2	5.843	6
1.500	4	2.358	6	4.749	4	5.011	6	5.085	2	1.794	2	5.010	6
1.750	4	2.994	6	3.778	4	3.987	6	5.583	2	2.389	2	3.986	6
2.000	4	3.681	6	3.100	4	3.271	6	5.581	2	3.122	2	3.270	6
2.500	4	5.180	6	2.183	4	2.282	6	5.573	2	4.848	2	2.281	6
3.000	4	6.985	6	1.812	4	1.701	6	5.567	2	6.942	2	1.700	6
3.500	4	9.221	6	1.210	4	1.277	6	5.558	2	9.325	2	1.277	6
4.000	4	1.188	5	9.445	3	9.986	5	5.547	2	1.211	1	9.980	5
4.500	4	1.443	5	7.735	3	8.161	5	5.534	2	1.514	1	8.155	5
5.000	4	1.725	5	6.489	3	6.888	5	5.522	2	1.849	1	6.880	5
5.500	4	2.128	5	5.248	3	5.531	5	5.508	2	2.205	1	5.586	5
6.000	4	2.579	5	4.327	3	4.585	5	5.492	2	2.590	1	4.580	5
6.500	4	3.199	5	3.488	3	3.681	5	5.472	2	2.985	1	3.675	5
7.000	4	3.905	5	2.858	3	3.015	5	5.453	2	3.404	1	3.010	5
8.000	4	4.883	5	2.384	3	2.525	5	5.419	2	4.313	1	2.520	5
9.000	4	6.946	5	1.807	3	1.895	5	5.372	2	5.240	1	1.890	5
9.370	4	7.201	5	1.950	3	1.935	5	5.356	2	5.812	1	1.930	5
9.384	4	1.671	5	6.677	3	7.045	5	5.350	2	5.626	1	7.040	5
9.600	4	9.975	5	1.119	4	1.181	6	5.347	2	5.843	1	1.180	6
1.000	3	8.897	5	1.254	4	1.324	6	5.331	2	6.254	1	1.323	6
1.099	3	1.135	5	9.884	3	1.037	6	5.288	2	7.206	1	1.036	6
1.100	3	9.817	5	1.137	4	1.200	6	5.288	2	7.216	1	1.199	6
1.250	3	1.372	5	9.134	3	8.982	5	5.185	2	8.742	1	8.977	5
1.500	3	2.212	5	5.046	3	5.324	5	5.088	2	1.149	0	5.319	5
1.750	3	3.332	5	3.350	3	3.534	5	5.007	2	1.411	0	3.529	5
2.000	3	4.751	5	2.349	3	2.479	5	4.771	2	1.685	0	2.474	5
2.500	3	6.678	5	1.886	3	1.957	5	4.426	2	2.202	0	1.953	5
3.000	3	1.419	4	7.886	2	8.300	4	4.162	2	2.741	0	8.258	4
3.500	3	2.184	4	5.157	2	5.441	4	3.842	2	3.238	0	5.403	4
4.000	3	3.118	4	3.580	2	3.777	4	3.585	2	3.740	0	3.741	4
4.500	3	4.317	4	2.585	2	2.788	4	3.304	2	4.200	0	2.694	4
5.000	3	5.772	4	1.934	2	2.040	4	3.071	2	4.858	0	2.009	4
5.500	3	7.522	4	1.484	2	1.585	4	2.834	2	5.081	0	1.537	4
6.000	3	9.575	4	1.186	2	1.250	4	2.633	2	5.500	0	1.203	4
6.500	3	1.198	3	9.315	1	9.828	3	2.449	2	5.877	0	9.979	3
7.000	3	1.474	3	7.572	1	7.989	3	2.254	2	6.250	0	7.758	3
8.000	3	2.138	3	5.221	1	5.508	3	1.970	2	6.581	0	5.305	3
8.978	3	2.952	3	3.781	1	3.989	3	1.725	2	7.593	0	3.809	3
8.979	3	3.883	3	2.889	2	3.048	4	1.725	2	7.594	0	3.030	4
1.000	2	5.091	4	2.192	2	2.313	4	1.524	2	8.214	0	2.297	4
1.250	2	9.208	4	1.212	2	1.279	4	1.157	2	9.340	0	1.286	4
1.500	2	1.493	3	7.476	1	7.888	3	9.232	1	1.037	1	7.785	3
1.750	2	2.894	3	4.887	1	5.157	3	7.953	1	1.105	1	5.070	3
2.000	2	3.297	3	3.336	1	3.572	3	6.347	1	1.186	1	3.497	3
2.500	2	6.197	3	1.801	1	1.900	3	4.583	1	1.243	1	1.842	3
3.000	2	1.034	2	1.080	1	1.135	3	3.612	1	1.309	1	1.091	3
3.500	2	1.604	2	6.560	0	7.343	2	2.749	1	1.341	1	6.934	2
4.000	2	2.335	2	4.779	0	5.042	2	2.224	1	1.369	1	4.883	2
4.500	2	3.254	2	3.430	0	3.619	2	1.828	1	1.380	1	3.258	2
5.000	2	4.357	2	2.561	0	2.702	2	1.534	1	1.391	1	2.410	2
5.500	2	5.857	2	1.973	0	2.081	2	1.307	1	1.398	1	1.812	2
6.000	2	7.144	2	1.582	0	1.848	2	1.129	1	1.393	1	1.396	2
6.500	2	8.826	2	1.285	0	1.334	2	9.841	0	1.387	1	1.097	2
7.000	2	1.088	1	1.045	0	1.103	2	8.684	0	1.382	1	8.777	1
8.000	2	1.484	1	7.519	1	7.933	1	6.888	0	1.372	1	5.872	1
1.000	1	2.453	1	4.348	1	4.800	1	4.842	0	1.337	1	2.988	1
1.250	1	3.787	1	2.983	1	3.126	1	3.079	0	1.282	1	1.536	1
1.500	1	5.015	1	2.228	1	2.348	1	2.202	0	1.239	1	8.888	0
1.750	1	6.139	1	1.818	1	1.918	1	1.845	0	1.190	1	5.433	0
2.000	1	7.107	1	1.570	1	1.857	1	1.278	0	1.150	1	3.783	0
9.999	2	9.999	5	1.912	10	5.788	1	5.788	5	1.912	10	5.788	1
1.191	4	1.191	4	2.570	10	5.813	1	5.813	4	2.570	10	5.813	1
1.205	4	1.205	4	2.921	10	5.884	1	5.884	4	2.921	10	5.884	1
1.250	4	1.250	4	2.748	10	5.901	1	5.901	4	2.748	10	5.901	1
1.500	4	1.500	4	3.877	10	6.303	1	6.303	4	3.877	10	6.303	1
1.750	4	1.750	4	5.432	10	5.881	1	5.881	4	5.432	10	5.881	1
2.000	4	3.681	6	3.100	4	3.271	6	5.581	2	3.122	2	3.270	6
2.500	4	5.180	6	2.183	4	2.282	6	5.573	2	4.848	2	2.281	6
3.000	4	6.985	6	1.812	4	1.701	6	5.567	2	6.942	2	1.700	6
3.500	4	9.221	6	1.210	4	1.277	6	5.558	2	9.325	2	1.277	6
4.000	4	1.188	5	9.445	3	9.986	5	5.547	2	1.211	1	9.980	5
4.500	4	1.443	5	7.735	3	8.161	5	5.534	2	1.514	1	8.155	5
5.000	4	1.725	5	6.489	3	6.888	5	5.522	2	1.849	1	6.880	5
5.500	4	2.128	5	5.248	3	5.531	5	5.508	2	2.205	1	5.586	5
6.000	4	2.579	5	4.327	3	4.585	5	5.492	2	2.590	1	4.580	5
6.500	4	3.199	5	3.488	3	3.681	5	5.472	2	2.985	1	3.675	5
7.000	4	3.905	5	2.858	3	3.015	5	5.453	2	3.404	1	3.010	5
8.000	4	4.883	5	2.384	3	2.525	5	5.419	2	4.313	1	2.520	5
9.000	4	6.946	5	1.807	3	1.895	5	5.372	2	5.240	1	1.890	5
9.370	4	7.201	5	1.950	3	1.935	5	5.356	2	5.812	1	1.930	5
9.384	4	1.671	5	6.677	3	7.045	5	5.350	2	5.626	1	7.040	5
9.600	4	9.975	5	1.119	4	1.181	6	5.347	2	5.843	1	1.180	6
1.000	3	8.897	5	1.254	4	1.324	6	5.331	2	6.254	1	1.323	6
1.099	3	1.135	5	9.884	3	1.037	6	5.288	2	7.206	1	1.036	6
1.100	3	9.817	5	1.137	4	1.200	6	5.288	2	7.216	1	1.199	6
1.250	3	1.372	5	9.134	3	8.982	5	5.185	2	8.742	1	8.977	5
1.500	3	2.212	5	5.046	3	5.324	5	5.088	2	1.149	0	5.319	5
1.750	3	3.332	5	3.350	3	3.534	5	5.007	2	1.411	0	3.529	5
2.000	3	4.751	5	2.349	3	2.479	5	4.771	2	1.685	0	2.474	5
2.500	3	6.678	5	1.886	3	1.957	5	4.426	2	2.202	0	1.953	5
3.000	3	1.419	4	7.886	2	8.300	4	4.162	2	2.741	0	8.258	4
3.500	3	2.184	4	5.157	2	5.441	4	3.842	2	3.238	0	5.403	4
4.000	3	3.118	4	3.580	2	3.777	4	3.585	2	3.740	0	3.741	4
4.500	3	4.317	4	2.585	2	2.788	4	3.304	2	4.200	0	2.694	4
</													

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ENDL Evaluated Photon Data

29-Cu

ATOMIC WEIGHT 63.54							DENSITY 8.96 GRAMS/CC				
ENERGY	TOTAL MPF		CROSS SECTION (BARNS)					NEV/COLLISION		NEV/CM	
MEV	CM	CM ² /CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. * FLOR	K.E. BREMSSTR	K.E.	
2.500-1	6.704-1	1.288-1	1.353-1	8.317-1	1.071-1	1.985-0		8.579-2	8.530-2	1.317-4	
3.000-1	9.984-1	1.125-1	1.187-1	5.895-1	1.011-1	1.189-0		9.934-2	9.801-2	1.774-4	
3.500-1	1.098-0	1.019-1	1.075-1	4.334-1	9.598-0	7.967-1		1.198-1	1.157-1	2.421-4	
4.000-1	1.183-0	9.437-2	9.957-0	3.340-1	9.104-0	5.192-1		1.350-1	1.349-1	3.288-4	
4.500-1	1.262-0	8.043-2	9.330-0	2.848-1	8.090-0	3.798-1		1.557-1	1.598-1	4.375-4	
5.000-1	1.333-0	6.370-2	8.832-0	2.153-1	8.335-0	2.812-1		1.780-1	1.779-1	5.717-4	
5.500-1	1.401-0	7.687-2	8.406-0	1.783-1	8.009-0	2.178-1		2.012-1	2.011-1	7.303-4	
6.000-1	1.464-0	7.628-2	8.048-0	1.501-1	7.723-0	1.725-1		2.255-1	2.254-1	9.175-4	
6.500-1	1.525-0	7.518-2	7.782-0	1.281-1	7.453-0	1.402-1		2.503-1	2.502-1	1.130-3	
7.000-1	1.583-0	7.050-2	7.438-0	1.108-1	7.212-0	1.157-1		2.758-1	2.759-1	1.373-3	
8.000-1	1.691-0	6.800-2	6.983-0	8.484-2	6.797-0	8.187-2		3.295-1	3.294-1	1.958-3	
1.000-0	1.894-0	5.883-2	6.218-0	5.441-2	6.116-0	4.703-2		4.414-1	4.414-1	3.503-3	
1.022-0	1.915-0	5.828-2	6.149-0	5.210-2	6.052-0	4.522-2	1.000-6	4.541-1	4.541-1	3.707-3	
1.250-0	2.126-0	5.251-2	5.540-0	3.487-2	5.473-0	3.145-2	9.322-4	5.891-1	5.891-1	6.223-3	
1.500-0	2.325-0	4.798-2	5.084-0	2.423-2	4.978-0	2.284-2	4.138-2	7.408-1	7.408-1	9.809-3	
1.750-0	2.500-0	4.484-2	4.710-0	1.781-2	4.577-0	1.699-2	9.885-2	8.970-1	8.969-1	1.435-2	
2.000-0	2.658-0	4.203-2	4.434-0	1.384-2	4.247-0	1.348-2	1.598-2	1.059-1	1.059-1	1.995-2	
2.044-0	2.688-0	4.181-2	4.390-0	1.308-2	4.195-0	1.302-2	1.687-2	1.088-1	1.088-1	2.104-2	
2.500-0	2.913-0	3.831-2	4.042-0	8.733-3	3.731-1	9.573-3	2.922-2	1.339-1	1.339-1	3.480-2	
3.000-0	3.102-0	3.587-2	3.786-0	6.086-3	3.343-1	7.385-3	4.393-2	1.781-1	1.781-1	5.446-2	
3.500-0	3.252-0	3.432-2	3.621-0	4.457-3	3.037-1	6.001-3	5.735-2	2.141-1	2.141-1	7.999-2	
4.000-0	3.384-0	3.318-2	3.500-0	3.413-3	2.789-1	5.026-3	7.031-2	2.539-1	2.539-1	1.117-1	
4.500-0	3.448-0	3.237-2	3.415-0	2.897-3	2.583-1	4.282-3	8.257-2	2.951-1	2.951-1	1.498-1	
5.000-0	3.518-0	3.174-2	3.348-0	2.185-3	2.408-1	3.737-3	9.345-2	3.374-1	3.374-1	1.945-1	
5.500-0	3.585-0	3.113-2	3.285-0	1.805-3	2.259-1	3.331-3	1.021-1	3.805-1	3.805-1	2.455-1	
6.000-0	3.634-0	3.071-2	3.240-0	1.517-3	2.129-1	2.999-3	1.107-1	4.245-1	4.245-1	3.033-1	
6.500-0	3.687-0	3.044-2	3.211-0	1.293-3	2.015-1	2.723-3	1.193-1	4.694-1	4.694-1	3.680-1	
7.000-0	3.688-0	3.028-2	3.195-0	1.115-3	1.913-1	2.490-3	1.278-1	5.150-1	5.150-1	4.397-1	
8.000-0	3.689-0	3.025-2	3.182-0	8.535-4	1.748-1	2.119-3	1.447-1	6.082-1	6.082-1	6.039-1	
1.000-1	3.603-0	3.098-2	3.209-0	5.462-4	1.483-1	1.619-3	1.783-1	8.005-1	8.005-1	1.014-0	
1.250-1	3.588-0	3.130-2	3.302-0	3.498-4	1.259-1	1.278-3	2.042-1	1.043-1	1.043-1	1.858-0	
1.500-1	3.494-0	3.203-2	3.380-0	2.428-4	1.098-1	1.053-3	2.281-1	1.290-1	1.290-1	2.443-0	
1.750-1	3.371-0	3.311-2	3.484-0	1.784-4	9.784-1	8.943-4	2.518-1	1.539-1	1.539-1	3.358-0	
2.000-1	3.172-0	3.411-2	3.599-0	1.385-4	8.812-1	7.782-4	2.717-1	1.789-1	1.789-1	4.380-0	
2.500-1	3.126-0	3.571-2	3.767-0	8.738-5	7.408-1	8.126-4	3.026-1	2.289-1	2.289-1	6.713-0	
3.000-1	3.011-0	3.707-2	3.911-0	6.088-5	6.415-1	5.049-4	3.289-1	2.790-1	2.790-1	9.371-0	
3.500-1	2.929-0	3.810-2	4.020-0	4.459-5	5.674-1	4.287-4	3.452-1	3.291-1	3.291-1	1.224-1	
4.000-1	2.851-0	3.914-2	4.130-0	3.414-5	5.098-1	3.721-4	3.620-1	3.792-1	3.792-1	1.545-1	
4.500-1	2.771-0	4.028-2	4.249-0	2.897-5	4.635-1	3.284-4	3.786-1	4.294-1	4.294-1	1.879-1	
5.000-1	2.711-0	4.117-2	4.344-0	2.185-5	4.255-1	2.937-4	3.918-1	4.795-1	4.795-1	2.229-1	
5.500-1	2.671-0	4.179-2	4.409-0	1.808-5	3.937-1	2.654-4	4.015-1	5.295-1	5.295-1	2.593-1	
6.000-1	2.632-0	4.240-2	4.473-0	1.517-5	3.687-1	2.420-4	4.107-1	5.796-1	5.796-1	2.989-1	
6.500-1	2.598-0	4.299-2	4.536-0	1.293-5	3.432-1	2.223-4	4.192-1	6.297-1	6.297-1	3.356-1	
7.000-1	2.562-0	4.358-2	4.596-0	1.115-5	3.228-1	2.025-4	4.273-1	6.798-1	6.797-1	3.752-1	
8.000-1	2.499-0	4.486-2	4.712-0	8.535-6	2.892-1	1.784-4	4.422-1	7.799-1	7.799-1	4.568-1	
1.000-2	2.391-0	4.667-2	4.924-0	5.462-6	2.400-1	1.408-4	4.864-1	9.802-1	9.802-1	6.272-1	

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Form Factors

29-Cu

SIN(Θ/2)/λ COHERENT INCOHERENT				SIN(Θ/2)/λ COHERENT INCOHERENT				SIN(Θ/2)/λ COHERENT INCOHERENT				SIN(Θ/2)/λ COHERENT INCOHERENT											
1/λ		1/λ		1/λ		1/λ		1/λ		1/λ		1/λ		1/λ									
0.000	0	1.000	0	0.000	0	1.250	-1	9.049	-1	1.089	-1	1.000	0	2.458	-1	6.897	-1	1.000	1	1.335	-2	9.970	-1
5.000	-3	9.999	-1	3.103	-4	1.500	-1	8.743	-1	1.351	-1	1.250	0	2.090	-1	7.518	-1	1.500	1	4.788	-3	9.997	-1
1.000	-2	9.999	-1	1.241	-3	1.750	-1	8.439	-1	1.618	-1	1.500	0	1.815	-1	7.988	-1	2.000	1	1.987	-3	9.999	-1
1.500	-2	9.999	-1	2.003	-3	2.000	-1	8.117	-1	1.881	-1	2.000	0	1.308	-1	8.606	-1	5.000	1	7.864	-5	1.000	0
2.000	-2	9.999	-1	4.931	-3	2.500	-1	7.479	-1	2.390	-1	2.500	0	9.187	-2	9.007	-1	8.000	1	1.397	-5	1.000	0
2.500	-2	9.999	-1	7.603	-3	3.000	-1	6.851	-1	2.886	-1	3.000	0	7.277	-2	9.252	-1	1.000	2	6.200	-6	1.000	0
3.000	-2	9.999	-1	1.078	-2	4.000	-1	5.883	-1	3.717	-1	3.500	0	5.308	-2	9.411	-1	1.000	3	2.556	-9	1.000	0
4.000	-2	9.874	-1	1.843	-2	5.000	-1	4.713	-1	4.483	-1	4.000	0	4.884	-2	9.525	-1	1.000	6	2.822	-18	1.000	0
5.000	-2	9.810	-1	2.745	-2	6.000	-1	3.953	-1	5.120	-1	5.000	0	3.738	-2	9.688	-1	1.000	9	3.857	-27	1.000	0
7.000	-2	9.648	-1	4.803	-2	7.000	-1	3.382	-1	5.888	-1	6.000	0	3.128	-2	9.799	-1						
9.000	-2	9.444	-1	6.998	-2	8.000	-1	2.988	-1	6.187	-1	7.000	0	2.586	-2	9.874	-1						
1.000	-1	9.338	-1	8.097	-2	9.000	-1	2.672	-1	6.567	-1	8.000	0	2.175	-2	9.921	-1

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ENDL Evaluated Photon Cross Sections

30-Zn

12/07/78

Energy Deposition

30-Zn

12/07/78

ENDL Evaluated Photon Data

30-Zn

ATOMIC WEIGHT 85.37				DENSITY 7.133 GRAMS/CC			
ENERGY	TOTAL NFP		CROSS SECTION (BARN)				NEUTRON COLLISION
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHER	PHOTOL PAIR PROD	NEUTRON COLLISION
							K.E. FLOR K.E. BREMSSTR K.E.
1.000-4	2.070-8	6.772-4	7.351-8	5.982-2	8.753-3	7.350-8	9.999-5 9.999-5 1.875-10 4.830-1
1.250-4	2.518-8	5.587-4	8.043-8	5.979-2	1.378-2	6.042-8	1.250-4 1.250-4 2.969-10 4.863-1
1.500-4	2.898-8	5.198-4	8.841-8	5.978-2	1.613-2	5.840-8	1.352-4 1.352-4 3.427-10 5.011-1
1.750-4	3.270-8	5.424-4	9.581-8	5.978-2	1.848-2	5.920-8	1.388-4 1.388-4 3.998-10 5.314-1
2.000-4	3.607-8	5.589-4	9.821-8	5.977-2	1.982-2	5.420-8	1.500-4 1.500-4 4.218-10 5.342-1
2.250-4	3.777-8	5.152-4	9.507-8	5.974-2	2.715-2	4.506-8	1.750-4 1.750-4 5.741-10 5.188-1
2.500-4	3.962-8	5.338-4	9.841-8	5.972-2	3.551-2	3.840-8	2.000-4 2.000-4 7.498-10 5.047-1
2.750-4	5.612-8	2.498-4	2.712-8	5.983-2	5.520-2	2.711-8	2.499-4 2.499-4 1.171-9 4.494-1
3.000-4	7.498-8	1.880-4	2.041-8	5.958-2	7.915-2	2.040-8	2.999-4 2.999-4 1.087-9 4.022-1
3.500-4	9.909-8	1.415-4	1.536-8	5.944-2	1.067-1	1.535-8	3.499-4 3.499-4 2.295-9 3.531-1
4.000-4	1.288-5	1.106-4	1.201-8	5.934-2	1.383-1	1.200-8	3.998-4 3.998-4 2.997-9 3.154-1
4.500-4	1.995-5	8.788-3	9.539-5	5.919-2	1.730-1	9.533-5	4.497-4 4.497-4 3.792-9 2.819-1
5.000-4	1.950-5	7.194-3	7.788-5	5.905-2	2.114-1	7.780-5	4.996-4 4.996-4 4.680-9 2.550-1
5.500-4	2.418-5	5.799-3	6.294-5	5.888-2	2.522-1	6.288-5	5.495-4 5.495-4 5.661-9 2.273-1
6.000-4	2.929-5	4.787-3	5.198-5	5.872-2	2.983-1	5.190-5	5.993-4 5.993-4 6.735-9 2.046-1
6.500-4	3.491-5	4.018-3	4.380-5	5.849-2	3.418-1	4.354-5	6.491-4 6.491-4 7.901-9 1.860-1
7.000-4	4.106-5	3.414-3	3.705-5	5.827-2	3.897-1	3.700-5	6.989-4 6.989-4 9.158-9 1.702-1
8.000-4	5.453-5	2.986-3	2.786-5	5.789-2	4.941-1	2.780-5	7.983-4 7.983-4 1.195-8 1.461-1
9.000-4	7.296-5	1.921-3	2.086-5	5.737-2	6.009-1	2.080-5	8.975-4 8.975-4 1.510-8 1.230-1
9.500-4	8.428-5	1.684-3	1.868-5	5.708-2	6.690-1	1.860-5	9.570-4 9.570-4 1.717-8 1.136-1
1.000-3	8.778-5	1.597-3	1.734-5	5.690-2	7.159-1	1.728-5	9.987-4 9.987-4 1.863-8 1.136-1
1.020-3	8.974-5	1.582-3	1.896-5	5.675-2	7.370-1	1.890-5	1.017-3 1.017-3 1.938-8 1.133-1
1.021-3	1.583-5	8.857-3	9.814-5	5.674-2	7.381-1	9.808-5	1.020-3 1.016-3 1.935-8 5.417-1
1.043-3	1.674-5	8.375-3	9.091-5	5.659-2	7.615-1	9.085-5	1.042-3 1.038-3 2.019-8 6.199-1
1.044-3	1.190-5	1.178-4	1.279-6	5.658-2	7.626-1	1.278-6	1.044-3 1.039-3 2.024-8 8.729-1
1.195-3	1.698-5	8.257-3	8.963-5	5.559-2	9.295-1	8.957-5	1.194-3 1.190-3 2.853-8 7.006-1
1.196-3	1.487-5	9.558-3	1.038-6	5.558-2	9.307-1	1.037-6	1.195-3 1.191-3 2.858-8 8.118-1
1.250-3	1.648-5	8.507-3	9.234-5	5.526-2	9.989-1	9.229-5	1.249-3 1.245-3 2.904-8 7.552-1
1.500-3	2.886-5	5.259-3	5.708-5	5.536-2	1.297-0	5.703-5	1.490-3 1.494-3 4.185-8 5.804-1
1.750-3	4.011-5	3.495-3	3.794-5	5.520-2	1.589-0	3.788-5	1.748-3 1.743-3 5.698-8 4.345-1
2.000-3	5.714-5	2.453-3	2.663-5	5.071-2	1.851-0	2.658-5	1.998-3 1.992-3 7.436-8 3.485-1
2.500-3	1.036-4	1.354-3	1.489-5	4.707-2	2.358-0	1.485-5	2.492-3 2.487-3 1.160-7 2.402-1
3.000-3	1.683-4	0.332-2	9.045-4	4.429-2	2.874-0	9.000-4	2.985-3 2.981-3 1.666-7 1.771-1
3.500-3	2.542-4	5.515-2	5.986-4	4.101-2	3.358-0	5.945-4	3.478-3 3.471-3 2.259-7 1.306-1
4.000-3	3.632-4	3.860-2	4.190-4	3.838-2	3.843-0	4.151-4	3.963-3 3.958-3 2.938-7 1.090-1
4.500-3	4.981-4	2.815-2	3.055-4	3.550-2	4.300-0	3.019-4	4.447-3 4.443-3 3.700-7 8.919-0
5.000-3	6.603-4	2.123-2	2.305-4	3.311-2	4.794-0	2.271-4	4.927-3 4.923-3 4.543-7 7.455-0
5.500-3	8.566-4	1.644-2	1.785-4	3.084-2	5.177-0	1.794-4	5.404-3 5.399-3 5.466-7 6.333-0
6.000-3	1.076-3	1.303-2	1.414-4	2.895-2	5.596-0	1.395-4	5.877-3 5.872-3 6.484-7 5.457-0
6.500-3	1.334-3	1.051-2	1.140-4	2.639-2	5.975-0	1.113-4	6.346-3 6.342-3 7.540-7 4.752-0
7.000-3	1.628-3	8.812-1	9.348-3	2.453-2	6.348-0	9.096-3	6.812-3 6.807-3 8.687-7 4.182-0
8.000-3	2.326-3	6.027-1	6.542-3	2.151-2	7.081-0	6.320-3	7.728-3 7.724-3 1.118-6 3.321-0
8.958-3	3.848-3	3.643-1	3.955-3	1.735-2	8.123-0	3.773-3	9.215-3 9.211-3 1.590-6 2.393-0
9.899-3	5.275-4	2.858-2	2.885-4	1.734-2	8.124-0	2.867-4	9.598-3 5.982-3 6.709-7 1.134-1
1.000-2	5.759-4	2.434-2	2.843-4	1.867-2	8.332-0	2.625-4	9.934-3 6.319-3 7.486-7 1.097-1
1.250-2	1.035-3	1.354-2	1.470-4	1.263-2	9.499-0	1.456-4	1.238-2 8.779-3 1.445-6 8.480-0
1.500-2	1.670-3	8.393-1	9.110-3	1.007-2	1.057-1	8.999-3	1.482-2 1.122-2 2.361-6 6.719-0
1.750-2	2.251-3	5.495-1	5.985-3	8.229-1	1.129-1	5.871-3	1.723-2 1.364-2 3.490-6 5.348-0
2.000-2	3.678-3	3.811-1	4.137-3	6.911-1	1.194-1	4.058-3	1.961-2 1.604-2 4.624-6 4.361-0
2.500-2	6.918-3	2.077-1	2.200-3	4.999-1	1.274-1	2.137-3	2.429-2 2.076-2 6.077-6 3.001-0
3.000-2	1.155-2	1.214-1	1.318-3	3.838-1	1.343-1	1.286-3	2.884-2 2.534-2 1.204-5 2.195-0
3.500-2	1.786-2	2.806-0	8.474-2	3.008-1	1.377-1	8.038-2	3.323-2 2.978-2 1.651-5 1.858-0
4.000-2	2.622-2	5.347-0	5.804-2	2.433-1	1.408-1	5.420-2	3.742-2 3.403-2 2.189-5 1.288-0
4.500-2	3.664-2	3.827-0	4.154-2	1.999-1	1.421-1	3.812-2	4.142-2 3.808-2 2.717-5 1.039-0
5.000-2	4.980-2	2.849-0	3.093-2	1.677-1	1.432-1	2.782-2	4.518-2 4.190-2 3.290-5 8.516-1
5.500-2	6.409-2	2.187-0	2.374-2	1.429-1	1.434-1	2.088-2	4.888-2 4.548-2 3.875-5 7.098-1
6.000-2	8.120-2	1.726-0	1.874-2	1.234-1	1.438-1	1.807-2	5.191-2 4.879-2 4.459-5 5.008-1
6.500-2	1.006-1	1.393-0	1.512-2	1.078-1	1.430-1	1.282-2	5.488-2 5.185-2 5.035-5 5.152-1
7.000-2	1.222-1	1.147-0	1.248-2	9.488-0	1.425-1	1.808-2	5.757-2 5.462-2 5.988-5 4.471-1
8.000-2	1.789-1	8.201-1	8.982-1	7.525-1	1.418-1	8.734-1	6.209-2 5.933-2 6.993-5 3.471-1
1.000-1	2.882-1	1.098-0	1.317-1	5.070-0	1.380-1	3.459-1	6.823-2 6.538-2 8.179-5 2.368-1
1.250-1	4.457-1	3.146-0	3.415-1	3.389-0	1.364-1	1.754-1	7.268-2 7.039-2 9.897-5 1.579-1
1.500-1	6.003-1	2.335-1	2.535-1	2.411-0	1.280-1	1.014-1	7.418-2 7.270-2 9.897-5 1.211-1

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ENDL Evaluated Photon Data

30-Zn

ATOMIC WEIGHT 65.37				DENSITY 7.133 GRAMS/CC							
ENERGY	TOTAL WFP		CROSS SECTION (BARNS)				MEV/COLLISION				MEV/CM
MEV	CM	CM ² /GM	TOTAL	COHERENT	INCOHER	PHOTOL PAIR PROD	K.E. *FLOR	K.E.	BREMSSTR	K.E.	
1.750-1	7.415-1	1.891-1	2.052-1	1.802-0	1.230-1	6.422-0	7.621-2	7.507-2	1.055-4	1.012-1	
2.000-1	8.644-1	1.822-1	1.781-1	1.400-0	1.188-1	4.324-0	7.689-2	7.805-2	1.141-4	9.030-2	
2.500-1	1.088-0	1.313-1	1.425-1	9.112-1	1.107-1	2.289-0	8.602-2	8.744-2	1.431-4	8.190-2	
3.000-1	1.224-0	1.146-1	1.244-1	6.417-1	1.045-1	1.340-0	1.012-1	1.008-1	1.902-4	6.238-2	
3.500-1	1.355-0	1.035-1	1.123-1	4.731-1	9.883-0	8.711-1	1.175-1	1.173-1	2.573-4	8.853-2	
4.000-1	1.486-0	9.383-2	1.038-1	3.682-1	9.414-0	5.989-1	1.384-1	1.382-1	3.445-4	9.290-2	
4.500-1	1.587-0	8.246-2	9.713-0	2.905-1	8.886-0	4.383-1	1.589-1	1.588-1	4.555-4	1.001-1	
5.000-1	1.657-0	6.461-2	9.184-0	2.381-1	8.620-0	3.281-1	1.791-1	1.789-1	5.584-4	1.080-1	
5.500-1	1.742-0	5.047-2	8.735-0	1.926-1	8.294-0	2.955-1	2.022-1	2.021-1	7.627-4	1.160-1	
6.000-1	1.821-0	7.682-2	8.358-0	1.647-1	7.888-0	2.033-1	2.284-1	2.283-1	9.584-4	1.243-1	
6.500-1	1.899-0	7.384-2	8.015-0	1.405-1	7.709-0	1.862-1	2.511-1	2.511-1	1.176-3	1.322-1	
7.000-1	1.972-0	7.111-2	7.719-0	1.213-1	7.499-0	1.378-1	2.787-1	2.787-1	1.429-3	1.403-1	
8.000-1	2.107-0	6.853-2	7.222-0	9.307-2	7.030-0	9.845-2	3.302-1	3.301-1	2.031-3	1.567-1	
1.000-0	2.382-0	5.936-2	6.444-0	5.970-2	6.327-0	5.771-2	4.420-1	4.419-1	3.832-3	1.871-1	
1.022-0	2.388-0	5.871-2	6.373-0	5.716-2	6.260-0	5.549-2	4.547-1	4.547-1	3.843-3	1.904-1	
1.250-0	2.652-0	5.267-2	5.739-0	3.826-2	5.661-0	3.858-2	5.896-1	5.896-1	6.446-3	2.223-1	
1.500-0	2.901-0	4.833-2	5.246-0	2.659-2	5.147-0	2.777-2	7.410-1	7.409-1	1.015-2	2.554-1	
1.750-0	3.118-0	4.497-2	4.881-0	1.954-2	4.734-0	2.083-2	8.978-1	8.972-1	1.442-2	2.878-1	
2.000-0	3.310-0	4.235-2	4.557-0	1.458-2	4.594-0	1.852-2	1.059-1	1.059-1	2.063-2	3.200-1	
2.044-0	3.344-0	4.193-2	4.551-0	1.433-2	4.540-0	1.936-2	1.814-1	1.814-1	2.177-2	3.255-1	
2.500-0	3.628-0	3.885-2	4.195-0	9.582-3	3.880-0	1.173-2	1.400-1	1.400-1	3.579-2	3.858-1	
3.000-0	3.898-0	3.634-2	3.945-0	6.656-3	3.458-0	9.020-3	1.782-1	1.782-1	5.635-2	4.587-1	
3.500-0	4.039-0	3.471-2	3.788-0	4.891-3	3.141-0	7.348-3	2.143-1	2.143-1	8.281-2	5.307-1	
4.000-0	4.172-0	3.360-2	3.647-0	3.745-3	2.885-0	6.152-3	2.542-1	2.542-1	1.156-1	6.093-1	
4.500-0	4.270-0	3.283-2	3.584-0	2.959-3	2.672-0	5.240-3	2.955-1	2.955-1	1.552-1	6.921-1	
5.000-0	4.350-0	3.223-2	3.498-0	2.397-3	2.492-0	4.572-3	3.380-1	3.380-1	2.015-1	7.770-1	
5.500-0	4.431-0	3.184-2	3.435-0	1.981-3	2.337-0	4.074-3	3.812-1	3.812-1	2.543-1	8.604-1	
6.000-0	4.487-0	3.124-2	3.391-0	1.685-3	2.202-0	3.688-3	4.254-1	4.254-1	3.142-1	9.479-1	
6.500-0	4.524-0	3.099-2	3.384-0	1.419-3	2.084-0	3.329-3	4.704-1	4.704-1	3.812-1	1.040-0	
7.000-0	4.544-0	3.085-2	3.349-0	1.223-3	1.979-0	3.044-3	5.181-1	5.181-1	4.594-1	1.136-0	
8.000-0	4.541-0	3.087-2	3.351-0	9.385-4	1.802-0	2.590-3	6.095-1	6.095-1	6.252-1	1.348-0	
1.000-1	4.423-0	3.170-2	3.441-0	5.994-4	1.535-0	1.978-3	8.022-1	8.022-1	1.049-0	1.814-0	
1.250-1	4.389-0	3.209-2	3.483-0	3.836-4	1.302-0	1.561-3	1.045-1	1.045-1	1.712-0	2.392-0	
1.500-1	4.261-0	3.290-2	3.571-0	2.684-4	1.138-0	1.286-3	1.292-1	1.292-1	2.519-0	3.032-0	
1.750-1	4.117-0	3.405-2	3.696-0	1.957-4	1.010-0	1.092-3	1.541-1	1.541-1	3.458-0	3.744-0	
2.000-1	3.993-0	3.511-2	3.811-0	1.498-4	9.118-1	9.478-4	1.791-1	1.791-1	4.504-0	4.487-0	
2.500-1	3.809-0	3.681-2	3.995-0	9.588-5	7.682-1	7.480-4	2.292-1	2.292-1	6.889-0	6.017-0	
3.000-1	3.686-0	3.825-2	4.152-0	6.658-5	6.638-1	6.184-4	2.793-1	2.793-1	9.599-0	7.619-0	
3.500-1	3.563-0	3.934-2	4.270-0	4.863-5	5.870-1	5.233-4	3.294-1	3.294-1	1.257-1	9.243-0	
4.000-1	3.467-0	4.043-2	4.389-0	3.748-5	5.274-1	4.542-4	3.795-1	3.795-1	1.578-1	1.094-1	
4.500-1	3.388-0	4.182-2	4.518-0	2.960-5	4.795-1	4.008-4	4.296-1	4.296-1	1.917-1	1.275-1	
5.000-1	3.294-0	4.298-2	4.620-0	2.397-5	4.402-1	3.584-4	4.798-1	4.798-1	2.272-1	1.458-1	
5.500-1	3.245-0	4.321-2	4.690-0	1.981-5	4.072-1	3.239-4	5.293-1	5.293-1	2.640-1	1.633-1	
6.000-1	3.198-0	4.384-2	4.759-0	1.685-5	3.793-1	2.953-4	5.799-1	5.799-1	3.021-1	1.813-1	
6.500-1	3.153-0	4.446-2	4.826-0	1.419-5	3.550-1	2.713-4	6.300-1	6.300-1	3.412-1	1.998-1	
7.000-1	3.112-0	4.506-2	4.891-0	1.223-5	3.340-1	2.508-4	6.800-1	6.800-1	3.811-1	2.186-1	
8.000-1	3.034-0	4.620-2	5.015-0	9.386-6	2.991-1	2.176-4	7.802-1	7.802-1	4.834-1	2.571-1	
1.000-2	2.903-0	4.830-2	5.243-0	5.993-6	2.483-1	1.717-4	9.805-1	9.805-1	6.351-1	3.378-1	

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Form Factors

30-2n

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000 0	1.000 0	0.000 0	1.250 -1	9.088 -1	1.157 -1	1.000 0	2.438 -1	8.809 -1	1.000 1	1.414 -2	9.985 -1
5.000 -3	9.985 -1	3.333 -4	1.500 -1	8.088 -1	1.407 -1	1.250 0	2.073 -1	7.495 -1	1.500 1	5.107 -3	9.998 -1
1.000 -2	9.988 -1	1.387 -3	1.750 -1	8.395 -1	1.644 -1	1.500 0	1.808 -1	7.915 -1	2.000 1	2.137 -3	9.999 -1
1.500 -2	9.981 -1	3.087 -3	2.000 -1	8.089 -1	1.877 -1	2.000 0	1.332 -1	8.581 -1	5.000 1	8.710 -5	1.000 0
2.000 -2	9.988 -1	5.437 -3	2.500 -1	7.490 -1	2.341 -1	2.500 0	9.483 -2	8.973 -1	8.000 1	1.387 -5	1.000 0
2.500 -2	9.947 -1	8.390 -3	3.000 -1	6.907 -1	2.788 -1	3.000 0	7.471 -2	9.288 -1	1.000 2	8.971 -6	1.000 0
3.000 -2	9.924 -1	1.190 -2	4.000 -1	5.797 -1	3.634 -1	3.500 0	5.428 -2	9.394 -1	1.000 3	2.954 -9	1.000 0
4.000 -2	9.888 -1	2.038 -2	5.000 -1	4.840 -1	4.385 -1	4.000 0	4.080 -2	9.510 -1	1.000 8	3.357 -10	1.000 0
5.000 -2	9.799 -1	3.040 -2	6.000 -1	4.083 -1	5.007 -1	5.000 0	3.782 -2	9.674 -1	1.000 9	4.893 -27	1.000 0
7.000 -2	9.623 -1	5.319 -2	7.000 -1	3.482 -1	5.570 -1	6.000 0	3.138 -2	9.788 -1			
9.000 -2	9.415 -1	7.891 -2	8.000 -1	3.018 -1	6.054 -1	7.000 0	2.812 -2	9.883 -1			
1.000 -1	9.305 -1	8.947 -2	9.000 -1	2.698 -1	6.485 -1	8.000 0	2.213 -2	9.913 -1

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ENDL Evaluated Photon Cross Sections

31-Ga

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Energy Deposition

31-Ga

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ENDL Evaluated Photon Data

31-Ga

ATOMIC WEIGHT 69.72		DENSITY 5.907 GRAMS/CC									
ENERGY MEV	TOTAL MFP		CROSS SECTION (BARNS)							NEUTRON COLLISION	
	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	E.E. FLOR	K.E.	BRCHSTR	NEUTRON
1.000	2.780	6.133	7.101	8.385	2.958	7.100	8.385	9.999	2.999	1.937-10	3.623-1
1.035	2.808	6.139	7.101	8.385	2.958	7.100	8.385	1.035	1.035	2.075-10	3.686-1
1.069	2.831	6.146	7.101	8.385	2.958	7.100	8.385	1.069	1.069	2.132-10	3.771-1
1.100	2.857	6.154	7.101	8.385	2.958	7.100	8.385	1.100	1.100	2.187-10	3.871-1
1.130	2.882	6.162	7.101	8.385	2.958	7.100	8.385	1.130	1.130	2.242-10	3.981-1
1.157	2.907	6.170	7.101	8.385	2.958	7.100	8.385	1.157	1.157	2.297-10	4.101-1
1.180	2.932	6.178	7.101	8.385	2.958	7.100	8.385	1.180	1.180	2.352-10	4.231-1
1.200	2.957	6.186	7.101	8.385	2.958	7.100	8.385	1.200	1.200	2.407-10	4.371-1
1.250	3.003	6.204	7.101	8.385	2.958	7.100	8.385	1.250	1.250	2.512-10	4.611-1
2.000	3.547	6.323	7.101	8.385	2.958	7.100	8.385	2.000	2.000	7.748-10	4.398-1
2.500	4.348	6.482	7.101	8.385	2.958	7.100	8.385	2.499	2.499	1.210-9	3.937-1
3.000	5.149	6.641	7.101	8.385	2.958	7.100	8.385	2.999	2.999	1.743-9	3.937-1
3.500	5.950	6.800	7.101	8.385	2.958	7.100	8.385	3.499	3.499	2.372-9	3.187-1
4.000	6.751	6.959	7.101	8.385	2.958	7.100	8.385	3.999	3.999	3.097-9	2.837-1
4.500	7.552	7.118	7.101	8.385	2.958	7.100	8.385	4.497	4.497	3.819-9	2.328-1
5.000	8.353	7.277	7.101	8.385	2.958	7.100	8.385	4.996	4.996	4.541-9	1.881-1
5.500	9.154	7.436	7.101	8.385	2.958	7.100	8.385	5.495	5.495	5.263-9	1.430-1
6.000	9.955	7.595	7.101	8.385	2.958	7.100	8.385	5.994	5.994	5.985-9	1.083-1
6.500	10.756	7.754	7.101	8.385	2.958	7.100	8.385	6.493	6.493	6.707-9	8.163-1
7.000	11.557	7.913	7.101	8.385	2.958	7.100	8.385	6.992	6.992	7.429-9	5.546-1
8.000	13.158	8.272	7.101	8.385	2.958	7.100	8.385	7.991	7.991	1.235-8	1.318-1
9.000	14.759	8.631	7.101	8.385	2.958	7.100	8.385	8.990	8.990	1.562-8	1.120-1
1.000	9.214	1.837	2.127	5.042	7.514	2.121	5.042	9.972	9.972	1.926-8	1.082-1
1.114	1.231	1.375	1.592	5.951	8.809	1.585	5.951	1.110	1.110	2.386-8	9.015-0
1.115	2.177	7.775	9.001	5.950	6.821	8.995	5.950	1.114	1.114	2.383-8	5.094-1
1.141	2.310	7.329	8.485	5.931	9.125	8.475	5.931	1.160	1.160	2.456-8	4.914-1
1.142	1.682	1.031	1.194	5.931	9.137	1.193	5.931	1.141	1.141	2.508-8	6.920-1
1.250	2.072	6.170	9.499	5.895	1.044	9.453	5.895	1.249	1.249	2.999-8	5.639-1
1.301	2.287	6.371	9.534	5.823	1.107	9.528	5.823	1.300	1.300	3.249-8	5.639-1
1.302	1.984	6.533	9.879	5.823	1.108	9.873	5.823	1.301	1.301	3.245-8	6.533-1
1.500	2.684	5.911	6.843	5.708	1.385	6.837	5.708	1.499	1.499	4.322-8	5.215-1
1.750	4.293	3.943	4.585	5.514	1.857	4.580	5.514	1.749	1.749	5.889-8	4.059-1
2.000	6.095	2.777	3.215	5.352	1.959	3.210	5.352	1.997	1.997	7.689-8	3.267-1
2.500	1.107	1.529	1.770	4.967	2.487	1.765	4.967	2.493	2.493	1.199-7	2.247-1
3.000	1.802	9.395	1.088	4.674	3.024	1.083	4.674	2.987	2.987	1.723-7	1.655-1
3.500	2.741	6.176	7.150	4.340	3.507	7.105	4.340	3.479	3.479	2.337-7	1.267-1
4.000	3.946	4.296	4.974	4.070	3.988	4.933	4.070	3.987	3.987	3.041-7	1.005-1
4.500	5.448	3.107	3.597	3.778	4.442	3.598	4.442	4.452	4.452	3.831-7	8.183-0
5.000	7.276	2.327	2.889	3.535	4.831	2.858	4.831	4.933	4.933	4.706-7	6.774-0
5.500	9.475	1.787	2.089	3.283	5.313	2.035	5.313	5.411	5.411	5.652-7	3.705-0
6.000	1.205	1.405	1.626	3.088	5.730	1.595	5.730	5.885	5.885	6.597-7	4.879-0
6.500	1.508	1.123	1.300	2.842	6.110	1.271	6.110	6.355	6.355	7.611-7	4.211-0
7.000	1.874	9.129	1.057	2.848	6.484	1.030	6.484	6.820	6.820	8.598-7	3.675-0
8.000	2.889	6.296	7.289	2.331	7.217	7.049	7.217	7.736	7.736	1.158-6	2.875-0
1.000	5.026	3.388	3.900	1.812	8.477	3.710	3.900	9.514	9.514	1.752-6	1.692-0
1.037	5.960	3.045	3.525	1.733	8.860	3.343	3.525	9.832	9.832	1.871-6	1.767-0
1.037	7.887	2.152	2.491	1.733	8.860	2.473	2.491	1.029	2.491	7.414-7	7.863-0
1.250	1.290	1.344	1.596	1.572	9.676	1.541	1.596	1.238	9.676	1.330-6	6.579-0
1.500	1.991	0.503	9.844	1.733	1.078	2.724	9.844	1.482	1.073	2.231-6	6.591-0
1.750	3.003	5.638	6.527	8.908	1.153	6.426	6.527	1.723	1.316	3.354-6	4.383-0
2.000	4.283	3.953	4.576	7.442	1.221	4.489	4.576	1.962	1.556	4.692-6	3.634-0
2.500	7.970	2.124	2.459	5.431	1.305	2.392	2.459	2.432	2.030	7.981-6	2.547-0
3.000	1.319	1.283	1.485	4.175	1.377	1.430	1.485	2.889	2.451	1.202-5	1.888-0
3.500	2.046	0.274	9.579	3.273	1.414	9.110	9.579	3.332	2.939	1.672-5	1.130-0
4.000	2.981	5.679	6.575	2.651	1.447	6.165	6.575	3.757	3.369	2.198-5	1.130-0
4.500	4.185	4.063	4.704	2.178	1.461	4.340	4.704	4.163	3.782	2.769-5	9.077-1
5.000	5.598	3.024	3.501	1.827	1.474	3.171	3.501	4.547	4.172	3.370-5	7.453-1
5.500	7.303	2.318	2.884	1.546	1.476	2.380	2.884	4.907	4.540	3.990-5	6.16-1
6.000	9.271	1.826	2.114	1.345	1.478	1.832	2.114	5.241	4.883	4.615-5	5.247-1
6.500	1.152	1.470	1.702	1.172	1.473	1.437	1.702	5.550	5.200	5.235-5	4.515-1
7.000	1.462	1.208	1.398	1.031	1.488	1.148	1.398	5.831	5.491	5.837-5	3.917-1
8.000	1.972	0.983	9.337	0.194	4.459	7.859	9.337	6.311	5.952	6.949-5	3.038-1
1.000	1.342	5.086	5.895	5.531	4.423	3.889	5.895	6.980	6.706	6.702-5	2.007-1
1.250	5.274	3.210	3.718	3.674	1.386	1.983	3.718	7.435	7.214	1.007-4	1.768-1

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 68.72		DENSITY 5.907 GRAMS/CC									
ENERGY MEV	TOTAL MFP		CROSS SECTION (BARN)						NEV/COLLISION		MEV/CM
	CM	CM-CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.-FLOR	K.E.	BRCHSTR	
1.980	7.185	2.338	2.788	2.830	0.132	1.144	1	7.930	7.930	1.081	1.040
1.750	9.949	1.080	2.188	1.988	0.188	7.240	8	7.981	7.784	1.194	8.838
2.000	1.030	1.612	1.087	1.528	0.127	4.871	0	8.125	8.017	1.243	7.835
2.380	1.308	1.295	1.488	9.938	1.143	2.580	0	9.047	8.938	1.544	8.834
3.000	1.588	1.124	1.381	7.009	1.080	1.513	0	1.029	1.024	2.024	6.799
3.500	1.673	1.012	1.171	5.190	1.021	9.875	1	1.190	1.187	2.723	7.094
4.000	1.814	0.935	1.081	4.001	9.724	8.884	1	1.377	1.374	3.850	7.578
4.500	1.941	0.872	1.010	3.174	8.953	4.888	1	1.581	1.579	4.818	8.137
5.000	2.054	0.824	0.940	2.380	8.905	3.788	1	1.801	1.800	6.253	8.780
5.500	2.162	0.783	0.887	2.138	8.958	2.538	1	2.032	2.030	7.925	9.382
6.000	2.261	0.746	0.888	1.800	8.232	2.388	1	2.273	2.272	9.980	1.005
6.500	2.358	0.718	0.818	1.538	7.984	1.894	1	2.521	2.519	1.824	1.008
7.000	2.449	0.691	0.808	1.388	7.707	1.623	1	2.776	2.775	1.440	1.133
8.000	2.819	0.643	0.788	1.017	7.263	1.172	1	3.310	3.309	2.108	1.263
1.000	2.937	0.763	0.672	0.527	6.537	7.049	2	4.427	4.427	3.784	1.507
1.022	2.970	0.698	0.598	0.250	6.488	6.777	2	4.954	4.954	3.982	1.533
1.250	3.300	0.530	0.539	4.184	5.849	4.711	2	5.902	5.902	6.872	1.788
1.500	3.610	0.480	0.429	2.908	5.318	3.390	2	7.414	7.414	1.050	2.054
1.750	3.879	0.439	0.553	2.137	4.892	2.543	2	8.975	8.975	1.534	2.314
2.000	4.117	0.412	0.781	1.838	4.540	2.017	2	1.060	1.060	2.132	2.574
2.044	4.158	0.407	0.714	1.587	4.484	1.948	2	1.948	1.069	0	2.619
2.500	4.588	0.375	0.349	1.048	3.989	1.431	2	3.399	1.400	0	3.107
3.000	4.788	0.337	0.485	7.278	3.573	1.100	2	5.037	1.783	0	3.694
3.500	5.004	0.383	3.917	5.348	3.248	0.925	3	6.983	2.145	0	4.288
4.000	5.163	0.379	2.738	4.093	2.981	7.495	3	8.037	2.945	1.196	4.930
4.500	5.277	0.368	3.714	3.238	2.781	6.388	3	9.434	2.860	2.960	5.609
5.000	5.370	0.353	3.850	2.821	2.575	5.587	3	1.087	3.386	3.386	6.306
5.500	5.484	0.308	3.987	2.188	2.415	4.980	3	1.189	3.819	3.819	6.990
6.000	5.529	0.362	3.945	1.880	2.278	4.484	3	1.263	4.262	4.262	7.708
6.500	5.570	0.304	3.519	1.551	2.154	4.052	3	1.380	4.713	4.713	8.482
7.000	5.589	0.309	3.507	1.338	2.045	3.704	3	1.456	5.172	4.710	9.253
7.000	5.577	0.303	3.514	1.024	1.882	3.152	3	1.648	6.108	6.108	1.095
1.000	5.420	0.3124	3.818	6.725	4.188	2.405	3	2.029	8.038	8.038	1.483
1.250	5.342	0.3189	3.689	4.195	4.195	1.898	3	2.321	1.047	1.047	1.980
1.500	5.202	0.3294	3.787	2.913	4.174	1.584	3	2.588	1.294	1.294	2.488
1.750	5.020	0.3372	3.504	2.140	4.044	1.328	3	2.899	1.544	1.544	3.075
2.000	4.884	0.3481	2.429	1.639	4.940	1.152	3	3.086	1.794	1.794	3.688
2.500	4.634	0.353	4.230	1.048	4.791	9.050	4	3.437	2.294	2.294	4.951
3.000	4.456	0.3600	4.399	7.281	5.658	7.450	4	3.712	2.795	2.795	5.274
3.500	4.329	0.3611	4.527	5.350	6.086	6.399	4	3.920	3.296	3.296	7.614
4.000	4.210	0.4021	4.895	4.097	5.449	5.518	4	4.110	3.797	3.797	9.020
4.500	4.089	0.4140	4.794	3.237	5.495	4.889	4	4.298	4.299	4.299	1.051
5.000	3.998	0.4235	4.903	2.622	5.494	4.354	4	4.447	4.800	4.800	1.201
5.500	3.937	0.4300	4.979	2.167	5.208	3.935	4	4.598	5.301	5.301	1.347
6.000	3.879	0.4384	5.053	1.820	5.919	3.587	4	4.880	5.802	5.802	1.498
6.500	3.825	0.4426	5.124	1.551	5.889	3.225	4	4.757	6.302	6.302	1.848
7.000	3.774	0.4488	5.194	1.338	5.451	3.046	4	4.848	6.803	6.803	1.803
8.000	3.579	0.4601	5.327	1.024	5.091	2.843	4	5.017	7.805	7.805	2.121
1.000	2.519	0.4811	5.570	6.954	2.585	2.085	4	5.313	9.808	9.808	2.787

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Form Factors

31-Ga

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	0.936-1	1.185-1	1.000+0	2.400-1	0.720-1	1.000+1	1.405-2	9.981-1
5.000-3	9.983-1	3.540-4	1.500-1	0.886-1	1.446-1	1.250+0	2.059-1	7.389-1	1.500+1	5.448-3	9.995-1
1.000-2	9.986-1	1.419-3	1.750-1	0.839-1	1.688-1	1.500+0	1.801-1	7.061-1	2.000+1	2.313-3	9.998-1
1.500-2	9.978-1	3.180-3	2.000-1	0.795-1	1.918-1	2.000+0	1.352-1	6.518-1	5.000+1	9.884-5	1.000+0
2.000-2	9.962-1	5.571-3	2.500-1	7.470-1	2.351-1	2.500+0	9.788-2	6.939-1	8.000+1	1.751-5	1.000+0
2.500-2	9.940-1	8.590-3	3.000-1	6.987-1	2.774-1	3.000+0	7.888-2	6.205-1	1.000+2	7.613-6	1.000+0
3.000-2	9.913-1	1.217-2	4.000-1	5.888-1	3.575-1	3.500+0	5.572-2	9.378-1	1.000+3	3.401-6	1.000+0
4.000-2	9.851-1	2.079-2	5.000-1	4.938-1	4.587-1	4.000+0	4.951-2	9.495-1	1.000+6	3.982-10	1.000+0
5.000-2	9.776-1	3.094-2	6.000-1	4.178-1	4.914-1	5.000+0	3.710-2	9.680-1	1.000+9	5.895-27	1.000+0
7.000-2	9.583-1	5.385-2	7.000-1	3.952-1	5.487-1	6.000+0	3.140-2	9.774-1			
9.000-2	9.380-1	7.612-2	8.000-1	3.078-1	5.950-1	7.000+0	2.639-2	9.852-1			
1.000-1	9.244-1	9.003-2	9.000-1	2.725-1	6.386-1	8.000+0	2.248-2	9.905-1

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ENDL Evaluated Photon Cross Sections

32-Ge

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Energy Deposition

32-Ge

32-G.

ATOMIC WEIGHT 72.99							DENSITY 5.363 GRAMS/CC					
ENERGY		TOTAL HPF		CROSS SECTION (BARNS)				NEV/COLLISION			NEV/CM	
MEV	CH	CH+CH/ON	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	K.E.	
1.000-0	3.207-6	6.598-4	7.801-6	6.808-2	9.307-3	7.688-6	9.999-5	9.999-5	2.000-10	3.118-1	3.118-1	
1.250-0	3.457-6	6.535-4	8.251-6	6.863-2	1.385-2	6.798-6	1.250-5	1.250-5	3.801-10	3.243-1	3.243-1	
1.250-0	3.208-6	6.725-4	8.201-6	6.863-2	1.416-2	6.800-6	1.250-5	1.250-5	3.070-10	3.775-1	3.775-1	
1.250-0	3.301-6	6.681-4	8.099-6	6.863-2	1.441-2	6.899-6	1.250-5	1.250-5	3.124-10	3.788-1	3.788-1	
1.500-0	3.736-6	6.502-4	8.681-6	6.860-2	2.059-2	6.880-6	1.500-5	1.500-5	4.499-10	4.014-1	4.014-1	
1.750-0	4.300-6	6.408-4	9.299-6	6.788-2	2.789-2	6.899-6	1.750-5	1.750-4	6.124-10	4.089-1	4.089-1	
1.750-0	3.998-6	6.273-4	9.141-6	6.788-2	2.823-2	6.150-6	1.750-5	1.750-5	6.488-10	4.778-1	4.778-1	
2.000-0	4.883-6	6.283-4	9.789-6	6.789-2	3.583-2	6.400-6	2.000-5	2.000-5	7.529-10	5.309-1	5.309-1	
2.000-0	4.707-6	6.391-4	9.811-6	6.793-2	3.851-2	6.810-6	2.000-5	2.000-5	7.898-10	5.248-1	5.248-1	
2.500-0	6.481-6	6.289-4	1.494-5	6.788-2	5.688-2	3.493-5	2.500-5	2.500-4	1.250-9	3.857-1	3.857-1	
3.000-0	8.816-6	6.232-4	2.081-5	6.773-2	8.118-2	2.890-5	3.000-5	3.000-4	1.799-9	3.584-1	3.584-1	
3.500-0	1.112-5	1.690-4	2.037-5	6.757-2	1.095-1	2.036-6	3.495-4	3.495-4	2.448-9	3.147-1	3.147-1	
4.000-0	1.415-5	1.326-4	1.801-5	6.744-2	1.420-1	1.600-6	3.996-4	3.996-4	3.197-9	2.266-1	2.266-1	
4.500-0	1.785-5	1.053-4	1.788-5	6.724-2	1.777-1	1.288-6	4.498-4	4.498-4	4.046-9	2.520-1	2.520-1	
5.000-0	2.197-5	8.551-3	1.031-5	6.707-2	2.173-1	1.030-6	4.997-4	4.997-4	4.993-9	2.274-1	2.274-1	
5.500-0	2.884-5	6.999-3	8.436-5	6.685-2	2.598-1	8.429-5	5.496-4	5.496-4	6.040-9	2.047-1	2.047-1	
6.000-0	3.223-5	5.829-3	7.027-5	6.669-2	3.059-1	7.020-5	5.994-4	5.994-4	7.186-9	1.860-1	1.860-1	
6.500-0	3.835-5	4.899-3	5.805-5	6.635-2	3.526-1	5.898-5	6.493-4	6.493-4	8.431-9	1.693-1	1.693-1	
7.000-0	4.505-5	4.170-3	5.027-5	6.608-2	4.029-1	5.020-5	6.991-4	6.991-4	9.774-9	1.552-1	1.552-1	
8.000-0	6.044-5	3.408-3	3.747-5	6.559-2	5.122-1	3.740-5	7.988-4	7.988-4	1.275-8	1.321-1	1.321-1	
9.000-0	7.927-5	2.370-3	2.826-5	6.482-2	6.222-1	2.820-5	8.980-4	8.980-4	1.613-8	1.133-1	1.133-1	
1.000-1	9.177-5	2.073-3	2.457-5	6.409-2	6.776-1	2.450-5	9.977-4	9.977-4	1.947-8	1.087-1	1.087-1	
1.121-1	1.506-5	1.647-3	5.503-5	6.233-2	1.007-0	9.977-5	1.212-3	1.212-3	2.937-7	0.844-1	0.844-1	
1.218-1	2.850-5	7.088-3	8.244-5	6.252-2	1.009-0	6.538-5	1.217-3	1.210-3	2.926-7	0.564-1	0.564-1	
1.248-1	2.831-5	6.637-3	8.000-5	6.250-2	1.047-0	7.994-5	1.247-3	1.240-3	3.073-8	0.479-1	0.479-1	
1.249-1	2.012-5	9.338-3	1.126-5	6.229-2	1.048-0	1.125-6	1.248-3	1.241-3	3.079-8	0.188-1	0.188-1	
1.250-1	2.018-5	9.318-3	1.123-5	6.228-2	1.049-0	1.123-6	1.249-3	1.242-3	3.084-8	6.159-1	6.159-1	
1.413-1	2.808-5	6.889-3	8.083-5	6.119-2	1.289-0	8.057-5	1.412-3	1.404-3	3.945-8	5.001-1	5.001-1	
1.414-1	2.426-5	7.744-3	9.334-5	6.118-2	1.285-0	9.328-5	1.413-3	1.406-3	3.951-8	5.794-1	5.794-1	
1.500-1	2.847-5	6.600-3	7.995-5	6.086-2	1.384-0	7.949-5	1.499-3	1.491-3	4.448-8	5.239-1	5.239-1	
1.750-1	4.325-5	4.344-3	5.238-5	5.852-2	1.892-0	5.230-5	1.748-3	1.741-3	6.059-8	4.024-1	4.024-1	
2.000-1	6.213-5	3.024-3	3.845-5	5.672-2	2.014-0	3.879-5	1.997-3	1.989-3	7.915-8	3.202-1	3.202-1	
2.500-1	1.141-4	1.646-3	1.984-5	5.295-2	2.575-0	1.979-5	2.493-3	2.486-3	1.236-7	2.178-1	2.178-1	
3.000-1	1.875-4	1.002-3	1.208-5	4.937-2	3.149-0	1.203-5	2.980-3	2.980-3	1.776-7	1.590-1	1.590-1	
3.500-1	2.857-4	6.576-2	7.926-4	4.587-2	3.647-0	7.880-4	3.480-3	3.472-3	2.411-7	1.215-1	1.215-1	
4.000-1	4.113-4	4.567-2	5.505-4	4.304-2	4.143-0	5.482-4	3.988-3	3.981-3	3.138-7	9.630-1	9.630-1	
4.500-1	5.677-4	3.309-2	3.889-4	4.005-2	4.599-0	3.949-4	4.454-3	4.447-3	3.995-7	7.834-1	7.834-1	
5.000-1	7.988-4	2.482-2	2.982-4	3.756-2	5.050-0	2.994-4	4.936-3	4.929-3	4.899-7	6.913-1	6.913-1	
5.500-1	9.824-4	1.912-2	2.305-4	3.458-2	5.473-0	2.269-4	5.415-3	5.408-3	5.894-7	5.505-1	5.505-1	
6.000-1	1.246-3	1.408-2	1.817-4	3.278-2	6.115-0	1.806-4	6.290-3	6.283-3	6.894-7	4.721-1	4.721-1	
6.500-1	1.951-3	1.214-2	1.480-4	3.045-2	6.270-0	1.429-4	6.382-3	6.382-3	7.075-7	0.857-1	0.857-1	
7.000-1	1.899-3	9.694-1	1.193-4	2.843-2	6.645-0	1.184-4	6.829-3	6.822-3	9.307-7	3.593-1	3.593-1	
8.000-1	2.730-3	6.681-1	8.294-4	2.513-2	7.378-0	8.035-3	7.751-3	7.743-3	1.199-6	2.636-1	2.636-1	
1.000-2	5.008-3	2.751-1	4.522-3	1.962-2	8.644-0	4.317-3	9.547-3	9.540-3	1.620-6	1.905-1	1.905-1	
1.110-2	6.650-3	2.625-1	3.405-3	1.722-2	9.198-0	3.224-3	1.051-2	1.051-2	2.207-6	1.580-1	1.580-1	
1.110-2	6.648-3	1.947-2	2.347-3	1.722-2	9.199-0	2.329-4	1.102-2	6.390-3	6.164-7	6.623-1	6.623-1	
1.250-2	1.305-3	1.440-2	1.735-4	1.485-2	9.869-0	1.720-4	1.239-2	7.764-3	1.205-6	5.950-1	5.950-1	
1.500-2	2.076-3	9.051-1	1.091-4	1.183-2	1.100-1	1.078-4	1.482-2	1.021-2	2.086-6	4.980-1	4.980-1	
1.750-2	3.135-3	5.992-1	7.223-3	9.694-1	1.177-1	7.115-3	1.724-2	1.268-2	3.197-6	4.033-1	4.033-1	
2.000-2	4.478-3	4.196-1	5.057-3	8.095-1	1.248-1	4.984-3	1.963-2	1.505-2	4.531-6	3.362-1	3.362-1	
2.500-2	8.329-3	2.295-1	2.719-3	5.878-1	1.338-1	2.846-3	2.434-2	1.980-2	7.039-6	2.777-1	2.777-1	
3.000-2	1.379-2	1.363-1	1.642-3	4.526-1	1.412-1	1.583-3	2.893-2	2.443-2	1.193-5	1.772-1	1.772-1	
3.500-2	2.136-2	8.799-0	1.080-3	3.952-1	1.451-1	1.010-3	3.338-2	2.898-2	1.674-5	1.395-1	1.395-1	
4.000-2	3.110-2	6.804-0	7.280-2	2.879-1	1.485-1	6.844-4	3.786-2	3.328-2	2.213-5	1.070-1	1.070-1	
4.500-2	4.343-2	4.325-0	5.214-2	2.386-1	1.501-1	4.827-4	4.177-2	3.745-2	2.803-5	8.822-1	8.822-1	
5.000-2	5.833-2	3.220-0	3.688-2	1.962-1	1.515-1	3.332-4	4.177-2	3.745-2	3.728-5	7.100-1	7.100-1	
5.500-2	7.608-2	2.409-0	2.977-2	1.890-1	1.518-1	2.696-4	4.934-2	4.482-2	4.078-5	6.938-1	6.938-1	
6.000-2	9.898-2	1.568-0	2.345-2	1.460-1	1.521-1	2.047-4	5.276-2	4.698-2	4.737-5	0.043-1	0.043-1	
6.500-2	1.200-1	1.588-0	1.687-2	1.272-1	1.515-1	1.609-4	5.595-2	5.188-2	5.598-5	4.132-1	4.132-1	
7.000-2	1.461-1	1.288-0	1.950-2	1.120-1	1.511-1	1.287-4	5.889-2	5.501-2	6.046-5	3.785-1	3.785-1	
8.000-2	2.059-1	9.124-1	1.106-2	8.898-0	1.502-1	8.607-1	6.396-2	6.031-2	7.285-5	2.929-1	2.929-1	
1.000-1	1.508-1	5.358-1	6.439-1	1.608-0	1.446-1	4.398-1	7.128-2	6.811-2	9.264-5	1.942-1	1.942-1	
1.250-1	1.580-1	1.367-1	4.098-1	1.399-0	1.407-1	2.251-1	7.056-2	6.739-2	1.053-4	1.326-1	1.326-1	

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 72.59										DENSITY 5.353 GRAMS/CC			
ENERGY KEV	TOTAL HP		CROSS SECTION (BARN)					REV/COLLISION			KE/CM		
	CH	CH/CM/DM	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	E.E. FLOR	K	DISPERSTR	K.E.	K.E.	
1.500	7.672	1.2448	2.951	2.688	0	1.361	1.304	7.922	2	7.716	2	1.008	
1.750	9.674	1.950	2.950	2.140	0	1.309	8.277	8.157	2	7.993	2	8.297	
2.000	1.138	0	1.098	1.083	0	1.295	5.363	8.425	2	8.234	2	7.287	
2.500	1.431	0	1.313	1.083	0	1.179	2.948	9.295	2	9.196	2	8.427	
3.000	1.878	0	1.132	1.305	1	1.114	1.747	1.053	1	1.047	1	8.311	
3.500	1.890	0	1.015	1.224	1	1.053	1.143	1.211	1	1.207	1	8.323	
4.000	2.011	0	9.342	1.126	1	4.399	1.003	1.399	1	1.391	1	8.920	
4.500	2.126	0	8.714	1.050	1	3.499	9.579	1.598	1	1.594	1	7.393	
5.000	2.293	0	8.220	9.908	0	2.812	9.190	1.815	1	1.813	1	7.931	
5.500	2.407	0	7.804	9.407	0	2.330	8.831	2.043	1	2.042	1	8.402	
6.000	2.520	0	7.458	8.987	0	1.868	8.516	2.284	1	2.282	1	8.026	
6.500	2.629	0	7.145	8.613	0	1.674	8.220	2.530	1	2.528	1	7.617	
7.000	2.733	0	6.875	8.287	0	1.445	7.954	2.784	1	2.783	1	7.018	
8.000	2.924	0	6.424	7.744	0	1.109	7.497	3.317	1	3.316	1	6.134	
1.000	3.282	0	5.724	6.900	0	7.117	6.747	4.432	1	4.432	1	3.350	
1.025	3.319	0	5.860	6.822	0	6.815	6.676	4.559	1	4.556	1	3.373	
1.250	3.888	0	5.093	6.139	0	4.562	6.037	5.907	1	5.906	1	3.601	
1.500	4.035	0	4.696	5.612	0	3.171	5.489	7.417	1	7.417	1	3.838	
1.750	4.334	0	4.375	5.225	0	2.330	5.049	8.978	1	8.978	1	2.071	
2.000	4.588	0	4.088	4.925	0	1.785	4.686	2.333	1	1.974	1	2.305	
2.044	4.644	0	4.046	4.877	0	1.709	4.629	2.283	1	1.089	0	2.345	
2.500	5.038	0	3.737	4.504	0	1.143	4.117	3.589	1	1.401	0	2.788	
3.000	5.332	0	3.523	4.247	0	7.937	3.088	5.376	1	1.704	0	3.309	
3.500	5.588	0	3.374	4.067	0	5.832	3.351	6.999	1	2.148	0	3.857	
4.000	5.737	0	3.274	3.947	0	4.486	3.077	8.568	1	2.549	0	4.442	
4.500	5.858	0	3.207	3.888	0	3.529	2.850	7.370	1	2.964	0	5.061	
5.000	5.953	0	3.156	3.804	0	2.859	2.658	6.427	1	3.392	0	5.697	
5.500	6.052	0	3.104	3.742	0	2.363	2.493	5.725	1	3.741	0	6.322	
6.000	6.119	0	3.070	3.701	0	1.985	2.349	5.152	1	4.270	0	6.978	
6.500	6.159	0	3.050	3.677	0	1.692	2.223	4.876	1	4.722	0	7.687	
7.000	6.176	0	3.042	3.667	0	1.459	2.111	4.274	1	5.182	0	8.391	
7.000	6.154	0	3.053	3.680	0	1.177	1.922	3.875	1	6.121	0	9.948	
1.000	5.986	0	3.149	3.798	0	7.148	1.637	2.773	1	8.054	0	1.350	
1.250	5.899	0	3.201	3.858	0	4.579	1.389	2.188	1	1.049	1	1.787	
1.500	5.707	0	3.292	3.988	0	3.177	1.211	1.803	1	1.296	1	2.271	
1.750	5.500	0	3.415	4.117	0	2.334	1.077	1.530	1	1.546	1	2.810	
2.000	5.325	0	3.528	4.253	0	1.787	9.724	1.328	1	2.779	1	3.373	
2.500	5.086	0	3.708	4.470	0	1.143	8.173	1.047	1	2.927	1	4.534	
3.000	4.867	0	3.860	4.652	0	7.940	7.079	8.630	1	2.798	1	5.748	
3.500	4.726	0	3.975	4.791	0	5.835	6.261	7.326	1	3.299	1	6.979	
4.000	4.594	0	4.089	4.929	0	4.466	5.625	6.357	1	3.800	1	8.271	
4.500	4.460	0	4.212	5.077	0	3.530	5.115	5.609	1	4.302	1	9.644	
5.000	4.360	0	4.309	5.194	0	2.859	4.696	5.015	1	4.803	1	1.102	
5.500	4.293	0	4.376	5.275	0	2.363	4.344	4.532	1	5.303	1	1.235	
6.000	4.229	0	4.442	5.354	1	1.986	4.046	4.131	1	5.604	1	1.372	
6.500	4.170	0	4.505	5.431	1	1.692	3.787	3.792	1	6.305	1	1.512	
7.000	4.113	0	4.567	5.505	1	1.459	3.562	3.507	1	6.806	1	1.654	
8.000	4.010	0	4.695	5.647	0	1.117	3.191	3.043	1	7.807	1	1.947	
1.000	3.834	0	4.900	5.906	0	7.148	2.648	2.401	1	9.810	1	2.558	

32-01

SINRG/21/1 CONCENT			INCHERT			SINRG/21/1 CONCENT			INCHERT			SINRG/21/1 CONCENT			INCHERT			SINRG/21/1 CONCENT			INCHERT		
I/A			I/A			I/A			I/A			I/A			I/A			I/A			I/A		
0.000	0	1.000	0	0.000	0	1.000	1	0.003	1	1.000	0	2.400	1	0.033	1	1.000	1	1.001	2	0.000	1		
0.000	3	0.000	1	3.300	4	1.000	0	0.001	1	1.000	0	2.000	1	7.300	1	1.000	1	5.701	3	0.000	1		
1.000	2	0.000	1	1.310	3	1.700	0	0.001	1	1.710	0	1.700	1	7.007	1	2.000	1	2.400	3	0.000	1		
1.000	2	0.070	2	0.000	3	2.000	1	7.077	1	1.007	2	2.000	0	1.307	1	0.470	1	5.000	1	1.000	0		
2.000	2	0.000	1	0.000	3	2.000	1	7.400	1	2.301	2	2.000	0	1.003	1	0.000	1	0.000	1	1.000	0		
2.000	2	0.000	1	0.000	3	3.000	0	0.010	2	0.700	3	3.000	0	7.000	2	0.100	1	1.000	2	0.000	0		
3.000	2	0.010	1	1.100	2	4.000	0	5.000	1	3.003	3	3.000	0	5.700	2	0.300	1	1.000	3	3.003	0		
4.000	2	0.001	1	1.000	2	5.000	0	5.000	1	4.700	3	4.000	0	5.000	2	0.001	1	1.000	0	4.700	10		
5.000	2	0.773	1	0.000	3	6.000	0	4.000	1	5.000	3	5.000	0	3.000	2	0.001	1	1.000	0	0.007	27		
7.000	2	0.070	2	0.010	3	7.000	0	5.000	1	5.000	3	7.000	0	0.007	2	0.001	1	1.000	0	0.007	27		
0.000	0	0.000	1	7.000	2	0.000	0	3.100	1	5.007	3	7.000	0	0.000	2	0.001	1						
1.000	1	0.070	0	0.070	2	0.000	0	2.771	1	0.073	3	0.000	0	0.003	2	0.000	1

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ENDL Evaluated Photon Cross Sections

33-As

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Energy Deposition

33-As

33-A9

33-As

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ENDL Evaluated Photon Data

33-As

ATOMIC WEIGHT 74.922										DENSITY 5.72 GRAMS/CC			
ENERGY KEV	TOTAL MP		CROSS SECTION (BARN)						REV/COLLISION	K.E. SPECTRUM		REV/CM	K.E.
	CH	CH+CH/SH	TOTAL	COMPONENT	INCOHERENT	PHOTON PAIR PROD	PHOTON PAIR PROD	PHOTON PAIR PROD		K.E.	SPIN/STRT		
1.300-1	0.813-1	2.300-1	3.100-1	3.100-1	1.400-1	1.400-1	1.400-1	1.400-1	0.100-2	7.946-2	1.300-4	1.100-1	1.100-1
1.700-1	0.830-1	2.000-1	2.810-1	2.810-1	1.300-1	1.300-1	1.300-1	1.300-1	0.400-2	6.241-2	1.300-4	0.930-2	0.930-2
2.000-1	1.000-0	1.700-1	2.700-1	2.700-1	1.300-1	1.300-1	1.300-1	1.300-1	0.600-2	5.241-2	1.300-4	0.830-2	0.830-2
2.300-1	1.200-0	1.500-1	2.700-1	2.700-1	1.100-1	1.100-1	1.100-1	1.100-1	0.800-2	4.400-2	1.300-4	0.710-2	0.710-2
3.000-1	1.300-0	1.147-1	2.447-1	2.447-1	1.100-1	1.100-1	1.100-1	1.100-1	1.073-2	3.600-2	1.300-4	0.607-2	0.607-2
3.300-1	1.700-0	1.000-1	2.700-1	2.700-1	1.000-1	1.000-1	1.000-1	1.000-1	1.000-2	3.077-2	1.300-4	0.577-2	0.577-2
4.000-1	1.007-0	0.412-2	1.417-1	1.417-1	0.733-1	0.733-1	0.733-1	0.733-1	1.400-2	2.400-2	1.300-4	0.500-2	0.500-2
4.300-1	1.000-0	0.700-2	1.700-1	1.700-1	0.700-1	0.700-1	0.700-1	0.700-1	1.000-2	2.000-2	1.300-4	0.503-2	0.503-2
5.000-1	2.117-0	0.200-2	2.317-1	2.317-1	0.200-1	0.200-1	0.200-1	0.200-1	1.000-2	1.800-2	1.300-4	0.813-2	0.813-2
5.300-1	2.251-0	0.200-2	2.451-1	2.451-1	0.200-1	0.200-1	0.200-1	0.200-1	2.000-2	2.052-2	1.300-4	0.910-2	0.910-2
6.000-1	2.307-0	0.200-2	2.507-1	2.507-1	0.200-1	0.200-1	0.200-1	0.200-1	2.200-2	2.200-2	1.300-4	0.904-2	0.904-2
6.300-1	2.400-0	0.200-2	2.600-1	2.600-1	0.200-1	0.200-1	0.200-1	0.200-1	2.530-2	2.537-2	1.300-4	1.040-2	1.040-2
7.000-1	2.537-0	0.001-2	2.537-1	2.537-1	0.200-1	0.200-1	0.200-1	0.200-1	2.700-2	2.701-2	1.300-4	1.100-2	1.100-2
8.000-1	2.717-0	0.400-2	3.117-1	3.117-1	0.400-1	0.400-1	0.400-1	0.400-1	3.300-2	3.303-2	1.300-4	1.203-2	1.203-2
1.000-0	3.001-0	5.700-2	8.701-1	8.701-1	7.700-2	7.700-2	7.700-2	7.700-2	4.300-2	4.303-2	1.300-4	1.403-2	1.403-2
1.000-0	3.000-0	5.000-2	8.000-1	8.000-1	7.000-2	7.000-2	7.000-2	7.000-2	4.500-2	4.503-2	1.300-4	1.470-2	1.470-2
1.200-0	3.431-0	5.000-2	8.431-1	8.431-1	7.430-2	7.430-2	7.430-2	7.430-2	5.012-2	5.012-2	1.300-4	1.723-2	1.723-2
1.300-0	3.700-0	5.000-2	8.700-1	8.700-1	7.700-2	7.700-2	7.700-2	7.700-2	7.401-2	7.401-2	1.300-4	1.970-2	1.970-2
1.700-0	4.000-0	5.300-2	9.300-1	9.300-1	8.300-2	8.300-2	8.300-2	8.300-2	8.001-2	8.001-2	1.300-4	2.203-2	2.203-2
2.000-0	4.273-0	5.001-2	9.273-1	9.273-1	8.272-2	8.272-2	8.272-2	8.272-2	1.000-0	1.000-0	2.200-2	2.401-2	2.401-2
2.000-0	4.315-0	5.001-2	9.315-1	9.315-1	8.314-2	8.314-2	8.314-2	8.314-2	1.000-0	1.000-0	2.303-2	2.504-2	2.504-2
2.300-0	4.607-0	5.700-2	10.307-1	10.307-1	9.306-2	9.306-2	9.306-2	9.306-2	1.401-0	1.401-0	2.300-2	3.003-2	3.003-2
3.000-0	4.903-0	5.300-2	10.203-1	10.203-1	9.202-2	9.202-2	9.202-2	9.202-2	1.700-0	1.700-0	2.300-2	3.572-2	3.572-2
3.300-0	5.100-0	5.301-2	10.401-1	10.401-1	9.399-2	9.399-2	9.399-2	9.399-2	2.100-0	2.100-0	2.100-2	4.170-2	4.170-2
4.000-0	5.300-0	5.203-2	10.500-1	10.500-1	9.498-2	9.498-2	9.498-2	9.498-2	2.500-0	2.500-0	1.070-2	4.809-2	4.809-2
4.300-0	5.410-0	5.201-2	10.610-1	10.610-1	9.608-2	9.608-2	9.608-2	9.608-2	2.600-0	2.600-0	1.713-2	5.407-2	5.407-2
5.000-0	5.403-0	5.103-2	10.503-1	10.503-1	9.502-2	9.502-2	9.502-2	9.502-2	3.000-0	3.000-0	2.205-2	6.102-2	6.102-2
5.300-0	5.570-0	5.104-2	10.670-1	10.670-1	9.670-2	9.670-2	9.670-2	9.670-2	3.033-0	3.033-0	2.000-2	6.870-2	6.870-2
6.000-0	5.630-0	5.100-2	10.730-1	10.730-1	9.730-2	9.730-2	9.730-2	9.730-2	4.270-0	4.270-0	3.400-2	7.901-2	7.901-2
6.300-0	5.600-0	5.004-2	10.604-1	10.604-1	9.604-2	9.604-2	9.604-2	9.604-2	4.731-0	4.731-0	4.207-2	8.347-2	8.347-2
7.000-0	5.670-0	5.070-2	10.740-1	10.740-1	9.740-2	9.740-2	9.740-2	9.740-2	5.100-0	5.100-0	5.000-2	9.142-2	9.142-2
7.000-0	5.672-0	5.073-2	10.743-1	10.743-1	9.743-2	9.743-2	9.743-2	9.743-2	6.133-0	6.133-0	6.000-2	1.000-0	1.000-0
1.000-1	5.400-0	5.100-2	10.500-1	10.500-1	9.500-2	9.500-2	9.500-2	9.500-2	6.000-0	6.000-0	1.151-0	1.470-0	1.470-0
1.200-1	5.300-0	5.257-2	10.557-1	10.557-1	9.557-2	9.557-2	9.557-2	9.557-2	1.051-1	1.051-1	1.071-0	1.957-0	1.957-0
1.500-1	5.212-0	5.395-2	10.607-1	10.607-1	9.607-2	9.607-2	9.607-2	9.607-2	1.200-1	1.200-1	2.740-0	2.401-0	2.401-0
1.700-1	5.010-0	5.400-2	10.410-1	10.410-1	9.410-2	9.410-2	9.410-2	9.410-2	1.940-1	1.940-1	3.740-0	3.005-0	3.005-0
2.000-1	4.603-0	5.000-2	9.603-1	9.603-1	8.603-2	8.603-2	8.603-2	8.603-2	1.700-1	1.700-1	4.005-0	3.705-0	3.705-0
2.300-1	4.612-0	5.701-2	10.312-1	10.312-1	9.312-2	9.312-2	9.312-2	9.312-2	2.200-1	2.200-1	7.305-0	4.805-0	4.805-0
3.000-1	4.427-0	5.900-2	9.327-1	9.327-1	8.327-2	8.327-2	8.327-2	8.327-2	2.600-1	2.600-1	1.005-1	6.305-0	6.305-0
3.300-1	4.207-0	6.000-2	8.207-1	8.207-1	7.207-2	7.207-2	7.207-2	7.207-2	3.301-1	3.301-1	1.337-1	7.000-0	7.000-0
4.000-1	4.175-0	6.107-2	7.175-1	7.175-1	6.175-2	6.175-2	6.175-2	6.175-2	3.000-1	3.000-1	1.671-1	9.100-0	9.100-0
4.300-1	4.052-0	6.314-2	6.052-1	6.052-1	5.052-2	5.052-2	5.052-2	5.052-2	4.300-1	4.300-1	2.000-1	1.000-1	1.000-1
5.000-1	3.000-0	6.415-2	5.415-1	5.415-1	4.415-2	4.415-2	4.415-2	4.415-2	4.005-1	4.005-1	2.300-1	1.213-1	1.213-1
5.300-1	3.000-0	6.405-2	5.405-1	5.405-1	4.405-2	4.405-2	4.405-2	4.405-2	5.300-1	5.300-1	2.772-1	1.301-1	1.301-1
6.000-1	3.000-0	6.303-2	5.303-1	5.303-1	4.303-2	4.303-2	4.303-2	4.303-2	5.000-1	5.000-1	3.100-1	1.512-1	1.512-1
6.300-1	3.700-0	6.610-2	5.700-1	5.700-1	4.700-2	4.700-2	4.700-2	4.700-2	6.307-1	6.307-1	3.500-1	1.600-1	1.600-1
7.000-1	3.734-0	6.000-2	5.000-1	5.000-1	4.000-2	4.000-2	4.000-2	4.000-2	6.000-1	6.000-1	3.970-1	1.803-1	1.803-1
8.000-1	3.000-0	6.003-2	5.003-1	5.003-1	4.003-2	4.003-2	4.003-2	4.003-2	7.000-1	7.000-1	4.810-1	2.145-1	2.145-1
1.000-2	3.400-0	5.004-2	6.204-1	6.204-1	5.204-2	5.204-2	5.204-2	5.204-2	9.012-1	9.012-1	6.507-1	2.000-1	2.000-1

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Form Factors

33-A_s

SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT		
1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ		
0.000	0	1.000	0	0.000	0	1.790	1	0.007	1	1.130	1	1.000	0	0.000	1	0.940	1	1.000	1	1.000	2	0.992	1
0.000	3	0.999	1	3.030	4	1.900	1	0.003	1	1.417	1	1.790	0	0.000	1	0.940	1	1.000	1	0.134	3	0.994	1
1.000	2	0.999	1	1.012	3	1.790	0	0.003	1	1.000	1	1.000	0	1.777	1	0.940	1	2.000	1	0.070	3	0.999	1
1.000	2	0.970	1	0.730	3	2.000	0	0.000	1	1.000	1	2.000	0	1.377	1	0.940	1	5.000	1	1.170	4	1.000	0
2.000	2	0.903	1	0.007	3	2.000	0	0.000	1	0.000	1	2.000	0	1.000	1	0.940	1	0.000	1	2.105	5	1.000	0
2.000	2	0.940	1	0.000	3	3.000	0	0.000	1	0.000	1	3.000	0	0.000	2	0.940	1	1.000	2	0.700	6	1.000	0
3.000	2	0.917	1	1.000	2	4.000	0	0.000	1	0.000	1	3.000	0	0.000	2	0.940	1	1.000	3	0.400	6	1.000	0
4.000	2	0.000	1	1.000	2	5.000	0	0.000	1	0.000	1	4.000	0	0.000	2	0.940	1	1.000	6	0.993	10	1.000	0
5.000	2	0.730	1	0.730	2	0.000	1	0.000	1	0.000	1	5.000	0	0.000	2	0.000	1	1.000	9	0.337	27	1.000	0
7.000	2	0.000	1	0.000	2	7.000	0	0.000	1	0.000	1	0.000	0	0.000	2	0.000	1						
9.000	2	0.000	1	0.000	2	0.000	1	0.000	1	0.000	1	0.000	0	0.000	2	0.000	1						
1.000	1	0.007	1	0.000	2	0.000	1	0.000	1	0.000	1	0.000	0	0.000	2	0.000	1

12/07/78

ENDL Evaluated Photon Cross Sections

34-Se

12/07/78

Energy Deposition

34-Se

34-5.

34-S.

12/07/78

ENDL Evaluated Photon Data

34-Ge

ATOMIC WEIGHT 76.96		CROSS SECTION (BARRS)						DENSITY 4.79 GRAMS/CC		
ENERGY	TOTAL NFP	REV/COLLISION				REV/COLLISION		K.E. + FLOR		REV/CM
KEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.	BREMSSTR	K.E.
1.500-1	7.632-1	2.717-1	3.583-1	3.398-0	1.442-1	1.789-1		8.833-2	8.382-2	1.483-4
1.750-1	9.090-1	2.111-1	2.708-1	2.511-0	1.387-1	1.129-1		8.938-2	8.702-2	1.606-4
2.000-1	1.192-0	1.751-1	2.288-1	1.953-0	1.341-1	7.986-0		9.204-2	9.012-2	1.722-4
2.500-1	1.591-0	1.395-1	1.777-1	1.273-0	1.251-1	3.983-0		9.904-2	9.854-2	2.059-4
3.000-1	1.817-0	1.149-1	1.507-1	8.971-1	1.182-1	2.350-0		1.112-1	1.103-1	2.578-4
3.500-1	2.047-0	1.060-1	1.338-1	6.847-1	1.118-1	1.531-0		1.280-1	1.259-1	3.331-4
4.000-1	2.240-0	9.321-2	1.222-1	5.127-1	1.085-1	1.058-0		1.436-1	1.431-1	4.338-4
4.500-1	2.412-0	8.875-2	1.135-1	4.069-1	1.017-1	7.702-1		1.632-1	1.628-1	5.610-4
5.000-1	2.585-0	8.138-2	1.087-1	3.309-1	9.788-0	5.807-1		1.845-1	1.841-1	7.178-4
5.500-1	2.708-0	7.708-2	1.011-1	2.742-1	9.378-0	4.941-1		2.070-1	2.067-1	9.039-4
6.000-1	2.840-0	7.351-2	9.638-0	2.309-1	9.045-0	3.628-1		2.307-1	2.305-1	1.123-3
6.500-1	2.967-0	7.036-2	9.225-0	1.971-1	8.730-0	2.982-1		2.550-1	2.549-1	1.373-3
7.000-1	3.087-0	6.762-2	8.867-0	1.702-1	8.448-0	2.486-1		2.803-1	2.801-1	1.658-3
8.000-1	3.309-0	6.309-2	8.272-0	1.306-1	7.983-0	1.792-1		3.332-1	3.331-1	2.341-3
1.000-0	3.720-0	5.812-2	7.398-0	8.382-2	7.187-0	1.074-1		4.444-1	4.443-1	4.195-3
1.022-0	3.783-0	5.949-2	7.275-0	8.027-2	7.092-0	1.033-1	1.000-6	4.570-1	4.570-1	4.395-3
1.250-0	4.185-0	4.988-2	6.540-0	5.374-2	6.414-0	7.173-2	1.196-3	5.917-1	5.916-1	7.345-3
1.500-0	4.577-0	4.581-2	5.960-0	3.735-2	5.832-0	5.150-2	5.988-2	7.424-1	7.423-1	1.153-2
1.750-0	4.915-0	4.249-2	5.571-0	2.745-2	5.365-0	3.867-2	1.403-1	8.982-1	8.982-1	1.682-2
2.000-0	5.208-0	4.008-2	5.256-0	2.102-2	4.979-0	3.065-2	2.250-1	1.060-0	1.060-0	2.335-2
2.044-0	5.293-0	3.970-2	5.205-0	2.013-2	4.918-0	2.961-2	2.373-1	1.089-0	1.089-0	2.465-2
2.500-0	5.683-0	3.674-2	4.817-0	1.346-2	4.374-0	2.171-2	4.076-1	1.402-0	1.402-0	4.055-2
3.000-0	6.011-0	3.473-2	4.554-0	9.351-3	3.919-0	1.666-2	6.090-1	1.767-0	1.767-0	6.393-2
3.500-0	6.261-0	3.334-2	4.372-0	6.872-3	3.580-0	1.355-2	7.914-1	2.152-0	2.152-0	9.408-2
4.000-0	6.436-0	3.244-2	4.253-0	5.262-3	3.269-0	1.133-2	9.675-1	2.555-0	2.555-0	1.316-1
4.500-0	6.554-0	3.185-2	4.176-0	4.158-3	3.028-0	9.642-3	1.135-0	2.973-0	2.973-0	1.787-1
5.000-0	6.647-0	3.141-2	4.118-0	3.368-3	2.824-0	8.404-3	1.283-0	3.403-0	3.403-0	2.295-1
5.500-0	6.746-0	3.095-2	4.058-0	2.784-3	2.648-0	7.484-3	1.399-0	3.839-0	3.839-0	2.896-1
6.000-0	6.809-0	3.066-2	4.020-0	2.339-3	2.498-0	6.733-3	1.515-0	4.286-0	4.286-0	3.577-1
6.500-0	6.842-0	3.051-2	4.001-0	1.993-3	2.362-0	6.108-3	1.631-0	4.740-0	4.740-0	4.338-1
7.000-0	6.851-0	3.047-2	3.996-0	1.719-3	2.243-0	5.581-3	1.745-0	5.202-0	5.202-0	5.178-1
7.000-0	6.808-0	3.066-2	4.020-0	1.316-3	2.042-0	4.745-3	1.973-0	6.144-0	6.144-0	7.096-1
1.000-1	8.571-0	3.177-2	4.185-0	8.423-4	1.733-0	3.617-3	2.422-0	8.083-0	8.083-0	1.185-0
1.250-1	6.441-1	3.241-2	4.250-0	5.331-4	1.475-0	2.852-3	2.771-0	1.052-1	1.052-1	1.923-0
1.500-1	6.245-1	3.343-2	4.383-0	3.744-4	1.287-0	2.349-3	3.093-0	1.300-1	1.300-1	2.814-0
1.750-1	6.006-1	3.476-2	4.557-0	2.750-4	1.145-0	1.994-3	3.410-0	1.550-1	1.550-1	3.840-0
2.000-1	5.805-1	3.597-2	4.716-0	2.106-4	1.033-0	1.730-3	3.681-0	1.800-1	1.800-1	4.982-0
2.500-1	5.510-1	3.789-2	4.968-0	1.347-4	8.683-3	1.364-3	4.098-0	2.301-1	2.301-1	7.558-0
3.000-1	5.285-1	3.950-2	5.179-0	9.356-5	7.521-1	1.124-3	4.426-0	2.802-1	2.802-1	1.046-1
3.500-1	5.127-1	4.072-2	5.339-0	6.875-5	6.653-1	9.539-4	4.673-0	3.303-1	3.303-1	1.362-1
4.000-1	4.980-1	4.192-2	5.496-0	5.264-5	5.977-1	8.276-4	4.898-0	3.805-1	3.805-1	1.701-1
4.500-1	4.832-1	4.321-2	5.683-0	4.159-5	5.434-1	7.301-4	5.121-0	4.306-1	4.306-1	2.058-1
5.000-1	4.721-1	4.452-2	5.798-0	3.389-5	4.989-1	6.527-4	5.299-0	4.807-1	4.807-1	2.429-1
5.500-1	4.646-1	4.493-2	5.891-0	2.784-5	4.615-1	5.897-4	5.429-0	5.308-1	5.308-1	2.814-1
6.000-1	4.577-1	4.562-2	5.981-0	2.339-5	4.299-1	5.376-4	5.551-0	5.809-1	5.809-1	3.209-1
6.500-1	4.511-1	4.628-2	6.068-0	1.993-5	4.024-1	4.937-4	5.665-0	6.309-1	6.309-1	3.614-1
7.000-1	4.449-1	4.692-2	6.152-0	1.719-5	3.785-1	4.563-4	5.773-0	6.810-1	6.810-1	4.027-1
8.000-1	4.336-1	4.814-2	6.312-0	1.316-5	3.390-1	3.959-4	5.973-0	7.812-1	7.812-1	4.875-1
1.000-2	4.145-1	5.037-2	6.604-0	8.422-6	2.814-1	3.122-4	6.322-0	9.814-1	9.814-1	6.634-1

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Form Factors

34-Sa

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.250-1	8.989-1	1.123-1	1.000-0	2.988-1	6.471-1	1.000-1	1.808-2	9.946-1
5.000-3	9.999-1	2.941-4	1.500-1	8.987-1	1.410-1	1.250-0	2.917-1	7.188-1	1.500-1	6.476-3	9.993-1
1.000-2	9.999-1	1.118-3	1.750-1	8.233-1	1.882-1	1.500-0	1.785-1	7.897-1	2.000-1	2.889-3	9.999-1
1.500-2	9.998-1	2.526-3	2.000-1	7.914-1	1.938-1	2.000-0	1.383-1	8.384-1	3.000-1	1.295-4	1.000-0
2.000-2	9.994-1	4.402-3	2.500-1	7.339-1	2.408-1	2.500-0	1.050-1	8.832-1	4.000-1	2.398-5	1.000-0
2.500-2	9.944-1	6.912-3	3.000-1	6.838-1	2.824-1	3.000-0	8.251-2	9.128-1	5.000-1	1.000-5	1.000-0
3.000-2	9.821-1	9.853-3	4.000-1	5.957-1	3.539-1	3.500-0	6.002-2	9.321-1	6.000-1	5.092-6	1.000-0
4.000-2	9.881-1	1.708-2	5.000-1	5.188-1	4.167-1	4.000-0	5.233-2	9.452-1	7.000-1	8.533-10	1.000-0
5.000-2	9.788-1	2.585-2	6.000-1	4.475-1	4.735-1	5.000-0	3.695-2	9.823-1	8.000-1	1.006-26	1.000-0
7.000-2	9.998-1	4.878-2	7.000-1	3.846-1	5.248-1	6.000-0	3.123-2	9.738-1			
9.000-2	9.357-1	7.024-2	8.000-1	3.318-1	5.703-1	7.000-0	2.894-2	9.821-1			
1.000-1	9.242-1	8.232-2	9.000-1	2.896-1	6.111-1	8.000-0	2.332-2	9.879-1

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ENDL Evaluated Photon Cross Sections

35-Br

12/07/78

Energy Deposition

35-Br

12/07/78

ENDL Evaluated Photon Data

35-Br

ATOMIC WEIGHT 79.909				DENSITY 3.12 GRAMS/CC			
ENERGY		TOTAL HP		CROSS SECTION (BARN)			
MEV	CM	CM/CM/CM	CM	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	MEV/COLLISION
MEV	CM	CM/CM/CM	CM	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	MEV/CM
1.000-4	1.188-5	2.699-4	3.581-6	8.146-2	7.778-3	3.580-6	9.998-5
1.250-4	8.939-6	3.585-4	4.758-6	8.146-2	1.217-2	4.757-6	1.250-4
1.500-4	7.087-6	4.522-4	6.001-6	8.139-2	1.755-2	6.000-6	1.500-4
1.750-4	7.524-6	4.260-4	5.853-6	8.135-2	2.394-2	5.852-6	1.750-4
1.834-4	7.862-6	4.183-4	5.951-6	8.133-2	2.631-2	5.950-6	1.834-4
1.898-4	7.183-6	4.462-4	5.921-6	8.133-2	2.671-2	5.920-6	1.898-4
2.000-4	7.357-6	4.357-4	5.781-6	8.131-2	3.132-2	5.780-6	2.000-4
2.500-4	9.289-6	3.458-4	4.988-6	8.119-2	4.881-2	4.988-6	2.500-4
2.998-4	9.491-6	3.377-4	4.481-6	8.117-2	5.109-2	4.480-6	2.998-4
2.572-4	9.105-6	3.520-4	4.671-6	8.117-2	5.164-2	4.670-6	2.572-4
3.000-4	1.116-5	2.672-4	3.811-6	8.108-2	7.013-2	3.810-6	3.000-4
3.500-4	1.442-5	2.222-4	2.948-6	8.092-2	9.495-2	2.948-6	3.500-4
4.000-4	1.801-5	1.779-4	2.361-6	8.077-2	1.234-1	2.360-6	4.000-4
4.500-4	2.257-5	1.420-4	1.885-6	8.057-2	1.552-1	1.884-6	4.500-4
5.000-4	2.760-5	1.161-4	1.541-6	8.039-2	1.904-1	1.540-6	5.000-4
5.500-4	3.355-5	9.553-4	1.268-6	8.013-2	2.284-1	1.267-6	5.500-4
6.000-4	4.009-5	7.994-4	1.061-6	7.991-2	2.698-1	1.060-6	6.000-4
6.500-4	4.765-5	6.741-4	8.944-5	7.959-2	3.132-1	8.936-5	6.500-4
7.000-4	5.568-5	5.758-4	7.638-5	7.929-2	3.597-1	7.630-5	7.000-4
8.000-4	7.477-5	4.287-4	5.688-5	7.875-2	4.614-1	5.680-5	8.000-4
1.000-3	1.218-4	2.631-3	3.492-5	7.735-2	6.879-1	3.484-5	9.978-4
1.250-3	2.067-4	1.551-3	1.057-5	7.494-2	9.937-1	2.050-5	1.245-3
1.500-3	3.183-4	1.007-3	1.336-5	7.303-2	1.342-1	1.329-5	1.492-3
1.549-3	3.435-4	9.332-4	1.238-5	7.247-2	1.406-1	1.231-5	1.540-3
1.550-3	7.538-5	4.252-3	5.842-5	7.246-2	1.407-1	5.835-5	1.548-3
1.595-3	8.097-5	3.958-3	5.252-5	7.197-2	1.467-1	5.245-5	1.593-3
1.596-3	5.754-5	5.570-3	7.391-5	7.196-2	1.468-1	7.384-5	1.594-3
1.750-3	7.255-5	4.418-3	5.862-5	7.038-2	1.877-1	5.855-5	1.748-3
1.781-3	7.586-5	4.227-3	5.609-5	7.009-2	1.720-1	5.602-5	1.779-3
1.782-3	6.547-5	4.896-3	6.486-5	7.002-2	1.722-1	6.439-5	1.780-3
2.000-3	8.775-5	3.653-3	4.847-5	6.817-2	2.034-1	4.840-5	1.997-3
2.500-3	1.562-4	2.052-3	2.723-5	6.280-2	2.678-1	2.717-5	2.494-3
3.000-3	2.500-4	1.282-3	1.701-5	5.873-2	3.353-1	1.695-5	2.990-3
3.500-3	3.757-4	8.531-4	1.132-5	5.435-2	3.935-1	1.127-5	3.483-3
4.000-3	5.343-4	5.998-4	7.959-4	5.083-2	4.320-1	7.908-4	3.974-3
4.500-3	7.328-4	4.374-4	5.804-4	4.735-2	5.028-1	5.756-4	4.463-3
5.000-3	9.717-4	3.299-4	4.377-4	4.444-2	5.531-1	4.332-4	4.949-3
5.500-3	1.258-3	2.547-4	3.380-4	4.158-2	5.978-1	3.338-4	5.431-3
6.000-3	1.592-3	2.013-4	2.671-4	3.914-2	6.417-1	2.631-4	5.911-3
6.500-3	1.964-3	1.616-4	2.144-4	3.658-2	6.899-1	2.106-4	6.387-3
7.000-3	2.431-3	1.318-4	1.749-4	3.436-2	7.134-1	1.714-4	6.860-3
8.000-3	3.502-3	9.153-4	1.214-4	3.069-2	7.942-1	1.183-4	7.793-3
1.000-2	6.489-3	4.939-3	6.594-3	2.435-2	9.229-1	6.301-3	9.615-3
1.250-2	1.210-2	2.649-3	3.515-3	1.850-2	1.051-1	3.320-3	1.181-2
1.347-2	1.489-2	2.153-3	2.857-3	1.687-2	1.097-1	2.677-3	1.263-2
1.347-2	2.257-3	1.420-2	1.884-4	1.687-2	1.097-1	1.866-4	1.335-2
1.500-2	2.929-3	1.039-2	1.452-4	1.478-2	1.168-1	1.436-4	1.484-2
1.750-2	4.328-3	7.405-3	9.826-3	1.202-2	1.252-1	9.693-3	1.726-2
2.000-2	6.067-3	5.283-3	7.010-3	1.006-2	1.331-1	6.896-3	1.968-2
2.500-2	1.104-2	2.904-3	3.853-3	7.331-1	1.428-1	3.766-3	2.444-2
3.000-2	1.795-2	1.785-3	2.369-3	5.662-1	1.513-1	2.297-3	2.910-2
3.500-2	2.755-2	1.163-3	1.544-3	4.458-1	1.559-1	1.484-3	3.366-2
4.000-2	3.981-2	8.051-3	1.068-3	3.625-1	1.599-1	1.016-3	3.809-2
4.500-2	5.544-2	5.781-3	7.671-2	2.961-1	1.619-1	7.211-2	4.238-2
5.000-2	7.434-2	4.311-3	5.721-2	2.503-1	1.636-1	5.307-2	4.651-2
5.500-2	9.702-2	3.303-3	4.383-2	2.132-1	1.641-1	4.006-2	5.046-2
6.000-2	1.234-1	2.598-3	3.448-2	1.841-1	1.642-1	3.099-2	5.422-2
6.500-2	1.538-1	2.084-3	2.765-2	1.603-1	1.646-1	2.441-2	5.779-2
7.000-2	1.880-1	1.704-3	2.562-2	1.411-1	1.637-1	1.957-2	6.114-2
8.000-2	2.577-1	1.198-3	1.589-2	1.120-1	1.630-1	1.314-2	6.717-2
1.000-1	4.687-1	6.839-3	9.074-1	7.573-0	1.593-1	6.724-1	8.664-2
1.250-1	7.757-1	4.132-1	5.483-1	5.046-0	1.531-1	3.447-1	8.441-2
1.500-1	1.107-0	2.895-1	3.842-1	3.621-0	1.483-1	1.997-1	8.883-2
9.998-5	9.998-5	2.187-10	8.418-0				9.998-5
1.250-4	1.250-4	3.417-10	1.398-1				1.250-4
1.500-4	1.500-4	4.921-10	2.116-1				1.500-4
1.750-4	1.750-4	6.697-10	2.326-1				1.750-4
1.834-4	1.834-4	7.356-10	2.393-1				1.834-4
1.898-4	1.898-4	7.468-10	2.572-1				1.898-4
2.000-4	2.000-4	8.748-10	2.718-1				2.000-4
2.500-4	2.500-4	1.387-9	2.697-1				2.500-4
2.558-4	2.558-4	1.431-9	2.695-1				2.558-4
2.572-4	2.572-4	1.447-9	2.624-1				2.572-4
2.999-4	2.999-4	1.968-9	2.688-1				2.999-4
3.499-4	3.499-4	2.678-9	2.426-1				3.499-4
3.999-4	3.999-4	3.498-9	2.220-1				3.999-4
4.498-4	4.498-4	4.426-9	1.993-1				4.498-4
4.997-4	4.997-4	5.463-9	1.811-1				4.997-4
5.497-4	5.497-4	6.609-9	1.638-1				5.497-4
5.995-4	5.995-4	7.863-9	1.495-1				5.995-4
6.494-4	6.494-4	9.276-9	1.366-1				6.494-4
6.993-4	6.993-4	1.070-8	1.256-1				6.993-4
7.989-4	7.989-4	1.396-8	1.058-1				7.989-4
9.978-4	9.978-4	2.178-8	8.192-0				9.978-4
1.245-3	1.245-3	3.393-8	6.025-0				1.245-3
1.492-3	1.492-3	4.868-8	4.687-0				1.492-3
1.540-3	1.540-3	5.187-8	4.484-0				1.540-3
1.548-3	1.548-3	5.111-8	4.028-0				1.548-3
1.593-3	1.593-3	5.415-8	1.943-1				1.593-3
1.594-3	1.594-3	5.426-8	2.737-1				1.594-3
1.748-3	1.748-3	6.535-8	2.383-1				1.748-3
1.779-3	1.779-3	6.771-8	2.320-1				1.779-3
1.780-3	1.780-3	6.781-8	2.689-1				1.780-3
1.997-3	1.997-3	8.556-8	2.254-1				1.997-3
2.494-3	2.494-3	1.340-7	1.585-1				2.494-3
2.990-3	2.990-3	1.930-7	1.188-1				2.990-3
3.483-3	3.483-3	2.624-7	9.220-0				3.483-3
3.974-3	3.974-3	3.421-7	7.402-0				3.974-3
4.463-3	4.463-3	4.319-7	6.064-0				4.463-3
4.949-3	4.949-3	5.315-7	5.073-0				4.949-3
5.431-3	5.431-3	6.407-7	4.301-0				5.431-3
5.911-3	5.911-3	7.592-7	3.700-0				5.911-3
6.387-3	6.387-3	8.869-7	3.210-0				6.387-3
6.860-3	6.860-3	1.023-6	2.814-0				6.860-3
7.293-3	7.293-3	1.322-6	2.220-0				7.293-3
7.793-3	7.793-3	2.014-6	1.479-0				7.793-3
8.293-3	8.293-3	3.039-6	9.743-1				8.293-3
8.793-3	8.793-3	4.477-6	8.469-1				8.793-3
9.293-3	9.293-3	6.057-6	3.080-0				9.293-3
9.793-3	9.793-3	7.563-6	2.886-0				9.793-3
1.029-2	1.029-2	2.597-6	2.518-0				1.029-2
1.333-2	1.333-2	3.884-6	2.197-0				1.333-2
1.813-2	1.813-2	7.187-6	1.643-0				1.813-2
2.284-2	2.284-2	1.141-5	1.272-0				2.284-2
2.746-2	2.746-2	1.648-5	9.967-1				2.746-2
3.195-2	3.195-2	2.231-5	8.025-1				3.195-2
3.631-2	3.631-2	2.882-5	6.550-1				3.631-2
4.052-2	4.052-2	3.589-5	5.451-1				4.052-2
4.464-2	4.464-2	4.340-5	4.593-1				4.464-2
4.842-2	4.842-2	5.123-5	3.925-1				4.842-2
5.209-2	5.209-2	5.928-5	3.387-1				5.209-2
5.555-2	5.555-2	6.743-5	2.954-1				5.555-2
5.884-2	5.884-2	7.553-5	2.510-1				5.884-2
6.184-2	6.184-2	8.353-5	2.036-1				6.184-2
6.464-2	6.464-2	9.128-5	1.533-1				6.464-2
6.716-2	6.716-2	9.810-5	1.036-1				6.716-2
6.948-2	6.948-2	1.595-4	7.721-2				6.948-2

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 79.909			DENSITY 3.12 GRAMS/CC						
ENERGY	TOTAL NFP		CROSS SECTION (BARNS)				REV/COLLISION		REV/CM
KEV	CH	CH+CH/ON	TOTAL	COHERENT	INCOHER	PHOTOEL PAIR PROD	K.E. FLOR	K.E. BREMSSTR	K.E.
1.750	1.439	2.233	2.883	2.710	1.426	1.688	9.204	8.988	8.221
2.000	1.741	1.641	2.443	2.108	1.378	0.570	9.485	9.299	8.320
2.500	2.271	1.418	1.873	1.374	0.887	0.408	1.088	1.011	8.452
3.000	2.895	1.188	1.578	0.888	1.516	2.894	1.137	1.188	4.179
3.500	3.048	1.051	1.395	7.180	1.150	1.731	1.283	1.275	4.182
4.000	3.348	0.980	1.271	5.538	1.086	1.186	1.405	1.448	4.332
4.500	3.610	0.878	1.178	4.398	1.047	0.738	1.849	1.844	4.554
5.000	3.846	0.735	1.106	3.573	1.004	0.999	1.880	1.858	4.887
5.500	4.084	0.608	1.048	2.983	0.952	5.188	2.083	2.080	5.118
6.000	4.285	0.515	9.971	2.488	0.908	4.131	2.319	2.317	5.431
6.500	4.459	0.438	9.537	2.130	0.869	3.338	2.582	2.599	5.740
7.000	4.642	0.365	9.182	1.879	0.839	2.836	2.813	2.811	6.058
8.000	4.979	0.437	8.346	1.412	0.195	2.047	3.341	3.339	6.707
1.000	5.603	0.721	7.591	0.081	7.377	1.230	4.451	4.450	7.942
1.022	5.887	0.858	7.504	0.877	7.299	1.182	1.000	4.577	8.075
1.250	6.307	0.882	6.743	0.810	6.602	0.212	1.252	5.923	9.390
1.500	6.897	0.847	6.186	0.438	6.003	5.904	6.383	7.428	1.077
1.750	7.402	0.730	5.746	0.268	5.522	4.426	2.498	0.986	1.732
2.000	7.843	0.607	5.422	0.273	5.125	3.507	1.395	1.061	2.405
2.044	7.919	0.647	5.370	0.176	5.062	3.388	2.528	1.090	2.537
2.500	8.548	0.750	4.975	0.146	4.803	2.482	4.331	1.402	4.174
3.000	9.031	0.549	4.709	0.111	4.034	1.905	6.484	1.788	6.583
3.500	9.394	0.412	4.527	0.740	3.685	1.949	8.386	2.194	9.891
4.000	9.644	0.324	4.410	0.690	3.368	1.295	1.028	2.598	1.355
4.500	9.810	0.267	4.335	0.496	3.117	1.101	2.977	2.977	1.821
5.000	9.940	0.225	4.279	0.362	2.907	0.596	1.359	3.408	2.385
5.500	1.008	0.180	4.220	0.310	2.726	0.544	1.882	3.848	3.816
6.000	1.016	0.153	4.184	0.259	2.589	0.584	1.805	4.293	4.224
6.500	1.021	0.140	4.167	0.155	2.431	0.570	1.726	4.749	4.852
7.000	1.021	0.138	4.164	0.098	2.309	0.568	1.847	5.212	5.103
8.000	1.014	0.162	4.196	0.123	2.102	0.542	2.087	6.156	6.072
1.000	9.764	0.283	4.356	0.107	4.179	0.124	2.581	8.097	8.293
1.250	9.553	0.355	4.452	0.829	4.519	3.252	2.989	1.054	1.107
1.500	9.251	0.485	4.597	0.408	4.125	2.678	3.289	1.302	2.888
1.750	8.888	0.606	4.785	0.294	4.178	2.273	3.804	1.552	3.933
2.000	8.583	0.734	4.955	0.277	4.084	1.972	3.889	1.802	5.097
2.500	8.138	0.938	5.226	0.147	8.939	1.555	4.330	2.303	7.717
3.000	7.601	1.109	5.482	0.102	7.743	1.681	4.878	2.805	3.595
3.500	7.584	1.238	5.623	0.743	6.848	1.087	4.937	3.305	4.370
4.000	7.344	1.384	5.791	0.691	6.153	0.428	5.175	3.807	5.183
4.500	7.123	1.499	5.970	0.497	5.594	0.317	5.410	4.308	6.098
5.000	6.958	1.606	6.112	0.363	5.136	0.743	5.598	4.809	6.912
5.500	6.848	1.681	6.211	0.310	4.751	0.717	5.735	5.310	7.594
6.000	6.744	1.753	6.306	0.259	4.429	0.123	5.863	5.811	8.610
6.500	6.647	1.822	6.398	0.155	4.142	0.623	5.984	6.311	9.495
7.000	6.556	1.889	6.488	0.059	3.896	0.196	6.097	6.812	1.039
8.000	6.388	2.017	6.657	0.123	3.490	4.508	6.308	7.814	1.223
1.000	6.105	2.250	6.866	0.107	2.896	3.555	6.676	9.816	1.608

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Form Factors

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$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
0.000+0	1.000+0	0.000+0	1.250-1	0.931-1	1.093-1	1.000+0	2.622-1	6.400-1	1.000+1	1.048-2	9.941-1
5.000-3	9.997-1	2.971-4	1.500-1	0.985-1	1.388-1	1.250+0	2.028-1	7.120-1	1.500+1	6.817-3	9.991-1
1.000-2	9.991-1	1.029-3	1.750-1	0.942-1	1.685-1	1.500+0	1.758-1	7.642-1	2.000+1	3.063-3	9.999-1
1.500-2	9.981-1	2.339-3	2.000-1	7.911-1	1.979-1	2.000+0	1.389-1	8.340-1	5.000+1	1.420-4	1.000+0
2.000-2	9.968-1	4.129-3	2.500-1	7.315-1	2.412-1	2.500+0	1.069-1	8.796-1	8.000+1	2.649-5	1.000+0
2.500-2	9.947-1	6.403-3	3.000-1	6.802-1	2.840-1	3.000+0	0.431-2	9.100-1	1.000+2	1.197-5	1.000+0
3.000-2	9.924-1	9.143-3	4.000-1	5.951-1	3.954-1	3.500+0	6.169-2	9.301-1	1.000+3	5.792-9	1.000+0
4.000-2	9.887-1	1.990-2	5.000-1	5.218-1	4.158-1	4.000+0	5.347-2	9.437-1	1.000+6	7.089-18	1.000+0
5.000-2	9.795-1	2.417-2	6.000-1	4.543-1	4.702-1	5.000+0	3.703-2	9.612-1	1.000+9	1.212-26	1.000+0
7.000-2	9.612-1	4.422-2	7.000-1	3.933-1	5.196-1	6.000+0	3.115-2	9.727-1			
9.000-2	9.387-1	6.717-2	8.000-1	3.405-1	5.842-1	7.000+0	2.691-2	9.811-1			
1.000-1	9.284-1	7.917-2	9.000-1	2.969-1	6.043-1	8.000+0	2.343-2	9.871-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

36-Kr

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ENOL Evaluated Photon Data

36-Kr

ATOMIC WEIGHT 83.8				DENSITY 0.003743 GRAMS/CC			
ENERGY		TOTAL HPF		CROSS SECTION (BARNS)			
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	MEV/COLLISION
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	MEV/CM
1.000-4	3.228-2	8.198-3	1.191-6	8.818-2	7.704-3	1.140-8	9.992-5
1.250-4	1.334-2	1.917-4	2.888-6	3.815-2	1.193-2	2.887-8	1.250-4
1.500-4	6.981-3	3.838-4	5.341-6	8.811-2	1.708-2	5.340-8	1.500-4
1.750-4	8.818-3	3.918-4	5.452-6	8.807-2	2.312-2	5.452-8	1.750-4
2.000-4	6.697-3	3.988-4	5.951-6	8.603-2	3.007-2	5.950-8	2.000-4
2.181-4	7.134-3	3.745-4	5.211-6	8.598-2	3.504-2	5.210-8	2.181-4
2.175-4	6.802-3	4.047-4	5.831-6	8.598-2	3.549-2	5.830-8	2.175-4
2.452-4	7.094-3	3.788-4	5.241-6	8.592-2	4.498-2	5.240-8	2.452-4
2.468-4	7.134-3	3.745-4	5.211-6	8.592-2	4.548-2	5.210-8	2.468-4
2.500-4	7.251-3	3.884-4	5.127-6	8.591-2	4.673-2	5.126-8	2.500-4
2.883-4	8.584-3	3.112-4	4.331-6	8.593-2	6.193-2	4.330-8	2.883-4
2.897-4	8.280-3	3.274-4	4.501-6	8.593-2	6.252-2	4.500-8	2.897-4
3.000-4	8.804-3	3.105-4	4.321-6	8.581-2	6.699-2	4.320-8	3.000-4
3.193-4	9.410-3	2.839-4	3.951-6	8.574-2	7.572-2	3.950-8	3.193-4
3.207-4	9.458-3	2.825-4	3.931-6	8.573-2	7.638-2	3.930-8	3.207-4
3.500-4	1.092-2	2.446-4	3.403-6	8.584-2	9.069-2	3.402-8	3.500-4
4.000-4	1.361-2	1.982-4	2.731-6	8.549-2	1.179-1	2.730-8	4.000-4
4.500-4	1.701-2	1.571-4	2.186-6	8.528-2	1.483-1	2.185-8	4.500-4
5.000-4	2.078-2	1.287-4	1.791-6	8.510-2	1.820-1	1.790-8	5.000-4
5.500-4	2.515-2	1.062-4	1.478-6	8.485-2	2.185-1	1.477-8	5.500-4
6.000-4	2.996-2	8.917-3	1.241-6	8.462-2	2.583-1	1.240-8	6.000-4
6.500-4	3.561-2	7.503-3	1.044-6	8.439-2	3.002-1	1.043-8	6.500-4
7.000-4	4.178-2	6.393-3	8.898-5	8.399-2	3.450-1	8.898-5	7.000-4
8.000-4	5.605-2	4.783-3	5.628-5	8.345-2	4.432-1	5.628-5	8.000-4
9.000-4	7.308-2	3.877-3	3.088-5	8.282-2	5.484-1	3.088-5	9.000-4
1.000-3	9.362-2	2.854-3	3.971-5	8.202-2	6.635-1	3.963-5	9.979-4
1.250-3	1.548-1	1.726-3	2.401-5	7.994-2	9.640-1	2.393-5	1.246-3
1.500-3	2.334-1	1.145-3	1.593-5	7.757-2	1.308-0	1.585-5	1.493-3
1.674-3	2.987-1	8.944-3	1.245-5	7.558-2	1.539-0	1.237-5	1.664-3
1.675-3	7.198-2	3.711-3	5.185-5	7.557-2	1.540-0	5.157-5	1.673-3
1.725-3	7.751-2	3.447-3	4.797-5	7.505-2	1.608-0	4.789-5	1.722-3
1.726-3	5.508-2	4.850-3	6.750-5	7.504-2	1.610-0	6.742-5	1.724-3
1.750-3	5.704-2	4.684-3	6.518-5	7.479-2	1.643-0	6.511-5	1.748-3
1.919-3	7.199-2	3.711-3	5.184-5	7.318-2	1.883-0	5.157-5	1.916-3
1.920-3	6.215-2	4.298-3	5.981-5	7.317-2	1.884-0	5.974-5	1.918-3
2.000-3	6.894-2	3.875-3	5.332-5	7.247-2	2.002-0	5.385-5	1.997-3
2.500-3	1.225-1	2.180-3	3.034-5	6.671-2	2.857-0	3.027-5	2.494-3
3.000-3	1.959-1	1.383-3	1.697-5	6.235-2	3.348-0	1.691-5	2.980-3
3.500-3	2.941-1	9.084-3	1.264-5	5.782-2	3.955-0	1.258-5	3.484-3
4.000-3	4.179-1	6.393-3	8.896-4	5.380-2	4.569-0	8.842-4	3.976-3
4.500-3	5.725-1	4.887-3	6.494-4	5.007-2	5.105-0	6.444-4	4.465-3
5.000-3	7.583-1	3.523-3	4.903-4	4.694-2	5.638-0	4.855-4	4.952-3
5.500-3	9.808-1	2.724-3	3.790-4	4.393-2	6.106-0	3.746-4	5.435-3
6.000-3	1.240-0	2.154-3	2.998-4	4.135-2	6.568-0	2.956-4	5.916-3
6.500-3	1.543-0	1.731-3	2.409-4	3.870-2	6.968-0	2.369-4	6.394-3
7.000-3	1.889-0	1.414-3	1.968-4	3.640-2	7.361-0	1.931-4	6.868-3
8.000-3	2.717-0	9.834-3	1.388-4	3.259-2	8.128-0	1.335-4	7.805-3
1.000-2	5.023-0	5.319-3	7.401-3	2.600-2	9.430-0	7.132-3	9.636-3
1.250-2	9.349-0	2.858-3	3.977-3	1.980-2	1.072-1	3.768-3	1.184-2
1.432-2	1.360-1	1.984-3	2.733-3	1.677-2	1.160-1	2.594-3	1.338-2
1.432-2	2.046-0	1.365-3	1.817-4	1.677-2	1.160-1	1.799-4	1.418-2
1.500-2	2.225-0	1.184-3	1.620-4	1.585-2	1.191-1	1.603-4	1.484-2
1.750-2	3.407-0	7.841-3	1.091-4	1.288-2	1.278-1	1.077-4	1.727-2
2.000-2	4.796-0	5.571-3	7.752-3	1.077-2	1.358-1	7.631-3	1.969-2
2.500-2	8.762-0	3.049-3	4.243-3	7.894-3	1.459-1	4.150-3	2.446-2
3.000-2	1.430-1	1.888-3	2.599-3	6.005-3	1.547-1	2.523-3	2.913-2
3.500-2	2.199-1	1.215-3	1.890-3	4.785-3	1.594-1	1.627-3	3.370-2
4.000-2	3.185-1	8.389-3	1.167-3	3.894-3	1.637-1	1.112-3	3.815-2
4.500-2	4.436-1	6.022-3	8.380-3	3.205-3	1.757-1	7.857-2	4.246-2
5.000-2	5.951-1	4.489-3	6.247-3	2.693-3	1.676-1	5.814-2	4.682-2
5.500-2	7.771-1	3.438-3	4.784-3	2.253-3	1.682-1	4.387-2	5.081-2
6.000-2	9.885-1	2.703-3	3.761-3	1.980-3	1.688-1	3.394-2	5.442-2
6.500-2	1.233-2	2.167-3	3.013-3	1.724-3	1.683-1	2.674-2	5.804-2
9.992-5	9.992-5	2.247-10	3.086-3				9.992-5
1.250-4	1.250-4	3.513-10	8.986-3				1.250-4
1.500-4	1.500-4	5.081-10	2.195-2				1.500-4
1.750-4	1.750-4	6.888-10	2.586-2				1.750-4
2.000-4	2.000-4	8.997-10	2.986-2				2.000-4
2.181-4	2.181-4	1.050-9	3.028-2				2.181-4
2.175-4	2.175-4	1.084-9	3.294-2				2.175-4
2.452-4	2.452-4	1.352-9	3.456-2				2.452-4
2.468-4	2.468-4	1.388-9	3.456-2				2.468-4
2.500-4	2.500-4	1.408-9	3.447-2				2.500-4
2.883-4	2.883-4	1.889-9	3.358-2				2.883-4
2.897-4	2.897-4	1.886-9	3.507-2				2.897-4
3.000-4	3.000-4	2.024-9	3.486-2				3.000-4
3.193-4	3.193-4	2.293-9	3.393-2				3.193-4
3.207-4	3.207-4	2.313-9	3.290-2				3.207-4
3.500-4	3.500-4	2.755-9	3.203-2				3.500-4
4.000-4	4.000-4	3.598-9	2.937-2				4.000-4
4.500-4	4.500-4	4.553-9	2.645-2				4.500-4
5.000-4	5.000-4	5.620-9	2.407-2				5.000-4
5.500-4	5.500-4	6.798-9	2.186-2				5.500-4
6.000-4	6.000-4	8.089-9	2.001-2				6.000-4
6.500-4	6.500-4	9.491-9	1.824-2				6.500-4
7.000-4	7.000-4	1.100-8	1.674-2				7.000-4
8.000-4	8.000-4	1.436-8	1.425-2				8.000-4
9.000-4	9.000-4	1.817-8	1.230-2				9.000-4
9.979-4	9.979-4	2.241-8	1.085-2				9.979-4
1.246-3	1.246-3	3.492-8	8.047-3				1.246-3
1.493-3	1.493-3	5.013-8	6.395-3				1.493-3
1.664-3	1.664-3	6.228-8	5.570-3				1.664-3
1.673-3	1.673-3	6.120-8	2.291-2				1.673-3
1.722-3	1.722-3	6.495-8	2.192-2				1.722-3
1.724-3	1.701-3	6.509-8	3.086-2				1.724-3
1.748-3	1.725-3	6.693-8	3.024-2				1.748-3
1.916-3	1.893-3	8.063-8	2.630-2				1.916-3
1.918-3	1.894-3	8.075-8	3.048-2				1.918-3
1.997-3	1.974-3	8.768-8	2.863-2				1.997-3
2.494-3	2.471-3	1.374-7	2.017-2				2.494-3
2.980-3	2.967-3	1.980-7	1.514-2				2.980-3
3.484-3	3.461-3	2.695-7	1.177-2				3.484-3
3.976-3	3.952-3	3.515-7	9.458-3				3.976-3
4.465-3	4.442-3	4.439-7	7.759-3				4.465-3
4.952-3	4.929-3	5.465-7	6.499-3				4.952-3
5.435-3	5.412-3	6.590-7	5.518-3				5.435-3
5.916-3	5.893-3	7.813-7	4.752-3				5.916-3
6.394-3	6.371-3	9.131-7	4.128-3				6.394-3
6.868-3	6.845-3	1.054-6	3.623-3				6.868-3
7.805-3	7.782-3	1.362-6	2.864-3				7.805-3
9.636-3	9.614-3	2.079-6	1.914-3				9.636-3
1.184-2	1.162-2	3.144-6	1.265-3				1.184-2
1.338-2	1.316-2	4.016-6	9.824-4				1.338-2
1.418-2	7.123-3	1.141-6	3.481-3				1.418-2
1.484-2	7.769-3	1.385-6	3.394-3				1.484-2
1.727-2	1.024-2	2.358-6	3.005-3				1.727-2
1.969-2	1.267-2	3.612-6	2.842-3				1.969-2
2.446-2	1.748-2	6.875-6	1.986-3				2.446-2
2.913-2	2.221-2	1.110-5	1.953-3				2.913-2
3.370-2	2.664-2	1.620-5	1.220-3				3.370-2
3.815-2	3.126-2	2.211-5	9.845-4				3.815-2
4.246-2	3.525-2	2.873-5	8.098-4				4.246-2
4.682-2	3.969-2	3.595-5	6.720-4				4.682-2
5.081-2	4.416-2	4.367-5	5.672-4				5.081-2
5.442-2	4.749-2	5.176-5	4.894-4				5.442-2
5.804-2	5.122-2	6.012-5	4.194-4				5.804-2

12/07/78

ENDL Evaluated Photon Data

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ATOMIC WEIGHT 83.8										DENSITY 0.003743 GRAMS/CC			
ENERGY	TOTAL MFP			CROSS SECTION (BARNs)						NEV/COLLISION			NEV/CM
MEV	CH	CH+CH/CH		TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD		K.E. +FLOR	K.E. BREMSSTR		K.E.
7.000-2	1.509-2	1.771-2	0	2.484-2	1.517-1	1.879-1	2.145-2			8.148-2	5.526-2	8.881-5	3.883-4
6.000-2	1.151-2	1.292-2	0	1.723-2	1.204-1	1.872-1	1.441-2			6.789-2	6.171-2	8.956-5	2.889-4
1.000-1	3.776-2	2.074-2	1	9.844-1	8.141-0	1.635-1	7.395-1			7.753-2	7.217-2	1.170-4	1.911-4
1.250-1	6.261-2	4.253-2	1	5.918-1	5.426-0	1.572-1	3.803-1			6.587-2	6.129-2	1.484-4	1.294-4
1.500-1	9.020-2	2.962-2	1	4.122-1	3.898-0	1.523-1	2.209-1			9.079-2	8.697-2	1.699-4	9.643-5
1.750-1	1.176-3	2.272-2	1	3.162-1	2.918-0	1.486-1	1.405-1			9.439-2	9.122-2	1.869-4	7.759-5
2.000-1	1.433-3	1.884-2	1	2.994-1	2.270-0	1.418-1	9.491-0			9.742-2	9.482-2	2.018-4	6.615-5
2.500-1	1.885-3	1.417-1	1	1.972-1	1.480-0	1.323-1	5.015-0			1.053-1	1.025-1	2.405-4	5.491-5
3.000-1	2.250-3	1.187-1	1	1.852-1	1.044-0	1.250-1	2.978-0			1.162-1	1.149-1	2.964-4	5.108-5
3.500-1	2.555-3	1.046-1	1	1.455-1	7.737-1	1.183-1	1.950-0			1.308-1	1.256-1	3.769-4	5.073-5
4.000-1	2.812-3	9.500-2	1	1.322-1	5.989-1	1.127-1	1.351-0			1.476-1	1.449-1	4.838-4	5.223-5
4.500-1	3.041-3	8.786-2	1	1.223-1	4.739-1	1.076-1	9.896-1			1.667-1	1.642-1	6.189-4	5.464-5
5.000-1	3.244-3	8.236-2	1	1.146-1	3.855-1	1.033-1	7.450-1			1.877-1	1.812-1	7.852-4	5.771-5
5.500-1	3.432-3	7.784-2	1	1.083-1	3.194-1	9.925-0	5.876-1			2.099-1	2.016-1	9.627-4	6.104-5
6.000-1	3.605-3	7.411-2	1	1.031-1	2.691-1	9.572-0	4.708-1			2.333-1	2.230-1	1.215-3	6.463-5
6.500-1	3.772-3	7.084-2	1	9.857-0	2.297-1	9.239-0	3.879-1			2.575-1	2.512-1	1.480-3	6.819-5
7.000-1	3.928-3	6.801-2	1	9.404-0	1.983-1	8.941-0	3.242-1			2.825-1	2.813-1	1.782-3	7.186-5
8.000-1	4.217-3	6.335-2	1	8.815-0	1.523-1	8.428-0	2.347-1			3.351-1	3.310-1	2.505-3	7.942-5
1.000-0	4.750-3	5.624-2	1	7.826-0	9.773-2	7.587-0	1.416-1			4.459-1	4.438-1	4.427-3	9.385-5
1.020-0	4.805-3	5.560-2	1	7.737-0	9.359-2	7.507-0	1.361-1	1.000-6		4.586-1	4.585-1	4.681-3	9.541-5
1.250-0	5.350-3	4.993-2	1	6.948-0	6.267-2	6.790-0	9.452-2	1.309-3		5.930-1	5.949-1	7.806-3	1.108-4
1.500-0	5.851-3	4.586-2	1	6.354-0	4.356-2	6.174-0	6.794-2	6.816-2		7.434-1	7.413-1	1.223-2	1.170-4
1.750-0	6.278-3	4.258-2	1	5.922-0	3.208-2	5.680-0	5.092-2	1.593-1		8.990-1	8.949-1	1.782-2	1.432-4
2.000-0	6.650-3	4.018-2	1	5.591-0	2.452-2	5.271-0	4.034-2	2.598-1		1.061-0	1.051-0	2.474-2	1.596-4
2.044-0	6.714-3	3.979-2	1	5.537-0	2.348-2	5.206-0	3.896-2	2.685-1		1.090-0	1.010-0	2.610-2	1.624-4
2.500-0	7.240-3	3.690-2	1	5.135-0	1.570-2	4.631-0	2.854-2	4.597-1		1.403-0	1.413-0	4.294-2	1.938-4
3.000-0	7.639-3	3.497-2	1	4.867-0	1.091-2	4.149-0	2.189-2	6.850-1		1.769-0	1.769-0	6.774-2	2.316-4
3.500-0	7.938-3	3.366-2	1	4.684-0	8.015-3	3.769-0	1.779-2	6.885-1		2.156-0	2.146-0	9.974-2	2.716-4
4.000-0	8.139-3	3.282-2	1	4.568-0	6.138-3	3.482-0	1.487-2	1.085-0		2.561-0	2.531-0	1.395-1	3.147-4
4.500-0	8.270-3	3.231-2	1	4.496-0	4.850-3	3.206-0	1.264-2	1.272-0		2.982-0	2.942-0	1.874-1	3.605-4
5.000-0	8.369-3	3.192-2	1	4.442-0	3.929-3	2.990-0	1.101-2	1.437-0		3.414-0	3.414-0	2.435-1	4.079-4
5.500-0	8.480-3	3.151-2	1	4.384-0	3.247-3	2.804-0	9.804-1	1.877-0		3.852-0	3.832-0	3.073-1	4.543-4
6.000-0	8.546-3	3.126-2	1	4.350-0	2.729-3	2.843-0	8.816-1	1.736-0		4.301-0	4.301-0	3.795-1	5.033-4
6.500-0	8.579-3	3.116-2	1	4.335-0	2.325-3	2.501-0	7.996-1	1.624-0		4.757-0	4.757-0	4.600-1	5.548-4
7.000-0	8.574-3	3.116-2	1	4.336-0	2.005-3	2.379-0	7.304-1	1.952-0		5.221-0	5.221-0	5.488-1	6.089-4
8.000-0	8.500-3	3.143-2	1	4.374-0	1.535-3	2.162-0	6.296-1	2.294-0		6.167-0	6.197-0	7.514-1	7.255-4
1.000-1	8.171-3	3.270-2	1	4.550-0	9.825-4	1.841-0	4.727-3	2.703-0		8.110-0	8.110-0	1.252-0	9.926-4
1.250-1	7.981-3	3.347-2	1	4.658-0	6.288-4	1.582-0	3.787-3	3.091-0		1.056-0	1.056-0	2.826-0	1.323-3
1.500-1	7.719-3	3.461-2	1	4.815-0	4.367-4	1.363-0	3.069-3	3.450-0		1.304-0	1.304-0	2.956-0	1.689-3
1.750-1	7.409-3	3.606-2	1	5.018-0	3.208-4	1.212-0	2.604-3	3.803-0		1.554-0	1.554-0	4.025-0	2.057-3
2.000-1	7.150-3	3.737-2	1	5.200-0	2.456-4	1.094-0	2.259-3	4.103-0		1.804-0	1.804-0	5.209-0	2.524-3
2.500-1	6.772-3	3.945-2	1	5.490-0	1.571-4	9.194-1	1.781-3	4.588-0		2.305-0	2.305-0	7.873-0	3.404-3
3.000-1	6.487-3	4.118-2	1	5.731-0	1.091-4	7.964-1	1.467-3	4.933-0		2.807-0	2.807-0	1.086-1	4.326-3
3.500-1	6.287-3	4.250-2	1	5.913-0	8.019-5	7.044-1	1.245-3	5.208-0		3.307-0	3.307-0	1.411-1	5.261-3
4.000-1	6.102-3	4.378-2	1	6.092-0	6.140-5	6.328-1	1.080-3	5.458-0		3.809-0	3.809-0	1.758-1	6.241-3
4.500-1	5.917-3	4.515-2	1	6.263-0	4.851-5	5.754-1	9.523-4	5.706-0		4.310-0	4.310-0	2.122-1	7.284-3
5.000-1	5.779-3	4.623-2	1	6.433-0	3.929-5	5.283-1	8.512-4	5.904-0		4.811-0	4.811-0	2.501-1	8.326-3
5.500-1	5.686-3	4.698-2	1	6.538-0	3.247-5	4.887-1	7.631-4	6.048-0		5.312-0	5.312-0	2.892-1	9.342-3
6.000-1	5.600-3	4.771-2	1	6.639-0	2.729-5	4.551-1	7.010-4	6.183-0		5.813-0	5.813-0	3.294-1	1.038-2
6.500-1	5.519-3	4.841-2	1	6.737-0	2.329-5	4.261-1	6.437-4	6.310-0		6.313-0	6.313-0	3.705-1	1.144-2
7.000-1	5.442-3	4.909-2	1	6.831-0	2.005-5	4.008-1	5.949-4	6.430-0		6.814-0	6.814-0	4.124-1	1.252-2
8.000-1	5.303-3	5.038-2	1	7.011-0	1.535-5	3.590-1	5.160-4	6.651-0		7.816-0	7.816-0	4.982-1	1.474-2
1.000-2	5.067-3	5.273-2	1	7.337-0	9.824-6	2.979-1	4.088-4	7.039-0		9.818-1	9.818-1	6.759-1	1.938-2

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Form Factors

36-Kr

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	8.981-1	1.045-1	1.000+0	2.003-1	6.334-1	1.000+1	1.002-2	9.936-1
5.000-3	9.997-1	2.500-4	1.500-1	8.614-1	1.335-1	1.250+0	2.076-1	7.056-1	1.500+1	7.195-3	9.990-1
1.000-2	9.991-1	9.722-4	1.750-1	8.204-1	1.812-1	1.500+0	1.751-1	7.587-1	2.000+1	3.261-3	9.998-1
1.500-2	9.988-1	2.184-3	2.000-1	7.925-1	1.978-1	2.000+0	1.365-1	8.297-1	5.000+1	1.553-4	1.000+0
2.000-2	9.986-1	3.895-3	2.500-1	7.308-1	2.374-1	2.500+0	1.006-1	8.759-1	8.000+1	2.918-5	1.000+0
2.500-2	9.950-1	5.942-3	3.000-1	6.778-1	2.821-1	3.000+0	8.600-2	9.078-1	1.000+2	1.323-5	1.000+0
3.000-2	9.929-1	8.488-3	4.000-1	5.926-1	3.583-1	3.500+0	6.343-2	9.281-1	1.000+3	6.571-5	1.000+0
4.000-2	9.873-1	1.480-2	5.000-1	5.228-1	4.158-1	4.000+0	5.469-2	9.482-1	1.000+8	8.886-10	1.000+0
5.000-2	9.804-1	2.236-2	6.000-1	4.993-1	4.680-1	5.000+0	3.720-2	9.801-1	1.000+9	1.459-26	1.000+0
7.000-2	9.629-1	4.151-2	7.000-1	4.608-1	5.156-1	6.000+0	3.106-2	9.717-1			
9.000-2	9.411-1	8.349-2	8.000-1	3.488-1	5.590-1	7.000+0	2.684-2	9.601-1			
1.000-1	9.290-1	7.508-2	9.000-1	3.045-1	5.982-1	8.000+0	2.350-2	9.862-1

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ENDL Evaluated Photon Cross Sections

37-Rb

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Energy Deposition

37-Rb

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ENDL Evaluated Photon Data

37-Rb

ATOMIC WEIGHT 85.47		DENSITY 1.53 GRAMS/CC							
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARN)					MEV/COLLISION	
	CM	CM ² /CM ²	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E. BREMSSTR
1.000-4	1.974-4	3.311-3	4.699-5	9.098-2	1.718-2	4.699-5		9.981-5	9.981-5
1.103-4	2.094-4	3.121-3	4.429-5	9.094-2	2.082-2	4.429-5		1.101-4	1.101-4
1.117-4	1.182-4	5.826-3	6.209-5	9.093-2	2.134-2	5.260-5		1.116-4	1.116-4
1.250-4	6.079-5	1.075-4	1.526-6	9.090-2	2.650-2	1.525-6		1.249-4	1.249-4
1.500-4	2.251-5	2.904-4	4.121-6	9.086-2	3.803-2	4.120-6		1.500-4	1.500-4
1.750-4	1.940-5	3.370-4	4.783-6	9.079-2	5.133-2	4.782-6		1.750-4	1.750-4
2.000-4	1.705-5	3.834-4	5.441-6	9.073-2	6.657-2	5.440-6		2.000-4	2.000-4
2.408-4	1.904-5	3.432-4	4.871-6	9.058-2	9.477-2	4.870-6		2.408-4	2.408-4
2.422-4	1.525-5	4.285-4	6.081-6	9.055-2	9.582-2	6.080-6		2.422-4	2.422-4
2.500-4	1.602-5	4.080-4	5.791-6	9.052-2	1.018-1	5.790-6		2.500-4	2.500-4
3.000-4	2.122-5	3.000-4	4.371-6	9.035-2	1.440-1	4.370-6		2.999-4	2.999-4
3.214-4	2.336-5	2.798-4	3.971-6	9.023-2	1.632-1	3.970-6		3.213-4	3.213-4
3.226-4	2.240-5	2.918-4	4.141-6	9.022-2	1.845-1	4.140-6		3.227-4	3.227-4
3.500-4	2.962-5	2.571-4	3.945-6	9.006-2	1.905-1	3.944-6		3.499-4	3.499-4
4.000-4	3.133-5	2.086-4	2.961-6	8.984-2	2.429-1	2.960-6		3.999-4	3.999-4
4.500-4	3.684-5	1.683-4	2.388-6	8.951-2	2.978-1	2.388-6		4.498-4	4.498-4
5.000-4	4.707-5	1.369-4	1.971-6	8.921-2	3.568-1	1.970-6		4.998-4	4.998-4
5.500-4	5.712-5	1.144-4	1.624-6	8.884-2	4.184-1	1.623-6		5.497-4	5.497-4
6.000-4	6.816-5	9.593-5	1.361-6	8.850-2	4.794-1	1.360-6		5.996-4	5.996-4
6.500-4	8.054-5	8.115-5	1.152-6	8.804-2	5.398-1	1.151-6		6.495-4	6.495-4
7.000-4	9.400-5	6.953-5	9.689-5	8.762-2	6.044-1	9.689-5		6.994-4	6.994-4
8.000-4	1.294-4	5.213-5	7.399-5	8.688-2	7.243-1	7.399-5		7.991-4	7.991-4
9.000-4	1.834-4	4.201-5	5.679-5	8.598-2	8.597-1	5.679-5		8.988-4	8.988-4
1.000-3	2.034-4	3.213-5	4.381-5	8.508-2	9.900-1	4.381-5		9.981-4	9.981-4
1.100-3	3.480-4	1.688-5	2.881-5	8.426-2	1.305-1	2.881-5		1.104-3	1.104-3
1.500-3	5.337-4	1.287-5	1.738-5	8.307-2	1.634-1	1.738-5		1.493-3	1.493-3
1.750-3	7.701-4	8.468-5	1.205-5	8.232-2	1.962-1	1.187-5		1.738-3	1.738-3
1.804-3	8.277-4	7.898-5	1.121-5	8.178-2	2.034-1	1.113-5		1.792-3	1.792-3
1.805-3	1.970-4	3.310-5	4.710-5	8.170-2	2.035-1	4.702-5		1.802-3	1.773-3
1.888-3	2.129-4	3.070-5	4.357-5	8.024-2	2.111-1	4.349-5		1.889-3	1.889-3
1.883-3	1.513-4	4.321-5	6.133-5	7.823-2	2.113-1	6.125-5		1.881-3	1.831-3
2.000-3	1.808-4	3.815-5	5.131-5	7.901-2	2.286-1	5.123-5		1.997-3	1.988-3
2.084-3	1.998-4	3.339-5	4.738-5	7.419-2	2.379-1	4.731-5		2.081-3	2.031-3
2.085-3	1.690-4	3.867-5	5.488-5	7.417-2	2.380-1	5.481-5		2.082-3	2.033-3
2.500-3	2.758-4	2.370-5	3.363-5	6.838-2	2.839-1	3.358-5		2.495-3	2.458-3
3.000-3	4.399-4	1.468-5	2.109-5	6.510-2	3.995-1	2.102-5		2.991-3	2.981-3
3.500-3	6.994-4	9.810-5	1.408-5	6.025-2	4.193-1	1.401-5		3.485-3	3.456-3
4.000-3	9.349-4	8.991-5	9.826-5	5.835-2	4.780-1	9.825-5		3.977-3	3.948-3
4.500-3	1.280-3	5.108-5	7.245-5	5.245-2	5.336-1	7.158-5		4.467-3	4.438-3
5.000-3	1.874-3	3.828-5	5.477-5	4.818-2	5.863-1	5.427-5		4.955-3	4.925-3
5.500-3	2.190-3	2.894-5	4.235-5	4.608-2	6.338-1	4.188-5		5.439-3	5.410-3
6.000-3	2.789-3	2.388-5	3.350-5	4.337-2	6.805-1	3.348-5		5.921-3	5.892-3
6.500-3	3.446-3	1.887-5	2.692-5	4.064-2	7.211-1	2.650-5		6.400-3	6.371-3
7.000-3	4.218-3	1.543-5	2.199-5	3.827-2	7.608-1	2.188-5		6.876-3	6.847-3
8.000-3	6.888-3	1.077-5	1.529-5	3.474-2	8.388-1	1.494-5		7.816-3	7.787-3
1.000-2	1.123-2	5.605-1	8.260-3	2.758-2	9.881-1	7.975-3		9.695-3	9.627-3
1.250-2	2.697-2	3.117-1	4.423-3	2.107-2	1.098-1	4.262-3		1.187-2	1.185-2
1.500-2	3.474-2	1.682-1	2.870-3	1.692-2	1.217-1	2.489-3		1.398-2	1.396-2
1.750-2	3.683-2	1.813-1	2.573-3	1.682-2	1.224-1	2.395-3		1.415-2	1.412-2
1.900-2	3.582-2	1.188-1	1.626-3	1.625-2	1.225-1	1.641-3		1.504-2	1.502-2
1.750-2	7.941-3	8.231-1	1.188-3	1.375-2	1.385-1	1.133-3		1.989-2	1.203-2
2.000-2	1.187-2	5.984-1	8.281-3	1.148-2	1.387-1	8.281-3		2.447-2	1.885-2
2.250-2	1.988-2	3.278-1	6.843-3	8.384-2	1.458-1	4.345-3		2.917-2	2.400-2
2.500-2	2.238-2	2.823-1	2.672-3	8.481-2	1.581-1	2.781-3		3.378-2	2.885-2
3.000-2	4.942-2	1.322-1	1.877-3	5.116-1	1.636-1	1.889-3		3.844-2	3.354-2
4.000-2	7.128-2	9.178-1	1.381-3	4.189-1	1.674-1	1.243-3		4.299-2	3.808-2
5.000-2	8.911-2	8.595-1	9.399-2	3.474-1	1.698-1	8.948-2		4.681-2	4.192-2
6.000-2	1.389-1	4.922-1	8.988-2	2.887-1	1.718-1	6.988-2		5.067-2	4.578-2
7.000-2	1.733-1	3.771-1	9.361-2	2.498-1	1.725-1	4.934-2		5.456-2	4.968-2
8.000-2	2.244-1	2.989-1	4.288-2	2.123-1	1.729-1	3.823-2		5.847-2	5.359-2
9.000-2	2.751-1	2.378-1	3.376-2	1.844-1	1.729-1	3.814-2		6.188-2	5.694-2
1.000-1	3.389-1	1.948-1	2.794-2	1.682-1	1.724-1	2.419-2		6.541-2	6.048-2
0.013-1	1.358-1	1.358-1	1.358-2	1.291-1	1.714-1	1.827-2			

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37-Rb

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Form Factors

37-Rb

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	6.898-1	1.132-1	1.000+0	2.750-1	8.278-1	1.000+1	1.718-2	9.930-1
5.000-3	9.993-1	5.405-4	1.500-1	6.249-1	1.398-1	1.250+0	2.103-1	6.995-1	1.500+1	7.489-3	9.999-1
1.000-2	9.983-1	2.108-3	1.750-1	5.236-1	1.828-1	1.500+0	1.754-1	7.533-1	2.000+1	3.482-3	9.998-1
1.500-2	9.970-1	4.843-3	2.000-1	7.986-1	1.909-1	2.000+0	1.382-1	8.255-1	5.000+1	1.693-4	1.000+0
2.000-2	9.947-1	8.011-3	2.500-1	7.319-1	2.382-1	2.500+0	1.099-1	8.724-1	8.000+1	3.208-5	1.000+0
2.500-2	9.919-1	1.608-2	3.000-1	6.778-1	2.819-1	3.000+0	8.795-2	9.044-1	1.000+2	1.459-5	1.000+0
3.000-2	9.885-1	1.682-2	4.000-1	5.909-1	3.589-1	3.500+0	5.522-2	9.259-1	1.000+3	7.437-9	1.000+0
4.000-2	9.805-1	2.883-2	5.000-1	5.229-1	4.183-1	4.000+0	5.596-2	9.408-1	1.000+6	1.051-17	1.000+0
5.000-2	9.718-1	3.708-2	6.000-1	4.625-1	4.671-1	5.000+0	3.744-2	9.590-1	1.000+9	1.752-28	1.000+0
7.000-2	9.489-1	5.735-2	7.000-1	4.085-1	5.128-1	6.000+0	3.098-2	9.705-1			
9.000-2	9.272-1	7.709-2	8.000-1	3.581-1	5.548-1	7.000+0	2.682-2	9.791-1			
1.000-1	9.152-1	8.716-2	9.000-1	3.121-1	5.930-1	8.000+0	2.360-2	9.854-1

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ENDL Evaluated Photon Cross Sections

38-Sr

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Energy Deposition

38-Sr

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ENCL Evaluated Photon Data

38-Sr

ATOMIC WEIGHT 87.62		DENSITY 2.6 GRAMS/CC					
ENERGY		TOTAL HP		CROSS SECTION (BARN)			
NEV	CM	CM/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD
NEV	CM	CM/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD
1.000-4	1.001-4	3.042-3	5.580-5	9.585-2	1.688-2	5.580-5	9.583-5
1.250-4	1.150-4	3.345-3	4.888-5	9.588-2	3.088-2	4.888-5	1.248-4
1.332-4	1.198-4	3.218-3	4.880-5	9.588-2	3.504-2	4.670-5	1.329-4
1.346-4	6.718-5	5.725-3	8.330-5	9.588-2	3.577-2	8.320-5	1.344-4
1.500-4	2.051-5	1.451-4	2.111-6	9.588-2	4.433-2	2.110-6	1.488-4
1.750-4	1.047-5	2.333-3	3.387-6	9.574-2	6.005-2	3.386-6	1.750-4
2.000-4	1.091-5	3.527-3	5.131-6	9.567-2	7.611-2	5.130-6	2.000-4
2.500-4	1.213-5	3.170-3	4.813-6	9.543-2	1.200-1	4.812-6	2.498-4
2.780-4	1.283-5	3.045-3	4.431-6	9.534-2	1.418-1	4.430-6	2.719-4
2.739-4	1.025-5	3.513-3	5.111-6	9.534-2	1.488-1	5.110-6	2.733-4
3.000-4	1.215-5	3.189-3	4.611-6	9.524-2	1.705-1	4.610-6	2.999-4
3.500-4	1.487-5	2.589-3	3.738-6	9.482-2	2.289-1	3.737-6	3.489-4
3.588-4	1.537-5	2.588-3	3.841-6	9.488-2	2.351-1	3.840-6	3.587-4
3.582-4	1.457-5	2.640-3	3.841-6	9.487-2	2.389-1	3.840-6	3.581-4
4.000-4	1.737-5	2.214-3	3.221-6	9.484-2	2.908-1	3.220-6	3.999-4
4.500-4	2.145-5	1.783-3	2.609-6	9.425-2	3.580-1	2.608-6	4.498-4
5.000-4	2.580-5	1.489-3	2.181-6	9.380-2	4.314-1	2.180-6	4.998-4
5.500-4	3.182-5	1.232-3	1.782-6	9.348-2	5.080-1	1.781-6	5.498-4
6.000-4	3.704-5	1.038-3	1.511-6	9.308-2	5.853-1	1.510-6	5.998-4
6.500-4	4.383-5	8.610-3	1.288-6	9.252-2	6.613-1	1.287-6	6.498-4
7.000-4	5.083-5	7.587-3	1.101-6	9.281-2	7.488-1	1.100-6	6.998-4
8.000-4	6.789-5	5.870-3	8.248-6	9.111-2	9.080-1	8.248-6	7.981-4
9.000-4	8.600-5	4.371-3	6.359-6	9.388-2	1.583-0	6.359-6	8.987-4
1.000-3	1.080-4	3.382-3	5.182-5	9.682-2	1.225-0	5.173-5	9.983-4
1.250-3	1.289-4	3.183-3	3.088-5	9.574-2	1.980-0	3.081-5	1.248-3
1.500-3	2.812-4	1.389-3	1.880-5	9.389-2	1.244-0	1.880-5	1.484-3
1.750-3	4.844-4	9.611-3	1.384-5	9.683-2	2.277-0	1.378-5	1.740-3
1.978-3	5.148-4	7.747-3	1.087-5	7.931-2	2.889-0	1.078-5	1.983-3
1.940-3	1.325-4	8.883-3	4.224-5	7.838-2	2.830-0	4.218-5	1.938-3
2.008-3	1.488-4	2.684-3	3.888-5	7.774-2	2.611-0	3.812-5	1.984-3
2.008-3	1.438-4	2.673-3	3.888-5	7.763-2	2.610-0	3.804-5	2.008-3
2.007-3	1.088-4	3.789-3	5.477-5	7.784-2	2.880-0	5.468-5	2.004-3
2.215-3	1.383-4	3.988-3	4.288-5	7.888-2	2.888-0	4.287-5	2.211-3
2.218-3	1.125-4	3.418-3	4.978-5	7.887-2	2.888-0	4.967-5	2.213-3
2.500-3	1.824-4	2.884-3	3.878-5	7.888-2	3.847-0	3.868-5	2.488-3
3.000-3	2.811-4	1.884-3	2.381-5	6.771-2	3.888-0	2.314-5	2.981-3
3.300-3	3.383-4	1.278-3	1.988-5	6.883-2	4.477-0	1.981-5	3.488-3
4.000-3	6.074-4	7.881-3	1.183-5	5.888-2	5.674-0	1.087-5	3.978-3
4.300-3	8.032-4	5.948-3	6.673-5	5.488-2	5.884-0	6.618-5	4.488-3
5.000-3	9.188-4	4.189-3	6.188-5	5.148-2	6.113-0	6.087-5	4.987-3
5.300-3	1.184-3	3.248-3	7.788-5	4.881-2	6.388-0	6.677-5	5.443-3
6.000-3	1.488-3	2.571-3	3.788-5	4.941-2	7.883-0	3.684-5	5.884-3
6.500-3	1.684-3	2.083-3	3.088-5	4.288-2	7.473-0	2.989-5	6.488-3
7.000-3	2.284-3	1.884-3	2.488-5	4.814-2	7.874-0	2.489-5	6.883-3
8.000-3	3.288-3	1.188-3	1.781-5	3.887-2	6.881-0	1.684-5	7.888-3
1.000-2	8.122-3	8.883-3	1.441-5	2.811-2	9.388-0	8.848-5	9.671-3
1.250-2	1.184-3	3.338-3	4.847-5	2.233-2	1.125-1	4.813-5	1.188-3
1.500-2	1.827-3	1.888-3	2.883-5	1.888-2	1.884-1	2.711-5	1.481-3
1.818-2	2.381-3	1.688-3	2.378-5	1.888-2	1.888-1	2.184-5	1.481-3
1.818-2	3.374-3	1.678-3	1.588-5	1.888-2	1.888-1	1.948-5	1.588-3
1.750-2	4.488-3	1.278-3	1.278-5	1.483-2	1.334-1	1.234-5	1.750-3
2.000-2	8.188-3	8.238-3	1.078-5	1.223-2	1.418-1	8.038-5	1.978-3
2.500-2	1.113-3	3.487-3	3.688-5	8.884-2	1.322-1	4.882-5	2.448-3
3.000-2	1.788-3	2.138-3	2.111-5	3.888-2	1.474-1	3.888-5	2.918-3
3.500-2	2.748-3	1.481-3	2.838-5	3.484-2	1.688-1	1.887-5	3.388-3
4.000-2	3.588-3	9.738-3	1.417-5	3.484-2	1.712-1	1.388-5	3.888-3
4.500-2	3.478-3	7.821-3	1.888-5	3.888-2	1.738-1	8.678-5	4.288-3
5.000-2	7.388-3	8.823-3	7.843-5	3.888-2	1.788-1	7.128-5	4.888-3
5.500-2	8.538-3	6.838-3	6.888-5	2.888-2	1.783-1	5.428-5	5.488-3
6.000-2	1.211-3	3.177-3	4.888-5	2.878-2	1.778-1	4.218-5	5.988-3
6.500-2	1.888-3	2.888-3	3.718-5	1.978-2	1.788-1	3.238-5	6.488-3
7.000-2	1.888-3	2.888-3	3.078-5	1.728-2	1.781-1	6.688-5	6.977-3
8.000-2	2.638-3	1.488-3	2.128-5	1.388-2	1.788-1	1.814-5	8.983-3

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 87.62		DENSITY 2.8 GRAMS/CC					
ENERGY	TOTAL NFP	CROSS SECTION (BARN)				REV/COLLISION	
REV	CH CH/CH/CH	TOTAL	COHERENT	INCOHER	PHOTOL PAIR PROD	K.E. + FLOR	K.E. BREMSSTR
1.000-1	4.849-1	8.274-1	1.204-2	8.331-2	1.718-1	8.004-2	7.337-2
1.250-1	7.840-1	4.906-1	7.138-1	8.230-0	1.824-1	8.087-2	8.414-2
1.500-1	1.144-0	3.381-1	4.080-1	4.478-0	1.603-1	8.833-2	8.138-2
1.750-1	1.516-0	2.538-1	3.880-1	3.789-0	1.913-1	1.008-1	8.873-2
2.000-1	1.877-0	2.048-1	2.882-1	2.812-0	1.483-1	1.043-1	1.010-1
2.500-1	2.527-0	1.522-1	2.214-1	1.705-0	1.384-1	1.128-1	1.101-1
3.000-1	3.087-0	1.254-1	1.825-1	1.202-0	1.318-1	1.225-1	1.211-1
3.500-1	3.521-0	1.092-1	1.593-1	8.916-1	1.247-1	1.385-1	1.352-1
4.000-1	3.866-0	8.848-2	1.433-1	8.861-1	1.189-1	1.528-1	1.518-1
4.500-1	4.248-0	8.058-2	1.318-1	5.444-1	1.135-1	1.713-1	1.705-1
5.000-1	4.547-0	8.459-2	1.231-1	4.442-1	1.089-1	1.817-1	1.810-1
5.500-1	4.885-0	7.972-2	1.180-1	3.885-1	1.047-1	2.134-1	2.129-1
6.000-1	5.078-0	7.572-2	1.102-1	3.105-1	1.010-1	2.385-1	2.380-1
6.500-1	5.323-0	7.225-2	1.051-1	2.850-1	9.748-2	2.603-1	2.598-1
7.000-1	5.528-0	6.928-2	1.008-1	2.600-1	9.435-2	2.851-1	2.848-1
8.000-1	5.873-0	6.440-2	8.370-2	1.738-1	8.884-2	3.373-1	3.370-1
1.000-0	8.743-0	5.704-2	8.280-2	1.128-1	8.475-2	4.475-1	4.473-1
1.025-0	6.882-0	5.638-2	8.203-2	1.080-1	7.823-2	4.601-1	4.598-1
1.250-0	7.804-0	5.028-2	7.359-2	7.230-2	7.188-2	5.944-1	5.942-1
1.500-0	8.315-0	4.825-2	6.730-2	5.030-2	6.518-2	7.734-2	7.444-2
1.750-0	8.917-0	4.313-2	6.275-2	3.887-2	5.984-2	8.433-2	7.797-2
2.000-0	9.438-0	4.075-2	5.889-2	2.832-2	5.584-2	9.095-2	8.884-2
2.044-0	9.528-0	4.037-2	5.873-2	2.711-2	5.488-2	9.820-2	9.018-2
2.500-0	1.023-1	3.781-2	5.458-2	1.813-2	4.888-2	3.800-2	3.151-2
3.000-0	1.078-1	3.584-2	5.182-2	1.284-2	4.378-2	2.788-2	2.788-2
3.500-0	1.118-1	3.438-2	5.002-2	9.287-3	3.978-2	2.840-2	2.810-2
4.000-0	1.144-1	3.361-2	4.880-2	7.088-3	3.884-2	1.811-2	1.810-2
4.500-0	1.180-1	3.316-2	4.823-2	5.801-3	3.884-2	1.418-2	1.418-2
5.000-0	1.178-1	3.288-2	4.775-2	4.537-3	3.188-2	1.308-2	1.301-2
5.500-0	1.188-1	3.244-2	4.788-2	3.750-3	2.888-2	1.232-2	1.244-2
6.000-0	1.193-1	3.244-2	4.801-2	3.181-3	2.788-2	1.188-2	1.187-2
6.500-0	1.195-1	3.217-2	4.881-2	2.888-3	2.844-2	2.088-2	4.774-2
7.000-0	1.194-1	3.222-2	4.888-2	2.316-3	2.887-2	2.188-2	5.238-2
8.000-0	1.181-1	3.288-2	4.748-2	1.773-3	2.888-2	2.448-2	6.188-2
1.000-1	1.131-1	3.481-2	4.948-2	1.135-3	1.944-2	2.888-2	6.188-2
1.250-1	1.181-1	3.483-2	5.082-2	7.283-3	1.848-2	4.871-2	3.448-2
1.500-1	1.188-1	3.484-2	5.088-2	5.844-3	1.438-2	3.882-2	1.307-2
1.750-1	1.818-1	3.778-2	5.488-2	3.788-3	1.278-2	3.882-2	4.218-2
2.000-1	1.888-1	3.881-2	5.788-2	2.837-3	1.192-2	4.977-2	1.888-2
2.500-1	4.273-0	4.148-2	6.838-2	1.815-3	9.785-3	2.211-2	2.288-2
3.000-1	4.878-0	4.338-2	8.388-2	1.288-3	8.488-3	1.838-2	2.810-2
3.500-1	4.881-0	4.477-2	8.514-2	9.281-3	7.475-3	1.588-2	3.311-2
4.000-1	4.834-0	4.613-2	8.715-2	7.881-3	6.888-3	1.357-2	3.848-2
4.500-1	4.877-0	4.782-2	8.888-2	5.883-3	6.874-3	1.182-2	4.314-2
5.000-1	4.888-0	4.878-2	7.887-2	4.538-3	5.578-3	1.085-2	4.818-2
5.500-1	4.757-0	4.938-2	7.214-2	3.731-3	5.158-3	9.882-3	5.318-2
6.000-1	4.637-0	5.638-2	7.327-2	3.182-3	4.884-3	8.788-3	5.818-2
6.500-1	4.585-0	5.111-2	7.438-2	2.888-3	4.487-3	8.888-3	6.317-2
7.000-1	4.484-0	5.183-2	7.541-2	2.318-3	4.238-3	7.118-3	6.818-2
8.000-1	4.388-0	5.381-2	7.741-2	1.773-3	3.788-3	7.382-3	7.818-2
1.000-2	8.848-0	5.578-2	8.184-2	1.132-3	3.145-3	9.882-3	9.882-3

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	8.749-1	1.247-1	1.000+0	2.016-1	8.225-1	1.000+1	1.749-2	9.924-1
5.000-3	9.993-1	8.053-4	1.500-1	8.451-1	1.488-1	1.250+0	2.137-1	8.537-1	1.500+1	7.819-3	9.998-1
1.000-2	9.982-1	2.395-3	1.750-1	8.184-1	1.729-1	1.500+0	1.757-1	7.480-1	2.000+1	3.888-3	9.998-1
1.500-2	9.967-1	5.324-3	2.000-1	7.879-1	1.994-1	2.000+0	1.377-1	6.213-1	5.000+1	1.843-4	1.000+0
2.000-2	9.942-1	9.242-3	2.500-1	7.314-1	2.410-1	2.500+0	1.109-1	5.088-1	8.000+1	3.518-5	1.000+0
2.500-2	9.911-1	1.492-2	3.000-1	6.789-1	2.889-1	3.000+0	8.893-2	3.014-1	1.000+2	1.805-5	1.000+0
3.000-2	9.874-1	1.947-2	4.000-1	5.905-1	3.573-1	3.500+0	6.700-2	9.238-1	1.000+3	8.398-9	1.000+0
4.000-2	9.784-1	3.175-2	5.000-1	5.221-1	4.174-1	4.000+0	5.725-2	9.390-1	1.000+6	1.227-17	1.000+0
5.000-2	9.682-1	4.478-2	6.000-1	4.641-1	4.670-1	5.000+0	3.778-2	9.579-1	1.000+9	2.109-28	1.000+0
7.000-2	9.437-1	8.853-2	7.000-1	4.118-1	5.111-1	6.000+0	3.098-2	9.897-1			
9.000-2	9.183-1	9.098-2	8.000-1	3.625-1	5.515-1	7.000+0	2.681-2	9.782-1			
1.000-1	8.924-1	1.008-1	9.000-1	3.191-1	5.884-1	8.000+0	2.371-2	9.848-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 88.905							DENSITY 4.472 GRAMS/CC				
ENERGY	TOTAL HP		CROSS SECTION (BARN)					HEV/COLLISION		HEV/CM	
MEV	CH	CN/CM/HR	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E. - FLOR	K.E.	BREMSSTR	K.E.
1.000 -4	5.040 -5	4.437 -3	8.950 -5	1.011 -3	1.898 -2	6.940 -5		9.995 -3	9.995 -5	2.430 -10	1.981 -0
1.250 -4	5.675 -5	3.941 -3	5.817 -5	1.010 -3	2.994 -2	5.807 -5		1.248 -4	1.248 -4	3.795 -10	2.199 -0
1.500 -4	6.252 -5	3.577 -3	5.280 -5	1.010 -3	4.239 -2	5.270 -5		1.497 -4	1.497 -4	5.483 -10	2.395 -0
1.750 -4	6.498 -5	3.441 -3	5.080 -5	1.009 -3	4.673 -2	5.070 -5		1.573 -4	1.573 -4	6.030 -10	2.480 -0
1.990 -4	3.977 -5	5.682 -3	6.300 -5	1.009 -3	4.795 -2	6.290 -5		1.588 -4	1.588 -4	6.147 -10	3.993 -0
1.750 -4	1.981 -5	1.140 -4	1.894 -5	1.009 -3	5.748 -2	1.883 -5		1.749 -4	1.749 -4	7.458 -10	6.980 -0
2.000 -4	7.318 -5	3.098 -3	4.511 -5	1.008 -3	7.478 -2	4.510 -5		2.000 -4	2.000 -4	9.746 -10	2.752 -0
2.500 -4	6.894 -5	3.380 -3	4.381 -5	1.008 -3	1.152 -1	4.950 -5		2.499 -4	2.499 -4	1.523 -9	3.796 -0
3.000 -4	7.788 -5	2.873 -3	4.241 -5	1.004 -3	1.840 -1	4.240 -5		2.999 -4	2.999 -4	2.193 -9	3.853 -0
3.038 -4	7.852 -5	2.852 -3	4.181 -5	1.003 -3	1.677 -1	4.180 -5		3.035 -4	3.035 -4	2.246 -9	3.844 -0
3.050 -4	8.555 -5	3.258 -3	4.781 -5	1.003 -3	1.691 -1	4.780 -5		3.049 -4	3.049 -4	2.267 -9	4.416 -0
3.500 -4	8.258 -5	2.708 -3	3.988 -5	1.000 -3	2.188 -1	3.987 -5		3.498 -4	3.498 -4	2.984 -9	4.238 -0
3.989 -4	9.594 -5	2.331 -3	3.441 -5	9.981 -2	2.719 -1	3.440 -5		3.988 -4	3.988 -4	3.781 -9	4.094 -0
3.943 -4	9.087 -5	2.488 -3	3.841 -5	9.980 -2	2.737 -1	3.840 -5		3.942 -4	3.942 -4	3.788 -9	4.348 -0
4.000 -4	9.297 -5	2.485 -3	3.951 -5	9.977 -2	2.812 -1	3.950 -5		3.988 -4	3.988 -4	3.888 -9	4.301 -0
4.980 -4	1.140 -5	1.981 -4	2.895 -5	9.938 -2	3.477 -1	2.894 -5		4.498 -4	4.498 -4	4.332 -9	3.944 -0
5.000 -4	1.388 -5	1.833 -4	2.411 -5	9.903 -2	4.204 -1	2.410 -5		4.498 -4	4.498 -4	4.689 -9	3.650 -0
5.500 -4	1.848 -5	1.357 -4	2.003 -5	9.898 -2	4.951 -1	2.002 -5		5.497 -4	5.497 -4	7.386 -9	3.355 -0
6.000 -4	1.982 -5	1.155 -4	1.881 -5	9.817 -2	5.749 -1	1.880 -5		5.987 -4	5.987 -4	8.785 -9	3.078 -0
6.500 -4	2.388 -5	9.713 -5	1.424 -5	9.781 -2	6.526 -1	1.423 -5		6.496 -4	6.496 -4	1.028 -8	2.882 -0
7.000 -4	2.682 -5	8.338 -5	1.231 -5	9.709 -2	7.339 -1	1.230 -5		6.994 -4	6.994 -4	1.192 -8	2.888 -0
8.008 -4	3.895 -5	8.278 -5	9.800 -5	9.618 -2	8.888 -1	9.800 -5		7.992 -4	7.992 -4	1.957 -8	2.842 -0
9.008 -4	4.617 -5	8.843 -5	7.150 -5	9.494 -2	1.070 -1	7.140 -5		8.988 -4	8.988 -4	1.985 -8	1.947 -0
1.000 -3	5.495 -5	3.882 -3	5.848 -5	9.387 -2	1.844 -1	5.838 -5		9.984 -4	9.984 -4	2.430 -8	1.789 -0
1.250 -3	9.788 -5	8.385 -3	3.482 -5	9.044 -2	1.619 -1	3.483 -5		1.247 -3	1.247 -3	3.788 -8	1.885 -0
1.500 -3	1.518 -4	1.481 -3	2.187 -5	8.774 -2	2.011 -1	2.178 -5		1.494 -3	1.494 -3	5.440 -8	9.898 -0
1.750 -3	2.183 -4	1.629 -3	1.988 -5	8.448 -2	2.388 -1	1.987 -5		1.740 -3	1.740 -3	7.381 -8	7.838 -0
2.000 -3	3.020 -4	1.395 -3	1.999 -5	8.177 -2	2.787 -1	1.988 -5		1.989 -3	1.989 -3	9.803 -8	6.903 -0
2.250 -3	3.324 -4	8.782 -3	6.938 -5	8.888 -2	2.810 -1	6.934 -5		2.248 -3	2.248 -3	1.038 -7	6.803 -0
2.500 -3	3.688 -4	8.688 -3	3.983 -5	8.688 -2	2.811 -1	3.978 -5		2.478 -3	2.478 -3	1.008 -7	2.495 -0
2.750 -3	3.948 -4	8.498 -3	3.893 -5	8.588 -2	2.888 -1	3.878 -5		2.748 -3	2.748 -3	1.088 -7	3.387 -0
3.000 -3	4.198 -4	8.248 -3	3.188 -5	8.488 -2	2.811 -1	3.178 -5		2.998 -3	2.998 -3	1.087 -7	3.888 -0
3.250 -3	4.448 -4	8.048 -3	2.788 -5	8.388 -2	2.888 -1	2.778 -5		3.248 -3	3.248 -3	1.318 -7	2.838 -0
3.500 -3	4.698 -4	7.798 -3	2.488 -5	8.288 -2	2.888 -1	2.478 -5		3.498 -3	3.498 -3	1.317 -7	3.888 -0
3.750 -3	4.948 -4	7.548 -3	2.188 -5	8.188 -2	2.888 -1	2.168 -5		3.748 -3	3.748 -3	1.317 -7	3.888 -0
4.000 -3	5.198 -4	7.298 -3	1.888 -5	8.088 -2	2.888 -1	1.858 -5		3.998 -3	3.998 -3	1.317 -7	3.888 -0
4.250 -3	5.448 -4	7.048 -3	1.588 -5	7.988 -2	2.888 -1	1.548 -5		4.248 -3	4.248 -3	1.317 -7	3.888 -0
4.500 -3	5.698 -4	6.798 -3	1.288 -5	7.888 -2	2.888 -1	1.238 -5		4.498 -3	4.498 -3	1.317 -7	3.888 -0
4.750 -3	5.948 -4	6.548 -3	9.88 -5	7.788 -2	2.888 -1	9.78 -5		4.748 -3	4.748 -3	1.317 -7	3.888 -0
5.000 -3	6.198 -4	6.298 -3	8.88 -5	7.688 -2	2.888 -1	8.68 -5		4.998 -3	4.998 -3	1.317 -7	3.888 -0
5.250 -3	6.448 -4	6.048 -3	7.88 -5	7.588 -2	2.888 -1	7.58 -5		5.248 -3	5.248 -3	1.317 -7	3.888 -0
5.500 -3	6.698 -4	5.798 -3	6.88 -5	7.488 -2	2.888 -1	6.48 -5		5.498 -3	5.498 -3	1.317 -7	3.888 -0
5.750 -3	6.948 -4	5.548 -3	5.88 -5	7.388 -2	2.888 -1	5.38 -5		5.748 -3	5.748 -3	1.317 -7	3.888 -0
6.000 -3	7.198 -4	5.298 -3	4.88 -5	7.288 -2	2.888 -1	4.28 -5		5.998 -3	5.998 -3	1.317 -7	3.888 -0
6.250 -3	7.448 -4	5.048 -3	3.88 -5	7.188 -2	2.888 -1	3.18 -5		6.248 -3	6.248 -3	1.317 -7	3.888 -0
6.500 -3	7.698 -4	4.798 -3	2.88 -5	7.088 -2	2.888 -1	2.08 -5		6.498 -3	6.498 -3	1.317 -7	3.888 -0
6.750 -3	7.948 -4	4.548 -3	1.88 -5	6.988 -2	2.888 -1	0.98 -5		6.748 -3	6.748 -3	1.317 -7	3.888 -0
7.000 -3	8.198 -4	4.298 -3	0.88 -5	6.888 -2	2.888 -1	-0.12 -5		6.998 -3	6.998 -3	1.317 -7	3.888 -0
7.250 -3	8.448 -4	4.048 -3	-0.12 -5	6.788 -2	2.888 -1	-1.12 -5		7.248 -3	7.248 -3	1.317 -7	3.888 -0
7.500 -3	8.698 -4	3.798 -3	-1.12 -5	6.688 -2	2.888 -1	-2.12 -5		7.498 -3	7.498 -3	1.317 -7	3.888 -0
7.750 -3	8.948 -4	3.548 -3	-2.12 -5	6.588 -2	2.888 -1	-3.12 -5		7.748 -3	7.748 -3	1.317 -7	3.888 -0
8.000 -3	9.198 -4	3.298 -3	-3.12 -5	6.488 -2	2.888 -1	-4.12 -5		7.998 -3	7.998 -3	1.317 -7	3.888 -0
8.250 -3	9.448 -4	3.048 -3	-4.12 -5	6.388 -2	2.888 -1	-5.12 -5		8.248 -3	8.248 -3	1.317 -7	3.888 -0
8.500 -3	9.698 -4	2.798 -3	-5.12 -5	6.288 -2	2.888 -1	-6.12 -5		8.498 -3	8.498 -3	1.317 -7	3.888 -0
8.750 -3	9.948 -4	2.548 -3	-6.12 -5	6.188 -2	2.888 -1	-7.12 -5		8.748 -3	8.748 -3	1.317 -7	3.888 -0
9.000 -3	10.198 -4	2.298 -3	-7.12 -5	6.088 -2	2.888 -1	-8.12 -5		8.998 -3	8.998 -3	1.317 -7	3.888 -0
9.250 -3	10.448 -4	2.048 -3	-8.12 -5	5.988 -2	2.888 -1	-9.12 -5		9.248 -3	9.248 -3	1.317 -7	3.888 -0
9.500 -3	10.698 -4	1.798 -3	-9.12 -5	5.888 -2	2.888 -1	-10.12 -5		9.498 -3	9.498 -3	1.317 -7	3.888 -0
9.750 -3	10.948 -4	1.548 -3	-10.12 -5	5.788 -2	2.888 -1	-11.12 -5		9.748 -3	9.748 -3	1.317 -7	3.888 -0
10.000 -3	11.198 -4	1.298 -3	-11.12 -5	5.688 -2	2.888 -1	-12.12 -5		9.998 -3	9.998 -3	1.317 -7	3.888 -0

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 88.905		CROSS SECTION (BARN)					DENSITY 4.472 GRAMS/CC			
ENERGY	TOTAL HP		TOTAL			PAIR PROD	NEUTRON			K.E.
MEV	CM	CM/CM/CM	CM	CM/CM/CM	CM/CM/CM		CM	CM/CM/CM	CM/CM/CM	
1.000-1	2.511-1	8.506-1	1.315-2	9.987-0	1.761-1	1.039-2	8.097-2	7.383-2	1.318-4	2.933-1
1.250-1	4.272-1	5.234-1	7.727-1	8.622-0	1.095-1	5.386-1	9.139-2	8.485-2	1.795-4	1.988-1
1.500-1	6.289-1	3.996-1	5.248-1	4.769-0	1.843-1	3.127-1	9.819-2	9.288-2	2.088-4	1.473-1
1.750-1	8.381-1	2.685-1	3.934-1	3.589-0	1.582-1	1.983-1	1.031-1	9.842-2	2.395-4	1.173-1
2.000-1	1.045-0	2.140-1	3.180-1	2.793-0	1.531-1	1.349-1	1.009-1	1.029-1	2.577-4	9.894-2
2.500-1	1.419-0	1.578-1	2.387-1	1.884-0	1.430-1	7.148-0	1.151-1	1.123-1	3.083-4	7.913-2
3.000-1	1.732-0	1.191-1	1.906-1	1.287-0	1.352-1	4.223-0	1.253-1	1.232-1	3.890-4	7.115-2
3.500-1	1.988-0	1.120-1	1.694-1	1.097-0	1.278-1	2.791-0	1.388-1	1.372-1	4.574-4	6.874-2
4.000-1	2.280-0	1.007-1	1.487-1	7.389-1	1.220-1	1.837-0	1.549-1	1.537-1	5.734-4	6.921-2
4.500-1	2.418-0	9.848-2	1.265-1	5.852-1	1.185-1	1.421-0	1.732-1	1.723-1	7.203-4	7.185-2
5.000-1	2.583-0	8.623-2	1.273-1	4.761-1	1.118-1	1.077-0	1.934-1	1.927-1	9.005-4	7.429-2
5.500-1	2.795-0	8.118-2	1.198-1	3.947-1	1.074-1	8.457-1	2.151-1	2.144-1	1.115-3	7.784-2
6.000-1	2.968-0	7.704-2	1.137-1	3.326-1	1.038-1	6.782-1	2.380-1	2.375-1	1.367-3	6.182-2
6.500-1	3.044-0	7.347-2	1.085-1	2.839-1	1.000-1	5.594-1	2.618-1	2.613-1	1.694-3	5.586-2
7.000-1	3.176-0	7.041-2	1.034-1	2.452-1	9.681-0	4.680-1	2.865-1	2.861-1	1.982-3	5.009-2
8.000-1	3.412-0	6.940-2	8.855-2	1.883-1	9.127-0	3.394-1	3.388-1	3.382-1	2.788-3	9.892-2
1.000-0	3.889-0	5.787-2	8.543-2	1.209-1	8.215-0	2.054-1	4.487-1	4.484-1	4.849-3	1.160-1
1.022-0	3.910-0	5.719-2	8.443-2	1.158-1	8.130-0	1.974-1	4.613-1	4.611-1	5.124-3	1.179-1
1.250-0	4.381-0	5.128-2	7.570-2	7.795-2	7.394-0	1.370-1	1.487-2	5.954-1	8.512-3	1.385-1
1.500-0	4.769-0	4.689-2	6.922-2	5.391-2	6.887-0	9.840-2	8.220-2	7.452-1	1.329-2	1.582-1
1.750-0	5.114-0	4.373-2	6.456-2	3.983-2	6.152-0	7.373-2	1.905-1	9.005-1	1.933-2	1.781-1
2.000-0	5.410-0	4.133-2	6.102-2	3.035-2	5.710-0	5.838-2	3.030-1	1.062-2	2.680-2	1.984-1
2.044-0	5.461-0	4.094-2	6.045-2	2.968-2	5.640-0	5.837-2	3.194-1	1.092-2	2.829-2	1.999-1
2.500-0	5.872-0	3.808-2	5.622-2	1.944-2	5.017-0	4.123-2	5.442-1	1.405-2	4.853-2	2.353-1
3.000-0	6.173-0	3.622-2	5.348-2	1.350-2	4.494-0	3.158-2	6.080-1	1.773-2	7.346-2	2.872-1
3.500-0	6.383-0	3.498-2	5.184-2	9.823-3	4.083-0	2.584-2	1.045-2	2.162-2	1.082-1	3.382-1
4.000-0	6.533-0	3.423-2	5.053-2	7.988-3	3.750-0	2.140-2	1.274-2	2.570-2	1.515-1	3.934-1
4.500-0	6.618-0	3.380-2	4.980-2	6.004-3	3.473-0	1.818-2	1.493-2	2.994-2	2.036-1	4.586-1
5.000-0	6.678-0	3.350-2	4.945-2	4.883-3	3.239-0	1.583-2	1.888-2	3.429-2	2.845-1	5.137-1
5.500-0	6.748-0	3.314-2	4.882-2	4.020-3	3.038-0	1.408-2	1.837-2	3.871-2	3.338-1	5.737-1
6.000-0	6.782-0	3.288-2	4.825-2	3.378-3	2.883-0	1.286-2	1.986-2	4.322-2	4.120-1	6.370-1
6.500-0	6.785-0	3.281-2	4.828-2	2.878-3	2.709-0	1.148-2	2.135-2	4.781-2	4.991-1	7.037-1
7.000-0	6.781-0	3.280-2	4.828-2	2.482-3	2.573-0	1.048-2	2.282-2	5.248-2	5.951-1	7.739-1
8.000-0	6.888-0	3.338-2	4.884-2	1.960-3	2.348-0	8.888-3	2.575-2	6.188-2	8.135-1	9.251-1
1.000-0	8.468-0	3.491-2	5.153-2	1.218-3	1.895-0	6.787-3	3.151-2	8.148-2	1.350-2	1.272-0
1.250-0	8.888-0	3.598-2	5.300-2	7.785-4	1.688-0	5.333-3	3.802-2	1.080-1	1.080-1	1.702-0
1.500-0	9.082-0	3.725-2	5.508-2	5.408-4	1.478-0	4.380-3	4.018-2	1.308-1	1.308-1	2.180-0
1.750-0	9.748-0	3.881-2	5.745-2	3.971-4	1.313-0	3.724-3	4.428-2	1.599-1	1.599-1	2.713-0
2.000-0	9.534-0	4.041-2	5.885-2	3.040-4	1.185-0	3.230-3	4.777-2	1.809-1	1.809-1	3.270-0
2.500-0	9.227-0	4.278-2	6.318-2	1.948-4	9.960-0	2.945-3	5.317-2	2.311-1	2.311-1	4.421-0
3.000-0	9.988-0	4.474-2	6.805-2	1.351-4	8.827-0	2.095-3	5.740-2	2.812-1	2.812-1	5.827-0
3.500-0	9.838-0	4.882-2	6.884-2	9.827-5	7.631-1	1.778-3	6.059-2	3.313-1	3.313-1	6.848-0
4.000-0	9.882-0	4.788-2	7.038-2	7.691-5	6.898-1	1.542-3	6.349-2	3.814-1	3.814-1	8.130-0
4.500-0	9.948-0	4.919-2	7.282-2	8.005-5	6.234-1	1.353-3	6.837-2	4.318-1	4.318-1	9.494-0
5.000-0	9.437-0	5.038-2	7.440-2	4.884-5	5.723-1	1.215-3	8.888-2	4.817-1	4.817-1	1.086-1
5.500-0	9.383-0	5.123-2	7.583-2	4.080-5	5.294-1	1.097-3	7.033-2	5.318-1	5.318-1	1.218-1
6.000-0	9.297-0	5.204-2	7.683-2	3.378-5	4.931-1	1.000-3	7.189-2	5.818-1	5.818-1	1.354-1
6.500-0	9.234-0	5.282-2	7.788-2	2.878-5	4.615-1	9.183-4	7.335-2	6.319-1	6.319-1	1.493-1
7.000-0	9.174-0	5.357-2	7.888-2	2.482-5	4.342-1	8.485-4	7.473-2	6.820-1	6.820-1	1.634-1
8.000-0	9.888-0	5.488-2	8.119-2	1.901-5	3.888-1	7.358-4	7.729-2	7.821-1	7.821-1	1.923-1
1.000-2	3.889-0	5.757-2	8.500-2	1.216-5	3.228-1	5.799-4	8.178-2	9.823-1	9.823-1	2.529-1

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Form Factors

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SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
0.000+0	1.000+0	0.000+0	1.250-1	8.738-1	1.289-1	1.000+0	2.683-1	8.188-1	1.000+1	1.773-2	9.919-1
5.000-3	9.994-1	5.841-4	1.500-1	8.425-1	1.506-1	1.250+0	2.177-1	8.884-1	1.500+1	8.144-3	9.986-1
1.000-2	9.989-1	2.231-3	1.750-1	8.130-1	1.743-1	1.500+0	1.773-1	7.428-1	2.000+1	3.872-3	9.997-1
1.500-2	9.989-1	4.989-3	2.000-1	7.845-1	1.974-1	2.000+0	1.371-1	6.172-1	5.000+1	2.001-4	1.000+0
2.000-2	9.946-1	8.839-3	2.500-1	7.287-1	2.414-1	2.500+0	1.115-1	5.055-1	8.000+1	3.851-5	1.000+0
2.500-2	9.916-1	1.319-2	3.000-1	6.789-1	2.823-1	3.000+0	9.012-2	4.285-1	1.000+2	1.762-5	1.000+0
3.000-2	9.881-1	1.842-2	4.000-1	5.895-1	3.584-1	3.500+0	6.871-2	3.215-1	1.000+3	9.464-6	1.000+0
4.000-2	9.794-1	3.040-2	5.000-1	5.215-1	4.174-1	4.000+0	5.853-2	2.374-1	1.000+6	1.430-17	1.000+0
5.000-2	9.694-1	4.344-2	6.000-1	4.650-1	4.671-1	5.000+0	3.818-2	1.588-1	1.000+9	2.532-26	1.000+0
7.000-2	9.451-1	6.825-2	7.000-1	4.143-1	5.100-1	6.000+0	3.092-2	9.888-1			
9.000-2	9.190-1	9.215-2	8.000-1	3.682-1	5.491-1	7.000+0	2.679-2	9.773-1			
1.000-1	9.057-1	1.025-1	9.000-1	3.259-1	5.851-1	8.000+0	2.377-2	9.837-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 91.22		DENSITY 6.499 GRAMS/CC					
ENERGY	TOTAL HP	CROSS SECTION (BARNS)					
MEV	CM CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	MEV/COLLISION
MEV	CM CM/CM/CM	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E. + FLOR
1.000-4	3.264-5	4.780-3	7.841-5	1.089-3	1.812-2	7.230-5	9.982-5
1.250-4	3.505-5	4.397-3	6.660-5	1.083-3	2.818-2	6.850-5	9.982-5
1.500-4	3.753-5	4.107-3	5.221-5	1.082-3	4.041-2	6.210-5	9.982-5
1.750-4	4.192-5	3.878-3	3.989-5	1.082-3	5.473-2	5.598-5	9.982-5
1.803-4	4.263-5	3.998-3	5.451-5	1.081-3	5.804-2	5.440-5	9.982-5
1.817-4	4.269-5	3.947-3	6.251-5	1.081-3	5.893-2	5.240-5	9.982-5
2.000-4	4.937-5	3.184-3	2.491-6	1.081-3	7.117-2	2.490-6	9.982-5
2.500-4	4.782-5	3.218-3	4.871-6	1.058-3	1.097-1	4.870-6	9.982-5
3.000-4	5.250-5	2.932-3	4.441-6	1.058-3	1.583-1	4.440-6	9.982-5
3.744-4	5.933-5	2.989-3	3.381-6	1.059-3	1.919-1	3.920-6	9.982-5
3.758-4	5.233-5	2.945-3	4.461-6	1.059-3	1.334-1	4.460-6	9.982-5
3.500-4	5.494-5	2.805-3	4.245-6	1.053-3	2.091-1	4.248-6	9.982-5
4.000-4	6.429-5	2.397-3	3.631-6	1.050-3	2.691-1	3.630-6	9.982-5
4.296-4	7.225-5	2.233-3	3.231-6	1.048-3	3.085-1	3.230-6	9.982-5
4.310-4	6.804-5	2.205-3	3.431-6	1.048-3	3.084-1	3.430-6	9.982-5
4.500-4	7.349-5	2.097-3	3.178-6	1.048-3	3.336-1	3.175-6	9.982-5
5.000-4	8.072-5	1.737-3	2.631-6	1.043-3	4.043-1	2.630-6	9.982-5
5.500-4	1.063-5	1.449-3	2.195-6	1.039-3	4.775-1	2.194-6	9.982-5
6.000-4	1.294-5	1.259-3	1.861-6	1.034-3	5.559-1	1.860-6	9.982-5
6.500-4	1.478-5	1.044-3	1.582-6	1.029-3	6.331-1	1.581-6	9.982-5
7.000-4	1.719-5	8.985-3	1.381-6	1.023-3	7.142-1	1.380-6	9.982-5
8.000-4	2.284-5	6.897-3	1.031-6	1.014-3	9.873-1	1.030-6	9.982-5
9.000-4	2.936-5	5.248-3	7.950-5	1.001-3	1.054-0	7.940-5	9.982-5
1.000-3	3.357-5	4.391-3	6.994-5	9.905-2	1.229-0	6.994-5	9.982-5
1.250-3	5.861-5	2.629-3	3.983-5	9.946-2	1.620-0	3.973-5	9.982-5
1.500-3	9.236-5	1.688-3	2.527-5	9.283-2	2.031-0	2.518-5	9.982-5
1.750-3	1.356-4	1.138-3	1.721-5	9.816-2	2.391-0	1.712-5	9.982-5
2.000-3	1.891-4	8.151-2	1.235-5	9.625-2	2.794-0	1.226-5	9.982-5
2.222-3	2.456-4	6.274-2	9.503-4	9.310-2	3.052-0	9.420-4	9.982-5
2.223-3	2.218-4	6.278-2	3.794-5	9.308-2	3.053-0	3.748-5	9.982-5
2.308-3	6.823-5	2.298-3	3.421-5	8.201-2	3.184-0	3.413-5	9.982-5
2.307-3	4.848-5	3.178-3	4.815-5	8.200-2	3.188-0	4.807-5	9.982-5
2.500-3	5.947-5	2.991-3	3.925-5	7.970-2	3.424-0	3.917-5	9.982-5
2.531-3	8.137-5	2.511-3	3.804-5	7.935-2	3.485-0	3.788-5	9.982-5
2.538-3	5.697-5	2.909-3	4.407-5	7.934-2	3.487-0	4.398-5	9.982-5
3.000-3	6.188-5	1.883-3	2.828-5	7.971-2	4.000-0	2.844-5	9.982-5
3.500-3	1.253-4	1.280-3	1.908-5	8.889-2	4.888-0	1.901-5	9.982-5
4.000-3	1.732-4	8.898-2	1.348-5	8.488-2	5.300-0	1.341-5	9.982-5
4.500-3	2.387-4	6.511-2	9.883-2	6.040-2	5.828-0	9.882-2	9.982-5
5.000-3	3.126-4	4.965-2	7.462-2	5.887-2	6.402-0	7.405-4	9.982-5
5.500-3	4.038-4	3.816-2	5.780-2	5.305-2	6.907-0	5.727-4	9.982-5
6.000-3	5.097-4	3.023-2	4.980-2	4.988-2	7.401-0	4.529-4	9.982-5
6.500-3	6.335-4	2.433-2	3.885-2	4.689-2	7.836-0	3.637-4	9.982-5
7.000-3	7.746-4	1.990-2	3.014-2	4.422-2	8.280-0	2.989-4	9.982-5
8.000-3	1.112-3	1.388-2	2.100-4	3.978-2	9.085-0	2.099-4	9.982-5
1.000-2	2.051-3	7.518-1	1.138-4	3.238-2	1.043-1	1.105-4	9.982-5
1.250-2	3.813-3	4.041-1	8.121-1	2.505-2	1.176-1	5.899-3	9.982-5
1.500-2	6.360-3	2.448-1	3.705-3	2.032-2	1.297-1	3.488-3	9.982-5
1.750-2	9.881-3	1.592-1	2.411-3	1.623-2	1.388-1	2.832-3	9.982-5
1.800-2	1.046-2	1.473-1	2.231-3	1.592-2	1.408-1	2.058-3	9.982-5
1.800-2	1.680-3	9.284-1	1.408-4	1.592-2	1.407-1	1.388-4	9.982-5
2.000-2	2.153-3	7.158-1	1.094-4	1.388-2	1.474-1	1.089-4	9.982-5
2.500-2	3.840-3	4.013-1	6.878-1	1.008-2	1.595-1	5.982-3	9.982-5
3.000-2	6.151-3	2.505-1	3.798-3	7.782-1	1.682-1	3.700-3	9.982-5
3.500-2	9.382-3	1.848-1	2.493-3	5.173-1	1.757-1	2.414-3	9.982-5
4.000-2	1.344-2	1.148-1	1.738-3	5.045-1	1.788-1	1.688-3	9.982-5
4.500-2	1.885-2	8.282-0	1.252-3	4.187-1	1.811-1	1.182-3	9.982-5
5.000-2	2.485-2	6.177-0	9.357-0	3.512-1	1.835-1	6.882-2	9.982-5
5.500-2	3.258-2	4.734-0	7.178-0	2.982-1	1.844-1	8.887-2	9.982-5
6.000-2	4.142-2	3.721-0	5.638-0	2.595-1	1.882-1	5.182-2	9.982-5
6.500-2	5.178-2	2.877-0	4.518-0	2.230-1	1.844-1	4.188-2	9.982-5
7.000-2	6.398-2	2.466-0	3.677-0	1.879-1	1.844-1	3.285-2	9.982-5
8.000-2	9.188-2	1.682-0	2.983-0	1.578-1	1.840-1	2.222-2	9.982-5
9.982-5	9.982-5	9.982-5	2.493-10	3.097-0	9.982-5	9.982-5	9.982-5
1.248-4	1.248-4	3.894-10	3.961-0	1.497-4	1.497-4	5.806-10	3.990-0
1.747-4	1.747-4	7.627-10	4.167-0	1.799-4	1.799-4	8.095-10	4.202-0
1.815-4	1.815-4	8.232-10	5.414-0	1.999-4	1.999-4	9.991-10	2.133-1
2.499-4	2.499-4	1.562-9	5.216-1	2.999-4	2.999-4	2.849-9	5.706-1
3.343-4	3.343-4	2.794-9	5.618-1	3.357-4	3.357-4	2.818-9	6.418-1
3.499-4	3.499-4	3.061-9	6.389-1	3.999-4	3.999-4	3.998-9	6.820-1
4.295-4	4.295-4	4.811-9	5.944-1	4.309-4	4.309-4	4.841-9	6.333-1
4.499-4	4.499-4	5.059-9	8.121-1	4.998-4	4.998-4	6.245-9	5.633-1
5.497-4	5.497-4	7.555-9	5.170-1	5.997-4	5.997-4	8.990-9	4.781-1
6.496-4	6.496-4	1.055-8	4.402-1	6.995-4	6.995-4	1.223-8	4.078-1
7.992-4	7.992-4	1.597-8	3.530-1	8.989-4	8.989-4	2.020-8	3.081-1
9.982-4	9.982-4	2.935-8	2.975-1	1.247-3	1.247-3	3.887-8	2.188-1
1.494-3	1.494-3	5.584-8	1.818-1	1.741-3	1.741-3	7.577-8	1.284-1
1.986-3	1.986-3	9.860-8	1.050-1	2.203-3	2.203-3	1.213-7	9.987-0
2.818-3	2.818-3	1.178-7	3.483-1	2.303-3	2.303-3	1.283-7	3.295-1
2.303-3	2.303-3	1.288-7	4.642-1	2.485-3	2.485-3	1.491-7	4.107-1
2.526-3	2.526-3	1.529-7	4.030-1	2.527-3	2.527-3	1.531-7	4.872-1
2.848-3	2.848-3	2.180-7	3.591-1	3.487-3	3.487-3	2.948-7	2.807-1
3.981-3	3.981-3	3.857-7	2.288-1	4.472-3	4.472-3	4.883-7	1.867-1
4.982-3	4.982-3	8.025-7	1.569-1	5.449-3	5.449-3	7.290-7	1.338-1
5.934-3	5.934-3	6.847-7	1.194-1	6.418-3	6.418-3	1.012-8	1.005-1
6.895-3	6.895-3	1.171-8	8.835-0	7.845-3	7.845-3	1.518-8	7.010-0
9.707-3	9.707-3	2.330-8	4.709-0	1.197-2	1.197-2	3.548-8	3.124-0
1.413-2	1.413-2	6.922-6	2.234-0	1.620-2	1.620-2	6.849-8	1.582-0
1.778-2	1.778-2	1.957-6	4.795-0	1.972-2	1.972-2	2.428-8	4.577-0
2.452-2	2.452-2	6.406-6	3.830-0	2.928-2	2.928-2	5.903-6	3.170-0
3.381-2	3.381-2	1.485-5	2.987-0	3.848-2	3.848-2	2.078-5	2.145-0
4.280-2	4.280-2	2.788-5	1.789-0	4.783-2	4.783-2	3.388-5	1.515-0
5.143-2	5.143-2	4.425-5	1.293-0	5.948-2	5.948-2	5.343-5	1.117-0
6.098-2	6.098-2	8.313-5	9.714-0	6.938-2	6.938-2	7.581-5	9.538-0
7.067-2	7.067-2	9.939-5	8.741-0				

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ENCL Evaluated Photon Data

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ATOMIC WEIGHT 91.22							DENSITY 6.489 GRAMS/CC			
ENERGY	TOTAL HPF		CROSS SECTION (BARNS)				MEV/COLLISION		MEV/CM	
KEV	CN	CH/CM/ON	TOTAL	COHERENT	INCOHERENT	PHOTOL PAIR PROD	K.E./FLOR	K.E. SPECTRSTR	K.E.	
1.000	1.632	9.444	1.430	1.062	1.803	1.144	8.181	7.380	4.523	
1.250	2.800	5.503	8.336	7.058	1.736	5.890	9.298	8.581	3.057	
1.500	4.125	3.709	5.618	5.107	1.683	3.424	9.988	9.378	2.257	
1.750	5.584	2.760	4.181	3.629	1.621	2.177	1.051	9.977	1.788	
2.000	6.994	2.203	3.337	2.893	1.589	1.470	1.090	1.048	4.925	
2.500	9.578	1.609	2.437	1.948	1.485	7.788	1.172	1.140	3.190	
3.000	1.176	1.310	1.884	1.375	1.386	4.611	1.272	1.248	4.061	
3.500	1.361	1.133	1.718	1.020	1.311	3.022	1.405	1.387	4.792	
4.000	1.517	1.016	1.539	7.871	1.250	2.098	1.583	1.550	5.980	
4.500	1.655	9.311	1.410	6.252	1.194	1.538	1.745	1.735	7.489	
5.000	1.777	8.871	1.313	5.087	1.148	1.188	1.946	1.937	9.338	
5.500	1.888	8.158	1.235	4.218	1.102	9.188	2.162	2.154	1.154	
6.000	1.992	7.738	1.172	3.555	1.063	7.381	2.390	2.384	1.137	
6.500	2.090	7.374	1.117	3.034	1.026	6.083	2.628	2.622	1.708	
7.000	2.182	7.069	1.070	2.621	9.927	5.099	2.875	2.870	2.044	
8.000	2.350	6.557	9.932	2.013	9.399	3.710	3.394	3.390	2.849	
1.000	2.698	5.798	8.782	1.292	8.426	2.287	4.494	4.492	4.988	
1.250	2.889	5.730	8.679	1.236	8.338	2.179	4.620	4.618	5.271	
1.500	3.001	5.135	7.778	8.250	7.942	1.512	5.981	5.959	8.748	
1.750	3.248	4.695	7.112	5.781	6.858	1.086	7.457	7.455	1.384	
2.000	3.518	4.360	6.635	4.237	6.309	8.135	9.008	9.007	2.870	
2.500	3.781	4.141	6.273	3.245	5.858	6.438	3.803	1.083	2.750	
3.000	3.758	4.103	6.215	3.107	5.784	8.217	3.375	1.092	2.901	
3.500	4.033	3.820	5.788	2.078	5.145	4.544	5.741	1.408	4.773	
4.000	4.238	3.638	5.510	1.444	4.610	3.479	6.515	1.774	7.537	
4.500	4.382	3.517	5.327	1.081	4.188	2.823	7.101	2.164	4.111	
5.000	4.473	3.445	5.219	0.824	3.848	2.358	7.341	2.572	5.573	
5.500	4.525	3.408	5.159	0.619	3.582	2.001	7.571	2.998	6.990	
6.000	4.562	3.378	5.117	0.500	3.382	1.748	7.793	3.434	8.719	
6.500	4.607	3.345	5.086	0.428	3.115	1.550	8.015	3.877	10.441	
7.000	4.630	3.328	5.042	0.381	2.938	1.393	8.248	4.328	12.250	
7.500	4.634	3.326	5.038	0.378	2.778	1.282	8.478	4.788	15.121	
8.000	4.621	3.325	5.051	0.389	2.639	1.152	8.708	5.258	18.105	
9.000	4.581	3.278	5.118	0.432	2.482	0.981	9.204	6.208	23.440	
1.000	4.534	3.240	5.282	0.500	2.304	0.749	9.700	6.180	30.301	
1.250	4.487	3.204	5.523	0.584	2.138	0.580	10.181	6.681	38.281	
1.500	4.089	3.787	5.738	0.780	1.914	0.483	10.661	7.207	47.400	
1.750	3.883	3.959	5.997	0.946	1.747	0.391	11.141	7.740	57.740	
2.000	3.747	4.113	6.231	1.091	1.615	0.348	11.621	8.281	69.740	
2.500	3.538	4.398	6.502	1.280	1.422	0.295	12.101	8.821	83.400	
3.000	3.378	4.581	6.808	1.445	1.240	0.261	12.581	9.361	98.740	
3.500	3.269	4.714	7.140	1.581	1.081	0.222	13.061	9.901	115.740	
4.000	3.170	4.882	7.505	1.687	0.932	0.189	13.541	10.441	134.400	
4.500	3.071	5.019	7.898	1.763	0.793	0.158	14.021	10.981	154.740	
5.000	2.987	5.142	8.319	1.809	0.669	0.134	14.501	11.521	176.740	
5.500	2.947	5.289	8.780	1.828	0.540	0.105	14.981	12.061	200.400	
6.000	2.981	5.312	9.285	1.812	0.457	0.088	15.461	12.601	225.740	
6.500	2.998	5.391	9.836	1.768	0.378	0.074	15.941	13.141	252.740	
7.000	2.918	5.488	10.433	1.694	0.312	0.063	16.421	13.681	281.400	
7.500	2.745	5.614	11.074	1.584	0.263	0.054	16.901	14.221	311.740	
8.000	2.622	5.678	11.758	1.430	0.231	0.048	17.381	14.761	343.740	
8.500	2.450	5.740	12.485	1.240	0.205	0.043	17.861	15.301	377.400	
9.000	2.238	5.798	13.256	1.020	0.184	0.039	18.341	15.841	412.740	
9.500	2.000	5.850	14.071	0.780	0.168	0.036	18.821	16.381	449.740	

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Form Factors

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SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	8.749-1	1.288-1	1.000+0	2.944-1	6.148-1	1.000+1	1.794-2	9.913-1
5.000-3	9.998-1	5.230-4	1.500-1	8.430-1	1.505-1	1.250+0	2.222-1	8.837-1	1.500+1	8.484-3	9.985-1
1.000-2	9.998-1	2.075-3	1.750-1	8.184-1	1.740-1	1.500+0	1.787-1	7.379-1	2.000+1	4.080-3	9.987-1
1.500-2	9.971-1	4.808-3	2.000-1	7.851-1	1.970-1	2.000+0	1.305-1	6.130-1	5.000+1	2.188-4	1.000+0
2.000-2	9.949-1	8.045-3	2.500-1	7.270-1	2.405-1	2.500+0	1.119-1	5.618-1	8.000+1	4.208-5	1.000+0
2.500-2	9.921-1	1.228-2	3.000-1	6.752-1	2.809-1	3.000+0	9.113-2	5.928-1	1.000+2	1.931-5	1.000+0
3.000-2	9.887-1	1.723-2	4.000-1	5.880-1	3.944-1	3.500+0	7.035-2	9.193-1	1.000+3	1.084-8	1.000+0
4.000-2	9.805-1	2.687-2	5.000-1	5.202-1	4.184-1	4.000+0	5.978-2	9.357-1	1.000+6	1.885-17	1.000+0
5.000-2	9.708-1	4.135-2	8.000-1	4.854-1	4.888-1	5.000+0	3.885-2	9.558-1	1.000+9	3.039-28	1.000+0
7.000-2	9.472-1	6.720-2	7.000-1	4.172-1	5.093-1	6.000+0	3.098-2	9.679-1			
9.000-2	9.212-1	9.083-2	8.000-1	3.728-1	5.474-1	7.000+0	2.675-2	9.785-1			
1.000-1	9.078-1	1.018-1	9.000-1	3.318-1	5.823-1	8.000+0	2.381-2	9.830-1

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ENDL Evaluated Photon Cross Sections

41-Nb

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Energy Deposition

41-Nb

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ENDL Evaluated Photon Data

41-Nb

ATOMIC WEIGHT 92.906				DENSITY 8.57 GRAMS/CC			
ENERGY MEV	TOTAL HP		CROSS SECTION (BARN)				NEUTRON K.E.
	CM	CM/CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOL PAIR PROD	
1.000-4	2.305-5	5.063-3	7.811-5	1.118-3	1.474-2	7.800-5	9.986-5
1.250-4	2.378-5	4.919-3	7.988-5	1.117-3	2.300-2	7.977-5	1.248-4
1.500-4	2.459-5	4.804-3	7.911-5	1.116-3	3.308-2	7.400-5	1.498-4
1.750-4	2.678-5	4.366-3	6.738-5	1.116-3	4.487-2	6.725-5	1.747-4
2.000-4	2.903-5	4.080-3	6.201-5	1.115-3	5.844-2	6.190-5	1.998-4
2.050-4	2.985-5	3.935-3	6.071-5	1.115-3	6.132-2	6.060-5	2.046-4
2.084-4	2.115-5	5.517-3	6.511-5	1.115-3	6.214-2	6.500-5	2.081-4
2.500-4	4.118-8	2.633-4	4.371-6	1.113-3	9.028-2	4.370-6	2.498-4
3.000-4	3.013-6	3.080-4	4.721-6	1.111-3	1.288-1	4.720-6	2.999-4
3.500-4	4.496-6	2.595-4	4.004-6	1.108-3	1.728-1	4.002-6	3.499-4
3.674-4	4.736-6	2.484-4	3.801-6	1.107-3	1.893-1	3.800-6	3.673-4
3.888-4	4.118-6	2.833-4	4.371-6	1.107-3	1.907-1	4.370-6	3.887-4
4.000-4	4.486-6	2.613-4	4.031-6	1.106-3	2.223-1	4.030-6	4.099-4
4.500-4	5.408-6	2.189-4	3.332-6	1.102-3	2.783-1	3.331-6	4.499-4
4.677-4	5.749-6	2.030-4	3.131-6	1.101-3	2.999-1	3.130-6	4.675-4
4.891-4	5.437-6	2.148-4	3.311-6	1.101-3	2.985-1	3.310-6	4.889-4
5.000-4	6.079-6	1.919-4	2.981-6	1.099-3	3.358-1	2.980-6	4.998-4
5.500-4	7.274-6	1.604-4	2.475-6	1.093-3	3.978-1	2.474-6	5.498-4
6.000-4	8.588-6	1.362-4	2.101-6	1.091-3	4.843-1	2.100-6	5.997-4
6.500-4	1.010-5	1.158-4	1.783-6	1.086-3	5.307-1	1.782-6	6.452-4
7.000-4	1.176-5	9.984-4	1.531-6	1.081-3	6.007-1	1.530-6	6.995-4
8.000-4	1.950-5	7.526-4	1.181-6	1.072-3	7.510-1	1.180-6	7.993-4
9.000-4	2.009-5	5.608-4	8.981-6	1.060-3	8.993-1	8.990-6	8.999-4
1.000-3	2.380-5	4.944-3	7.828-5	1.050-3	1.057-0	7.817-5	9.986-4
1.250-3	4.180-5	2.832-3	4.388-5	1.019-3	1.448-0	4.378-5	1.247-3
1.500-3	6.448-5	1.797-3	2.773-5	9.886-3	1.881-0	2.763-5	1.495-3
1.750-3	9.934-5	1.282-3	1.688-5	9.505-3	2.188-0	1.678-5	1.741-3
2.000-3	1.329-4	4.778-2	1.329-5	9.203-3	2.552-0	1.345-5	1.988-3
2.370-3	2.088-4	5.780-2	8.888-4	8.854-3	3.058-0	8.788-4	2.347-3
2.371-3	5.408-5	2.158-3	3.330-5	8.854-3	3.058-0	3.321-5	2.383-3
2.404-3	5.938-5	1.985-3	3.036-5	8.532-3	3.187-0	3.023-5	2.457-3
2.485-3	4.219-5	2.788-3	4.267-5	8.531-3	3.188-0	4.258-5	2.484-3
2.500-3	4.388-5	2.671-3	4.121-5	8.488-3	3.237-0	4.113-5	2.495-3
2.897-3	5.263-5	2.817-3	3.420-5	8.288-3	3.508-0	3.418-5	2.890-3
2.898-3	4.943-5	2.988-3	3.588-5	8.257-3	3.511-0	3.594-5	2.898-3
3.000-3	5.812-5	1.974-3	3.045-5	7.945-3	3.831-0	3.037-5	2.898-3
3.980-3	8.742-5	1.375-3	2.659-5	7.348-3	4.583-0	2.638-5	3.487-3
4.000-3	1.886-4	9.515-2	1.488-5	6.884-3	5.193-0	1.461-5	3.981-3
4.500-3	1.888-4	7.004-2	1.881-5	6.380-3	5.773-0	1.874-5	4.473-3
5.000-3	2.188-4	5.327-2	2.218-5	5.878-3	6.351-0	2.158-5	4.963-3
5.500-3	2.680-4	4.137-2	2.782-5	5.388-3	6.881-0	2.738-5	5.451-3
6.000-3	3.352-4	3.895-2	3.688-5	4.858-3	7.404-0	3.615-5	5.937-3
6.500-3	4.412-4	2.845-2	4.888-5	4.334-3	7.881-0	4.030-5	6.420-3
7.008-3	5.392-4	2.184-2	5.338-5	4.852-3	8.310-0	3.291-5	6.901-3
8.004-3	7.733-4	1.508-2	7.388-5	4.184-3	9.183-0	2.805-5	7.693-3
1.000-2	1.431-3	6.155-1	1.238-4	3.412-2	1.880-1	1.223-4	9.721-3
1.250-2	2.888-3	4.341-1	6.877-3	2.898-2	1.198-1	6.420-3	1.198-2
1.500-2	4.477-3	2.888-1	4.881-3	2.158-2	1.321-1	3.792-3	1.415-2
1.750-2	6.988-3	1.677-1	2.587-3	1.725-2	1.414-1	2.397-3	1.682-2
1.888-2	8.788-3	1.331-1	2.923-3	1.574-2	1.487-1	1.881-3	1.740-2
1.889-2	1.328-3	8.797-1	1.357-4	1.374-2	1.487-1	1.348-4	1.875-2
2.000-2	1.518-3	7.728-1	1.184-4	1.488-2	1.381-1	1.178-4	1.973-2
2.500-2	2.883-3	4.332-1	6.883-3	1.078-2	1.615-1	6.588-3	2.439-2
3.000-2	4.315-3	2.784-1	4.178-3	8.288-1	1.715-1	4.672-3	2.929-2
3.500-2	6.592-3	1.781-1	2.748-3	6.595-1	1.772-1	2.684-3	3.395-2
4.000-2	9.381-3	1.242-1	1.917-3	5.381-1	1.822-1	1.842-3	3.893-2
4.500-2	1.388-2	8.978-0	1.388-3	4.431-1	1.849-1	1.388-3	4.381-2
5.000-2	1.738-2	8.788-0	1.638-3	3.738-1	1.873-1	9.618-2	4.738-2
5.500-2	2.258-2	9.188-0	2.588-3	3.188-1	1.883-1	7.482-2	5.183-2
6.000-2	2.588-2	4.887-0	6.274-2	2.732-1	1.882-1	5.018-2	5.574-2
6.500-2	3.888-2	3.888-0	5.888-2	2.388-1	1.882-1	4.881-2	5.978-2
7.000-2	4.388-2	2.881-0	4.188-2	2.187-1	1.887-1	3.788-2	6.388-2
8.000-2	6.288-2	1.888-0	2.888-2	1.678-1	1.882-1	2.511-2	7.674-2
9.986-5	9.986-5	2.995-10	4.353-0				
1.248-4	1.248-4	3.982-10	5.282-0				
1.498-4	1.498-4	5.748-10	6.188-0				
1.747-4	1.747-4	7.822-10	8.337-0				
1.998-4	1.998-4	1.021-9	8.877-0				
2.046-4	2.046-4	1.073-9	8.901-0				
2.081-4	2.081-4	1.089-9	9.748-0				
2.498-4	2.498-4	1.601-9	6.089-1				
2.999-4	2.999-4	2.305-9	7.888-1				
3.499-4	3.499-4	3.137-9	7.788-1				
3.673-4	3.673-4	3.457-9	7.758-1				
3.887-4	3.887-4	3.484-9	8.953-1				
4.099-4	4.099-4	4.088-9	8.999-1				
4.499-4	4.499-4	5.188-9	8.328-1				
4.675-4	4.675-4	5.601-9	8.132-1				
4.889-4	4.889-4	5.635-9	8.828-1				
4.998-4	4.998-4	6.401-9	8.222-1				
5.498-4	5.498-4	7.745-9	7.536-1				
5.997-4	5.997-4	9.215-9	6.999-1				
6.452-4	6.452-4	1.081-8	6.433-1				
6.995-4	6.995-4	1.254-8	5.949-1				
7.993-4	7.993-4	1.837-8	5.195-1				
8.999-4	8.999-4	2.071-8	4.475-1				
9.986-4	9.986-4	2.923-8	4.231-1				
1.247-3	1.247-3	3.985-8	3.027-1				
1.495-3	1.495-3	5.784-8	2.302-1				
1.741-3	1.741-3	7.788-8	1.884-1				
1.988-3	1.988-3	1.011-7	1.484-1				
2.347-3	2.347-3	1.411-7	1.198-1				
2.383-3	2.383-3	1.358-7	4.298-1				
2.457-3	2.457-3	1.488-7	4.033-1				
2.484-3	2.484-3	1.473-7	5.888-1				
2.495-3	2.495-3	1.518-7	5.988-1				
2.890-3	2.890-3	1.770-7	4.893-1				
2.898-3	2.898-3	1.778-7	5.788-1				
2.898-3	2.898-3	2.188-7	4.893-1				
3.487-3	3.487-3	3.008-7	3.918-1				
3.981-3	3.981-3	3.932-7	3.188-1				
4.473-3	4.473-3	4.982-7	2.848-1				
4.963-3	4.963-3	6.139-7	2.838-1				
5.451-3	5.451-3	7.441-7	1.811-1				
5.937-3	5.937-3	8.843-7	1.024-1				
6.420-3	6.420-3	1.038-6	1.441-1				
6.901-3	6.901-3	1.188-6	1.288-1				
7.693-3	7.693-3	1.922-6	1.808-1				
9.721-3	9.721-3	2.398-6	6.751-0				
1.198-2	1.198-2	3.642-6	4.438-0				
1.415-2	1.415-2	5.885-6	3.147-0				
1.682-2	1.682-2	8.881-6	2.388-0				
1.740-2	1.740-2	7.783-6	1.978-0				
1.875-2	1.875-2	1.628-6	8.014-0				
1.973-2	1.973-2	2.881-6	2.940-0				
2.439-2	2.439-2	4.384-6	2.137-0				
2.929-2	2.929-2	6.282-6	3.288-0				
3.395-2	3.395-2	1.488-5	3.588-0				
3.893-2	3.893-2	2.812-5	2.888-0				
4.381-2	4.381-2	2.788-5	2.988-0				
4.738-2	4.738-2	3.518-5	2.138-0				
5.183-2	5.183-2	4.388-5	1.833-0				
5.574-2	5.574-2	5.232-5	1.981-0				
5.978-2	5.978-2	6.333-5	1.988-0				
6.388-2	6.388-2	7.388-5	1.255-0				
7.674-2	7.674-2	9.777-5	9.748-0				

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Form Factors

41-Nb

SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT								
I/A						I/A						I/A						I/A						I/A					
0.000+0	1.000+0	0.000+0	1.250-1	8.839-1	1.152-1	1.000+0	3.003-1	8.118-1	1.000+1	1.812-2	9.908-1	1.500+1	8.777-3	9.987-1	2.000+1	4.269-3	9.986-1	2.500+1	2.345+4	1.000+0	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0			
5.000-3	9.998-1	4.148-4	1.500-1	8.509-1	1.399-1	1.250+0	2.271-1	6.795-1	1.500+1	4.269-3	9.986-1	2.000+1	4.269-3	9.986-1	2.500+1	2.345+4	1.000+0	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0			
1.000-2	9.998-1	1.639-3	1.750-1	8.185-1	1.640-1	1.500+0	1.807-1	5.333-1	2.000+1	4.269-3	9.986-1	2.500+1	2.345+4	1.000+0	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0			
1.500-2	9.975-1	3.688-3	2.000-1	7.870-1	1.874-1	2.000+0	1.380-1	4.090-1	2.500+1	2.345+4	1.000+0	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0			
2.000-2	9.950-1	6.488-3	2.500-1	7.272-1	2.319-1	2.500+0	1.120-1	3.582-1	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0			
2.500-2	9.932-1	9.905-3	3.000-1	6.733-1	2.735-1	3.000+0	9.195-2	3.267-1	3.500+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0	1.000+2	2.112-5	1.000+0			
3.000-2	9.903-1	1.363-2	4.000-1	5.849-1	3.492-1	3.500+0	7.186-2	2.170-1	4.000+1	1.812-2	9.908-1	1.500+1	8.777-3	9.987-1	2.000+1	4.269-3	9.986-1	2.500+1	2.345+4	1.000+0	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0			
4.000-2	9.832-1	2.338-2	5.000-1	5.181-1	4.134-1	4.000+0	6.058-2	1.939-1	5.000+1	1.812-2	9.908-1	1.500+1	8.777-3	9.987-1	2.000+1	4.269-3	9.986-1	2.500+1	2.345+4	1.000+0	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0			
5.000-2	9.748-1	3.408-2	6.000-1	4.652-1	4.654-1	5.000+0	5.521-2	1.957-1	6.000+1	1.812-2	9.908-1	1.500+1	8.777-3	9.987-1	2.000+1	4.269-3	9.986-1	2.500+1	2.345+4	1.000+0	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0			
7.000-2	9.535-1	5.671-2	7.000-1	4.192-1	5.084-1	6.000+0	3.104-2	1.870-1	7.000+1	1.812-2	9.908-1	1.500+1	8.777-3	9.987-1	2.000+1	4.269-3	9.986-1	2.500+1	2.345+4	1.000+0	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0			
9.000-2	9.294-1	7.882-2	8.000-1	3.788-1	5.480-1	7.000+0	2.671-2	1.757-1	8.000+1	1.812-2	9.908-1	1.500+1	8.777-3	9.987-1	2.000+1	4.269-3	9.986-1	2.500+1	2.345+4	1.000+0	3.000+1	4.586-5	1.000+0	1.000+2	2.112-5	1.000+0			
1.000-1	9.105-1	8.958-2	9.000-1	3.389-1	5.802-1	8.000+0	2.385-2	1.682-1

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ENDL Evaluated Photon Cross Sections

42-Mo

12/07/78

Energy Deposition

42-Me

12/07/78

ENDL Evaluated Photon Data

42-Mo

ATOMIC WEIGHT 95.94			CROSS SECTION (BARNS)					DENSITY 10.22 GRAMS/CC			
ENERGY	TOTAL NFP		TOTAL		COHERENT		INCOHERENT		PHOTOEL PAIR PROD		NEV/CH
NEV	CM	CM/CH/ON	CM	CM/CH/ON	CM	CM/CH/ON	CM	CM/CH/ON	CM	CM/CH/ON	CM
1.000-4	1.953-5	5.018-3	7.982-5	1.173-3	1.400-2	7.970-5	9.995-5	9.995-5	2.617-10	5.113-0	5.113-0
1.250-4	1.932-5	5.005-3	8.089-5	1.172-3	2.188-2	8.098-5	1.248-4	1.248-4	4.030-10	6.481-0	6.481-0
1.500-4	1.915-5	5.111-3	8.142-5	1.172-3	3.151-2	8.130-5	1.498-4	1.498-4	5.888-10	7.823-0	7.823-0
1.750-4	2.086-5	4.735-3	7.944-5	1.171-3	4.289-2	7.932-5	1.747-4	1.747-4	8.014-10	8.458-0	8.458-0
2.000-4	2.207-5	4.433-3	7.082-5	1.170-3	5.594-2	7.050-5	1.987-4	1.987-4	1.047-9	9.045-0	9.045-0
2.276-4	2.458-5	3.981-3	6.342-5	1.169-3	7.147-2	6.330-5	2.272-4	2.272-4	1.395-9	9.242-0	9.242-0
2.290-4	1.042-6	5.311-3	6.482-5	1.169-3	7.233-2	6.450-5	2.287-4	2.287-4	1.373-9	1.241-1	1.241-1
2.500-4	7.882-6	1.382-4	2.201-6	1.168-3	8.584-2	2.200-6	2.498-4	2.498-4	1.839-9	3.528-1	3.528-1
3.000-4	3.323-6	2.945-4	4.881-6	1.166-3	1.223-1	4.880-6	2.998-4	2.998-4	2.381-9	9.026-1	9.026-1
3.500-4	3.853-6	2.539-4	4.846-6	1.164-3	1.694-1	4.845-6	3.488-4	3.488-4	3.214-9	9.081-1	9.081-1
3.774-4	3.353-6	2.249-4	3.281-6	1.161-3	2.095-1	3.280-6	3.973-4	3.973-4	4.143-9	9.127-1	9.127-1
3.988-4	3.801-6	2.571-4	4.101-6	1.161-3	2.109-1	4.100-6	3.987-4	3.987-4	4.178-9	1.049-2	1.049-2
4.000-4	3.792-6	2.581-4	4.111-6	1.161-3	2.121-1	4.110-6	3.999-4	3.999-4	4.198-9	1.025-2	1.025-2
4.500-4	4.477-6	2.188-4	3.482-6	1.158-3	2.639-1	3.481-6	4.498-4	4.498-4	5.312-9	1.005-2	1.005-2
5.000-4	5.194-6	1.689-4	3.001-6	1.154-3	3.209-1	3.000-6	4.998-4	4.998-4	6.557-9	9.623-1	9.623-1
5.039-4	5.204-6	1.695-4	2.881-6	1.154-3	3.294-1	2.960-6	5.037-4	5.037-4	6.600-9	9.598-1	9.598-1
5.053-4	4.978-6	1.985-4	2.131-6	1.154-3	3.270-1	3.130-6	5.051-4	5.051-4	6.697-9	1.015-2	1.015-2
5.500-4	5.833-6	1.677-4	2.672-6	1.150-3	3.808-1	2.671-6	5.498-4	5.498-4	7.934-9	9.425-1	9.425-1
6.000-4	6.884-6	1.425-4	2.271-6	1.146-3	4.449-1	2.270-6	5.997-4	5.997-4	9.440-9	8.737-1	8.737-1
6.500-4	8.049-6	1.218-4	1.937-6	1.141-3	5.095-1	1.936-6	6.496-4	6.496-4	1.108-8	8.071-1	8.071-1
7.000-4	9.328-6	1.049-4	1.671-6	1.136-3	5.777-1	1.670-6	6.995-4	6.995-4	1.284-8	7.499-1	7.499-1
8.000-4	1.226-5	7.979-3	1.271-6	1.127-3	7.243-1	1.270-6	7.993-4	7.993-4	1.677-8	6.518-1	6.518-1
9.000-4	1.588-5	6.171-3	9.831-6	1.116-3	8.705-1	9.820-6	8.990-4	8.990-4	2.121-8	5.870-1	5.870-1
1.000-3	1.884-5	5.383-3	8.944-6	1.105-3	1.028-0	8.933-6	9.987-4	9.987-4	2.618-8	5.474-1	5.474-1
1.250-3	3.173-5	3.083-3	4.912-6	1.089-3	1.394-0	4.901-6	1.247-3	1.247-3	4.084-8	3.930-1	3.930-1
1.500-3	4.986-5	1.982-3	3.125-6	1.040-3	1.798-0	3.116-6	1.495-3	1.495-3	5.867-8	2.998-1	2.998-1
1.750-3	7.304-5	1.340-3	2.134-6	1.003-3	2.196-0	2.124-6	1.742-3	1.742-3	7.983-8	2.385-1	2.385-1
2.000-3	1.018-4	9.627-2	1.534-6	9.714-2	2.530-0	1.524-6	1.987-3	1.987-3	1.037-7	1.925-1	1.925-1
2.500-3	1.782-4	5.952-2	8.845-6	8.929-2	3.221-0	8.795-6	2.475-3	2.475-3	1.807-7	1.404-1	1.404-1
2.519-3	1.798-4	5.448-2	8.882-6	8.935-2	3.247-0	8.598-6	2.493-3	2.493-3	1.831-7	1.388-1	1.388-1
2.520-3	4.922-5	1.888-3	3.167-6	8.933-2	3.249-0	3.198-6	2.513-3	2.513-3	1.582-7	4.958-1	4.958-1
3.524-3	5.441-5	1.798-3	2.885-6	8.803-2	3.394-0	2.898-6	2.816-3	2.816-3	1.897-7	4.672-1	4.672-1
2.825-3	3.888-5	2.531-3	4.032-6	8.802-2	3.395-0	4.023-6	2.819-3	2.819-3	1.701-7	8.589-1	8.589-1
2.885-3	4.810-5	2.034-3	3.241-6	8.527-2	3.732-0	3.232-6	2.857-3	2.857-3	2.034-7	5.787-1	5.787-1
2.888-3	4.153-5	2.350-3	3.794-6	8.526-2	3.734-0	3.745-6	2.859-3	2.859-3	2.037-7	6.708-1	6.708-1
3.000-3	4.858-5	2.101-3	3.346-6	8.388-2	3.923-0	3.338-6	2.988-3	2.988-3	2.626-7	6.886-1	6.886-1
3.500-3	8.901-5	1.418-3	2.228-6	7.749-2	4.582-0	2.251-6	3.488-3	3.414-3	3.080-7	4.947-1	4.947-1
4.000-3	9.698-5	1.009-3	1.807-6	7.235-2	5.200-0	1.600-6	3.982-3	3.908-3	4.009-7	4.030-1	4.030-1
4.500-3	1.318-4	7.422-2	1.182-6	6.719-2	5.791-0	1.178-6	4.474-3	4.401-3	5.083-7	3.338-1	3.338-1
5.000-3	1.735-4	5.841-2	8.987-6	6.288-2	6.377-0	8.923-6	4.985-3	4.891-3	6.280-7	2.820-1	2.820-1
5.500-3	2.233-4	4.388-2	6.982-6	5.876-2	6.921-0	6.922-6	5.453-3	5.380-3	7.597-7	2.410-1	2.410-1
6.000-3	2.811-4	3.491-2	5.946-6	5.524-2	7.458-0	5.490-6	5.933-3	5.866-3	9.032-7	2.087-1	2.087-1
6.500-3	3.488-4	2.805-2	4.489-6	5.182-2	7.931-0	4.418-6	6.423-3	6.351-3	1.058-6	1.821-1	1.821-1
7.000-3	4.299-4	2.297-2	3.880-6	4.884-2	8.397-0	3.810-6	6.905-3	6.832-3	1.225-6	1.804-1	1.804-1
8.000-3	6.099-4	1.804-2	2.926-6	4.391-2	9.308-0	2.511-6	7.980-3	7.787-3	1.591-6	1.277-1	1.277-1
1.000-2	1.123-3	8.712-1	1.388-6	3.586-2	1.077-1	1.351-6	9.734-3	9.562-3	2.450-6	6.603-0	6.603-0
1.250-2	2.095-3	4.671-1	7.441-3	2.787-2	1.217-1	7.149-3	1.201-2	1.194-2	3.741-6	5.899-0	5.899-0
1.500-2	3.470-3	2.819-1	4.482-3	2.283-2	1.345-1	4.250-3	1.412-2	1.412-2	5.235-6	4.070-0	4.070-0
1.750-2	5.388-3	1.823-1	2.304-3	1.859-2	1.440-1	2.704-3	1.630-2	1.623-2	6.910-6	3.023-0	3.023-0
2.000-2	7.798-3	1.225-1	1.968-3	1.358-2	1.578-1	1.888-3	1.829-2	1.823-2	8.717-6	2.337-0	2.337-0
2.000-2	1.267-3	8.104-1	1.291-4	1.926-2	1.529-1	1.274-4	1.974-2	1.924-2	1.786-6	6.795-0	6.795-0
2.000-2	1.208-3	8.098-1	1.290-4	1.926-2	1.529-1	1.273-4	1.974-2	1.925-2	1.787-6	6.790-0	6.790-0
2.500-2	2.135-3	4.941-1	7.235-3	1.134-2	1.846-1	7.105-3	2.425-2	2.308-2	4.488-6	6.070-0	6.070-0
3.000-2	3.451-3	2.835-1	4.517-3	8.758-1	1.748-1	4.412-3	2.931-2	2.789-2	8.402-6	5.185-0	5.185-0
3.500-2	5.225-3	1.678-1	2.983-3	6.946-1	1.808-1	2.893-3	3.399-2	3.284-2	1.345-5	4.333-0	4.333-0
4.000-2	7.475-3	1.309-1	2.085-3	5.694-1	1.898-1	2.010-3	3.898-2	3.732-2	1.957-5	3.694-0	3.694-0
4.500-2	1.031-2	9.490-0	1.512-3	4.703-1	1.886-1	1.448-3	4.308-2	4.191-2	2.670-5	3.095-0	3.095-0
5.000-2	1.372-2	7.138-0	1.136-3	3.970-1	1.912-1	1.077-3	4.743-2	4.640-2	2.875-5	2.853-0	2.853-0
5.500-2	1.783-2	5.488-0	8.745-2	3.384-1	1.923-1	8.214-2	5.178-2	5.080-2	4.383-5	2.289-0	2.289-0
6.000-2	2.298-2	4.331-0	6.880-2	2.925-1	1.932-1	6.414-2	5.995-2	5.908-2	5.329-5	1.995-0	1.995-0
6.500-2	2.812-2	3.478-0	5.243-2	2.246-1	1.930-1	5.098-2	5.989-2	5.925-2	6.749-5	1.731-0	1.731-0
7.000-2	3.438-2	2.848-0	4.534-2	2.238-1	1.927-1	4.118-2	6.781-2	6.729-2	7.443-5	1.290-0	1.290-0
8.000-2	4.910-2	1.983-0	3.175-2	1.777-1	1.923-1	2.889-2	7.128-2	6.998-2	9.739-5	1.248-0	1.248-0

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 95.94		DENSITY 10.22 GRAMS/CC									
ENERGY MEV	TOTAL MPF		CROSS SECTION (BARNS)					REV/COLLISION			MEV/CM K.E.
	CH	CHCM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E. BREMSSTR	K.E.	
1.000	8.789	2 1.116	0 1.778	2 1.201	1 1.885	1 1.488	2	8.418	2 7.452	2 1.425	8.499
1.250	1.512	1 6.470	1 1.031	2 8.036	0 1.817	1 7.888	1	9.892	2 8.860	2 2.037	9.833
1.500	2.289	1 4.315	1 6.870	1 5.786	0 1.763	1 4.528	1	1.081	1 9.843	2 2.536	4.338
1.750	3.094	1 3.182	1 5.038	1 4.341	0 1.898	1 2.906	1	1.131	1 1.083	1 2.860	3.437
2.000	3.936	1 2.486	1 3.961	1 3.385	0 1.844	1 1.978	1	1.183	1 1.125	1 3.313	2.899
2.500	5.947	1 1.769	1 2.810	1 2.211	0 1.536	1 1.053	1	1.278	1 1.234	1 3.885	2.225
3.000	8.984	1 1.405	1 2.236	1 1.981	0 1.453	1 6.290	0	1.378	1 1.345	1 4.730	1.931
3.500	8.188	1 1.195	1 1.904	1 1.158	0 1.378	1 4.121	0	1.503	1 1.478	1 5.711	1.805
4.000	9.240	1 1.059	1 1.687	1 6.945	1 1.312	1 2.857	0	1.853	1 1.633	1 6.988	1.767
4.500	1.017	0 9.652	2 1.533	1 7.106	1 1.253	1 2.088	0	1.825	1 1.809	1 8.551	1.779
5.000	1.099	0 8.902	2 1.418	1 5.784	1 1.203	1 1.577	0	2.017	1 2.004	1 1.049	1.823
5.500	1.174	0 8.332	2 1.327	1 4.795	1 1.158	1 1.232	0	2.224	1 2.214	1 1.279	1.865
6.000	1.243	0 7.872	2 1.254	1 4.043	1 1.115	1 9.841	1	2.448	1 2.437	1 1.549	1.961
6.500	1.308	0 7.481	2 1.192	1 3.451	1 1.077	1 8.085	1	2.677	1 2.669	1 1.857	2.041
7.000	1.369	0 7.149	2 1.139	1 2.981	1 1.042	1 7.709	1	2.919	1 2.912	1 2.209	2.127
8.000	1.440	0 6.815	2 1.053	1 2.250	1 9.824	0 4.813	1	3.429	1 3.424	1 3.050	2.314
1.000	1.680	0 5.825	2 9.277	0 1.471	1 8.846	0 2.842	1	4.517	1 4.514	1 5.295	2.686
1.022	1.700	0 5.794	2 9.167	0 1.409	1 8.753	0 2.732	1 1.000	4.643	1 4.639	1 5.582	2.728
1.250	1.900	0 5.149	2 8.203	0 9.436	2 7.918	0 1.894	1 1.875	5.981	1 5.978	1 9.236	3.146
1.500	2.078	0 4.708	2 7.500	0 8.562	2 7.201	0 1.360	1 9.790	2 7.472	1 7.470	1 1.437	2.594
1.750	2.227	0 4.393	2 6.999	0 4.824	2 6.624	0 1.018	1 2.249	1 9.021	1 9.019	1 2.086	2.050
2.000	2.354	0 4.157	2 6.622	0 3.695	2 6.148	0 8.058	2 3.563	1 1.064	1 1.064	0 2.890	2.451
2.044	2.376	0 4.119	2 6.581	0 3.538	2 6.073	0 7.780	2 3.794	1 1.093	1 1.093	0 3.049	2.601
2.500	2.547	0 3.841	2 6.119	0 2.386	2 5.402	0 5.881	2 6.385	1 1.408	1 1.407	0 5.015	2.525
3.000	2.808	0 3.867	2 5.842	0 1.844	2 4.840	0 4.345	2 9.419	1 1.777	1 1.777	0 7.921	2.860
3.500	2.794	0 3.553	2 5.880	0 1.288	2 4.397	0 3.524	2 1.218	0 2.169	0 2.169	1 1.188	1.785
4.000	2.905	0 3.488	2 5.257	0 9.250	3 4.038	0 8.940	2 1.480	0 2.579	0 2.579	1 1.638	1.935
4.500	2.832	0 3.495	2 5.505	0 7.309	3 3.740	0 5.495	2 1.732	0 3.008	0 3.008	1 2.138	1.106
5.000	2.850	0 3.433	2 5.489	0 5.921	3 3.488	0 2.171	2 1.954	0 3.444	0 3.444	0 2.895	1.208
5.500	2.875	0 3.404	2 5.425	0 4.854	3 3.271	0 1.930	2 2.127	0 3.889	0 3.889	0 3.602	1.353
6.000	2.885	0 3.398	2 5.403	0 4.112	3 3.083	0 1.734	2 2.299	0 4.342	0 4.342	0 4.443	1.505
6.500	2.884	0 3.393	2 5.406	0 3.504	3 2.917	0 1.571	2 2.489	0 4.804	0 4.804	0 5.380	1.688
7.000	2.873	0 3.408	2 5.426	0 3.022	3 2.771	0 1.434	2 2.838	0 5.273	0 5.273	0 6.410	1.875
8.000	2.830	0 3.458	2 5.509	0 2.314	2 2.522	0 1.217	2 2.972	0 6.227	0 6.227	0 6.748	2.201
1.000	2.893	0 3.634	2 5.789	0 1.481	3 2.148	0 9.241	3 3.630	0 8.183	0 8.183	0 1.447	3.039
1.250	2.807	0 3.753	2 5.979	0 9.478	4 1.823	0 7.280	3 4.148	1 1.084	1 1.084	0 2.323	4.081
1.500	2.505	0 3.908	2 6.223	0 6.582	4 1.990	0 5.991	3 4.826	1 1.313	1 1.313	0 3.384	5.240
1.750	2.393	0 4.089	2 6.515	0 4.835	4 1.414	0 5.081	3 5.095	1 1.583	1 1.583	0 4.548	6.534
2.000	2.300	0 4.294	2 6.777	0 3.702	4 1.278	0 4.405	3 5.496	1 1.814	1 1.814	0 5.852	7.888
2.500	2.167	0 4.515	2 7.193	0 2.389	4 1.073	0 3.470	3 6.118	0 2.315	0 2.315	1 8.753	1.088
3.000	2.069	0 4.725	2 7.534	0 1.845	4 8.291	1 2.858	3 6.802	0 2.817	0 2.817	1 1.197	1.361
3.500	2.001	0 4.851	2 7.792	0 1.209	4 8.218	1 2.422	3 6.988	0 3.318	0 3.318	1 1.344	1.858
4.000	1.939	0 5.047	2 8.041	0 9.294	5 7.383	1 2.100	3 7.300	0 3.819	0 3.819	1 1.812	1.970
4.500	1.877	0 5.212	2 8.303	0 7.312	5 6.713	1 1.851	3 7.630	0 4.321	0 4.321	1 2.236	2.381
5.000	1.832	0 5.348	2 8.510	0 5.923	5 6.163	1 1.654	3 7.892	0 4.822	0 4.822	1 2.694	2.832
5.500	1.801	0 5.432	2 8.695	0 4.895	5 5.701	1 1.494	3 8.083	0 5.322	0 5.322	1 3.102	2.995
6.000	1.773	0 5.520	2 8.793	0 4.113	5 5.310	1 1.361	3 8.261	0 5.823	0 5.823	1 3.520	3.285
6.500	1.746	0 5.603	2 8.866	0 3.505	5 4.971	1 1.250	3 8.426	0 6.324	0 6.324	1 3.946	3.621
7.000	1.722	0 5.683	2 8.934	0 3.022	5 4.678	1 1.154	3 8.586	0 6.824	0 6.824	1 4.378	3.984
8.000	1.677	0 5.875	2 9.297	0 2.314	5 4.188	1 1.001	3 8.877	0 7.825	0 7.825	1 5.283	4.867
1.000	1.601	0 6.111	2 9.736	0 1.481	5 3.476	1 7.684	4 9.388	0 9.828	0 9.828	1 7.082	5.138

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Form Factors

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SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT				
1/λ		1/λ		1/λ		1/λ					
0.000+0	1.000+0	0.000+0	1.250-1	0.873-1	1.117-1	1.000+0	3.058-1	8.091-1	1.000+1	1.827-2	9.902-1
5.000-3	9.987-1	3.810-4	1.980-1	8.543-1	1.382-1	1.250+0	2.321-1	8.757-1	1.500+1	9.084-3	9.981-1
1.000-2	9.988-1	1.940-3	1.750-1	8.215-1	1.600-1	1.500+0	1.832-1	7.250-1	2.000+1	4.560-3	9.988-1
1.500-2	9.977-1	3.426-3	2.000-1	7.894-1	1.831-1	2.000+0	1.357-1	8.050-1	5.000+1	2.530-4	1.000+0
2.000-2	9.959-1	6.000-3	2.500-1	7.285-1	2.270-1	2.500+0	1.120-1	8.548-1	8.000+1	4.981-5	1.000+0
2.500-2	9.935-1	9.210-3	3.000-1	6.735-1	2.881-1	3.000+0	9.205-2	8.888-1	1.000+2	2.307-5	1.000+0
3.000-2	9.908-1	1.297-2	4.000-1	5.835-1	3.438-1	3.500+0	7.329-2	9.148-1	1.000+3	1.339-6	1.000+0
4.000-2	9.842-1	2.185-2	5.000-1	5.182-1	4.084-1	4.000+0	6.214-2	9.321-1	1.000+6	2.249-17	1.000+0
5.000-2	9.788-1	3.200-2	6.000-1	4.641-1	4.832-1	5.000+0	3.985-2	9.538-1	1.000+9	4.372-26	1.000+0
7.000-2	9.557-1	5.381-2	7.000-1	4.188-1	5.071-1	6.000+0	3.117-2	9.881-1			
9.000-2	9.323-1	7.575-2	8.000-1	3.793-1	5.447-1	7.000+0	2.898-2	9.748-1			
1.000-1	9.197-1	8.831-2	9.000-1	3.412-1	5.783-1	8.000+0	2.388-2	9.815-1

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ENDL Evaluated Photon Cross Sections

43-Tc

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Energy Deposition

43-Tc

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ENOL Evaluated Photon Data

43-Tc

ATOMIC WEIGHT 98				DENSITY 11.48 GRAMS/CC			
ENERGY		TOTAL MFP		CROSS SECTION (BARN/MS)			
MEV	CM	CM/CM/CM	CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD
MEV	CM	CM/CM/CM	CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD
1.000-4	1.628-5	5.361-3	0.012-5	1.229-3	1.562-2	0.000-5	0.000-5
1.250-4	1.606-5	5.434-3	0.013-5	1.229-3	1.562-2	0.000-5	0.000-5
1.500-4	1.588-5	5.494-3	0.013-5	1.229-3	1.562-2	0.000-5	0.000-5
1.750-4	1.571-5	5.576-3	0.014-5	1.229-3	1.562-2	0.000-5	0.000-5
2.000-4	1.554-5	5.670-3	0.014-5	1.229-3	1.562-2	0.000-5	0.000-5
2.250-4	1.537-5	5.774-3	0.015-5	1.229-3	1.562-2	0.000-5	0.000-5
2.500-4	1.520-5	5.888-3	0.015-5	1.229-3	1.562-2	0.000-5	0.000-5
2.750-4	1.503-5	6.012-3	0.016-5	1.229-3	1.562-2	0.000-5	0.000-5
3.000-4	1.486-5	6.146-3	0.016-5	1.229-3	1.562-2	0.000-5	0.000-5
3.250-4	1.469-5	6.290-3	0.017-5	1.229-3	1.562-2	0.000-5	0.000-5
3.500-4	1.452-5	6.444-3	0.017-5	1.229-3	1.562-2	0.000-5	0.000-5
3.750-4	1.435-5	6.608-3	0.018-5	1.229-3	1.562-2	0.000-5	0.000-5
4.000-4	1.418-5	6.782-3	0.018-5	1.229-3	1.562-2	0.000-5	0.000-5
4.250-4	1.401-5	6.966-3	0.019-5	1.229-3	1.562-2	0.000-5	0.000-5
4.500-4	1.384-5	7.160-3	0.019-5	1.229-3	1.562-2	0.000-5	0.000-5
4.750-4	1.367-5	7.364-3	0.020-5	1.229-3	1.562-2	0.000-5	0.000-5
5.000-4	1.350-5	7.578-3	0.020-5	1.229-3	1.562-2	0.000-5	0.000-5
5.250-4	1.333-5	7.802-3	0.021-5	1.229-3	1.562-2	0.000-5	0.000-5
5.500-4	1.316-5	8.036-3	0.021-5	1.229-3	1.562-2	0.000-5	0.000-5
5.750-4	1.299-5	8.280-3	0.022-5	1.229-3	1.562-2	0.000-5	0.000-5
6.000-4	1.282-5	8.534-3	0.022-5	1.229-3	1.562-2	0.000-5	0.000-5
6.250-4	1.265-5	8.798-3	0.023-5	1.229-3	1.562-2	0.000-5	0.000-5
6.500-4	1.248-5	9.072-3	0.023-5	1.229-3	1.562-2	0.000-5	0.000-5
6.750-4	1.231-5	9.356-3	0.024-5	1.229-3	1.562-2	0.000-5	0.000-5
7.000-4	1.214-5	9.650-3	0.024-5	1.229-3	1.562-2	0.000-5	0.000-5
7.250-4	1.197-5	9.954-3	0.025-5	1.229-3	1.562-2	0.000-5	0.000-5
7.500-4	1.180-5	10.268-3	0.025-5	1.229-3	1.562-2	0.000-5	0.000-5
7.750-4	1.163-5	10.592-3	0.026-5	1.229-3	1.562-2	0.000-5	0.000-5
8.000-4	1.146-5	10.926-3	0.026-5	1.229-3	1.562-2	0.000-5	0.000-5
8.250-4	1.129-5	11.270-3	0.027-5	1.229-3	1.562-2	0.000-5	0.000-5
8.500-4	1.112-5	11.624-3	0.027-5	1.229-3	1.562-2	0.000-5	0.000-5
8.750-4	1.095-5	11.988-3	0.028-5	1.229-3	1.562-2	0.000-5	0.000-5
9.000-4	1.078-5	12.362-3	0.028-5	1.229-3	1.562-2	0.000-5	0.000-5
9.250-4	1.061-5	12.746-3	0.029-5	1.229-3	1.562-2	0.000-5	0.000-5
9.500-4	1.044-5	13.140-3	0.029-5	1.229-3	1.562-2	0.000-5	0.000-5
9.750-4	1.027-5	13.544-3	0.030-5	1.229-3	1.562-2	0.000-5	0.000-5
10.000-4	1.010-5	13.958-3	0.030-5	1.229-3	1.562-2	0.000-5	0.000-5
10.250-4	9.934-6	14.382-3	0.031-5	1.229-3	1.562-2	0.000-5	0.000-5
10.500-4	9.768-6	14.816-3	0.031-5	1.229-3	1.562-2	0.000-5	0.000-5
10.750-4	9.602-6	15.260-3	0.032-5	1.229-3	1.562-2	0.000-5	0.000-5
11.000-4	9.436-6	15.714-3	0.032-5	1.229-3	1.562-2	0.000-5	0.000-5
11.250-4	9.270-6	16.178-3	0.033-5	1.229-3	1.562-2	0.000-5	0.000-5
11.500-4	9.104-6	16.652-3	0.033-5	1.229-3	1.562-2	0.000-5	0.000-5
11.750-4	8.938-6	17.136-3	0.034-5	1.229-3	1.562-2	0.000-5	0.000-5
12.000-4	8.772-6	17.630-3	0.034-5	1.229-3	1.562-2	0.000-5	0.000-5
12.250-4	8.606-6	18.134-3	0.035-5	1.229-3	1.562-2	0.000-5	0.000-5
12.500-4	8.440-6	18.648-3	0.035-5	1.229-3	1.562-2	0.000-5	0.000-5
12.750-4	8.274-6	19.172-3	0.036-5	1.229-3	1.562-2	0.000-5	0.000-5
13.000-4	8.108-6	19.706-3	0.036-5	1.229-3	1.562-2	0.000-5	0.000-5
13.250-4	7.942-6	20.250-3	0.037-5	1.229-3	1.562-2	0.000-5	0.000-5
13.500-4	7.776-6	20.804-3	0.037-5	1.229-3	1.562-2	0.000-5	0.000-5
13.750-4	7.610-6	21.368-3	0.038-5	1.229-3	1.562-2	0.000-5	0.000-5
14.000-4	7.444-6	21.942-3	0.038-5	1.229-3	1.562-2	0.000-5	0.000-5
14.250-4	7.278-6	22.526-3	0.039-5	1.229-3	1.562-2	0.000-5	0.000-5
14.500-4	7.112-6	23.120-3	0.039-5	1.229-3	1.562-2	0.000-5	0.000-5
14.750-4	6.946-6	23.724-3	0.040-5	1.229-3	1.562-2	0.000-5	0.000-5
15.000-4	6.780-6	24.338-3	0.040-5	1.229-3	1.562-2	0.000-5	0.000-5
15.250-4	6.614-6	24.962-3	0.041-5	1.229-3	1.562-2	0.000-5	0.000-5
15.500-4	6.448-6	25.596-3	0.041-5	1.229-3	1.562-2	0.000-5	0.000-5
15.750-4	6.282-6	26.240-3	0.042-5	1.229-3	1.562-2	0.000-5	0.000-5
16.000-4	6.116-6	26.894-3	0.042-5	1.229-3	1.562-2	0.000-5	0.000-5
16.250-4	5.950-6	27.558-3	0.043-5	1.229-3	1.562-2	0.000-5	0.000-5
16.500-4	5.784-6	28.232-3	0.043-5	1.229-3	1.562-2	0.000-5	0.000-5
16.750-4	5.618-6	28.916-3	0.044-5	1.229-3	1.562-2	0.000-5	0.000-5
17.000-4	5.452-6	29.610-3	0.044-5	1.229-3	1.562-2	0.000-5	0.000-5
17.250-4	5.286-6	30.314-3	0.045-5	1.229-3	1.562-2	0.000-5	0.000-5
17.500-4	5.120-6	31.028-3	0.045-5	1.229-3	1.562-2	0.000-5	0.000-5
17.750-4	4.954-6	31.752-3	0.046-5	1.229-3	1.562-2	0.000-5	0.000-5
18.000-4	4.788-6	32.486-3	0.046-5	1.229-3	1.562-2	0.000-5	0.000-5
18.250-4	4.622-6	33.230-3	0.047-5	1.229-3	1.562-2	0.000-5	0.000-5
18.500-4	4.456-6	33.984-3	0.047-5	1.229-3	1.562-2	0.000-5	0.000-5
18.750-4	4.290-6	34.748-3	0.048-5	1.229-3	1.562-2	0.000-5	0.000-5
19.000-4	4.124-6	35.522-3	0.048-5	1.229-3	1.562-2	0.000-5	0.000-5
19.250-4	3.958-6	36.306-3	0.049-5	1.229-3	1.562-2	0.000-5	0.000-5
19.500-4	3.792-6	37.100-3	0.049-5	1.229-3	1.562-2	0.000-5	0.000-5
19.750-4	3.626-6	37.904-3	0.050-5	1.229-3	1.562-2	0.000-5	0.000-5
20.000-4	3.460-6	38.718-3	0.050-5	1.229-3	1.562-2	0.000-5	0.000-5
20.250-4	3.294-6	39.542-3	0.051-5	1.229-3	1.562-2	0.000-5	0.000-5
20.500-4	3.128-6	40.376-3	0.051-5	1.229-3	1.562-2	0.000-5	0.000-5
20.750-4	2.962-6	41.220-3	0.052-5	1.229-3	1.562-2	0.000-5	0.000-5
21.000-4	2.796-6	42.074-3	0.052-5	1.229-3	1.562-2	0.000-5	0.000-5
21.250-4	2.630-6	42.938-3	0.053-5	1.229-3	1.562-2	0.000-5	0.000-5
21.500-4	2.464-6	43.812-3	0.053-5	1.229-3	1.562-2	0.000-5	0.000-5
21.750-4	2.298-6	44.696-3	0.054-5	1.229-3	1.562-2	0.000-5	0.000-5
22.000-4	2.132-6	45.590-3	0.054-5	1.229-3	1.562-2	0.000-5	0.000-5
22.250-4	1.966-6	46.494-3	0.055-5	1.229-3	1.562-2	0.000-5	0.000-5
22.500-4	1.800-6	47.408-3	0.055-5	1.229-3	1.562-2	0.000-5	0.000-5
22.750-4	1.634-6	48.332-3	0.056-5	1.229-3	1.562-2	0.000-5	0.000-5
23.000-4	1.468-6	49.266-3	0.056-5	1.229-3	1.562-2	0.000-5	0.000-5
23.250-4	1.302-6	50.210-3	0.057-5	1.229-3	1.562-2	0.000-5	0.000-5
23.500-4	1.136-6	51.164-3	0.057-5	1.229-3	1.562-2	0.000-5	0.000-5
23.750-4	1.070-6	52.128-3	0.058-5	1.229-3	1.562-2	0.000-5	0.000-5
24.000-4	1.004-6	53.102-3	0.058-5	1.229-3	1.562-2	0.000-5	0.000-5
24.250-4	9.384-7	54.086-3	0.059-5	1.229-3	1.562-2	0.000-5	0.000-5
24.500-4	8.724-7	55.080-3	0.059-5	1.229-3	1.562-2	0.000-5	0.000-5
24.750-4	8.064-7	56.084-3	0.060-5	1.229-3	1.562-2	0.000-5	0.000-5
25.000-4	7.404-7	57.108-3	0.060-5	1.229-3	1.562-2	0.000-5	0.000-5
25.250-4	6.744-7	58.142-3	0.061-5	1.229-3	1.562-2	0.000-5	0.000-5
25.500-4	6.084-7	59.186-3	0.061-5	1.229-3	1.562-2	0.000-5	0.000-5
25.750-4	5.424-7	60.240-3	0.062-5	1.229-3	1.562-2	0.000-5	0.000-5
26.000-4	4.764-7	61.304-3	0.062-5	1.229-3	1.562-2	0.000-5	0.000-5
26.250-4	4.104-7	62.378-3	0.063-5	1.229-3	1.562-2	0.000-5	0.000-5
26.500-4	3.444-7	63.462-3	0.063-5	1.229-3	1.562-2	0.000-5	0.000-5
26.750-4	2.784-7	64.556-3	0.064-5	1.229-3	1.562-2	0.000-5	0.000-5
27.000-4	2.124-7	65.660-3	0.064-5	1.229-3	1.562-2	0.000-5	0.000-5
27.250-4	1.464-7	66.774-3	0.065-5	1.229-3	1.562-2	0.000-5	0.000-5
27.500-4	8.084-8	67.898-3	0.065-5	1.229-3	1.562-2	0.000-5	0.000-5
27.750-4	7.424-8	69.032-3	0.066-5	1.229-3	1.562-2	0.000-5	0.000-5
28.000-4	6.764-8	70.176-3	0.066-5	1.229-3	1.562-2	0.000-5	0.000-5
28.250-4	6.104-8	71.330-3	0.067-5	1.229-3	1.562-2	0.000-5	0.000-5
28.500-4	5.444-8	72.494-3	0.067-5	1.229-3	1.562-2	0.000-5	0.000-5
28.750-4	4.784-8	73.668-3	0.068-5	1.229-3	1.562-2	0.000-5	0.000-5
29.000-4	4.124-8	74.852-3	0.068-5	1.229-3	1.562-2	0.000-5	0.000-5
29.250-4	3.464-8	76.046-3	0.069-5	1.229-3	1.562-2	0.000-5	0.000-5
29.500-4	2.804-8	77.250-3	0.069-5	1.229-3	1.562-2	0.000-5	0.000-5

12/07/78

ENDL Evaluated Photon Data

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ATOMIC WEIGHT 99		DENSITY 11.48 GRAMS/CC									
ENERGY MEV	TOTAL HFP		CROSS SECTION (BARNs)					MEV/COLLISION		MEV/CM	
	CH	CH+CH/CH	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E. FLOR	K.E. GREYSTR	K.E.	
0.000-2	4.238-2	2.082-0	3.396-2	1.894-1	1.894-1	3.005-2		7.192-2	6.043-2	9.799-5	1.428-0
1.000-1	7.630-2	1.144-0	1.880-2	1.274-1	1.927-1	1.980-2		8.447-2	7.411-2	1.473-4	9.713-1
1.250-1	1.327-1	6.574-1	1.081-2	8.526-0	1.057-1	8.098-1		9.726-2	8.791-2	2.072-4	6.823-1
1.500-1	2.005-1	4.253-1	7.158-1	8.141-0	1.603-1	4.739-1		1.095-1	9.820-2	2.585-4	4.898-1
1.750-1	2.745-1	3.176-1	5.225-1	4.610-0	1.737-1	3.027-1		1.134-1	1.061-1	3.019-4	3.885-1
2.000-1	3.503-1	2.481-1	4.052-1	3.995-0	1.686-1	2.053-1		1.188-1	1.123-1	3.579-4	3.206-1
2.500-1	4.950-1	1.763-1	2.890-1	2.349-0	1.576-1	1.091-1		1.260-1	1.253-1	4.073-4	2.491-1
3.000-1	6.225-1	1.402-1	2.304-1	1.829-0	1.407-1	6.512-0		1.379-1	1.344-1	4.836-4	2.159-1
3.500-1	7.326-1	1.182-1	1.829-1	1.231-0	1.408-1	4.201-0		1.508-1	1.479-1	5.698-4	2.020-1
4.000-1	8.285-1	1.058-1	1.735-1	9.510-1	1.343-1	2.977-0		1.657-1	1.635-1	7.195-4	1.978-1
4.500-1	9.097-1	9.592-2	1.577-1	7.526-1	1.282-1	2.189-0		1.831-1	1.814-1	8.798-4	1.994-1
5.000-1	9.834-1	8.873-2	1.429-1	6.151-1	1.231-1	1.683-0		2.024-1	2.010-1	1.080-3	2.044-1
5.500-1	1.051-0	8.305-2	1.305-1	5.101-1	1.183-1	1.309-0		2.233-1	2.221-1	1.316-3	2.114-1
6.000-1	1.112-0	7.846-2	1.250-1	4.300-1	1.142-1	1.052-0		2.456-1	2.445-1	1.597-3	2.193-1
6.500-1	1.170-0	7.456-2	1.226-1	3.671-1	1.102-1	8.702-1		2.688-1	2.680-1	1.916-3	2.290-1
7.000-1	1.225-0	7.125-2	1.171-1	3.171-1	1.067-1	7.300-1		2.931-1	2.923-1	2.279-3	2.367-1
8.000-1	1.324-0	6.589-2	1.083-1	2.436-1	1.008-1	5.319-1		3.443-1	3.437-1	3.148-3	2.595-1
1.000-0	1.504-0	5.801-2	9.537-0	1.595-1	9.095-0	3.253-1		4.534-1	4.530-1	5.449-3	3.012-1
1.022-0	1.522-0	5.732-2	9.423-0	1.499-1	8.980-0	3.127-1	1.000-6	4.660-1	4.656-1	5.794-3	3.096-1
1.250-0	1.703-0	5.125-2	8.484-0	1.004-1	8.106-0	2.187-1	1.748-3	5.996-1	5.993-1	9.499-3	3.520-1
1.500-0	1.883-0	4.684-2	7.700-0	6.982-2	7.371-0	1.255-1	1.037-1	7.485-1	7.483-1	1.475-2	4.017-1
1.750-0	1.998-0	4.372-2	7.167-0	5.133-2	6.788-0	1.184-1	2.373-1	9.031-1	9.029-1	2.139-2	4.523-1
2.000-0	2.105-0	4.137-2	6.601-0	3.932-2	6.295-0	9.209-2	3.754-1	1.065-0	1.065-0	2.882-2	5.048-1
2.044-0	2.129-0	4.099-2	6.733-0	3.765-2	6.217-0	8.892-2	3.924-1	1.094-0	1.094-0	3.185-2	5.139-1
2.500-0	2.281-0	3.880-2	6.290-0	2.518-2	5.531-0	8.497-2	6.894-1	1.409-0	1.409-0	5.136-2	6.177-1
3.000-0	2.388-0	3.657-2	6.012-0	1.749-2	4.925-0	8.970-2	8.883-1	1.779-0	1.778-0	8.116-2	7.495-1
3.500-0	2.480-0	3.547-2	5.831-0	1.286-2	4.502-0	8.029-2	1.276-0	2.171-0	2.171-0	1.197-1	8.825-1
4.000-0	2.504-0	3.485-2	5.730-0	9.844-3	4.134-0	3.390-2	1.952-0	2.583-0	2.583-0	1.678-1	1.032-0
4.500-0	2.525-0	3.428-2	5.681-0	7.778-3	3.828-0	2.851-2	1.816-0	3.010-0	3.010-0	2.253-1	1.188-0
5.000-0	2.539-0	3.437-2	5.650-0	6.301-3	3.571-0	2.480-2	2.049-0	3.448-0	3.448-0	2.889-1	1.338-0
5.500-0	2.559-0	3.408-2	5.605-0	5.808-3	3.349-0	2.204-2	2.229-0	3.895-0	3.895-0	3.899-1	1.522-0
6.000-0	2.587-0	3.398-2	5.588-0	4.378-3	3.158-0	1.980-2	2.408-0	4.348-0	4.348-0	4.951-1	1.694-0
6.500-0	2.585-0	3.403-2	5.584-0	3.789-3	2.987-0	1.794-2	2.585-0	4.812-0	4.811-0	5.909-1	1.878-0
7.000-0	2.594-0	3.417-2	5.617-0	3.218-3	2.837-0	1.637-2	2.781-0	5.281-0	5.281-0	8.583-1	2.080-0
8.000-0	2.513-0	3.472-2	5.708-0	2.462-3	2.586-0	1.388-2	3.110-0	8.636-0	8.636-0	8.631-1	2.481-0
1.000-1	2.388-0	3.653-2	6.008-0	1.578-3	2.199-0	1.054-2	3.794-0	8.183-0	8.183-0	1.478-0	3.430-0
1.250-1	2.310-0	3.778-2	6.211-0	1.009-3	1.886-0	8.302-3	4.338-0	1.085-1	1.085-1	2.371-0	4.812-0
1.500-1	2.217-0	3.936-2	6.471-0	7.004-4	1.628-0	6.831-3	4.835-0	1.314-1	1.314-1	3.430-0	5.827-0
1.750-1	2.118-0	4.124-2	6.780-0	5.148-4	1.448-0	5.783-3	5.326-0	1.585-1	1.585-1	4.632-0	7.395-0
2.000-1	2.033-0	4.282-2	7.056-0	3.839-4	1.307-0	5.022-3	5.744-0	1.815-1	1.815-1	5.953-0	8.930-0
2.500-1	1.914-0	4.598-2	7.484-0	2.521-4	1.098-0	3.898-3	6.392-0	2.317-1	2.317-1	8.890-0	1.210-1
3.000-1	1.827-0	4.777-2	7.853-0	1.751-4	8.512-1	3.255-3	8.098-0	2.818-1	2.818-1	1.215-1	1.943-1
3.500-1	1.768-0	4.942-2	8.125-0	1.286-4	8.413-1	2.780-3	7.281-0	3.319-1	3.319-1	1.585-1	1.880-1
4.000-1	1.710-0	5.102-2	8.387-0	9.848-5	7.599-1	2.393-3	7.629-0	3.820-1	3.820-1	1.935-1	2.234-1
4.500-1	1.658-0	5.270-2	8.683-0	7.781-5	6.873-1	2.110-3	7.974-0	4.322-1	4.322-1	2.322-1	2.610-1
5.000-1	1.615-0	5.402-2	8.981-0	6.303-5	6.310-1	1.885-3	8.248-0	4.823-1	4.823-1	2.723-1	2.986-1
5.500-1	1.588-0	5.494-2	9.032-0	5.209-5	5.837-1	1.702-3	8.446-0	5.324-1	5.324-1	3.134-1	3.352-1
6.000-1	1.563-0	5.582-2	9.177-0	4.377-5	5.438-1	1.551-3	8.632-0	5.824-1	5.824-1	3.594-1	3.766-1
6.500-1	1.540-0	5.667-2	9.316-0	3.730-5	5.088-1	1.424-3	8.806-0	6.325-1	6.325-1	3.988-1	4.108-1
7.000-1	1.518-0	5.749-2	9.451-0	3.218-5	4.787-1	1.315-3	8.971-0	6.826-1	6.826-1	4.417-1	4.487-1
8.000-1	1.478-0	5.943-2	9.705-0	2.463-5	4.286-1	1.140-3	9.275-0	7.827-1	7.827-1	5.305-1	5.295-1
1.000-2	1.411-0	6.182-2	1.016-1	1.576-5	3.599-1	8.988-4	9.807-0	9.829-1	9.829-1	7.130-1	8.884-1

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Form Factors

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SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT		
1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ		
0.000	0	1.000	0	0.000	0	1.250	1	0.843	1	1.178	1	1.000	0	3.102	1	0.088	1	1.000	1	1.841	2	9.898	1
5.000	3	9.997	1	4.188	4	1.500	1	0.515	1	1.411	1	1.250	0	2.373	1	0.721	1	1.500	1	9.383	3	9.979	1
1.500	2	9.999	1	1.674	3	1.750	1	0.134	1	1.636	1	1.500	0	1.662	1	7.250	1	2.000	1	4.712	3	9.995	1
1.500	2	9.976	1	3.721	3	2.000	1	7.883	1	1.857	1	2.000	0	1.325	1	0.011	1	5.000	1	2.728	4	1.000	0
2.000	2	9.957	1	8.323	3	2.500	1	7.291	1	2.281	1	2.500	0	1.119	1	0.514	1	0.000	1	5.422	5	1.000	0
2.500	2	9.933	1	1.002	2	3.000	1	6.750	1	2.677	1	3.000	0	9.323	2	0.000	1	1.000	2	2.514	5	1.000	0
3.007	2	9.905	1	1.412	2	4.000	1	5.842	1	3.408	1	3.500	0	7.462	2	9.122	1	1.000	3	1.497	8	1.000	0
4.000	2	9.835	1	2.383	2	5.000	1	5.154	1	4.060	1	4.000	0	6.327	2	9.303	1	1.000	8	2.610	17	1.000	0
5.000	2	9.750	1	3.493	2	6.000	1	4.629	1	4.608	1	5.000	0	4.057	2	9.525	1	1.000	9	5.243	26	1.000	0
7.000	2	9.540	1	5.676	2	7.000	1	4.197	1	5.058	1	6.000	0	3.134	2	9.653	1						
9.000	2	9.298	1	8.190	2	8.000	1	3.809	1	5.435	1	7.000	0	2.685	2	9.741	1						
1.000	1	9.170	1	9.272	2	9.000	1	3.444	1	5.767	1	8.000	0	2.390	2	9.807	1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

⁴⁴-Ru

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 101.7										DENSITY 12.2 GRAMS/CC			
ENERGY KEV	TOTAL MFP			CROSS SECTION (BARNES)						REV/COLLISION			REV/CM K.E.
	CH	CH+CH/CH		TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD		K.E.	SPINLOSS		
1.000	1.030	5.000	3	0.493	5	1.007	3	1.291	2	0.400	5	9.200	9.200
1.250	1.519	5.300	3	0.113	5	1.007	3	2.005	2	0.100	5	1.200	1.200
1.500	1.439	5.710	3	0.003	5	1.000	3	2.070	2	0.040	5	1.400	1.400
1.750	1.400	5.500	3	0.200	5	1.000	3	3.000	2	0.000	5	1.700	1.700
2.000	1.330	5.331	3	0.003	5	1.000	3	5.000	2	0.000	5	1.007	1.007
2.250	1.000	4.400	3	7.000	5	1.003	3	7.001	2	7.000	5	2.400	2.400
2.500	2.000	4.000	3	0.003	5	1.000	3	9.010	2	0.010	5	2.700	2.700
2.750	1.011	5.000	3	0.003	5	1.000	3	9.010	2	0.000	5	2.014	2.014
3.000	9.200	0.003	3	1.001	0	1.001	3	1.100	1	1.000	0	2.007	2.007
3.250	3.001	0.713	4	0.001	0	1.270	3	1.000	1	0.000	0	3.400	3.400
3.500	3.400	0.411	4	0.071	0	1.270	3	1.000	1	0.070	0	3.000	3.000
3.750	4.000	0.000	4	3.410	0	1.272	3	2.407	1	3.410	0	4.400	4.400
4.000	4.000	0.000	4	3.231	0	1.271	3	2.005	1	3.230	0	4.071	4.071
4.250	4.000	0.000	4	3.001	0	1.271	3	2.005	1	3.000	0	4.000	4.000
4.500	3.000	0.000	4	3.531	0	1.000	3	2.007	1	3.530	0	4.000	4.000
4.750	4.000	0.000	4	2.000	0	1.000	3	3.510	1	2.000	0	5.400	5.400
5.000	5.103	0.000	4	2.001	0	1.000	3	3.007	1	2.000	0	5.000	5.000
5.250	4.072	0.000	4	2.001	0	1.000	3	3.004	1	2.000	0	5.000	5.000
5.500	5.105	0.000	4	2.711	0	1.001	3	4.121	1	2.710	0	5.007	5.007
5.750	5.000	0.175	4	2.300	0	1.000	3	4.730	1	2.301	0	6.400	6.400
6.000	6.000	0.101	4	2.011	0	1.001	3	5.300	1	2.010	0	6.000	6.000
6.250	6.000	0.007	3	1.531	0	1.000	3	6.700	1	1.530	0	7.000	7.000
6.500	1.100	7.000	3	1.101	0	1.230	3	0.214	1	1.100	0	8.001	8.001
6.750	1.200	0.314	3	1.000	0	1.200	3	9.700	1	1.000	0	9.000	9.000
7.000	2.257	5.000	3	0.134	5	1.003	3	1.344	0	0.100	5	1.200	1.200
7.250	3.004	0.313	3	3.000	0	1.153	3	1.700	0	3.000	0	1.400	1.400
7.500	5.100	0.000	3	0.000	0	1.113	3	2.107	0	0.007	5	1.700	1.700
7.750	7.214	0.100	3	0.100	5	1.000	3	2.510	0	1.000	5	1.000	1.000
8.000	1.251	0.000	2	1.107	5	0.071	2	2.300	0	1.007	5	2.477	2.477
8.250	1.707	0.000	2	0.110	4	0.531	2	3.734	0	0.014	4	2.004	2.004
8.500	5.010	0.000	3	0.700	5	0.000	2	3.730	0	0.700	5	2.000	2.000
8.750	5.000	0.400	3	0.473	5	0.300	2	3.005	0	0.400	5	2.000	2.000
9.000	3.970	0.000	3	3.401	5	0.370	2	3.007	0	3.470	5	2.000	2.000
9.250	4.000	0.000	3	3.000	5	0.342	2	3.070	0	3.370	5	2.000	2.000
9.500	3.000	0.000	3	0.000	5	0.000	2	4.271	0	0.000	5	3.213	3.213
9.750	4.210	0.000	3	3.001	5	0.001	2	4.270	0	3.270	5	3.215	3.215
10.000	5.104	0.000	3	2.000	5	0.000	2	4.037	0	2.000	5	3.400	3.400
10.250	7.201	0.100	3	1.001	5	0.000	2	5.200	0	1.000	5	3.003	3.003
10.500	0.003	0.311	2	1.003	5	7.404	2	5.007	0	1.000	5	4.470	4.470
10.750	1.000	0.330	2	1.070	5	0.070	2	0.510	0	1.000	5	4.007	4.007
11.000	1.001	0.000	2	0.330	4	0.007	2	7.070	0	0.000	4	5.457	5.457
11.250	2.007	0.007	2	0.330	4	0.107	2	7.000	0	0.070	4	5.004	5.004
11.500	2.000	0.170	2	0.300	4	0.107	2	0.107	0	0.000	4	6.430	6.430
11.750	3.100	0.001	2	4.300	4	0.300	2	0.010	0	4.337	4	6.013	6.013
12.000	4.300	0.000	2	3.070	4	0.030	2	0.570	0	3.007	4	7.070	7.070
12.250	0.251	0.934	1	1.070	4	3.001	2	1.115	1	1.037	4	9.700	9.700
12.500	1.533	5.330	1	0.031	3	3.100	2	1.001	1	0.700	3	1.205	1.205
12.750	2.530	3.230	1	0.000	3	2.500	2	1.300	1	0.100	3	1.400	1.400
13.000	3.000	2.007	1	3.040	3	2.070	2	1.400	1	3.310	3	1.000	1.000
13.250	5.073	1.400	1	2.440	3	1.700	2	1.000	1	2.200	3	1.000	1.000
13.500	7.000	1.000	1	1.030	3	1.511	2	1.030	1	1.071	3	2.011	2.011
13.750	1.007	0.700	1	1.107	4	1.511	2	1.030	1	1.130	4	2.100	2.100
14.000	1.000	0.071	1	0.300	3	1.000	2	1.707	1	0.231	3	2.457	2.457
14.250	2.000	3.100	1	0.003	3	0.700	1	1.014	1	0.107	3	2.300	2.300
14.500	3.001	2.070	1	3.003	3	7.770	1	1.070	1	3.407	3	3.405	3.405
14.750	5.000	3.400	1	2.400	3	1.031	1	1.031	1	2.375	3	3.007	3.007
15.000	7.771	1.000	1	1.701	3	5.770	1	1.001	1	1.700	3	4.301	4.301
15.250	1.000	2.000	0	1.330	3	4.400	1	1.000	1	1.273	3	4.700	4.700
15.500	2.100	0.000	0	1.000	3	3.000	1	2.001	1	0.700	2	5.200	5.200
15.750	1.700	0.700	0	0.100	2	3.201	1	0.010	1	7.570	2	5.000	5.000
16.000	2.100	3.000	0	0.400	2	2.000	1	2.010	1	0.000	2	6.000	6.000
16.250	2.013	3.137	0	5.207	2	2.000	1	0.000	1	0.000	2	6.400	6.400
16.500	3.751	2.100	0	3.000	2	1.000	1	2.000	1	3.700	2	7.100	7.100

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 101.7				DENSITY (2.2 GRAMS/CC)																	
ENERGY		TOTAL YFP		CROSS SECTION (BARN)						NEUTRON COLLISION				VELOCITY							
KEV	CM	CM/CM/CM		TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	K.E. FLOR	K.E.	BREMSSTR	K.E.									
1.000	1	6.770	2	1.210	0	2.000	1	1.300	1	1.712	2	0.510	2	7.399	2	1.503	4	1.093	0		
1.200	1	1.103	1	0.927	1	1.170	1	0.917	0	1.000	1	0.895	1	0.000	2	0.032	2	2.140	4	7.463	0
1.500	1	1.707	1	4.200	1	7.700	1	0.510	0	1.000	1	0.510	1	1.000	1	0.910	2	0.000	4	5.520	1
1.700	1	2.474	1	3.314	1	5.500	1	0.000	0	1.775	1	3.331	1	1.190	1	1.077	1	3.170	4	4.353	1
2.000	1	3.173	1	2.503	1	4.300	1	3.010	0	1.700	1	2.201	1	1.210	1	1.143	1	3.501	4	3.000	1
2.500	1	4.204	1	1.012	1	3.000	1	2.400	0	1.007	1	1.203	1	1.311	1	1.090	1	4.401	4	2.700	1
3.000	1	5.731	1	1.430	1	2.415	1	1.700	0	1.201	1	1.101	1	1.411	1	1.371	1	5.190	4	2.300	1
3.500	1	6.774	1	1.210	1	2.043	1	1.400	0	1.400	0	0.700	0	1.537	1	1.000	1	6.201	4	2.003	1
4.000	1	7.070	1	1.000	1	1.003	1	1.011	0	1.373	1	3.000	0	1.005	1	1.001	1	7.201	4	2.104	1
4.500	1	8.470	1	0.877	2	0.830	1	0.033	1	1.312	1	2.401	0	1.000	1	1.030	0	8.241	4	2.170	1
5.000	1	9.170	1	0.933	2	1.000	1	0.940	1	1.200	1	1.000	0	2.000	1	0.032	1	1.120	3	2.215	1
5.500	1	9.010	1	0.340	2	1.410	1	0.400	1	1.211	1	1.400	0	2.250	1	0.242	1	1.374	3	2.203	1
6.000	1	1.041	0	7.077	2	1.330	1	4.572	1	1.100	1	1.100	0	2.477	1	0.245	1	1.000	3	2.300	1
6.500	1	1.000	0	7.470	2	1.203	1	3.504	1	1.127	1	0.053	1	2.700	1	0.090	1	1.007	3	2.402	1
7.000	1	1.140	0	7.141	2	1.200	1	3.373	1	1.001	1	0.104	1	2.950	1	0.241	1	2.350	3	2.502	1
8.000	1	1.243	0	6.500	2	1.114	1	2.501	1	1.020	1	0.913	1	3.400	1	0.253	1	2.240	3	2.770	1
1.000	0	1.413	0	5.000	2	0.700	0	1.005	1	0.205	0	3.000	1	4.000	1	4.400	1	0.000	3	3.215	1
1.000	0	1.431	0	5.730	2	0.870	1	1.500	1	0.100	0	1.000	0	4.000	1	4.000	1	0.000	3	3.200	1
1.200	0	1.001	0	5.110	2	0.000	1	0.200	0	2.415	1	1.010	3	0.000	1	0.000	1	9.705	3	3.500	1
1.500	0	1.700	0	4.000	2	7.000	0	7.400	0	1.700	1	1.000	1	7.400	1	7.400	1	0.000	1	3.270	1
1.700	0	1.077	0	4.300	2	7.730	0	5.401	2	0.030	1	0.030	2	0.000	1	0.037	2	0.100	2	4.014	1
2.000	0	1.003	0	4.133	2	0.000	0	4.100	2	1.005	1	3.000	1	1.000	0	1.000	0	0.030	2	5.733	1
2.000	0	2.001	0	4.000	2	0.000	0	4.000	2	0.001	2	0.001	2	1.000	1	1.000	0	0.030	2	5.470	1
2.500	0	2.142	0	3.000	2	0.401	0	2.670	2	0.000	2	7.031	1	1.410	0	1.410	0	0.200	2	6.900	1
3.000	0	2.230	0	3.001	2	0.100	0	3.070	0	5.530	2	1.030	0	1.701	0	1.700	0	0.310	2	7.951	1
3.500	0	2.300	0	3.000	2	0.000	0	4.000	0	4.400	2	1.337	0	2.173	0	2.173	0	1.000	1	9.404	1
4.000	0	2.344	0	3.000	2	0.000	0	4.000	0	3.741	2	1.000	0	2.500	0	2.500	0	1.717	1	1.103	1
4.500	0	2.300	0	3.470	2	0.000	0	0.277	3	3.010	0	3.174	0	3.014	0	3.014	0	2.307	1	1.270	1
5.000	0	2.374	0	3.453	2	0.000	0	0.704	3	3.000	0	2.700	0	3.454	0	3.454	0	0.000	1	1.490	1
5.500	0	2.301	0	3.400	2	0.700	0	0.941	3	3.407	0	2.453	0	3.000	0	3.000	0	3.770	1	1.031	1
6.000	0	2.307	0	3.400	2	0.773	0	0.057	3	3.230	0	2.001	0	4.000	0	4.000	0	0.000	1	1.017	1
6.500	0	2.303	0	3.400	2	0.704	0	3.000	3	3.050	0	1.905	0	4.000	0	4.000	0	0.000	1	2.013	0
7.000	0	2.300	0	3.401	2	0.811	0	3.400	3	2.903	0	1.001	0	4.000	0	4.000	0	0.000	1	2.000	0
8.000	0	2.300	0	3.500	2	0.810	0	2.000	0	1.940	0	3.200	0	0.200	0	0.200	0	0.152	1	2.000	0
1.000	1	0.073	3	3.007	2	0.000	0	1.077	3	2.000	1	1.171	2	0.000	0	0.073	0	0.000	1	3.000	0
1.200	1	0.147	0	3.010	2	0.447	0	1.073	3	1.000	0	0.205	3	1.000	0	1.000	0	0.410	0	4.000	0
1.500	1	0.070	0	2.001	2	0.723	0	7.453	4	1.000	0	7.000	3	0.000	1	1.315	1	1.315	1	3.400	0
1.700	1	0.004	0	4.170	2	7.000	0	0.475	4	1.401	0	0.430	3	0.000	1	1.500	1	1.500	1	4.710	0
2.000	1	0.000	0	4.347	2	7.340	0	4.100	4	1.337	0	5.570	3	0.000	1	1.017	1	1.017	1	0.033	0
2.500	1	1.775	0	4.010	2	7.000	0	2.003	4	1.120	0	4.300	3	0.000	1	2.310	1	2.310	1	0.000	1
3.000	1	1.003	0	4.042	2	0.170	0	1.003	4	0.733	1	3.015	3	0.000	1	2.000	1	2.000	1	1.231	1
3.500	1	1.035	0	5.012	2	0.400	0	1.300	4	0.000	1	3.005	3	0.000	1	3.301	1	3.301	1	1.000	1
4.000	1	1.000	0	5.175	2	0.730	0	1.040	4	7.755	1	2.007	3	0.000	1	3.000	1	3.000	1	1.000	1
4.500	1	1.033	0	5.347	2	0.000	0	0.000	0	7.033	1	2.342	3	0.000	1	4.323	1	4.323	1	2.000	1
5.000	1	1.000	0	5.000	2	0.277	0	0.707	5	0.400	1	1.000	3	0.000	1	1.000	1	1.000	1	2.701	1
5.500	1	1.470	0	5.570	2	0.410	0	0.743	5	0.073	1	1.000	3	0.000	1	1.000	1	1.000	1	3.000	1
6.000	1	1.447	0	5.000	2	0.000	0	0.000	0	0.303	1	1.000	3	0.000	1	1.000	1	1.000	1	3.000	1
6.500	1	1.405	0	5.750	2	0.710	0	0.300	5	0.207	1	1.000	3	0.000	1	1.000	1	1.000	1	4.000	1
7.000	1	1.405	0	5.075	2	0.000	0	0.400	5	0.000	1	1.400	3	0.000	1	1.400	1	1.400	1	4.000	1
8.000	1	1.300	0	5.000	2	1.012	1	0.000	5	0.307	1	1.000	3	0.000	1	1.000	1	1.000	1	5.723	1
1.000	2	1.300	0	6.270	2	1.000	1	1.077	5	3.001	1	0.007	4	1.023	1	0.830	1	0.830	1	7.170	1

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	0.940-1	1.000-1	1.000+0	3.144-1	0.000-1	1.000+1	1.000-2	0.000-1
0.000-3	0.997-1	3.400-4	1.500-1	0.893-1	1.314-1	1.250+0	0.424-1	0.000-1	1.500+1	0.675-3	0.977-1
1.000-2	0.990-1	1.311-3	1.750-1	0.850-1	1.594-1	1.500+0	1.007-1	7.214-1	2.000+1	0.424-3	0.995-1
1.500-2	0.979-1	2.504-3	2.000-1	7.970-1	1.700-1	2.000+0	1.357-1	7.973-1	5.000+1	0.230-4	1.000+0
2.000-2	0.963-1	5.230-3	2.500-1	7.343-1	2.210-1	2.500+0	1.110-1	0.400-1	8.000+1	0.000-5	1.000+0
2.500-2	0.943-1	0.907-3	3.000-1	0.770-1	2.001-1	3.000+0	0.300-2	0.000-1	1.000+2	0.730-5	1.000+0
3.000-2	0.910-1	1.130-2	4.000-1	0.600-1	3.300-1	3.500+0	7.575-2	0.000-1	1.000+3	1.072-5	1.000+0
4.000-2	0.800-1	1.030-2	5.000-1	5.100-1	4.010-1	4.000+0	0.440-2	0.000-1	1.000+4	3.000-17	1.000+0
5.000-2	0.700-1	2.000-2	6.000-1	4.010-1	4.500-1	5.000+0	0.130-2	0.514-1	1.000+5	0.000-20	1.000+0
7.000-2	0.500-1	4.000-2	7.000-1	4.100-1	5.000-1	6.000+0	3.100-2	0.040-1			
9.000-2	0.370-1	7.000-2	8.000-1	3.000-1	5.400-1	7.000+0	0.000-2	0.700-1			
1.000-1	0.200-1	0.000-2	9.000-1	3.474-1	5.753-1	8.000+0	0.300-2	0.000-1

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ENDL Evaluated Photon Cross Sections

45-Rh

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Energy Deposition

45-Rh

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ENDL Evaluated Photon Data

45-Rh

ATOMIC WEIGHT 102.31										DENSITY 12.40 GRAMS/CC			
ENERGY MEV	TOTAL NFP			CROSS SECTION (BARS)					PAIR PROD	REV/COLLISION		REV/CM	
	CH	CH+CH/ON		TOTAL	COHERENT	INCOHER	PHOTOL			K.E. + FLOR	K.E. BREMSSTR	K.E.	
1.000-4	1.582-5	5.148-3	0.793-5	1.347-3	1.212-2	0.780-5	0.985-5	0.985-5	2.804-10	0.392-0	0.392-0	0.392-0	
1.250-4	1.439-5	5.288-3	0.793-5	1.348-3	1.094-2	0.535-5	1.248-4	1.248-4	4.382-10	0.677-0	0.677-0	0.677-0	
1.500-4	1.345-5	5.377-3	1.021-6	1.345-3	2.727-2	1.020-6	1.498-4	1.498-4	6.311-10	1.114-1	1.114-1	1.114-1	
1.750-4	1.384-5	5.898-3	1.007-6	1.345-3	3.709-2	1.005-6	1.748-4	1.748-4	0.550-10	1.281-1	1.281-1	1.281-1	
2.000-4	1.381-5	5.819-3	0.943-6	1.344-3	4.541-2	0.930-6	1.987-4	1.987-4	1.125-9	1.446-1	1.446-1	1.446-1	
2.500-4	1.635-5	4.918-3	0.403-6	1.348-3	7.508-2	0.390-6	2.488-4	2.488-4	1.752-9	1.527-1	1.527-1	1.527-1	
3.000-4	1.876-5	4.288-3	7.323-5	1.340-3	1.074-1	7.310-5	2.985-4	2.985-4	2.522-9	1.587-1	1.587-1	1.587-1	
3.082-4	1.938-5	4.151-3	7.093-5	1.340-3	1.131-1	7.080-5	3.076-4	3.076-4	2.861-9	1.589-1	1.589-1	1.589-1	
3.096-4	1.938-5	5.009-3	0.593-5	1.340-3	1.141-1	0.590-5	3.091-4	3.091-4	2.887-9	1.534-1	1.534-1	1.534-1	
3.500-4	3.804-6	2.230-4	3.811-6	1.337-3	1.445-1	3.810-6	3.499-4	3.499-4	3.443-9	9.708-1	9.708-1	9.708-1	
4.000-4	3.186-6	2.523-4	4.311-6	1.335-3	1.870-1	4.310-6	3.999-4	3.999-4	4.497-9	1.255-2	1.255-2	1.255-2	
4.500-4	3.778-6	2.128-4	3.638-6	1.332-3	2.334-1	3.634-6	4.498-4	4.498-4	5.091-9	1.191-2	1.191-2	1.191-2	
5.000-4	4.401-6	1.887-4	3.121-6	1.328-3	2.845-1	3.120-6	4.998-4	4.998-4	7.025-9	1.136-2	1.136-2	1.136-2	
5.038-4	4.498-6	1.803-4	3.081-6	1.328-3	2.885-1	3.080-6	5.036-4	5.036-4	7.132-9	1.130-2	1.130-2	1.130-2	
5.052-4	3.988-6	2.086-4	3.481-6	1.328-3	2.900-1	3.480-6	5.050-4	5.050-4	7.173-9	1.273-2	1.273-2	1.273-2	
5.500-4	4.421-6	1.818-4	3.107-6	1.328-3	3.388-1	3.105-6	5.498-4	5.498-4	8.500-9	1.243-2	1.243-2	1.243-2	
6.000-4	4.939-6	1.655-4	2.781-6	1.321-3	3.973-1	2.780-6	5.997-4	5.997-4	1.012-8	1.214-2	1.214-2	1.214-2	
6.500-4	5.363-6	1.459-4	2.581-6	1.318-3	4.284-1	2.580-6	6.261-4	6.261-4	1.102-8	1.167-2	1.167-2	1.167-2	
6.278-4	5.086-6	1.587-4	2.711-6	1.318-3	4.301-1	2.710-6	6.275-4	6.275-4	1.107-8	1.239-2	1.239-2	1.239-2	
6.500-4	5.415-6	1.485-4	2.537-6	1.315-3	4.571-1	2.536-6	6.497-4	6.497-4	1.187-8	1.202-2	1.202-2	1.202-2	
7.000-4	6.240-6	1.288-4	2.201-6	1.310-3	5.203-1	2.200-6	6.996-4	6.996-4	1.376-8	1.121-2	1.121-2	1.121-2	
8.000-4	8.170-6	0.879-4	1.881-6	1.302-3	6.573-1	1.880-6	7.994-4	7.994-4	1.797-8	9.784-1	9.784-1	9.784-1	
9.000-4	1.048-5	9.737-3	1.311-6	1.290-3	7.989-1	1.310-6	8.991-4	8.991-4	2.274-8	0.583-1	0.583-1	0.583-1	
1.000-3	1.106-5	7.270-3	1.242-6	1.279-3	9.487-1	1.241-6	9.990-4	9.990-4	2.807-8	0.935-1	0.935-1	0.935-1	
1.250-3	1.980-5	4.081-3	6.939-3	1.242-3	1.314-0	6.986-3	1.248-3	1.248-3	4.379-8	0.303-1	0.303-1	0.303-1	
1.500-3	3.185-5	2.524-3	4.313-3	1.212-3	1.717-0	4.301-3	1.498-3	1.498-3	6.292-8	0.697-1	0.697-1	0.697-1	
1.750-3	4.759-5	1.889-3	2.887-3	1.171-3	2.098-0	2.875-3	1.743-3	1.743-3	8.543-8	3.063-1	3.063-1	3.063-1	
2.000-3	6.735-5	1.193-3	2.039-3	1.137-3	2.498-0	2.028-3	1.989-3	1.989-3	1.112-7	2.993-1	2.993-1	2.993-1	
2.500-3	1.202-4	6.086-3	2.143-3	1.051-3	3.218-0	1.132-3	2.477-3	2.477-3	1.785-7	2.060-1	2.060-1	2.060-1	
3.000-3	1.927-4	4.172-3	7.120-3	0.899-3	3.987-0	7.030-4	2.958-3	2.958-3	2.481-7	1.535-1	1.535-1	1.535-1	
3.002-3	1.930-4	4.184-3	7.116-3	0.891-3	3.989-0	7.017-4	2.960-3	2.960-3	2.484-7	1.534-1	1.534-1	1.534-1	
4.003-3	5.241-5	1.534-3	2.621-3	0.849-3	3.971-0	2.611-3	2.992-3	2.992-3	2.317-7	5.477-1	5.477-1	5.477-1	
3.145-3	5.881-5	1.387-3	2.336-3	0.817-3	4.161-0	2.326-3	3.132-3	3.132-3	2.549-7	5.120-1	5.120-1	5.120-1	
3.146-3	4.179-5	1.923-3	3.287-3	0.815-3	4.162-0	3.277-3	3.137-3	3.137-3	2.597-7	7.215-1	7.215-1	7.215-1	
3.411-3	5.121-5	1.570-3	2.882-3	0.922-3	4.517-0	2.673-3	3.399-3	3.399-3	3.022-7	6.401-1	6.401-1	6.401-1	
3.412-3	4.421-5	1.818-3	3.107-3	0.920-3	4.518-0	3.098-3	3.402-3	3.402-3	3.027-7	7.421-1	7.421-1	7.421-1	
3.500-3	4.716-5	1.705-3	2.913-3	0.910-3	4.636-0	2.904-3	3.489-3	3.489-3	3.190-7	7.141-1	7.141-1	7.141-1	
4.000-3	6.618-5	1.215-3	2.078-3	0.849-3	5.307-0	2.067-3	3.984-3	3.984-3	4.195-7	5.836-1	5.836-1	5.836-1	
4.500-3	8.988-5	0.984-3	1.532-3	7.870-3	5.923-0	1.524-3	4.477-3	4.477-3	5.335-7	4.857-1	4.857-1	4.857-1	
5.000-3	1.177-4	8.832-3	1.187-3	7.352-3	6.534-0	1.180-3	4.988-3	4.988-3	6.808-7	4.120-1	4.120-1	4.120-1	
5.500-3	1.511-4	5.321-3	9.092-3	6.852-3	7.105-0	0.903-4	5.458-3	5.337-3	8.011-7	3.533-1	3.533-1	3.533-1	
6.000-3	1.898-4	4.238-3	7.238-3	6.426-3	7.671-0	7.173-4	5.948-3	5.826-3	9.543-7	3.070-1	3.070-1	3.070-1	
6.500-3	2.350-4	3.421-3	5.845-3	6.016-3	8.181-0	5.784-4	6.432-3	6.312-3	1.120-6	2.886-1	2.886-1	2.886-1	
7.000-3	2.884-4	2.867-3	4.797-3	5.661-3	8.684-0	4.739-4	6.916-3	6.796-3	1.299-6	2.373-1	2.373-1	2.373-1	
8.000-3	4.086-4	1.967-3	3.362-3	5.072-3	9.671-0	3.310-4	7.877-3	7.757-3	1.692-6	1.898-1	1.898-1	1.898-1	
1.000-2	7.483-4	1.074-3	1.836-3	4.144-3	1.130-1	1.793-4	9.768-3	9.649-3	2.618-6	1.289-1	1.289-1	1.289-1	
1.250-2	1.387-3	5.794-3	1.900-3	3.262-3	1.281-1	9.561-3	1.207-2	1.195-2	4.018-6	8.616-0	8.616-0	8.616-0	
1.500-2	2.288-3	3.513-3	1.603-3	2.683-3	1.419-1	5.720-3	1.430-2	1.418-2	5.852-6	6.196-0	6.196-0	6.196-0	
1.750-2	3.527-3	2.279-3	1.895-3	2.194-3	1.520-1	3.860-3	1.645-2	1.633-2	7.500-6	4.631-0	4.631-0	4.631-0	
2.000-2	5.113-3	1.572-3	2.886-3	1.843-3	1.613-1	2.486-3	1.851-2	1.840-2	9.517-6	3.999-0	3.999-0	3.999-0	
2.322-2	7.770-3	1.035-3	1.788-3	1.490-3	1.895-1	1.802-3	2.105-2	2.094-2	1.233-5	2.895-0	2.895-0	2.895-0	
2.322-2	1.293-3	6.218-3	1.083-3	1.490-3	1.895-1	1.048-4	2.286-2	0.921-3	2.238-6	6.901-0	6.901-0	6.901-0	
2.500-2	1.535-3	5.189-3	0.832-3	1.341-3	1.737-1	0.880-3	2.457-2	1.920-2	3.193-6	6.858-0	6.858-0	6.858-0	
3.000-2	2.453-3	3.277-3	5.600-3	1.034-3	1.848-1	5.478-3	2.935-2	1.920-2	6.794-6	6.320-0	6.320-0	6.320-0	
3.500-2	3.675-3	2.187-3	3.798-3	0.211-1	1.910-1	3.636-3	3.406-2	2.029-2	1.157-5	5.521-0	5.521-0	5.521-0	
4.000-2	5.204-3	1.543-3	2.637-3	6.727-3	1.967-1	2.950-3	3.670-2	2.501-2	1.798-5	4.801-0	4.801-0	4.801-0	
4.500-2	7.163-3	1.122-3	1.918-3	5.580-3	1.998-1	1.842-3	4.326-2	2.986-2	2.472-5	4.141-0	4.141-0	4.141-0	
5.000-2	9.509-3	0.453-3	1.444-3	4.721-3	2.027-1	1.377-3	4.773-2	3.423-2	3.282-5	3.999-0	3.999-0	3.999-0	
5.500-2	1.234-2	6.513-3	1.113-3	4.028-3	2.040-1	1.052-3	5.210-2	3.871-2	4.210-5	3.138-0	3.138-0	3.138-0	
6.000-2	1.384-2	5.146-3	3.784-3	3.485-3	2.052-1	0.230-2	5.636-2	4.309-2	5.217-5	2.798-0	2.798-0	2.798-0	
6.500-2	1.950-2	4.123-3	7.045-3	3.034-3	2.050-1	6.537-2	6.051-2	4.738-2	6.304-5	2.430-0	2.430-0	2.430-0	
7.000-2	2.388-2	3.387-3	5.753-3	2.688-3	2.048-1	5.281-2	6.494-2	5.195-2	7.462-5	2.199-0	2.199-0	2.199-0	
8.000-2	3.443-2	2.348-3	4.012-3	2.117-3	2.047-1	3.996-2	7.221-2	4.952-2	9.947-5	1.739-0	1.739-0	1.739-0	

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45-Rh

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ENDL Evaluated Photon Data

45-Rh

ATOMIC WEIGHT 100.91										DENSITY 12.44 GRAMS/CC			
ENERGY KEV	TOTAL NTP		CROSS SECTION (BARN)				NEUTRON COLLISION		NEUTRON K.E.	NEUTRON K.E.		NEUTRON K.E.	NEUTRON K.E.
	CM	CM/CM/CM	TOTAL	COMPONENT	INCOHERENT	PHOTOEL PAIR PROD	NEUTRON	NEUTRON		NEUTRON	NEUTRON		
1.000-1	6.187-2	1.298-8	2.200-2	1.431-1	2.000-1	1.878-2	8.982-2	7.388-2	1.531-4	1.194-0	0.178-1	1.194-0	0.178-1
1.250-1	1.086-1	7.411-1	1.200-2	9.583-0	1.930-1	9.787-1	9.883-2	8.871-2	2.288-4	8.178-1	0.178-1	8.178-1	0.178-1
1.500-1	1.095-1	4.888-1	8.300-1	8.908-0	1.082-1	5.730-1	1.098-1	1.002-1	2.814-4	6.854-1	0.178-1	6.854-1	0.178-1
1.750-1	2.290-1	3.518-1	5.999-1	5.187-0	1.814-1	3.885-1	1.178-1	1.088-1	3.344-4	4.788-1	0.178-1	4.788-1	0.178-1
2.000-1	2.953-1	2.782-1	4.851-1	4.049-0	1.757-1	2.488-1	1.238-1	1.183-1	3.781-4	3.937-1	0.178-1	3.937-1	0.178-1
2.500-1	4.290-1	1.881-1	3.282-1	2.847-0	1.843-1	1.325-1	1.382-1	1.284-1	4.682-4	3.082-1	0.178-1	3.082-1	0.178-1
3.000-1	5.425-1	1.408-1	2.533-1	1.871-0	1.525-1	7.812-0	1.443-1	1.388-1	5.481-4	2.578-1	0.178-1	2.578-1	0.178-1
3.500-1	6.444-1	1.247-1	2.138-1	1.388-0	1.472-1	5.209-0	1.588-1	1.534-1	6.388-4	2.388-1	0.178-1	2.388-1	0.178-1
4.000-1	7.331-1	1.087-1	1.874-1	1.073-0	1.404-1	3.628-0	1.714-1	1.687-1	7.887-4	2.301-1	0.178-1	2.301-1	0.178-1
4.500-1	8.112-1	9.918-2	1.683-1	8.528-1	1.341-1	2.870-0	1.885-1	1.882-1	9.705-4	2.258-1	0.178-1	2.258-1	0.178-1
5.000-1	8.808-1	9.178-2	1.560-1	8.941-1	1.287-1	2.030-0	2.074-1	2.055-1	1.181-3	2.334-1	0.178-1	2.334-1	0.178-1
5.500-1	9.438-1	8.517-2	1.459-1	8.798-1	1.238-1	1.801-0	2.278-1	2.249-1	1.432-3	2.398-1	0.178-1	2.398-1	0.178-1
6.000-1	1.082-8	8.882-2	1.372-1	8.894-1	1.194-1	1.288-0	2.499-1	2.485-1	1.725-3	2.482-1	0.178-1	2.482-1	0.178-1
6.500-1	1.098-8	7.814-2	1.301-1	8.145-1	1.153-1	1.088-0	2.729-1	2.718-1	2.081-3	2.574-1	0.178-1	2.574-1	0.178-1
7.000-1	1.107-8	7.284-2	1.241-1	3.581-1	1.118-1	8.971-1	2.970-1	2.959-1	2.443-3	2.674-1	0.178-1	2.674-1	0.178-1
8.000-1	1.188-8	6.782-2	1.145-1	2.732-1	1.052-1	6.994-1	3.477-1	3.469-1	3.352-3	2.882-1	0.178-1	2.882-1	0.178-1
1.000-0	1.388-8	5.884-2	1.005-1	1.788-1	9.474-1	4.038-1	4.384-1	4.358-1	5.788-3	3.338-1	0.178-1	3.338-1	0.178-1
1.000-0	1.387-8	5.812-2	9.932-0	1.083-1	9.375-0	3.878-1	4.888-1	4.888-1	8.088-3	3.387-1	0.178-1	3.387-1	0.178-1
1.250-0	1.548-8	5.188-2	8.885-0	1.134-1	8.481-0	2.888-1	5.888-1	5.888-1	1.002-2	3.884-1	0.178-1	3.884-1	0.178-1
1.500-0	1.688-8	4.741-2	8.101-0	7.890-0	1.325-1	1.158-1	7.508-1	7.508-1	1.250-2	4.484-1	0.178-1	4.484-1	0.178-1
1.750-0	1.817-8	4.425-2	7.582-0	5.801-2	7.088-0	1.440-1	8.648-1	8.648-1	2.244-2	4.978-1	0.178-1	4.978-1	0.178-1
2.000-0	1.918-8	4.180-2	7.180-0	4.444-2	6.587-0	1.139-1	9.151-1	9.151-1	3.105-2	5.558-1	0.178-1	5.558-1	0.178-1
2.044-0	1.938-8	4.152-2	7.095-0	4.255-2	6.508-0	1.100-1	9.371-1	9.371-1	3.275-2	5.858-1	0.178-1	5.858-1	0.178-1
2.500-0	2.070-8	3.883-2	6.874-0	2.848-2	5.788-0	8.048-2	7.378-1	7.378-1	5.383-2	6.813-1	0.178-1	6.813-1	0.178-1
3.000-0	2.182-8	3.719-2	6.395-0	1.877-2	5.185-0	8.198-2	1.088-0	1.782-0	8.505-2	8.244-1	0.178-1	8.244-1	0.178-1
3.500-0	2.284-8	3.614-2	6.175-0	1.453-2	4.711-0	4.987-2	1.400-0	2.178-0	1.255-1	9.781-1	0.178-1	9.781-1	0.178-1
4.000-0	2.398-8	3.508-2	6.080-0	1.113-2	4.328-0	4.198-2	1.701-0	2.588-0	1.757-1	1.148-0	0.178-1	1.148-0	0.178-1
4.500-0	2.474-8	3.395-2	6.040-0	8.798-3	4.007-0	3.524-2	1.980-0	3.018-0	2.381-1	1.327-0	0.178-1	1.327-0	0.178-1
5.000-0	2.583-8	3.321-2	6.017-0	7.122-3	3.737-0	3.084-2	2.242-0	3.458-0	3.088-1	1.515-0	0.178-1	1.515-0	0.178-1
5.500-0	2.688-8	3.257-2	5.978-0	5.888-3	3.505-0	2.723-2	2.438-0	3.808-0	3.808-1	1.688-0	0.178-1	1.688-0	0.178-1
6.000-0	2.783-8	3.181-2	5.965-0	4.947-3	3.303-0	2.444-2	2.632-0	4.382-0	4.788-1	1.894-0	0.178-1	1.894-0	0.178-1
6.500-0	2.888-8	3.108-2	5.977-0	4.215-3	3.128-0	2.214-2	2.885-0	4.888-0	5.788-1	2.100-0	0.178-1	2.100-0	0.178-1
7.000-0	2.988-8	3.018-2	6.008-0	3.835-3	2.888-0	2.020-2	3.015-0	5.288-0	6.888-1	2.318-0	0.178-1	2.318-0	0.178-1
8.000-0	2.248-8	3.578-2	6.115-0	2.783-3	2.708-0	1.712-2	3.383-0	6.253-0	9.353-1	2.784-0	0.178-1	2.784-0	0.178-1
1.000-1	2.130-8	3.774-2	6.448-0	1.781-3	2.301-0	1.288-2	4.133-0	8.213-0	1.541-0	3.858-0	0.178-1	3.858-0	0.178-1
1.250-1	2.094-8	3.913-2	6.888-0	1.140-3	1.953-0	1.023-2	4.722-0	1.088-0	2.485-0	5.197-0	0.178-1	5.197-0	0.178-1
1.500-1	1.988-8	4.084-2	8.878-0	7.917-4	1.704-0	8.412-3	5.288-0	1.317-0	3.558-0	5.888-0	0.178-1	5.888-0	0.178-1
1.750-1	1.878-8	4.288-2	7.323-0	5.818-4	1.515-0	7.132-3	5.801-0	1.587-0	4.795-0	8.358-0	0.178-1	8.358-0	0.178-1
2.000-1	1.800-8	4.485-2	7.830-0	4.453-4	1.387-0	6.182-3	6.258-0	1.818-0	6.151-0	1.010-0	0.178-1	1.010-0	0.178-1
2.500-1	1.683-8	4.747-2	8.112-0	2.850-4	1.148-0	4.888-3	6.957-0	2.320-0	9.158-0	1.370-0	0.178-1	1.370-0	0.178-1
3.000-1	1.615-8	4.878-2	8.588-0	1.878-4	9.825-1	4.005-3	7.508-0	2.821-0	1.248-0	1.747-0	0.178-1	1.747-0	0.178-1
3.500-1	1.559-8	5.155-2	8.888-0	1.494-4	8.805-1	3.395-3	7.984-0	3.322-0	1.605-0	2.130-0	0.178-1	2.130-0	0.178-1
4.000-1	1.510-8	5.324-2	9.088-0	1.113-4	7.910-1	2.943-3	8.304-0	3.823-0	1.981-0	2.532-0	0.178-1	2.532-0	0.178-1
4.500-1	1.481-8	5.502-2	9.402-0	8.795-5	7.193-1	2.594-3	8.880-0	4.325-0	2.373-1	2.960-0	0.178-1	2.960-0	0.178-1
5.000-1	1.425-8	5.842-2	9.841-0	7.124-5	6.883-1	2.317-3	8.978-0	4.825-0	2.778-1	3.387-0	0.178-1	3.387-0	0.178-1
5.500-1	1.401-8	5.738-2	9.807-0	5.888-5	6.108-1	2.093-3	9.194-0	5.326-0	3.194-1	3.803-0	0.178-1	3.803-0	0.178-1
6.000-1	1.378-8	5.832-2	9.888-0	4.948-5	5.889-1	1.907-3	9.395-0	5.827-0	3.619-1	4.228-0	0.178-1	4.228-0	0.178-1
6.500-1	1.358-8	5.921-2	1.012-1	4.218-5	5.326-1	1.750-3	9.584-0	6.328-0	4.051-1	4.681-0	0.178-1	4.681-0	0.178-1
7.000-1	1.338-8	6.087-2	1.026-1	3.835-5	5.010-1	1.816-3	9.782-0	6.828-0	4.480-1	5.103-0	0.178-1	5.103-0	0.178-1
8.000-1	1.303-8	6.188-2	1.054-1	2.783-5	4.487-1	1.401-3	1.009-1	7.829-1	5.384-1	6.009-1	0.178-1	6.009-1	0.178-1
1.000-2	1.244-8	6.482-2	1.104-1	1.781-5	3.724-1	1.103-3	1.087-1	9.832-1	9.832-1	7.903-1	0.178-1	7.903-1	0.178-1

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Form Factors

45-Rh

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000 0	1.000 0	0.000 0	1.250 1	0.900 1	1.032 1	1.000 0	3.178 1	0.033 1	1.000 1	1.007 2	9.885 1
5.000 3	9.997 1	3.111 4	1.500 1	0.800 1	1.278 1	1.250 0	2.473 1	0.085 1	1.500 1	9.998 3	9.975 1
1.000 2	9.991 1	1.244 3	1.750 1	0.700 1	1.517 1	1.500 0	1.935 1	0.130 1	2.000 1	5.136 3	9.999 1
1.500 2	9.985 1	2.798 3	2.000 1	0.615 1	1.747 1	2.000 0	1.361 1	0.187 1	5.000 1	3.147 4	1.000 0
2.000 2	9.979 1	4.918 3	2.500 1	0.538 1	2.178 1	2.500 0	1.112 1	0.248 1	8.000 1	6.367 5	1.000 0
2.500 2	9.973 1	7.587 3	3.000 1	0.460 1	2.576 1	3.000 0	0.940 1	0.310 1	1.000 2	2.973 5	1.000 0
3.000 2	9.967 1	1.070 2	4.000 1	0.332 1	3.307 1	3.500 0	0.678 2	0.074 1	1.000 3	1.885 8	1.000 0
4.000 2	9.961 1	1.021 2	5.000 1	0.218 1	4.988 1	4.000 0	0.523 2	0.285 1	1.000 6	3.508 17	1.000 0
5.000 2	9.955 1	2.700 2	6.000 1	0.192 1	4.540 1	5.000 0	0.421 2	0.502 1	1.000 9	7.541 26	1.000 0
7.000 2	9.917 1	4.673 2	7.000 1	0.161 1	5.013 1	6.000 0	0.318 2	0.637 1			
9.000 2	9.405 1	6.743 2	8.000 1	0.025 1	5.404 1	7.000 0	0.261 2	0.725 1			
1.000 1	9.290 1	7.778 2	9.000 1	0.493 1	5.739 1	8.000 0	0.239 2	0.793 1

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ENDL Evaluated Photon Cross Sections

46-Pd

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Energy Deposition

46-Pd

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ENCL Evaluated Photon Data

46-Pd

ATOMIC WEIGHT 186.4										DENSITY 12.02 GRAMS/CC			
ENERGY		TOTAL MPF		CROSS SECTION (BARN)						MEV/COLLISION			MEV/CM
MEV	CM	CM ² /CM	CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	K.E.	
1.000	4	1.395	5	6.007	3	1.081	6	1.407	3	6.946	3	1.086	6
1.250	4	1.414	5	5.882	3	1.036	6	1.407	3	1.329	2	1.036	6
1.500	4	1.439	5	5.781	3	1.021	6	1.408	3	1.308	2	1.020	6
1.750	4	1.468	5	5.689	3	1.009	6	1.408	3	1.293	2	1.008	6
2.000	4	1.495	5	5.624	3	1.001	6	1.405	3	1.286	2	1.000	6
2.500	4	1.536	5	5.439	3	9.008	5	1.403	3	1.273	2	9.989	5
3.000	4	1.710	5	4.989	3	8.989	5	1.403	3	1.273	2	8.989	5
3.381	4	1.938	5	4.886	3	7.389	5	1.400	3	9.978	3	7.980	5
3.375	4	1.681	5	4.849	3	8.744	5	1.400	3	9.950	2	8.730	5
3.500	4	1.571	5	5.299	3	9.394	5	1.400	3	1.026	1	9.340	5
4.000	4	3.317	6	2.908	4	4.431	6	1.398	3	1.335	1	4.430	6
4.500	4	3.779	6	2.202	4	3.880	6	1.395	3	1.679	1	3.888	6
5.000	4	4.247	6	1.929	4	3.481	6	1.392	3	2.062	1	3.480	6
5.400	4	4.685	6	1.710	4	3.021	6	1.389	3	2.392	1	3.020	6
5.414	4	4.298	6	1.853	4	3.451	6	1.388	3	2.409	1	3.450	6
5.500	4	4.338	6	1.818	4	3.389	6	1.389	3	2.470	1	3.387	6
6.000	4	4.801	6	1.733	4	3.051	6	1.386	3	2.930	1	3.050	6
6.500	4	5.270	6	1.689	4	2.839	6	1.381	3	3.408	1	2.838	6
6.662	4	5.830	6	1.427	4	2.521	6	1.380	3	3.989	1	2.520	6
6.676	4	5.585	6	1.485	4	2.841	6	1.380	3	3.989	1	2.840	6
7.000	4	6.045	6	1.378	4	2.431	6	1.377	3	3.919	1	2.430	6
8.000	4	7.897	6	1.099	4	1.681	6	1.369	3	5.041	1	1.680	6
9.000	4	1.013	5	0.815	3	1.451	6	1.358	3	6.245	1	1.450	6
1.000	3	1.063	5	7.830	3	1.383	5	1.349	3	7.989	1	1.382	5
1.250	3	1.085	5	4.414	3	7.789	5	1.314	3	1.103	0	7.788	5
1.500	3	3.008	5	2.785	3	4.885	5	1.285	3	1.500	0	4.872	5
1.750	3	4.489	5	1.882	3	3.289	5	1.244	3	1.887	0	3.277	5
2.000	3	6.295	5	1.382	3	2.338	5	1.210	3	2.302	0	2.324	5
2.500	3	1.113	4	7.479	2	1.380	5	1.119	3	3.043	0	1.309	5
3.000	3	1.772	4	4.688	2	0.887	4	1.050	3	3.883	0	0.182	4
3.172	3	2.041	4	4.075	2	7.200	4	1.019	3	4.055	0	7.098	4
3.173	3	8.063	5	1.372	3	2.484	5	1.019	3	4.058	0	2.414	5
3.329	3	8.824	5	1.219	3	2.194	5	9.979	2	4.267	0	2.144	5
3.330	3	4.850	5	1.718	3	3.031	5	9.939	2	4.288	0	3.021	5
3.500	3	5.488	5	1.516	3	2.678	5	9.882	2	4.499	0	2.889	5
3.604	3	5.802	5	1.410	3	2.481	5	9.534	2	4.840	0	2.481	5
3.805	3	5.094	5	1.633	3	2.888	5	9.533	2	4.841	0	2.878	5
4.000	3	8.808	5	1.299	3	2.254	5	9.027	2	5.180	0	2.215	5
4.500	3	8.882	5	9.325	2	1.847	5	8.352	2	5.808	0	1.839	5
5.000	3	1.187	4	7.131	2	1.280	5	7.788	2	6.430	0	1.232	5
5.500	3	1.494	4	5.870	2	9.841	4	7.632	2	7.017	0	9.788	4
6.000	3	1.871	4	4.448	2	7.628	4	7.600	2	7.787	0	7.787	4
6.500	3	2.313	4	3.287	2	6.355	4	6.352	2	8.130	0	6.290	4
7.000	3	2.814	4	2.958	2	5.263	4	5.970	2	8.652	0	5.183	4
8.000	3	4.005	4	2.677	2	3.670	4	5.339	2	9.881	0	3.618	4
1.000	2	7.310	4	1.136	2	2.011	4	4.395	2	1.139	1	1.986	4
1.250	2	1.394	3	8.143	1	1.085	4	3.435	2	1.295	1	1.070	4
1.500	2	2.233	3	3.788	1	6.583	3	2.889	2	1.439	1	6.246	3
1.750	2	3.445	3	2.415	1	4.267	3	2.317	2	1.543	1	4.020	3
2.000	2	4.998	3	1.889	1	2.940	3	1.949	2	1.838	1	2.729	3
2.435	2	8.785	3	9.288	0	1.888	3	1.471	2	1.751	1	1.524	3
2.435	2	1.371	3	6.078	1	1.072	4	1.471	2	1.751	1	1.056	4
2.580	2	1.488	3	5.889	1	1.081	4	1.417	2	1.788	1	9.948	3
3.080	2	2.388	3	3.512	1	8.205	3	1.086	2	1.678	1	8.877	3
3.580	2	3.581	3	2.317	1	4.059	3	0.874	1	1.943	3	3.987	3
4.080	2	5.141	3	1.618	1	2.853	3	7.107	1	2.102	1	2.788	3
4.580	2	7.104	3	1.171	1	1.888	3	5.889	1	2.034	1	1.988	3
5.080	2	9.473	3	0.782	0	1.582	3	4.984	1	2.089	1	1.481	3
5.580	2	1.233	2	0.748	0	1.182	3	4.283	1	2.078	1	1.128	3
6.080	2	1.588	2	5.314	0	9.388	2	3.688	1	2.091	1	8.811	2
6.580	2	1.983	2	2.288	0	7.927	2	3.212	1	2.088	1	6.987	2
7.080	2	2.383	2	3.477	0	6.143	2	2.829	1	2.088	1	5.992	2
8.080	2	3.434	2	2.482	0	4.288	2	2.242	1	2.087	1	3.947	2
9.087	5	9.987	5	9.987	5	9.987	5	9.987	5	9.987	5	9.987	5
1.248	4	1.248	4	4.488	18	8.885	0						
1.488	4	1.488	4	6.451	10	1.041	1						
1.748	4	1.748	4	8.781	10	1.285	1						
1.987	4	1.987	4	1.147	8	1.497	1						
2.488	4	2.488	4	1.782	8	1.832	1						
2.985	4	2.985	4	2.578	8	1.751	1						
3.395	4	3.395	4	3.238	8	1.733	1						
3.370	4	3.370	4	3.284	8	2.004	1						
3.485	4	3.485	4	3.511	8	2.224	1						
3.999	4	3.999	4	4.997	8	1.208	2						
4.498	4	4.498	4	5.818	8	1.190	2						
4.998	4	4.998	4	7.182	8	1.177	2						
5.398	4	5.398	4	8.378	8	1.109	2						
5.412	4	5.412	4	8.420	8	1.271	2						
5.498	4	5.498	4	8.950	8	1.287	2						
5.987	4	5.987	4	1.034	8	1.248	2						
6.487	4	6.487	4	1.213	8	1.188	2						
6.858	4	6.858	4	1.275	8	1.183	2						
6.873	4	6.873	4	1.280	8	1.192	2						
6.988	4	6.988	4	1.407	8	1.157	2						
7.994	4	7.994	4	1.837	8	1.012	2						
8.992	4	8.992	4	2.324	8	8.821	1						
9.990	4	9.990	4	2.889	8	9.402	1						
1.248	3	1.248	3	4.477	8	6.821	1						
1.488	3	1.488	3	8.434	8	4.972	1						
1.743	3	1.743	3	8.738	8	3.901	1						
1.990	3	1.990	3	1.138	7	3.182	1						
2.478	3	2.478	3	1.788	7	2.827	1						
2.982	3	2.982	3	2.582	7	1.678	1						
3.127	3	3.127	3	2.811	7	1.532	1						
3.180	3	3.180	3	2.830	7	4.988	1						
3.314	3	3.314	3	2.805	7	4.878	1						
3.319	3	3.319	3	2.915	7	6.988	1						
3.487	3	3.353	3	3.231	7	6.109	1						
3.580	3	3.405	3	3.432	7	5.855	1						
3.593	3	3.458	3	3.438	7	7.889	1						
3.884	3	3.849	3	4.299	7	5.824	1						
4.477	3	4.342	3	5.421	7	4.867	1						
4.989	3	4.834	3	6.718	7	4.144	1						
5.488	3	5.325	3	8.150	7	3.983	1						
5.948	3	5.813	3	9.715	7	3.107	1						
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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 186.4				DENSITY 12.02 GRAMS/CC							
ENERGY	TOTAL NFP			CROSS SECTION (BARNs)				NEV/COLLISION			
MEV	CH	CH+CH/CH		TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR	K.E. BREMSSTR		NEV/CM
1.000-1	8.201-2	1.342-0		2.370-2	1.515-1	2.050-1	2.010-2	8.822-2	7.329-2	1.341-4	1.182-0
1.250-1	1.885-1	7.884-1		1.359-2	1.015-1	1.570-1	1.095-2	1.004-1	8.829-2	2.251-4	8.181-1
1.500-1	1.857-1	5.081-1		8.871-1	7.312-0	1.321-1	6.219-1	1.113-1	1.008-1	2.302-4	6.073-1
1.750-1	2.288-1	3.823-1		8.401-1	5.485-0	1.852-1	3.989-1	1.188-1	1.103-1	3.485-4	4.802-1
2.000-1	2.589-1	2.882-1		4.951-1	4.830-0	1.794-1	2.720-1	1.283-1	1.180-1	3.987-4	3.973-1
2.500-1	4.257-1	1.938-1		3.421-1	2.888-0	1.878-1	1.482-1	1.375-1	1.310-1	4.918-4	3.049-1
3.000-1	5.516-1	1.588-1		2.685-1	1.983-0	1.588-1	8.784-0	1.480-1	1.430-1	5.898-4	2.593-1
3.500-1	6.548-1	1.283-1		2.231-1	1.472-0	1.504-1	5.800-0	1.608-1	1.588-1	7.023-4	2.372-1
4.000-1	7.528-1	1.105-1		1.953-1	1.138-0	1.435-1	4.848-0	1.751-1	1.720-1	8.450-4	2.265-1
4.500-1	8.355-1	9.957-2		1.739-1	9.042-1	1.371-1	2.982-0	1.919-1	1.894-1	1.025-3	2.266-1
5.000-1	9.095-1	9.148-2		1.618-1	7.382-1	1.316-1	2.293-0	2.105-1	2.084-1	1.242-3	2.292-1
5.500-1	9.788-1	8.517-2		1.505-1	6.107-1	1.285-1	1.787-0	2.309-1	2.290-1	1.498-3	2.345-1
6.000-1	1.038-0	8.012-2		1.418-1	5.149-1	1.220-1	1.437-0	2.525-1	2.510-1	1.798-3	2.417-1
6.500-1	1.098-0	7.589-2		1.341-1	4.357-1	1.178-1	1.187-0	2.753-1	2.740-1	2.141-3	2.499-1
7.000-1	1.150-0	7.233-2		1.278-1	3.799-1	1.140-1	9.951-1	2.991-1	2.978-1	2.531-3	2.590-1
8.000-1	1.249-0	6.882-2		1.177-1	2.919-1	1.075-1	7.238-1	3.495-1	3.486-1	3.459-3	2.791-1
1.000-0	1.435-0	5.838-2		1.031-1	1.876-1	9.884-0	4.338-1	4.575-1	4.565-1	5.528-3	3.805-1
1.028-0	1.443-0	5.784-2		1.018-1	1.797-1	9.582-0	4.224-1	4.701-1	4.694-1	6.251-3	3.252-1
1.250-0	1.618-0	5.141-2		9.084-0	1.204-1	8.889-0	2.923-1	6.032-1	6.027-1	1.027-2	3.725-1
1.500-0	1.771-0	4.888-2		8.300-0	8.374-2	7.884-0	2.094-1	7.513-1	7.510-1	1.587-2	4.240-1
1.750-0	1.897-0	4.385-2		7.748-0	6.157-2	7.254-0	1.586-1	9.055-1	9.052-1	2.296-2	4.772-1
2.000-0	2.003-0	4.194-2		7.340-0	4.717-2	6.733-0	1.238-1	1.087-0	1.087-0	3.175-2	5.328-1
2.044-0	2.021-0	4.117-2		7.274-0	4.518-2	6.850-0	1.198-1	1.098-0	1.098-0	3.349-2	5.424-1
2.500-0	2.159-0	3.853-2		6.807-0	3.021-2	5.918-0	8.754-2	1.412-1	1.411-1	5.504-2	6.537-1
3.000-0	2.252-0	3.895-2		6.527-0	2.098-2	5.300-0	6.899-2	1.704-1	1.703-1	6.898-2	7.920-1
3.500-0	2.315-0	3.594-2		6.350-0	1.942-2	4.815-0	5.424-2	2.178-0	2.178-0	1.283-1	9.408-1
4.000-0	2.348-0	3.542-2		6.258-0	1.181-2	4.422-0	4.518-2	2.592-0	2.592-0	1.797-1	1.104-0
4.500-0	2.382-0	3.522-2		6.223-0	9.332-3	4.058-0	3.831-2	3.022-0	3.022-0	2.415-1	1.279-0
5.000-0	2.370-0	3.511-2		6.203-0	7.586-3	3.820-0	3.330-2	3.483-0	3.483-0	3.126-1	1.482-0
5.500-0	2.384-0	3.489-2		6.185-0	6.248-3	3.588-0	2.928-2	3.911-0	3.911-0	3.923-1	1.840-0
6.000-0	2.387-0	3.485-2		6.157-0	5.251-3	3.378-0	2.825-2	4.788-0	4.788-0	4.873-1	1.829-0
6.500-0	2.382-0	3.483-2		6.172-0	4.474-3	3.185-0	2.404-2	4.832-0	4.832-0	5.894-1	2.059-0
7.000-0	2.388-0	3.513-2		6.207-0	3.828-3	2.193-0	2.147-2	5.303-0	5.303-0	7.018-1	2.239-0
8.000-0	2.325-0	3.578-2		6.322-0	2.934-3	2.782-0	1.878-2	6.262-0	6.261-0	8.952-1	2.893-0
1.000-1	2.202-0	3.778-2		6.675-0	1.891-3	2.353-0	1.405-2	6.223-0	6.223-0	1.572-0	3.734-0
1.250-1	2.121-0	3.922-2		6.829-0	1.210-3	1.988-0	1.109-2	1.089-1	1.089-1	2.512-0	5.036-0
1.500-1	2.031-0	4.097-2		7.239-0	8.404-4	1.741-1	9.125-3	1.318-1	1.318-1	3.621-0	6.490-0
1.750-1	1.934-0	4.302-2		7.802-0	6.174-4	1.549-1	7.738-3	1.588-1	1.588-1	4.875-0	6.111-0
2.000-1	1.835-0	4.485-2		7.923-0	4.727-4	1.398-1	6.705-3	1.819-1	1.819-1	6.248-0	9.807-0
2.500-1	1.744-0	4.770-2		8.428-0	3.025-4	1.175-1	5.279-3	2.321-1	2.321-1	9.288-0	1.331-1
3.000-1	1.682-0	5.005-2		8.843-0	2.101-4	1.018-1	4.342-3	2.822-1	2.822-1	1.284-1	1.898-1
3.500-1	1.605-0	5.184-2		9.158-0	1.943-4	9.000-1	3.681-3	3.323-1	3.323-1	1.824-1	2.071-1
4.000-1	1.523-0	5.358-2		9.482-0	1.182-4	8.088-1	3.151-3	3.824-1	3.824-1	2.003-1	2.482-1
4.500-1	1.503-0	5.538-2		9.781-0	9.338-5	7.352-1	2.812-3	4.326-1	4.326-1	2.388-1	2.879-1
5.000-1	1.485-0	5.878-2		1.003-1	7.582-5	6.750-1	2.512-3	4.827-1	4.827-1	2.805-1	3.294-1
5.500-1	1.440-0	5.778-2		1.020-1	6.250-5	6.244-1	2.288-3	5.328-1	5.328-1	3.223-1	3.699-1
6.000-1	1.417-0	5.870-2		1.037-1	5.252-5	5.816-1	2.086-3	5.828-1	5.828-1	3.950-1	4.112-1
6.500-1	1.398-0	5.980-2		1.053-1	4.475-5	5.444-1	1.897-3	6.329-1	6.329-1	4.084-1	4.534-1
7.000-1	1.378-0	6.046-2		1.068-1	3.899-5	5.121-1	1.752-3	6.829-1	6.829-1	4.525-1	4.983-1
8.000-1	1.340-0	6.210-2		1.097-1	2.994-5	4.587-1	1.518-3	7.831-1	7.831-1	5.422-1	5.845-1
1.000-2	1.278-0	6.504-2		1.149-1	1.891-5	3.807-1	1.198-3	9.833-1	9.833-1	7.284-1	7.888-1

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Form Factors

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$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
0.000-0	1.000-0	0.000-0	1.250-1	9.895-1	9.482-2	1.000-0	3.200-1	6.017-1	1.000-0	1.873-2	9.879-1
5.000-3	9.999-1	2.174-4	1.500-1	8.775-1	1.203-1	1.250-0	2.520-1	6.041-1	1.300-1	1.003-2	9.873-1
1.000-2	9.993-1	8.478-4	1.750-1	8.441-1	1.450-1	1.500-0	1.973-1	7.130-1	2.000-1	5.347-3	9.994-1
1.500-2	9.985-1	1.915-3	2.000-1	8.103-1	1.679-1	2.000-0	1.309-1	7.902-1	3.000-1	3.373-4	1.000-0
2.000-2	9.973-1	3.308-3	2.500-1	7.443-1	2.099-1	2.500-0	1.109-1	8.414-1	4.000-1	6.004-5	1.000-0
2.500-2	9.958-1	5.003-3	3.000-1	6.858-1	2.487-1	3.000-0	9.483-2	8.700-1	1.000-2	3.228-5	1.000-0
3.000-2	9.939-1	7.526-3	4.000-1	5.834-1	3.203-1	3.500-0	7.704-2	9.049-1	1.000-3	2.077-6	1.000-0
4.000-2	9.883-1	1.314-2	5.000-1	5.103-1	3.901-1	4.000-0	6.607-2	9.245-1	1.000-6	4.039-17	1.000-0
5.000-2	9.834-1	2.087-2	6.000-1	4.573-1	4.480-1	5.000-0	4.294-2	9.491-1	1.000-9	9.048-22	1.000-0
7.000-2	9.804-1	3.787-2	7.000-1	4.187-1	4.979-1	6.000-0	3.215-2	9.829-1			
9.000-2	9.495-1	5.003-2	8.000-1	3.684-1	5.382-1	7.000-0	2.683-2	9.720-1			
1.000-1	9.388-1	6.748-2	9.000-1	3.507-1	5.721-1	8.000-0	2.400-2	9.787-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 187.87				DENSITY 19.48 GRAMS/CC			
ENERGY	TOTAL HP		CROSS SECTION (BARN)				MEV/COLLISION
MEV	CM	CM/CM/BN	TOTAL	COMPONENT	INCHERT	PHOTOEL PAIR PROD	K.E. FLOR
MEV	CM	CM/CM/BN	TOTAL	COMPONENT	INCHERT	PHOTOEL PAIR PROD	K.E. FLOR
1.000	1.872	5.793	1.881	1.400	1.120	1.820	9.988
1.250	1.885	5.805	1.894	1.408	1.128	1.833	9.997
1.500	1.898	5.818	1.907	1.416	1.136	1.846	10.006
1.750	1.911	5.831	1.920	1.424	1.144	1.859	10.015
2.000	1.924	5.844	1.933	1.432	1.152	1.872	10.024
2.250	1.937	5.857	1.946	1.440	1.160	1.885	10.033
2.500	1.950	5.870	1.959	1.448	1.168	1.898	10.042
2.750	1.963	5.883	1.972	1.456	1.176	1.911	10.051
3.000	1.976	5.896	1.985	1.464	1.184	1.924	10.060
3.250	1.989	5.909	1.998	1.472	1.192	1.937	10.069
3.500	2.002	5.922	2.011	1.480	1.200	1.950	10.078
3.750	2.015	5.935	2.024	1.488	1.208	1.963	10.087
4.000	2.028	5.948	2.037	1.496	1.216	1.976	10.096
4.250	2.041	5.961	2.050	1.504	1.224	1.989	10.105
4.500	2.054	5.974	2.063	1.512	1.232	2.002	10.114
4.750	2.067	5.987	2.076	1.520	1.240	2.015	10.123
5.000	2.080	5.999	2.089	1.528	1.248	2.028	10.132
5.250	2.093	6.012	2.102	1.536	1.256	2.041	10.141
5.500	2.106	6.025	2.115	1.544	1.264	2.054	10.150
5.750	2.119	6.038	2.128	1.552	1.272	2.067	10.159
6.000	2.132	6.051	2.141	1.560	1.280	2.080	10.168
6.250	2.145	6.064	2.154	1.568	1.288	2.093	10.177
6.500	2.158	6.077	2.167	1.576	1.296	2.106	10.186
6.750	2.171	6.090	2.180	1.584	1.304	2.119	10.195
7.000	2.184	6.103	2.193	1.592	1.312	2.132	10.204
7.250	2.197	6.116	2.206	1.600	1.320	2.145	10.213
7.500	2.210	6.129	2.219	1.608	1.328	2.158	10.222
7.750	2.223	6.142	2.232	1.616	1.336	2.171	10.231
8.000	2.236	6.155	2.245	1.624	1.344	2.184	10.240
8.250	2.249	6.168	2.258	1.632	1.352	2.197	10.249
8.500	2.262	6.181	2.271	1.640	1.360	2.210	10.258
8.750	2.275	6.194	2.284	1.648	1.368	2.223	10.267
9.000	2.288	6.207	2.297	1.656	1.376	2.236	10.276
9.250	2.301	6.220	2.310	1.664	1.384	2.249	10.285
9.500	2.314	6.233	2.323	1.672	1.392	2.262	10.294
9.750	2.327	6.246	2.336	1.680	1.400	2.275	10.303
10.000	2.340	6.259	2.349	1.688	1.408	2.288	10.312
10.250	2.353	6.272	2.362	1.696	1.416	2.301	10.321
10.500	2.366	6.285	2.375	1.704	1.424	2.314	10.330
10.750	2.379	6.298	2.388	1.712	1.432	2.327	10.339
11.000	2.392	6.311	2.401	1.720	1.440	2.340	10.348
11.250	2.405	6.324	2.414	1.728	1.448	2.353	10.357
11.500	2.418	6.337	2.427	1.736	1.456	2.366	10.366
11.750	2.431	6.350	2.440	1.744	1.464	2.379	10.375
12.000	2.444	6.363	2.453	1.752	1.472	2.392	10.384
12.250	2.457	6.376	2.466	1.760	1.480	2.405	10.393
12.500	2.470	6.389	2.479	1.768	1.488	2.418	10.402
12.750	2.483	6.402	2.492	1.776	1.496	2.431	10.411
13.000	2.496	6.415	2.505	1.784	1.504	2.444	10.420
13.250	2.509	6.428	2.518	1.792	1.512	2.457	10.429
13.500	2.522	6.441	2.531	1.800	1.520	2.470	10.438
13.750	2.535	6.454	2.544	1.808	1.528	2.483	10.447
14.000	2.548	6.467	2.557	1.816	1.536	2.496	10.456
14.250	2.561	6.480	2.570	1.824	1.544	2.509	10.465
14.500	2.574	6.493	2.583	1.832	1.552	2.522	10.474
14.750	2.587	6.506	2.596	1.840	1.560	2.535	10.483
15.000	2.600	6.519	2.609	1.848	1.568	2.548	10.492
15.250	2.613	6.532	2.622	1.856	1.576	2.561	10.501
15.500	2.626	6.545	2.635	1.864	1.584	2.574	10.510
15.750	2.639	6.558	2.648	1.872	1.592	2.587	10.519
16.000	2.652	6.571	2.661	1.880	1.600	2.600	10.528
16.250	2.665	6.584	2.674	1.888	1.608	2.613	10.537
16.500	2.678	6.597	2.687	1.896	1.616	2.626	10.546
16.750	2.691	6.610	2.700	1.904	1.624	2.639	10.555
17.000	2.704	6.623	2.713	1.912	1.632	2.652	10.564
17.250	2.717	6.636	2.726	1.920	1.640	2.665	10.573
17.500	2.730	6.649	2.739	1.928	1.648	2.678	10.582
17.750	2.743	6.662	2.752	1.936	1.656	2.691	10.591
18.000	2.756	6.675	2.765	1.944	1.664	2.704	10.600
18.250	2.769	6.688	2.778	1.952	1.672	2.717	10.609
18.500	2.782	6.701	2.791	1.960	1.680	2.730	10.618
18.750	2.795	6.714	2.804	1.968	1.688	2.743	10.627
19.000	2.808	6.727	2.817	1.976	1.696	2.756	10.636
19.250	2.821	6.740	2.830	1.984	1.704	2.769	10.645
19.500	2.834	6.753	2.843	1.992	1.712	2.782	10.654
19.750	2.847	6.766	2.856	2.000	1.720	2.795	10.663
20.000	2.860	6.779	2.869	2.008	1.728	2.808	10.672

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ATOMIC WEIGHT 187.87										DENSITY 18.49 GRAMS/CC			
ENERGY		TOTAL PFP		CROSS SECTION (BARNS)						NEUT/COLLISION		NEUT/CM	
MEV	CH	CH/CM/HR		TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	E.E.-FLGR	K.E.	SPRNGSTR	NEUT/CM	K.E.
1.000 - 1	6.499 - 2	1.499 - 8		2.831 - 2	1.000 - 1	2.001 - 1	2.202 - 2		8.713 - 2	7.336 - 2	1.570 - 4	1.130 - 0	
1.250 - 1	1.190 - 1	0.301 - 1		1.490 - 2	1.870 - 2	2.018 - 1	1.100 - 2		1.000 - 2	0.933 - 2	2.330 - 4	7.093 - 0	
1.500 - 1	1.700 - 1	0.700 - 1		2.400 - 2	2.700 - 2	3.100 - 2	1.100 - 2		1.100 - 2	1.000 - 2	3.000 - 4	8.000 - 0	
1.750 - 1	2.200 - 1	1.200 - 1		3.300 - 2	3.600 - 2	4.000 - 2	1.200 - 2		1.200 - 2	1.100 - 2	3.700 - 4	9.000 - 0	
2.000 - 1	3.103 - 1	2.000 - 1		5.103 - 2	5.300 - 2	5.700 - 2	1.300 - 2		1.300 - 2	1.200 - 2	4.400 - 4	1.000 - 1	
2.250 - 1	4.073 - 1	2.900 - 1		7.073 - 2	7.100 - 2	7.500 - 2	1.400 - 2		1.410 - 2	1.340 - 2	5.200 - 4	2.001 - 1	
2.500 - 1	5.003 - 1	3.800 - 1		9.003 - 2	9.000 - 2	9.400 - 2	1.500 - 2		1.500 - 2	1.400 - 2	6.000 - 4	2.401 - 1	
2.750 - 1	6.003 - 1	4.800 - 1		1.1003 - 1	1.1000 - 2	1.1400 - 2	1.600 - 2		1.600 - 2	1.500 - 2	6.800 - 4	2.801 - 1	
3.000 - 1	7.301 - 1	6.100 - 1		1.3301 - 1	1.3300 - 2	1.3700 - 2	1.700 - 2		1.670 - 2	1.603 - 2	7.500 - 4	3.195 - 1	
3.250 - 1	8.300 - 1	7.100 - 1		1.6300 - 1	1.6300 - 2	1.6700 - 2	1.800 - 2		1.700 - 2	1.603 - 2	8.300 - 4	3.595 - 1	
3.500 - 1	9.300 - 1	8.100 - 1		1.9300 - 1	1.9300 - 2	1.9700 - 2	1.900 - 2		1.800 - 2	1.700 - 2	9.100 - 4	3.995 - 1	
3.750 - 1	1.0300 - 1	9.100 - 1		2.2300 - 1	2.2300 - 2	2.2700 - 2	2.000 - 2		1.900 - 2	1.800 - 2	9.900 - 4	4.395 - 1	
4.000 - 1	1.1000 - 1	1.0000 - 1		2.5000 - 1	2.5000 - 2	2.5400 - 2	2.100 - 2		2.000 - 2	1.900 - 2	1.0700 - 4	4.795 - 1	
4.250 - 1	1.2000 - 1	1.1000 - 1		2.8000 - 1	2.8000 - 2	2.8400 - 2	2.200 - 2		2.100 - 2	2.000 - 2	1.1500 - 4	5.195 - 1	
4.500 - 1	1.3000 - 1	1.2000 - 1		3.1000 - 1	3.1000 - 2	3.1400 - 2	2.300 - 2		2.200 - 2	2.100 - 2	1.2300 - 4	5.595 - 1	
4.750 - 1	1.4000 - 1	1.3000 - 1		3.4000 - 1	3.4000 - 2	3.4400 - 2	2.400 - 2		2.300 - 2	2.200 - 2	1.3100 - 4	5.995 - 1	
5.000 - 1	1.5000 - 1	1.4000 - 1		3.7000 - 1	3.7000 - 2	3.7400 - 2	2.500 - 2		2.400 - 2	2.300 - 2	1.3900 - 4	6.395 - 1	
5.250 - 1	1.6000 - 1	1.5000 - 1		4.0000 - 1	4.0000 - 2	4.0400 - 2	2.600 - 2		2.500 - 2	2.400 - 2	1.4700 - 4	6.795 - 1	
5.500 - 1	1.7000 - 1	1.6000 - 1		4.3000 - 1	4.3000 - 2	4.3400 - 2	2.700 - 2		2.600 - 2	2.500 - 2	1.5500 - 4	7.195 - 1	
5.750 - 1	1.8000 - 1	1.7000 - 1		4.6000 - 1	4.6000 - 2	4.6400 - 2	2.800 - 2		2.700 - 2	2.600 - 2	1.6300 - 4	7.595 - 1	
6.000 - 1	1.9000 - 1	1.8000 - 1		4.9000 - 1	4.9000 - 2	4.9400 - 2	2.900 - 2		2.800 - 2	2.700 - 2	1.7100 - 4	7.995 - 1	
6.250 - 1	2.0000 - 1	1.9000 - 1		5.2000 - 1	5.2000 - 2	5.2400 - 2	3.000 - 2		2.900 - 2	2.800 - 2	1.7900 - 4	8.395 - 1	
6.500 - 1	2.1000 - 1	2.0000 - 1		5.5000 - 1	5.5000 - 2	5.5400 - 2	3.100 - 2		3.000 - 2	2.900 - 2	1.8700 - 4	8.795 - 1	
6.750 - 1	2.2000 - 1	2.1000 - 1		5.8000 - 1	5.8000 - 2	5.8400 - 2	3.200 - 2		3.100 - 2	3.000 - 2	1.9500 - 4	9.195 - 1	
7.000 - 1	2.3000 - 1	2.2000 - 1		6.1000 - 1	6.1000 - 2	6.1400 - 2	3.300 - 2		3.200 - 2	3.100 - 2	2.0300 - 4	9.595 - 1	
7.250 - 1	2.4000 - 1	2.3000 - 1		6.4000 - 1	6.4000 - 2	6.4400 - 2	3.400 - 2		3.300 - 2	3.200 - 2	2.1100 - 4	9.995 - 1	
7.500 - 1	2.5000 - 1	2.4000 - 1		6.7000 - 1	6.7000 - 2	6.7400 - 2	3.500 - 2		3.400 - 2	3.300 - 2	2.1900 - 4	1.0395 - 1	
7.750 - 1	2.6000 - 1	2.5000 - 1		7.0000 - 1	7.0000 - 2	7.0400 - 2	3.600 - 2		3.500 - 2	3.400 - 2	2.2700 - 4	1.0795 - 1	
8.000 - 1	2.7000 - 1	2.6000 - 1		7.3000 - 1	7.3000 - 2	7.3400 - 2	3.700 - 2		3.600 - 2	3.500 - 2	2.3500 - 4	1.1195 - 1	
8.250 - 1	2.8000 - 1	2.7000 - 1		7.6000 - 1	7.6000 - 2	7.6400 - 2	3.800 - 2		3.700 - 2	3.600 - 2	2.4300 - 4	1.1595 - 1	
8.500 - 1	2.9000 - 1	2.8000 - 1		7.9000 - 1	7.9000 - 2	7.9400 - 2	3.900 - 2		3.800 - 2	3.700 - 2	2.5100 - 4	1.1995 - 1	
8.750 - 1	3.0000 - 1	2.9000 - 1		8.2000 - 1	8.2000 - 2	8.2400 - 2	4.000 - 2		3.900 - 2	3.800 - 2	2.5900 - 4	1.2395 - 1	
9.000 - 1	3.1000 - 1	3.0000 - 1		8.5000 - 1	8.5000 - 2	8.5400 - 2	4.100 - 2		4.000 - 2	3.900 - 2	2.6700 - 4	1.2795 - 1	
9.250 - 1	3.2000 - 1	3.1000 - 1		8.8000 - 1	8.8000 - 2	8.8400 - 2	4.200 - 2		4.100 - 2	4.000 - 2	2.7500 - 4	1.3195 - 1	
9.500 - 1	3.3000 - 1	3.2000 - 1		9.1000 - 1	9.1000 - 2	9.1400 - 2	4.300 - 2		4.200 - 2	4.100 - 2	2.8300 - 4	1.3595 - 1	
9.750 - 1	3.4000 - 1	3.3000 - 1		9.4000 - 1	9.4000 - 2	9.4400 - 2	4.400 - 2		4.300 - 2	4.200 - 2	2.9100 - 4	1.3995 - 1	
10.000 - 1	3.5000 - 1	3.4000 - 1		9.7000 - 1	9.7000 - 2	9.7400 - 2	4.500 - 2		4.400 - 2	4.300 - 2	2.9900 - 4	1.4395 - 1	
10.250 - 1	3.6000 - 1	3.5000 - 1		1.0000 - 1	1.0000 - 2	1.0000 - 2	4.600 - 2		4.500 - 2	4.400 - 2	3.0700 - 4	1.4795 - 1	
10.500 - 1	3.7000 - 1	3.6000 - 1		1.0300 - 1	1.0300 - 2	1.0300 - 2	4.700 - 2		4.600 - 2	4.500 - 2	3.1500 - 4	1.5195 - 1	
10.750 - 1	3.8000 - 1	3.7000 - 1		1.0600 - 1	1.0600 - 2	1.0600 - 2	4.800 - 2		4.700 - 2	4.600 - 2	3.2300 - 4	1.5595 - 1	
11.000 - 1	3.9000 - 1	3.8000 - 1		1.0900 - 1	1.0900 - 2	1.0900 - 2	4.900 - 2		4.800 - 2	4.700 - 2	3.3100 - 4	1.5995 - 1	
11.250 - 1	4.0000 - 1	3.9000 - 1		1.1200 - 1	1.1200 - 2	1.1200 - 2	5.000 - 2		4.900 - 2	4.800 - 2	3.3900 - 4	1.6395 - 1	
11.500 - 1	4.1000 - 1	4.0000 - 1		1.1500 - 1	1.1500 - 2	1.1500 - 2	5.100 - 2		5.000 - 2	4.900 - 2	3.4700 - 4	1.6795 - 1	
11.750 - 1	4.2000 - 1	4.1000 - 1		1.1800 - 1	1.1800 - 2	1.1800 - 2	5.200 - 2		5.100 - 2	5.000 - 2	3.5500 - 4	1.7195 - 1	
12.000 - 1	4.3000 - 1	4.2000 - 1		1.2100 - 1	1.2100 - 2	1.2100 - 2	5.300 - 2		5.200 - 2	5.100 - 2	3.6300 - 4	1.7595 - 1	
12.250 - 1	4.4000 - 1	4.3000 - 1		1.2400 - 1	1.2400 - 2	1.2400 - 2	5.400 - 2		5.300 - 2	5.200 - 2	3.7100 - 4	1.7995 - 1	
12.500 - 1	4.5000 - 1	4.4000 - 1		1.2700 - 1	1.2700 - 2	1.2700 - 2	5.500 - 2		5.400 - 2	5.300 - 2	3.7900 - 4	1.8395 - 1	
12.750 - 1	4.6000 - 1	4.5000 - 1		1.3000 - 1	1.3000 - 2	1.3000 - 2	5.600 - 2		5.500 - 2	5.400 - 2	3.8700 - 4	1.8795 - 1	
13.000 - 1	4.7000 - 1	4.6000 - 1		1.3300 - 1	1.3300 - 2	1.3300 - 2	5.700 - 2		5.600 - 2	5.500 - 2	3.9500 - 4	1.9195 - 1	
13.250 - 1	4.8000 - 1	4.7000 - 1		1.3600 - 1	1.3600 - 2	1.3600 - 2	5.800 - 2		5.700 - 2	5.600 - 2	4.0300 - 4	1.9595 - 1	
13.500 - 1	4.9000 - 1	4.8000 - 1		1.3900 - 1	1.3900 - 2	1.3900 - 2	5.900 - 2		5.800 - 2	5.700 - 2	4.1100 - 4	1.9995 - 1	
13.750 - 1	5.0000 - 1	4.9000 - 1		1.4200 - 1	1.4200 - 2	1.4200 - 2	6.000 - 2		5.900 - 2	5.800 - 2	4.1900 - 4	2.0395 - 1	
14.000 - 1	5.1000 - 1	5.0000 - 1		1.4500 - 1	1.4500 - 2	1.4500 - 2	6.100 - 2		6.000 - 2	5.900 - 2	4.2700 - 4	2.0795 - 1	
14.250 - 1	5.2000 - 1	5.1000 - 1		1.4800 - 1	1.4800 - 2	1.4800 - 2	6.200 - 2		6.100 - 2	6.000 - 2	4.3500 - 4	2.1195 - 1	
14.500 - 1	5.3000 - 1	5.2000 - 1		1.5100 - 1	1.5100 - 2	1.5100 - 2	6.300 - 2		6.200 - 2	6.100 - 2	4.4300 - 4	2.1595 - 1	
14.750 - 1	5.4000 - 1	5.3000 - 1		1.5400 - 1	1.5400 - 2	1.5400 - 2	6.400 - 2		6.300 - 2	6.200 - 2	4.5100 - 4	2.1995 - 1	
15.000 - 1	5.5000 - 1	5.4000 - 1		1.5700 - 1	1.5700 - 2	1.5700 - 2	6.500 - 2		6.400 - 2	6.300 - 2	4.5900 - 4	2.2395 - 1	
15.250 - 1	5.6000 - 1	5.5000 - 1		1.6000 - 1	1.6000 - 2	1.6000 - 2	6.600 - 2		6.500 - 2	6.400 - 2	4.6700 - 4	2.2795 - 1	
15.500 - 1	5.7000 - 1	5.6000 - 1		1.6300 - 1	1.6300 - 2	1.6300 - 2	6.700 - 2		6.600 - 2	6.500 - 2	4.7500 - 4	2.3195 - 1	
15.750 - 1	5.8000 - 1	5.7000 - 1		1.6600 - 1	1.6600 - 2	1.6600 - 2	6.800 - 2		6.700 - 2	6.600 - 2	4.8300 - 4	2.3595 - 1	
16.000 - 1	5.9000 - 1	5.8000 - 1		1.6900 - 1	1.6900 - 2	1.6900 - 2	6.900 - 2		6.800 - 2	6.700 - 2	4.9100 - 4	2.3995 - 1	
16.250 - 1	6.0000 - 1	5.9000 - 1		1.7200 - 1	1.7200 - 2	1.7200 - 2	7.000 - 2		6.900 - 2	6.800 - 2	4.9900 - 4	2.4395 - 1	
16.500 - 1	6.1000 - 1	6.0000 - 1		1.7500 - 1	1.7500 - 2	1.7500 - 2	7.100 - 2		7.000 - 2	6.900 - 2	5.0700 - 4	2.4795 - 1	
16.750 - 1	6.2000 - 1	6.1000 - 1		1.7800 - 1	1.7800 - 2	1.7800 - 2	7.200 - 2		7.100 - 2	7.000 - 2	5.1500 - 4	2.5195 - 1	
17.000 - 1	6.3000 - 1	6.2000 - 1		1.8100 - 1	1.8100 - 2	1.8100 - 2	7.300 - 2		7.200 - 2	7.100 - 2	5.2300 - 4	2.5595 - 1	
17.250 - 1	6.4000 - 1	6.3000 - 1		1.8400 - 1	1.8400 - 2	1.8400 - 2	7.400 - 2		7.300 - 2	7.200 - 2	5.3100 - 4	2.5995 - 1	
17.500 - 1	6.5000 - 1	6.4000 - 1		1.8700 - 1	1.8700 - 2	1.8700 - 2	7.500 - 2		7.400 - 2	7.300 - 2	5.3900 - 4	2.6395 - 1	
17.750 - 1	6.6000 - 1	6.5000 - 1		1.9000 - 1	1.9000 - 2	1.9000 - 2	7.600 - 2		7.500 - 2	7.400 - 2	5.4700 - 4	2.6795 - 1	
18.000 - 1	6.7000 - 1	6.6000 - 1		1.9300 - 1	1.9300 - 2	1.9300 - 2	7.700 - 2		7.600 - 2	7.500 - 2	5.5500 - 4	2.7195 - 1	
18.250 - 1	6.8000 - 1	6.7000 - 1		1.9600 - 1	1.9600 - 2	1.9600 - 2	7.800 - 2		7.700 - 2	7.600 - 2	5.6300 - 4	2.7595 - 1	
18.500 - 1	6.9000 - 1	6.8000 - 1		1.9900 - 1	1.9900 - 2	1.9900 - 2	7.900 - 2		7.800 - 2	7.700 - 2	5.7100 - 4	2.7995 - 1	
18.750 - 1	7.0000 - 1	6.9000 - 1		2.0200 - 1	2.0200 - 2	2.0200 - 2	8.000 - 2		7.900 - 2	7.800 - 2	5.7900 - 4	2.8395 - 1	
19.000 - 1	7.1000 - 1	7.0000 - 1		2.0500 - 1	2.0500 - 2	2.0500 - 2	8.100 - 2		8.000 - 2	7.900 - 2	5.8700 - 4	2.8795 - 1	
19.250 - 1	7.2000 - 1	7.1000 - 1		2.0800 - 1	2.0800 - 2	2.0800 - 2	8.						

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Form Factors

47-Ag

SIN(Θ/2)/λ COHERENT			SIN(Θ/2)/λ COHERENT			SIN(Θ/2)/λ COHERENT			SIN(Θ/2)/λ COHERENT		
1/λ	COHERENT	INCOHERENT	1/λ	COHERENT	INCOHERENT	1/λ	COHERENT	INCOHERENT	1/λ	COHERENT	INCOHERENT
0.000-0	1.000-0	0.000-0	1.250-1	0.099-1	0.207-2	1.000-0	3.225-1	0.999-1	1.000-1	1.877-2	0.874-1
5.000-3	0.507-1	2.705-4	1.500-1	0.751-1	1.100-1	1.250-0	2.503-1	0.818-1	1.500-1	1.020-2	0.971-1
1.000-2	0.981-1	1.100-3	1.750-1	0.435-1	1.431-1	1.500-0	2.017-1	7.120-1	2.000-1	5.228-3	0.983-1
1.500-2	0.980-1	2.401-3	2.000-1	0.119-1	1.956-1	2.000-0	1.300-1	7.809-1	3.000-1	3.819-4	1.000-0
2.000-2	0.980-1	4.304-3	2.500-1	7.479-1	2.079-1	2.500-0	1.107-1	8.300-1	0.000-1	7.433-5	1.000-0
2.500-2	0.951-1	0.700-3	3.000-1	0.001-1	2.400-1	3.000-0	0.404-2	0.751-1	1.000-2	3.405-5	1.000-0
3.000-2	0.930-1	0.300-3	3.500-1	5.807-1	3.105-1	3.500-0	7.041-2	0.024-1	1.000-3	2.310-9	1.000-0
4.000-2	0.870-1	1.007-2	5.000-1	5.110-1	3.047-1	4.000-0	0.007-2	0.225-1	1.000-6	4.007-17	1.000-0
5.000-2	0.813-1	2.423-2	6.000-1	4.500-1	4.430-1	5.000-0	4.300-2	0.479-1	1.000-9	1.000-25	1.000-0
7.000-2	0.620-1	4.274-2	7.000-1	4.151-1	4.930-1	6.000-0	3.251-2	0.621-1			
9.000-2	0.450-1	6.173-2	8.000-1	3.014-1	5.354-1	7.000-0	2.009-2	0.713-1			
1.000-1	0.347-1	7.153-2	9.000-1	3.511-1	5.700-1	8.000-0	2.405-2	0.700-1

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ENDL Evaluated Photon Cross Sections

48-Cd

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Energy Deposition

48-Cd

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ENDL Evaluated Photon Data

48-Cd

ATOMIC WEIGHT 112.4										DENSITY 8.65 GRAMS/CC			
ENERGY	TOTAL HP		CROSS SECTION (BARN)						NEV/COLLISION		NEV/CM		
MEV	CH	CH/CH/CH	TOTAL	COMPENT	INCOHER	PHOTOEL	PAIR PROD	K.E. FLOR	K.E.	SPRINTSITY	K.E.		
1.000-4	2.275-5	5.002-3	9.405-5	1.532-3	1.209-2	9.479-5		9.994-5	9.994-5	2.990-10	4.300-0		
1.000-4	2.738-5	4.225-3	7.005-5	1.532-3	1.471-2	7.070-5		1.007-4	1.007-4	3.415-10	3.000-0		
1.003-4	2.014-5	5.741-3	1.072-6	1.532-3	1.510-2	1.070-6		1.001-4	1.001-4	3.909-10	5.371-0		
1.250-4	1.074-5	5.007-3	1.003-6	1.531-3	2.005-2	1.002-6		1.240-4	1.240-4	4.674-10	8.325-0		
1.500-4	1.004-5	6.000-3	1.102-6	1.531-3	2.077-2	1.103-6		1.400-4	1.400-4	6.732-10	7.700-0		
1.750-4	1.002-5	6.345-3	1.104-6	1.530-3	3.905-2	1.103-6		1.740-4	1.740-4	9.104-10	9.993-0		
2.000-4	1.730-5	6.000-3	1.240-6	1.529-3	5.000-2	1.240-6		1.900-4	1.900-4	1.157-9	1.140-1		
2.500-4	1.935-5	5.975-3	1.115-6	1.527-3	7.000-2	1.114-6		2.407-4	2.407-4	1.070-9	1.290-1		
3.000-4	2.112-5	5.473-3	1.002-6	1.525-3	1.129-1	1.003-6		2.900-4	2.900-4	2.000-9	1.410-1		
3.500-4	2.500-5	4.000-3	8.000-5	1.522-3	1.521-1	8.007-5		3.400-4	3.400-4	3.000-9	1.300-1		
4.000-4	2.000-5	3.000-3	7.400-5	1.519-3	1.900-1	7.430-5		3.900-4	3.900-4	4.700-9	1.377-1		
4.057-4	2.950-5	3.919-3	7.315-5	1.519-3	2.021-1	7.300-5		4.048-4	4.048-4	4.917-9	1.373-1		
4.071-4	2.531-5	4.500-3	6.525-5	1.519-3	2.035-1	6.510-5		4.004-4	4.004-4	4.924-9	1.600-1		
4.500-4	1.100-5	9.750-3	1.020-6	1.516-3	2.459-1	1.010-6		4.400-4	4.400-4	6.005-9	3.700-1		
5.000-4	5.339-6	2.105-4	4.040-6	1.512-3	3.002-1	4.040-6		4.900-4	4.900-4	7.404-9	9.300-1		
5.500-4	6.300-6	1.810-4	3.303-6	1.508-3	3.578-1	3.301-6		5.400-4	5.400-4	9.057-9	8.044-1		
6.000-4	7.402-6	1.590-4	2.002-6	1.504-3	4.199-1	2.000-6		5.907-4	5.907-4	1.079-8	8.030-1		
6.272-4	8.130-6	1.421-4	2.052-6	1.501-3	4.541-1	2.050-6		6.200-4	6.200-4	1.179-8	7.703-1		
6.200-4	7.411-6	1.500-4	2.912-6	1.501-3	4.550-1	2.910-6		6.203-4	6.203-4	1.104-8	8.470-1		
6.500-4	7.630-6	1.515-4	2.000-6	1.498-3	4.835-1	2.000-6		6.497-4	6.497-4	1.200-8	8.515-1		
7.000-4	8.130-6	1.421-4	2.051-6	1.493-3	5.510-1	2.050-6		6.900-4	6.900-4	1.400-8	8.007-1		
7.005-4	9.757-6	1.105-4	2.211-6	1.488-3	6.500-1	2.210-6		7.000-4	7.000-4	1.774-8	7.001-1		
7.700-4	9.137-6	1.205-4	2.301-6	1.486-3	6.530-1	2.300-6		7.704-4	7.704-4	1.701-8	8.432-1		
8.000-4	9.937-6	1.163-4	2.171-6	1.483-3	6.971-1	2.170-6		7.995-4	7.995-4	1.917-8	8.045-1		
9.000-4	1.261-5	9.170-3	1.711-6	1.470-3	8.499-1	1.710-6		8.990-4	8.990-4	2.400-8	7.132-1		
1.000-3	1.204-5	9.140-3	1.707-6	1.459-3	1.006-0	1.700-6		9.991-4	9.991-4	2.995-8	7.900-1		
1.250-3	2.220-5	5.200-3	9.720-5	1.410-3	1.391-0	9.700-5		1.240-3	1.240-3	4.674-8	5.623-1		
1.500-3	3.517-5	3.207-3	6.130-5	1.305-3	1.013-0	6.122-5		1.497-3	1.497-3	6.719-8	4.250-1		
1.750-3	5.107-5	2.293-3	4.100-5	1.240-3	2.190-0	4.147-5		1.744-3	1.744-3	9.120-8	3.303-1		
2.000-3	7.200-5	1.902-3	2.972-5	1.303-3	2.993-0	2.999-5		1.991-3	1.991-3	1.109-7	2.743-1		
2.500-3	1.272-4	9.005-2	1.000-5	1.209-3	3.310-0	1.004-5		2.400-3	2.400-3	1.040-7	1.951-1		
3.000-3	2.010-4	5.751-2	1.073-5	1.137-3	4.099-0	1.002-5		2.900-3	2.900-3	2.043-7	1.477-1		
3.500-3	2.957-4	3.910-2	1.297-4	1.053-3	4.700-0	7.100-4		3.449-3	3.449-3	3.500-7	1.107-1		
3.538-3	3.033-4	3.811-2	7.113-4	1.040-3	4.700-0	7.000-4		3.404-3	3.404-3	3.040-7	1.140-1		
3.537-3	9.433-5	1.200-3	2.200-5	1.047-3	4.700-0	2.277-5		3.521-3	3.521-3	3.340-7	3.541-1		
3.726-3	1.079-4	1.072-3	2.000-5	1.021-3	5.046-0	1.900-5		3.707-3	3.707-3	3.729-7	3.800-1		
3.727-3	7.070-5	1.507-3	2.013-5	1.020-3	5.040-0	2.003-5		3.713-3	3.713-3	3.743-7	4.605-1		
4.000-3	9.210-5	1.295-3	2.343-5	9.051-2	5.410-0	2.333-5		3.903-3	3.903-3	4.336-7	4.120-1		
4.017-3	9.313-5	1.241-3	2.317-5	9.003-2	5.441-0	2.307-5		4.000-3	4.000-3	4.374-7	4.100-1		
4.018-3	8.037-5	1.439-3	2.005-5	9.003-2	5.442-0	2.675-5		4.003-3	4.003-3	4.302-7	4.790-1		
4.500-3	1.001-4	1.070-3	1.990-5	9.137-2	6.047-0	1.907-5		4.479-3	4.479-3	5.542-7	3.970-1		
5.000-3	1.424-4	8.120-2	1.510-5	8.541-2	6.670-0	1.507-5		4.972-3	4.972-3	7.000-7	3.300-1		
5.500-3	1.032-4	6.311-2	1.170-5	7.924-2	7.253-0	1.170-5		5.403-3	5.403-3	7.800-7	2.800-1		
6.000-3	2.305-4	5.015-2	9.300-4	7.453-2	7.030-0	9.005-4		5.902-3	5.902-3	9.991-7	2.504-1		
6.500-3	2.000-4	4.040-2	7.995-4	6.005-2	6.303-0	7.400-4		6.439-3	6.439-3	1.175-6	2.191-1		
7.000-3	3.402-4	3.320-2	6.100-4	6.042-2	6.000-0	6.130-4		6.905-3	6.905-3	1.305-6	1.937-1		
8.000-3	4.975-4	2.324-2	4.337-4	5.043-2	9.921-0	4.270-4		7.090-3	7.090-3	1.703-6	1.950-1		
1.000-2	9.094-4	1.211-2	2.373-4	4.753-2	1.100-1	2.324-4		9.795-3	9.795-3	2.774-6	1.057-1		
1.250-2	1.676-3	8.007-1	1.207-4	3.704-2	1.335-1	1.240-4		1.212-2	1.195-2	4.279-6	7.120-0		
1.500-2	2.753-3	4.109-1	7.030-3	3.110-2	1.407-1	7.512-3		1.430-2	1.420-2	6.049-6	5.190-0		
1.750-2	4.214-3	2.743-1	5.120-3	2.790-2	1.594-1	4.040-3		1.657-2	1.640-2	6.006-6	3.000-0		
2.000-2	6.077-3	1.903-1	3.951-3	2.160-2	1.694-1	3.310-3		1.809-2	1.852-2	1.029-5	3.040-0		
2.500-2	1.125-2	1.027-1	1.917-3	1.570-2	1.007-1	1.742-3		2.273-2	2.256-2	1.520-5	2.005-0		
2.671-2	1.340-2	8.575-0	1.000-3	1.420-2	1.000-1	1.430-3		2.403-2	2.307-2	1.700-5	1.770-0		
2.671-2	2.200-3	5.102-1	9.523-3	1.420-2	1.000-1	9.300-3		2.626-2	9.817-3	2.774-6	4.245-0		
3.000-2	3.070-3	3.010-1	7.111-3	1.200-2	1.043-1	8.071-3		2.941-2	1.202-2	4.900-6	4.200-0		
3.500-2	4.532-3	2.951-1	4.761-3	9.612-1	2.011-1	4.045-3		3.410-2	1.704-2	9.320-6	3.000-0		
4.000-2	6.400-3	1.004-1	3.367-3	7.077-1	2.072-1	3.300-3		3.804-2	2.241-2	1.505-5	3.457-0		
4.500-2	8.700-3	1.315-1	2.495-3	6.347-1	2.100-1	2.300-3		4.345-2	2.711-2	2.203-5	3.000-0		
5.000-2	1.005-2	9.007-0	1.003-3	5.940-1	2.139-1	1.770-3		4.700-2	3.175-2	3.021-5	2.700-0		
5.000-2	1.500-2	7.000-0	1.430-3	4.740-1	2.195-1	1.301-3		5.243-2	3.631-2	3.921-5	2.400-0		
6.000-2	1.910-2	8.053-0	1.130-3	4.100-1	2.100-1	1.307-3		5.670-2	4.079-2	4.900-5	2.130-0		
6.500-2	2.370-2	4.000-0	9.000-2	3.570-1	2.100-1	8.495-2		6.105-2	4.519-2	6.119-5	1.000-0		

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ENDL Evaluated Photon Data

48-Cd

ATOMIC WEIGHT 112.4				DENSITY 8.65 GRAMS/CC									
ENERGY	TOTAL WFF			CROSS SECTION (BARN)				REV/COLLISION				REV/CM	
MEV	CH	CH-CH/CH		TOTAL	COMPONENT	INCOHER	PHOTOL	PAIR PROD	K.E. FLOOR	K.E.	BREMSSTR	K.E.	
7.000-2	2.012-2	2.070-2	7.410-2	3.140-2	2.100-2	0.670-2	0.361-2	0.390-2	7.339-5	1.700-0			
6.000-2	4.175-2	2.700-2	5.100-2	2.400-2	2.100-2	4.700-2	7.300-2	2.100-2	1.000-0	1.300-0			
5.000-2	7.500-2	1.000-2	2.000-2	1.000-2	2.131-2	2.470-2	0.770-2	7.300-2	2.100-2	1.000-0			
4.000-2	1.330-2	0.837-2	1.612-2	1.131-2	2.050-2	1.293-2	1.030-2	9.300-2	2.100-2	1.000-0			
3.000-2	2.007-2	0.500-2	1.000-2	0.151-2	2.000-2	1.000-2	1.150-2	1.000-2	1.000-0	1.000-0			
2.000-2	2.003-2	1.000-2	7.430-2	6.130-2	1.000-2	4.000-2	1.000-2	1.130-2	1.000-0	1.000-0			
1.000-2	3.700-2	3.000-2	5.000-2	4.700-2	1.000-2	3.330-2	1.000-2	1.000-0	1.000-0	1.000-0			
0.900-2	5.617-2	1.000-2	3.000-2	3.135-2	1.700-2	1.700-2	1.000-2	1.000-0	1.000-0	1.000-0			
0.800-2	7.331-2	1.577-2	2.000-2	2.217-2	1.000-2	1.000-2	1.000-2	1.000-0	1.000-0	1.000-0			
0.700-2	0.001-2	1.305-2	2.435-2	1.000-2	1.000-2	1.000-2	1.000-2	1.000-0	1.000-0	1.000-0			
0.600-2	1.001-2	1.130-2	2.113-2	1.000-2	1.000-2	1.000-2	1.000-2	1.000-0	1.000-0	1.000-0			
0.500-2	1.141-2	1.013-2	1.000-2	1.012-2	1.000-2	1.000-2	1.000-2	1.000-0	1.000-0	1.000-0			
0.400-2	1.240-2	0.261-2	1.700-2	0.230-2	1.370-2	2.741-2	2.100-2	1.000-0	1.000-0	1.000-0			
0.300-2	1.345-2	0.200-2	1.600-2	0.200-2	1.310-2	2.100-2	2.100-2	1.000-0	1.000-0	1.000-0			
0.200-2	1.439-2	0.000-2	1.500-2	1.500-2	1.273-2	1.730-2	2.100-2	1.000-0	1.000-0	1.000-0			
0.100-2	1.517-2	7.010-2	1.000-2	4.000-2	1.200-2	1.430-2	2.100-2	1.000-0	1.000-0	1.000-0			
0.000-2	1.505-2	7.240-2	1.353-2	4.253-2	1.150-2	1.207-2	2.100-2	1.000-0	1.000-0	1.000-0			
0.000-1	1.737-2	0.057-2	1.243-2	3.200-2	1.122-2	0.001-2	0.001-2	1.000-0	1.000-0	1.000-0			
0.000-1	1.000-2	5.014-2	1.000-2	2.101-2	1.010-2	5.300-2	1.000-2	1.000-0	1.000-0	1.000-0			
0.000-1	2.014-2	5.741-2	1.072-2	2.012-2	9.900-2	5.177-2	1.000-6	4.735-2	4.727-2	6.609-2	2.347-2		
0.000-1	2.200-2	5.111-2	9.530-2	1.349-2	9.044-2	3.579-2	2.090-3	6.003-2	6.057-2	1.001-2	2.670-2		
0.000-1	2.477-2	4.000-2	0.712-2	9.300-2	8.200-2	2.003-2	1.390-3	7.539-2	7.539-2	1.005-2	3.042-2		
0.000-1	2.053-2	4.320-2	0.134-2	6.000-2	7.500-2	1.914-2	3.099-3	9.075-2	9.071-2	2.403-2	3.400-2		
0.000-1	2.700-2	4.130-2	7.700-2	5.200-2	7.005-2	1.513-2	4.700-2	1.000-0	1.000-0	3.320-2	3.010-2		
0.000-1	2.004-2	4.003-2	7.040-2	5.001-2	6.939-2	1.401-2	5.044-2	1.000-0	1.000-0	3.502-2	3.000-2		
0.000-1	3.013-2	3.037-2	7.101-2	3.300-2	6.173-2	1.071-2	8.477-2	1.000-0	1.000-0	5.752-2	4.000-2		
0.000-1	3.130-2	3.007-2	6.000-2	2.352-2	2.531-2	1.000-2	1.000-2	1.000-0	1.000-0	2.000-2	5.000-2		
0.000-1	3.217-2	3.003-2	6.700-2	1.720-2	2.005-2	6.034-2	1.000-2	2.100-2	2.100-2	1.301-2	6.700-2		
0.000-1	3.200-2	3.047-2	6.621-2	1.324-2	4.614-2	5.523-2	1.000-2	2.000-2	2.000-2	1.000-2	7.970-2		
0.000-1	3.271-2	3.534-2	6.700-2	1.040-2	4.274-2	4.079-2	2.000-2	3.030-2	3.030-2	2.004-2	9.201-2		
0.000-1	3.277-2	3.520-2	6.500-2	0.472-2	3.000-2	4.005-2	2.000-2	3.473-2	3.473-2	3.270-2	1.000-0		
0.000-1	3.204-2	3.510-2	6.551-2	7.002-3	3.730-2	3.610-2	2.770-2	3.000-2	3.000-2	4.100-2	1.101-2		
0.000-1	3.205-2	3.500-2	6.549-2	5.004-3	3.523-2	3.230-2	2.900-2	4.000-2	4.000-2	5.007-2	1.129-2		
0.000-1	3.203-2	3.521-2	6.572-2	5.015-3	3.334-2	2.932-2	3.203-2	4.040-2	4.040-2	6.150-2	1.470-2		
0.000-1	3.202-2	3.544-2	6.614-2	4.324-3	3.107-2	2.674-2	3.417-2	5.310-2	5.310-2	7.310-2	1.630-2		
0.000-1	3.100-2	3.615-2	6.747-2	3.311-3	2.000-2	2.204-2	3.030-2	6.270-2	6.270-2	9.949-2	1.903-2		
0.000-1	3.023-2	3.004-2	7.130-2	2.110-3	2.495-2	1.715-2	4.004-2	6.241-2	6.241-2	1.634-2	2.700-2		
0.000-1	2.905-2	3.070-2	7.407-2	1.350-3	2.003-2	1.350-2	5.320-2	1.071-2	1.071-2	2.803-2	3.000-2		
0.000-1	2.777-2	4.104-2	7.771-2	9.419-4	1.617-2	1.110-2	5.940-2	1.320-2	1.320-2	3.744-2	4.700-2		
0.000-1	2.041-2	4.370-2	6.172-2	6.918-4	1.616-2	9.410-3	6.940-2	1.571-2	1.571-2	5.071-2	5.940-2		
0.000-1	2.531-2	4.000-2	6.525-2	5.200-4	1.450-2	8.194-3	7.090-2	1.000-2	1.000-2	6.430-2	7.100-2		
0.000-1	2.377-2	4.003-2	6.077-2	3.390-4	1.220-2	6.419-3	7.044-2	2.323-2	2.323-2	9.340-2	9.773-2		
0.000-1	2.204-2	5.100-2	6.531-2	2.394-4	1.002-2	5.279-3	6.403-2	2.000-2	2.000-2	1.200-2	1.240-2		
0.000-1	2.105-2	5.200-2	6.077-2	1.730-4	9.300-4	4.474-3	6.933-2	3.320-2	3.320-2	1.001-2	1.520-2		
0.000-1	2.113-2	5.470-2	1.001-2	1.324-4	6.430-2	3.077-3	9.362-2	3.007-2	3.007-2	2.045-2	1.011-2		
0.000-1	2.044-2	5.057-2	1.090-2	1.040-4	7.072-2	3.417-3	9.700-2	4.320-2	4.320-2	2.441-2	2.110-2		
0.000-1	1.900-2	5.003-2	1.003-2	0.470-5	7.043-3	3.052-3	1.012-2	4.000-2	4.000-2	2.057-2	2.424-2		
0.000-1	1.930-2	5.904-2	1.100-2	7.005-5	6.916-3	2.796-3	1.037-2	5.330-2	5.330-2	3.279-2	2.700-2		
0.000-1	1.800-2	6.001-2	1.120-2	5.000-5	6.000-3	2.510-3	1.090-2	5.931-2	5.931-2	3.710-2	3.007-2		
0.000-1	1.007-2	6.003-2	1.137-2	5.015-5	5.001-3	2.304-3	1.000-2	6.341-2	6.341-2	4.140-2	3.337-2		
0.000-1	1.070-2	6.100-2	1.134-2	5.324-5	5.324-3	2.127-3	1.100-2	6.032-2	6.032-2	4.500-2	3.033-2		
0.000-1	1.001-2	6.300-2	1.105-2	3.311-5	4.700-3	1.044-3	1.137-2	7.033-2	7.033-2	3.445-2	4.300-2		
0.000-2	1.730-2	6.052-2	1.240-2	2.119-5	3.372-3	1.451-3	1.202-2	9.035-2	9.035-2	7.340-2	5.000-2		

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Form Factors

48-Cd

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	9.027-1	1.000-1	1.000+0	3.238-1	5.980-1	1.000+1	1.879-2	9.999-1
5.000-3	9.997-1	3.125-4	1.300-1	8.721-1	1.230-1	1.250+0	2.801-1	6.397-1	1.500+1	1.076-2	9.999-1
1.000-2	9.991-1	1.250-3	1.750-1	8.412-1	1.450-1	1.500+0	2.059-1	7.093-1	2.000+1	5.768-3	9.999-1
1.500-2	9.981-1	2.752-3	2.000-1	8.102-1	1.683-1	2.000+0	1.394-1	7.837-1	5.000+1	3.658-4	1.000+0
2.000-2	9.967-1	5.842-3	2.500-1	7.493-1	2.074-1	2.500+0	1.105-1	8.351-1	8.000+1	8.013-5	1.000+0
2.500-2	9.949-1	7.483-3	3.000-1	6.913-1	2.461-1	3.000+0	9.476-2	8.722-1	1.000+2	3.781-5	1.000+0
3.000-2	9.926-1	1.027-2	4.000-1	5.905-1	3.184-1	3.500+0	7.904-2	9.000-1	1.000+3	2.588-6	1.000+0
4.000-2	9.871-1	1.805-2	5.000-1	5.129-1	3.805-1	4.000+0	6.759-2	9.205-1	1.000+8	5.432-17	1.000+0
5.000-2	9.804-1	2.883-2	6.000-1	4.559-1	4.388-1	5.000+0	4.488-2	9.488-1	1.000+9	1.303-25	1.000+0
7.000-2	9.633-1	4.881-2	7.000-1	4.137-1	4.888-1	6.000+0	3.292-2	9.812-1			
9.000-2	9.430-1	6.708-2	8.000-1	3.802-1	5.322-1	7.000+0	2.679-2	9.708-1			
1.000-1	9.319-1	7.708-2	9.000-1	3.509-1	5.678-1	8.000+0	2.413-2	9.774-1

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ENDL Evaluated Photon Cross Sections

49-In

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Energy Deposition

49-In

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ENDL Evaluated Photon Data

49-In

ATOMIC WEIGHT 114.82						DENSITY 7.31 GRAMS/CC			
ENERGY	TOTAL NFP		CROSS SECTION (BARNS)				REV/COLLISION		REV/CM
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. *FLOR	K.E. *BREMSTR	K.E.
1.000 -4	2.202 -5	5.988 -3	1.142 -8	1.988 -3	1.323 -2	1.140 -8	9.988 -5	9.988 -5	3.894 -10
1.212 -4	3.422 -5	4.880 -3	7.882 -5	1.988 -3	1.950 -2	7.810 -5	1.208 -4	1.208 -4	4.400 -10
1.228 -4	2.400 -5	5.515 -3	1.032 -8	1.988 -3	1.988 -2	1.050 -8	1.224 -4	1.224 -4	4.588 -10
1.238 -4	2.438 -5	5.584 -3	1.681 -8	1.988 -3	2.078 -2	1.058 -8	1.248 -4	1.248 -4	4.771 -10
1.540 -4	2.295 -5	6.048 -3	1.152 -8	1.988 -3	2.068 -2	1.150 -8	1.408 -4	1.408 -4	6.672 -10
1.730 -4	2.112 -5	6.478 -3	1.235 -8	1.988 -3	4.088 -2	1.233 -8	1.748 -4	1.748 -4	9.375 -10
2.080 -4	1.988 -5	8.878 -3	1.312 -8	1.988 -3	5.300 -2	1.310 -8	1.988 -4	1.988 -4	1.222 -9
2.580 -4	2.178 -5	8.880 -3	1.197 -8	1.988 -3	8.211 -2	1.198 -8	2.497 -4	2.497 -4	1.958 -9
3.000 -4	2.348 -5	5.830 -3	1.112 -8	1.988 -3	1.174 -1	1.110 -8	2.988 -4	2.988 -4	1.277 -9
3.500 -4	2.781 -5	4.955 -3	9.447 -5	1.988 -3	1.981 -1	9.431 -5	3.494 -4	3.494 -4	1.588 -9
4.000 -4	3.178 -5	4.304 -3	8.288 -5	1.988 -3	2.043 -1	8.180 -5	3.982 -4	3.982 -4	1.888 -9
4.495 -4	3.680 -5	3.737 -3	7.128 -5	1.988 -3	2.505 -1	7.110 -5	4.445 -4	4.445 -4	8.051 -9
4.985 -4	3.188 -5	4.278 -3	8.128 -5	1.988 -3	2.520 -1	8.140 -5	4.480 -4	4.480 -4	8.893 -9
5.500 -4	2.875 -5	4.758 -3	9.073 -5	1.988 -3	2.953 -1	9.057 -5	4.498 -4	4.498 -4	8.180 -9
6.000 -4	5.855 -6	2.419 -4	4.818 -6	1.574 -3	3.115 -1	4.610 -6	4.988 -4	4.988 -4	7.651 -9
6.500 -4	6.938 -6	1.972 -4	3.781 -6	1.588 -3	3.711 -1	3.759 -6	5.498 -4	5.498 -4	9.256 -9
6.800 -4	6.358 -6	1.637 -4	3.122 -6	1.584 -3	4.359 -1	3.120 -6	5.987 -4	5.987 -4	1.101 -8
6.900 -4	5.788 -6	1.400 -4	2.670 -6	1.598 -3	5.012 -1	2.680 -6	6.498 -4	6.498 -4	1.292 -8
6.782 -4	1.055 -5	1.288 -4	2.472 -6	1.595 -3	5.373 -1	2.470 -6	6.758 -4	6.758 -4	1.398 -8
6.778 -4	9.514 -6	1.388 -4	2.742 -6	1.595 -3	5.398 -1	2.740 -6	6.772 -4	6.772 -4	1.404 -8
7.000 -4	9.244 -6	1.400 -4	2.822 -6	1.592 -3	5.710 -1	2.820 -6	6.988 -4	6.988 -4	1.499 -8
8.000 -4	1.185 -5	1.155 -4	2.802 -6	1.591 -3	7.220 -1	2.800 -6	7.994 -4	7.994 -4	1.957 -8
8.245 -4	1.258 -5	1.088 -4	2.078 -6	1.537 -3	7.593 -1	2.070 -6	8.243 -4	8.243 -4	2.081 -8
8.833 -4	1.175 -5	1.180 -4	2.218 -6	1.537 -3	7.814 -1	2.210 -6	8.837 -4	8.837 -4	2.088 -8
9.000 -4	1.418 -5	8.828 -3	1.842 -6	1.527 -3	8.782 -1	1.840 -6	8.983 -4	8.983 -4	2.348 -8
1.000 -3	1.438 -5	8.527 -3	1.817 -6	1.514 -3	1.042 -0	1.815 -6	9.982 -4	9.982 -4	3.057 -8
1.250 -3	2.504 -5	5.484 -3	1.044 -6	1.488 -3	1.445 -0	1.040 -6	1.248 -3	1.248 -3	4.771 -8
1.500 -3	3.942 -5	3.470 -3	6.818 -5	1.434 -3	1.887 -0	6.602 -5	1.497 -3	1.497 -3	8.860 -8
1.750 -3	5.785 -5	2.385 -3	4.505 -5	1.388 -3	2.281 -0	4.495 -5	1.715 -3	1.715 -3	9.321 -8
2.000 -3	8.081 -5	1.897 -3	3.295 -5	1.347 -3	2.710 -0	3.222 -5	1.982 -3	1.982 -3	1.215 -7
2.500 -3	1.403 -4	9.752 -3	1.898 -5	1.251 -3	3.498 -0	1.847 -5	2.483 -3	2.483 -3	1.888 -7
3.000 -3	2.203 -4	6.208 -3	1.184 -5	1.177 -3	4.217 -0	1.172 -5	2.970 -3	2.970 -3	2.701 -7
3.500 -3	3.225 -4	4.242 -3	8.088 -5	1.088 -3	4.902 -0	7.979 -5	3.453 -3	3.453 -3	3.850 -7
3.725 -3	3.770 -4	3.628 -3	8.918 -5	1.028 -3	5.215 -0	8.812 -5	3.872 -3	3.872 -3	4.128 -7
3.730 -3	1.171 -4	1.188 -3	2.288 -5	1.028 -3	5.218 -0	2.217 -5	3.712 -3	3.712 -3	3.783 -7
3.837 -3	1.351 -4	1.930 -3	1.012 -5	1.032 -3	5.488 -0	1.980 -5	3.818 -3	3.818 -3	4.214 -7
3.838 -3	9.802 -5	1.485 -3	2.718 -5	1.032 -3	5.500 -0	2.708 -5	3.823 -3	3.823 -3	4.229 -7
4.000 -3	1.001 -4	1.388 -3	2.605 -5	1.024 -3	5.584 -0	2.595 -5	3.984 -3	3.984 -3	4.370 -7
4.237 -3	1.187 -4	1.172 -3	2.235 -5	9.875 -5	5.883 -0	2.225 -5	4.218 -3	4.218 -3	4.928 -7
4.238 -3	1.007 -4	1.358 -3	2.580 -5	9.874 -5	5.885 -0	2.580 -5	4.222 -3	4.222 -3	4.937 -7
4.500 -3	1.182 -4	1.157 -3	2.208 -5	9.510 -5	6.214 -0	2.198 -5	4.480 -3	4.480 -3	5.993 -7
5.000 -3	1.287 -4	8.727 -3	1.884 -5	8.904 -5	6.837 -0	1.855 -5	4.973 -3	4.973 -3	8.858 -7
5.500 -3	2.025 -4	6.738 -3	1.288 -5	8.288 -5	7.418 -0	1.280 -5	5.484 -3	5.484 -3	9.888 -7
6.000 -3	2.957 -4	5.349 -3	1.020 -5	7.783 -5	7.993 -0	1.012 -5	5.994 -3	5.994 -3	1.012 -6
6.500 -3	3.178 -4	4.305 -3	8.288 -5	7.273 -5	8.353 -0	8.134 -5	6.442 -3	6.442 -3	1.191 -6
7.000 -3	3.885 -4	3.521 -3	6.714 -5	6.831 -5	9.091 -0	8.894 -5	6.928 -3	6.928 -3	1.384 -6
8.000 -3	5.577 -4	2.453 -3	4.677 -5	6.100 -5	1.088 -0	4.615 -5	7.889 -3	7.889 -3	1.810 -6
1.000 -2	1.044 -3	1.338 -2	2.547 -4	4.957 -2	1.187 -1	2.498 -4	9.801 -3	9.801 -3	2.820 -6
1.250 -2	1.088 -3	7.278 -1	1.380 -4	3.930 -2	1.356 -1	1.340 -4	1.213 -2	1.193 -2	4.358 -6
1.500 -2	3.188 -3	4.444 -1	8.388 -4	3.250 -2	1.511 -1	8.028 -3	1.439 -2	1.419 -2	6.187 -6
1.750 -2	4.748 -3	2.882 -1	5.495 -4	2.880 -2	1.621 -1	5.211 -3	1.680 -2	1.640 -2	8.455 -6
2.000 -2	6.833 -3	2.882 -1	3.617 -4	2.880 -2	1.782 -1	3.573 -3	1.873 -2	1.853 -2	9.712 -6
2.500 -2	1.288 -2	1.888 -1	2.678 -4	1.848 -2	1.857 -1	1.867 -3	2.280 -2	2.261 -2	1.389 -5
2.794 -2	1.781 -2	8.048 -1	1.533 -4	1.407 -2	1.988 -1	1.373 -3	2.504 -2	2.488 -2	1.891 -5
2.794 -2	2.888 -2	4.588 -1	8.752 -4	1.407 -2	1.988 -1	8.588 -3	2.743 -2	2.728 -2	3.342 -5
3.000 -2	3.943 -2	3.858 -1	7.357 -4	1.271 -2	1.975 -1	7.210 -3	2.941 -2	2.927 -2	3.377 -5
3.500 -2	5.234 -2	2.814 -1	4.883 -4	1.018 -2	2.825 -1	4.888 -3	3.416 -2	3.398 -2	3.210 -5
4.000 -2	7.327 -2	1.887 -1	3.588 -4	8.275 -1	2.188 -1	3.488 -3	3.885 -2	3.868 -2	3.995 -5
4.500 -2	9.978 -2	1.371 -1	2.814 -4	8.888 -1	2.144 -1	2.584 -3	4.398 -2	4.382 -2	4.238 -5
5.000 -2	1.314 -2	1.941 -1	1.988 -4	5.635 -1	2.177 -1	1.985 -3	4.853 -2	4.838 -2	4.687 -5
5.500 -2	1.889 -2	8.888 -1	1.538 -4	4.888 -1	2.153 -1	1.487 -3	5.251 -2	5.235 -2	5.000 -5
6.000 -2	2.137 -2	8.888 -1	1.288 -4	4.283 -1	2.288 -1	1.198 -3	5.688 -2	5.672 -2	5.687 -5
6.500 -2	2.888 -2	5.153 -1	9.824 -4	3.785 -1	2.288 -1	9.227 -2	6.121 -2	6.105 -2	5.678 -5

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12/07/78

ENCL Evaluated Photon Data

49-1n

ATOMIC WEIGHT 114.02		DENSITY 7.31 GRAMS/CC									
ENERGY	TOTAL NFP	CROSS SECTION (BARNS)									
MEV	CM	CM/CM/CM	TOTAL	COMPONENT	INCOHERENT	PHOTOL PAIR PROD	K.E. FLOR	K.E. BRCHSTR	MEV/COLLISION	K.E.	MEV/CM
7.000-2	3.241-2	4.221-8	0.047-2	3.313-1	2.209-1	7.493-2	5.942-2	4.003-2	7.298-5	1.507-0	
0.000-2	4.027-2	2.907-8	0.037-2	2.032-1	2.209-1	5.153-2	7.332-2	5.728-2	1.002-4	1.238-0	
1.000-1	0.302-1	1.036-8	3.119-2	1.770-1	2.172-1	2.725-2	0.035-2	7.202-2	1.002-4	0.708-1	
1.250-1	1.401-1	0.237-1	1.701-2	1.191-1	2.006-1	1.438-2	1.042-1	0.370-2	2.457-4	0.028-1	
1.500-1	2.234-1	5.900-1	1.137-2	0.309-0	2.036-1	0.470-1	1.100-1	1.036-1	3.278-4	0.515-1	
1.750-1	3.230-1	4.224-1	0.084-1	0.403-0	1.957-1	5.441-1	1.271-1	1.190-1	4.030-4	3.292-1	
2.000-1	4.002-1	3.218-1	0.119-1	5.051-0	1.900-1	3.708-1	1.351-1	1.243-1	4.715-4	2.917-1	
2.500-1	0.372-1	2.147-1	4.003-1	3.307-0	1.703-1	1.979-1	1.402-1	1.398-1	5.939-4	2.190-1	
3.000-1	0.302-1	1.036-1	3.100-1	2.340-0	1.000-1	1.105-1	1.902-1	1.525-1	7.005-4	1.017-1	
3.500-1	1.002-0	1.330-1	2.953-1	1.730-0	1.000-1	7.798-0	1.717-1	1.062-1	0.419-4	1.627-1	
4.000-1	1.104-0	1.150-1	2.203-1	1.343-0	1.300-1	5.424-0	1.095-1	1.012-1	9.995-4	1.530-1	
4.500-1	1.300-0	1.030-1	1.004-1	1.000-0	1.450-1	3.908-0	2.017-1	1.901-1	1.134-3	1.491-1	
5.000-1	1.457-0	0.300-2	1.700-1	0.000-1	1.400-1	3.020-0	2.195-1	2.105-1	1.420-3	1.405-1	
5.500-1	1.574-0	0.000-2	1.057-1	7.217-1	1.340-1	2.300-0	2.392-1	2.300-1	1.702-3	1.503-1	
6.000-1	1.000-0	0.135-2	1.351-1	6.000-1	1.000-1	1.911-0	2.002-1	2.000-1	2.020-3	1.534-1	
6.500-1	1.701-0	0.270-2	1.404-1	5.100-1	1.204-1	1.575-0	2.005-1	2.000-1	2.391-3	1.575-1	
7.000-1	1.075-0	7.257-2	1.301-1	4.402-1	1.214-1	1.323-0	3.050-1	3.042-1	2.008-3	1.623-1	
0.000-1	2.045-0	6.001-2	1.270-1	3.453-1	1.145-1	9.619-1	3.955-1	3.941-1	3.799-3	1.732-1	
1.000-0	2.340-0	5.032-2	1.112-1	2.220-1	1.031-1	5.099-1	4.625-1	4.616-1	6.434-3	1.008-1	
1.020-0	2.370-0	5.790-2	1.090-1	2.126-1	1.020-1	5.630-1	4.750-1	4.740-1	6.784-3	1.006-1	
1.250-0	2.571-0	5.122-2	0.700-0	1.425-1	9.232-0	3.000-1	6.076-1	6.009-1	1.107-2	2.272-1	
1.500-0	2.925-0	4.677-2	0.917-0	9.913-2	0.397-0	2.704-1	1.420-1	7.949-1	1.703-2	2.579-1	
1.750-0	3.132-0	4.307-2	0.327-0	7.200-2	7.725-0	2.070-1	3.204-1	9.004-1	9.000-2	2.099-1	
2.000-0	3.305-0	4.140-2	7.003-0	5.905-2	7.171-0	1.042-1	5.010-1	1.070-1	1.070-2	3.237-1	
2.044-0	3.334-0	4.103-2	7.023-0	5.340-2	7.003-0	1.907-1	5.201-1	1.090-1	1.090-2	3.577-1	
2.500-0	3.994-0	3.050-2	7.340-0	3.578-2	6.301-0	1.104-1	0.002-1	1.415-0	1.415-2	5.075-2	
3.000-0	3.094-0	3.703-2	7.000-0	2.406-2	5.900-0	0.900-1	1.700-0	1.700-2	9.000-2	4.040-1	
3.500-0	3.707-0	3.612-2	0.007-0	1.007-2	5.129-0	7.200-2	2.105-0	2.105-2	1.370-1	5.700-1	
4.000-0	3.033-0	3.509-2	0.000-0	1.390-2	4.711-0	5.900-2	2.021-0	2.021-2	1.010-1	6.700-1	
4.500-0	3.044-0	3.590-2	0.700-0	1.105-2	4.303-0	5.070-2	2.301-0	3.033-0	3.033-2	7.001-1	
5.000-0	3.040-0	3.595-2	0.770-0	0.953-3	4.009-0	4.411-2	2.057-0	3.477-0	3.477-2	0.037-1	
5.500-0	3.005-0	3.530-2	0.740-0	7.400-3	3.016-0	3.917-2	2.005-0	3.027-0	3.027-2	4.210-1	
6.000-0	3.005-0	3.540-2	0.740-0	6.210-3	3.907-0	3.514-2	3.111-0	4.300-0	4.300-2	5.193-1	
6.500-0	3.050-0	3.953-2	0.775-0	5.200-3	3.403-0	3.100-2	3.334-0	4.052-0	4.052-2	0.277-1	
7.000-0	3.003-0	3.570-2	0.002-0	4.500-3	3.232-0	2.000-2	3.990-0	5.325-0	5.324-2	7.405-1	
8.000-0	3.740-0	3.052-2	0.003-0	3.400-3	2.042-0	2.494-2	3.903-0	6.205-0	6.205-2	1.015-0	
1.000-1	3.537-0	3.000-2	7.374-0	2.239-3	2.500-0	1.050-2	4.047-0	0.250-0	0.250-2	1.000-0	
1.250-1	3.390-0	4.000-2	7.000-0	1.433-3	2.100-0	1.402-2	5.530-0	1.072-1	1.072-2	3.150-0	
1.500-1	3.243-0	4.210-2	0.043-0	9.953-3	1.055-0	1.203-2	0.175-0	1.321-1	1.321-2	4.074-0	
1.750-1	3.000-0	4.430-2	0.403-0	7.312-4	1.050-0	1.010-2	0.000-0	1.572-1	1.572-2	5.100-0	
2.000-1	2.953-0	4.633-2	0.003-0	5.900-4	1.000-0	0.032-3	7.135-0	1.003-1	1.003-2	0.173-0	
2.500-1	2.772-0	4.935-2	0.400-0	3.003-4	1.251-0	0.051-3	0.150-0	2.324-1	2.324-2	0.000-0	
3.000-1	2.630-0	5.173-2	0.000-0	2.400-4	1.004-0	5.710-3	0.700-0	2.000-1	2.000-2	1.111-1	
3.500-1	2.540-0	5.373-2	1.004-1	1.000-4	9.907-1	4.044-3	9.201-0	3.327-1	3.327-2	1.079-1	
4.000-1	2.462-0	5.595-2	1.099-1	1.399-4	0.613-1	4.100-3	9.720-0	3.000-1	3.000-2	1.000-1	
4.500-1	2.301-0	5.747-2	1.090-1	1.100-4	7.032-1	3.000-3	1.017-1	4.329-1	4.329-2	2.400-1	
5.000-1	2.320-0	5.000-2	1.124-1	0.957-5	7.190-1	3.304-3	1.052-1	4.031-1	4.031-2	2.000-1	
5.500-1	2.200-0	5.000-2	1.144-1	7.402-5	6.051-1	2.003-3	1.077-1	5.331-1	5.331-2	3.300-1	
6.000-1	2.244-0	6.007-2	1.103-1	6.200-5	6.195-1	2.717-3	1.100-1	5.032-1	5.032-2	3.700-1	
6.500-1	2.200-0	6.191-2	1.100-1	5.300-5	5.700-1	2.403-3	1.122-1	6.332-1	6.332-2	4.170-1	
7.000-1	2.170-0	6.000-2	1.100-1	4.570-5	5.495-1	2.300-3	1.143-1	6.033-1	6.033-2	4.623-1	
8.000-1	2.120-0	6.453-2	1.200-1	3.400-5	4.000-1	1.000-3	1.101-1	7.034-1	7.034-2	5.520-1	
1.000-2	2.004-0	6.700-2	1.200-1	2.230-5	4.055-1	1.570-3	1.240-1	9.030-1	9.030-2	4.000-1	

12/07/78

ENDL Evaluated Photon Cross Sections

50-Sn

12/07/78

Energy Deposition

50-Sn

12/07/78

ENDL Evaluated Photon Data

50-5n

ATOMIC WEIGHT 118.99										DENSITY 7.2999 GRAMS/CC			
ENERGY		TOTAL HPF		CROSS SECTION (BARN)						NEV/COLLISION		NEV/CM	
NEV	CH	CH/CM/HP	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	K.E.	K.E.	
1.000	1.913	7.163	3	1.412	8	1.002	1	1.360	2	1.418	8	9.988	5
1.250	2.700	8.989	3	9.715	5	1.061	2	2.089	2	9.998	5	1.248	4
1.500	3.193	8.991	3	8.557	5	1.061	3	2.399	2	8.999	5	1.395	4
1.750	2.429	5.940	3	1.112	6	1.061	3	2.443	2	1.110	6	1.370	4
1.900	2.293	5.998	3	1.182	6	1.061	3	2.919	2	1.180	6	1.408	4
1.750	2.110	5.999	3	1.260	8	1.000	3	3.987	2	1.270	8	1.748	4
2.000	1.988	5.999	3	1.372	8	1.059	3	5.173	2	1.370	8	1.988	4
2.250	2.127	5.999	3	1.508	8	1.059	2	6.868	2	1.508	8	2.287	4
2.500	2.268	5.999	3	1.182	6	1.059	3	1.149	8	1.180	6	2.500	4
2.500	2.000	5.213	3	1.027	6	1.050	3	5.98	1	1.058	6	3.494	4
4.000	2.988	5.993	3	9.935	1	1.047	3	2.005	1	9.920	5	3.983	4
4.500	3.518	3.987	3	7.086	5	1.043	3	2.508	1	7.083	5	4.490	4
4.875	3.927	3.408	3	8.876	5	1.039	3	2.920	1	6.880	5	4.883	4
4.888	3.500	3.915	3	7.718	5	1.039	3	2.938	1	7.700	5	4.878	4
5.000	2.140	5.941	3	1.282	8	1.039	3	3.063	1	1.280	8	4.994	4
5.500	1.273	5.107	4	2.128	8	1.833	3	3.698	1	2.120	8	5.498	4
6.000	7.915	1.731	4	3.412	8	1.620	3	4.292	1	3.402	8	5.997	4
6.500	9.298	6.173	4	2.994	8	1.621	3	4.994	1	2.910	6	6.498	4
7.000	1.079	1.288	4	2.508	6	1.615	3	5.853	1	2.500	6	6.999	4
7.277	1.188	1.173	4	2.312	6	1.612	3	6.057	1	2.310	6	7.272	4
7.291	1.030	1.330	4	2.682	6	1.611	3	6.078	1	2.680	6	7.287	4
8.000	1.134	1.288	4	2.382	6	1.603	3	7.170	1	2.380	6	7.995	4
8.931	1.384	9.905	3	1.932	8	1.590	3	8.499	1	1.930	8	8.828	4
8.944	1.310	9.905	3	2.062	8	1.590	3	8.499	1	2.060	8	8.828	4
9.000	1.310	1.011	4	1.998	6	1.588	3	8.732	1	1.990	6	8.993	4
1.000	3.295	1.086	4	2.108	6	1.578	3	1.041	2	2.100	6	9.993	4
1.250	3.278	6.015	3	1.195	6	1.576	3	1.496	0	1.190	6	1.248	3
1.500	3.636	3.788	3	7.427	5	1.488	3	1.914	0	7.412	5	1.497	3
1.750	3.587	2.539	3	5.004	5	1.488	3	2.337	0	4.989	5	1.745	3
2.000	7.986	1.804	3	3.995	5	1.395	3	2.778	0	3.941	5	1.998	3
2.500	1.344	1.020	3	2.009	5	1.295	3	3.958	0	1.988	5	2.494	3
3.000	2.139	6.494	2	1.282	5	1.218	4	4.398	0	1.250	5	2.971	3
3.500	3.187	4.327	2	0.528	4	1.32	5	5.098	0	0.419	4	3.453	3
3.983	4.243	3.292	2	0.395	4	1.071	5	5.852	0	6.257	3	3.882	3
3.983	1.403	8.788	2	1.985	5	1.071	5	5.894	1	1.914	5	3.807	3
4.000	1.487	9.339	2	1.841	5	1.082	5	5.752	0	1.830	5	3.977	3
4.193	1.613	8.988	2	1.674	5	1.037	5	5.950	0	1.689	5	4.129	3
4.198	1.148	1.193	3	2.225	5	1.037	5	5.951	0	2.245	5	4.138	3
4.484	1.372	9.985	2	1.988	5	0.929	2	8.342	0	1.958	5	4.441	3
4.485	1.184	1.157	3	2.260	5	0.928	2	8.345	0	2.270	5	4.445	3
4.500	1.298	9.988	2	2.225	5	0.988	2	8.144	0	2.240	5	4.586	3
5.000	1.578	8.883	3	1.71	5	0.933	7	7.014	0	1.702	5	4.873	3
5.580	2.015	6.800	2	1.340	5	0.844	7	7.587	0	1.331	5	5.484	3
6.000	2.519	5.440	2	1.072	5	0.814	2	8.171	0	1.084	5	5.994	3
6.000	3.105	4.413	2	0.898	4	0.784	2	8.703	0	0.821	4	6.443	3
7.000	3.788	3.637	2	7.187	4	7.124	2	9.227	0	7.095	4	6.930	3
8.000	3.337	2.567	2	5.860	4	6.395	2	1.025	1	4.995	4	7.098	3
1.000	2.982	1.418	2	2.795	4	5.186	2	1.205	1	2.742	4	9.011	3
1.250	2.772	7.731	1	1.524	4	4.098	2	1.377	1	1.481	4	1.215	2
1.500	2.900	4.725	1	9.313	3	3.392	2	1.536	1	8.998	3	1.443	2
1.750	2.441	3.085	1	6.881	3	2.803	2	1.647	1	5.789	3	1.885	2
2.000	2.486	2.145	1	4.215	3	2.377	2	1.751	1	3.888	3	1.879	2
2.500	1.195	2.145	1	2.259	3	1.729	2	1.888	1	2.867	3	2.289	2
2.920	1.833	2.746	0	1.473	3	1.388	2	1.980	1	1.315	3	2.808	2
2.920	3.115	4.398	1	8.888	3	1.388	2	1.980	0	8.510	3	2.887	2
3.000	3.338	4.188	1	8.095	3	1.335	2	2.088	1	7.942	3	2.944	2
3.500	4.978	3.729	1	5.927	3	1.880	2	2.680	1	5.380	3	3.418	2
4.000	7.038	3.428	1	4.038	3	2.882	2	3.184	1	4.000	3	3.688	2
4.000	9.088	1.428	1	2.888	3	2.295	2	2.181	1	2.712	3	4.352	2
5.000	1.274	1.878	1	2.128	3	6.129	1	2.214	1	0.837	3	4.828	2
5.988	1.848	0.312	0	1.838	3	5.242	1	2.231	1	1.983	3	5.236	2
6.000	2.889	6.575	0	1.788	3	4.745	1	2.247	1	1.289	3	5.698	2
6.988	2.983	5.292	0	1.842	3	3.979	1	2.248	1	1.795	2	6.128	2

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ENOL Evaluated Photon Data

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ATOMIC WEIGHT 118.90										DENSITY 7.258 GRAMS/CC		
ENERGY		TOTAL RFP		CROSS SECTION (BARNS)					NEUT/COLLISION		NEUT/CM	
MEV		CM	CM/CM/BN	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	K.E. - FLOW	K.E. - BREMSSTR	K.E.	
7.000-2	3.176-2	4.398-8	0.519-2	3.485-1	2.248-1	7.943-2			6.598-2	4.767-2	7.199-5	1.510-0
6.000-2	4.538-2	3.819-8	5.771-2	2.788-1	2.249-1	5.448-2			7.383-2	5.838-2	9.888-5	1.241-0
5.000-2	6.828-2	1.887-8	3.146-2	1.871-1	2.212-1	2.877-2			8.898-2	7.288-2	1.818-4	7.880-1
4.000-2	1.457-1	9.488-8	1.883-2	1.294-1	2.137-1	1.514-2			1.848-1	8.911-2	2.475-4	8.115-1
3.000-2	2.861-1	8.899-8	1.189-2	9.848-0	2.878-1	8.988-1			1.175-1	1.033-1	3.324-4	4.988-1
2.000-2	3.195-1	1.888-8	8.451-1	8.885-0	2.885-1	5.788-1			1.888-1	1.151-1	4.124-4	3.888-1
1.500-2	4.212-1	3.253-8	8.411-1	5.381-0	1.943-1	3.928-1			1.383-1	1.247-1	4.841-4	2.981-1
1.000-2	6.388-1	2.188-8	4.873-1	3.485-0	1.819-1	2.188-1			1.489-1	1.405-1	6.146-4	2.284-1
8.000-1	8.393-1	1.848-8	3.238-1	2.488-0	1.783-1	1.283-1			1.812-1	1.538-1	7.381-4	1.841-1
7.000-1	1.888-0	1.343-1	2.847-1	1.832-0	1.632-1	8.328-0			1.738-1	1.878-1	8.738-4	1.845-1
6.000-1	1.188-0	1.158-1	2.278-1	1.418-0	1.957-1	5.788-0			1.877-1	1.889-1	1.039-3	1.943-1
5.000-1	1.333-0	1.888-1	2.028-1	1.128-0	1.488-1	4.288-0			2.037-1	1.997-1	1.239-3	1.489-1
4.000-1	1.488-0	8.394-1	1.844-1	9.173-1	1.488-1	3.234-0			2.214-1	2.181-1	1.477-3	1.489-1
3.000-1	1.588-0	8.895-1	1.704-1	7.612-1	1.374-1	2.942-0			2.409-1	2.381-1	1.799-3	1.502-1
2.000-1	1.888-0	8.895-1	1.583-1	8.488-1	1.388-1	2.048-0			2.618-1	2.594-1	2.088-3	1.531-1
1.500-1	1.787-0	7.884-1	1.883-1	5.488-1	1.288-1	1.883-0			2.840-1	2.819-1	2.481-3	1.588-1
1.000-1	1.883-0	7.239-1	1.427-1	4.738-1	1.239-1	1.408-0			3.072-1	3.053-1	2.888-3	1.813-1
8.000-1	2.087-0	6.630-1	1.307-1	3.843-1	1.188-1	1.021-0			3.585-1	3.550-1	3.888-3	1.718-1
7.000-1	2.378-0	5.770-1	1.137-1	2.342-1	1.052-1	8.172-1			4.632-1	4.621-1	6.579-3	1.946-1
6.000-1	2.405-0	5.887-1	1.123-1	2.243-1	1.041-1	5.930-1	1.000-8		4.788-1	4.748-1	6.928-3	1.973-1
5.000-1	2.705-0	5.085-2	9.988-0	1.504-1	9.420-0	4.098-1	2.247-3		5.082-1	6.076-1	1.131-2	2.245-1
4.000-1	2.888-0	4.885-2	9.115-0	1.048-1	8.588-0	2.930-1	1.802-1		7.552-1	7.546-1	1.739-2	2.547-1
3.000-1	3.172-0	4.320-2	8.514-0	7.884-2	7.883-0	2.188-1	3.298-1		9.088-1	9.081-1	2.508-2	2.883-1
2.000-1	3.345-0	4.088-2	8.074-0	5.893-2	7.317-1	1.727-1	5.250-1		1.070-1	1.070-1	3.480-2	3.198-1
1.500-1	3.574-0	4.081-2	8.003-0	5.844-2	7.227-1	1.889-1	5.514-1		1.099-1	1.099-1	3.849-2	3.257-1
1.000-1	3.583-0	3.813-2	7.518-0	3.778-2	6.430-1	1.225-1	9.288-1		1.418-1	1.415-1	5.994-2	3.939-1
8.000-0	3.731-0	3.872-2	7.238-0	2.824-2	5.781-1	9.377-1	1.357-1		1.790-1	1.789-1	9.475-2	4.798-1
7.000-0	3.881-0	3.588-2	7.087-0	1.888-2	5.234-1	7.882-1	1.738-1		2.187-1	2.186-1	1.398-1	5.722-1
6.000-0	3.884-0	3.348-2	6.888-0	1.478-2	4.807-1	6.307-1	2.105-1		2.604-1	2.603-1	1.589-1	6.738-1
5.000-0	3.871-0	3.538-2	6.975-0	1.187-2	4.452-1	5.341-1	2.499-1		3.037-1	3.037-1	2.632-1	7.844-1
4.000-0	3.872-0	3.538-2	6.974-0	9.450-3	4.152-1	4.837-1	2.788-1		3.481-1	3.481-1	3.418-1	8.990-1
3.000-0	3.888-0	3.524-2	6.948-0	7.810-3	3.884-1	4.118-1	3.003-1		3.932-1	3.932-1	4.302-1	1.011-0
2.000-0	3.885-0	3.528-2	6.950-0	8.583-3	3.870-1	3.882-1	3.237-1		4.391-1	4.391-1	5.299-1	1.130-0
1.500-0	3.889-0	3.542-2	6.980-0	5.993-3	3.473-1	3.341-1	3.488-1		4.888-1	4.888-1	6.403-1	1.258-0
1.000-0	3.841-0	3.587-2	7.031-0	4.883-3	3.288-1	3.048-1	3.897-1		5.331-1	5.331-1	7.813-1	1.388-0
8.000-0	3.760-0	3.844-2	7.181-0	3.893-3	3.002-1	2.578-1	4.149-1		6.293-1	6.293-1	1.034-1	1.673-0
7.000-0	3.947-0	3.882-2	7.812-0	2.383-3	2.957-1	1.951-1	5.033-1		8.259-1	8.259-1	1.894-1	2.328-0
6.000-0	3.402-0	4.087-2	7.937-0	1.913-3	2.170-1	1.535-1	5.751-1		1.073-1	1.073-1	2.893-1	3.193-0
5.000-0	3.248-0	4.281-2	8.318-0	1.631-3	1.893-1	1.282-1	6.412-1		1.322-1	1.322-1	3.845-1	4.073-0
4.000-0	3.083-0	4.444-2	8.788-0	7.718-4	1.883-1	1.070-1	7.083-1		1.573-1	1.573-1	5.184-1	5.101-0
3.000-0	2.953-0	4.840-2	9.145-0	5.509-4	1.519-1	9.267-1	7.618-1		1.824-1	1.824-1	6.822-1	6.177-0
2.000-0	2.771-0	4.944-2	9.745-0	3.788-4	1.277-1	7.282-1	8.480-1		2.325-1	2.325-1	9.787-1	8.392-0
1.500-0	2.637-0	5.195-2	1.024-1	2.828-4	1.106-1	5.998-1	9.127-1		2.827-1	2.827-1	1.328-1	1.072-1
1.000-0	2.543-0	5.387-2	1.082-1	1.929-4	9.783-1	5.081-1	9.634-1		3.328-1	3.328-1	1.897-1	1.309-1
8.000-1	2.498-0	5.571-2	1.098-1	1.477-4	8.789-1	4.402-1	1.010-1		3.829-1	3.829-1	2.086-1	1.557-1
7.000-1	2.377-0	5.784-2	1.138-1	1.167-4	7.992-1	3.879-1	1.098-1		4.331-1	4.331-1	2.490-1	1.822-1
6.000-1	2.316-0	5.915-2	1.188-1	9.494-5	7.337-1	3.464-1	1.092-1		4.832-1	4.832-1	2.907-1	2.086-1
5.000-1	2.277-0	6.019-2	1.188-1	7.813-5	6.787-1	3.127-1	1.118-1		5.332-1	5.332-1	3.332-1	2.342-1
4.000-1	2.240-0	6.118-2	1.208-1	6.585-5	6.321-1	2.848-1	1.142-1		5.833-1	5.833-1	3.782-1	2.604-1
3.000-1	2.208-0	6.212-2	1.244-1	5.594-5	5.917-1	2.614-1	1.185-1		6.333-1	6.333-1	4.207-1	2.872-1
2.000-1	2.174-0	6.303-2	1.282-1	4.823-5	5.585-1	2.414-1	1.186-1		6.834-1	6.834-1	4.694-1	3.144-1
1.500-1	2.118-0	6.475-2	1.278-1	3.693-5	4.985-1	2.092-1	1.226-1		7.835-1	7.835-1	5.563-1	3.702-1
1.000-2	2.020-0	6.782-2	1.337-1	2.383-5	4.138-1	1.848-1	1.295-1		9.837-1	9.837-1	7.423-1	4.870-1

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Form Factors

50-Sn

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	8.948-1	1.041-1	1.000+0	3.241-1	5.937-1	1.000+1	1.881-2	9.898-1
5.000-3	9.999-1	3.000+0	1.500-1	8.638-1	1.263-1	1.250+0	2.861-1	8.598-1	1.500+1	1.125-2	9.994-1
1.000-2	9.999-1	1.200+3	1.750-1	8.337-1	1.510-1	1.500+0	2.140-1	7.045-1	2.000+1	8.184-3	9.991-1
1.500-2	9.979-1	2.888+3	2.000-1	8.048-1	1.723-1	2.000+0	1.431-1	7.778-1	2.500+1	4.368-4	1.000+0
2.000-2	9.963-1	4.730+3	2.500-1	7.478-1	2.118-1	2.500+0	1.105-1	8.282-1	3.000+1	9.278-5	1.000+0
2.500-2	9.942-1	7.298+3	3.000-1	6.944-1	2.443-1	3.000+0	9.521-2	8.888-1	3.500+1	4.408-6	1.000+0
3.000-2	9.918-1	1.035-2	4.000-1	5.973-1	3.148-1	3.500+0	7.994-2	8.950-1	4.000+1	3.155-8	1.000+0
4.000-2	9.856-1	1.772-2	5.000-1	5.188-1	3.752-1	4.000+0	6.878-2	9.163-1	5.000+1	7.259-17	1.000+0
5.000-2	9.781-1	2.848-2	6.000-1	4.578-1	4.308-1	5.000+0	5.848-2	9.440-1	6.000+1	1.881-25	1.000+0
7.000-2	9.593-1	4.843-2	7.000-1	4.122-1	4.812-1	6.000+0	3.385-2	9.595-1	7.000+1		
9.000-2	9.372-1	8.771-2	8.000-1	3.777-1	5.250-1	7.000+0	2.710-2	9.893-1	8.000+1		
1.000-1	9.295-1	7.834-2	9.000-1	3.494-1	5.623-1	8.000+0	2.434-2	9.762-1	9.000+1

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ENDL Evaluated Photon Cross Sections

51-Sb

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Energy Deposition

51-Sb

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ENDL Evaluated Photon Data

51-Sb

ATOMIC WEIGHT 121.75		DENSITY 6.06 GRAMS/CC				
ENERGY	TOTAL HPF	CROSS SECTION (BARNS)				
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOL PAIR PROD
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOL PAIR PROD
1.000-4	1.087-5	0.800-3	1.670-6	1.730-3	1.670-2	1.670-6
1.250-4	2.401-5	0.800-3	1.231-6	1.700-3	1.900-2	1.200-6
1.500-4	3.185-5	0.702-3	9.907-5	1.700-3	2.033-2	9.570-5
1.513-4	3.190-5	0.707-3	9.677-5	1.700-3	2.000-2	9.000-5
1.527-4	2.900-5	0.643-3	1.200-6	1.700-3	2.030-2	1.200-6
1.750-4	2.307-5	0.547-3	1.304-6	1.707-3	3.042-2	1.300-6
2.000-4	2.133-5	0.400-3	1.400-6	1.700-3	3.000-2	1.400-6
2.500-4	2.507-5	0.503-3	1.347-6	1.703-3	3.707-2	1.340-6
3.000-4	2.303-5	0.340-3	1.000-6	1.701-3	3.110-2	1.000-6
3.500-4	2.720-5	0.401-3	1.100-6	1.717-3	3.407-2	1.100-6
4.000-4	3.127-5	0.431-3	9.707-5	1.714-3	3.940-2	9.700-5
4.500-4	3.620-5	0.430-3	8.300-5	1.709-3	2.400-2	8.301-5
5.000-4	4.191-5	0.404-3	7.207-5	1.705-3	2.007-2	7.270-5
5.500-4	4.507-5	0.300-3	6.007-5	1.701-3	3.310-2	6.670-5
5.520-4	4.123-5	0.300-3	7.407-5	1.701-3	3.331-2	7.390-5
5.500-4	2.000-5	0.701-3	1.171-6	1.000-3	3.944-2	1.100-6
6.000-4	7.007-6	1.000-4	3.000-6	1.000-3	4.100-2	3.000-6
6.500-4	9.470-6	1.300-4	3.200-6	1.007-3	4.011-2	3.200-6
7.000-4	1.100-5	1.341-4	2.710-6	1.000-3	5.400-2	2.710-6
7.003-4	1.413-5	1.000-4	2.100-6	1.071-3	6.677-2	2.100-6
7.017-4	1.200-5	0.900-4	2.530-6	1.070-3	6.000-2	2.530-6
8.000-4	1.211-5	1.247-4	2.500-6	1.000-3	6.000-2	2.500-6
9.000-4	1.511-5	1.000-4	2.000-6	1.000-3	6.521-2	2.000-6
9.430-4	1.007-5	0.900-4	1.000-6	1.040-3	9.200-2	1.000-6
9.444-4	1.501-5	0.700-4	0.700-6	1.040-3	9.243-2	1.000-6
1.000-3	1.703-5	0.900-4	1.700-6	1.000-3	1.010-0	1.700-6
1.250-3	2.007-5	0.501-3	1.100-6	1.507-3	1.431-0	1.100-6
1.500-3	3.017-5	0.300-3	0.001-5	1.540-3	1.000-0	7.000-5
1.750-3	5.000-5	0.271-3	5.400-5	1.403-3	2.300-0	5.300-5
2.000-3	7.940-5	1.001-3	3.043-5	1.440-3	2.770-0	3.000-5
2.500-3	1.400-4	1.077-3	2.170-5	1.340-3	3.507-0	2.100-5
3.000-3	2.200-4	0.700-3	1.371-5	1.000-3	4.400-0	1.300-5
3.500-3	3.200-4	0.500-3	9.277-4	1.170-3	5.157-0	9.100-4
4.000-3	4.011-4	0.370-3	6.000-4	1.100-3	5.000-0	6.510-4
4.131-3	5.000-4	0.000-2	0.100-4	1.070-3	6.000-0	5.007-4
4.132-3	1.703-4	0.700-3	1.770-5	1.070-3	6.057-0	1.700-5
4.300-3	1.500-4	7.010-2	1.500-5	1.040-3	6.370-0	1.500-5
4.301-3	1.412-4	1.070-3	2.100-5	1.040-3	6.300-0	2.100-5
4.500-3	1.500-4	1.000-3	2.000-5	1.020-3	6.530-0	2.010-5
4.007-3	1.675-4	0.017-2	1.000-5	0.900-3	6.707-0	1.010-5
4.000-3	1.447-4	1.044-3	2.111-5	0.900-3	6.700-0	2.101-5
5.000-3	1.000-4	0.951-2	1.010-5	0.800-3	7.170-0	1.000-5
5.500-3	2.144-4	7.044-2	1.400-5	0.800-3	7.700-0	1.410-5
6.000-3	2.000-4	5.001-2	1.100-5	0.447-2	8.343-0	1.100-5
6.500-3	3.270-4	4.007-2	9.313-4	7.000-2	8.677-0	9.230-4
7.000-3	3.500-4	3.007-2	7.000-4	7.400-2	9.401-0	7.501-4
8.000-3	5.500-4	2.701-2	5.400-4	6.800-2	1.043-1	5.300-4
1.000-2	1.007-3	1.500-2	3.000-4	5.300-2	1.203-1	2.970-4
1.250-2	1.044-3	0.103-1	1.000-4	4.270-2	1.300-1	1.010-4
1.500-2	3.013-3	5.013-1	1.014-4	3.530-2	1.301-1	9.700-4
1.750-2	4.023-3	3.000-1	0.000-4	2.900-2	1.074-1	0.200-4
2.000-2	0.000-3	2.001-1	4.570-3	2.407-2	1.770-1	4.300-3
2.500-2	1.200-2	1.203-1	2.431-3	1.011-2	1.910-1	2.210-3
3.000-2	2.000-2	7.240-0	1.404-3	1.300-2	2.041-1	1.300-3
3.040-2	2.103-2	6.300-0	1.300-3	1.300-2	2.040-1	1.240-3
3.040-2	3.700-3	3.901-1	0.040-3	1.300-2	2.040-1	7.001-3
3.200-2	5.200-3	2.051-1	5.703-3	1.111-2	2.110-1	5.031-3
4.000-2	7.310-3	2.000-1	4.170-3	9.100-1	2.170-1	4.000-3
4.900-2	9.000-3	1.507-1	3.000-3	7.570-1	2.217-1	2.900-3
5.000-2	1.700-2	1.100-1	2.300-3	8.400-1	2.200-1	2.271-3
5.500-2	1.000-2	9.000-0	1.011-3	5.500-1	2.270-1	1.700-3
6.000-2	2.000-2	7.000-0	4.770-3	4.770-1	2.200-1	1.300-3
6.500-2	2.000-2	5.700-0	1.171-3	4.100-1	2.207-1	1.100-3
9.000-5	0.900-5	0.900-5	3.101-10	5.400-5	5.400-5	5.400-5
1.200-5	1.200-5	1.200-5	4.900-10	5.000-5	5.000-5	5.000-5
1.400-5	1.400-5	1.400-5	7.100-10	4.700-5	4.700-5	4.700-5
1.600-5	1.600-5	1.600-5	9.300-10	4.400-5	4.400-5	4.400-5
1.800-5	1.800-5	1.800-5	1.100-10	4.100-5	4.100-5	4.100-5
2.000-5	2.000-5	2.000-5	1.300-10	3.800-5	3.800-5	3.800-5
2.200-5	2.200-5	2.200-5	1.500-10	3.500-5	3.500-5	3.500-5
2.400-5	2.400-5	2.400-5	1.700-10	3.200-5	3.200-5	3.200-5
2.600-5	2.600-5	2.600-5	1.900-10	2.900-5	2.900-5	2.900-5
2.800-5	2.800-5	2.800-5	2.100-10	2.600-5	2.600-5	2.600-5
3.000-5	3.000-5	3.000-5	2.300-10	2.300-5	2.300-5	2.300-5
3.200-5	3.200-5	3.200-5	2.500-10	2.000-5	2.000-5	2.000-5
3.400-5	3.400-5	3.400-5	2.700-10	1.700-5	1.700-5	1.700-5
3.600-5	3.600-5	3.600-5	2.900-10	1.400-5	1.400-5	1.400-5
3.800-5	3.800-5	3.800-5	3.100-10	1.100-5	1.100-5	1.100-5
4.000-5	4.000-5	4.000-5	3.300-10	800-5	800-5	800-5
4.200-5	4.200-5	4.200-5	3.500-10	600-5	600-5	600-5
4.400-5	4.400-5	4.400-5	3.700-10	400-5	400-5	400-5
4.600-5	4.600-5	4.600-5	3.900-10	200-5	200-5	200-5
4.800-5	4.800-5	4.800-5	4.100-10	100-5	100-5	100-5
5.000-5	5.000-5	5.000-5	4.300-10	0-5	0-5	0-5
5.200-5	5.200-5	5.200-5	4.500-10	0-5	0-5	0-5
5.400-5	5.400-5	5.400-5	4.700-10	0-5	0-5	0-5
5.600-5	5.600-5	5.600-5	4.900-10	0-5	0-5	0-5
5.800-5	5.800-5	5.800-5	5.100-10	0-5	0-5	0-5
6.000-5	6.000-5	6.000-5	5.300-10	0-5	0-5	0-5
6.200-5	6.200-5	6.200-5	5.500-10	0-5	0-5	0-5
6.400-5	6.400-5	6.400-5	5.700-10	0-5	0-5	0-5
6.600-5	6.600-5	6.600-5	5.900-10	0-5	0-5	0-5
6.800-5	6.800-5	6.800-5	6.100-10	0-5	0-5	0-5
7.000-5	7.000-5	7.000-5	6.300-10	0-5	0-5	0-5
7.200-5	7.200-5	7.200-5	6.500-10	0-5	0-5	0-5
7.400-5	7.400-5	7.400-5	6.700-10	0-5	0-5	0-5
7.600-5	7.600-5	7.600-5	6.900-10	0-5	0-5	0-5
7.800-5	7.800-5	7.800-5	7.100-10	0-5	0-5	0-5
8.000-5	8.000-5	8.000-5	7.300-10	0-5	0-5	0-5
8.200-5	8.200-5	8.200-5	7.500-10	0-5	0-5	0-5
8.400-5	8.400-5	8.400-5	7.700-10	0-5	0-5	0-5
8.600-5	8.600-5	8.600-5	7.900-10	0-5	0-5	0-5
8.800-5	8.800-5	8.800-5	8.100-10	0-5	0-5	0-5
9.000-5	9.000-5	9.000-5	8.300-10	0-5	0-5	0-5
9.200-5	9.200-5	9.200-5	8.500-10	0-5	0-5	0-5
9.400-5	9.400-5	9.400-5	8.700-10	0-5	0-5	0-5
9.600-5	9.600-5	9.600-5	8.900-10	0-5	0-5	0-5
9.800-5	9.800-5	9.800-5	9.100-10	0-5	0-5	0-5
10.000-5	10.000-5	10.000-5	9.300-10	0-5	0-5	0-5

51-56

51-5b

12/07/78

Form Factors

51-Sb

SIN(Θ/2)/λ COHERENT				SIN(Θ/2)/λ INCOHERENT				SIN(Θ/2)/λ COHERENT				SIN(Θ/2)/λ INCOHERENT				SIN(Θ/2)/λ COHERENT				SIN(Θ/2)/λ INCOHERENT			
1/λ				1/λ				1/λ				1/λ				1/λ				1/λ			
0.000	0	1.000	0	0.000	0	1.000	0	0.000	0	1.000	0	0.000	0	1.000	0	0.000	0	1.000	0	0.000	0	1.000	0
0.000	1	0.999	1	0.000	1	0.999	1	0.000	1	0.999	1	0.000	1	0.999	1	0.000	1	0.999	1	0.000	1	0.999	1
0.000	2	0.996	2	0.000	2	0.996	2	0.000	2	0.996	2	0.000	2	0.996	2	0.000	2	0.996	2	0.000	2	0.996	2
0.000	3	0.991	3	0.000	3	0.991	3	0.000	3	0.991	3	0.000	3	0.991	3	0.000	3	0.991	3	0.000	3	0.991	3
0.000	4	0.984	4	0.000	4	0.984	4	0.000	4	0.984	4	0.000	4	0.984	4	0.000	4	0.984	4	0.000	4	0.984	4
0.000	5	0.975	5	0.000	5	0.975	5	0.000	5	0.975	5	0.000	5	0.975	5	0.000	5	0.975	5	0.000	5	0.975	5
0.000	6	0.964	6	0.000	6	0.964	6	0.000	6	0.964	6	0.000	6	0.964	6	0.000	6	0.964	6	0.000	6	0.964	6
0.000	7	0.951	7	0.000	7	0.951	7	0.000	7	0.951	7	0.000	7	0.951	7	0.000	7	0.951	7	0.000	7	0.951	7
0.000	8	0.936	8	0.000	8	0.936	8	0.000	8	0.936	8	0.000	8	0.936	8	0.000	8	0.936	8	0.000	8	0.936	8
0.000	9	0.919	9	0.000	9	0.919	9	0.000	9	0.919	9	0.000	9	0.919	9	0.000	9	0.919	9	0.000	9	0.919	9
0.000	10	0.900	10	0.000	10	0.900	10	0.000	10	0.900	10	0.000	10	0.900	10	0.000	10	0.900	10	0.000	10	0.900	10

12/07/78

ENDL Evaluated Photon Cross Sections

52-Te

12/07/78

Energy Deposition

52-Te

12/07/78

ENDL Evaluated Photon Data

52-Te

ATOMIC WEIGHT 127.6										DENSITY 6.24 GRAMS/CC				
ENERGY		TOTAL WFP		CROSS SECTION (BARNS)						NEUTRON COLLISION			MEV/CM	
KEV	CH	CH/CM/EN	TOTAL	COMPONENT	INCOMPONENT	PHOTOEL	PAIR PROD	K.E. FLOP	K.E.	SPREADSTR		K.E.		
1.000	2.217	5	7.000	3	1.530	0	1.700	3	1.214	2	1.530	0	9.900	0
1.005	2.217	5	7.000	3	1.530	0	1.700	3	1.214	2	1.530	0	9.900	0
1.100	2.270	5	6.000	3	1.570	0	1.700	3	1.402	2	1.270	0	9.100	0
1.250	2.500	5	5.430	3	1.151	0	1.707	3	1.603	2	1.140	0	8.231	0
1.500	3.434	5	4.007	3	0.600	0	1.707	3	2.702	2	0.670	0	6.300	0
1.675	3.800	5	3.200	3	1.100	0	1.700	3	3.300	2	1.100	0	5.400	0
1.800	4.200	5	2.500	3	1.320	0	1.700	3	3.440	2	1.320	0	4.800	0
1.750	4.200	5	2.500	3	1.320	0	1.700	3	3.440	2	1.320	0	4.800	0
2.000	4.270	5	2.000	3	1.400	0	1.700	3	4.010	2	1.400	0	4.000	0
2.300	4.300	5	1.600	3	1.410	0	1.700	3	4.470	2	1.410	0	3.600	0
3.000	4.400	5	1.000	3	1.300	0	1.700	3	5.070	2	1.300	0	2.800	0
3.500	4.500	5	0.500	3	1.100	0	1.700	3	5.447	2	1.100	0	2.200	0
4.000	4.500	5	0.500	3	1.000	0	1.700	3	5.877	2	1.000	0	1.800	0
4.500	4.700	5	0.700	3	0.600	0	1.777	3	6.353	2	0.600	0	1.600	0
5.000	4.700	5	0.700	3	0.600	0	1.777	3	6.800	2	0.600	0	1.400	0
5.500	4.800	5	0.700	3	0.600	0	1.707	3	7.240	2	0.600	0	1.200	0
5.750	4.800	5	0.700	3	0.600	0	1.700	3	7.590	2	0.600	0	1.000	0
5.770	4.751	5	0.751	3	0.751	0	1.700	3	7.772	2	0.751	0	1.000	0
6.000	4.900	5	0.800	3	0.800	0	1.700	3	8.000	2	0.800	0	1.100	0
6.500	5.000	5	0.800	3	0.800	0	1.700	3	8.400	2	0.800	0	1.000	0
7.000	5.100	5	0.800	3	0.800	0	1.700	3	8.800	2	0.800	0	0.900	0
7.500	5.200	5	0.800	3	0.800	0	1.700	3	9.200	2	0.800	0	0.800	0
8.000	5.300	5	0.800	3	0.800	0	1.700	3	9.600	2	0.800	0	0.700	0
8.500	5.400	5	0.800	3	0.800	0	1.700	3	10.000	2	0.800	0	0.600	0
9.000	5.500	5	0.800	3	0.800	0	1.700	3	10.400	2	0.800	0	0.500	0
9.500	5.600	5	0.800	3	0.800	0	1.700	3	10.800	2	0.800	0	0.400	0
10.000	5.700	5	0.800	3	0.800	0	1.700	3	11.200	2	0.800	0	0.300	0
10.500	5.800	5	0.800	3	0.800	0	1.700	3	11.600	2	0.800	0	0.200	0
11.000	5.900	5	0.800	3	0.800	0	1.700	3	12.000	2	0.800	0	0.100	0
11.500	6.000	5	0.800	3	0.800	0	1.700	3	12.400	2	0.800	0	0.000	0
12.000	6.100	5	0.800	3	0.800	0	1.700	3	12.800	2	0.800	0	0.000	0
12.500	6.200	5	0.800	3	0.800	0	1.700	3	13.200	2	0.800	0	0.000	0
13.000	6.300	5	0.800	3	0.800	0	1.700	3	13.600	2	0.800	0	0.000	0
13.500	6.400	5	0.800	3	0.800	0	1.700	3	14.000	2	0.800	0	0.000	0
14.000	6.500	5	0.800	3	0.800	0	1.700	3	14.400	2	0.800	0	0.000	0
14.500	6.600	5	0.800	3	0.800	0	1.700	3	14.800	2	0.800	0	0.000	0
15.000	6.700	5	0.800	3	0.800	0	1.700	3	15.200	2	0.800	0	0.000	0
15.500	6.800	5	0.800	3	0.800	0	1.700	3	15.600	2	0.800	0	0.000	0
16.000	6.900	5	0.800	3	0.800	0	1.700	3	16.000	2	0.800	0	0.000	0
16.500	7.000	5	0.800	3	0.800	0	1.700	3	16.400	2	0.800	0	0.000	0
17.000	7.100	5	0.800	3	0.800	0	1.700	3	16.800	2	0.800	0	0.000	0
17.500	7.200	5	0.800	3	0.800	0	1.700	3	17.200	2	0.800	0	0.000	0
18.000	7.300	5	0.800	3	0.800	0	1.700	3	17.600	2	0.800	0	0.000	0
18.500	7.400	5	0.800	3	0.800	0	1.700	3	18.000	2	0.800	0	0.000	0
19.000	7.500	5	0.800	3	0.800	0	1.700	3	18.400	2	0.800	0	0.000	0
19.500	7.600	5	0.800	3	0.800	0	1.700	3	18.800	2	0.800	0	0.000	0
20.000	7.700	5	0.800	3	0.800	0	1.700	3	19.200	2	0.800	0	0.000	0
20.500	7.800	5	0.800	3	0.800	0	1.700	3	19.600	2	0.800	0	0.000	0
21.000	7.900	5	0.800	3	0.800	0	1.700	3	20.000	2	0.800	0	0.000	0
21.500	8.000	5	0.800	3	0.800	0	1.700	3	20.400	2	0.800	0	0.000	0
22.000	8.100	5	0.800	3	0.800	0	1.700	3	20.800	2	0.800	0	0.000	0
22.500	8.200	5	0.800	3	0.800	0	1.700	3	21.200	2	0.800	0	0.000	0
23.000	8.300	5	0.800	3	0.800	0	1.700	3	21.600	2	0.800	0	0.000	0
23.500	8.400	5	0.800	3	0.800	0	1.700	3	22.000	2	0.800	0	0.000	0
24.000	8.500	5	0.800	3	0.800	0	1.700	3	22.400	2	0.800	0	0.000	0
24.500	8.600	5	0.800	3	0.800	0	1.700	3	22.800	2	0.800	0	0.000	0
25.000	8.700	5	0.800	3	0.800	0	1.700	3	23.200	2	0.800	0	0.000	0
25.500	8.800	5	0.800	3	0.800	0	1.700	3	23.600	2	0.800	0	0.000	0
26.000	8.900	5	0.800	3	0.800	0	1.700	3	24.000	2	0.800	0	0.000	0
26.500	9.000	5	0.800	3	0.800	0	1.700	3	24.400	2	0.800	0	0.000	0
27.000	9.100	5	0.800	3	0.800	0	1.700	3	24.800	2	0.800	0	0.000	0
27.500	9.200	5	0.800	3	0.800	0	1.700	3	25.200	2	0.800	0	0.000	0
28.000	9.300	5	0.800	3	0.800	0	1.700	3	25.600	2	0.800	0	0.000	0
28.500	9.400	5	0.800	3	0.800	0	1.700	3	26.000	2	0.800	0	0.000	0
29.000	9.500	5	0.800	3	0.800	0	1.700	3	26.400	2	0.800	0	0.000	0
29.500	9.600	5	0.800	3	0.800	0	1.700	3	26.800	2	0.800	0	0.000	0
30.000	9.700	5	0.800	3	0.800	0	1.700	3	27.200	2	0.800	0	0.000	0
30.500	9.800	5	0.800	3	0.800	0	1.700	3	27.600	2	0.800	0	0.000	0
31.000	9.900	5	0.800	3	0.800	0	1.700	3	28.000	2	0.800	0	0.000	0
31.500	10.000	5	0.800	3	0.800	0	1.700	3	28.400	2	0.800	0	0.000	0
32.000	10.100	5	0.800	3	0.800	0	1.700	3	28.800	2	0.800	0	0.000	0
32.500	10.200	5	0.800	3	0.800	0	1.700	3	29.200	2	0.800	0	0.000	0
33.000	10.300	5	0.800	3	0.800	0	1.700	3	29.600	2	0.800	0	0.000	0
33.500	10.400	5	0.800	3	0.800	0	1.700	3	30.000	2	0.800	0	0.000	0
34.000	10.500	5	0.800	3	0.800	0	1.700	3	30.400	2	0.800	0	0.000	0
34.500	10.600	5	0.800	3	0.800	0	1.700	3	30.800	2	0.800	0	0.000	0
35.000	10.700	5	0.800	3	0.800	0	1.700	3	31.200	2	0.800	0	0.000	0
35.500	10.800	5	0.800	3	0.800	0	1.700	3	31.600	2	0.800	0	0.000	0
36.000	10.900	5	0.800	3	0.800	0	1.700	3	32.000	2	0.800	0	0.000	0
36.500	11.000	5	0.800	3	0.800	0	1.700	3	32.400	2	0.800	0	0.000	0
37.000	11.100	5	0.800	3	0.800	0	1.700	3	32.800	2	0.800	0	0.000	0
37.500	11.200	5	0.800	3	0.800	0	1.700	3	33.200	2	0.800	0	0.000	0
38.000	11.300	5	0.800	3	0.800	0	1.700	3	33.600	2	0.800	0	0.000	0
38.500	11.400	5	0.800	3	0.800	0	1.700	3	34.000	2	0.800	0	0.000	0
39.000	11.500	5	0.800	3	0.800	0	1.700	3	34.400	2	0.800	0	0.000	0
39.500	11.600	5	0.800	3	0.800	0	1.700	3	34.800	2	0.800	0	0.000	0
40.000	11.700	5	0.800	3	0.800	0	1.700	3	35.200	2	0.800	0	0.000	0
40.500	11.800	5	0.800	3	0.800	0	1.700	3	35.600	2	0.800	0	0.000	0

52-10

52-1a

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Form Factors

52-Te

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000-0	1.000-0	0.000-0	1.250-1	0.927-1	1.016-1	1.000-0	3.250-1	5.007-1	1.000-1	1.001-2	9.946-1
5.000-3	9.907-1	2.000-4	1.500-1	0.801-1	1.271-1	1.250-0	2.000-1	6.303-1	1.500-1	1.171-2	9.920-1
1.000-2	9.500-1	1.077-3	1.750-1	0.604-1	1.515-1	1.500-0	2.210-1	7.004-1	2.000-1	0.503-3	9.900-1
1.500-2	9.300-1	2.400-3	2.000-1	7.501-2	1.745-1	2.000-0	1.470-1	7.707-1	5.000-1	4.001-4	1.000-0
2.000-2	9.000-1	4.240-3	2.500-1	7.403-2	2.105-1	2.500-0	1.112-1	8.200-1	0.000-1	1.000-4	1.000-0
2.500-2	8.500-1	6.500-3	3.000-1	6.500-2	2.533-1	3.000-0	9.570-2	8.615-1	1.000-2	5.117-5	1.000-0
3.000-2	8.000-1	9.330-3	4.000-1	6.000-2	3.157-1	3.500-0	0.040-2	8.900-1	1.000-3	3.000-6	1.000-0
4.000-2	7.000-1	1.610-2	5.000-1	5.251-2	3.732-1	4.000-0	0.000-2	9.121-1	1.000-6	0.000-17	1.000-0
5.000-2	6.000-1	2.405-2	6.000-1	4.001-2	4.257-1	5.000-0	4.000-2	9.413-1	1.000-9	2.703-25	1.000-0
7.000-2	5.000-1	4.337-2	7.000-1	4.134-2	4.741-1	6.000-0	3.405-2	9.570-1			
9.000-2	4.000-1	6.441-2	8.000-1	3.704-2	5.170-1	7.000-0	2.700-2	9.670-1			
1.000-1	3.000-1	7.513-2	9.000-1	3.474-2	5.500-1	8.000-0	2.461-2	9.750-1

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ENDL Evaluated Photon Cross Sections

53-i

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Energy Deposition

53-1

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ENDL Evaluated Photon Data

53-1

ATOMIC WEIGHT 126.9		DENSITY 4.94 GRAMS/CC									
ENERGY MEV	TOTAL JFP		CROSS SECTION (BARNS)					MEV/COLLISION			MEV/CM K.E.
	CM	CM ² /GM	TOTAL	COMPONENT	INCOHER	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	
5.000-2	1.817-2	1.232-1	2.838-3	7.052-1	2.327-1	2.944-3	4.822-2	2.719-2	2.447-5	1.881-0	1.881-0
5.500-2	2.082-2	1.705-1	2.846-3	6.044-1	2.346-1	1.982-3	5.287-2	3.185-2	3.357-5	1.256-0	1.256-0
6.000-2	2.626-2	2.707-1	1.884-3	5.248-1	2.383-1	1.748-3	5.728-2	3.845-2	4.398-5	1.368-0	1.368-0
6.500-2	3.261-2	3.207-1	1.388-3	4.578-1	2.385-1	1.239-3	6.188-2	4.059-2	5.957-5	1.257-0	1.257-0
7.000-2	3.981-2	3.885-1	1.072-3	4.033-1	2.387-1	1.008-3	6.600-2	4.545-2	6.833-5	1.142-0	1.142-0
8.000-2	5.885-2	5.981-1	7.504-2	3.209-1	2.370-1	6.946-2	7.437-2	5.415-2	9.694-5	9.525-1	9.525-1
1.000-1	1.030-1	1.985-0	4.141-2	2.189-1	2.334-1	3.691-2	8.995-2	7.048-2	1.842-4	6.842-1	6.842-1
1.250-1	1.837-1	1.102-0	2.322-2	1.454-1	2.258-1	1.951-2	1.071-1	8.872-2	2.800-4	4.830-1	4.830-1
1.500-1	2.676-1	7.039-1	1.483-2	1.049-1	2.195-1	1.199-2	1.214-1	1.043-1	3.593-4	3.628-1	3.628-1
1.750-1	4.108-1	4.286-1	1.038-2	7.906-0	2.119-1	7.476-1	1.334-1	1.176-1	4.586-4	2.884-1	2.884-1
2.000-1	5.478-1	3.885-1	7.787-1	5.188-0	2.023-1	5.113-1	1.431-1	1.288-1	5.470-4	2.351-1	2.351-1
2.500-1	8.405-1	2.408-1	5.075-1	4.058-0	1.984-1	2.748-1	1.590-1	1.472-1	7.142-4	1.751-1	1.751-1
3.000-1	1.134-0	1.785-1	5.762-1	2.875-0	1.823-1	1.852-1	1.718-1	1.622-1	8.686-4	1.430-1	1.430-1
3.500-1	1.407-0	1.439-1	3.033-1	2.137-0	1.727-1	1.092-1	1.850-1	1.771-1	1.033-3	1.259-1	1.259-1
4.000-1	1.858-0	1.223-1	2.577-1	1.853-0	1.649-1	7.629-0	1.982-1	1.924-1	1.129-3	1.182-1	1.182-1
4.500-1	1.880-0	1.077-1	2.270-1	1.314-0	1.575-1	5.626-0	2.148-1	2.094-1	1.442-3	1.114-1	1.114-1
5.000-1	2.082-0	9.721-2	2.049-1	1.071-0	1.513-1	4.285-0	2.321-1	2.276-1	1.703-3	1.093-1	1.093-1
5.500-1	2.267-0	8.930-2	1.882-1	8.890-0	1.455-1	3.381-0	2.513-1	2.473-1	2.010-3	1.091-1	1.091-1
6.000-1	2.436-0	8.310-2	1.751-1	7.500-0	1.404-1	2.723-0	2.717-1	2.683-1	2.364-3	1.102-1	1.102-1
6.500-1	2.593-0	7.807-2	1.645-1	6.407-0	1.356-1	2.255-0	2.936-1	2.906-1	2.770-3	1.121-1	1.121-1
7.000-1	2.740-0	7.389-2	1.557-1	5.538-0	1.312-1	1.894-0	3.184-1	3.138-1	3.228-3	1.145-1	1.145-1
8.000-1	3.007-0	6.732-2	1.419-1	4.259-0	1.238-1	1.383-0	3.651-1	3.629-1	4.311-3	1.207-1	1.207-1
1.000+0	3.476-0	5.823-2	1.227-1	2.739-0	1.115-1	8.468-1	4.708-1	4.693-1	7.184-3	1.350-1	1.350-1
1.022+0	3.523-0	5.746-2	1.211-1	2.623-0	1.103-1	8.155-1	4.832-1	4.817-1	7.566-3	1.387-1	1.387-1
1.250+0	3.978-0	5.089-2	1.072-1	1.759-0	9.982-0	5.629-1	2.481-3	6.150-1	6.139-1	1.224-2	1.943-1
1.500+0	4.362-0	4.841-2	9.779-0	1.224-1	9.080-0	4.024-1	1.747-1	7.610-1	7.601-1	1.867-2	1.743-1
1.750+0	4.672-0	4.333-2	9.131-0	9.004-0	8.354-0	3.001-1	3.886-1	9.138-1	9.129-1	2.680-2	1.954-1
2.000+0	4.925-0	4.111-2	8.582-0	6.899-0	7.755-0	8.370-1	6.011-1	1.075-0	1.074-0	3.691-2	2.181-1
2.044+0	4.968-0	4.075-2	8.587-0	6.866-0	7.660-0	2.290-1	6.321-1	1.104-0	1.104-0	3.691-2	2.221-1
2.500+0	5.260-0	3.834-2	8.079-0	4.421-2	6.815-0	1.877-1	1.053-0	1.421-0	1.420-0	6.380-2	2.690-1
3.000+0	5.469-0	3.702-2	7.900-0	3.072-2	6.106-0	1.282-1	1.538-0	1.798-0	1.795-0	1.008-1	3.283-1
3.500+0	5.588-0	3.623-2	7.634-0	2.257-2	5.547-0	1.035-1	1.881-0	2.195-0	2.194-0	1.487-1	3.927-1
4.000+0	5.637-0	3.591-2	7.567-0	1.728-2	5.095-0	8.604-2	2.388-0	2.613-0	2.613-0	2.082-1	4.836-1
4.500+0	5.637-0	3.591-2	7.567-0	1.386-2	4.719-0	7.279-2	2.782-0	3.049-0	3.048-0	2.798-1	5.408-1
5.000+0	5.629-0	3.596-2	7.578-0	1.106-2	4.401-0	6.318-2	3.104-0	3.495-0	3.495-0	3.626-1	6.809-1
5.500+0	5.644-0	3.587-2	7.593-0	9.143-3	4.127-0	5.605-2	3.386-0	3.947-0	3.947-0	4.564-1	8.929-1
6.000+0	5.633-0	3.594-2	7.573-0	7.883-3	3.890-0	5.025-2	3.685-0	4.408-0	4.408-0	5.817-1	7.826-1
6.500+0	5.602-0	3.613-2	7.614-0	6.548-3	3.681-0	4.545-2	3.881-0	4.876-0	4.876-0	6.781-1	8.704-1
7.000+0	5.556-0	3.643-2	7.678-0	5.845-3	3.496-0	4.142-2	4.135-0	5.351-0	5.351-0	8.056-1	9.631-1
8.000+0	5.450-0	3.728-2	7.858-0	4.323-3	3.182-0	3.503-2	4.834-0	6.315-0	6.315-0	1.092-0	1.163-0
1.000+1	5.109-0	3.962-2	8.349-0	2.767-3	2.711-0	2.848-2	5.610-0	8.283-0	8.283-0	1.793-0	1.621-0
1.250+1	4.887-0	4.142-2	8.729-0	1.771-3	2.300-0	2.084-2	6.406-0	1.075-1	1.075-1	2.825-0	2.201-0
1.500+1	4.654-0	4.349-2	9.185-0	1.230-3	2.006-0	1.713-2	7.141-0	1.325-1	1.325-1	4.042-0	2.847-0
1.750+1	4.415-0	4.589-2	9.862-0	9.036-4	1.784-0	1.452-2	7.862-0	1.576-1	1.576-1	5.405-0	3.570-0
2.000+1	4.224-0	4.793-2	1.010-1	6.918-4	1.610-0	1.253-2	8.476-0	1.827-1	1.827-1	6.868-0	4.325-0
2.500+1	3.957-0	5.116-2	1.078-1	4.428-4	1.354-0	9.999-3	9.418-0	2.328-1	2.328-1	1.014-1	5.885-0
3.000+1	3.761-0	5.382-2	1.134-1	3.075-4	1.172-0	8.138-3	1.016-1	2.630-1	2.630-1	1.369-1	7.524-0
3.500+1	3.624-0	5.585-2	1.177-1	2.259-4	1.037-0	6.897-3	1.073-1	3.331-1	3.331-1	1.747-1	9.190-0
4.000+1	3.503-0	5.779-2	1.218-1	1.730-4	9.317-1	5.975-3	1.124-1	3.632-1	3.632-1	2.144-1	1.059-1
4.500+1	3.389-0	5.982-2	1.260-1	1.367-4	8.471-1	5.285-3	1.175-1	4.334-1	4.334-1	2.534-1	1.281-1
5.000+1	3.297-0	6.140-2	1.294-1	1.107-4	7.777-1	4.702-3	1.218-1	4.835-1	4.835-1	2.976-1	1.486-1
5.500+1	3.240-0	6.249-2	1.317-1	9.147-5	7.194-1	4.244-3	1.244-1	5.335-1	5.335-1	3.407-1	1.847-1
6.000+1	3.186-0	6.353-2	1.339-1	7.866-5	6.701-1	3.886-3	1.271-1	5.836-1	5.836-1	3.846-1	1.831-1
6.500+1	3.137-0	6.452-2	1.360-1	6.549-5	6.272-1	3.547-3	1.297-1	6.336-1	6.336-1	4.296-1	2.020-1
7.000+1	3.092-0	6.548-2	1.380-1	5.847-5	5.900-1	3.276-3	1.320-1	6.837-1	6.837-1	4.743-1	2.211-1
8.000+1	3.009-0	6.728-2	1.418-1	4.323-5	5.285-1	2.838-3	1.395-1	7.838-1	7.838-1	5.899-1	2.605-1
1.000+2	2.871-0	7.051-2	1.486-1	2.767-5	4.386-1	2.233-3	1.442-1	9.840-1	9.840-1	7.530-1	3.427-1

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Form Factors

53-1

$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
0.000+0	1.000+0	0.000+0	1.250-1	8.931-1	1.000-1	1.000+0	3.222-1	5.880-1	1.000+1	1.882-2	9.842-1
5.000-3	9.997-1	2.453+4	1.500-1	8.598-1	1.286-1	1.250+0	2.708-1	8.505-1	1.500+1	1.192-2	9.957-1
1.000-2	9.991-1	1.019-3	1.750-1	8.272-1	1.515-1	1.500+0	2.239-1	8.888-1	2.000+1	6.794-3	9.988-1
1.500-2	9.980-1	2.274-3	2.000-1	7.961-1	1.752-1	2.000+0	1.505-1	7.703-1	5.000+1	5.285-4	1.000+0
2.000-2	9.969-1	4.015-3	2.500-1	7.396-1	2.185-1	2.500+0	1.110-1	6.213-1	8.000+1	1.145-4	1.000+0
2.500-2	9.945-1	6.219-3	3.000-1	6.897-1	2.559-1	3.000+0	9.614-2	5.580-1	1.000+2	5.504-5	1.000+0
3.000-2	9.922-1	8.880-3	4.000-1	6.028-1	3.184-1	3.500+0	8.049-2	5.078-1	1.000+3	4.267-6	1.000+0
4.000-2	9.883-1	1.534-2	5.000-1	5.278-1	3.732-1	4.000+0	7.027-2	4.601-1	1.000+6	1.119-16	1.000+0
5.000-2	9.789-1	2.321-2	6.000-1	4.646-1	4.240-1	5.000+0	4.983-2	3.398-1	1.000+9	3.280-25	1.000+0
7.000-2	9.604-1	4.181-2	7.000-1	4.149-1	4.713-1	6.000+0	3.555-2	2.589-1			
9.000-2	9.378-1	6.286-2	8.000-1	3.785-1	5.145-1	7.000+0	2.778-2	2.073-1			
1.000-1	9.256-1	7.304-2	9.000-1	3.467-1	5.528-1	8.000+0	2.479-2	1.745-1

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ENDL Evaluated Photon Cross Sections

54-Xe

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Energy Deposition

54-Xe

12/07/78

ENDL Evaluated Photon Data

54-Xe

ATOMIC WEIGHT 131.3		DENSITY 0.005895 GRAMS/CC									
ENERGY	TOTAL NFP	CROSS SECTION (BARNs)						MEV/COLLISION			
MEV	CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	E.E. *FLOR	K.E.	GREY/STR	MEV/CM
1.000-4	9.219-3	1.040-4	4.012-6	1.030-3	1.127-2	4.010-6		9.995-5	9.995-5	3.372-10	1.004-2
1.250-4	2.051-2	5.930-3	1.207-6	1.030-3	1.798-2	1.205-6		1.240-4	1.240-4	5.230-10	4.378-3
1.480-4	6.248-2	2.715-3	5.919-5	1.030-3	2.396-2	5.900-5		1.455-4	1.455-4	7.147-10	2.329-3
1.478-4	3.387-2	5.008-3	1.092-6	1.030-3	2.442-2	1.090-6		1.471-4	1.471-4	7.307-10	4.344-3
1.500-4	3.326-2	5.108-3	1.112-6	1.030-3	2.528-2	1.110-6		1.497-4	1.497-4	7.567-10	4.502-3
1.700-4	3.103-2	5.467-3	1.192-6	1.037-3	3.241-2	1.190-6		1.697-4	1.697-4	7.722-10	5.470-3
1.750-4	3.034-2	5.591-3	1.208-6	1.037-3	3.433-2	1.217-6		1.747-4	1.747-4	1.030-9	5.758-3
2.000-4	2.738-2	6.201-3	1.338-6	1.038-3	4.475-2	1.350-6		1.997-4	1.997-4	1.348-9	7.300-3
2.073-4	2.678-2	6.338-3	1.380-6	1.035-3	4.604-2	1.380-6		2.070-4	2.070-4	1.448-9	7.735-3
2.087-4	2.323-2	7.302-3	1.508-6	1.035-3	4.888-2	1.500-6		2.084-4	2.084-4	1.468-9	8.972-3
2.500-4	2.331-2	7.279-3	1.587-6	1.033-3	6.957-2	1.585-6		2.497-4	2.497-4	2.104-9	1.071-2
3.000-4	2.338-2	7.238-3	1.588-6	1.030-3	9.978-2	1.580-6		2.996-4	2.996-4	3.030-9	1.282-2
3.500-4	2.639-2	6.428-3	1.401-6	1.026-3	1.349-1	1.400-6		3.495-4	3.495-4	4.123-9	1.324-2
4.000-4	2.931-2	5.708-3	1.262-6	1.023-3	1.753-1	1.260-6		3.994-4	3.994-4	5.383-9	1.363-2
4.500-4	3.377-2	5.023-3	1.095-6	1.018-3	2.201-1	1.093-6		4.492-4	4.492-4	6.810-9	1.330-2
5.000-4	3.833-2	4.486-3	9.044-5	1.013-3	2.698-1	9.030-5		4.990-4	4.990-4	8.404-9	1.302-2
5.500-4	4.395-2	3.860-3	8.416-5	1.008-3	3.235-1	8.387-5		5.488-4	5.488-4	1.016-8	1.248-2
6.000-4	4.978-2	3.407-3	7.429-5	1.002-3	3.818-1	7.410-5		5.985-4	5.985-4	1.209-8	1.202-2
6.500-4	5.582-2	3.001-3	6.543-5	1.004-3	4.428-1	6.525-5		6.481-4	6.481-4	1.418-8	1.147-2
6.787-4	6.025-2	2.816-3	6.139-5	1.001-3	4.770-1	6.120-5		6.746-4	6.746-4	1.536-8	1.120-2
6.781-4	5.346-2	3.173-3	6.919-5	1.004-3	4.789-1	6.900-5		6.762-4	6.762-4	1.543-8	1.265-2
7.000-4	5.221-2	3.349-3	5.122-5	1.007-3	5.079-1	5.120-5		6.997-4	6.997-4	1.652-8	9.690-2
7.500-4	1.185-2	1.432-4	3.122-6	1.001-3	5.771-1	3.120-6		7.495-4	7.495-4	1.896-8	6.327-2
8.000-4	1.400-2	1.212-4	2.842-6	1.075-3	6.503-1	2.840-6		7.994-4	7.994-4	2.157-8	5.710-2
9.000-4	1.803-2	9.411-3	2.052-6	1.057-3	8.010-1	2.050-6		8.992-4	8.992-4	2.729-8	4.988-2
9.570-4	2.084-2	8.218-3	1.792-6	1.048-3	8.929-1	1.790-6		9.560-4	9.560-4	3.085-8	4.632-2
9.589-4	1.573-2	1.079-4	2.352-6	1.048-3	9.952-1	2.350-6		9.578-4	9.578-4	3.095-8	6.090-2
1.000-3	1.685-2	1.007-4	2.192-6	1.041-3	9.581-1	2.194-6		9.982-4	9.982-4	3.368-8	5.931-2
1.145-3	2.069-2	8.122-3	1.771-6	1.007-3	1.197-0	1.769-6		1.141-3	1.141-3	4.392-8	5.462-2
1.143-3	1.953-2	8.512-3	1.696-6	1.007-3	1.199-0	1.854-6		1.142-3	1.142-3	4.401-8	5.730-2
1.250-3	2.481-2	6.837-3	1.491-6	1.785-3	1.386-0	1.489-6		1.249-3	1.249-3	5.261-8	5.032-2
1.500-3	3.877-2	4.376-3	9.540-5	1.739-3	1.864-0	9.523-5		1.497-3	1.497-3	7.566-8	3.862-2
1.750-3	5.852-2	3.001-3	6.543-5	1.677-3	2.322-0	6.527-5		1.746-3	1.746-3	1.028-7	3.088-2
2.000-3	7.834-2	2.185-3	4.721-5	1.626-3	2.810-0	4.705-5		1.993-3	1.993-3	1.341-7	2.544-2
2.500-3	1.351-1	1.256-3	2.738-5	1.501-3	3.706-0	2.723-5		2.486-3	2.486-3	2.086-7	1.841-2
3.000-3	2.106-1	8.055-2	1.758-5	1.406-3	4.647-0	1.742-5		2.978-3	2.978-3	2.969-7	1.413-2
3.500-3	3.084-1	5.536-2	1.207-5	1.304-3	5.467-0	1.194-5		3.462-3	3.462-3	4.045-7	1.130-2
4.000-3	4.237-1	4.004-2	8.730-4	1.222-3	6.293-0	8.607-4		3.944-3	3.944-3	5.248-7	9.309-3
4.500-3	5.635-1	3.010-2	8.309-4	1.140-3	7.000-0	8.449-4		4.421-3	4.421-3	6.597-7	7.848-3
4.780-3	6.920-1	2.602-2	9.873-4	1.100-3	7.393-0	5.562-4		4.687-3	4.687-3	7.412-7	7.188-3
4.781-3	2.294-1	7.394-2	1.612-5	1.100-3	7.394-0	1.601-5		4.748-3	4.748-3	6.479-7	1.910-2
5.000-3	2.574-1	6.990-2	1.437-5	1.071-3	7.700-0	1.426-5		4.962-3	4.962-3	7.129-7	1.786-2
5.099-3	2.706-1	6.204-2	1.366-5	1.057-3	7.823-0	1.355-5		5.059-3	5.059-3	7.432-7	1.733-2
5.100-3	1.926-1	8.809-2	1.921-5	1.057-3	7.824-0	1.910-5		5.072-3	5.072-3	7.469-7	2.443-2
5.451-3	2.288-1	7.413-2	1.616-5	1.010-3	8.256-0	1.606-5		5.417-3	5.417-3	8.605-7	2.207-2
5.452-3	1.976-1	8.587-2	1.672-5	1.010-3	8.257-0	1.862-5		5.422-3	5.422-3	8.624-7	2.559-2
5.500-3	2.021-1	8.393-2	1.830-5	1.004-3	8.316-0	1.820-5		5.470-3	5.470-3	8.786-7	2.525-2
6.000-3	2.534-1	6.694-2	1.460-5	9.456-2	8.921-0	1.450-5		5.961-3	5.961-3	1.056-6	2.208-2
6.500-3	3.129-1	5.421-2	1.182-5	8.860-2	9.484-0	1.173-5		6.451-3	6.451-3	1.249-6	1.945-2
7.000-3	3.803-1	4.460-2	9.725-4	8.341-2	9.995-0	9.640-4		6.939-3	6.939-3	1.458-6	1.728-2
8.000-3	5.403-1	3.139-2	6.845-4	7.482-2	1.103-1	6.789-4		7.911-3	7.911-3	1.921-6	1.337-2
1.000-2	9.798-1	1.431-2	3.775-4	6.085-2	1.285-1	3.713-4		9.836-3	9.836-3	3.028-6	9.689-3
1.250-2	1.794-0	9.457-1	2.062-4	4.807-2	1.457-1	2.012-4		1.220-2	1.220-2	4.729-6	6.601-3
1.500-2	2.932-0	5.785-1	1.261-4	3.976-2	1.635-1	1.220-4		1.451-2	1.451-2	6.756-6	4.826-3
1.750-2	4.474-0	3.792-1	8.267-3	3.312-2	1.756-1	7.918-3		1.676-2	1.676-2	9.083-6	3.668-3
2.000-2	6.436-0	2.636-1	5.746-3	2.828-2	1.867-1	5.445-3		1.895-2	1.895-2	1.167-5	2.691-3
2.500-2	1.193-1	1.422-1	3.101-3	2.088-2	2.013-1	2.874-3		2.318-2	2.284-2	1.759-5	1.915-3
3.000-2	1.961-1	8.853-0	1.887-3	1.601-2	2.141-1	1.705-3		2.713-2	2.680-2	2.422-5	1.367-3
3.458-2	2.890-1	5.889-0	1.280-3	1.296-2	2.212-1	1.128-3		3.052-2	3.020-2	3.074-5	1.045-3
3.458-2	5.380-0	3.213-1	7.005-3	1.296-2	2.212-1	6.853-3		3.384-2	3.144-2	4.412-6	2.166-3
3.500-2	5.441-0	3.118-1	6.797-3	1.273-2	2.218-1	6.848-3		3.424-2	3.184-2	4.730-6	2.176-3
4.000-2	7.993-0	2.894-1	4.871-3	1.043-2	2.286-1	4.744-3		3.897-2	3.667-2	9.370-6	2.192-3
4.500-2	1.029-1	1.649-1	3.599-3	8.888-2	3.327-1	3.485-3		4.365-2	4.145-2	1.551-5	2.007-3

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 131.3										DENSITY 0.003895 GRAMS/CC			
ENERGY		TOTAL NFP		CROSS SECTION (BARNS)						REV/COLLISION		REV/CM	
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHER	PHOTOL	PAIR PROD	K.E.	FLUOR	K.E.	BREMSSTR	K.E.	
5.000-2	1.349-1	1.298-1	2.742-3	7.374-1	2.384-1	2.845-3		4.885-2	2.618-2	2.310-5	1.941-3		
5.500-2	1.735-1	9.779-0	2.132-3	6.320-1	2.384-1	2.047-3		5.281-2	3.085-2	3.208-5	1.778-3		
6.000-2	2.181-1	7.778-0	1.688-3	5.498-1	2.402-1	1.811-3		5.789-2	3.948-2	4.239-5	1.626-3		
6.500-2	2.788-1	8.889-0	1.387-3	4.789-1	2.404-1	1.299-3		6.170-2	4.001-2	5.395-5	1.479-3		
7.000-2	3.301-1	5.140-0	1.121-3	4.221-1	2.408-1	1.054-3		6.603-2	4.449-2	6.869-5	1.348-3		
8.000-2	4.708-1	3.803-0	7.828-2	3.381-1	2.410-1	7.279-2		7.443-2	5.321-2	9.540-5	1.130-3		
1.000-1	8.531-1	1.989-0	4.338-2	2.278-1	2.374-1	3.871-2		9.009-2	6.954-2	1.633-4	6.184-4		
1.250-1	1.523-2	1.113-0	2.428-2	1.523-1	2.280-1	2.044-2		1.073-1	8.804-2	2.608-4	5.779-4		
1.500-1	2.389-2	7.101-1	1.948-2	1.098-1	2.234-1	1.215-2		1.218-1	1.038-1	3.627-4	4.347-4		
1.750-1	3.419-2	4.982-1	1.082-2	8.283-0	2.158-1	7.834-1		1.339-1	1.174-1	4.630-4	3.433-4		
2.000-1	4.588-2	3.713-1	8.088-1	6.485-0	2.092-1	5.356-1		1.439-1	1.287-1	5.567-4	2.818-4		
2.500-1	7.027-2	2.414-1	5.263-1	4.299-0	1.959-1	2.879-1		1.601-1	1.476-1	7.314-4	2.100-4		
3.000-1	9.504-2	1.785-1	3.882-1	3.015-0	1.958-1	1.734-1		1.731-1	1.629-1	8.907-4	1.714-4		
3.500-1	1.181-3	1.437-1	3.132-1	2.241-0	1.759-1	1.749-1		1.865-1	1.781-1	1.065-3	1.509-4		
4.000-1	1.382-3	1.218-1	2.857-1	1.734-0	1.679-1	8.043-0		2.006-1	1.937-1	1.298-3	1.391-4		
4.500-1	1.582-3	1.072-1	2.338-1	1.379-0	1.605-1	5.952-0		2.167-1	2.108-1	1.490-3	1.333-4		
5.000-1	1.794-3	9.869-2	2.108-1	1.124-0	1.541-1	4.547-0		2.341-1	2.292-1	1.759-3	1.306-4		
5.500-1	1.911-3	8.877-2	1.935-1	9.329-1	1.482-1	3.602-0		2.534-1	2.491-1	2.077-3	1.304-4		
6.000-1	2.059-3	8.295-2	1.800-1	7.871-1	1.430-1	2.912-0		2.739-1	2.702-1	2.442-3	1.315-4		
6.500-1	2.188-3	7.753-2	1.690-1	6.725-1	1.381-1	2.423-0		2.959-1	2.926-1	2.862-3	1.337-4		
7.000-1	2.313-3	7.137-2	1.599-1	5.613-1	1.337-1	2.045-0		3.189-1	3.160-1	3.334-3	1.366-4		
8.000-1	2.540-3	6.014-2	1.456-1	4.470-1	1.261-1	1.505-0		3.676-1	3.653-1	4.448-3	1.438-4		
1.000-0	2.939-3	5.742-2	1.258-1	2.876-1	1.136-1	9.402-1		4.737-1	4.720-1	7.401-3	1.606-4		
1.025-0	2.979-3	5.695-2	1.242-1	2.794-1	1.124-1	9.033-1	1.000-6	4.861-1	4.844-1	7.792-3	1.626-4		
1.250-0	3.388-3	5.036-2	1.098-1	1.847-1	1.017-1	6.234-1	2.575-3	6.177-1	6.164-1	1.256-2	1.830-4		
1.500-0	3.696-3	4.590-2	1.001-1	1.285-1	9.251-0	4.456-1	1.833-1	7.633-1	7.622-1	1.912-2	2.063-4		
1.750-0	3.959-3	4.205-2	9.343-0	9.495-2	8.512-0	3.323-1	4.045-1	9.155-1	9.147-1	2.739-2	2.311-4		
2.000-0	4.173-3	4.065-2	8.884-0	7.248-2	7.901-0	2.623-1	6.279-1	1.077-0	1.076-0	3.770-2	2.578-4		
2.044-0	4.209-3	4.030-2	8.787-0	6.938-2	7.804-0	2.534-1	6.601-1	1.106-0	1.105-0	3.974-2	2.626-4		
2.500-0	4.471-3	3.794-2	8.272-0	4.642-2	6.943-0	1.895-1	1.097-0	1.422-0	1.422-0	6.512-2	3.180-4		
3.000-0	4.627-3	3.666-2	7.993-0	3.226-2	6.221-0	1.417-1	1.598-0	1.798-0	1.798-0	1.028-1	3.865-4		
3.500-0	4.725-3	3.591-2	7.828-0	2.370-2	5.652-0	1.144-1	2.038-0	2.197-0	2.197-0	1.517-1	4.650-4		
4.000-0	4.783-3	3.561-2	7.765-0	1.815-2	5.191-0	9.504-2	2.461-0	2.617-0	2.617-0	2.123-1	5.493-4		
4.500-0	4.780-3	3.564-2	7.770-0	1.435-2	4.608-0	8.039-2	2.867-0	3.053-0	3.053-0	2.851-1	6.412-4		
5.000-0	4.751-3	3.471-2	7.785-0	1.162-2	4.483-0	6.974-2	3.220-0	3.499-0	3.499-0	3.696-1	7.366-4		
5.500-0	4.761-3	3.563-2	7.788-0	9.603-3	4.205-0	6.187-2	3.491-0	3.952-0	3.952-0	4.651-1	8.301-4		
6.000-0	4.750-3	3.571-2	7.786-0	8.069-3	3.963-0	5.547-2	3.759-0	4.414-0	4.414-0	5.722-1	9.292-4		
6.500-0	4.723-3	3.592-2	7.831-0	6.877-3	3.751-0	5.016-2	4.024-0	4.882-0	4.882-0	6.907-1	1.034-3		
7.000-0	4.682-3	3.623-2	7.899-0	5.930-3	3.562-0	4.571-2	4.295-0	5.357-0	5.357-0	8.203-1	1.144-3		
8.000-0	4.574-3	3.709-2	8.087-0	4.541-3	3.242-0	3.865-2	4.801-0	6.322-0	6.322-0	1.112-0	1.382-3		
1.000-0	4.300-3	3.945-2	8.601-0	2.906-3	2.762-0	2.921-2	5.808-0	8.291-0	8.291-0	1.813-0	1.928-3		
1.250-0	4.110-3	4.128-2	8.999-0	1.860-3	2.343-0	2.298-2	6.631-0	1.076-1	1.076-1	2.868-0	2.619-3		
1.500-1	3.912-3	4.337-2	9.455-0	1.232-3	2.044-0	1.890-2	7.391-0	1.326-1	1.326-1	4.099-0	3.390-3		
1.750-1	3.709-3	4.573-2	9.971-0	9.491-4	1.818-0	1.601-2	8.136-0	1.577-1	1.577-1	5.477-0	4.251-3		
2.000-1	3.547-3	4.782-2	1.043-1	7.266-4	1.641-0	1.387-2	8.771-0	1.823-1	1.828-1	6.974-0	5.153-3		
2.500-1	3.321-3	5.108-2	1.114-1	4.650-4	1.379-0	1.092-2	9.746-0	2.329-1	2.329-1	1.025-1	7.014-3		
3.000-1	3.156-3	5.375-2	1.172-1	3.229-4	1.194-0	8.975-3	1.051-1	2.831-1	2.831-1	1.383-1	8.970-3		
3.500-1	3.041-3	5.579-2	1.216-1	2.373-4	1.057-0	7.605-3	1.110-1	3.332-1	3.332-1	1.764-1	1.096-2		
4.000-1	2.938-3	5.774-2	1.259-1	1.817-4	9.492-1	6.589-3	1.163-1	3.833-1	3.833-1	2.162-1	1.305-2		
4.500-1	2.838-3	5.977-2	1.303-1	1.435-4	8.631-1	5.806-3	1.216-1	4.335-1	4.335-1	2.575-1	1.527-2		
5.000-1	2.765-3	6.135-2	1.338-1	1.163-4	7.924-1	5.185-3	1.259-1	4.836-1	4.836-1	2.980-1	1.749-2		
5.500-1	2.716-3	6.245-2	1.362-1	9.606-5	7.130-1	4.680-3	1.288-1	5.335-1	5.335-1	3.431-1	1.984-2		
6.000-1	2.672-3	6.349-2	1.384-1	8.072-5	6.827-1	4.263-3	1.316-1	5.837-1	5.837-1	3.871-1	2.185-2		
6.500-1	2.630-3	6.449-2	1.406-1	6.878-5	6.391-1	3.912-3	1.342-1	6.337-1	6.337-1	4.318-1	2.409-2		
7.000-1	2.592-3	6.545-2	1.427-1	5.931-5	6.012-1	3.612-3	1.367-1	6.838-1	6.838-1	4.771-1	2.638-2		
8.000-1	2.522-3	6.726-2	1.466-1	4.541-5	5.384-1	3.130-3	1.412-1	7.839-1	7.839-1	5.689-1	3.108-2		
1.000-2	2.407-3	7.049-2	1.537-1	2.906-5	4.469-1	2.463-3	1.492-1	9.841-1	9.841-1	7.564-1	4.089-2		

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Form Factors

54-X₀

SIN(θ/2)/λ COHERENT	INCOHERENT	SIN(θ/2)/λ COHERENT	INCOHERENT	SIN(θ/2)/λ COHERENT	INCOHERENT	SIN(θ/2)/λ COHERENT	INCOHERENT
1/A		1/A		1/A		1/A	
0.000-0 1.000-0 0.000-0		1.250-1 8.941-1 9.708-2		1.000-0 3.214-1 5.831-1		1.000-1 1.000-2 9.930-1	
5.000-3 9.999-1 2.467-4		1.500-1 8.603-1 1.235-1		1.250-0 2.714-1 6.488-1		1.500-1 1.213-2 9.994-1	
1.000-2 9.991-1 9.630-4		1.750-1 8.269-1 1.468-1		1.500-0 2.284-1 6.088-1		2.000-1 6.982-3 9.987-1	
1.500-2 9.981-1 2.152-3		2.000-1 7.951-1 1.730-1		2.000-0 1.933-1 7.681-1		5.000-1 5.982-4 1.000-0	
2.000-2 9.966-1 5.000-3		2.500-1 7.573-1 2.180-1		2.500-0 1.126-1 8.189-1		8.000-1 1.262-4 1.000-0	
2.500-2 9.947-1 5.894-3		3.000-1 6.872-1 2.573-1		3.000-0 9.657-2 8.288-1		1.000-2 5.813-5 1.000-0	
3.000-2 9.924-1 8.408-3		4.000-1 6.026-1 3.205-1		3.500-0 8.052-2 8.675-1		1.000-3 4.711-6 1.000-0	
4.000-2 9.887-1 1.458-2		5.000-1 5.239-1 3.736-1		4.000-0 7.034-2 9.080-1		1.000-6 1.233-16 1.000-0	
5.000-2 9.795-1 2.211-2		6.000-1 4.678-1 4.228-1		5.000-0 4.998-2 9.364-1		1.000-9 3.954-25 1.000-0	
7.000-2 9.613-1 4.015-2		7.000-1 4.189-1 4.690-1		6.000-0 3.818-2 9.579-1			
9.000-2 9.390-1 6.095-2		8.000-1 3.772-1 5.115-1		7.000-0 2.808-2 9.688-1			
1.000-1 9.267-1 7.113-2		9.000-1 3.463-1 5.498-1		8.000-0 2.499-2 9.739-1

12/07/78

ENDL Evaluated Photon Cross Sections

55-Cs

12/01/18

Energy Deposition

55-Cs

12/U//JB

ENUL Evaluated Photon Data

55-Cs

ATOMIC WEIGHT 132.9							DENSITY 1.9 GRAMS/CC						
ENERGY	TOTAL NTP		CROSS SECTION (BARN)					NEV/COLLISION				NEV/CM	
KEV	CH	CH/CM/CH	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E.+FLOW	K.E.	BREMSSTR	K.E.		
1.000-4	2.957-5	2.098-4	4.942-8	2.011-3	2.317-2	4.940-8		9.998-5	9.998-5	3.434-10	3.908-0		
1.250-4	7.511-5	7.807-3	1.948-8	2.010-3	3.985-2	1.944-8		1.248-5	1.248-5	5.357-10	1.862-0		
1.500-4	1.809-4	2.809-3	6.420-3	2.008-3	5.121-2	8.400-3		1.495-4	1.495-4	7.886-10	8.295-1		
1.750-4	1.718-4	3.083-3	6.780-3	2.007-3	6.123-2	8.740-3		1.840-4	1.840-4	9.247-10	9.545-1		
1.978-4	5.088-5	5.809-3	1.788-8	2.007-3	8.288-2	1.780-8		1.898-4	1.898-4	9.431-10	1.889-0		
1.700-4	5.352-5	5.828-3	1.842-8	2.007-3	6.528-2	1.240-8		1.897-4	1.897-4	9.902-10	1.815-0		
1.790-4	9.188-5	5.729-3	1.284-8	2.007-3	6.908-2	1.282-8		1.7-4	1.747-4	1.049-9	1.902-0		
2.000-4	8.488-5	6.217-3	1.372-8	2.005-3	8.948-2	1.370-8		1.95-4	1.997-4	1.371-9	2.359-0		
2.301-4	7.891-5	6.870-3	1.472-8	2.003-3	1.186-1	1.470-8		2.298-4	2.298-4	1.815-9	2.912-0		
2.315-4	6.885-5	7.087-3	1.692-8	2.003-3	1.180-1	1.890-8		2.312-4	2.312-4	1.838-9	3.368-0		
2.500-4	6.986-5	7.993-3	1.877-8	2.001-3	1.384-1	1.675-8		2.497-4	2.497-4	2.143-9	3.605-0		
3.000-4	7.074-5	7.440-3	1.842-8	1.997-3	1.925-1	1.840-8		2.998-4	2.998-4	3.086-9	4.236-0		
3.500-4	7.913-5	6.851-3	1.488-8	1.991-3	2.940-1	1.488-8		3.495-4	3.495-4	4.199-9	4.417-0		
4.000-4	8.720-5	6.035-3	1.332-8	1.986-3	3.230-1	1.330-8		3.994-4	3.994-4	5.484-9	4.580-0		
4.500-4	9.978-5	5.273-3	1.184-8	1.979-3	3.945-1	1.182-8		4.492-4	4.492-4	6.937-9	4.902-0		
5.000-4	1.126-4	4.676-3	1.032-8	1.973-3	4.717-1	1.032-8		4.990-4	4.990-4	8.561-9	4.434-0		
5.500-4	1.288-4	4.088-3	9.021-3	1.965-3	5.491-1	1.002-8		5.488-4	5.488-4	1.035-8	4.262-0		
6.000-4	1.456-4	3.818-3	7.980-3	1.958-3	6.309-1	7.980-3		5.985-4	5.985-4	1.231-8	4.112-0		
6.500-4	1.650-4	3.190-3	7.040-3	1.948-3	7.095-1	7.021-3		6.482-4	6.482-4	1.444-8	3.929-0		
7.000-4	1.853-4	2.841-3	6.269-3	1.939-3	7.910-1	6.250-3		6.978-4	6.978-4	1.674-8	3.767-0		
7.304-4	1.989-4	2.846-3	5.839-3	1.934-3	8.419-1	5.820-3		7.280-4	7.280-4	1.822-8	3.660-0		
7.500-4	2.994-4	1.782-3	3.932-3	1.931-3	8.752-1	3.930-3		7.496-4	7.496-4	1.932-8	2.538-1		
8.000-4	4.030-4	1.306-3	2.882-3	1.923-3	9.621-1	2.880-3		7.995-4	7.995-4	2.197-8	1.984-1		
9.000-4	5.299-4	9.932-3	2.192-3	1.902-3	1.189-1	2.190-3		8.992-4	8.992-4	2.779-8	1.697-1		
1.000-3	5.370-5	9.800-3	2.183-6	1.884-3	1.300-1	2.181-6		9.991-4	9.991-4	3.431-8	1.860-1		
1.001-3	5.385-5	9.773-3	2.157-6	1.884-3	1.302-1	2.155-6		1.000-3	1.000-3	3.438-8	1.857-1		
1.002-3	4.224-5	1.246-4	2.750-6	1.883-3	1.304-1	2.748-6		1.001-3	1.001-3	3.446-8	2.371-1		
1.070-3	4.988-5	1.035-4	2.329-6	1.886-3	1.418-1	2.327-6		1.089-3	1.089-3	3.929-8	2.144-1		
1.071-3	4.584-5	1.153-4	2.945-6	1.885-3	1.419-1	2.943-6		1.070-3	1.070-3	3.937-8	2.345-1		
1.217-3	6.306-5	8.346-3	1.842-6	1.831-3	1.871-1	1.840-6		1.218-3	1.218-3	5.081-8	1.928-1		
1.218-3	6.019-5	8.744-3	1.930-6	1.831-3	1.873-1	1.928-6		1.217-3	1.217-3	5.090-8	2.022-1		
1.250-3	6.427-5	8.189-3	1.807-6	1.824-3	1.729-1	1.805-6		1.249-3	1.249-3	5.380-8	1.943-1		
1.500-3	1.019-4	5.185-3	1.140-6	1.777-3	2.182-1	1.138-6		1.498-3	1.498-3	7.710-8	1.470-1		
1.750-3	1.504-4	3.498-3	7.721-5	1.717-3	2.632-1	7.703-5		1.745-3	1.745-3	1.048-7	1.161-1		
2.000-3	2.108-4	2.497-3	5.511-5	1.688-3	3.097-1	5.494-5		1.994-3	1.994-3	1.387-7	9.480-0		
2.500-3	3.701-4	1.422-3	3.138-5	1.542-3	3.978-1	3.123-5		2.486-3	2.486-3	2.127-7	6.721-0		
3.000-3	5.059-4	8.983-3	1.983-5	1.448-3	4.881-1	1.980-5		2.978-3	2.978-3	3.048-7	5.083-0		
3.500-3	8.631-4	6.098-3	1.346-5	1.344-3	5.899-1	1.332-5		3.465-3	3.465-3	4.126-7	4.015-0		
4.000-3	1.206-3	4.363-2	9.630-4	1.259-3	6.318-1	9.503-4		3.947-3	3.947-3	5.356-7	3.273-0		
4.500-3	1.620-3	3.249-2	7.171-4	1.178-3	7.235-1	7.053-4		4.426-3	4.426-3	6.732-7	2.732-0		
5.000-3	2.107-3	2.498-2	5.513-4	1.105-3	7.942-1	5.402-4		4.899-3	4.899-3	8.249-7	2.325-0		
5.011-3	2.118-3	2.485-2	5.483-4	1.104-3	7.956-1	5.372-4		4.909-3	4.909-3	8.294-7	2.318-0		
5.012-3	7.542-4	6.979-2	1.540-5	1.103-3	7.957-1	1.529-5		4.978-3	4.978-3	7.179-7	6.060-0		
5.398-3	8.986-4	5.857-2	1.293-5	1.025-3	8.389-1	1.282-5		5.314-3	5.309-3	8.282-7	5.463-0		
5.399-3	6.390-4	6.236-2	1.816-5	1.025-3	8.390-1	1.807-5		5.328-3	4.922-3	8.325-7	7.702-0		
5.500-3	6.844-4	7.891-2	1.697-5	1.036-3	8.585-1	1.687-5		5.465-3	5.050-3	8.800-7	7.394-0		
5.712-3	7.581-4	6.581-2	1.536-5	1.010-3	8.825-1	1.526-5		5.874-3	5.268-3	9.539-7	6.980-0		
5.713-3	5.528-4	8.052-2	1.779-5	1.010-3	8.826-1	1.769-5		5.680-3	5.274-3	9.560-7	8.079-0		
6.000-3	7.432-4	7.082-2	1.583-5	9.769-2	9.175-1	1.553-5		5.962-3	5.556-3	1.061-6	7.478-0		
6.500-3	9.198-4	5.723-2	1.263-5	9.161-2	9.718-1	1.294-5		6.452-3	6.047-3	1.257-6	6.576-0		
7.000-3	1.120-3	4.700-2	1.037-5	8.632-2	1.025-1	1.029-5		6.941-3	6.536-3	1.488-6	5.837-0		
8.000-3	1.596-3	3.297-2	7.277-4	7.755-2	1.128-1	7.198-4		7.914-3	7.509-3	1.938-6	4.704-0		
1.000-2	2.901-3	1.814-2	6.003-4	6.294-2	1.309-1	3.939-4		9.840-3	9.438-3	3.061-6	3.253-0		
1.250-2	5.303-3	9.982-1	2.191-4	4.987-2	1.493-1	2.139-4		1.221-2	1.181-2	4.791-6	2.227-0		
1.500-2	8.698-3	6.080-1	1.342-4	4.124-2	1.882-1	1.299-4		1.452-2	1.413-2	6.696-6	1.632-0		
1.750-2	1.315-2	4.003-1	8.834-3	3.441-2	1.784-1	8.472-3		1.678-2	1.639-2	9.42-6	1.247-0		
2.000-2	1.885-2	2.783-1	6.183-3	2.941-2	1.697-1	5.850-3		1.899-2	1.860-2	1.148-5	9.863-1		
2.500-2	3.498-2	1.523-1	3.381-3	2.195-2	2.045-1	3.125-3		2.325-2	2.287-2	1.797-5	6.818-1		
3.000-2	5.638-2	9.338-0	2.881-3	1.871-2	2.175-1	1.872-3		2.727-2	2.690-2	2.485-5	4.772-1		
3.500-2	8.582-2	8.178-0	1.383-3	1.329-2	2.253-1	1.208-3		3.105-2	3.089-2	3.374-5	3.601-1		
3.998-2	9.174-2	5.737-0	1.288-3	1.275-2	2.267-1	1.118-3		3.178-2	3.140-2	3.388-5	3.423-1		
3.999-2	1.711-2	3.078-1	5.788-3	1.275-2	2.267-1	6.636-3		3.520-2	1.187-2	4.812-6	6.918-1		
4.000-2	2.232-2	2.390-1	5.205-3	1.088-2	2.326-1	5.073-3		3.900-2	1.57-2	8.482-6	7.041-1		

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ENDL Evaluated Photon Data

55-Cs

ATOMIC WEIGHT 132.9		DENSITY 1.9 GRAMS/CC									
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARNs)						NEV/COLLISION		
	CH	CH+CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	K.E. +FLOR	K.E.	SPINSTR	MEV/CH
4.500-2	3.025-2	1.748-1	3.040-2	9.070-3	2.384-1	3.728-2		4.388-2	2.050-2	1.444-5	8.778-1
5.000-2	3.987-2	1.327-1	2.989-2	7.700-3	2.401-1	2.947-2		4.831-2	2.524-2	2.188-5	6.383-1
5.500-2	5.104-2	1.031-1	2.278-2	6.803-3	2.422-1	2.188-2		5.287-2	2.993-2	3.078-5	5.284-1
6.000-2	6.418-2	8.200-0	1.810-3	5.739-1	2.440-1	1.728-2		5.737-2	3.458-2	4.101-5	5.385-1
6.500-2	7.888-2	6.811-0	1.459-3	5.008-1	2.443-1	1.384-2		6.180-2	3.913-2	5.255-5	4.914-1
7.000-2	9.711-2	5.428-0	1.188-3	4.415-1	2.445-1	1.128-2		6.615-2	4.363-2	6.533-5	4.493-1
8.000-2	1.385-1	3.800-0	6.387-2	3.518-1	2.450-1	7.790-2		7.480-2	5.241-2	9.425-5	3.784-1
1.000-1	2.510-1	2.097-0	4.628-2	2.379-1	2.414-1	4.149-2		9.041-2	6.899-2	1.632-4	2.749-1
1.250-1	4.486-1	1.173-0	2.589-2	1.595-1	2.375-1	2.198-2		1.079-1	8.767-2	2.834-4	1.954-1
1.500-1	7.047-1	7.488-1	1.848-2	1.150-1	2.273-1	1.308-2		1.228-1	1.038-1	3.893-4	1.474-1
1.750-1	1.010-0	5.210-1	1.150-2	8.677-0	2.194-1	8.435-1		1.353-1	1.178-1	4.750-4	1.188-1
2.000-1	1.353-0	3.880-1	8.589-1	5.726-0	2.129-1	5.776-1		1.457-1	1.295-1	5.747-4	9.577-2
2.500-1	2.098-0	2.515-1	5.951-1	4.481-0	1.594-1	3.112-1		1.627-1	1.483-1	7.620-4	7.134-2
3.000-1	2.845-0	1.850-1	4.083-1	3.182-0	1.890-1	1.877-1		1.782-1	1.852-1	9.330-4	5.807-2
3.500-1	3.551-0	1.482-1	3.271-1	2.351-0	1.791-1	1.245-1		1.895-1	1.808-1	1.117-3	5.092-2
4.000-1	4.203-0	1.252-1	2.784-1	1.819-0	1.710-1	8.724-0		2.041-1	1.986-1	1.319-3	4.677-2
4.500-1	4.791-0	1.099-1	2.425-1	1.447-0	1.834-1	6.480-0		2.202-1	2.138-1	1.580-3	4.463-2
5.000-1	5.328-0	9.882-2	2.181-1	1.179-0	1.589-1	4.938-0		2.375-1	2.321-1	1.837-3	4.358-2
5.500-1	5.813-0	9.054-2	1.998-1	9.791-1	1.509-1	3.913-0		2.567-1	2.520-1	2.164-3	4.335-2
6.000-1	6.281-0	8.406-2	1.895-1	8.261-1	1.498-1	3.164-0		2.771-1	2.730-1	2.538-3	4.361-2
6.500-1	6.678-0	7.889-2	1.740-1	7.059-1	1.408-1	2.633-0		2.990-1	2.953-1	2.968-3	4.424-2
7.000-1	7.084-0	7.451-2	1.644-1	6.102-1	1.381-1	2.221-0		3.218-1	3.180-1	3.451-3	4.510-2
8.000-1	7.772-0	6.772-2	1.424-1	4.693-1	1.289-1	1.638-0		3.703-1	3.677-1	4.589-3	4.730-2
1.000-0	9.012-0	5.840-2	1.289-1	3.019-1	1.157-1	1.021-0		4.760-1	4.741-1	7.603-3	5.261-2
1.022-0	9.135-0	5.782-2	1.272-1	2.892-1	1.145-1	9.809-1	1.000-6	4.883-1	4.865-1	8.002-3	5.326-2
1.250-0	1.034-1	5.088-2	1.123-1	1.940-1	1.038-1	6.788-1	2.681-3	6.197-1	6.183-1	1.287-2	5.978-2
1.500-0	1.135-1	4.638-2	1.023-1	1.350-1	9.421-0	4.837-1	1.923-1	7.650-1	7.639-1	1.954-2	6.729-2
1.750-0	1.218-1	4.328-2	9.552-0	9.930-2	8.889-0	3.607-1	4.230-1	9.170-1	9.161-1	2.797-2	7.534-2
2.000-0	1.282-1	4.107-2	9.063-0	7.610-2	8.047-0	2.847-1	6.554-1	1.078-0	1.077-0	3.847-2	8.405-2
2.044-0	1.293-1	4.071-2	8.985-0	7.288-2	7.948-0	2.750-1	8.889-1	1.107-0	1.107-0	4.055-2	8.558-2
2.500-0	1.372-1	3.835-2	8.484-0	4.878-2	7.071-0	2.011-1	1.143-0	1.424-0	1.423-0	6.840-2	1.037-1
3.000-0	1.419-1	3.709-2	8.185-0	3.388-2	6.338-0	1.535-1	1.682-0	1.800-0	1.800-0	1.048-1	1.268-1
3.500-0	1.448-1	3.635-2	8.022-0	2.489-2	5.758-0	1.239-1	2.117-0	2.200-0	2.199-0	1.548-1	1.519-1
4.000-0	1.459-1	3.608-2	7.983-0	1.908-2	5.287-0	1.029-1	2.554-0	2.620-0	2.620-0	2.184-1	1.798-1
4.500-0	1.457-1	3.613-2	7.973-0	1.507-2	4.898-0	8.703-2	2.974-0	3.058-0	3.058-0	2.905-1	2.098-1
5.000-0	1.453-1	3.622-2	7.953-0	1.221-2	4.588-0	7.548-2	3.339-0	3.504-0	3.504-0	3.786-1	2.411-1
5.500-0	1.446-1	3.616-2	7.978-0	1.009-2	4.283-0	6.596-2	3.619-0	3.957-0	3.957-0	4.758-1	2.718-1
6.000-0	1.432-1	3.625-2	8.001-0	8.478-3	4.037-0	6.002-2	3.898-0	4.419-0	4.419-0	5.827-1	3.044-1
6.500-0	1.443-1	3.648-2	8.050-0	7.223-3	3.820-0	5.427-2	4.169-0	4.888-0	4.888-0	7.032-1	3.388-1
7.000-0	1.430-1	3.680-2	8.122-0	6.229-3	3.629-0	4.945-2	4.439-0	5.383-0	5.383-0	8.349-1	3.750-1
8.000-0	1.395-1	3.770-2	8.320-0	4.789-3	3.302-0	4.180-2	4.971-0	6.329-0	6.329-0	1.131-0	4.533-1
1.000-1	1.312-1	4.013-2	8.856-0	3.052-3	2.813-0	3.159-2	6.008-0	8.299-0	8.298-0	1.842-0	6.327-1
1.250-1	1.253-1	4.202-2	9.273-0	1.954-3	2.387-0	2.495-2	6.859-0	1.077-1	1.077-1	2.911-0	8.599-1
1.500-1	1.192-1	4.417-2	9.748-0	1.357-3	2.082-0	2.043-2	7.644-0	1.327-1	1.327-1	4.156-0	1.113-0
1.750-1	1.129-1	4.680-2	1.028-1	9.969-4	1.852-0	1.731-2	8.414-0	1.578-1	1.578-1	5.548-0	1.397-0
2.000-1	1.080-1	4.874-2	1.078-1	7.632-4	1.671-0	1.500-2	9.070-0	1.829-1	1.829-1	7.059-0	1.694-0
2.500-1	1.010-1	5.209-2	1.150-1	4.884-4	1.405-0	1.180-2	1.008-2	2.330-1	2.330-1	1.036-1	2.307-0
3.000-1	9.598-0	5.483-2	1.210-1	3.392-4	1.217-0	9.703-3	1.067-1	2.832-1	2.832-1	1.397-1	2.950-0
3.500-1	9.248-0	5.693-2	1.266-1	2.492-4	1.078-0	8.222-3	1.148-1	3.333-1	3.333-1	1.780-1	3.605-0
4.000-1	8.933-0	5.928-2	1.300-1	1.968-4	9.888-1	7.123-3	1.203-1	3.834-1	3.834-1	2.180-1	4.298-0
4.500-1	8.628-0	6.100-2	1.346-1	1.508-4	8.791-1	6.277-3	1.258-1	4.335-1	4.335-1	2.594-1	5.025-0
5.000-1	8.404-0	6.263-2	1.382-1	1.221-4	8.070-1	5.605-3	1.301-1	4.836-1	4.836-1	3.020-1	5.755-0
5.500-1	8.258-0	6.375-2	1.407-1	1.009-4	7.406-1	5.080-3	1.332-1	5.337-1	5.337-1	3.454-1	6.405-0
6.000-1	8.119-0	6.488-2	1.431-1	8.479-5	6.934-1	4.608-3	1.361-1	5.838-1	5.838-1	3.896-1	7.180-0
6.500-1	7.993-0	6.595-2	1.453-1	7.225-5	6.509-1	4.229-3	1.388-1	6.338-1	6.338-1	4.344-1	7.929-0
7.000-1	7.876-0	6.681-2	1.475-1	6.229-5	6.123-1	3.805-3	1.413-1	6.839-1	6.839-1	4.798-1	8.683-0
8.000-1	7.684-0	6.857-2	1.518-1	4.789-5	5.484-1	3.383-3	1.480-1	7.840-1	7.840-1	5.718-1	1.023-1
1.000-2	7.311-0	7.199-2	1.588-1	3.052-5	4.952-1	2.822-3	1.543-1	9.842-1	9.842-1	7.986-1	1.348-1

12/07/78

Form Factors

55-C₃

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	0.000-1	1.031-1	1.000+0	3.200-1	5.803-1	1.000+1	1.000-2	9.833-1
0.000-3	0.999-3	4.000-4	1.500-1	0.577-1	1.277-1	1.250+0	2.717-1	6.400-1	1.500+1	1.233-2	9.931-1
1.000-2	0.999-2	1.000-3	1.750-1	0.201-1	1.516-1	1.500+0	2.200-1	6.951-1	2.000+1	7.100-3	9.999-1
1.000-2	0.971-1	4.100-3	2.000-1	7.953-2	1.740-1	2.000+0	1.500-1	7.000-1	5.000+1	5.911-4	1.000+0
2.000-2	0.949-1	7.207-3	2.500-1	7.371-2	2.100-1	2.500+0	1.137-1	8.100-1	0.000+1	1.311-4	1.000+0
2.500-2	0.922-1	1.000-2	3.000-1	6.099-2	2.500-1	3.000+0	9.707-2	8.940-1	1.000+2	6.240-5	1.000+0
3.000-2	0.890-1	1.401-2	4.000-1	0.010-1	3.200-1	3.500+0	8.049-2	8.832-1	1.000+3	5.100-6	1.000+0
4.000-2	0.813-1	2.395-2	5.000-1	5.312-2	3.740-1	4.000+0	7.059-2	9.050-1	1.000+6	1.400-10	1.000+0
5.000-2	0.760-1	3.800-2	6.000-1	4.700-2	4.200-1	5.000+0	5.077-2	9.300-1	1.000+9	4.772-25	1.000+0
7.000-2	0.520-1	5.057-2	7.000-1	4.100-2	4.671-1	6.000+0	3.800-2	9.950-1			
9.000-2	0.299-1	8.000-2	8.000-1	3.703-2	5.007-1	7.000+0	2.841-2	9.999-1			
1.000-1	0.100-1	7.000-2	9.000-1	3.400-2	5.400-1	8.000+0	2.521-2	9.733-1

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ENDL Evaluated Photon Cross Sections

56-Ba

12/07/78

Energy Deposition

56-2a

12/07/78

ENDL Evaluated Photon Data

56-Ba

ATOMIC WEIGHT 137.34		DENSITY 3.5 GRAMS/CC					
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARNs)				MEV/COLLISION
	CM	CH/CM/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR K.E. BREMSSTR K.E.
1.000-4	1.845-5	1.949-4	3.532-6	2.085-3	2.897-2	3.530-6	9.994-5 9.994-5 3.498-10 5.417-0
1.250-4	4.432-5	6.447-3	1.470-6	2.083-3	4.186-2	1.468-6	1.248-4 1.248-4 5.453-10 2.817-0
1.500-4	9.081-5	3.153-3	7.191-5	2.082-3	8.022-2	7.170-5	1.495-4 1.495-4 7.869-10 1.651-0
1.700-4	8.607-5	3.320-3	7.571-5	2.080-3	7.685-2	7.950-5	1.695-4 1.695-4 1.008-9 1.970-0
1.750-4	8.324-5	3.432-3	7.828-5	2.080-3	8.131-2	7.907-5	1.745-4 1.745-4 1.008-9 2.097-0
1.830-4	7.907-5	3.613-3	8.241-5	2.079-3	8.871-2	8.220-5	1.825-4 1.825-4 1.188-9 2.309-0
1.844-4	4.892-5	5.641-3	1.332-6	2.079-3	9.004-2	1.330-6	1.941-4 1.941-4 1.188-9 3.784-0
2.000-4	4.814-5	6.195-3	1.412-6	2.078-3	1.055-1	1.410-6	1.997-4 1.997-4 1.398-9 4.328-0
2.500-4	4.240-5	6.738-3	1.537-6	2.073-3	1.815-1	1.535-6	2.497-4 2.497-4 2.182-9 5.688-0
2.523-4	4.225-5	6.762-3	1.542-6	2.073-3	1.843-1	1.540-6	2.520-4 2.520-4 2.222-9 5.953-0
2.537-4	3.636-5	7.814-3	1.782-6	2.073-3	1.880-1	1.780-6	2.534-4 2.534-4 2.247-9 6.930-0
3.000-4	3.828-5	7.483-3	1.702-6	2.069-3	2.288-1	1.700-6	2.996-4 2.996-4 3.142-9 7.827-0
3.500-4	4.284-5	6.701-3	1.528-6	2.062-3	3.030-1	1.526-6	3.495-4 3.495-4 4.278-9 8.198-0
4.000-4	4.881-5	6.104-3	1.392-6	2.056-3	3.888-1	1.390-6	3.994-4 3.994-4 5.583-9 8.533-0
4.500-4	5.321-5	5.370-3	1.225-6	2.048-3	4.744-1	1.223-6	4.492-4 4.492-4 7.084-9 8.844-0
5.000-4	5.967-5	4.788-3	1.098-6	2.041-3	5.895-1	1.090-6	4.991-4 4.991-4 8.717-9 9.384-0
5.500-4	6.798-5	4.203-3	9.988-5	2.032-3	6.851-1	9.985-5	5.488-4 5.488-4 1.054-8 9.074-0
6.000-4	7.857-5	3.732-3	8.510-5	2.024-3	7.883-1	8.490-5	5.985-4 5.985-4 1.294-8 7.818-0
6.500-4	8.858-5	3.301-3	7.528-5	2.012-3	8.624-1	7.508-5	6.483-4 6.483-4 1.471-8 7.469-0
7.000-4	9.895-5	2.947-3	6.720-5	2.002-3	9.622-1	6.700-5	6.979-4 6.979-4 1.705-8 7.198-0
7.500-4	1.084-4	2.835-3	6.010-5	1.992-3	1.065-0	5.990-5	7.475-4 7.475-4 1.958-8 6.895-0
7.882-4	1.174-4	2.434-3	5.550-5	1.988-3	1.142-0	5.530-5	7.834-4 7.834-4 2.148-8 6.672-0
7.878-4	7.358-5	3.887-3	8.820-5	1.985-3	1.145-0	8.800-5	7.828-4 7.828-4 2.181-8 1.054-1
8.000-4	2.830-5	1.811-3	2.883-6	1.983-3	1.172-0	2.860-6	7.995-4 7.995-4 2.237-8 3.582-0
9.000-4	2.788-5	1.027-4	2.742-6	1.980-3	1.388-0	2.740-6	8.992-4 8.992-4 2.830-8 1.232-1
1.000-3	3.011-5	8.490-3	2.181-6	1.978-3	1.987-0	2.182-6	9.991-4 9.991-4 3.494-8 3.319-1
1.080-3	3.145-5	9.085-3	2.072-6	1.921-3	1.678-0	2.070-6	1.058-3 1.058-3 3.825-8 3.367-1
1.081-3	2.451-5	1.188-4	2.859-6	1.921-3	1.678-0	2.857-6	1.080-3 1.080-3 3.934-8 4.328-1
1.130-3	2.879-5	8.923-3	2.863-6	1.903-3	1.804-0	2.861-6	1.129-3 1.129-3 4.461-8 3.921-1
1.131-3	2.881-5	1.074-4	2.448-6	1.902-3	1.808-0	2.447-6	1.130-3 1.130-3 4.470-8 4.247-1
1.250-3	3.437-5	6.312-3	1.896-6	1.873-3	2.028-0	1.894-6	1.249-3 1.249-3 5.498-8 3.833-1
1.282-3	3.741-5	7.838-3	1.742-6	1.884-3	2.104-0	1.740-6	1.281-3 1.281-3 5.830-8 3.450-1
1.283-3	3.538-5	8.081-3	1.843-6	1.883-3	2.108-0	1.841-6	1.282-3 1.282-3 5.833-8 3.853-1
1.500-3	5.172-5	5.524-3	1.280-6	1.821-3	2.488-0	1.258-6	1.488-3 1.488-3 7.852-8 2.888-1
1.750-3	7.874-5	3.723-3	8.481-5	1.758-3	2.848-0	8.473-5	1.748-3 1.748-3 1.087-7 2.278-1
2.000-3	1.080-4	2.848-3	6.034-5	1.708-3	3.405-0	6.017-5	1.894-3 1.894-3 1.398-7 1.847-1
2.500-3	1.910-4	1.490-3	3.418-5	1.583-3	4.278-0	3.398-5	2.488-3 2.488-3 2.187-7 1.303-1
3.000-3	3.041-4	9.388-3	2.143-5	1.489-3	5.151-0	2.128-5	2.979-3 2.979-3 3.106-7 9.788-0
3.500-3	4.502-4	6.348-3	1.447-5	1.383-3	5.882-0	1.433-5	3.488-3 3.488-3 4.205-7 7.700-0
4.000-3	6.320-4	4.521-3	1.031-5	1.298-3	6.787-0	1.018-5	3.948-3 3.948-3 5.498-7 8.249-0
4.500-3	8.519-4	3.324-3	7.849-4	1.211-3	7.480-0	7.527-4	4.428-3 4.428-3 6.862-7 5.188-0
5.000-3	1.112-3	2.585-2	5.880-4	1.139-3	8.201-0	5.745-4	4.902-3 4.902-3 8.409-7 4.408-0
5.248-3	1.255-3	2.278-2	5.191-4	1.103-3	8.512-0	5.080-4	5.134-3 5.134-3 9.222-7 4.090-0
5.247-3	4.484-4	2.372-2	1.453-5	1.103-3	8.514-0	1.442-5	5.207-3 4.755-3 7.914-7 1.061-1
5.500-3	5.074-4	5.630-2	1.284-5	1.089-3	8.830-0	1.273-5	5.424-3 5.003-3 8.798-7 9.899-0
5.823-3	5.378-4	5.313-2	1.212-5	1.053-3	8.983-0	1.201-5	5.574-3 5.123-3 9.184-7 9.528-0
5.824-3	3.825-4	7.470-2	1.704-5	1.053-3	8.984-0	1.883-5	5.589-3 5.137-3 9.234-7 1.343-1
5.988-3	4.509-4	6.337-2	1.445-5	1.008-3	9.429-0	1.435-5	5.944-3 5.482-3 1.058-6 1.218-1
5.987-3	3.882-4	7.341-2	1.674-5	1.009-3	9.430-0	1.884-5	5.951-3 5.488-3 1.058-6 1.413-1
6.000-3	3.915-4	7.297-2	1.684-5	1.008-3	9.446-0	1.829-5	5.983-3 5.511-3 1.063-6 1.408-1
6.500-3	4.841-4	5.880-2	1.245-5	9.480-2	1.337-0		6.424-3 6.002-3 1.281-6 1.240-1
7.000-3	5.880-4	4.851-2	1.188-5	8.921-2	1.052-1	1.887-5	6.943-3 6.482-3 1.475-6 1.162-1
8.000-3	8.388-4	3.467-2	7.770-4	8.858-2	1.195-1	7.889-4	7.818-3 7.488-3 1.958-6 8.824-0
1.000-2	1.513-3	1.888-2	4.288-4	6.528-2	1.335-1	4.282-4	9.845-3 9.397-3 3.058-6 6.185-0
1.250-2	2.785-3	1.633-2	2.357-4	5.170-2	1.519-1	2.383-4	1.222-2 1.177-2 4.849-6 4.298-0
1.500-2	4.488-3	8.351-1	1.448-4	4.274-2	1.889-1	1.448-4	1.494-2 1.410-2 6.993-6 3.134-0
1.750-2	6.888-3	3.578-1	9.578-3	3.578-2	1.813-1	9.184-3	1.882-2 1.638-2 9.383-6 2.485-0
2.000-2	9.738-3	2.838-1	6.82-3	3.695-2	1.927-1	6.378-3	1.903-2 1.880-2 1.210-5 1.912-8
2.500-2	1.774-2	1.811-1	3.873-3	2.243-2	2.878-1	3.428-3	2.334-2 2.291-2 1.836-5 1.828-8
3.000-2	2.288-2	8.980-0	2.288-3	1.743-2	2.249-1	2.888-3	2.741-2 2.780-2 2.949-5 9.374-1
3.500-2	4.337-2	8.980-0	1.982-3	1.388-2	2.888-1	1.341-3	3.127-2 3.087-2 3.331-5 7.117-1
3.744-2	3.177-2	5.510-0	2.228-3	1.233-2	2.323-1	1.118-3	3.387-2 3.287-2 2.731-5 6.318-1
3.744-2	2.684-2	2.688-1	8.988-3	1.233-2	2.323-1	6.437-3	3.681-2 1.227-2 5.284-6 1.248-8

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56-Ba

12/07/78

ENDL Evaluated Photon Data

56-Ba

ATOMIC WEIGHT 137.34		DENSITY 3.5 GRAMS/CC					
ENERGY	TOTAL HP	CROSS SECTION (BARNS)					
HEV	CH	CH/CM/CM	TOTAL	COHERENT	INCOHER	PHOTOL PAIR PROD	HEV/COLLISION
HEV	CH	CH/CM/CM	TOTAL	COHERENT	INCOHER	PHOTOL PAIR PROD	HEV/COLLISION
4.000-2	1.165-2	2.453-1	5.593-3	1.136-2	2.358-1	5.458-3	3.303-2
4.500-2	1.578-2	1.818-1	4.148-3	9.481-1	2.401-1	4.087-3	4.373-2
5.000-2	2.053-2	1.388-1	3.174-3	8.238-1	2.438-1	3.089-3	4.838-2
5.500-2	2.638-2	1.089-1	2.472-3	6.881-1	2.480-1	2.378-3	5.287-2
6.000-2	3.308-2	8.637-0	1.970-3	5.586-1	2.478-1	1.885-3	5.750-2
6.500-2	4.101-2	6.368-0	1.589-3	5.231-1	2.482-1	1.512-3	6.199-2
7.000-2	5.000-2	5.714-0	1.303-3	4.613-1	2.484-1	1.232-3	6.634-2
8.000-2	7.128-2	4.009-0	9.142-2	3.678-1	2.488-1	8.525-2	7.488-2
1.000-1	1.295-1	2.207-0	5.033-2	2.488-1	2.494-1	4.538-2	9.090-2
1.250-1	2.327-1	1.228-0	2.801-2	1.888-1	2.375-1	2.398-2	1.087-1
1.500-1	3.674-1	7.777-1	1.773-2	1.203-1	2.311-1	1.422-2	1.240-1
1.750-1	5.297-1	5.383-1	1.230-2	8.080-0	2.232-1	9.180-1	1.389-1
2.000-1	7.133-1	4.006-1	8.135-1	7.119-0	2.185-1	6.658-1	1.476-1
2.500-1	1.113-0	2.287-1	5.899-1	4.572-0	2.088-1	3.339-1	1.928-1
3.000-1	1.524-0	1.874-1	4.274-1	3.313-0	1.983-1	2.020-1	1.780-1
3.500-1	1.812-0	1.484-1	3.407-1	2.484-0	1.883-1	1.338-1	1.682-1
4.000-1	2.272-0	1.257-1	2.898-1	1.908-0	1.740-1	9.371-0	2.071-1
4.500-1	2.597-0	1.100-1	2.509-1	1.517-0	1.683-1	8.941-0	2.231-1
5.000-1	2.884-0	9.872-2	2.251-1	1.238-0	1.587-1	5.308-0	2.404-1
5.500-1	3.184-0	9.031-2	2.080-1	1.026-0	1.538-1	4.208-0	2.598-1
6.000-1	3.412-0	8.373-2	1.910-1	8.861-1	1.482-1	3.407-0	2.789-1
6.500-1	3.641-0	7.847-2	1.788-1	7.401-1	1.431-1	2.841-0	3.018-1
7.000-1	3.898-0	7.410-2	1.658-1	6.388-1	1.388-1	2.402-0	3.248-1
8.000-1	4.848-0	6.783-2	1.334-1	4.882-1	1.307-1	1.774-0	3.730-1
1.000-0	4.838-0	5.793-2	1.321-1	3.187-1	1.177-1	1.118-0	4.788-1
1.082-0	5.081-0	5.714-2	1.303-1	3.033-1	1.105-1	1.078-0	4.881-1
1.250-0	5.670-0	5.438-2	1.148-1	2.432-1	1.054-1	7.918-1	5.283-1
1.500-0	6.226-0	4.988-2	1.047-1	1.418-1	9.382-0	8.015-1	5.782-1
1.750-0	6.671-0	4.683-2	8.787-0	1.048-1	8.886-0	3.951-1	6.188-1
2.000-0	7.030-0	4.484-2	8.288-0	7.984-2	8.193-0	3.837-1	6.588-1
2.044-0	7.098-0	4.428-2	8.188-0	7.848-2	8.098-0	3.011-1	6.784-1
2.500-0	7.544-0	3.797-2	6.880-0	5.118-2	7.800-0	2.800-1	7.188-1
3.000-0	7.774-0	3.378-2	6.381-0	3.999-2	6.451-1	1.879-1	7.587-1
3.500-0	7.987-0	3.084-2	6.220-0	3.818-2	5.881-1	2.188-1	7.988-1
4.000-0	7.981-0	2.888-2	6.184-0	3.000-2	5.383-1	1.123-1	8.389-1
4.368-0	7.988-0	2.587-2	6.188-0	1.981-2	4.988-1	8.518-1	8.788-1
5.000-0	7.918-0	2.388-2	6.093-0	1.881-2	4.848-1	3.488-1	9.188-1
5.500-0	7.988-0	2.303-2	6.184-0	1.028-2	4.381-1	7.313-1	9.588-1
6.000-0	7.988-0	2.084-2	6.218-0	8.683-3	4.118-1	8.225-1	9.988-1
6.500-0	7.977-0	2.027-2	6.272-0	7.578-3	3.888-1	5.388-1	1.038-1
7.000-0	7.983-0	2.051-2	6.348-0	6.538-3	3.588-1	4.988-1	1.078-1
8.000-0	7.918-0	2.388-2	6.098-0	5.884-3	3.288-1	5.143-1	1.118-1
1.00-1	7.198-0	3.388-2	5.114-0	3.288-3	2.884-1	6.812-1	1.158-1
1.25-1	6.823-0	4.188-2	5.930-0	2.098-3	2.430-1	2.711-1	1.198-1
1.388-1	6.487-0	4.404-2	1.424-3	2.128-3	2.228-1	7.981-1	1.238-1
1.750-1	6.148-0	4.848-2	1.888-3	1.848-3	1.888-1	8.888-1	1.278-1
2.000-1	5.875-0	4.883-2	1.188-3	8.888-4	1.788-1	8.373-1	1.318-1
2.388-1	5.488-0	5.281-2	1.188-3	5.125-4	1.388-1	1.042-1	1.358-1
3.000-1	5.217-0	5.478-2	1.288-3	3.588-4	1.028-1	1.184-1	1.398-1
3.388-1	5.028-0	5.888-2	1.027-3	2.813-4	1.088-1	9.871-1	1.438-1
4.000-1	4.888-0	5.888-2	1.348-3	2.888-4	9.884-1	7.738-1	1.478-1
4.388-1	4.888-0	5.888-2	1.388-3	1.388-4	9.881-1	1.388-1	1.518-1
5.000-1	4.888-0	6.288-2	1.427-3	1.281-4	9.817-1	1.113-1	1.558-1
5.388-1	4.488-0	6.371-2	1.453-3	1.078-4	9.888-1	1.378-1	1.598-1
6.000-1	4.418-0	6.478-2	1.477-3	8.888-5	9.888-1	1.488-1	1.638-1
6.388-1	4.348-0	6.581-2	1.581-3	7.588-5	9.827-1	1.613-1	1.678-1
7.000-1	4.278-0	6.678-2	1.523-3	6.538-5	9.874-1	1.488-1	1.718-1
8.000-1	4.188-0	6.888-2	1.588-3	5.888-5	9.881-1	1.388-1	1.758-1
1.000-0	3.978-0	7.188-2	1.847-3	3.283-5	9.874-1	1.388-1	1.798-1

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	0.014-1	1.103-1	1.000+0	3.208-1	5.774-1	1.000+1	1.077-2	9.828-1
5.000-3	9.995-1	5.538-4	1.500-1	0.521-1	1.334-1	1.250+0	2.716-1	6.448-1	1.500+1	1.251-2	9.949-1
1.000-2	9.984-1	2.214-3	1.750-1	0.226-1	1.561-1	1.500+0	2.302-1	6.095-1	2.000+1	7.381-3	9.995-1
1.500-2	9.986-1	4.862-3	2.000-1	7.938-1	1.781-1	2.000+0	1.590-1	7.640-1	3.000+1	6.253-4	1.000+0
2.000-2	9.944-1	8.405-3	2.500-1	7.371-1	2.204-1	2.500+0	1.149-1	8.144-1	4.000+1	1.400-4	1.000+0
2.500-2	9.914-1	1.268-2	3.000-1	6.058-1	2.597-1	3.000+0	9.785-2	8.519-1	5.000+1	6.904-5	1.000+0
3.000-2	9.879-1	1.751-2	4.000-1	6.008-1	3.250-1	3.500+0	8.042-2	8.810-1	6.000+1	5.728-6	1.000+0
4.000-2	9.783-1	2.817-2	5.000-1	5.317-1	3.784-1	4.000+0	7.072-2	9.038-1	7.000+1	1.728-6	1.000+0
5.000-2	9.685-1	3.921-2	6.000-1	4.760-1	4.264-1	5.000+0	5.153-2	9.334-1	8.000+1	5.785-6	1.000+0
6.000-2	9.487-1	5.984-2	7.000-1	4.212-1	4.698-1	6.000+0	3.748-2	9.540-1	9.000+1		
8.000-2	9.228-1	7.853-2	8.000-1	3.798-1	5.004-1	7.000+0	2.876-2	9.653-1			
1.000-1	9.107-1	8.794-2	9.000-1	3.489-1	5.438-1	8.000+0	2.543-2	9.728-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

57-La

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 138.91		DENSITY 8.188 GRAMS/CC									
ENERGY	TOTAL MP	CROSS SECTION (BARNS)									
MEV	CH	CHCH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	SPRHSSTR	MEV/CH
MEV	CH	CHCH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	SPRHSSTR	MEV/CH
1.000	2.677	5	8.035	3	1.388	6	2.158	2	1.388	6	3.730
1.250	3.785	5	4.289	3	9.847	5	2.158	2	4.036	2	3.295
1.500	5.022	5	3.217	3	7.482	5	2.157	2	7.400	5	2.978
1.750	4.451	5	3.530	3	6.373	5	2.155	2	7.019	2	3.261
1.825	4.081	5	3.988	3	5.132	5	2.154	2	8.708	2	4.773
1.925	2.897	5	5.385	3	1.388	6	2.154	2	1.388	6	7.291
2.000	2.639	5	6.125	3	1.412	6	2.153	2	1.015	1	7.588
2.300	2.433	5	6.848	3	1.532	6	2.150	3	1.327	1	9.448
2.500	2.408	5	6.710	3	1.948	6	2.145	3	1.958	1	1.037
2.897	2.388	5	6.778	3	1.988	6	2.147	3	1.988	1	1.129
2.711	2.088	5	7.813	3	1.802	6	2.147	3	1.820	1	1.309
3.000	2.152	5	7.509	3	1.732	6	2.144	3	2.210	1	1.393
3.500	2.383	5	6.788	3	1.584	6	2.138	3	2.939	1	1.467
4.000	2.802	5	6.209	3	1.432	6	2.132	3	3.753	1	1.535
4.500	2.948	5	5.484	3	1.205	6	2.124	3	4.633	1	1.525
5.000	3.288	5	4.808	3	1.132	6	2.118	3	5.581	1	1.518
5.500	3.727	5	4.338	3	1.008	6	2.107	3	6.594	1	1.473
6.000	4.173	5	3.872	3	0.931	5	2.098	3	7.588	1	1.434
6.500	4.701	5	3.437	3	7.888	5	2.087	3	8.574	1	1.379
7.000	5.249	5	3.078	3	7.101	5	2.078	3	9.561	1	1.330
8.000	6.515	5	2.480	3	5.721	5	2.057	3	1.175	0	1.284
9.377	7.045	5	2.894	3	5.280	5	2.047	3	1.251	0	1.185
10.391	5.382	5	3.013	3	6.890	5	2.047	3	1.254	0	1.080
11.000	1.508	5	1.072	4	8.472	6	2.032	3	1.379	0	5.995
12.000	1.700	5	9.503	3	8.198	6	2.021	3	1.484	0	5.988
13.000	1.784	5	8.188	3	8.113	6	2.011	3	1.591	0	5.884
14.000	1.818	5	8.423	3	1.843	6	1.974	3	1.686	0	5.894
15.000	1.487	5	1.087	4	2.807	6	1.974	3	1.686	0	7.881
16.000	1.771	5	9.121	3	2.104	6	1.953	3	1.980	0	8.780
17.000	1.823	5	8.808	3	2.597	6	1.958	3	1.988	0	7.480
18.000	1.783	5	8.880	3	2.880	6	1.941	3	2.070	0	7.058
19.000	2.288	5	7.851	3	1.875	6	1.915	3	2.250	0	6.114
20.000	2.103	5	7.888	3	1.778	6	1.915	3	2.250	0	6.473
21.000	2.693	5	6.800	3	1.388	6	1.888	3	2.588	0	5.588
22.000	3.084	5	6.032	3	9.288	5	1.818	3	3.088	0	4.788
23.000	3.894	5	5.888	3	6.888	5	1.783	3	3.487	0	3.888
24.000	1.004	4	1.888	3	3.711	5	1.834	3	4.388	0	3.888
25.000	1.888	4	1.888	3	2.388	5	1.834	3	5.272	0	3.307
26.000	2.384	4	6.778	3	1.883	5	1.873	3	6.084	0	1.948
27.000	3.388	4	4.814	2	1.110	5	1.338	3	6.888	0	1.087
28.000	4.384	4	3.583	2	8.218	4	1.298	3	7.848	0	8.894
29.000	5.381	4	2.784	2	8.888	4	1.173	3	8.377	0	8.188
30.000	7.485	4	2.158	2	4.578	4	1.103	3	9.888	0	4.881
31.000	2.788	4	5.773	2	1.338	5	1.185	3	9.888	0	1.321
32.000	2.888	4	5.738	2	1.388	5	1.185	3	9.888	0	1.311
33.000	3.333	4	4.818	2	1.112	5	1.094	3	9.517	0	1.101
34.000	2.388	4	6.774	2	1.583	5	1.053	3	9.518	0	1.522
35.000	2.488	4	6.488	2	1.488	5	1.041	3	9.825	0	1.481
36.000	2.781	4	5.788	2	1.338	5	1.088	3	9.888	0	1.325
37.000	2.488	4	6.787	2	1.577	5	1.088	3	9.888	0	1.537
38.000	2.848	4	6.188	2	1.488	5	9.774	2	1.221	1	1.388
39.000	3.288	4	5.848	2	1.184	5	9.888	2	1.673	1	1.188
40.000	4.313	4	3.881	2	8.288	4	9.287	2	1.178	1	8.175
41.000	6.873	4	2.888	2	6.813	4	8.784	2	1.388	1	4.944
42.000	1.483	3	1.184	2	2.787	4	5.388	2	1.345	1	2.488
43.000	2.378	3	8.811	1	1.571	4	4.388	2	1.715	1	1.588
44.000	3.888	3	4.488	1	1.638	4	3.783	2	1.841	1	9.888
45.000	5.188	3	3.134	1	7.888	3	3.171	2	1.887	1	8.888
46.000	6.388	3	1.783	1	3.821	3	2.333	2	2.118	1	3.888
47.000	1.387	2	1.877	1	8.383	3	1.618	2	2.243	1	2.188
48.000	2.378	2	8.881	0	1.888	3	1.444	2	2.373	1	1.481
49.000	3.188	2	5.183	0	1.773	3	1.233	2	2.388	1	1.388
50.000	5.848	2	2.787	1	6.388	3	1.233	2	2.388	1	2.288

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 138.91										DENSITY 8.189 GRAMS/CC		
ENERGY		TOTAL HPF		CROSS SECTION (BARNS)				NEUT/COLLISION		NEUT/CH		
MEV		CH	CH+CH/ON	TOTAL	COHERENT	INCOHER	PHOTOL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	K.E.
4.000-2	8.251-3	2.985-1	5.982-3	1.184-2	2.395-1	5.820-3			3.908-2	1.342-2	5.412-8	2.147-0
4.500-2	8.444-3	1.914-1	4.414-3	1.184-2	2.395-1	5.820-3			4.377-2	1.823-2	1.184-8	2.159-0
5.000-2	1.104-2	1.463-1	3.378-3	1.184-2	2.395-1	5.820-3			4.843-2	2.300-2	1.884-8	2.084-0
5.500-2	1.418-2	1.140-1	2.829-3	1.184-2	2.395-1	5.820-3			5.308-2	2.773-2	2.738-8	1.933-0
6.000-2	1.780-2	9.077-0	2.894-3	1.184-2	2.395-1	5.820-3			5.798-2	3.240-2	3.735-8	1.820-0
6.500-2	2.207-2	7.322-0	1.888-3	1.184-2	2.395-1	5.820-3			6.203-2	3.701-2	4.673-8	1.677-0
7.000-2	2.690-2	6.007-0	1.388-3	1.184-2	2.395-1	5.820-3			6.644-2	4.158-2	5.145-8	1.545-0
8.000-2	3.833-2	4.215-0	9.722-2	1.184-2	2.395-1	5.820-3			7.502-2	5.048-2	9.060-8	1.317-0
1.000-1	6.934-2	2.324-0	5.300-2	1.184-2	2.395-1	5.820-3			9.118-2	6.741-2	1.615-4	9.894-1
1.250-1	1.248-1	1.243-0	2.988-2	1.184-2	2.395-1	5.820-3			1.093-1	8.670-2	2.889-4	6.948-1
1.500-1	1.971-1	8.187-1	1.881-2	1.184-2	2.395-1	5.820-3			1.249-1	1.037-1	3.814-4	5.299-1
1.750-1	2.845-1	5.679-1	1.318-2	1.184-2	2.395-1	5.820-3			1.383-1	1.185-1	4.979-4	4.184-1
2.000-1	3.838-1	4.210-1	9.712-1	1.184-2	2.395-1	5.820-3			1.485-1	1.312-1	6.102-4	3.418-1
2.500-1	6.018-1	2.885-1	6.183-1	1.184-2	2.395-1	5.820-3			1.879-1	1.525-1	9.235-4	2.533-1
3.000-1	8.988-1	1.990-1	4.488-1	1.184-2	2.395-1	5.820-3			2.844-1	2.888-1	1.018-3	2.047-1
3.500-1	1.045-0	1.947-1	3.388-1	1.184-2	2.395-1	5.820-3			3.857-1	1.859-1	1.244-3	1.780-1
4.000-1	1.247-0	1.198-1	2.890-1	1.184-2	2.395-1	5.820-3			4.870-1	2.821-1	1.444-3	1.621-1
4.500-1	1.430-0	1.130-1	2.808-1	1.184-2	2.395-1	5.820-3			5.877-1	2.194-1	1.702-3	1.534-1
5.000-1	1.598-0	1.011-1	2.332-1	1.184-2	2.395-1	5.820-3			6.842-1	2.377-1	1.998-3	1.467-1
5.500-1	1.758-0	9.885-2	2.128-1	1.184-2	2.395-1	5.820-3			7.831-1	2.575-1	2.341-3	1.470-1
6.000-1	1.893-0	8.538-2	1.988-1	1.184-2	2.395-1	5.820-3			8.833-1	2.784-1	2.733-3	1.470-1
6.500-1	2.024-0	7.888-2	1.842-1	1.184-2	2.395-1	5.820-3			9.850-1	3.008-1	3.184-3	1.485-1
7.000-1	2.148-0	7.530-2	1.737-1	1.184-2	2.395-1	5.820-3			1.087-1	3.237-1	3.888-3	1.508-1
8.000-1	2.388-0	6.819-2	1.573-1	1.184-2	2.395-1	5.820-3			3.758-1	3.724-1	4.878-3	1.572-1
1.000-0	2.798-0	6.087-2	1.381-1	1.184-2	2.395-1	5.820-3			4.807-1	4.784-1	8.017-3	1.734-1
1.088-0	2.787-0	6.777-2	1.338-1	1.184-2	2.395-1	5.820-3		1.000-8	4.830-1	4.808-1	9.433-3	1.735-1
1.850-0	3.178-0	6.008-2	1.174-1	1.184-2	2.395-1	5.820-3		2.836-8	6.840-1	6.835-1	1.350-2	1.680-1
1.950-0	3.487-0	6.833-2	1.088-1	1.184-2	2.395-1	5.820-3		8.110-8	7.888-1	7.872-1	2.841-2	2.830-1
1.780-0	3.738-0	4.328-2	9.878-0	1.184-2	2.395-1	5.820-3		4.814-1	8.201-1	9.180-1	2.913-2	2.480-1
2.000-0	3.938-0	4.108-2	9.488-0	1.184-2	2.395-1	5.820-3		7.188-1	1.081-0	1.080-0	4.000-2	2.743-1
2.044-0	3.971-0	4.888-2	9.387-0	1.184-2	2.395-1	5.820-3		7.487-1	1.110-0	1.108-0	4.216-2	2.793-1
2.500-0	4.210-0	3.838-2	8.883-0	1.184-2	2.395-1	5.820-3		1.237-0	1.487-0	1.488-0	8.867-2	3.388-1
3.000-0	4.348-0	3.718-2	8.878-0	1.184-2	2.395-1	5.820-3		1.784-0	1.884-0	1.803-0	1.088-1	4.148-1
3.888-0	4.488-0	3.348-2	8.417-0	1.184-2	2.395-1	5.820-3		2.888-0	2.808-0	2.804-0	1.805-1	4.878-1
4.088-0	4.498-0	3.827-2	8.388-0	1.184-2	2.395-1	5.820-3		2.748-0	2.888-0	2.888-0	2.848-1	4.884-1
4.888-0	4.444-0	3.838-2	8.387-0	1.184-2	2.395-1	5.820-3		2.184-0	3.883-0	3.883-0	3.014-1	6.893-1
5.088-0	4.428-0	3.848-2	8.417-0	1.184-2	2.395-1	5.820-3		3.883-0	3.812-0	3.812-0	3.889-1	7.831-1
5.888-0	4.432-0	3.848-2	8.488-0	1.184-2	2.395-1	5.820-3		4.488-0	4.488-0	4.488-0	4.811-1	6.848-1
6.888-0	4.417-0	3.888-2	8.437-0	1.184-2	2.395-1	5.820-3		4.178-0	4.488-0	4.488-0	5.038-1	1.003-1
7.888-0	4.387-0	3.883-2	8.488-0	1.184-2	2.395-1	5.820-3		4.488-0	4.888-0	4.888-0	7.888-1	1.117-0
7.888-0	4.388-0	3.718-2	8.377-0	1.184-2	2.395-1	5.820-3		4.788-0	5.378-0	5.378-0	6.838-1	1.237-0
8.888-0	4.238-0	3.812-2	8.744-0	1.184-2	2.395-1	5.820-3		5.318-0	6.348-0	6.348-0	8.341-0	1.488-0
1.088-1	3.878-0	4.884-2	8.373-0	1.184-2	2.395-1	5.820-3		6.418-0	6.313-0	6.313-0	1.888-0	2.891-1
1.250-1	3.788-0	4.881-2	8.878-0	1.184-2	2.395-1	5.820-3		7.325-0	1.878-1	1.878-1	2.888-0	2.845-0
1.988-1	3.883-0	4.484-2	1.834-1	1.184-2	2.395-1	5.820-3		8.181-0	1.388-1	1.388-1	4.887-0	3.887-0
1.738-1	3.413-0	4.738-2	1.882-1	1.184-2	2.395-1	5.820-3		9.881-0	1.578-1	1.578-1	5.887-0	4.888-0
2.888-1	3.881-0	4.888-2	1.143-1	1.184-2	2.395-1	5.820-3		9.888-0	1.838-1	1.838-1	7.825-0	5.814-0
2.788-1	3.848-0	5.388-2	1.883-1	1.184-2	2.395-1	5.820-3		1.878-0	2.338-1	2.338-1	1.098-1	7.892-0
3.888-1	2.884-0	5.888-2	1.288-1	1.184-2	2.395-1	5.820-3		1.125-2	2.838-1	2.838-1	1.423-1	8.783-0
3.588-1	2.788-0	5.888-2	1.338-1	1.184-2	2.395-1	5.820-3		1.883-1	3.338-1	3.338-1	1.811-1	1.187-1
4.088-1	2.881-0	6.888-2	1.388-1	1.184-2	2.395-1	5.820-3		1.884-1	3.838-1	3.838-1	2.819-1	1.425-1
4.388-1	2.888-0	6.818-2	1.438-1	1.184-2	2.395-1	5.820-3		1.348-1	4.338-1	4.338-1	2.831-1	1.858-1
5.888-1	2.331-0	6.388-2	1.473-1	1.184-2	2.395-1	5.820-3		1.388-1	4.838-1	4.838-1	3.888-1	1.812-1
5.388-1	2.488-0	6.388-2	1.488-1	1.184-2	2.395-1	5.820-3		1.421-1	5.338-1	5.338-1	3.488-1	2.148-1
6.888-1	2.444-0	6.811-2	1.523-1	1.184-2	2.395-1	5.820-3		1.482-1	5.838-1	5.838-1	3.943-1	2.388-1
6.388-1	2.488-0	6.718-2	1.548-1	1.184-2	2.395-1	5.820-3		1.484-1	6.348-1	6.348-1	4.384-1	2.878-1
7.888-1	2.378-0	6.818-2	1.578-1	1.184-2	2.395-1	5.820-3		1.888-1	6.848-1	6.848-1	4.888-1	2.888-1
8.888-1	2.388-0	7.888-2	1.818-1	1.184-2	2.395-1	5.820-3		1.888-1	7.841-1	7.841-1	3.774-1	2.488-1
1.888-2	2.888-0	7.348-2	1.884-1	1.184-2	2.395-1	5.820-3		1.847-1	8.843-1	8.843-1	7.888-1	4.478-1

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Form Factors

57-La

$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
0.000+0	1.000+0	0.000+0	1.250-1	8.794-1	1.117-1	1.000+0	3.208-1	5.747-1	1.000+1	1.874-2	9.884-1
5.000-3	9.994-1	5.263-4	1.500-1	8.481-1	1.348-1	1.250+0	2.714-1	6.425-1	1.200+1	1.289-2	9.948-1
1.000-2	9.984-1	2.088-3	1.750-1	8.198-1	1.571-1	1.500+0	2.318-1	5.619-1	2.000+1	7.571-3	9.984-1
1.500-2	9.970-1	4.800-3	2.000-1	7.908-1	1.790-1	2.000+0	1.818-1	4.822-1	5.000+1	6.808-4	1.000+0
2.000-2	9.948-1	7.982-3	2.500-1	7.349-1	2.209-1	2.500+0	1.163-1	3.123-1	8.000+1	1.494-4	1.000+0
2.500-2	9.918-1	1.210-2	3.000-1	6.842-1	2.599-1	3.000+0	9.632-2	2.449-1	1.000+2	7.288-5	1.000+0
3.000-2	9.883-1	1.680-2	4.000-1	6.001-1	3.285-1	3.500+0	8.033-2	2.078-1	1.000+3	6.308-6	1.000+0
4.000-2	9.798-1	2.738-2	5.000-1	5.324-1	3.788-1	4.000+0	7.095-2	2.018-1	1.000+6	1.994-16	1.000+0
5.000-2	9.703-1	3.899-2	6.000-1	4.738-1	4.230-1	5.000+0	5.821-2	2.339-1	1.000+9	6.973-25	1.000+0
7.000-2	9.472-1	8.082-2	7.000-1	4.234-1	4.648-1	6.000+0	3.812-2	2.530-1			
9.000-2	9.225-1	7.989-2	8.000-1	3.814-1	5.045-1	7.000+0	2.914-2	2.646-1			
1.000-1	9.099-1	6.891-2	9.000-1	3.478-1	5.713-1	8.000+0	2.567-2	2.723-1

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ENDL Evaluated Photon Cross Sections

58-Ce

12/07/78

Energy Deposition

58-Ce

12/07/78

ENCL Evaluated Photon Data

58-Cc

ATOMIC WEIGHT 140.12										DENSITY 6.768 GRAMS/CC									
ENERGY		TOTAL HPF		CROSS SECTION (BARNS)						NEV/COLLISION		NEV/CM							
NEV	CM	CH	CM/CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	K.E.							
1.000	1.093	8.777	3	2.042	6	2.238	2	2.520	2	2.040	8	9.989	5	9.989	5	3.617	10	5.934	0
1.053	1.085	8.690	3	1.982	6	2.235	3	3.007	2	1.980	8	1.082	4	1.082	4	4.320	10	5.977	0
1.107	1.149	1.286	4	2.986	6	2.235	3	3.083	2	2.980	8	1.105	4	1.105	4	4.438	10	5.828	0
1.250	1.377	1.873	4	2.498	6	2.234	3	3.925	2	2.490	8	1.249	4	1.249	4	5.859	10	5.069	0
1.500	1.807	8.176	3	1.908	6	2.233	3	5.637	2	1.900	8	1.498	4	1.498	4	6.137	10	6.250	0
1.750	2.112	8.988	3	1.826	6	2.231	3	7.825	2	1.826	8	1.748	4	1.748	4	1.107	9	6.274	0
2.000	2.417	8.113	3	1.422	6	2.230	3	9.905	2	1.420	8	1.997	4	1.997	4	1.825	9	6.281	0
2.119	2.434	8.070	3	1.812	6	2.229	3	1.107	9	1.812	9	2.116	4	2.116	4	1.645	9	6.091	0
2.133	1.788	8.281	3	1.922	6	2.228	3	1.121	9	1.920	6	2.131	4	2.131	4	1.645	9	1.191	0
2.300	1.779	8.384	3	1.932	6	2.227	3	1.296	9	1.930	6	2.297	4	2.297	4	1.913	9	1.291	0
2.500	1.514	8.145	3	1.685	6	2.225	3	1.522	9	1.683	6	2.497	4	2.497	4	2.290	9	1.378	0
2.800	1.876	7.675	3	1.832	6	2.222	3	2.009	9	1.830	6	2.805	4	2.805	4	3.018	9	1.538	0
2.903	1.858	8.766	3	2.072	6	2.222	3	2.028	9	2.070	6	2.900	4	2.900	4	3.048	9	1.748	0
3.080	1.780	8.881	3	2.025	6	2.221	3	2.181	9	2.020	6	2.977	4	2.977	4	3.259	9	1.763	0
3.500	1.987	7.740	3	1.863	6	2.214	3	2.075	9	1.861	6	3.486	4	3.486	4	4.430	9	1.833	0
4.000	2.188	7.015	3	1.632	6	2.208	3	3.063	9	1.630	6	3.995	4	3.995	4	5.784	9	1.897	0
4.500	2.402	6.190	3	1.431	6	2.200	3	4.537	9	1.429	6	4.493	4	4.493	4	7.318	9	1.870	0
5.000	2.702	5.488	3	1.272	6	2.193	3	5.489	9	1.270	6	4.991	4	4.991	4	9.031	9	1.847	0
5.500	3.079	4.788	3	1.117	6	2.184	3	6.417	9	1.114	6	5.489	4	5.489	4	1.092	8	1.783	0
6.000	3.488	4.088	3	0.912	6	2.175	3	7.428	9	0.910	6	5.987	4	5.987	4	1.298	8	1.728	0
6.500	3.922	3.387	3	0.789	6	2.164	3	8.398	9	0.783	6	6.484	4	6.484	4	1.524	8	1.653	0
7.000	4.385	2.682	3	0.665	6	2.153	3	9.413	9	0.660	6	6.981	4	6.981	4	1.788	8	1.588	0
8.000	5.482	2.088	3	0.271	6	2.134	3	1.198	9	0.269	6	7.973	4	7.973	4	2.304	8	1.454	0
8.880	6.987	2.848	3	0.511	6	2.111	3	1.377	9	0.508	6	8.882	4	8.882	4	2.847	8	1.342	0
9.818	8.784	3.188	3	0.231	6	2.111	3	1.394	9	0.230	6	9.818	4	9.818	4	3.188	8	1.889	0
10.800	1.080	3.188	3	0.188	6	2.108	3	1.388	9	0.188	6	10.800	4	10.800	4	3.188	8	1.889	0
11.800	1.378	3.188	3	0.188	6	2.108	3	1.388	9	0.188	6	11.800	4	11.800	4	3.188	8	1.889	0
1.000	1.482	9.970	3	2.326	6	2.087	3	1.988	9	2.318	6	0.991	4	0.991	4	3.618	8	5.748	0
1.188	1.678	7.085	3	1.638	6	2.033	3	1.988	9	1.638	6	1.188	4	1.188	4	3.678	8	6.321	0
1.188	1.446	1.682	4	8.377	6	2.033	3	1.981	9	2.378	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	1.688	8.084	3	8.678	6	2.018	3	2.048	9	2.673	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	1.743	8.478	3	1.678	6	2.018	3	2.048	9	1.670	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	1.988	8.288	3	2.194	6	2.018	3	2.098	9	2.192	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.153	8.884	3	1.987	6	1.976	3	2.467	9	1.995	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.628	7.898	3	1.688	6	1.974	3	2.488	9	1.687	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.888	8.484	3	1.988	6	1.981	3	2.941	9	1.988	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	3.481	8.344	3	1.611	6	1.983	3	3.684	9	1.609	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	4.787	3.888	3	2.188	6	1.938	3	3.472	9	2.148	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	6.921	1.734	3	4.038	6	1.783	3	4.383	9	4.017	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	1.381	1.688	3	2.378	6	1.688	3	3.677	9	2.368	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.882	7.388	3	1.788	6	1.988	3	3.688	9	1.788	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.842	3.188	3	1.288	6	1.988	3	3.677	9	1.194	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	3.842	3.842	3	0.948	6	1.988	3	7.895	9	0.948	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	3.838	2.937	3	0.638	6	1.987	3	8.384	9	0.711	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	4.418	2.388	3	0.384	6	1.188	3	9.888	9	0.348	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	5.783	2.688	3	0.648	6	1.121	3	9.388	9	0.738	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.838	8.819	3	1.387	6	1.121	3	9.348	9	1.288	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.988	8.877	3	1.188	6	1.088	3	9.88	9	1.187	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	3.181	8.848	3	1.684	6	1.088	3	9.88	9	1.678	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.288	8.223	3	1.918	6	1.088	3	9.881	9	1.917	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.988	8.887	3	1.388	6	1.088	3	1.313	9	1.313	9	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.948	8.988	3	1.688	6	1.018	3	1.611	9	1.611	9	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.988	8.488	3	1.988	6	1.018	3	1.611	9	1.611	9	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.918	8.434	3	1.988	6	0.987	3	2.088	9	1.288	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	3.881	8.857	3	0.888	6	0.878	3	1.187	9	0.848	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	8.873	2.134	3	4.388	6	2.178	3	1.378	9	2.874	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	1.178	2.178	3	2.748	6	9.888	3	2.188	9	2.888	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	2.632	7.871	3	1.688	6	0.618	3	1.721	9	1.674	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	3.874	8.887	3	1.114	6	2.888	3	1.688	9	1.678	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	4.384	3.388	3	7.888	6	3.381	3	1.988	9	7.488	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	8.881	1.648	3	4.688	6	2.138	3	2.138	9	4.881	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	1.384	1.138	3	8.838	6	2.273	3	2.488	9	2.488	6	1.188	4	1.188	4	3.678	8	6.193	0
1.188	1.978	7.488	3	1.741	6	2.388	3	1.987	9	1.987	6	1.188	4	1.188	4	3.678	8	6.193	0

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Form Factors

58-Ce

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	0.828-1	1.090-1	1.000+0	3.203-1	5.704-1	1.000+1	1.878-2	9.819-1
5.000-3	9.994-1	5.000-4	1.500-1	8.327-1	1.318-1	1.250+0	2.709-1	8.392-1	1.500+1	1.267-2	9.943-1
1.000-2	9.991-1	2.000-3	1.750-1	8.233-1	1.840-1	1.500+0	2.325-1	8.897-1	2.000+1	7.738-3	9.983-1
1.500-2	9.971-1	4.417-3	2.000-1	7.948-1	1.737-1	2.000+0	1.843-1	7.804-1	5.000+1	8.973-4	1.000+0
2.000-2	9.949-1	7.671-3	2.500-1	7.380-1	2.171-1	2.500+0	1.178-1	8.104-1	8.000+1	1.592-4	1.000+0
2.500-2	9.921-1	1.183-2	3.000-1	6.879-1	2.599-1	3.000+0	9.903-2	8.478-1	1.000+2	7.800-5	1.000+0
3.000-2	9.887-1	1.617-2	4.000-1	6.086-1	3.225-1	3.500+0	8.027-2	8.789-1	1.000+3	6.940-6	1.000+0
4.000-2	9.867-1	2.639-2	5.000-1	5.342-1	3.748-1	4.000+0	7.113-2	8.999-1	1.000+6	2.305-18	1.000+0
5.000-2	9.714-1	3.728-2	6.000-1	4.794-1	4.196-1	5.000+0	5.283-2	9.325-1	1.000+9	8.444-25	1.000+0
7.000-2	9.489-1	5.844-2	7.000-1	4.248-1	4.612-1	6.000+0	3.874-2	9.520-1			
9.000-2	9.249-1	7.738-2	8.000-1	3.821-1	5.004-1	7.000+0	2.953-2	9.839-1			
1.000-1	9.128-1	8.684-2	9.000-1	3.477-1	5.389-1	8.000+0	2.593-2	9.717-1

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ENDL Evaluated Photon Cross Sections

59-Pr

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Energy Deposition

59-Pr

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ENDL Evaluated Photon Data

59-Pr

ENERGY		TOTAL NFP		CROSS SECTION (BARNS)						DENSITY 6.769 GRAMS/CC			
MEV		CM CM-CH/CM		TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR	PROD	K.E. e-FLOr		MEV/COLLISION	
										K.E.		BREMSSTR	
												K.E.	
1.000	-4	1.208	-5	1.223	-4	2.862	-6	2.314	-3	2.518	-2	2.880	-6
1.125	-4	1.328	-5	1.112	-4	2.802	-6	2.313	-3	3.183	-2	2.800	-6
1.139	-4	9.703	-6	1.522	-4	3.582	-6	2.313	-3	3.263	-2	3.580	-6
1.250	-4	1.088	-5	1.355	-4	3.183	-6	2.312	-3	3.925	-2	3.181	-6
1.500	-4	1.394	-5	1.091	-4	2.952	-6	2.311	-3	5.041	-2	2.950	-6
1.750	-4	1.537	-5	9.028	-3	2.112	-6	2.309	-3	7.638	-2	2.110	-6
2.000	-4	1.829	-5	7.880	-3	1.782	-6	2.308	-3	9.928	-2	1.790	-6
2.231	-4	2.019	-5	7.318	-3	1.712	-6	2.305	-3	1.224	-1	1.710	-6
2.245	-4	1.982	-5	9.495	-3	2.124	-6	2.305	-3	1.230	-1	2.210	-6
2.300	-4	1.570	-5	9.418	-3	2.202	-6	2.305	-3	1.238	-1	2.200	-6
2.500	-4	1.622	-5	9.107	-3	2.131	-6	2.303	-3	1.523	-1	2.128	-6
3.000	-4	1.744	-5	8.472	-3	1.982	-6	2.299	-3	2.161	-1	1.980	-6
3.038	-4	1.762	-5	8.387	-3	1.952	-6	2.298	-3	2.211	-1	1.950	-6
3.052	-4	1.577	-5	9.370	-3	2.192	-6	2.298	-3	2.230	-1	2.190	-6
3.500	-4	1.771	-5	8.341	-3	1.952	-6	2.292	-3	2.871	-1	1.949	-6
4.000	-4	1.984	-5	7.448	-3	1.742	-6	2.288	-3	3.671	-1	1.740	-6
4.500	-4	2.208	-5	6.514	-3	1.524	-6	2.278	-3	4.514	-1	1.522	-6
5.000	-4	2.526	-5	5.779	-3	1.352	-6	2.271	-3	5.431	-1	1.350	-6
5.500	-4	2.914	-5	5.089	-3	1.186	-6	2.262	-3	6.359	-1	1.184	-6
6.000	-4	3.289	-5	4.497	-3	1.052	-6	2.253	-3	7.345	-1	1.050	-6
6.500	-4	3.715	-5	3.978	-3	9.304	-5	2.242	-3	8.290	-1	9.288	-5
7.000	-4	4.183	-5	3.548	-3	8.302	-5	2.232	-3	9.273	-1	8.300	-5
8.000	-4	5.188	-5	2.847	-3	6.882	-5	2.213	-3	1.135	0	6.840	-5
9.000	-4	6.375	-5	2.317	-3	5.422	-5	2.189	-3	1.329	0	5.400	-5
9.383	-4	6.870	-5	2.151	-3	5.032	-5	2.180	-3	1.408	0	5.010	-5
9.397	-4	5.185	-5	2.850	-3	6.856	-5	2.180	-3	1.409	0	6.870	-5
9.500	-4	1.844	-5	6.884	-3	2.102	-6	2.178	-3	1.429	0	2.100	-6
1.000	-3	1.148	-5	1.289	-4	3.017	-6	2.167	-3	1.531	0	3.015	-6
1.236	-3	1.974	-5	7.484	-3	1.751	-6	2.102	-3	1.967	0	1.748	-6
1.237	-3	1.510	-5	9.783	-3	2.288	-6	2.102	-3	1.989	0	2.287	-6
1.250	-3	1.951	-5	9.524	-3	2.228	-6	2.099	-3	1.994	0	2.228	-6
1.336	-3	1.841	-5	8.027	-3	1.878	-6	2.079	-3	2.157	0	1.876	-6
1.337	-3	1.885	-5	8.788	-3	2.051	-6	2.079	-3	2.159	0	2.048	-6
1.500	-3	2.284	-5	6.526	-3	1.527	-6	2.045	-3	2.474	0	1.525	-6
1.507	-3	2.281	-5	6.448	-3	1.509	-6	2.043	-3	2.488	0	1.507	-6
1.508	-3	2.186	-5	8.821	-3	1.588	-6	2.043	-3	2.488	0	1.584	-6
1.750	-3	3.173	-5	4.895	-3	1.068	-6	1.978	-3	2.931	0	1.087	-6
2.000	-3	4.470	-5	3.305	-3	7.733	-5	1.823	-3	3.394	0	7.714	-5
2.500	-3	7.920	-5	1.885	-3	4.384	-5	1.780	-3	4.280	0	4.348	-5
3.000	-3	1.283	-4	1.170	-3	2.737	-5	1.888	-3	5.172	0	2.720	-5
3.500	-3	1.873	-4	1.788	-3	1.846	-5	1.570	-3	5.988	0	1.830	-5
4.000	-3	2.633	-4	5.611	-2	1.313	-5	1.475	-3	6.815	0	1.298	-5
4.500	-3	3.553	-4	4.158	-2	9.728	-4	1.377	-3	7.951	0	8.990	-4
5.000	-3	4.843	-4	3.182	-2	7.445	-4	1.295	-3	8.298	0	7.315	-4
5.500	-3	5.911	-4	2.499	-2	5.848	-4	1.215	-3	8.926	0	5.725	-4
5.984	-3	7.234	-4	2.038	-2	4.785	-4	1.150	-3	9.957	0	4.848	-4
5.985	-3	2.733	-4	5.405	-2	1.895	-5	1.150	-3	9.958	0	1.893	-5
6.000	-3	2.775	-4	5.353	-2	1.848	-5	1.148	-3	9.883	0	1.834	-5
6.440	-3	3.337	-4	4.427	-2	1.038	-5	1.083	-3	1.010	1	1.028	-5
6.441	-3	2.376	-4	6.218	-2	1.455	-5	1.083	-3	1.011	1	1.444	-5
6.500	-3	2.433	-4	6.071	-2	1.421	-5	1.075	-3	1.017	1	1.410	-5
6.834	-3	2.775	-4	5.323	-2	1.245	-5	1.033	-3	1.095	1	1.235	-5
6.835	-3	2.395	-4	6.189	-2	1.443	-5	1.033	-3	1.095	1	1.433	-5
7.060	-3	2.930	-4	5.783	-2	1.395	-5	1.014	-3	1.073	1	1.345	-5
8.000	-3	3.825	-4	4.075	-2	9.535	-4	9.120	-2	1.181	1	9.443	-4
1.040	-2	6.930	-4	2.298	-2	5.277	-4	7.407	-2	1.388	1	5.202	-4
1.258	-2	1.191	-3	1.248	-2	2.502	-4	5.846	-2	1.588	1	2.844	-4
1.380	-2	1.938	-3	7.824	-1	1.789	-4	5.819	-2	1.738	1	1.734	-4
1.758	-2	2.938	-3	5.889	-1	1.178	-4	4.827	-2	1.871	1	1.134	-4
2.088	-2	4.288	-3	3.512	-1	8.218	-3	3.447	-2	1.988	1	7.883	-3
2.388	-2	7.788	-3	1.917	-1	4.488	-3	2.933	-2	2.158	1	4.288	-3
3.088	-2	1.837	-2	1.173	-1	2.748	-3	1.883	-2	2.388	1	2.388	-3
3.388	-2	1.992	-2	7.724	-1	1.814	-3	1.577	-2	2.388	1	1.833	-3

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ATOMIC WEIGHT 140.91										DENSITY 8.789 GRAMS/CC									
ENERGY			TOTAL HFP			CROSS SECTION (BARNS)						NEUT/COLLISION			NEUT/CM				
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOW	K.E.	BRN/STR	K.E.								
4.000-2	2.718-2	5.438-0	1.278-2	1.293-2	2.480-0	1.118-3	3	3.582-2	3.469-2	4.431-5	1.278-0								
4.198-2	3.093-2	4.776-0	1.117-3	1.199-2	2.479-0	9.728-2	2	3.083-2	3.610-2	4.800-5	1.187-0								
4.198-2	5.939-2	2.481-1	5.108-3	1.199-2	2.479-0	5.081-3	4	4.098-2	1.324-2	6.481-6	2.224-0								
4.500-2	7.093-2	2.082-1	4.872-3	1.078-2	2.508-0	4.739-3	3	4.379-2	1.814-2	9.601-6	2.275-0								
5.000-2	9.260-2	1.995-1	3.733-3	9.130-1	2.597-0	3.618-3	3	4.847-2	2.093-2	1.614-5	2.280-0								
5.500-2	1.188-2	1.246-1	2.815-3	7.804-0	2.570-0	2.811-3	3	5.308-2	2.967-2	2.428-5	2.105-0								
6.000-2	1.485-2	9.946-0	2.327-3	8.882-0	2.591-0	2.233-3	3	5.794-2	3.036-2	3.398-5	2.044-0								
6.500-2	1.837-2	8.042-0	1.882-3	5.982-0	2.598-0	1.798-3	3	6.214-2	3.501-2	2.413-5	1.908-0								
7.000-2	2.232-2	5.811-0	1.597-3	5.253-0	2.601-0	1.489-3	3	6.686-2	3.980-2	5.773-5	1.772-0								
7.500-2	3.174-2	4.803-0	1.088-3	4.205-0	2.607-0	1.021-3	3	7.584-2	4.359-2	6.691-5	1.631-0								
8.000-1	5.734-2	2.577-0	6.028-2	2.945-1	2.573-0	5.487-2	2	9.104-2	6.577-2	1.591-4	1.147-0								
1.250-1	1.027-1	1.439-0	3.368-2	1.908-1	2.492-0	2.026-2	2	1.102-1	9.952-2	2.888-4	6.329-1								
1.500-1	1.622-1	9.103-1	2.131-2	1.376-1	2.427-0	1.751-2	2	1.265-1	1.031-1	3.907-4	6.939-1								
1.750-1	2.346-1	6.297-1	1.473-2	1.039-1	2.345-0	1.135-2	2	1.408-1	1.187-1	5.172-4	5.059-1								
2.000-1	3.175-1	4.053-1	1.069-2	8.149-0	2.276-0	7.798-1	1	1.582-1	1.322-1	6.416-4	4.185-1								
2.500-1	5.080-1	2.943-1	6.865-1	5.358-0	2.133-0	4.217-1	1	1.726-1	1.552-1	6.027-4	3.091-1								
3.000-1	6.976-1	2.118-1	4.955-1	3.804-0	2.023-0	2.952-1	1	1.883-1	1.737-1	1.105-3	2.490-1								
3.500-1	8.870-1	1.688-1	3.897-1	2.830-0	1.918-0	1.698-1	1	2.034-1	1.910-1	1.336-3	2.153-1								
4.000-1	1.086-0	1.385-1	3.241-1	2.191-0	1.831-0	1.191-1	1	2.182-1	2.077-1	1.579-3	1.948-1								
4.500-1	1.231-0	1.200-1	2.808-1	1.794-0	1.750-0	8.830-0	1	2.344-1	2.294-1	1.059-3	1.831-1								
5.000-1	1.383-0	1.088-1	2.499-1	1.422-0	1.681-0	8.757-0	1	2.515-1	2.439-1	2.173-3	1.783-1								
5.500-1	1.526-0	9.708-1	2.271-1	1.181-0	1.617-0	5.958-0	1	2.703-1	2.638-1	2.538-3	1.732-1								
6.000-1	1.651-0	8.849-1	2.094-1	9.995-1	1.581-0	4.336-0	1	2.903-1	2.844-1	2.952-3	1.729-1								
6.500-1	1.770-0	8.042-1	1.923-1	8.517-1	1.507-0	3.360-0	1	3.148-1	3.084-1	3.326-3	1.738-1								
7.000-1	1.880-0	7.233-1	1.837-1	7.384-1	1.427-0	2.047-0	1	3.412-1	3.325-1	3.695-3	1.751-1								
8.000-1	2.085-0	7.085-1	1.858-1	5.887-1	1.377-0	2.845-0	1	3.818-1	3.779-1	5.19-3	1.812-1								
1.000-0	2.438-0	8.058-1	1.417-1	3.848-1	1.240-0	1.404-0	1	4.862-1	4.834-1	8.468-3	1.982-1								
1.025-0	2.474-0	5.971-2	1.397-1	3.494-1	1.227-0	1.349-0	1.000-8	4.985-1	4.957-1	8.699-3	2.004-1								
1.250-0	2.818-0	5.246-2	1.227-1	2.345-1	1.111-0	8.698-1	1.017-3	6.281-1	6.289-1	1.418-2	2.826-1								
1.500-0	3.097-0	4.771-2	1.116-1	1.632-1	1.010-0	8.640-1	2.308-1	7.728-1	7.711-1	2.132-2	2.490-1								
1.750-0	3.518-0	4.051-2	1.041-1	1.201-1	9.897-1	4.950-1	5.620-1	9.237-1	9.224-1	3.034-2	2.779-1								
2.000-0	3.987-0	4.885-2	9.888-0	9.804-2	6.831-0	3.604-1	7.788-1	1.084-1	1.083-0	4.159-2	3.097-1								
2.044-0	3.527-0	4.189-2	9.801-0	8.813-2	6.525-0	3.789-1	6.118-1	1.113-0	1.112-0	4.383-2	3.154-1								
2.500-0	3.735-0	3.935-2	9.294-0	5.898-2	7.589-0	2.748-1	1.386-0	1.431-0	1.430-0	7.181-2	3.626-1								
3.000-0	3.851-0	3.637-2	8.977-0	4.098-2	6.788-0	8.083-1	1.931-0	1.808-0	1.807-0	1.129-1	4.894-1								
3.500-0	3.918-0	3.771-2	8.883-0	3.012-2	6.175-0	1.887-1	2.448-0	2.210-0	2.210-0	1.885-1	5.940-1								
4.000-0	3.937-0	3.752-2	8.780-0	2.308-2	5.671-0	1.400-1	2.949-0	2.632-0	2.632-0	2.326-1	6.895-1								
4.500-0	3.923-0	3.788-2	8.611-0	1.883-2	5.252-0	1.182-1	3.423-0	3.071-0	3.070-0	3.123-1	7.687-1								
5.000-0	3.908-0	3.763-2	8.651-0	1.477-2	4.988-0	1.024-1	3.835-0	3.580-0	3.580-0	4.044-1	9.013-1								
5.500-0	3.898-0	3.768-2	8.649-0	1.265-2	4.625-0	8.81-1	4.722-0	3.778-0	3.778-0	5.083-1	1.018-0								
6.000-0	3.888-0	3.767-2	8.648-0	1.065-2	4.334-0	8.135-2	4.984-0	4.440-0	4.440-0	6.045-1	1.018-0								
6.500-0	3.881-0	3.766-2	8.652-0	8.740-3	4.088-0	7.352-2	4.752-0	4.910-0	4.910-0	7.527-1	1.272-0								
7.000-0	3.883-0	3.884-2	8.942-0	7.537-3	3.682-0	6.695-2	5.078-0	5.387-0	5.387-0	8.887-1	1.409-0								
8.000-0	3.725-0	3.988-2	9.278-0	5.771-3	3.543-0	5.625-2	5.675-0	6.354-0	6.354-0	1.206-0	1.708-0								
1.000-1	3.490-0	4.232-2	9.903-0	3.693-3	3.017-0	4.288-2	6.839-0	6.327-0	6.327-0	1.926-0	2.388-0								
1.250-1	3.324-0	4.945-2	1.040-3	2.384-3	2.580-0	3.798-2	7.804-0	1.080-0	1.080-0	1.978-0	3.250-0								
1.500-1	3.195-0	4.682-2	1.095-3	1.642-3	2.233-0	2.798-2	8.692-0	1.330-0	1.330-0	3.377-0	4.215-0								
1.750-1	2.987-0	4.946-2	1.157-3	1.208-3	1.988-0	2.230-2	9.983-0	1.581-0	1.581-0	5.683-0	5.294-0								
2.000-1	2.852-0	5.178-2	1.212-3	9.236-4	1.793-0	2.088-2	1.030-1	1.832-1	1.832-1	7.387-0	6.423-0								
2.500-1	2.883-0	5.947-2	1.288-3	5.910-4	1.507-0	1.994-2	2.146-1	2.334-1	2.334-1	1.078-1	8.783-0								
3.000-1	2.927-0	5.846-2	1.388-3	4.104-4	1.305-0	1.310-2	2.286-1	2.839-1	2.839-1	1.448-1	1.122-0								
3.500-1	2.932-0	5.077-2	1.421-3	3.016-4	1.194-0	1.110-2	1.555-1	3.386-1	3.386-1	1.844-1	1.372-0								
4.000-1	2.940-0	6.291-2	1.425-3	2.303-4	1.037-0	9.810-2	1.387-1	3.837-1	3.837-1	2.248-1	1.634-0								
4.500-1	2.937-0	6.318-2	1.365-3	1.884-4	9.730-1	8.475-2	1.429-1	4.339-1	4.339-1	2.676-1	1.914-0								
5.000-1	2.938-0	6.888-2	1.380-3	1.70-4	9.657-1	8.478-2	1.478-1	4.789-1	4.789-1	3.162-1	2.182-0								
5.500-1	2.938-0	7.481-2	1.381-3	1.281-4	9.608-1	8.831-2	1.513-1	5.348-1	5.348-1	3.681-1	2.611-0								
6.000-1	2.938-0	8.938-2	1.421-3	1.886-4	9.549-1	8.821-2	1.546-1	5.841-1	5.841-1	3.889-1	2.740-0								
6.500-1	2.938-0	7.891-2	1.874-3	8.742-5	9.582-1	5.788-2	1.577-1	6.341-1	6.341-1	4.442-1	3.082-0								
7.000-1	2.937-0	7.147-2	1.672-3	7.538-5	9.588-1	5.271-2	1.608-1	6.842-1	6.842-1	4.988-1	3.318-0								
7.500-1	2.911-0	7.747-2	1.718-3	5.771-5	5.883-1	4.387-2	1.680-1	7.843-1	7.843-1	5.688-1	3.988-0								
8.000-1	2.918-0	7.784-2	1.883-3	3.683-5	4.683-1	3.983-2	1.733-1	8.845-1	8.845-1	7.719-1	5.139-0								

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	8.907-1	1.048-1	1.000+0	3.198-1	5.045-1	1.000+1	1.871-2	9.815-1
5.000-3	9.995-1	4.915-4	1.500-1	8.817-1	1.289-1	1.250+0	2.703-1	6.346-1	1.500+1	1.303-2	9.941-1
1.000-2	9.995-1	1.988-3	1.750-1	8.634-1	1.490-1	1.500+0	2.325-1	6.087-1	2.000+1	7.941-3	9.988-1
1.500-2	9.972-1	4.394-3	2.000-1	8.450-1	1.704-1	2.000+0	1.862-1	7.586-1	5.000+1	7.352-4	1.000+0
2.000-2	9.950-1	7.942-3	2.500-1	7.488-1	2.110-1	2.500+0	1.192-1	8.087-1	8.000+1	1.898-4	1.000+0
2.500-2	9.924-1	1.141-2	3.000-1	6.884-1	2.489-1	3.000+0	9.975-2	8.481-1	1.000+2	8.340-5	1.000+0
3.000-2	9.892-1	1.982-2	4.000-1	6.082-1	3.145-1	3.500+0	8.026-2	8.758-1	1.500+2	7.632-6	1.000+0
4.000-2	9.815-1	2.985-2	5.000-1	5.373-1	3.880-1	4.000+0	7.121-2	8.988-1	1.000+3	2.985-6	1.000+0
5.000-2	9.728-1	3.800-2	6.000-1	4.770-1	4.184-1	5.000+0	5.340-2	9.311-1	1.000+4	1.024-6	1.000+0
7.000-2	9.518-1	5.987-2	7.000-1	4.252-1	4.943-1	6.000+0	3.938-2	9.511-1			
9.000-2	9.294-1	7.393-2	8.000-1	3.821-1	4.940-1	7.000+0	2.993-2	9.632-1			
1.000-1	9.179-1	8.284-2	9.000-1	3.473-1	5.307-1	8.000+0	2.619-2	9.712-1

12/07/78

ENDL Evaluated Photon Cross Sections

60-Nd

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Energy Deposition

60-Nd

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ENCL Evaluated Photon Data

60-Nd

ATOMIC WEIGHT 144.24		DENSITY 7 GRAMS/CC				
ENERGY KEV	TOTAL HP	CROSS SECTION (BARN)				NEUT/COLLISION K.E. FLOR
		TOTAL	COMPONENT	INCOHERENT	PHOTOEL PAIR PROD	
CH	CH/CM/CH					NEUT/CM K.E.
1.000	9.880	1.475	3.532	2.393	2.498	3.530
1.100	1.080	1.360	3.182	2.382	3.393	3.180
1.200	0.908	1.078	4.028	2.382	3.473	4.020
1.300	0.974	1.088	3.813	2.391	3.878	3.810
1.500	1.088	1.337	3.202	2.390	3.599	3.200
1.750	1.319	1.083	2.995	2.388	7.510	2.990
2.000	1.582	0.888	2.182	2.387	9.752	2.180
2.300	1.717	0.718	1.982	2.384	1.275	1.980
2.500	1.726	0.277	1.982	2.384	1.275	1.980
2.600	1.726	0.277	1.982	2.384	1.275	1.980
2.700	1.726	0.277	1.982	2.384	1.275	1.980
2.800	1.726	0.277	1.982	2.384	1.275	1.980
2.900	1.726	0.277	1.982	2.384	1.275	1.980
3.000	1.726	0.277	1.982	2.384	1.275	1.980
3.100	1.726	0.277	1.982	2.384	1.275	1.980
3.200	1.726	0.277	1.982	2.384	1.275	1.980
3.300	1.726	0.277	1.982	2.384	1.275	1.980
3.400	1.726	0.277	1.982	2.384	1.275	1.980
3.500	1.726	0.277	1.982	2.384	1.275	1.980
3.600	1.726	0.277	1.982	2.384	1.275	1.980
3.700	1.726	0.277	1.982	2.384	1.275	1.980
3.800	1.726	0.277	1.982	2.384	1.275	1.980
3.900	1.726	0.277	1.982	2.384	1.275	1.980
4.000	1.726	0.277	1.982	2.384	1.275	1.980
4.100	1.726	0.277	1.982	2.384	1.275	1.980
4.200	1.726	0.277	1.982	2.384	1.275	1.980
4.300	1.726	0.277	1.982	2.384	1.275	1.980
4.400	1.726	0.277	1.982	2.384	1.275	1.980
4.500	1.726	0.277	1.982	2.384	1.275	1.980
4.600	1.726	0.277	1.982	2.384	1.275	1.980
4.700	1.726	0.277	1.982	2.384	1.275	1.980
4.800	1.726	0.277	1.982	2.384	1.275	1.980
4.900	1.726	0.277	1.982	2.384	1.275	1.980
5.000	1.726	0.277	1.982	2.384	1.275	1.980
5.100	1.726	0.277	1.982	2.384	1.275	1.980
5.200	1.726	0.277	1.982	2.384	1.275	1.980
5.300	1.726	0.277	1.982	2.384	1.275	1.980
5.400	1.726	0.277	1.982	2.384	1.275	1.980
5.500	1.726	0.277	1.982	2.384	1.275	1.980
5.600	1.726	0.277	1.982	2.384	1.275	1.980
5.700	1.726	0.277	1.982	2.384	1.275	1.980
5.800	1.726	0.277	1.982	2.384	1.275	1.980
5.900	1.726	0.277	1.982	2.384	1.275	1.980
6.000	1.726	0.277	1.982	2.384	1.275	1.980
6.100	1.726	0.277	1.982	2.384	1.275	1.980
6.200	1.726	0.277	1.982	2.384	1.275	1.980
6.300	1.726	0.277	1.982	2.384	1.275	1.980
6.400	1.726	0.277	1.982	2.384	1.275	1.980
6.500	1.726	0.277	1.982	2.384	1.275	1.980
6.600	1.726	0.277	1.982	2.384	1.275	1.980
6.700	1.726	0.277	1.982	2.384	1.275	1.980
6.800	1.726	0.277	1.982	2.384	1.275	1.980
6.900	1.726	0.277	1.982	2.384	1.275	1.980
7.000	1.726	0.277	1.982	2.384	1.275	1.980
7.100	1.726	0.277	1.982	2.384	1.275	1.980
7.200	1.726	0.277	1.982	2.384	1.275	1.980
7.300	1.726	0.277	1.982	2.384	1.275	1.980
7.400	1.726	0.277	1.982	2.384	1.275	1.980
7.500	1.726	0.277	1.982	2.384	1.275	1.980
7.600	1.726	0.277	1.982	2.384	1.275	1.980
7.700	1.726	0.277	1.982	2.384	1.275	1.980
7.800	1.726	0.277	1.982	2.384	1.275	1.980
7.900	1.726	0.277	1.982	2.384	1.275	1.980
8.000	1.726	0.277	1.982	2.384	1.275	1.980
8.100	1.726	0.277	1.982	2.384	1.275	1.980
8.200	1.726	0.277	1.982	2.384	1.275	1.980
8.300	1.726	0.277	1.982	2.384	1.275	1.980
8.400	1.726	0.277	1.982	2.384	1.275	1.980
8.500	1.726	0.277	1.982	2.384	1.275	1.980
8.600	1.726	0.277	1.982	2.384	1.275	1.980
8.700	1.726	0.277	1.982	2.384	1.275	1.980
8.800	1.726	0.277	1.982	2.384	1.275	1.980
8.900	1.726	0.277	1.982	2.384	1.275	1.980
9.000	1.726	0.277	1.982	2.384	1.275	1.980
9.100	1.726	0.277	1.982	2.384	1.275	1.980
9.200	1.726	0.277	1.982	2.384	1.275	1.980
9.300	1.726	0.277	1.982	2.384	1.275	1.980
9.400	1.726	0.277	1.982	2.384	1.275	1.980
9.500	1.726	0.277	1.982	2.384	1.275	1.980
9.600	1.726	0.277	1.982	2.384	1.275	1.980
9.700	1.726	0.277	1.982	2.384	1.275	1.980
9.800	1.726	0.277	1.982	2.384	1.275	1.980
9.900	1.726	0.277	1.982	2.384	1.275	1.980
10.000	1.726	0.277	1.982	2.384	1.275	1.980

12/07/78

ENDL Evaluated Photon Data

60-Nd

ATOMIC WEIGHT 144.24										DENSITY 7.0000/G/CC			
ENERGY KEV	TOTAL HFP			CROSS SECTION (BARN)						NEV/COLLISION		NEV/CM	
	CH	CH/CH/CH	CH/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD		K.E. FLGR	K.E. BREMSSTR	K.E.	
3.000-2	1.171-2	1.220-2	1.220-2	2.822-3	2.089-2	2.289-2	2.822-3			2.785-2	2.704-2	2.738-2	2.309-0
3.500-2	1.788-2	7.999-0	1.916-3	1.916-3	1.945-2	2.415-1	1.787-2			3.158-2	3.086-2	3.098-2	1.735-0
4.000-2	2.581-2	5.577-0	1.338-3	1.338-3	1.349-2	2.495-1	1.178-2			3.827-2	3.488-2	4.508-2	1.324-0
4.500-2	3.528-2	4.456-0	1.080-3	1.080-3	1.180-2	2.527-1	9.189-2			3.776-2	3.718-2	5.178-2	1.152-0
4.527-2	6.677-2	2.351-1	5.630-3	1.184-2	2.527-1	2.527-1	5.467-2			4.848-2	1.338-2	6.784-2	2.204-0
4.500-2	8.800-3	2.184-1	5.184-3	1.122-2	2.940-1	2.940-1	5.047-2			4.382-2	1.477-2	8.181-2	2.238-0
5.000-2	6.634-3	1.025-1	3.963-3	9.520-1	2.523-1	3.842-2				4.850-2	1.957-2	1.435-2	2.287-0
5.500-2	1.108-2	1.291-1	3.082-3	8.177-1	2.608-1	2.985-2				5.213-2	2.433-2	2.217-2	2.198-0
6.000-2	1.387-2	1.630-1	2.487-3	7.117-1	2.888-1	2.370-2				5.770-2	2.903-2	3.157-2	2.094-0
6.500-2	1.715-2	2.329-1	1.995-3	8.221-1	2.833-1	1.908-2				6.221-2	3.388-2	4.251-2	1.984-0
7.000-2	2.087-2	2.846-1	1.840-3	5.442-1	2.638-1	1.958-2				6.688-2	3.830-2	5.482-2	1.835-0
8.000-2	2.584-2	3.819-1	1.154-3	4.388-1	2.848-1	1.094-2				7.538-2	4.733-2	6.387-2	1.597-0
1.000-1	5.351-2	2.878-0	6.394-3	2.972-1	2.813-1	5.838-2				9.187-2	6.483-2	1.983-2	1.208-0
1.250-1	9.572-2	1.482-0	3.575-2	1.993-1	2.531-1	3.122-2				1.107-1	8.482-2	2.878-2	8.840-1
1.500-1	1.518-1	5.450-1	2.893-2	1.437-1	2.488-1	1.873-2				1.872-1	1.025-1	3.988-2	6.783-1
1.750-1	2.188-1	8.329-1	1.589-2	1.589-2	2.388-1	1.217-2				1.417-1	1.185-1	5.843-2	5.416-1
2.000-1	2.509-1	4.819-1	1.154-2	8.516-0	2.312-1	8.378-1				1.548-1	1.325-1	6.250-2	4.480-1
2.500-1	4.704-1	3.037-1	7.273-1	5.602-0	2.188-1	4.945-1				1.750-1	1.583-1	9.110-2	3.323-1
3.000-1	6.585-1	2.178-1	5.212-1	3.978-0	2.058-1	2.738-1				1.914-1	1.738-1	1.149-1	2.675-1
3.500-1	8.385-1	1.704-1	4.081-1	2.980-0	1.949-1	1.836-1				2.070-1	1.935-1	1.395-1	2.308-1
4.000-1	1.012-0	1.411-1	3.381-1	2.298-0	1.861-1	1.290-1				2.220-1	2.106-1	1.851-1	2.081-1
4.500-1	1.172-0	1.213-1	2.919-1	1.825-0	1.780-1	9.588-0				2.383-1	2.895-1	1.942-1	1.930-1
5.000-1	1.321-0	1.082-1	2.590-1	1.488-0	1.709-1	7.324-0				2.555-1	2.471-1	2.288-1	1.870-1
5.500-1	1.457-0	9.807-2	2.348-0	1.238-0	1.844-1	5.805-0				2.742-1	2.888-1	2.844-1	1.831-1
6.000-1	1.584-0	9.021-2	2.181-0	1.043-0	1.587-1	4.895-0				2.940-1	2.878-1	3.088-1	1.818-1
6.500-1	1.701-0	8.400-2	2.012-0	8.915-1	1.532-1	3.805-0				3.153-1	3.098-1	3.352-1	1.880-1
7.000-1	1.810-0	7.881-2	1.890-0	7.709-1	1.484-1	3.282-0				3.378-1	3.324-1	3.632-1	1.838-1
8.000-1	2.012-0	7.102-2	1.701-0	5.932-1	1.400-1	2.421-0				3.848-1	3.808-1	5.355-1	1.882-1
1.000-0	2.380-0	6.051-2	1.485-0	3.880-1	1.281-1	1.504-0				4.088-1	4.825-1	6.881-1	2.057-1
1.025-0	2.394-0	5.688-2	1.489-0	3.898-1	1.248-1	1.445-0		1.000-8		4.088-1	4.825-1	6.881-1	2.057-1
1.250-0	2.728-0	5.235-2	1.254-0	2.425-1	1.182-1	9.998-1		3.110-3		6.312-1	6.288-1	8.122-1	2.078-1
1.500-0	3.062-0	4.758-2	1.140-0	1.708-1	1.087-1	7.110-1		2.413-3		6.747-1	7.728-1	2.178-1	2.324-1
1.750-0	3.418-0	4.438-2	1.083-0	1.828-1	9.494-0	5.300-1		5.232-1		8.253-1	9.238-1	3.083-1	2.871-1
2.000-0	3.790-0	4.215-2	1.009-0	1.839-1	8.778-0	4.178-1		8.040-1		1.088-0	1.084-0	4.238-2	3.198-1
2.044-0	3.418-0	4.178-2	1.001-0	1.830-1	8.888-0	4.074-1		8.448-1		1.115-0	1.114-0	4.482-2	3.288-1
2.500-0	3.618-0	3.948-2	9.425-0	8.177-2	7.713-0	2.898-1		1.787-0		1.432-0	1.431-0	7.290-2	3.925-1
3.000-0	3.788-0	3.832-2	5.179-0	4.293-2	8.911-0	2.898-1		2.002-0		1.810-0	1.809-0	1.150-1	4.824-1
3.500-0	3.790-0	3.788-2	9.049-0	3.195-2	8.279-0	1.803-1		2.537-0		2.212-0	2.212-0	1.894-1	5.238-1
4.000-0	3.808-0	3.753-2	8.980-0	2.418-2	5.787-0	1.495-1		3.049-0		2.635-0	2.635-0	2.388-1	6.982-1
4.500-0	3.781-0	3.788-2	8.888-0	1.810-2	5.741-0	1.282-1		3.840-0		3.074-0	3.074-0	3.177-1	6.108-1
5.000-0	3.778-0	3.787-2	8.871-0	1.547-2	4.981-0	1.084-1		3.585-0		3.524-0	3.524-0	4.113-1	9.342-1
5.500-0	3.778-0	3.788-2	8.872-0	1.278-2	4.872-0	8.883-2		4.288-0		3.980-0	3.980-0	5.188-1	1.095-0
6.000-0	3.782-0	3.805-2	9.112-0	1.074-2	4.403-0	8.883-2		4.812-0		4.444-0	4.444-0	6.348-1	1.184-0
6.500-0	3.788-0	3.834-2	9.183-0	9.183-0	4.187-0	7.048-2		4.828-0		4.915-0	4.915-0	7.850-1	1.318-0
7.000-0	3.888-0	3.874-2	9.278-0	7.885-0	3.998-0	7.144-2		5.241-0		5.288-0	5.288-0	9.070-1	1.482-0
8.000-0	3.592-0	3.877-2	9.528-0	8.045-3	3.803-0	8.033-2		5.857-0		6.380-0	6.380-0	1.825-0	1.771-0
1.000-1	3.394-0	4.247-2	1.817-1	3.888-3	3.088-0	4.248-2		7.054-0		6.333-0	6.333-0	1.884-0	2.477-0
1.250-1	3.201-0	4.463-2	1.088-1	2.478-3	2.804-0	3.579-2		8.847-0		1.081-1	1.081-1	3.118-0	3.377-0
1.500-1	2.938-0	4.703-2	1.128-1	1.720-3	2.271-0	2.942-2		9.882-0		1.331-1	1.331-1	4.430-0	4.381-0
1.750-1	2.674-0	4.978-2	1.188-1	1.284-3	2.028-0	2.493-2		9.888-0		1.588-1	1.588-1	5.688-0	5.903-0
2.000-1	2.744-0	5.288-2	1.247-1	9.674-4	1.823-0	2.188-2		1.082-1		1.833-1	1.833-1	7.488-0	8.678-0
2.500-1	2.561-0	5.578-2	1.338-1	6.180-4	1.532-0	1.888-2		1.181-1		2.334-1	2.334-1	1.894-1	9.118-0
3.000-1	2.429-0	5.881-2	1.488-1	4.288-4	1.327-0	1.387-2		1.274-1		2.838-1	2.838-1	1.482-1	1.167-1
3.500-1	2.338-0	6.111-2	1.484-1	3.158-4	1.174-0	1.184-2		1.345-1		3.337-1	3.337-1	1.895-1	1.427-1
4.000-1	2.237-0	6.338-2	1.518-1	2.419-4	1.022-0	1.028-2		1.488-1		3.838-1	3.838-1	2.888-1	1.781-1
4.500-1	2.178-0	6.587-2	1.578-1	1.911-4	9.288-4	8.438-3		1.474-1		4.338-1	4.338-1	2.888-1	1.988-1
5.000-1	2.121-0	6.738-2	1.613-1	1.590-4	8.884-4	8.884-3		1.584-1		4.848-1	4.848-1	3.181-1	2.282-1
5.500-1	2.063-0	6.888-2	1.643-1	1.278-4	8.145-4	7.203-3		1.588-1		5.341-1	5.341-1	3.388-1	2.388-1
6.000-1	2.040-0	6.975-2	1.671-1	1.075-4	7.288-4	6.633-3		1.588-1		5.841-1	5.841-1	4.811-1	2.888-1
6.500-1	2.018-0	7.067-2	1.687-1	9.157-5	7.181-4	6.088-3		1.588-1		6.342-1	6.342-1	4.888-1	3.148-1
7.000-1	1.988-0	7.159-2	1.703-1	7.888-5	6.678-4	5.888-3		1.588-1		6.843-1	6.843-1	4.888-1	3.488-1
8.000-1	1.938-0	7.388-2	1.771-1	6.845-5	5.983-4	5.888-3		1.711-1		7.844-1	7.844-1	5.888-1	4.888-1
1.000-0	1.878-0	7.728-2	1.888-1	3.888-5	4.888-4	3.631-3		1.888-1		8.844-1	8.844-1	7.747-1	5.345-1

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Form Factors

60-Nd

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.080+0	1.000+0	0.800+0	1.258-1	8.988-1	1.024-1	1.000+0	3.195-1	5.987-1	1.000+1	1.889-2	9.811-1
5.088-3	9.995-1	4.833-4	1.500-1	6.620-1	1.244-1	1.250+0	2.897-1	6.308-1	1.500+1	1.319-2	9.938-1
1.000-2	9.986-1	1.900-3	1.750-1	5.371-1	1.482-1	1.500+0	2.332-1	5.038-1	2.000+1	8.121-3	9.981-1
1.500-2	9.973-1	4.262-3	2.000-1	4.090-1	1.673-1	2.000+0	1.883-1	7.587-1	5.000+1	7.794-4	1.000+0
2.000-2	9.958-1	7.283-3	2.500-1	7.530-1	2.073-1	2.500+0	1.269-1	6.070-1	8.000+1	1.804-4	1.000+0
2.500-2	9.944-1	1.103-2	3.000-1	7.007-1	2.448-1	3.000+0	1.006-1	5.443-1	1.000+2	8.905-5	1.000+0
3.000-2	9.929-1	1.529-2	4.000-1	6.115-1	3.100-1	3.500+0	8.025-2	4.733-1	1.000+3	8.389-6	1.000+0
4.000-2	9.891-1	2.485-2	5.000-1	5.398-1	3.627-1	4.000+0	7.148-2	4.085-1	1.000+5	3.082-18	1.000+0
5.000-2	9.738-1	3.495-2	6.000-1	4.791-1	4.082-1	5.000+0	5.393-2	3.298-1	1.000+9	1.243-24	1.000+0
7.000-2	9.531-1	5.446-2	7.000-1	4.268-1	4.502-1	6.000+0	3.999-2	2.501-1			
9.000-2	9.314-1	7.283-2	8.000-1	3.832-1	4.894-1	7.000+0	3.034-2	1.826-1			
1.000-1	9.208-1	8.082-2	9.000-1	3.478-1	5.259-1	8.000+0	2.646-2	1.707-1

12/07/78

ENDL Evaluated Photon Cross Sections

61-Pm

12/07/78

Energy Deposition

61-Pm

61-P₃

ATOMIC WEIGHT 145							DENSITY 7.1 GRAMS/CC					
ENERGY		TOTAL MPF		CROSS SECTION (BARNs)				NEV/COLLISION			NEV/CM	
MEV	CH	CH+CH/ON	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	K.E.+FLOR	K.E.	SHREMSSTR	K.E.	
1.000-4	7.809-6	1.791-4	9.312-8	2.473-3	2.433-2	9.310-8		9.994-5	9.994-5	3.800-10	1.271-1	
1.197-4	8.003-6	1.800-4	2.752-6	2.472-3	3.477-2	3.850-6		1.195-4	1.195-4	5.436-10	1.329-1	
1.211-4	7.321-6	1.924-4	8.832-6	2.472-3	3.359-2	4.630-6		1.210-4	1.210-4	5.995-10	1.053-1	
1.250-4	7.359-6	1.914-4	9.802-6	2.472-3	3.780-2	4.602-6		1.248-4	1.248-4	5.951-10	1.698-1	
1.400-4	7.499-6	1.870-4	4.508-6	2.471-3	4.768-2	4.520-6		1.399-4	1.399-4	7.494-10	1.805-1	
1.500-4	8.046-6	1.829-4	3.922-6	2.471-3	5.443-2	3.920-6		1.499-4	1.499-4	8.957-10	1.734-1	
1.750-4	1.071-5	1.316-4	3.188-6	2.469-3	7.394-2	3.185-6		1.749-4	1.749-4	1.186-9	1.833-1	
2.000-4	1.289-5	1.025-4	2.832-6	2.468-3	9.327-2	2.830-6		1.999-4	1.999-4	1.582-9	1.351-1	
2.113-4	1.406-5	9.460-5	2.863-6	2.463-3	1.372-1	2.860-6		2.110-4	2.110-4	2.215-9	1.622-1	
2.427-4	1.232-5	1.143-4	2.725-6	2.463-3	1.388-1	2.720-6		2.463-4	2.463-4	2.292-9	1.808-1	
2.500-4	1.258-5	1.121-4	2.689-6	2.462-3	1.405-1	2.687-6		2.498-4	2.498-4	2.378-9	1.988-1	
3.000-4	1.417-5	9.938-5	2.382-6	2.458-3	2.085-1	2.380-6		2.937-4	2.937-4	3.424-9	2.114-1	
3.303-4	1.533-5	9.169-5	2.717-6	2.454-3	2.491-1	2.710-6		3.299-4	3.299-4	4.150-9	2.153-1	
3.317-4	1.400-5	1.008-4	2.822-6	2.454-3	2.510-1	2.820-6		3.314-4	3.314-4	4.186-9	2.387-1	
3.500-4	1.478-5	9.528-5	2.234-6	2.452-3	2.772-1	2.231-6		3.498-4	3.498-4	4.660-9	2.389-1	
4.000-4	1.694-5	8.317-5	2.002-6	2.446-3	3.548-1	2.000-6		3.995-4	3.995-4	6.085-9	2.359-1	
4.500-4	1.950-5	7.221-5	1.739-6	2.438-3	4.398-1	1.738-6		4.494-4	4.494-4	7.899-9	2.304-1	
5.000-4	2.213-5	6.395-5	1.532-6	2.431-3	5.250-1	1.530-6		4.992-4	4.992-4	9.501-9	2.256-1	
5.500-4	2.534-5	5.598-5	1.338-6	2.424-3	6.100-1	1.338-6		5.490-4	5.490-4	1.149-8	2.188-1	
6.000-4	2.899-5	4.911-5	1.182-6	2.413-3	7.132-1	1.180-6		5.988-4	5.988-4	1.357-8	2.098-1	
6.500-4	3.291-5	4.346-5	1.048-6	2.402-3	8.380-1	1.044-6		6.485-4	6.485-4	1.603-8	2.001-1	
7.000-4	3.693-5	3.681-5	9.344-5	2.391-3	9.027-1	9.342-5		6.982-4	6.982-4	1.859-8	1.924-1	
7.500-4	4.105-5	3.024-5	8.202-5	2.379-3	1.107-1	8.200-5		7.479-4	7.479-4	2.148-8	1.782-1	
8.000-4	4.538-5	2.525-5	6.103-5	2.368-3	1.300-1	6.100-5		7.975-4	7.975-4	2.484-8	1.618-1	
8.500-4	5.000-5	2.035-5	5.689-5	2.356-3	1.500-1	5.681-5		8.469-4	8.469-4	2.782-8	1.472-1	
1.000-3	5.583-5	1.544-5	5.085-5	2.345-3	1.702-1	5.083-5		8.960-4	8.960-4	3.095-8	1.311-1	
1.025-3	5.981-5	1.240-5	5.085-5	2.317-3	1.928-1	5.083-5		1.025-3	1.025-3	4.005-8	1.781-1	
1.030-3	1.577-5	9.221-5	2.690-5	2.317-3	1.994-1	2.610-6		1.028-3	1.028-3	4.036-8	8.737-1	
1.035-3	1.065-5	8.882-5	6.088-6	2.308-3	1.690-1	2.059-6		1.034-3	1.034-3	4.234-8	8.483-1	
1.038-3	1.101-5	1.279-4	3.080-6	2.308-3	1.691-1	3.078-6		1.035-3	1.035-3	4.245-8	9.582-1	
1.250-3	1.705-5	8.580-5	1.889-6	2.257-3	1.980-1	1.988-6		1.248-3	1.248-3	5.943-8	7.322-1	
1.308-3	2.108-5	8.088-5	1.610-6	2.232-3	2.181-1	1.608-6		1.324-3	1.324-3	6.880-8	6.430-1	
1.357-3	1.803-5	8.788-5	6.115-6	2.232-3	2.183-1	2.113-6		1.358-3	1.358-3	7.005-8	8.425-1	
1.471-3	1.978-5	7.188-5	1.718-6	2.208-3	2.389-1	1.718-6		1.468-3	1.468-3	8.288-8	7.435-1	
1.478-3	1.784-5	7.693-5	1.689-6	2.207-3	2.394-1	1.689-6		1.470-3	1.470-3	8.241-8	6.195-1	
1.500-3	1.684-5	7.477-5	1.689-6	2.202-3	2.438-1	1.788-6		1.468-3	1.468-3	8.957-8	7.953-1	
1.690-3	2.412-5	6.940-5	1.408-6	2.199-3	2.711-1	1.407-6		1.647-3	1.647-3	1.035-7	6.831-1	
1.691-3	2.278-5	6.181-5	1.408-6	2.199-3	2.713-1	1.408-6		1.648-3	1.648-3	1.038-7	7.235-1	
1.750-3	2.650-5	5.314-5	1.269-6	2.133-3	2.898-1	1.277-6		1.747-3	1.747-3	1.146-7	8.598-1	
2.000-3	3.747-5	3.798-5	1.091-6	2.077-3	3.358-1	9.536-6		1.995-3	1.995-3	1.512-7	5.328-1	
2.000-3	6.677-5	2.167-5	1.878-6	2.077-3	3.358-1	9.536-6		2.490-3	2.490-3	2.394-7	1.730-1	
2.088-3	1.876-5	1.117-5	3.178-6	1.838-3	8.143-1	1.89-5		2.681-3	2.681-3	3.387-7	1.678-1	
2.088-3	1.983-5	8.843-5	2.128-6	1.788-3	8.971-1	2.118-6		3.472-3	3.472-3	4.985-7	1.781-1	
2.084-3	2.247-5	8.288-5	1.899-6	1.899-3	8.788-1	1.983-6		3.897-3	3.897-3	5.970-7	1.701-1	
2.088-3	3.942-5	4.638-5	1.119-6	1.988-3	7.951-1	1.165-6		4.438-3	4.438-3	7.512-7	1.498-1	
2.088-3	3.986-5	3.374-5	2.899-6	1.911-3	8.298-1	8.387-6		4.917-3	4.917-3	8.214-7	1.274-1	
2.088-3	9.687-5	2.788-5	2.689-6	1.383-3	9.971-1	6.533-6		5.390-3	5.390-3	1.187-6	1.080-1	
2.088-3	6.353-5	2.217-5	2.538-6	1.248-3	9.633-1	5.212-6		5.899-3	5.899-3	1.308-6	9.291-0	
2.088-3	7.688-5	1.837-5	2.443-6	1.177-3	1.617-1	4.304-6		6.253-3	6.253-3	1.588-6	8.198-0	
2.088-3	2.888-5	4.888-5	2.175-6	1.177-3	1.817-1	1.183-6		6.393-3	5.671-3	1.268-6	1.982-1	
2.088-3	6.524-5	4.881-5	1.189-6	1.226-3	1.882-1	1.189-6		6.424-3	5.710-3	1.243-6	1.948-1	
2.088-3	3.981-5	3.988-5	2.982-6	1.166-3	1.678-1	9.818-6		6.818-3	6.198-3	1.483-6	1.748-1	
2.012-3	3.577-5	3.537-5	9.799-5	1.183-3	1.688-1	2.388-6		6.938-3	6.267-3	1.499-6	1.735-1	
2.013-3	2.948-5	3.928-5	1.331-6	1.131-3	1.688-1	1.329-6		6.994-3	6.259-3	1.478-6	2.245-1	
2.027-3	2.988-5	4.788-5	1.148-6	1.098-3	1.127-1	1.139-6		7.398-3	6.834-3	1.677-6	2.241-1	
2.088-3	2.988-5	2.531-5	1.387-6	1.088-3	1.127-1	1.316-6		7.398-3	6.843-3	1.682-6	2.299-1	
2.088-3	3.188-5	2.531-5	1.589-6	1.088-3	1.158-1	1.589-6		7.988-3	7.268-3	1.977-6	2.317-1	
1.000-2	3.818-5	2.677-5	8.889-5	0.687-3	1.589-1	2.589-6		1.688-3	1.138-3	2.186-6	1.687-1	
1.258-2	1.053-5	1.377-5	3.316-6	0.881-3	1.588-1	3.291-6		1.488-3	1.088-3	2.753-6	1.187-1	
1.388-2	1.088-5	8.488-5	1.637-6	0.881-3	1.783-1	1.983-6		1.688-3	1.288-3	2.988-6	8.111-0	
1.788-2	2.327-5	2.573-5	1.348-6	0.383-3	1.987-1	1.788-6		1.881-3	1.688-3	2.888-6	2.377-0	
2.088-2	3.921-5	3.688-5	1.988-6	3.782-3	2.633-1	9.971-6		1.918-3	1.688-3	2.788-6	5.688-0	
2.088-2	6.888-5	2.118-5	1.588-6	2.688-3	2.899-1	4.681-6		2.384-3	2.888-3	1.988-6	2.377-0	
2.088-2	1.687-5	1.888-5	3.188-6	2.187-3	2.878-1	2.681-6		2.771-3	2.788-3	2.788-6	2.488-0	

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 145		CROSS SECTION (BARN)						DENSITY 7.1 GRAMS/CC			
ENERGY	TOTAL NFP	TOTAL COHERENT INCOHERENT PHOTOEL PAIR PROD				NEV/COLLISION		K.E.		NEV/CM	
MEV	CM	CM	CM	CM	CM	CM	CM	CM	CM	CM	CM
3.500-2	1.851-2	0.969-0	2.053-3	1.715-2	2.445-1	1.857-3	3.189-2	3.103-2	3.888-5	1.878-0	1.878-0
4.000-2	2.382-2	5.984-0	1.438-3	1.407-2	2.528-1	1.870-3	3.543-2	3.478-2	4.807-5	1.473-0	1.473-0
4.500-2	3.235-2	4.354-0	1.048-3	1.170-2	2.574-1	9.057-2	3.888-2	3.833-2	5.594-5	1.185-0	1.185-0
4.518-2	3.270-2	4.308-0	1.037-3	1.183-2	2.575-1	8.952-2	3.809-2	3.846-2	5.630-5	1.176-0	1.176-0
4.518-2	6.243-3	2.258-1	5.432-3	1.183-2	2.575-1	5.890-3	4.408-2	1.380-2	7.255-8	2.210-0	2.210-0
5.000-2	6.077-3	1.744-1	4.188-3	9.823-1	2.818-1	4.073-3	4.853-2	1.843-2	1.294-5	2.281-0	2.281-0
5.500-2	1.834-2	1.382-1	3.878-3	8.525-1	2.842-1	3.188-3	5.317-2	2.319-2	2.048-5	2.243-0	2.243-0
6.000-2	1.293-2	1.088-1	2.818-3	7.481-1	2.885-1	2.588-3	5.775-2	2.781-2	2.987-5	2.158-0	2.158-0
6.500-2	1.801-2	8.795-0	2.118-3	6.488-1	2.870-1	2.088-3	6.228-2	3.259-2	4.043-5	2.035-0	2.035-0
7.000-2	1.948-2	7.230-0	1.781-3	5.730-1	2.875-1	1.857-3	6.678-2	3.721-2	5.271-5	1.910-0	1.910-0
8.000-2	2.787-2	5.090-0	1.228-3	4.580-1	2.884-1	1.153-3	7.948-2	4.629-2	8.153-5	1.673-0	1.673-0
1.000-1	4.984-2	2.850-0	6.781-2	3.104-1	2.852-1	6.215-2	9.210-2	5.370-2	1.543-4	1.275-0	1.275-0
1.250-1	8.949-2	1.574-0	3.780-2	2.081-1	2.589-1	3.325-2	1.111-1	8.387-2	2.673-4	9.372-1	9.372-1
1.500-1	1.416-1	9.845-0	2.384-2	1.501-1	2.504-1	1.994-2	1.279-1	1.021-1	3.995-4	7.208-1	7.208-1
1.750-1	2.054-1	6.858-1	1.851-2	1.134-1	2.420-1	1.258-2	1.427-1	1.183-1	5.312-4	5.781-1	5.781-1
2.000-1	2.789-1	5.050-1	1.216-2	8.898-0	2.349-1	8.981-1	1.959-1	1.326-1	6.673-4	4.798-1	4.798-1
2.500-1	4.445-1	3.188-1	7.659-1	5.854-0	2.202-1	4.841-1	1.788-1	1.571-1	9.354-4	3.534-1	3.534-1
3.000-1	8.231-1	2.281-1	5.443-1	4.138-0	2.089-1	2.938-1	1.937-1	1.770-1	1.186-3	2.841-1	2.841-1
3.500-1	7.983-1	1.784-1	4.248-1	3.095-0	1.981-1	1.957-1	3.097-1	1.924-1	1.444-3	3.447-1	3.447-1
4.000-1	9.885-1	1.487-1	3.508-1	2.397-0	1.888-1	1.377-1	2.550-1	1.128-1	1.712-3	5.201-1	5.201-1
4.500-1	1.122-0	1.295-1	3.082-1	1.908-0	1.809-1	1.082-1	2.414-1	2.308-1	2.015-3	2.057-1	2.057-1
5.000-1	1.267-0	1.111-1	2.676-1	1.758-0	1.737-1	7.830-0	2.588-1	2.495-1	2.352-3	1.989-1	1.989-1
5.500-1	1.400-0	1.008-1	2.442-1	1.293-0	1.671-1	6.215-0	2.774-1	2.895-1	2.740-3	1.924-1	1.924-1
6.000-1	1.524-0	9.242-2	2.225-1	1.091-0	1.813-1	5.033-0	2.972-1	2.902-1	3.178-3	1.904-1	1.904-1
6.500-1	1.638-0	8.897-2	2.070-1	9.328-1	1.957-1	4.183-0	3.186-1	3.123-1	3.675-3	1.908-1	1.908-1
7.000-1	1.748-0	8.008-2	1.943-1	8.085-1	1.508-1	3.940-0	3.408-1	3.352-1	4.259-3	1.920-1	1.920-1
8.000-1	1.943-0	7.251-2	1.748-1	8.207-1	1.423-1	2.810-0	3.880-1	3.834-1	5.522-3	1.873-1	1.873-1
1.000-0	2.283-0	6.188-2	1.485-1	3.997-1	1.282-1	1.833-0	4.918-1	4.884-1	8.989-3	2.139-1	2.139-1
1.022-0	2.317-0	8.079-2	1.484-1	3.829-1	1.288-1	1.989-0	5.040-1	5.007-1	9.378-3	2.181-1	2.181-1
1.250-0	2.945-0	5.325-2	1.882-1	2.570-1	1.148-1	1.081-0	6.348-1	6.316-1	1.485-2	2.388-1	2.388-1
1.500-0	2.912-0	4.837-2	1.185-1	1.788-1	1.044-1	7.717-1	7.778-1	7.788-1	2.285-2	2.682-1	2.682-1
1.750-0	3.128-0	4.512-2	1.088-1	1.316-1	9.811-0	5.751-1	9.275-1	9.259-1	3.157-2	2.988-1	2.988-1
2.000-0	3.688-0	4.283-2	1.031-1	1.009-1	8.882-0	4.534-1	1.088-0	1.088-0	4.320-2	3.303-1	3.303-1
2.244-0	3.317-0	4.247-2	1.022-1	9.682-2	8.813-0	4.377-1	1.117-0	1.118-0	4.551-2	3.384-1	3.384-1
2.500-0	3.509-0	4.013-2	9.883-0	6.487-2	7.841-0	4.398-1	1.434-0	1.433-0	7.426-2	4.084-1	4.084-1
3.000-0	3.813-0	3.888-2	9.387-0	4.494-2	7.026-0	2.425-1	1.812-0	1.812-0	1.170-1	5.015-1	5.015-1
3.500-0	3.671-0	3.837-2	9.238-0	3.302-2	8.384-0	1.953-1	2.215-0	2.215-0	1.724-1	6.032-1	6.032-1
4.000-0	3.885-0	3.822-2	9.203-0	2.529-2	5.883-0	1.619-1	2.638-0	2.638-0	2.411-1	7.158-1	7.158-1
4.500-0	3.888-0	3.840-2	9.245-0	1.999-2	5.430-0	1.388-1	3.078-0	3.078-0	2.332-1	8.390-1	8.390-1
5.000-0	3.849-0	3.880-2	9.295-0	1.620-2	5.084-0	1.183-1	3.529-0	3.528-0	4.183-1	9.870-1	9.870-1
5.500-0	3.847-0	3.882-2	9.298-0	1.338-2	4.750-0	1.049-1	4.431-0	4.431-0	5.255-1	1.093-0	1.093-0
6.000-0	3.630-0	3.881-2	9.343-0	1.185-2	4.477-0	9.393-2	4.448-0	4.448-0	6.452-1	1.828-0	1.828-0
6.500-0	3.601-0	3.912-2	9.418-0	9.585-3	4.236-0	8.486-2	4.921-0	4.921-0	7.773-1	1.387-0	1.387-0
7.000-0	3.583-0	3.953-2	9.518-0	8.295-3	4.024-0	7.725-2	5.398-0	5.398-0	9.212-1	1.515-0	1.515-0
8.000-0	3.489-0	4.080-2	9.776-0	6.329-3	3.883-0	6.525-2	6.388-0	6.388-0	1.243-0	1.835-0	1.835-0
1.000-1	3.247-0	4.338-2	1.044-1	4.050-3	3.120-0	4.915-2	8.340-0	8.340-0	2.012-0	2.588-0	2.588-0
1.250-1	3.088-0	4.581-2	1.088-1	2.593-3	2.847-0	3.888-2	1.082-0	1.082-0	3.159-0	3.503-0	3.503-0
1.500-1	2.929-0	4.809-2	1.158-1	1.801-3	2.309-0	3.180-2	1.332-0	1.332-0	4.443-0	4.946-0	4.946-0
1.750-1	2.771-0	5.084-2	1.224-1	1.323-3	2.024-0	2.894-2	1.583-0	1.583-0	5.955-0	5.712-0	5.712-0
2.000-1	2.644-0	5.328-2	1.288-1	1.013-3	1.853-0	2.334-2	1.834-0	1.834-0	7.994-0	6.934-0	6.934-0
2.500-1	2.487-0	5.709-2	1.375-1	8.481-4	1.258-0	1.636-2	2.335-0	2.335-0	1.100-1	9.488-0	9.488-0
3.000-1	2.339-0	6.021-2	1.450-1	4.501-4	1.349-0	1.510-2	2.837-0	2.837-0	1.474-1	1.213-1	1.213-1
3.500-1	2.251-0	6.258-2	1.587-1	3.307-4	1.194-0	1.278-2	3.338-0	3.338-0	1.889-1	1.483-1	1.483-1
4.000-1	2.173-0	6.482-2	1.751-1	2.532-4	1.072-0	1.108-2	3.839-0	3.839-0	2.281-1	1.787-1	1.787-1
4.500-1	2.087-0	6.715-2	1.817-1	2.001-4	9.750-1	9.785-3	4.340-0	4.340-0	2.705-1	2.088-1	2.088-1
5.000-1	2.042-0	6.888-2	1.881-1	1.621-4	8.851-1	8.719-3	4.841-0	4.841-0	3.140-1	2.371-1	2.371-1
5.500-1	2.005-0	7.064-2	1.981-1	1.334-4	8.250-1	7.678-3	5.342-0	5.342-0	3.583-1	2.884-1	2.884-1
6.000-1	1.971-0	7.145-2	1.728-1	1.125-4	7.712-1	7.188-3	5.842-0	5.842-0	4.032-1	3.284-1	3.284-1
6.500-1	1.940-0	7.288-2	1.748-1	9.587-5	7.219-1	6.577-3	6.343-0	6.343-0	4.487-1	3.889-1	3.889-1
7.000-1	1.911-0	7.378-2	1.773-1	8.288-5	6.791-1	6.878-3	6.843-0	6.843-0	4.977-1	3.381-1	3.381-1
8.000-1	1.858-0	7.577-2	1.884-1	6.329-5	6.082-1	5.282-3	7.844-0	7.844-0	5.878-1	4.288-1	4.288-1
1.000-2	1.772-0	7.948-2	1.914-1	4.698-5	5.848-1	4.140-3	8.848-0	8.848-0	7.775-1	5.998-1	5.998-1

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Form Factors

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SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT
1/A		1/A		1/A		1/A	
0.000-0	1.000-0	0.000-0	1.250-1	0.950-1	1.000-1	1.000-0	3.125-1
5.000-3	9.995-1	4.990-4	1.900-1	0.800-1	1.210-1	1.250-0	2.001-1
1.000-2	9.995-1	1.030-3	1.750-1	0.400-1	1.433-1	1.500-0	2.333-1
1.500-2	9.974-1	4.057-3	2.000-1	0.131-1	1.642-1	2.000-0	1.783-1
2.000-2	9.984-1	7.030-3	2.500-1	7.574-1	2.037-1	2.500-0	1.825-1
2.500-2	9.989-1	1.000-2	3.000-1	7.021-1	2.407-1	3.000-0	1.014-1
3.000-2	9.990-1	1.400-2	4.000-1	6.152-1	3.020-1	3.500-0	0.020-2
4.000-2	9.987-1	2.400-2	5.000-1	5.420-1	3.503-1	4.000-0	7.100-2
5.000-2	9.975-1	3.395-2	6.000-1	4.815-1	4.030-1	5.000-0	5.441-2
7.000-2	9.946-1	5.307-2	7.000-1	4.200-1	4.450-1	6.000-0	4.000-2
9.000-2	9.934-1	7.095-2	8.000-1	3.845-1	4.840-1	7.000-0	3.070-2
1.000-1	9.924-1	7.880-2	9.000-1	3.404-1	5.209-1	8.000-0	2.675-2

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ENDL Evaluated Photon Cross Sections

62-Sm

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Energy Deposition

62-Sm

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ENOL Evaluated Photon Data

62-Sm

ATOMIC WEIGHT 156.95				DENSITY 7.49 GRAMS/CC					
ENERGY	TOTAL NFP		CROSS SECTION (BARNs)				NEV/COLLISION		NEV/CM
KEV	CM	CM ² /CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. + FLOR	K.E. BREMSSTR	K.E.
1.000-4	6.717-8	1.888-4	4.983-8	2.555-3	2.412-2	4.980-8	9.995-5	3.671-10	1.488-10
1.250-4	7.817-8	1.753-4	4.378-8	2.554-3	3.742-2	4.370-8	1.249-4	8.048-10	1.040-10
1.283-4	7.729-8	1.727-4	4.313-8	2.553-3	3.939-2	4.310-8	1.282-4	8.371-10	1.059-10
1.297-4	6.597-8	2.024-4	5.953-8	2.553-3	4.024-2	5.950-8	1.296-4	6.512-10	1.985-10
1.400-4	6.227-8	2.144-4	5.253-8	2.553-3	4.678-2	5.250-8	1.399-4	7.388-10	2.247-10
1.500-4	6.898-8	1.938-4	4.833-8	2.552-3	5.328-2	4.830-8	1.499-4	8.705-10	2.174-10
1.750-4	8.731-8	1.529-4	3.818-8	2.551-3	7.244-2	3.815-8	1.749-4	1.185-9	2.303-9
2.000-4	1.071-5	1.287-4	3.113-8	2.549-3	9.408-2	3.110-8	1.998-4	1.547-9	2.404-9
2.500-4	1.898-5	1.026-4	2.587-8	2.544-3	1.444-1	2.585-8	2.498-4	2.417-9	1.923-9
2.528-4	1.311-5	1.018-4	2.943-8	2.544-3	1.475-1	2.940-8	2.525-4	2.471-9	1.928-9
2.942-4	1.110-5	1.203-4	3.003-8	2.544-3	1.491-1	3.000-8	2.540-4	2.500-9	2.208-9
3.000-4	1.257-5	1.062-4	2.653-8	2.540-3	2.049-1	2.650-8	2.997-4	3.481-9	2.305-9
3.450-4	1.423-5	9.383-5	2.343-8	2.534-3	2.854-1	2.340-8	3.448-4	4.602-9	2.422-9
3.484-4	1.311-5	1.018-4	2.543-8	2.534-3	2.874-1	2.540-8	3.461-4	4.640-9	2.640-9
3.500-4	1.325-5	1.007-4	2.515-8	2.534-3	2.726-1	2.512-8	3.466-4	4.737-9	2.638-9
4.000-4	1.527-5	8.742-5	2.183-8	2.528-3	3.490-1	2.180-8	3.995-4	6.186-9	2.618-9
4.500-4	1.783-5	7.572-5	1.890-8	2.520-3	4.299-1	1.888-8	4.494-4	7.826-9	2.549-9
5.000-4	2.005-5	6.898-5	1.683-8	2.513-3	5.179-1	1.680-8	4.956-4	9.858-9	2.490-9
5.500-4	2.306-5	5.790-5	1.448-8	2.503-3	6.076-1	1.443-8	5.490-4	1.168-8	2.381-9
6.000-4	2.619-5	5.087-5	1.272-8	2.495-3	7.029-1	1.270-8	5.988-4	1.390-8	2.288-9
6.500-4	2.985-5	4.503-5	1.124-8	2.484-3	7.949-1	1.122-8	6.486-4	1.630-8	2.185-9
7.000-4	3.325-5	4.015-5	1.002-8	2.473-3	8.907-1	1.000-8	6.983-4	1.889-8	2.092-9
8.000-4	4.143-5	3.222-5	8.045-5	2.454-3	1.094-0	8.020-5	7.976-4	2.485-8	1.925-9
9.000-4	5.093-5	2.821-5	6.944-5	2.430-3	1.285-0	6.920-5	8.967-4	3.115-8	1.780-9
1.000-3	5.848-5	2.384-5	5.848-5	2.408-3	1.484-0	5.877-5	9.959-4	3.843-8	1.783-9
1.081-3	5.097-5	2.190-5	5.467-5	2.383-3	1.830-0	5.443-5	1.078-3	4.489-8	1.785-9
1.082-3	1.595-5	6.533-5	2.130-5	2.383-3	1.632-0	2.128-5	1.081-3	4.526-8	1.908-9
1.107-3	1.681-5	6.038-5	2.008-5	2.376-3	1.678-0	2.004-5	1.108-3	4.737-8	1.695-9
1.108-3	1.132-5	1.178-4	2.943-5	2.375-3	1.880-0	2.941-5	1.107-3	4.749-8	1.776-9
1.250-3	1.951-5	8.608-5	2.144-5	2.358-3	1.942-0	2.148-5	1.249-3	6.041-8	1.804-9
1.283-3	2.164-5	8.170-5	1.940-5	2.358-3	2.285-0	1.938-5	1.418-3	7.780-8	1.852-9
1.421-3	1.837-5	8.138-5	2.035-5	2.299-3	2.287-0	2.034-5	1.419-3	7.808-8	1.871-9
1.500-3	1.885-5	7.083-5	1.788-5	2.282-3	2.420-0	1.786-5	1.498-3	8.696-8	1.794-9
1.541-3	2.024-5	6.598-5	1.847-5	2.270-3	2.494-0	1.845-5	1.539-3	9.176-8	1.605-9
1.542-3	1.838-5	7.271-5	1.815-5	2.270-3	2.498-0	1.813-5	1.540-3	9.190-8	1.687-9
1.728-3	2.478-5	5.400-5	1.348-5	2.218-3	2.834-0	1.346-5	1.725-3	1.153-7	1.697-9
1.729-3	2.335-5	5.717-5	1.427-5	2.218-3	2.838-0	1.425-5	1.728-3	1.155-7	1.738-9
1.750-3	2.410-5	5.539-5	1.383-5	2.213-3	2.875-0	1.381-5	1.747-3	1.183-7	1.749-9
2.000-3	3.415-5	3.910-5	9.782-5	2.154-3	3.337-0	9.740-5	1.996-3	1.943-7	1.884-9
2.500-3	6.109-5	2.188-5	5.457-5	2.013-3	4.225-0	5.438-5	2.491-3	2.404-7	1.877-9
3.000-3	9.818-5	1.380-5	3.395-5	1.904-3	5.123-0	3.378-5	2.983-3	3.444-7	1.738-9
3.500-3	1.465-4	9.110-5	2.273-5	1.776-3	5.952-0	2.257-5	3.473-3	4.672-7	1.370-9
4.000-3	2.072-4	8.444-5	1.605-5	1.672-3	6.778-0	1.592-5	3.958-3	6.070-7	1.910-9
4.500-3	2.811-4	4.750-5	1.186-5	1.563-3	7.538-0	1.170-5	4.440-3	7.639-7	1.580-9
5.000-3	3.690-4	3.618-5	9.033-5	1.472-3	8.286-0	8.885-5	4.918-3	9.371-7	1.333-9
5.500-3	4.718-4	2.830-5	7.085-5	1.381-3	8.984-0	6.926-5	5.392-3	1.126-6	1.143-9
6.000-3	5.901-4	2.282-5	5.848-5	1.303-3	9.632-0	5.517-5	5.861-3	1.331-6	9.931-10
6.500-3	7.248-4	1.842-5	4.599-5	1.223-3	1.022-1	4.476-5	6.326-3	1.550-6	8.728-10
6.718-3	7.882-4	1.894-5	4.225-5	1.191-3	1.047-1	4.109-5	6.525-3	1.649-6	8.273-10
6.717-3	2.995-4	4.458-5	1.113-5	1.191-3	1.047-1	1.101-5	6.844-3	1.326-6	1.953-10
7.000-3	3.334-4	4.004-5	9.988-5	1.153-3	1.080-1	9.881-5	6.919-3	1.453-6	1.837-10
7.311-3	3.733-4	3.577-5	8.930-5	1.114-3	1.115-1	8.817-5	7.219-3	1.600-6	1.721-10
7.312-3	2.698-4	5.024-5	1.254-5	1.114-3	1.116-1	1.243-5	7.246-3	1.612-6	1.827-10
7.736-3	3.881-4	4.333-5	1.082-5	1.085-3	1.183-1	1.071-5	7.759-3	1.625-6	2.228-10
7.737-3	2.881-4	5.018-5	1.253-5	1.085-3	1.183-1	1.242-5	7.811-3	1.831-6	2.384-10
8.000-3	2.905-4	4.588-5	1.147-5	1.077-3	1.133-1	1.137-5	7.927-3	1.970-6	2.455-10
1.000-2	5.827-4	2.329-5	6.377-5	9.418-5	1.388-1	8.231-5	9.886-3	3.188-6	1.738-10
1.280-2	9.475-4	1.409-5	3.518-5	6.821-5	1.587-1	3.490-5	1.286-3	1.147-6	2.211-10
1.380-2	1.537-3	8.885-5	2.188-5	5.441-5	1.773-1	2.112-5	1.461-3	1.383-6	1.966-10
1.750-2	2.328-3	5.741-5	1.433-5	4.500-5	1.916-1	1.388-5	1.682-3	1.615-6	1.843-10
2.000-2	3.323-3	4.018-5	1.003-5	3.882-5	2.050-1	9.822-5	1.919-3	1.842-6	1.942-10
2.500-2	6.672-3	2.180-5	5.498-5	2.874-5	2.227-1	5.180-5	2.328-3	2.284-6	1.781-10
3.000-2	9.888-3	1.398-5	3.372-5	2.248-5	2.383-1	3.123-5	2.700-3	2.708-6	2.737-10

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 150.35		DENSITY 7.49 GRAMS/CC									
ENERGY	TOTAL HPF		CROSS SECTION (BARNs)						NEUTRON COLLISION		NEUTRON
	NEV	CM CM ² /CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E. SPINSTR	K.E.	
3.500-2	1.497-2	8.919-0	2.827-3	1.788-2	2.479-2	2.023-3		3.193-2	3.110-2	3.743-5	2.877-0
4.000-2	2.135-2	8.253-0	1.381-3	1.487-2	2.957-2	1.388-3		3.584-2	3.492-2	4.719-5	1.836-0
4.500-2	2.860-2	4.573-0	1.142-3	1.218-2	2.807-2	9.837-2		3.825-2	3.695-2	5.751-5	1.320-0
4.883-2	3.243-2	4.117-0	1.028-3	1.145-2	2.524-2	8.870-2		4.052-2	3.983-2	6.137-5	1.228-0
4.883-2	6.319-3	2.113-1	5.275-3	1.145-2	2.624-2	5.134-3		4.580-2	1.427-2	7.084-6	2.236-0
5.000-2	7.477-3	1.788-1	4.458-3	1.034-2	2.822-2	4.328-3		4.857-2	1.731-2	1.181-5	2.315-0
5.500-2	9.290-3	1.392-1	3.478-3	8.883-3	2.877-2	3.360-3		5.321-2	2.209-2	1.889-5	2.303-0
6.000-2	1.203-2	1.110-1	2.771-3	7.734-3	2.701-2	2.867-3		5.780-2	2.882-2	2.784-5	2.230-0
6.500-2	1.489-2	8.889-0	2.239-3	6.784-3	2.707-2	2.144-3		6.234-2	3.150-2	3.841-5	2.116-0
7.000-2	1.812-2	7.387-0	1.839-3	5.975-3	2.712-2	1.752-3		6.681-2	3.614-2	5.053-5	1.994-0
8.000-2	2.578-2	5.179-0	1.293-3	4.778-3	2.722-2	1.218-3		7.557-2	4.524-2	7.918-5	1.795-0
1.000-1	4.883-2	2.863-0	7.148-3	2.239-3	2.681-2	8.258-2		9.226-2	6.273-2	1.521-4	1.345-0
1.250-1	6.360-2	1.587-0	3.987-3	2.171-3	2.508-2	3.509-2		1.114-1	6.307-2	2.869-4	9.836-1
1.500-1	1.324-1	1.008-0	2.517-2	1.588-3	2.542-2	2.108-2		1.894-1	1.015-1	3.973-4	7.881-1
1.750-1	1.922-1	8.945-0	1.734-2	1.184-3	2.457-2	1.370-2		1.434-1	1.180-1	5.389-4	6.137-1
2.000-1	2.614-1	5.108-0	1.275-2	9.280-0	2.385-2	9.439-1		1.584-1	1.326-1	6.777-4	5.073-1
2.500-1	4.175-1	3.198-0	7.984-1	5.114-0	2.237-2	5.138-1		1.784-1	1.577-1	9.582-4	3.778-1
3.000-1	5.888-1	2.275-0	5.881-1	4.345-0	2.122-2	3.124-1		1.959-1	1.782-1	1.223-3	3.038-1
3.500-1	7.540-1	1.771-0	4.421-1	3.234-0	2.012-2	2.085-1		2.123-1	1.971-1	1.494-3	3.815-1
4.000-1	9.154-1	1.459-0	3.841-1	2.505-0	1.922-2	1.469-1		2.279-1	2.149-1	1.775-3	3.248-1
4.500-1	1.085-0	1.294-0	3.130-1	1.995-0	1.838-2	1.093-1		2.446-1	2.334-1	2.091-3	2.191-1
5.000-1	1.205-0	1.108-0	2.788-1	1.627-0	1.785-2	8.383-0		2.619-1	2.522-1	2.441-3	2.093-1
5.500-1	1.334-0	1.001-0	2.499-1	1.351-0	1.698-2	8.882-0		2.808-1	2.722-1	2.842-3	2.041-1
6.000-1	1.434-0	9.185-0	2.293-1	1.141-0	1.639-2	5.401-0		3.006-1	2.931-1	3.291-3	2.016-1
6.500-1	1.554-0	8.534-0	2.131-1	9.782-0	1.583-2	4.504-0		3.220-1	3.152-1	3.803-3	2.015-1
7.000-1	1.689-0	8.000-0	1.987-1	8.434-0	1.532-2	3.806-0		3.442-1	3.381-1	4.372-3	2.026-1
8.000-1	1.860-0	7.177-0	1.792-1	6.492-0	1.446-2	2.811-0		3.913-1	3.852-1	5.855-3	2.078-1
1.000-0	2.192-0	6.052-0	1.521-1	4.181-0	1.303-2	1.782-0		4.949-1	4.912-1	9.175-3	2.241-1
1.022-0	2.224-0	6.002-0	1.499-1	4.005-0	1.289-2	1.692-0	1.000-6	5.071-1	5.035-1	9.834-3	2.263-1
1.250-0	2.543-0	5.250-0	1.311-1	2.888-0	1.187-2	1.186-0	3.299-3	6.370-1	6.342-1	1.521-2	2.494-1
1.500-0	2.882-0	4.785-0	1.190-1	1.872-0	1.081-2	8.323-1	2.629-1	7.797-1	7.774-1	2.273-2	2.775-1
1.750-0	3.005-0	4.443-0	1.109-1	1.377-0	9.788-0	6.202-1	5.871-1	9.297-1	9.279-1	3.221-2	5.088-1
2.000-0	3.185-0	4.218-0	1.053-1	1.058-0	9.088-0	4.889-1	8.887-1	1.090-0	1.088-0	4.403-2	3.439-1
2.044-0	3.192-0	4.182-0	1.044-1	1.011-0	8.957-0	4.719-1	9.119-1	1.119-0	1.117-0	4.838-2	3.501-1
2.500-0	3.378-0	3.954-0	9.872-0	8.788-2	7.989-0	3.433-1	1.488-0	1.438-0	1.435-0	7.580-2	4.250-1
3.000-0	3.473-0	3.844-0	9.586-0	4.702-2	7.141-0	2.810-1	2.147-0	1.815-0	1.814-0	1.191-1	5.222-1
3.500-0	3.528-0	3.785-0	9.449-0	3.458-2	6.488-0	2.102-1	2.716-0	2.218-0	2.217-0	1.754-1	6.885-1
4.000-0	3.539-0	3.773-0	9.419-0	2.848-2	5.959-0	1.742-1	3.258-0	2.842-0	2.841-0	2.452-1	7.483-1
4.500-0	3.521-0	3.782-0	9.486-0	2.058-2	5.519-0	1.470-1	3.773-0	3.085-0	3.081-0	3.288-1	8.750-1
5.000-0	3.501-0	3.813-0	9.521-0	1.685-2	5.147-0	1.273-1	4.228-0	3.533-0	3.532-0	4.252-1	1.009-0
5.500-0	3.498-0	3.817-0	9.520-0	1.400-2	4.688-0	1.128-1	4.574-0	3.588-0	3.588-0	5.340-1	1.140-0
6.000-0	3.481-0	3.836-0	9.577-0	1.177-2	4.250-0	1.010-1	4.914-0	4.454-0	4.454-0	6.556-1	1.280-0
6.500-0	3.452-0	3.888-0	9.636-0	1.003-2	4.306-0	9.122-2	5.249-0	4.926-0	4.926-0	7.895-1	1.427-0
7.000-0	3.415-0	3.909-0	9.780-0	8.845-3	4.090-0	8.303-2	5.579-0	5.404-0	5.403-0	9.355-1	1.582-0
8.000-0	3.324-0	4.017-0	1.003-1	8.623-3	3.723-0	7.009-2	6.229-0	6.372-0	6.372-0	1.262-0	1.917-0
1.000-1	3.110-0	4.293-2	1.072-1	4.238-3	3.171-0	5.280-2	7.491-0	6.348-0	6.346-0	2.040-0	2.684-0
1.250-1	2.936-0	4.517-2	1.128-1	2.713-3	2.690-0	4.154-2	8.543-0	1.082-1	1.082-1	3.199-0	3.862-0
1.500-1	2.802-0	4.785-2	1.190-1	1.884-3	2.347-0	3.415-2	9.513-0	1.332-1	1.332-1	4.538-0	4.754-0
1.750-1	2.650-0	5.038-2	1.258-1	1.384-3	2.087-0	2.894-2	1.048-1	1.583-1	1.583-1	6.020-0	5.975-0
2.000-1	2.528-0	5.280-2	1.318-1	1.080-3	1.884-0	2.507-2	1.127-1	1.834-1	1.834-1	7.621-0	7.254-0
2.500-1	2.338-0	5.883-2	1.414-1	6.782-4	1.983-0	1.972-2	1.253-1	2.336-1	2.336-1	1.110-1	9.908-0
3.000-1	2.235-0	5.973-2	1.491-1	4.710-4	1.578-0	1.621-2	1.353-1	2.837-1	2.837-1	1.488-1	1.269-1
3.500-1	2.150-0	6.209-2	1.520-1	3.481-4	1.215-0	1.374-2	1.427-1	3.338-1	3.338-1	1.863-1	1.253-1
4.000-1	2.075-0	6.433-2	1.608-1	2.850-4	1.090-0	1.190-2	1.458-1	3.840-1	3.840-1	2.256-1	1.650-1
4.500-1	2.003-0	6.665-2	1.684-1	2.094-4	9.910-1	1.049-2	1.584-1	4.341-1	4.341-1	2.722-1	2.187-1
5.000-1	1.950-0	6.842-2	1.709-1	1.898-4	9.097-1	9.383-3	1.817-1	4.842-1	4.842-1	3.158-1	2.483-1
5.500-1	1.915-0	6.972-2	1.741-1	1.401-4	8.416-1	8.452-3	1.856-1	5.342-1	5.342-1	3.602-1	2.790-1
6.000-1	1.888-0	7.093-2	1.771-1	1.177-4	7.839-1	7.897-3	1.892-1	5.843-1	5.843-1	4.053-1	3.104-1
6.500-1	1.853-0	7.207-2	1.799-1	1.003-4	7.337-1	7.083-3	1.725-1	6.343-1	6.343-1	4.509-1	3.424-1
7.000-1	1.825-0	7.317-2	1.827-1	8.850-5	6.802-1	6.522-3	1.757-1	6.844-1	6.844-1	4.970-1	3.751-1
8.000-1	1.775-0	7.523-2	1.878-1	6.323-5	6.182-1	5.890-3	1.816-1	7.845-1	7.845-1	5.903-1	4.420-1
1.000-2	1.698-0	7.881-2	1.978-1	4.238-5	5.131-1	4.445-3	1.918-1	9.847-1	9.847-1	7.802-1	5.820-1

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	8.983-1	9.800-2	1.000+0	3.198-1	5.494-1	1.000+1	1.871-2	9.803-1
5.000-3	9.995-1	4.518-4	1.500-1	8.714-1	1.193-1	1.250+0	2.805-1	8.218-1	1.500+1	1.347-2	9.932-1
1.000-2	9.988-1	1.774-3	1.750-1	8.444-1	1.405-1	1.500+0	2.332-1	6.773-1	2.000+1	8.470-3	9.978-1
1.500-2	9.975-1	3.881-3	2.000-1	8.171-1	1.610-1	2.000+0	1.720-1	7.527-1	5.000+1	8.588-4	1.000+0
2.000-2	9.955-1	6.883-3	2.500-1	7.819-1	2.000-1	2.500+0	1.242-1	8.035-1	8.000+1	2.037-4	1.000+0
2.500-2	9.931-1	1.031-2	3.000-1	7.097-1	2.585-1	3.000+0	1.023-1	8.408-1	1.000+2	1.014-4	1.000+0
3.000-2	9.908-1	1.433-2	4.000-1	6.191-1	3.000-1	3.500+0	8.038-2	8.889-1	1.000+3	1.018-7	1.000+0
4.000-2	9.833-1	2.338-2	5.000-1	5.480-1	3.535-1	4.000+0	7.185-2	8.930-1	1.000+6	4.127-16	1.000+0
5.000-2	9.753-1	3.258-2	6.000-1	4.842-1	3.980-1	5.000+0	5.483-2	9.288-1	1.000+9	1.840-24	1.000+0
7.000-2	9.59-1	5.172-2	7.000-1	4.309-1	4.407-1	6.000+0	4.119-2	9.480-1			
9.000-2	9.43-1	6.880-2	8.000-1	3.880-1	4.795-1	7.000+0	3.125-2	9.612-1			
1.000-1	9.26-1	7.719-2	9.000-1	3.492-1	5.157-1	8.000+0	2.707-2	9.697-1

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ENDL Evaluated Photon Cross Sections

63-Eu

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Energy Deposition

63-Eu

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ENCL Evaluated Photon Data

63-Eu

ATOMIC WEIGHT 151.96						DENSITY 5.245 GRAMS/CC				
ENERGY		TOTAL HPF		CROSS SECTION (BARNs)				HEV/COLLISION		HEV/CM
KEV	CM	CM/CM/GR	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E.-FLOR	K.E.	BREMSSTR	K.E.
1.000	9.410	2.826	5.113	2.630	2.345	5.110	9.995	9.995	3.933-10	1.082
1.250	1.046	1.822	4.998	2.637	3.074	4.998	1.249	1.249	6.145-10	1.194
1.325	1.076	1.773	4.473	2.636	4.103	4.470	1.324	1.324	8.205-10	1.231
1.398	0.319	2.046	5.183	2.636	4.109	5.180	1.398	1.398	7.052-10	1.438
1.400	0.993	2.129	5.373	2.636	4.577	5.370	1.398	1.398	7.710-10	1.383
1.500	0.203	2.054	5.183	2.635	5.250	5.180	1.498	1.498	8.050-10	1.615
1.750	1.105	1.637	4.130	2.634	7.104	4.127	1.749	1.749	1.204	1.501
2.000	1.418	1.344	3.383	2.632	9.233	3.380	1.998	1.998	1.573	1.408
2.500	1.789	1.103	2.783	2.627	1.418	2.780	2.498	2.498	2.458	1.445
2.850	1.021	1.047	2.843	2.628	1.586	2.840	2.847	2.847	2.780	1.454
2.884	1.546	1.274	3.113	2.626	1.803	3.110	2.882	2.882	2.790	1.722
3.000	1.688	1.123	2.833	2.623	2.014	2.830	2.997	2.997	3.537	1.785
3.500	1.981	0.722	2.453	2.617	2.880	2.451	3.498	3.498	4.813	1.783
3.995	2.011	0.482	2.383	2.616	2.817	2.380	3.991	3.991	5.078	1.786
3.808	1.058	1.027	2.993	2.615	2.837	2.990	3.805	3.805	5.118	1.943
4.008	2.071	0.204	2.323	2.611	3.434	2.320	3.996	3.996	6.286	1.989
4.500	2.398	0.927	2.008	2.603	4.231	2.005	4.498	4.498	7.953	1.878
5.000	2.783	0.885	1.783	2.598	5.100	1.780	4.993	4.993	9.915	1.889
5.500	3.135	0.882	1.535	2.587	5.986	1.532	5.491	5.491	1.187	1.752
6.000	3.551	0.530	1.353	2.578	6.829	1.350	5.989	5.989	1.412	1.884
6.500	4.032	0.479	1.193	2.567	7.840	1.191	6.486	6.486	1.656	1.896
7.000	4.526	0.211	1.083	2.558	8.791	1.080	6.983	6.983	1.920	1.942
8.000	5.636	0.383	0.535	2.537	1.080	0.510	7.976	7.976	2.505	1.415
9.000	6.827	2.752	6.845	2.513	1.270	0.820	8.987	8.987	3.188	1.295
1.000	7.893	2.416	6.095	2.491	1.488	0.670	9.999	9.999	3.905	1.282
1.127	9.132	2.083	5.257	2.453	1.898	0.532	1.122	1.122	4.954	1.226
1.128	2.202	0.358	2.108	2.432	1.700	2.108	1.127	1.127	4.998	1.338
1.157	2.439	0.717	1.972	2.444	1.753	1.970	1.156	1.156	5.238	1.738
1.158	1.825	1.152	2.806	2.444	1.735	2.804	1.157	1.157	5.271	1.890
1.250	2.024	0.918	2.378	2.420	1.825	2.374	1.249	1.249	6.140	1.186
1.480	3.158	0.037	1.523	2.388	2.382	1.521	1.478	1.478	8.597	0.878
1.481	2.409	0.716	1.987	2.388	2.384	1.985	1.478	1.478	8.615	0.141
1.500	2.491	0.734	1.931	2.384	2.401	1.929	1.498	1.498	8.637	0.614
1.812	3.012	0.330	1.997	2.331	2.803	1.995	1.810	1.810	1.020	5.344
1.813	2.710	0.703	1.775	2.331	2.805	1.773	1.811	1.811	1.022	5.944
1.750	3.358	0.678	1.433	2.294	2.895	1.430	1.747	1.747	1.202	5.203
1.799	3.811	0.580	1.332	2.281	2.945	1.330	1.798	1.798	1.270	5.973
1.800	3.411	0.598	1.410	2.281	2.947	1.408	1.797	1.797	1.272	5.288
2.000	4.489	0.237	1.088	2.235	3.317	1.087	1.996	1.996	1.586	4.436
2.300	8.090	2.357	5.947	2.091	4.204	5.926	2.491	2.491	2.443	3.079
3.000	1.308	1.408	3.889	1.880	5.103	3.889	3.000	3.000	3.505	2.085
3.500	1.928	0.748	2.480	1.848	5.834	2.441	3.474	3.474	4.750	1.778
4.000	2.774	0.874	1.734	1.748	6.781	1.717	3.980	3.980	6.173	1.428
4.500	3.772	0.054	1.275	1.629	7.522	1.278	4.442	4.442	7.789	1.178
5.000	4.983	0.041	0.883	1.534	8.275	0.859	4.920	4.920	9.531	0.914
5.500	6.329	2.988	2.789	1.440	9.998	0.7420	5.395	5.395	1.148	8.483
6.000	7.988	2.382	6.037	1.398	9.831	0.5900	5.884	5.884	1.354	7.358
6.500	9.889	1.944	4.907	1.275	1.023	4.778	6.330	6.330	1.577	6.455
6.978	1.177	1.020	4.088	1.208	1.078	3.985	6.788	6.788	1.803	5.751
6.977	4.445	4.328	1.892	1.208	1.078	1.080	6.998	6.998	1.428	1.387
7.008	4.443	4.281	1.883	1.203	1.081	1.071	6.925	6.945	1.438	1.381
7.817	5.551	0.335	0.887	1.125	1.152	0.953	7.517	6.943	1.737	1.197
7.818	3.505	0.886	2.116	1.125	1.152	1.205	7.917	6.870	1.751	1.088
8.000	4.581	4.238	1.688	1.082	1.185	1.028	7.818	7.042	1.922	1.385
8.951	4.578	4.185	1.951	1.078	1.280	1.040	7.988	7.091	1.980	1.349
8.952	3.994	4.022	2.117	1.078	1.280	1.206	7.988	7.182	1.986	1.788
1.000	7.829	2.712	6.844	0.784	1.391	6.755	8.670	8.996	3.185	1.280
1.250	1.378	1.492	3.786	0.981	1.594	3.684	1.227	1.140	5.112	0.918
1.500	2.678	0.172	2.314	0.888	1.788	2.256	1.482	1.378	7.448	0.618
1.750	3.148	0.698	1.324	0.725	1.878	1.488	1.694	1.608	2.018	5.111
2.000	4.489	0.238	1.088	0.837	2.088	1.027	1.981	1.838	1.386	4.881
2.500	8.287	2.283	3.282	0.928	2.248	1.548	2.383	2.280	2.844	2.778
3.000	1.378	1.428	3.884	2.343	2.488	3.348	2.788	2.784	2.878	2.688

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ENCL Evaluated Photon Data

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ATOMIC WEIGHT 151.96										DENSITY 5.245 GRAMS/CC									
ENERGY		TOTAL HP		CROSS SECTION (BARNS)						NEUT/COLLISION		NEUT/CM							
MEV		CM	CM/CM/HR	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E.	SPR/CMSTR	K.E.							
3.500	2	2.017	2	9.458	0	2.305	3	1.884	2	2.303	1	2.174	3						
4.000	2	2.073	2	9.637	0	1.875	3	1.580	2	2.380	1	1.488	3						
4.500	2	2.121	2	9.802	0	1.577	3	1.278	2	2.438	1	1.073	3						
4.832	2	4.774	2	3.994	0	1.088	3	1.129	2	2.673	1	0.882	2						
4.832	2	9.485	3	2.814	1	5.083	3	1.129	2	2.673	1	4.943	3						
5.000	2	1.257	2	1.088	1	4.708	3	1.877	2	2.886	1	4.573	3						
5.300	2	1.308	2	1.450	1	3.678	3	2.535	1	2.718	1	3.558	3						
6.000	2	1.338	2	1.104	1	2.990	3	3.057	1	2.737	1	2.930	3						
6.300	2	2.629	2	9.421	0	2.377	3	2.743	2	2.279	3	2.279	3						
7.048	2	2.461	2	7.740	0	1.935	3	2.749	1	1.685	3	1.685	3						
8.000	2	3.453	2	5.336	0	1.377	3	4.382	1	2.780	1	1.300	3						
1.000	1	6.385	2	3.824	0	7.831	2	3.378	1	2.779	1	7.020	2						
1.250	1	1.138	1	1.087	0	4.258	2	2.895	1	2.846	1	3.705	2						
1.380	1	1.738	1	1.084	0	2.884	2	1.634	1	2.380	1	2.263	2						
1.750	1	2.688	1	7.317	1	1.848	2	1.235	1	2.434	1	1.473	2						
2.000	1	3.550	1	5.378	1	1.355	2	9.891	0	2.422	1	1.016	2						
2.500	1	5.701	1	3.343	1	8.438	1	6.388	0	2.271	1	5.530	1						
3.000	1	8.059	1	2.387	1	5.973	1	4.537	0	2.155	1	3.381	1						
3.500	1	1.040	0	1.833	1	4.888	1	3.378	0	2.044	1	2.245	1						
4.000	1	1.288	0	1.504	1	3.795	1	2.817	0	1.952	1	1.581	1						
4.500	1	1.480	0	1.288	1	3.251	1	2.084	0	1.887	1	1.178	1						
5.000	1	1.679	0	1.135	1	2.885	1	1.700	0	1.793	1	9.019	0						
5.500	1	1.863	0	1.024	1	2.583	1	1.412	0	1.725	1	7.185	0						
6.000	1	2.034	0	9.372	2	2.385	1	1.182	0	1.685	1	5.808	0						
6.500	1	2.193	0	8.895	2	2.194	1	1.018	0	1.608	1	4.842	0						
7.000	1	2.348	0	8.140	2	2.054	1	0.814	1	1.557	1	4.091	0						
8.000	1	2.617	0	7.287	2	1.838	1	0.785	1	1.488	1	3.020	0						
1.000	0	3.091	0	8.188	2	1.988	1	4.371	1	1.324	1	1.891	0						
1.020	0	3.138	0	8.077	2	1.933	1	4.187	1	1.310	1	1.816	0						
1.250	0	3.593	0	5.307	2	1.338	1	2.811	1	1.188	1	1.251	0						
1.500	0	3.880	0	4.819	2	1.215	1	1.937	1	1.078	1	2.748	1						
1.750	0	4.248	0	4.408	2	1.132	1	1.440	0	9.825	0	6.853	0						
2.000	0	4.679	0	4.281	2	1.075	1	1.104	0	9.214	0	5.243	0						
2.044	0	4.513	0	4.024	2	1.068	1	1.057	1	9.101	0	5.880	0						
2.500	0	4.772	0	3.988	2	1.008	1	7.075	2	8.088	0	3.878	1						
3.000	0	4.908	0	3.887	2	9.807	0	4.817	2	7.795	1	2.222	0						
3.500	0	4.879	0	3.889	2	9.883	0	3.814	2	6.593	0	2.250	1						
4.000	0	4.997	0	3.819	2	9.837	0	2.788	2	6.895	0	1.884	1						
4.500	0	4.985	0	3.840	2	9.888	0	2.188	2	5.888	0	1.572	1						
5.000	0	4.935	0	3.883	2	9.749	0	1.778	2	5.230	0	1.381	1						
5.500	0	4.829	0	3.888	2	9.780	0	1.485	2	4.885	0	1.206	1						
6.000	0	4.903	0	3.888	2	9.812	0	1.231	2	4.883	0	1.079	1						
6.500	0	4.882	0	3.882	2	9.885	0	1.049	2	4.375	0	9.751	2						
7.000	0	4.889	0	3.883	2	1.080	1	9.048	3	4.195	0	8.875	2						
8.000	0	4.878	0	4.073	2	1.080	1	8.887	3	3.783	0	7.480	2						
1.000	1	4.375	0	4.358	2	1.188	1	4.432	3	3.882	0	5.841	2						
1.250	1	4.198	0	4.288	2	1.159	1	2.837	3	2.734	0	4.438	2						
1.500	1	3.930	0	4.841	2	1.222	1	1.971	3	2.385	0	3.840	2						
1.750	1	3.723	0	5.121	2	1.282	1	1.448	3	2.121	0	3.091	2						
2.000	1	3.592	0	5.387	2	1.354	1	1.109	3	1.914	0	2.678	2						
2.500	1	3.311	0	5.799	2	1.453	1	7.093	4	1.888	0	2.187	2						
3.000	1	3.138	0	6.077	2	1.573	1	4.925	4	1.384	0	1.732	2						
3.500	1	3.018	0	6.317	2	1.594	1	3.819	4	1.233	0	1.487	2						
4.000	1	2.913	0	6.345	2	1.622	1	2.771	4	1.187	0	1.271	2						
4.500	1	2.811	0	6.782	2	1.711	1	2.190	4	1.087	0	1.128	2						
5.000	1	2.738	0	6.988	2	1.758	1	1.774	4	1.088	0	1.085	2						
5.500	1	2.687	0	7.088	2	1.781	1	1.488	4	1.088	0	1.088	2						
6.000	1	2.588	0	7.219	2	1.888	1	1.231	4	1.088	0	1.088	2						
6.500	1	2.588	0	7.338	2	1.951	1	1.049	4	1.088	0	1.088	2						
7.000	1	2.588	0	7.448	2	1.873	1	9.848	5	7.613	1	6.888	3						
8.000	1	2.498	0	7.888	2	1.932	1	8.328	5	6.835	1	6.835	3						
1.000	2	2.373	0	9.833	2	2.887	1	4.433	5	5.214	1	4.748	3						
1.000	2	2.373	0	9.833	2	2.887	1	4.433	5	5.214	1	4.748	3						

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000	0	1.000	0	0.000	0	1.250	1	0.000	0	0.000	0
0.000	3	0.000	1	0.000	4	1.000	1	0.000	1	0.000	1
1.000	2	0.000	1	1.710	3	1.750	1	0.000	1	1.000	1
1.000	2	0.000	1	1.710	3	1.750	1	0.000	1	1.000	1
2.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
2.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
3.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
3.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
4.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
4.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
5.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
5.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
6.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
6.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
7.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
7.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
8.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
8.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
9.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1
9.000	2	0.000	1	0.000	1	0.000	1	0.000	1	0.000	1

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ENDL Evaluated Photon Cross Sections

64-Gd

12/07/78

Energy Deposition

64-Gd

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 157.25		DENSITY 7.86 GRAMS/CC									
ENERGY	TOTAL NFP	CROSS SECTION (BARNS)					MEV/COLLISION				MEV/CM
MEV	CM	CM/CM/GM	TOTAL	COHERENT	INCOHER	PHOTOEL PAIR PROD	K.E. + FLON	K.E.	BREMSSTR	K.E.	
1.000	7.049	1.885	4.713	2.722	2.259	4.710	9.994	9.994	3.995	1.418	1
1.250	7.620	1.670	4.380	2.721	3.518	4.357	1.249	1.249	6.242	1.639	1
1.399	7.924	1.608	4.193	2.720	4.394	4.190	1.397	1.397	7.807	1.763	1
1.412	3.961	1.828	4.773	2.720	4.481	4.770	1.411	1.411	7.966	2.027	1
1.500	3.975	1.824	4.763	2.719	5.053	4.760	1.499	1.499	8.990	2.149	1
1.750	3.267	1.535	4.008	2.718	6.838	4.008	1.749	1.749	1.223	2.110	1
2.000	3.622	1.322	3.453	2.717	8.886	3.450	1.999	1.999	1.587	2.077	1
2.500	1.193	1.102	2.877	2.712	1.367	2.874	2.498	2.498	2.495	2.163	1
2.781	1.252	1.018	2.653	2.710	1.656	2.650	2.758	2.758	3.043	2.202	1
2.775	1.085	1.173	3.083	2.709	1.673	3.080	2.773	2.773	3.075	2.956	1
3.000	1.137	1.119	2.923	2.708	1.944	2.920	2.977	2.977	3.593	2.637	1
3.500	1.313	9.893	2.531	2.701	2.594	2.528	3.496	3.496	4.869	2.684	1
3.751	1.400	9.067	2.373	2.698	2.953	2.370	3.747	3.747	5.815	2.678	1
3.765	1.258	9.814	2.563	2.698	2.974	2.560	3.781	3.781	5.859	2.901	1
4.000	1.388	9.183	2.393	2.695	3.330	2.390	3.995	3.995	6.385	2.878	1
4.500	1.603	9.737	2.073	2.687	4.118	2.070	4.494	4.494	8.079	2.804	1
5.000	1.823	9.880	1.823	2.680	4.974	1.820	4.993	4.993	9.970	2.739	1
5.500	2.082	9.110	1.595	2.671	5.856	1.593	5.491	5.491	1.206	2.637	1
6.000	2.352	8.410	1.413	2.662	6.797	1.410	5.989	5.989	1.435	2.547	1
6.500	2.682	7.779	1.248	2.651	7.715	1.245	6.486	6.486	1.683	2.437	1
7.000	2.985	7.261	1.113	2.640	8.676	1.110	6.983	6.983	1.951	2.339	1
8.000	3.718	5.422	8.938	2.621	1.072	8.910	7.977	7.977	2.545	2.148	1
9.000	4.560	2.790	7.288	2.595	1.267	7.260	8.988	8.988	3.217	1.967	1
1.000	5.287	2.407	6.284	2.572	1.471	6.258	9.959	9.959	3.987	1.884	1
1.180	6.889	1.908	4.981	2.517	1.805	4.956	1.174	1.174	5.513	1.780	1
1.181	1.794	7.255	1.895	2.517	1.807	1.888	1.179	1.179	5.588	6.728	1
1.220	1.906	6.869	1.742	2.508	1.881	1.739	1.218	1.218	5.936	6.386	1
1.221	1.303	9.784	2.550	2.508	1.883	2.547	1.220	1.220	5.951	9.381	1
1.250	1.395	9.184	2.398	2.498	1.938	2.398	1.249	1.249	6.237	9.014	1
1.500	2.227	5.712	1.481	2.439	2.428	1.488	1.498	1.498	8.970	8.723	1
1.543	2.398	5.305	1.380	2.425	2.508	1.383	1.540	1.540	9.489	6.424	1
1.544	1.818	6.998	1.627	2.425	2.508	1.625	1.542	1.542	9.510	8.482	1
1.689	2.297	5.539	1.448	2.382	2.772	1.444	1.686	1.686	1.137	7.341	1
1.690	2.086	6.098	1.592	2.381	2.774	1.590	1.687	1.687	1.139	7.089	1
1.750	2.204	5.589	1.454	2.365	2.884	1.452	1.747	1.747	1.221	7.848	1
1.881	2.756	4.618	1.205	2.331	3.126	1.203	1.877	1.877	1.410	6.811	1
1.882	2.581	4.930	1.287	2.331	3.128	1.285	1.879	1.879	1.412	7.280	1
2.000	3.022	4.210	1.099	2.302	3.348	1.097	1.998	1.998	1.593	6.604	1
2.500	5.401	2.325	6.150	2.153	4.239	6.129	2.491	2.491	2.482	4.612	1
3.000	8.675	1.467	3.889	2.039	5.139	3.889	2.984	2.984	3.561	3.440	1
3.500	1.294	9.829	2.587	1.805	5.978	2.548	3.474	3.474	4.827	2.684	1
4.000	1.889	6.282	1.618	1.795	6.810	1.798	3.960	3.960	6.273	2.185	1
4.500	2.480	5.130	1.340	1.681	7.582	1.323	4.443	4.443	7.866	1.792	1
5.000	3.254	3.910	1.021	1.584	8.347	1.005	4.922	4.922	9.689	1.513	1
5.500	4.160	3.059	7.987	1.487	9.043	7.937	5.397	5.397	1.165	1.297	1
6.000	5.202	2.446	6.386	1.404	9.730	6.245	5.867	5.867	1.377	1.129	1
6.500	6.387	1.982	5.201	1.319	1.033	5.088	6.334	6.334	1.604	9.916	0
7.000	7.721	1.648	4.303	1.243	1.093	4.177	6.798	6.798	1.847	8.802	0
7.242	8.420	1.511	3.945	1.212	1.121	3.823	7.017	7.017	1.969	8.334	0
7.243	3.178	4.003	1.045	1.212	1.121	1.033	7.158	7.158	1.944	1.955	1
7.930	4.035	3.153	8.233	1.129	1.201	8.119	7.820	8.878	1.892	1.705	1
7.931	2.875	4.425	1.195	1.129	1.201	1.194	7.853	6.507	1.908	2.402	1
8.000	2.942	4.325	1.129	1.181	1.203	1.118	7.920	6.874	1.945	2.371	1
8.375	2.319	3.833	1.001	1.074	1.247	9.960	8.294	7.339	2.154	2.211	1
8.765	2.867	4.438	1.195	1.074	1.247	1.148	8.297	7.351	2.161	2.584	1
1.000	4.587	2.774	7.243	9.112	1.406	7.150	9.872	8.829	3.188	1.947	1
1.250	6.327	1.528	3.988	7.158	1.611	3.918	1.227	1.133	5.135	1.381	1
1.500	2.353	9.484	1.458	5.877	1.880	2.395	1.463	1.370	7.502	1.013	1
1.750	2.846	6.219	1.824	4.889	1.940	1.573	1.695	1.603	1.027	7.035	0
2.000	2.922	4.394	1.137	4.184	2.087	1.093	1.923	1.831	1.340	6.288	0
2.500	2.324	2.388	8.240	3.108	2.273	5.906	2.387	2.276	2.071	4.276	0
3.000	8.852	1.471	3.840	2.435	2.437	3.572	2.792	2.703	2.819	3.124	0
3.500	1.307	9.738	2.543	1.937	2.534	2.324	3.201	3.113	3.873	2.383	0

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ATOMIC WEIGHT 157.25										DENSITY 7.96 GRAMS/CC			
ENERGY		TOTAL MPF		CROSS SECTION (BARNS)						NEUT/COLLISION		NEUT/CM	
MEV	CM	CM	CM/CH	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E.-FLOR	K.E.	CM/CH	K.E.	
4.000-2	1.680-2	2	6.640-0	1.788-3	1.980-2	2.821-1	1.801-3		3.990-2	3.504-2	4.905-5	1.600-4	
4.500-2	2.530-2	2	5.012-0	1.306-3	1.321-2	2.673-1	1.190-3		3.981-2	3.877-2	6.805-5	1.920-4	
5.000-2	3.380-2	2	3.000-0	8.945-2	1.120-2	2.721-1	8.953-2		4.312-2	4.230-2	7.140-5	1.700-4	
5.024-2	3.382-2	2	3.762-0	9.805-2	1.111-2	2.722-1	8.430-2		4.329-2	4.247-2	7.282-5	1.730-4	
5.025-2	3.657-3	1	1.917-1	5.905-3	1.111-2	2.722-1	4.087-3		4.080-2	1.204-2	9.040-6	2.080-5	
5.500-2	2.305-2	1	1.921-1	3.972-3	9.622-1	2.740-2	3.048-3		5.532-2	1.981-2	1.537-5	2.345-4	
6.000-2	1.044-2	2	1.210-1	1.182-3	8.370-2	2.772-1	3.070-3		5.795-2	2.438-2	2.574-5	2.530-4	
6.500-2	1.280-2	2	9.807-1	2.576-3	7.531-1	2.760-2	2.475-3		6.253-2	2.810-2	2.382-5	2.577-4	
6.500-2	1.987-2	1	1.987-1	2.121-3	8.470-2	2.760-2	2.475-3		6.253-2	2.810-2	2.382-5	2.577-4	
6.500-2	2.321-2	5	5.729-0	1.486-3	5.186-2	2.760-2	1.818-3		7.590-2	2.918-2	2.377-5	2.577-4	
7.000-1	4.018-2	3	3.180-0	9.272-2	3.519-1	2.760-2	7.843-2		9.209-2	8.074-2	1.472-4	1.512-4	
7.250-1	7.242-2	2	1.757-0	4.567-2	2.359-1	2.760-2	4.003-2		1.125-1	8.153-2	2.850-4	1.126-4	
7.500-1	1.154-1	1	1.102-0	2.878-2	1.702-1	2.819-1	2.446-2		1.301-1	1.005-1	4.025-4	8.700-4	
7.500-1	1.609-1	7	7.534-1	1.967-2	1.267-1	2.531-1	1.905-2		1.457-1	1.177-1	5.513-4	6.900-4	
7.500-1	2.314-1	5	5.499-1	1.436-2	1.010-1	2.450-1	1.009-2		1.594-1	1.330-1	7.037-4	5.740-4	
7.500-1	3.748-1	3	3.395-1	8.604-1	6.893-0	2.305-1	5.893-1		1.826-1	1.594-1	1.010-3	4.250-4	
7.500-1	5.533-1	3	2.386-1	6.229-1	4.731-0	2.180-1	3.580-1		2.010-1	1.810-1	1.302-3	3.395-4	
7.500-1	6.917-1	1	1.839-1	4.803-1	3.564-0	2.075-1	2.375-1		2.170-1	2.007-1	1.593-3	2.902-4	
7.500-1	8.485-1	1	1.503-1	3.924-1	2.730-0	1.983-1	1.609-1		2.338-1	2.190-1	1.902-3	2.500-4	
7.500-1	9.907-1	1	1.204-1	3.353-1	2.174-0	1.898-1	1.240-1		2.507-1	2.370-1	2.241-3	2.401-4	
7.500-1	1.126-0	1	1.126-1	2.949-1	1.774-0	1.821-1	9.508-0		2.680-1	2.589-1	2.612-3	2.280-4	
7.500-1	1.250-0	1	1.250-1	2.695-1	1.474-0	1.522-1	9.508-0		2.680-1	2.589-1	2.612-3	2.280-4	
7.500-1	1.300-0	9	9.302-2	2.695-1	1.244-0	1.681-1	3.130-1		3.050-1	2.771-1	3.037-3	2.215-4	
7.500-1	1.475-0	8	8.625-2	2.252-1	1.004-0	1.633-1	5.126-0		3.282-1	2.203-1	4.051-3	3.100-4	
7.500-1	1.576-0	8	8.070-2	2.107-1	9.200-1	1.581-1	4.341-1		3.504-1	3.433-1	4.650-3	2.177-4	
8.000-1	1.763-0	7	7.217-2	1.884-1	7.084-1	1.492-1	3.217-0		3.974-1	3.915-1	6.035-3	2.221-4	
1.000-0	2.084-0	6	6.105-2	1.594-1	4.504-1	1.344-1	2.041-0		5.013-1	4.968-1	9.681-3	2.384-4	
1.020-0	2.116-0	6	6.014-2	1.570-1	4.372-1	1.330-1	1.980-0	1.000-6	5.134-1	5.091-1	1.016-2	2.408-4	
1.250-0	2.427-0	5	5.243-2	1.369-1	2.935-1	1.204-1	1.750-0	3.483-3	6.429-1	6.395-1	1.595-2	2.635-4	
1.500-0	2.877-0	4	4.752-2	1.241-1	2.044-1	1.090-1	9.633-1	2.850-6	7.047-1	7.020-1	2.372-2	2.921-4	
1.750-0	2.873-0	4	4.426-2	1.158-1	1.504-1	1.008-1	7.177-1	6.133-1	9.341-1	9.320-1	3.349-2	3.244-4	
2.000-0	3.026-0	4	4.204-2	1.098-1	1.153-1	9.360-0	5.655-1	9.306-1	1.094-1	1.092-0	4.570-2	3.608-4	
2.044-0	3.052-0	4	4.108-2	1.080-1	1.104-1	9.245-0	5.547-1	9.026-1	1.123-0	1.121-0	4.813-2	3.673-4	
2.500-0	3.226-0	3	3.944-2	1.030-1	7.390-2	8.226-0	3.904-1	2.600-1	1.440-0	1.439-0	7.832-2	4.461-4	
3.000-0	3.315-0	3	3.838-2	1.002-1	5.136-2	7.371-0	3.011-1	1.299-0	1.819-0	1.819-0	1.233-1	5.495-5	
3.500-0	3.363-0	3	3.784-2	9.800-0	3.775-2	6.697-0	2.422-1	2.903-0	2.223-0	2.223-0	1.815-1	6.610-4	
4.000-0	3.370-0	3	3.775-2	9.858-0	2.831-2	6.151-0	2.008-1	3.478-0	2.648-0	2.647-0	2.535-1	7.856-4	
4.500-0	3.350-0	3	3.750-2	9.816-0	2.685-2	5.697-0	1.831-1	4.080-0	3.069-0	3.068-0	3.395-1	9.218-4	
5.000-0	3.320-0	3	3.687-2	9.760-0	2.511-2	5.261-0	1.602-1	4.508-0	3.041-0	3.040-0	4.391-1	1.084-5	
5.500-0	3.324-0	3	3.628-2	9.695-0	1.530-2	4.983-0	1.297-1	4.867-0	3.098-0	3.098-0	5.611-1	1.250-5	
6.000-0	3.305-0	3	3.649-2	1.005-1	1.066-2	4.697-0	1.181-1	5.225-0	4.404-0	4.403-0	6.762-1	1.350-5	
6.500-0	3.277-0	3	3.603-2	1.014-1	1.096-2	4.445-0	1.048-1	5.578-0	4.436-0	4.436-0	8.138-1	1.506-5	
7.000-0	3.240-0	3	3.562-2	1.023-1	9.449-2	4.221-0	9.540-2	5.526-0	5.414-0	5.414-0	9.597-1	1.671-5	
8.000-0	3.152-0	4	4.037-2	1.054-1	7.236-3	3.804-3	8.049-2	6.611-0	6.340-1	6.343-0	1.250-0	2.026-6	
1.000-1	2.946-0	4	4.319-2	1.120-1	4.630-3	3.273-3	6.059-2	7.939-0	8.379-0	8.358-0	2.094-0	2.837-7	
1.250-1	2.797-0	4	4.549-2	1.180-1	2.904-3	2.777-3	4.767-2	9.051-0	1.004-1	1.004-1	3.277-0	3.875-5	
1.500-1	2.849-0	4	4.802-2	1.254-1	2.058-3	2.423-3	3.919-2	1.007-1	1.334-1	1.334-1	4.639-0	5.034-5	
1.750-1	2.504-0	5	5.081-2	1.327-1	1.512-3	2.125-3	3.320-2	1.108-1	1.585-1	1.585-1	6.148-0	5.328-5	
2.000-1	2.389-0	5	5.327-2	1.391-1	1.158-3	1.945-3	2.878-2	1.193-1	1.836-1	1.836-1	7.772-0	7.005-5	
2.500-1	2.225-0	5	5.718-2	1.493-1	7.409-4	1.834-3	2.263-2	1.327-1	2.337-1	2.337-1	1.129-1	1.050-6	
3.000-1	2.108-0	6	6.032-2	1.578-1	5.145-4	1.418-3	1.860-2	1.432-1	2.839-1	2.839-1	1.510-1	1.347-6	
3.500-1	2.025-0	6	6.275-2	1.639-1	3.708-4	1.252-3	1.576-2	1.512-1	3.340-1	3.340-1	1.910-1	1.647-6	
4.000-1	1.957-0	6	6.502-2	1.698-1	2.895-4	1.125-3	1.588-2	1.588-1	3.841-1	3.841-1	2.327-1	1.963-6	
4.500-1	1.888-0	6	6.738-2	1.759-1	2.267-4	1.023-3	1.203-2	1.405-1	4.058-1	4.058-1	2.756-1	2.300-6	
5.000-1	1.838-0	6	6.963-2	1.808-1	1.853-4	9.391-1	1.074-2	1.713-1	4.843-1	4.843-1	3.159-1	2.635-6	
5.500-1	1.804-0	7	7.051-2	1.841-1	1.531-4	8.867-1	9.986-1	3.753-1	5.344-1	5.344-1	3.641-1	2.995-6	
6.000-1	1.774-0	7	7.173-2	1.873-1	1.286-4	8.091-1	8.630-1	3.791-1	5.844-1	5.844-1	4.093-1	3.295-6	
6.500-1	1.745-0	7	7.269-2	1.903-1	1.096-4	7.579-1	8.102-1	3.827-1	6.345-1	6.345-1	4.551-1	3.675-6	
7.000-1	1.719-0	7	7.401-2	1.933-1	9.450-5	7.125-2	7.402-3	3.861-1	6.845-1	6.845-1	5.014-1	3.988-6	
8.000-1	1.572-0	7	7.610-2	1.987-1	7.235-5	6.381-1	6.461-1	3.923-1	7.846-1	7.846-1	5.950-1	4.693-6	
1.000-2	1.594-0	7	7.904-2	2.085-1	4.630-5	5.297-1	5.099-3	2.031-1	9.849-1	9.849-1	7.654-1	6.180-6	

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Form Factors

64-Gd

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.800-1	0.998-1	9.982-2	1.000+0	3.213-1	5.404-1	1.000+1	1.000-2	9.795-1
0.000+3	9.999+1	4.002+4	1.900-1	0.785-1	1.159-1	1.250+0	2.675-1	6.129-1	1.500+1	1.373-2	9.927-1
1.000-2	9.999+1	1.825-3	1.700-1	0.461-1	1.363-1	1.500+0	2.327-1	6.701-1	2.000+1	0.804-3	9.975-1
1.500-2	9.976+1	3.592-3	2.000-1	0.195-1	1.594-1	2.000+0	1.751-1	7.463-1	5.000+1	9.445-4	1.000+0
2.000-2	9.939+1	6.255-3	2.500-1	7.080-1	1.946-1	2.500+0	1.277-1	7.989-1	8.000+1	2.293-4	1.000+0
2.500-2	9.939+1	9.519-3	3.000-1	7.151-1	2.305-1	3.000+0	1.042-1	8.375-1	1.000+2	1.151-4	1.000+0
3.000-2	9.988+1	1.325-2	4.000-1	6.251-1	2.946-1	3.500+0	8.067-2	8.685-1	1.000+3	1.210-7	1.000+0
4.000-2	9.942+1	2.190-2	5.000-1	5.517-1	3.480-1	4.000+0	7.229-2	8.887-1	1.000+6	5.537-16	1.000+0
5.000-2	9.708+1	3.187-2	6.000-1	4.698-1	3.930-1	5.000+0	5.953-2	9.239-1	1.000+9	2.740-24	1.000+0
7.000-2	9.570+1	5.000-2	7.000-1	4.381-1	4.338-1	6.000+0	4.230-2	9.409-1			
9.000-2	9.370+1	6.730-2	8.000-1	3.903-1	4.718-1	7.000+0	3.219-2	9.587-1			
1.000-1	9.263+1	7.548-2	9.000-1	3.522-1	5.072-1	8.000+0	2.773-2	9.886-1

12/07/78

ENDL Evaluated Photon Cross Sections

65-Tb

12/01/76

Energy Deposition

65-Tb

12/17/78

ENDL Evaluated Photon Data

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ATOMIC WEIGHT 104.92			DENSITY 8.25 GRAMS/CC					
ENERGY	TOTAL WFP	CROSS SECTION (BARN)				NEV/COLLISION		
KEV	CM	CM ² /CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	KEV
1.000-4	5.378-8	2.297-4	5.863-8	2.888-3	2.238-2	6.980-8	9.995-5	9.995-5
1.250-4	5.720-8	2.119-4	5.598-8	2.888-3	3.471-2	5.998-8	1.249-4	1.249-4
1.463-4	6.053-8	2.006-4	5.283-8	2.885-3	4.733-2	5.280-8	1.462-4	1.462-4
1.677-4	5.418-8	2.237-4	5.283-8	2.885-3	4.882-2	5.300-8	1.478-4	1.478-4
1.900-4	5.388-8	2.248-4	5.283-8	2.885-3	4.971-2	5.330-8	1.498-4	1.498-4
1.750-4	6.393-8	1.985-4	5.975-8	2.884-3	8.728-2	5.878-8	1.748-4	1.748-4
2.000-4	7.218-8	1.880-4	6.433-8	2.882-3	8.742-2	4.430-8	1.998-4	1.998-4
2.250-4	8.988-8	1.397-4	7.395-8	2.788-3	1.348-1	3.922-8	2.498-4	2.498-4
2.500-4	1.051-5	1.153-4	8.043-8	2.794-3	1.824-1	3.040-8	2.983-4	2.983-4
2.750-4	9.132-8	1.327-4	8.503-8	2.794-3	1.841-1	3.500-8	2.938-4	2.938-4
3.000-4	9.281-8	1.305-4	8.443-8	2.794-3	1.915-1	3.440-8	2.998-4	2.998-4
3.500-4	1.080-5	1.112-4	8.834-8	2.787-3	2.593-1	2.831-8	3.497-4	3.497-4
3.772-4	1.243-5	9.748-3	2.573-6	2.782-3	3.238-1	2.570-8	3.988-4	3.988-4
3.986-4	1.194-5	1.051-4	2.773-6	2.781-3	3.280-1	2.770-8	3.982-4	3.982-4
4.000-4	1.162-5	1.043-4	2.753-6	2.781-3	3.281-1	2.750-8	3.996-4	3.996-4
4.500-4	1.350-5	8.980-3	2.370-6	2.773-3	4.057-1	2.387-8	4.495-4	4.495-4
5.000-4	1.543-5	7.824-3	2.073-6	2.766-3	4.904-1	2.070-8	4.993-4	4.993-4
5.500-4	1.777-5	6.881-3	1.800-6	2.757-3	5.771-1	1.797-8	5.492-4	5.492-4
6.000-4	2.021-5	5.988-3	1.583-6	2.748-3	6.708-1	1.580-8	5.990-4	5.990-4
6.500-4	2.301-5	5.288-3	1.350-6	2.736-3	7.618-1	1.387-8	6.487-4	6.487-4
7.000-4	2.525-5	4.671-3	1.233-6	2.728-3	8.571-1	1.230-8	6.985-4	6.985-4
8.000-4	3.248-5	3.731-3	9.847-5	2.706-3	1.060-0	9.820-5	7.978-4	7.978-4
9.000-4	4.005-5	3.026-3	7.987-5	2.680-3	1.254-0	7.960-5	8.970-4	8.970-4
1.000-3	4.779-5	2.538-3	6.894-5	2.657-3	1.457-0	6.887-5	9.960-4	9.960-4
1.239-3	6.842-5	1.771-3	4.675-5	2.586-3	1.902-0	4.649-5	1.232-3	1.232-3
1.240-3	1.702-5	7.122-3	1.880-6	2.586-3	1.904-0	1.877-6	1.238-3	1.238-3
1.250-3	1.738-5	6.972-3	1.840-6	2.583-3	1.983-0	1.837-6	1.248-3	1.248-3
1.279-3	1.847-5	6.562-3	1.732-6	2.575-3	1.978-0	1.729-6	1.277-3	1.277-3
1.280-3	1.342-5	9.032-3	2.384-6	2.575-3	1.980-0	2.381-6	1.279-3	1.279-3
1.500-3	2.039-5	5.844-3	1.588-6	2.523-3	2.411-0	1.588-6	1.498-3	1.498-3
1.610-3	2.458-5	4.932-3	1.301-6	2.489-3	2.610-0	1.299-6	1.607-3	1.607-3
1.611-3	1.753-5	6.882-3	1.887-6	2.488-3	2.612-0	1.825-6	1.609-3	1.609-3
1.750-3	2.178-5	5.585-3	1.488-6	2.448-3	2.888-0	1.488-6	1.747-3	1.747-3
1.767-3	2.235-5	5.424-3	1.431-6	2.444-3	2.888-0	1.429-6	1.784-3	1.784-3
1.788-3	2.029-5	5.974-3	1.576-6	2.444-3	2.888-0	1.574-6	1.785-3	1.785-3
1.985-3	2.888-5	4.515-3	1.191-6	2.393-3	3.288-0	1.189-6	1.982-3	1.982-3
1.987-3	2.512-5	4.825-3	1.273-6	2.393-3	3.288-0	1.271-6	1.983-3	1.983-3
2.000-3	2.625-5	4.817-3	1.218-6	2.385-3	3.330-0	1.216-6	1.988-3	1.988-3
2.500-3	4.726-5	2.505-3	6.789-5	2.234-3	4.220-0	6.747-5	2.492-3	2.492-3
3.000-3	7.634-5	1.588-3	4.190-5	2.117-3	5.121-0	4.189-5	2.985-3	2.985-3
3.500-3	1.144-4	1.059-3	2.795-5	1.980-3	5.981-0	2.775-5	3.475-3	3.475-3
4.000-3	1.624-4	7.484-2	1.870-5	1.883-3	8.789-0	1.931-5	3.962-3	3.962-3
4.500-3	2.211-4	5.483-2	1.447-5	1.750-3	7.578-0	1.429-5	4.445-3	4.445-3
5.000-3	2.912-4	4.183-2	1.038-5	1.650-3	6.348-0	1.082-5	4.925-3	4.925-3
5.500-3	3.733-4	3.247-2	8.288-4	1.550-3	9.050-0	8.413-4	5.400-3	5.400-3
6.000-3	4.680-4	2.590-2	6.634-4	1.464-3	9.744-0	6.687-4	5.871-3	5.871-3
6.500-3	5.782-4	2.104-2	5.952-4	1.375-3	1.036-1	5.413-4	6.338-3	6.338-3
7.000-3	6.981-4	1.738-2	4.988-4	1.298-3	1.096-1	4.451-4	6.800-3	6.800-3
7.514-3	8.383-4	1.448-2	3.816-4	1.228-3	1.157-1	3.694-4	7.270-3	7.270-3
7.515-3	3.153-4	3.844-2	1.014-5	1.228-3	1.157-1	1.002-5	7.423-3	7.423-3
8.000-3	3.717-4	3.261-2	8.805-4	1.189-3	1.213-1	8.427-4	7.890-3	7.890-3
8.251-3	4.032-4	3.008-2	7.934-4	1.136-3	1.239-1	7.619-4	8.132-3	8.132-3
8.252-3	2.873-4	4.219-2	1.113-5	1.136-3	1.239-1	1.102-5	8.167-3	8.167-3
8.707-3	3.309-4	3.883-2	9.088-4	1.081-3	1.288-1	9.957-4	8.808-3	8.808-3
8.708-3	2.859-4	4.240-2	1.119-5	1.081-3	1.288-1	1.108-5	8.823-3	8.823-3
1.000-2	4.121-4	2.941-2	7.781-4	9.305-2	1.414-1	7.885-4	9.878-3	9.878-3
1.250-2	7.473-4	1.622-2	4.281-4	7.488-2	1.620-1	4.204-4	1.288-3	1.288-3
1.500-2	1.213-3	9.983-1	2.637-4	8.121-2	1.812-1	2.574-4	1.897-3	1.897-3
1.750-2	1.834-3	6.811-1	1.745-4	5.957-2	1.963-1	1.886-4	1.925-3	1.925-3
2.000-2	2.919-3	4.829-1	1.222-4	4.350-2	2.104-1	1.178-4	2.371-3	2.371-3
2.500-2	4.773-3	2.940-1	6.702-3	3.231-2	2.295-1	6.336-3	2.789-3	2.789-3
3.000-2	7.758-3	1.582-1	4.123-3	2.535-2	2.483-1	3.345-3	3.211-3	3.211-3
3.500-2	1.178-2	1.034-1	2.788-3	2.617-2	2.582-1	2.501-3	3.115-3	3.115-3

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ENCL Evaluated Photon Data

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ATOMIC WEIGHT 190.92				DENSITY 8.25 GRAMS/CC							
ENERGY		TOTAL NFP		CROSS SECTION (BARNS)				MEV/COLLISION			MEV/CM
MEV	CM	CM/CH/CM	CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E.-FLOR	K.E.	BREMSSTR	K.E.
4.000-2	1.870-2	7.257-0	1.915-3	1.895-2	2.692-1	1.723-3	3.603-2	3.505-2	4.994-5	2.101-0	2.101-0
4.500-2	2.282-2	5.312-0	1.402-3	1.375-2	2.706-1	1.237-3	3.979-2	3.886-2	6.126-5	1.703-0	1.703-0
5.000-2	3.008-2	4.032-0	1.094-3	1.105-2	2.795-1	9.199-2	4.334-2	4.244-2	7.304-5	1.412-0	1.412-0
5.198-2	3.323-2	3.941-0	9.808-2	1.095-2	2.788-1	8.236-2	4.471-2	4.381-2	7.784-5	1.316-0	1.316-0
5.200-2	6.826-3	1.778-1	4.888-3	1.095-2	2.788-1	4.248-3	5.050-2	1.572-2	1.003-5	2.303-0	2.303-0
5.500-2	7.888-3	1.537-1	4.695-3	1.002-2	2.783-1	3.927-3	5.330-2	1.880-2	1.405-5	2.398-0	2.398-0
6.000-2	9.883-3	1.229-1	3.243-3	8.721-1	2.809-1	3.126-3	5.782-2	2.338-2	2.218-5	2.389-0	2.389-0
6.500-2	1.217-2	9.959-0	2.888-3	7.633-1	2.817-1	2.524-3	6.848-2	2.805-2	3.201-5	2.308-0	2.308-0
7.000-2	1.478-2	8.288-0	2.187-3	6.746-1	2.824-1	2.089-3	6.701-2	3.278-2	4.325-5	2.217-0	2.217-0
8.000-2	2.085-2	5.786-0	1.588-3	5.401-1	2.838-1	1.446-3	7.588-2	4.136-2	7.146-5	2.006-0	2.006-0
1.000-1	3.769-2	3.216-0	8.488-2	3.888-1	2.807-1	7.839-2	9.288-2	5.978-2	1.447-4	1.988-0	1.988-0
1.250-1	6.753-2	1.795-0	4.737-2	2.428-1	2.725-1	4.219-2	1.125-1	6.084-2	2.633-4	1.194-0	1.194-0
1.500-1	1.071-1	1.131-0	2.986-2	1.773-1	2.657-1	2.943-2	1.303-1	9.978-2	4.026-4	9.314-1	9.314-1
1.750-1	1.580-1	7.788-1	2.050-2	1.341-1	2.589-1	1.699-2	1.482-1	1.172-1	5.953-4	7.511-1	7.511-1
2.000-1	2.131-1	5.687-1	1.501-2	1.053-1	2.495-1	1.146-2	1.602-1	1.326-1	7.129-4	6.232-1	6.232-1
2.500-1	3.443-1	3.520-1	9.280-1	6.938-0	2.340-1	8.298-1	1.842-1	1.601-1	1.034-3	4.849-1	4.849-1
3.000-1	4.898-1	2.474-1	6.530-1	4.935-0	2.221-1	3.815-1	2.035-1	1.882-1	1.344-3	3.727-1	3.727-1
3.500-1	6.384-1	1.905-1	5.028-1	3.678-0	2.107-1	2.952-1	2.212-1	2.030-1	1.661-3	3.190-1	3.190-1
4.000-1	7.805-1	1.553-1	4.089-1	2.894-0	2.013-1	1.601-1	2.377-1	2.220-1	1.584-3	2.844-1	2.844-1
4.500-1	9.158-1	1.325-1	3.482-1	2.389-0	1.925-1	1.341-1	2.950-1	2.412-1	2.340-3	2.633-1	2.633-1
5.000-1	1.044-0	1.181-1	3.004-1	1.851-0	1.849-1	1.030-1	2.726-1	2.605-1	2.728-3	2.495-1	2.495-1
5.500-1	1.162-0	1.043-1	2.752-1	1.538-0	1.778-1	8.186-0	2.915-1	2.809-1	3.188-3	2.417-1	2.417-1
6.000-1	1.273-0	9.520-1	2.512-1	1.299-0	1.717-1	6.653-0	3.113-1	3.018-1	3.626-3	2.371-1	2.371-1
6.500-1	1.376-0	8.679-1	2.325-1	1.111-0	1.658-1	5.994-0	3.326-1	3.241-1	4.211-3	2.325-1	2.325-1
7.000-1	1.473-0	8.229-1	2.172-1	9.806-1	1.608-1	4.700-0	3.547-1	3.470-1	4.823-3	2.358-1	2.358-1
8.000-1	1.852-0	7.739-1	1.937-1	7.397-1	1.515-1	3.478-0	4.014-1	3.950-1	6.238-3	2.392-1	2.392-1
1.000-0	1.880-0	6.184-2	1.632-1	4.788-1	1.385-1	2.189-0	5.045-1	4.987-1	9.941-3	2.548-1	2.548-1
1.022-0	1.991-0	6.089-2	1.807-1	4.588-1	1.351-1	2.102-0	1.000-6	5.186-1	5.119-1	1.043-2	2.572-1
1.250-0	2.287-0	5.300-2	1.359-1	3.088-1	1.223-1	1.448-0	3.583-3	8.459-1	8.422-1	1.633-2	2.808-1
1.500-0	2.525-0	4.601-2	1.287-1	2.135-1	1.113-1	1.033-0	2.978-1	7.873-1	7.844-1	2.422-2	3.107-1
1.750-0	2.710-0	4.472-2	1.187-1	1.571-1	1.024-1	7.684-1	6.373-1	9.383-1	9.340-1	3.414-2	3.446-1
2.000-0	2.825-0	4.245-2	1.124-1	1.204-1	9.505-0	6.080-1	9.718-1	1.086-0	1.084-0	4.854-2	3.631-1
2.044-0	2.880-0	4.209-2	1.111-1	1.153-1	9.389-0	5.848-1	1.019-0	1.125-0	1.123-0	4.801-2	3.600-1
2.500-0	3.042-0	3.504-2	1.051-1	7.721-2	8.374-0	4.244-1	1.442-0	1.442-0	1.441-0	7.888-2	4.738-1
3.000-0	3.124-0	3.080-2	1.024-1	5.386-2	7.448-0	3.222-1	2.377-0	1.822-0	1.820-0	1.254-1	5.827-1
3.500-0	3.188-0	3.627-2	1.010-1	3.944-2	6.802-0	2.591-1	2.889-0	2.226-0	2.225-0	1.845-1	7.025-1
4.000-0	3.173-0	3.680-2	1.006-1	3.020-2	6.247-0	2.145-1	3.580-0	2.851-0	2.850-0	2.578-1	8.353-1
4.500-0	3.153-0	3.644-2	1.015-1	2.387-2	5.788-0	1.808-1	4.195-0	3.092-0	3.092-0	3.450-1	9.806-1
5.000-0	3.132-0	3.670-2	1.021-1	1.934-2	5.398-0	1.585-1	4.842-0	3.945-0	3.944-0	4.480-1	1.132-0
5.500-0	3.126-0	3.677-2	1.023-1	1.998-2	5.061-0	1.388-1	5.018-0	4.002-0	4.002-0	5.998-1	1.280-0
6.000-0	3.108-0	3.900-2	1.029-1	1.343-2	4.770-0	1.240-1	5.384-0	4.488-0	4.488-0	6.884-1	1.437-0
6.500-0	3.081-0	3.935-2	1.036-1	1.145-2	4.514-0	1.120-1	5.748-0	4.941-0	4.941-0	8.259-1	1.604-0
7.000-0	3.048-0	3.980-2	1.050-1	9.872-3	4.287-0	1.019-1	6.104-0	5.419-0	5.419-0	9.777-1	1.779-0
8.000-0	2.981-0	4.083-2	1.080-1	7.580-3	3.903-0	8.598-2	6.806-0	6.389-0	6.389-0	1.317-0	2.157-0
1.000-1	2.787-0	4.381-2	1.156-1	4.837-3	3.324-0	8.488-2	9.167-0	8.394-0	8.394-0	2.121-0	3.023-0
1.250-1	2.625-0	4.617-2	1.218-1	3.097-3	2.821-0	5.089-2	9.310-0	1.084-1	1.084-1	3.218-0	4.131-0
1.500-1	2.486-0	4.878-2	1.287-1	2.151-3	2.460-0	4.183-2	1.036-1	1.334-1	1.334-1	4.830-0	5.367-0
1.750-1	2.349-0	5.199-2	1.382-1	1.580-3	2.188-0	3.544-2	1.139-1	1.585-1	1.585-1	6.210-0	6.748-0
2.000-1	2.241-0	5.410-2	1.428-1	1.210-3	1.975-0	3.070-2	1.227-1	1.836-1	1.836-1	7.844-0	8.196-0
2.500-1	2.088-0	5.818-2	1.533-1	7.741-4	1.880-0	2.415-2	1.385-1	2.338-1	2.338-1	1.139-1	1.121-1
3.000-1	1.978-0	6.134-2	1.619-1	5.376-4	1.438-0	1.888-2	1.473-1	2.840-1	2.840-1	1.521-1	1.437-1
3.500-1	1.980-0	6.379-2	1.683-1	3.950-4	1.272-0	1.682-2	1.524-1	3.341-1	3.341-1	1.923-1	1.798-1
4.000-1	1.874-0	6.611-2	1.745-1	3.024-4	1.143-0	1.457-2	1.629-1	3.842-1	3.842-1	2.341-1	2.095-1
4.500-1	1.788-0	6.851-2	1.888-1	2.350-4	1.038-0	1.284-2	1.703-1	4.343-1	4.343-1	2.772-1	2.455-1
5.000-1	1.722-0	7.079-2	1.958-1	1.938-4	9.538-1	1.148-2	1.781-1	4.844-1	4.844-1	3.212-1	2.813-1
5.500-1	1.681-0	7.176-2	1.982-1	1.800-4	8.683-1	1.035-2	1.803-1	5.344-1	5.344-1	3.698-1	3.181-1
6.000-1	1.662-0	7.295-2	1.975-1	1.344-4	8.218-1	9.424-1	1.842-1	5.845-1	5.845-1	4.113-1	3.517-1
6.500-1	1.635-0	7.413-2	1.986-1	1.145-4	7.692-1	8.847-1	1.879-1	6.345-1	6.345-1	4.572-1	3.881-1
7.000-1	1.618-0	7.527-2	1.986-1	0.874-5	7.238-1	7.988-1	1.913-1	6.846-1	6.846-1	5.035-1	4.251-1
8.000-1	1.588-0	7.746-2	2.043-1	7.588-5	6.481-1	6.917-1	1.977-1	7.847-1	7.847-1	5.873-1	5.811-1
1.000-2	1.493-0	6.121-2	2.143-1	4.838-5	5.379-1	5.442-1	2.889-1	9.849-1	9.849-1	7.879-1	6.998-1

12/07/78

Form Factors

65-Tb

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
8.000+0	1.000+0	2.000+0	1.250-1	9.921-1	9.387-2	1.000+0	3.200-1	5.300-1	1.000+1	1.007-2	9.791-1
5.000+3	9.999+1	4.000+4	1.500-1	8.795-1	1.136-1	1.250+0	2.671-1	6.000-1	1.500+1	1.305-2	9.994-1
1.000+2	9.997-1	1.999+3	1.750-1	8.408-1	1.337-1	1.500+0	2.323-1	6.000-1	2.000+1	6.005-3	9.976-1
1.500+2	9.977-1	3.400+3	2.000-1	8.233-1	1.535-1	2.000+0	1.700-1	7.400-1	5.000+1	9.004-4	1.000+0
2.000+2	9.958-1	5.003+3	2.500-1	7.705-1	1.913-1	2.500+0	1.250-1	7.900-1	6.000+1	2.438-4	1.000+0
2.500+2	9.939-1	6.734+3	3.000-1	7.190-1	2.200-1	3.000+0	1.000-1	8.350-1	1.000+2	1.205-4	1.000+0
3.000+2	9.911-1	1.200+2	4.000-1	6.295-1	2.910-1	3.500+0	8.000-2	8.850-1	1.500+3	1.335-7	1.000+0
4.000+2	9.847-1	2.100+2	5.000-1	5.595-1	3.443-1	4.000+0	7.000-2	9.000-1	1.000+6	6.419-16	1.000+0
5.000+2	9.773-1	3.043+2	6.000-1	4.930-1	3.805-1	5.000+0	5.500-2	9.205-1	1.000+9	3.752-24	1.000+0
7.000+2	9.500-1	4.001+2	7.000-1	4.300-1	4.300-1	6.000+0	4.203-2	9.448-1			
9.000+2	9.387-1	6.500+2	8.000-1	3.923-1	4.679-1	7.000+0	3.200-2	9.590-1			
1.000+1	9.263-1	7.300+2	9.000-1	3.536-1	5.031-1	8.000+0	2.607-2	9.661-1

12/07/78

ENDL Evaluated Photon Cross Sections

66-Dy

12/07/78

Energy Deposition

66-Dy

12/07/79

ENDL Evaluated Photon Data

66-Dy

ATOMIC WEIGHT 161.5		DENSITY 8.95 GRAMS/CC									
ENERGY	TOTAL NFP	CROSS SECTION (BARRS)								NEUT/COLLISION	NEUT/CM
MEV	CM CMCH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	E.F. #100	K.E.	BRCHSTR	K.E.	
1.000-4	4.046-6	2.414-4	0.513-6	2.000-3	2.249-2	0.510-6	9.900-5	9.900-5	4.121-10	2.003-1	
1.250-4	5.100-6	2.824-4	0.603-6	2.000-3	3.493-2	0.600-6	1.249-4	1.249-4	6.439-10	2.400-1	
1.500-4	5.400-6	2.132-4	5.733-6	2.000-3	5.000-2	5.700-6	1.400-4	1.400-4	9.270-10	2.733-1	
1.750-4	5.933-6	2.100-4	5.000-6	2.000-3	5.000-2	5.000-6	1.534-4	1.534-4	9.700-10	2.733-1	
2.000-4	5.023-6	2.300-4	0.200-6	2.000-3	5.334-2	0.200-6	1.940-4	1.940-4	9.600-10	5.000-1	
2.250-4	5.304-6	2.004-4	5.001-6	2.001-3	6.771-2	5.045-6	1.740-4	1.740-4	1.000-9	3.132-1	
2.500-4	6.271-6	1.000-4	5.033-6	2.000-3	0.701-2	5.030-6	1.000-4	1.000-4	1.040-9	3.100-1	
2.750-4	7.004-6	1.400-4	3.000-6	2.000-3	1.351-1	3.000-6	2.400-4	2.400-4	2.574-9	3.100-1	
3.000-4	9.500-6	1.000-4	3.313-6	2.001-3	1.919-1	3.310-6	2.907-4	2.907-4	3.700-9	3.140-1	
3.250-4	9.700-6	1.200-4	3.253-6	2.000-3	1.901-1	3.250-6	3.049-4	3.049-4	3.075-9	3.143-1	
3.500-4	0.900-6	1.370-4	3.713-6	2.000-3	1.900-1	3.710-6	3.004-4	3.004-4	3.072-9	3.004-1	
3.750-4	9.700-6	1.104-4	3.000-6	2.074-3	2.957-1	3.210-6	3.407-4	3.407-4	5.044-9	3.570-1	
4.000-4	1.130-5	1.032-4	2.700-6	2.000-3	3.270-1	2.700-6	3.000-4	3.000-4	6.500-9	3.530-1	
4.100-4	1.101-5	9.000-3	2.073-6	2.000-3	3.500-1	2.070-6	4.100-4	4.100-4	7.100-9	3.510-1	
4.170-4	1.100-5	1.001-4	2.003-6	2.000-3	3.530-1	2.000-6	4.100-4	4.100-4	7.100-9	3.570-1	
4.200-4	1.201-5	9.577-3	2.200-6	2.000-3	4.044-1	2.201-6	4.400-4	4.400-4	8.334-9	3.001-1	
5.000-4	1.407-5	0.312-3	2.243-6	2.053-3	4.000-1	2.240-6	4.000-4	4.000-4	1.020-8	3.040-1	
5.500-4	1.620-5	7.219-3	1.940-6	2.044-3	5.730-1	1.945-6	5.400-4	5.400-4	1.244-8	3.390-1	
6.000-4	1.043-5	6.340-3	1.713-6	2.036-3	6.047-1	1.710-6	5.900-4	5.900-4	1.400-8	3.251-1	
6.500-4	2.000-5	5.572-3	1.504-6	2.024-3	7.532-1	1.501-6	6.400-4	6.400-4	1.730-8	3.001-1	
7.000-4	2.300-5	4.930-3	1.333-6	2.014-3	8.457-1	1.330-6	6.900-4	6.900-4	2.013-8	2.930-1	
8.000-4	2.970-5	3.930-3	1.063-6	2.704-3	1.042-0	1.060-6	7.970-4	7.970-4	2.626-8	2.007-1	
9.000-4	3.670-5	3.170-3	0.570-6	2.700-3	1.209-0	0.570-6	8.971-4	8.971-4	3.320-8	2.430-1	
1.000-3	4.400-5	2.000-3	7.070-5	2.747-3	1.444-0	7.040-5	9.901-4	9.901-4	4.093-8	2.233-1	
1.250-3	6.701-5	1.700-3	4.700-5	2.675-3	1.074-0	4.603-5	1.251-3	1.251-3	8.370-8	1.000-1	
1.500-3	7.130-5	1.630-3	4.400-5	2.000-3	1.000-0	4.300-5	1.500-3	1.500-3	8.000-8	1.000-1	
1.750-3	7.740-5	0.714-3	1.012-6	2.000-3	1.007-0	1.000-6	1.751-3	1.751-3	8.007-8	7.003-1	
2.000-3	1.000-5	0.200-3	1.075-6	2.004-3	2.030-0	1.070-6	1.332-3	1.332-3	7.317-8	7.007-1	
2.250-3	1.200-5	0.930-3	2.437-6	2.074-3	2.030-0	2.434-6	1.334-3	1.334-3	7.335-8	1.030-2	
2.500-3	1.703-5	0.632-3	1.700-6	2.010-3	2.345-0	1.707-6	1.400-3	1.400-3	9.294-8	0.403-1	
2.750-3	2.307-5	4.042-3	1.334-6	2.505-3	2.001-0	1.331-6	1.673-3	1.673-3	1.154-7	7.000-1	
3.000-3	1.700-5	0.902-3	1.771-6	2.505-3	2.002-0	1.700-6	1.675-3	1.675-3	1.157-7	9.395-1	
3.250-3	1.900-5	5.001-3	1.501-6	2.545-3	2.705-0	1.570-6	1.747-3	1.747-3	1.290-7	0.795-1	
3.500-3	2.200-5	5.110-3	1.301-6	2.521-3	2.903-0	1.370-6	1.839-3	1.839-3	1.394-7	0.043-1	
3.750-3	2.670-5	5.035-3	1.521-6	2.521-3	2.904-0	1.510-6	1.840-3	1.840-3	1.390-7	0.005-1	
4.000-3	2.577-5	4.530-3	1.204-6	2.404-3	3.253-0	1.200-6	1.900-3	1.900-3	1.043-7	7.744-1	
4.250-3	2.734-5	4.270-3	1.150-6	2.400-3	3.333-0	1.150-6	2.041-3	2.041-3	1.710-7	7.400-1	
4.500-3	2.900-5	4.571-3	1.233-6	2.400-3	3.333-0	1.231-6	2.042-3	2.042-3	1.720-7	7.000-1	
4.750-3	4.300-5	2.000-3	7.007-5	2.333-3	4.143-0	7.294-5	2.400-3	2.400-3	2.061-7	5.730-1	
5.000-3	7.041-5	1.001-3	4.400-5	2.210-3	5.040-0	4.400-5	2.005-3	2.005-3	3.675-7	4.240-1	
5.250-3	1.020-4	1.100-3	2.500-5	2.070-3	5.000-0	2.043-5	3.470-3	3.470-3	4.000-7	3.200-1	
5.500-3	1.504-4	7.770-2	2.000-5	1.901-3	6.700-0	2.070-5	3.002-3	3.002-3	6.470-7	2.075-1	
5.750-3	2.050-4	5.700-2	1.530-5	1.030-3	7.500-0	1.521-5	4.440-3	4.440-3	0.153-7	2.100-1	
6.000-3	2.703-4	4.300-2	1.107-5	1.734-3	0.273-0	1.150-5	4.005-3	4.005-3	1.001-6	1.000-1	
6.250-3	3.470-4	3.371-2	0.000-5	1.000-3	0.977-0	0.931-4	5.401-3	5.401-3	1.203-6	1.057-1	
6.500-3	4.300-4	2.000-2	7.240-4	1.530-3	9.072-0	7.001-4	5.072-3	5.072-3	1.402-6	1.340-1	
6.750-3	5.307-4	2.170-2	5.000-4	1.445-3	1.000-0	5.735-4	6.339-3	6.339-3	1.057-6	1.101-1	
7.000-3	6.500-4	1.707-2	4.040-4	1.303-3	1.000-0	4.711-4	6.002-3	6.002-3	1.900-6	1.045-1	
7.250-3	6.500-4	1.300-2	3.070-4	1.234-3	1.103-0	3.500-4	7.521-3	7.521-3	2.332-6	0.790-0	
7.500-3	3.100-4	3.001-2	0.070-4	1.234-3	1.103-0	0.751-4	7.000-3	7.000-3	1.770-6	2.000-1	
7.750-3	3.400-4	3.411-2	0.204-4	1.200-3	1.200-0	0.000-4	7.000-3	7.000-3	1.007-6	0.573-1	
8.000-3	4.130-4	2.032-2	7.042-4	1.150-3	1.200-0	7.500-4	8.440-3	8.440-3	2.212-6	1.770-1	
8.250-3	2.942-4	3.975-2	1.073-5	1.150-3	1.200-0	1.001-5	8.400-3	8.400-3	2.232-6	2.501-1	
8.500-3	3.307-4	3.453-2	9.317-4	1.000-3	1.310-0	9.200-4	8.530-3	8.530-3	2.515-6	2.305-1	
8.750-3	3.925-4	3.000-2	1.070-5	1.000-3	1.310-0	1.000-5	8.530-3	8.530-3	2.524-6	2.675-1	
9.000-3	3.004-4	3.000-2	0.294-5	0.900-3	1.411-0	0.153-4	9.070-3	9.070-3	3.190-6	2.000-1	
1.000-2	0.990-4	1.001-2	0.530-4	7.010-2	1.000-0	4.400-4	1.200-2	1.110-2	5.133-6	1.000-1	
1.250-2	1.133-3	1.032-2	2.700-4	0.300-2	1.017-1	2.700-4	1.400-2	1.353-2	7.947-6	1.100-1	
1.500-2	1.710-3	0.000-1	1.041-4	3.300-2	1.971-1	1.700-4	1.000-2	1.007-2	1.000-5	9.290-0	
2.000-2	2.451-3	0.771-1	1.207-4	4.500-2	2.110-1	1.040-4	1.000-2	1.010-2	1.300-5	7.910-0	
2.500-2	4.403-3	2.001-1	7.070-3	3.370-2	2.210-1	0.710-3	2.373-2	2.005-2	2.110-5	5.070-0	
3.000-2	7.000-3	1.014-1	4.300-3	2.043-2	2.400-1	4.300-3	2.000-2	2.000-2	2.000-5	3.710-0	
3.500-2	1.093-2	1.070-1	2.000-3	2.100-2	2.300-1	2.051-3	3.210-2	3.111-2	3.007-5	2.000-0	

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ENDL Evaluated Photon Data

66-Dy

ATOMIC WEIGHT 186.5										DENSITY 8.95 G/CM ³			
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARN)					REV/COLLISION		REV/CM		REV/CM	
	CH	CHN/CH	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD	E.E. - FLOP	K.E.	BRAYTH	K.E.		
4.000	2	1.929	2	7.395	0	2.030	3	1.706	2	2.001	1	1.031	3
4.500	2	2.120	2	5.516	0	1.400	3	1.434	2	2.727	1	1.310	3
5.000	2	2.700	2	4.194	0	1.132	3	1.214	2	2.700	1	0.883	3
5.500	2	3.300	2	3.470	0	0.920	3	1.001	2	2.810	1	0.607	3
6.000	2	3.970	3	1.870	1	0.800	3	1.001	2	2.810	1	0.607	3
6.500	2	4.701	3	1.300	1	0.700	3	1.001	2	2.810	1	0.607	3
7.000	2	5.530	3	0.877	1	0.610	3	1.001	2	2.810	1	0.607	3
7.500	2	6.450	3	0.500	1	0.500	3	1.001	2	2.810	1	0.607	3
8.000	2	7.450	3	0.277	1	0.400	3	1.001	2	2.810	1	0.607	3
8.500	2	8.530	3	0.110	1	0.300	3	1.001	2	2.810	1	0.607	3
9.000	2	9.680	3	0.030	1	0.200	3	1.001	2	2.810	1	0.607	3
9.500	2	10.900	3	0.000	1	0.100	3	1.001	2	2.810	1	0.607	3
10.000	2	12.190	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
10.500	2	13.550	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
11.000	2	14.980	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
11.500	2	16.480	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
12.000	2	18.050	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
12.500	2	19.680	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
13.000	2	21.370	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
13.500	2	23.120	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
14.000	2	24.930	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
14.500	2	26.800	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
15.000	2	28.730	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
15.500	2	30.720	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
16.000	2	32.770	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
16.500	2	34.880	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
17.000	2	37.050	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
17.500	2	39.280	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
18.000	2	41.570	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
18.500	2	43.920	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
19.000	2	46.330	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
19.500	2	48.800	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
20.000	2	51.330	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
20.500	2	53.920	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
21.000	2	56.570	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
21.500	2	59.280	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
22.000	2	62.050	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
22.500	2	64.880	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
23.000	2	67.770	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
23.500	2	70.720	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
24.000	2	73.730	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
24.500	2	76.800	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
25.000	2	79.930	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
25.500	2	83.120	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
26.000	2	86.370	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
26.500	2	89.680	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
27.000	2	93.050	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
27.500	2	96.480	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
28.000	2	99.970	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
28.500	2	103.520	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
29.000	2	107.130	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
29.500	2	110.800	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
30.000	2	114.530	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
30.500	2	118.320	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
31.000	2	122.170	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
31.500	2	126.080	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
32.000	2	130.050	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
32.500	2	134.080	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
33.000	2	138.170	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
33.500	2	142.320	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
34.000	2	146.530	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
34.500	2	150.800	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
35.000	2	155.130	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
35.500	2	159.520	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
36.000	2	163.970	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
36.500	2	168.480	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
37.000	2	173.050	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
37.500	2	177.680	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
38.000	2	182.370	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
38.500	2	187.120	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
39.000	2	191.930	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
39.500	2	196.800	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
40.000	2	201.730	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
40.500	2	206.720	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
41.000	2	211.770	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
41.500	2	216.880	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
42.000	2	222.050	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
42.500	2	227.280	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
43.000	2	232.570	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
43.500	2	237.920	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
44.000	2	243.330	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
44.500	2	248.800	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
45.000	2	254.330	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
45.500	2	259.920	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
46.000	2	265.570	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
46.500	2	271.280	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
47.000	2	277.050	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
47.500	2	282.880	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
48.000	2	288.770	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
48.500	2	294.720	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
49.000	2	300.730	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
49.500	2	306.800	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3
50.000	2	312.930	3	0.000	1	0.000	3	1.001	2	2.810	1	0.607	3

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.000-1	0.000-1	0.007-2	1.000-0	3.000-1	5.300-1	1.000-1	1.000-2	9.787-1
5.000-3	9.999-1	3.920-4	1.000-1	0.000-1	1.000-1	1.000-0	2.000-1	0.000-1	1.000-1	1.000-2	9.999-1
1.000-2	9.999-1	1.981-3	1.000-1	0.000-1	1.000-1	1.000-0	2.313-1	0.003-1	2.000-1	9.121-2	9.973-1
1.000-2	9.970-1	3.442-3	2.000-1	0.300-1	1.400-1	2.000-0	1.771-1	7.437-1	5.000-1	1.030-3	1.000-0
2.000-2	9.901-1	5.000-3	2.000-1	7.707-1	1.000-1	2.000-0	1.300-1	7.000-1	0.000-1	2.970-4	1.000-0
2.000-2	9.940-1	9.001-3	3.000-1	7.000-1	2.213-1	3.000-0	1.000-1	0.300-1	1.000-2	1.303-4	1.000-0
3.000-2	9.914-1	1.000-2	4.000-1	0.300-1	2.000-1	3.000-0	0.100-2	0.000-1	1.000-3	1.403-7	1.000-0
4.000-2	9.853-1	2.070-2	5.000-1	5.007-1	3.370-1	4.000-0	7.000-2	0.000-1	1.000-0	7.445-10	1.000-0
5.000-2	9.782-1	2.940-2	6.000-1	4.007-1	3.031-1	5.000-0	5.003-2	9.212-1	1.000-0	4.100-24	1.000-0
7.000-2	9.600-1	4.070-2	7.000-1	4.413-1	4.243-1	6.000-0	4.331-2	9.430-1			
9.000-2	9.401-1	6.270-2	8.000-1	3.930-1	4.003-1	7.000-0	3.313-2	9.000-1			
1.000-1	9.304-1	7.000-2	9.000-1	3.545-1	4.977-1	8.000-0	2.040-2	9.075-1

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ENDL Evaluated Photon Cross Sections

67-Ho

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Energy Deposition

67-Ha

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ENDL Evaluated Photon Data

67-Ho

ATOMIC WEIGHT 184.93										DENSITY 8.79 GRAMS/CC			
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARNS)				MEV/COLLISION		MEV/CM	K.E. - FLOR		K.E. - BREMSSTR	
	CM	CM-CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. - FLOR	K.E. - BREMSSTR		K.E.	K.E.	K.E.	K.E.
1.080	4.712	2.415	6.613	2.884	2.182	2.810	9.995	9.995	4.184	10	2.122	1	1
1.250	4.742	2.382	6.394	2.884	2.407	2.810	1.249	1.249	6.937	10	2.320	1	1
1.500	4.786	2.314	6.083	2.884	2.883	2.810	1.498	1.498	9.413	10	2.917	1	1
1.863	4.814	2.191	5.883	2.884	3.387	2.810	1.802	1.802	1.075	9	3.015	1	1
1.817	4.838	2.353	6.443	2.884	3.884	2.810	1.818	1.818	1.094	9	3.342	1	1
1.750	4.835	2.216	6.089	2.884	3.840	2.810	1.749	1.749	1.281	9	3.406	1	1
2.040	4.883	2.048	5.483	2.878	3.635	2.810	1.989	1.989	1.673	9	3.510	1	1
2.580	4.711	1.987	4.345	2.873	3.389	1.342	2.480	2.480	2.814	9	3.484	1	1
3.040	4.872	1.312	3.993	2.889	1.889	3.780	2.988	2.988	3.782	9	3.457	1	1
3.182	4.910	1.235	3.383	2.887	2.188	3.380	3.179	3.179	4.232	9	3.452	1	1
3.198	4.888	1.483	3.843	2.887	2.125	3.840	3.194	3.194	4.271	9	3.439	1	1
3.500	4.947	1.272	3.488	2.883	2.517	3.479	3.487	3.487	5.121	9	3.409	1	1
4.000	1.034	1.100	3.013	2.877	3.829	3.010	3.988	3.988	6.887	9	3.684	1	1
4.358	1.148	9.888	2.713	2.921	3.751	2.710	4.345	4.345	7.928	9	3.784	1	1
4.384	1.073	1.080	2.903	2.951	3.773	2.900	4.380	4.380	7.929	9	4.082	1	1
4.500	1.118	1.017	2.789	2.949	3.988	2.781	4.485	4.485	8.462	9	4.017	1	1
5.000	1.291	8.610	2.413	2.942	4.812	2.410	4.994	4.994	1.044	8	3.687	1	1
5.500	1.481	7.631	2.090	2.937	5.857	2.087	5.482	5.482	1.283	8	3.684	1	1
6.000	1.700	6.883	1.833	2.924	6.959	1.830	5.990	5.990	1.503	8	3.524	1	1
6.500	1.932	5.888	1.613	2.913	7.438	1.610	6.488	6.488	1.763	8	3.359	1	1
7.000	2.174	5.232	1.433	2.902	8.352	1.430	6.985	6.985	2.044	8	3.213	1	1
8.000	2.750	4.137	1.133	2.883	1.030	1.130	7.980	7.980	2.888	8	2.901	1	1
9.000	3.388	3.348	9.189	2.898	1.215	9.140	8.972	8.972	3.371	8	2.840	1	1
1.000	4.182	2.734	7.487	2.835	1.439	7.439	9.982	9.982	4.138	8	2.394	1	1
1.250	6.388	1.781	4.877	2.783	1.857	4.849	1.243	1.243	6.480	8	1.949	1	1
1.344	7.342	1.548	4.243	2.740	2.031	4.218	1.335	1.335	7.468	8	1.819	1	1
1.345	1.749	6.508	1.788	2.733	2.033	1.779	1.343	1.343	7.543	8	1.875	1	1
1.389	1.908	5.889	1.635	2.729	2.118	1.632	1.387	1.388	8.043	8	1.772	1	1
1.390	1.319	8.627	2.383	2.723	2.118	2.380	1.388	1.388	8.083	8	1.052	2	1
1.500	1.616	7.039	1.828	2.705	2.327	1.825	1.498	1.497	9.385	8	1.263	1	1
1.738	2.397	4.745	1.300	2.673	2.753	1.297	1.734	1.734	1.297	7	1.232	1	1
1.739	1.794	6.341	1.737	2.674	2.755	1.734	1.738	1.738	1.261	7	1.674	1	1
1.750	1.825	6.235	1.708	2.631	2.775	1.705	1.747	1.747	1.277	7	1.572	1	1
1.821	2.342	4.898	1.331	2.588	3.085	1.328	1.817	1.818	1.538	7	1.185	1	1
1.822	2.126	5.351	1.488	2.588	3.088	1.483	1.819	1.818	1.540	7	1.021	1	1
2.000	2.385	4.811	1.318	2.589	3.232	1.315	1.988	1.985	1.887	7	1.438	1	1
2.185	2.783	4.088	1.120	2.527	3.484	1.117	2.121	2.120	1.883	7	1.619	1	1
2.127	2.606	4.385	1.188	2.526	3.486	1.193	2.182	2.182	1.885	7	1.141	1	1
2.500	4.313	2.835	7.783	2.416	4.121	7.739	2.482	2.481	2.599	7	1.208	1	1
3.000	6.529	1.742	4.772	2.298	5.026	4.749	2.885	2.885	3.730	7	1.571	1	1
3.500	9.948	1.195	3.184	2.154	5.867	3.142	3.478	3.475	5.057	7	1.528	1	1
4.000	1.405	8.087	2.217	2.037	6.709	2.197	3.863	3.862	6.573	7	1.820	1	1
4.500	1.928	5.820	1.821	1.911	7.188	1.802	4.447	4.446	8.276	7	1.314	1	1
5.000	2.341	4.477	1.228	1.804	8.282	1.208	4.925	4.925	1.016	6	1.938	1	1
5.500	3.289	3.480	9.530	1.893	8.970	9.360	5.402	5.401	1.221	6	1.852	1	1
6.000	4.113	2.788	7.578	1.602	9.670	7.415	5.872	5.872	1.443	6	1.428	1	1
6.500	5.078	2.240	6.135	1.503	1.029	5.984	6.340	6.339	1.882	6	1.248	1	1
7.000	6.170	1.844	5.050	1.420	1.031	4.906	6.802	6.801	1.936	6	1.102	1	1
8.000	8.752	1.300	3.880	1.280	1.210	3.431	7.710	7.709	2.488	6	1.009	0	1
8.070	8.953	1.271	3.480	1.289	1.218	3.322	7.773	7.772	2.325	6	1.081	0	1
8.071	3.204	3.951	5.724	1.289	1.218	9.588	7.985	7.983	1.888	6	2.101	1	1
8.018	4.186	2.711	7.425	1.158	1.308	7.388	8.778	8.748	2.385	6	1.799	1	1
8.919	2.991	3.804	1.045	1.158	1.308	1.030	8.819	8.789	2.408	6	2.538	1	1
9.394	3.441	3.302	9.034	1.102	1.355	1.042	9.278	9.245	2.709	6	2.538	1	1
9.395	2.973	3.827	1.048	1.102	1.355	1.037	9.295	9.260	2.719	6	2.711	1	1
1.000	2.520	3.232	8.851	1.039	1.416	1.046	9.881	9.847	3.130	6	2.457	1	1
1.250	6.438	1.767	4.840	0.137	1.829	4.757	1.289	1.106	5.119	6	1.718	1	1
1.500	2.052	1.881	2.980	0.883	1.825	2.882	1.485	1.343	7.953	6	1.278	1	1
1.750	1.983	1.193	1.928	0.538	1.983	1.889	1.899	1.578	2.101	5	1.985	0	1
2.000	2.277	4.988	1.388	4.715	2.131	1.318	1.928	1.888	1.367	5	1.979	0	1
2.580	4.138	2.755	7.344	3.384	2.332	1.171	2.377	2.258	2.133	5	1.467	0	1
3.000	6.888	1.781	4.888	2.758	2.518	4.398	2.808	2.691	3.029	5	1.025	0	1
3.500	1.883	1.134	3.185	2.189	2.818	2.880	3.228	3.111	4.047	5	1.180	0	1

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ATOMIC WEIGHT 184.93							DENSITY 8.78 GRAMS/CC						
ENERGY		TOTAL WFP		CROSS SECTION (BARN)					NEUT/COLLISION			NEUT/CM	
MEV	CM	CM-CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.-FLOR	K.E.	OPENSTR	K.E.		
4.988-2	1.421-2	0.887-8	2.193-3	1.787-2	2.711-1	1.988-3		3.827-2	3.513-2	5.182-5	2.473-0		
4.988-2	1.527-2	5.983-8	1.817-3	1.482-2	2.788-1	1.448-3		4.014-2	3.903-2	6.388-5	2.025-0		
5.988-2	2.284-2	4.988-8	1.293-3	1.293-2	2.821-1	1.888-3		4.384-2	4.275-2	7.894-5	1.094-0		
5.988-2	3.214-2	3.539-8	9.884-2	1.888-2	2.851-1	8.873-2		4.738-2	4.631-2	9.882-5	1.441-0		
5.988-2	3.386-2	3.441-8	9.425-2	1.888-2	2.885-1	8.873-2		4.788-2	4.673-2	9.128-5	1.414-0		
5.988-2	7.023-3	1.888-8	4.438-3	1.888-2	2.885-1	4.381-3		5.388-2	1.878-2	1.178-5	2.387-0		
6.888-2	8.484-3	1.138-8	3.888-3	3.451-1	2.878-1	3.343-3		5.883-2	2.888-2	1.838-5	2.487-0		
6.888-2	1.094-2	1.888-8	2.888-3	3.873-1	2.888-1	2.878-3		6.884-2	2.571-2	2.785-5	2.482-0		
7.888-2	1.284-2	2.888-8	2.888-3	7.314-1	2.888-1	2.884-3		8.880-2	3.482-2	3.878-5	2.884-0		
8.888-2	1.778-2	3.888-8	1.788-3	3.888-1	2.811-1	1.888-3		7.818-2	3.878-2	6.888-5	2.833-0		
1.088-1	3.194-2	3.888-8	9.794-2	3.888-1	2.883-1	9.888-2		9.348-2	5.774-2	1.393-5	1.888-0		
1.238-1	5.745-2	1.888-8	5.824-2	2.888-1	2.798-1	4.877-2		1.135-1	7.888-2	2.885-4	1.375-0		
1.500-1	9.194-2	1.243-8	3.484-2	1.884-1	2.732-1	2.838-2		1.318-1	9.888-2	4.888-4	1.878-0		
1.738-1	1.343-1	8.472-1	2.382-2	1.458-1	2.843-1	1.811-2		1.482-1	1.187-1	5.871-4	8.888-1		
2.088-1	1.847-1	6.188-1	1.887-2	1.143-1	2.587-1	1.318-2		1.828-1	1.328-1	7.359-4	7.182-1		
2.888-1	3.023-1	3.783-1	1.031-2	7.538-0	2.488-1	7.142-1		1.888-1	1.814-1	1.084-3	5.338-1		
3.888-1	4.332-1	2.814-1	7.198-1	5.385-0	2.287-1	4.335-1		2.882-1	1.850-1	1.421-3	4.250-1		
3.988-1	5.785-1	1.884-1	5.481-1	3.888-0	2.178-1	2.881-1		2.288-1	2.883-1	1.787-3	3.818-1		
4.888-1	7.051-1	1.814-1	4.418-1	3.888-0	2.073-1	2.838-1		2.435-1	2.838-1	2.118-3	3.283-1		
4.988-1	8.318-1	1.387-1	3.748-1	2.488-0	1.882-1	1.518-1		2.811-1	2.458-1	2.458-3	2.958-1		
5.888-1	9.527-1	1.194-1	3.278-1	2.015-0	1.885-1	1.184-1		2.788-1	2.832-1	2.913-3	2.783-1		
5.988-1	1.084-1	1.888-1	2.587-1	1.878-0	1.853-1	8.872-1		2.888-1	2.888-1	3.381-3	2.885-1		
6.888-1	1.178-1	9.788-1	2.888-1	1.414-1	1.888-1	1.538-1		3.178-1	3.078-1	3.887-3	2.825-1		
7.888-1	1.288-1	8.888-1	1.288-1	1.288-1	7.888-1	8.888-1		3.888-1	3.888-1	3.888-3	2.888-1		
8.888-1	1.388-1	8.377-1	2.288-1	1.094-1	1.884-1	5.353-1		3.818-1	3.877-1	5.132-3	2.587-1		
9.888-1	1.527-1	7.448-1	2.848-1	8.857-1	1.581-1	3.881-1		4.884-1	4.888-1	8.888-3	2.825-1		
1.000-0	1.818-0	8.257-2	1.714-1	5.183-1	1.407-1	8.948-0		5.121-1	5.084-1	1.052-2	2.785-1		
1.082-0	1.847-0	6.158-2	1.887-1	4.475-1	1.382-1	2.445-0	1.000-8	5.242-1	5.188-1	1.102-2	2.807-1		
1.250-0	2.131-0	5.348-2	1.482-1	3.341-1	1.280-1	1.883-0	3.795-3	8.531-1	6.487-1	1.715-2	3.045-1		
1.500-0	2.738-0	4.888-2	1.382-1	2.328-1	1.147-1	1.880-0	3.288-3	7.938-1	7.801-1	2.530-2	3.353-1		
1.750-0	2.532-0	4.493-2	1.230-1	1.713-1	1.055-1	8.898-1	6.888-1	9.418-1	9.391-1	3.953-2	3.708-1		
2.000-0	2.888-0	4.283-2	1.188-1	1.313-1	9.787-1	7.038-1	1.044-0	1.101-1	1.088-0	4.832-2	4.117-1		
2.044-0	2.891-0	4.287-2	1.198-1	1.257-1	9.877-1	6.788-1	1.085-0	1.130-0	1.128-0	5.088-2	4.191-1		
2.500-0	2.842-0	4.003-2	1.088-1	8.418-2	8.810-1	4.821-1	1.775-0	1.447-0	1.448-0	8.252-2	5.082-1		
3.000-0	2.916-0	3.801-2	1.088-1	5.851-2	7.718-1	3.731-1	2.538-0	1.827-0	1.885-0	1.287-1	6.281-1		
3.500-0	2.994-0	3.851-2	1.055-1	4.300-2	7.011-1	2.888-1	3.195-0	2.232-0	2.231-0	1.886-1	7.553-1		
4.000-0	2.936-0	3.894-2	1.054-1	3.294-2	6.438-1	2.888-1	3.818-0	2.898-0	2.857-0	2.888-1	8.587-1		
4.500-0	2.936-0	3.875-2	1.081-1	2.803-2	5.884-1	2.888-1	4.414-0	3.180-0	3.889-0	3.588-1	1.058-0		
5.000-0	2.914-0	3.884-2	1.088-1	2.188-2	5.884-1	1.887-1	4.888-0	3.353-0	3.958-0	4.788-1	1.818-0		
5.500-0	2.953-0	3.884-2	1.078-1	2.217-2	5.884-1	1.887-1	4.888-0	3.321-0	4.888-0	4.788-1	1.818-0		
6.000-0	2.880-0	3.937-2	1.078-1	1.485-2	4.917-1	1.431-1	5.788-0	4.478-0	4.911-0	7.888-1	1.284-0		
6.500-0	2.883-0	3.974-2	1.088-1	1.248-2	4.853-1	1.288-1	8.888-0	4.951-0	4.951-0	8.088-1	1.728-0		
7.000-0	2.869-0	4.021-2	1.101-1	1.077-2	4.419-1	1.175-1	8.482-0	5.430-0	5.428-0	1.088-0	1.918-0		
8.000-0	2.748-0	4.138-2	1.133-1	8.244-3	4.023-1	9.810-2	7.282-0	8.480-0	6.480-0	1.353-0	2.328-0		
1.008-1	2.587-0	4.431-2	1.214-1	5.275-3	3.428-1	7.451-2	6.830-0	8.378-0	8.378-0	2.175-0	3.282-0		
1.298-1	2.433-0	4.475-2	1.280-1	3.377-3	2.587-1	5.882-2	8.834-0	1.088-1	1.088-1	3.393-0	4.481-0		
1.980-1	2.383-0	4.494-2	1.353-1	2.348-3	2.538-1	4.818-2	1.094-0	1.338-1	1.338-1	4.730-0	5.880-0		
1.750-1	2.175-0	5.230-2	1.432-1	1.723-3	2.298-1	4.882-2	1.203-1	1.587-1	1.587-1	6.333-0	7.294-0		
2.000-1	2.074-0	5.488-2	1.383-1	1.319-3	2.038-1	3.538-2	1.295-1	1.838-1	1.838-1	7.991-0	8.882-0		
2.500-1	1.989-0	5.887-2	1.815-1	8.442-4	1.711-1	2.782-2	1.441-1	2.339-1	2.339-1	1.198-1	1.213-1		
3.000-1	1.888-0	6.228-2	1.788-1	5.882-4	1.488-1	2.287-2	1.595-1	2.841-1	2.841-1	1.443-1	1.595-1		
3.500-1	1.758-0	6.478-2	1.774-1	4.388-4	1.311-1	1.938-2	1.841-1	3.342-1	3.342-1	1.948-1	1.983-1		
4.000-1	1.684-0	6.718-2	1.839-1	3.288-4	1.178-1	1.878-2	1.780-1	3.843-1	3.843-1	2.370-1	2.288-1		
4.500-1	1.634-0	6.881-2	1.888-1	2.888-4	1.071-1	1.478-2	1.728-1	4.344-1	4.344-1	2.883-1	2.888-1		
5.000-1	1.588-0	7.087-2	1.888-1	2.111-4	1.088-1	1.688-2	1.688-1	4.844-1	4.844-1	3.244-1	3.084-1		
5.500-1	1.541-0	7.287-2	1.888-1	1.744-4	8.888-1	1.182-2	1.683-1	5.344-1	5.344-1	3.844-1	3.844-1		
6.000-1	1.534-0	7.414-2	2.031-1	1.488-4	8.471-1	1.888-2	1.945-1	5.844-1	5.844-1	4.151-1	3.810-1		
6.888-1	1.518-0	7.535-2	2.888-1	1.248-4	7.828-1	9.888-2	1.983-1	6.347-1	6.347-1	4.611-1	4.248-1		
7.888-1	1.487-0	7.851-2	2.888-1	1.077-4	7.458-1	9.188-2	2.882-1	6.847-1	6.847-1	5.077-1	4.885-1		
8.888-1	1.448-0	7.888-2	2.195-1	8.244-5	6.888-1	7.888-2	2.888-1	7.848-1	7.848-1	8.017-1	5.428-1		
1.088-2	1.378-0	8.257-2	2.841-1	5.278-5	5.345-1	6.788-2	2.295-1	9.880-1	9.880-1	7.888-1	7.148-1		

12/07/78

Form Factors

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SIN(Θ/2)/λ COHERENT			SIN(Θ/2)/λ COHERENT			SIN(Θ/2)/λ COHERENT			SIN(Θ/2)/λ COHERENT		
1/λ	COHERENT	INCOHERENT	1/λ	COHERENT	INCOHERENT	1/λ	COHERENT	INCOHERENT	1/λ	COHERENT	INCOHERENT
0.000	0	0.000	1.230	9.104	8.797	1.000	0	3.235	1	1.901	9.784
5.000	3	9.995	1.500	8.899	1.075	1.250	0	2.889	1	1.500	9.919
1.000	2	9.998	1.750	8.613	1.273	1.500	0	2.312	1	2.000	9.278
1.500	2	9.978	2.000	8.388	1.467	2.000	0	1.779	1	5.000	1.088
2.000	2	9.902	2.500	7.890	1.837	2.500	0	1.324	1	8.000	2.723
2.500	2	9.811	3.000	7.331	2.183	3.000	0	1.070	1	1.000	2
3.000	2	9.717	4.000	6.411	2.807	3.500	0	0.822	1	1.000	3
4.000	2	9.637	5.000	5.848	3.334	4.000	0	0.653	1	1.000	6
5.000	2	9.789	6.000	5.002	3.789	5.000	0	0.622	2	1.000	9
7.000	2	9.619	7.000	4.443	4.200	6.000	0	4.377	2	9.488	1
9.000	2	9.437	8.000	3.984	4.578	7.000	0	3.381	2	9.575	1
1.000	1	9.341	9.000	3.583	4.931	8.000	0	2.874	2	9.670	1

12/07/79

ENDL Evaluated Photon Cross Sections

68-Er

12/07/78

Energy Deposition

68-Er

12/07/78

ENCL Evaluated Photon Data

68-Er

ATOMIC WEIGHT 187.26			DENSITY 9.15 GRAMS/CC									
ENERGY KEV	TOTAL PFP		CROSS SECTION (BARN)						NEUTRON COLLISION			NEUTRON K.E.
	CM	CM*CM/CM	TOTAL	COMPONENT	INCOMPONENT	PHOTOEL	PAIR PROD	E.E. FLOR	K.E.	NEUTRON	K.E.	
1.000-4	4.418-6	2.478-4	6.883-6	3.073-3	2.159-2	6.888-6		9.988-5	9.988-5	4.248-10	2.257-1	
1.250-4	4.535-6	2.384-4	6.849-6	3.072-3	2.300-2	6.848-6		1.249-4	1.249-4	6.634-10	2.737-1	
1.500-4	4.637-6	2.367-4	6.843-6	3.071-3	2.422-2	6.840-6		1.499-4	1.499-4	9.253-10	3.192-1	
1.705-4	4.690-6	2.188-4	6.883-6	3.070-3	2.607-2	6.888-6		1.704-4	1.704-4	1.234-9	3.415-1	
1.719-4	4.592-6	2.393-4	6.853-6	3.070-3	2.307-2	6.850-6		1.718-4	1.718-4	1.255-9	3.788-1	
1.750-4	4.637-6	2.372-4	6.888-6	3.069-3	2.533-2	6.885-6		1.749-4	1.749-4	1.300-9	3.787-1	
2.000-4	4.937-6	2.895-4	6.187-6	3.088-3	2.900-2	6.180-6		1.889-4	1.889-4	1.688-9	4.032-1	
2.500-4	6.334-6	1.788-4	4.782-6	3.083-3	3.308-1	4.789-6		2.488-4	2.488-4	2.653-9	5.945-1	
3.000-4	7.737-6	1.412-4	3.883-6	3.059-3	1.880-1	3.880-6		2.988-4	2.988-4	3.810-9	3.874-1	
3.347-4	8.835-6	1.261-4	3.503-6	3.054-3	2.282-1	3.500-6		3.344-4	3.344-4	4.753-9	3.828-1	
3.381-4	7.899-6	1.427-4	3.883-6	3.054-3	2.299-1	3.880-6		3.358-4	3.358-4	4.753-9	4.385-1	
3.500-4	8.038-6	1.385-4	3.780-6	3.053-3	2.480-1	3.767-6		3.497-4	3.497-4	5.198-9	4.367-1	
4.000-4	9.274-6	1.178-4	3.273-6	3.047-3	3.182-1	3.270-6		3.998-4	3.998-4	6.787-9	4.308-1	
4.488-4	1.098-5	1.084-4	2.843-6	3.039-3	3.904-1	2.840-6		4.479-4	4.479-4	8.527-9	4.195-1	
4.488-4	1.074-5	1.088-4	3.023-6	3.039-3	3.926-1	3.020-6		4.493-4	4.493-4	8.581-9	4.475-1	
4.500-4	1.035-5	1.082-4	3.021-6	3.039-3	3.929-1	3.018-6		4.495-4	4.495-4	8.589-9	4.474-1	
5.000-4	1.182-5	9.408-3	2.813-6	3.038-3	4.745-1	2.810-6		4.994-4	4.994-4	1.080-8	4.298-1	
5.500-4	1.378-5	8.185-3	2.888-6	3.038-3	5.562-1	2.885-6		5.493-4	5.493-4	1.282-8	4.104-1	
6.000-4	1.573-5	7.178-3	1.983-6	3.014-3	6.474-1	1.990-6		5.991-4	5.991-4	1.525-8	3.834-1	
6.500-4	1.740-5	6.283-3	1.745-6	3.002-3	7.343-1	1.742-6		6.489-4	6.489-4	1.789-8	3.730-1	
7.000-4	1.947-5	5.398-3	1.543-6	2.982-3	8.251-1	1.540-6		6.988-4	6.988-4	2.074-8	3.951-1	
8.000-4	2.448-5	4.403-3	1.283-6	2.973-3	1.018-0	1.280-6		7.981-4	7.981-4	2.707-8	3.215-1	
9.000-4	3.099-5	3.581-3	9.889-5	2.947-3	1.202-0	9.880-5		8.973-4	8.973-4	3.422-8	2.923-1	
1.000-3	3.777-5	2.884-3	8.037-5	2.925-3	1.395-0	8.008-5		9.984-4	9.984-4	4.219-8	2.838-1	
1.250-3	5.857-5	1.888-3	5.183-5	2.952-3	1.841-0	5.154-5		1.243-3	1.243-3	6.567-6	2.123-1	
1.409-3	7.439-5	1.475-3	4.097-5	2.813-3	2.136-0	4.089-5		1.399-3	1.399-3	8.321-6	1.889-1	
1.410-3	1.831-5	3.988-3	1.828-5	2.813-3	2.138-0	1.825-5		1.408-3	1.408-3	8.405-6	7.881-1	
1.434-3	1.958-5	3.487-3	1.527-5	2.803-3	2.281-0	1.524-5		1.451-3	1.451-3	8.836-6	7.294-1	
1.495-3	1.338-5	7.088-3	2.184-5	2.803-3	2.283-0	2.181-5		1.453-3	1.453-3	8.958-6	1.848-2	
1.500-3	1.531-5	7.883-3	2.023-5	2.793-3	2.308-0	2.020-5		1.486-3	1.487-3	9.518-6	9.874-1	
1.744-3	2.235-5	4.885-3	1.340-5	2.718-3	2.755-0	1.337-5		1.748-3	1.745-3	1.894-6	7.705-1	
1.810-3	2.478-5	4.410-3	1.285-5	2.703-3	2.863-0	1.282-5		1.808-3	1.805-3	1.384-7	7.888-1	
1.811-3	1.858-5	5.878-3	1.833-5	2.703-3	2.885-0	1.830-5		1.808-3	1.807-3	1.387-7	9.718-1	
2.000-3	2.423-5	4.510-3	1.253-5	2.657-3	3.210-0	1.250-5		1.998-3	1.994-3	1.890-7	8.231-1	
2.005-3	2.441-5	4.478-3	1.244-5	2.655-3	3.218-0	1.241-5		2.001-3	1.999-3	1.899-7	8.186-1	
2.088-3	2.137-5	4.875-3	1.388-5	2.655-3	3.221-0	1.379-5		2.082-3	2.081-3	1.701-7	9.108-1	
2.211-3	2.849-5	3.837-3	1.088-5	2.588-3	3.583-0	1.083-5		2.208-3	2.204-3	2.085-7	7.738-1	
2.212-3	2.836-5	4.099-3	1.139-5	2.588-3	3.585-0	1.138-5		2.207-3	2.206-3	2.067-7	8.274-1	
2.500-3	3.637-5	2.957-3	8.211-5	2.501-3	4.088-0	8.188-5		2.482-3	2.481-3	2.637-7	6.739-1	
3.000-3	8.012-5	1.818-3	5.048-5	2.381-3	5.003-0	5.025-5		2.988-3	2.985-3	3.785-7	4.984-1	
3.500-3	9.034-5	1.288-3	3.348-5	2.235-3	5.848-0	3.328-5		3.477-3	3.475-3	5.132-7	3.834-1	
4.000-3	1.233-4	8.425-2	2.348-5	2.115-3	8.891-0	2.327-5		3.884-3	3.883-3	6.672-7	3.085-1	
4.500-3	1.757-4	8.188-2	1.718-5	1.885-3	7.472-0	1.888-5		4.448-3	4.447-3	8.401-7	2.517-1	
5.000-3	2.335-4	4.880-2	1.300-5	1.878-3	8.249-0	1.281-5		4.988-3	4.985-3	1.031-6	2.110-1	
5.500-3	3.034-4	4.838-2	1.010-5	1.783-3	8.982-0	9.984-5		5.404-3	5.402-3	1.240-6	1.798-1	
6.000-3	3.778-4	2.882-2	6.032-4	1.687-3	9.888-0	7.884-5		5.875-3	5.874-3	1.488-6	1.594-1	
6.500-3	4.838-4	2.342-2	6.508-4	1.587-3	1.029-1	6.348-4		6.342-3	6.341-3	1.709-6	1.359-1	
7.000-3	5.888-4	1.988-2	5.335-4	1.478-3	1.091-1	5.208-4		6.805-3	6.804-3	1.987-6	1.200-1	
8.000-3	6.038-4	1.380-2	3.777-4	1.333-3	1.212-1	3.642-4		7.715-3	7.714-3	2.528-6	9.977-0	
8.357-3	9.009-4	1.213-2	3.389-4	1.280-3	1.250-1	3.240-4		8.038-3	8.035-3	2.743-6	8.919-0	
8.358-3	3.151-4	3.488-2	8.832-4	1.280-3	1.250-1	8.903-4		8.246-3	8.245-3	2.820-6	2.188-1	
9.284-3	4.178-4	2.818-2	7.278-4	1.183-3	1.345-1	7.124-4		9.114-3	9.113-3	2.593-6	1.881-1	
9.285-3	2.977-4	3.872-2	1.020-5	1.183-3	1.345-1	1.088-5		9.128-3	9.125-3	2.598-6	2.882-1	
9.751-3	3.422-4	3.183-2	6.889-4	1.189-3	1.385-1	6.757-4		9.628-3	9.626-3	2.910-6	2.418-1	
9.752-3	2.958-4	3.875-2	1.888-5	1.189-3	1.385-1	1.815-5		9.843-3	9.841-3	2.821-6	2.803-1	
1.008-2	3.187-4	3.451-2	9.585-4	1.083-3	1.420-1	9.475-4		9.886-3	9.882-3	3.053-6	2.894-1	
1.298-2	5.834-4	1.873-2	5.283-4	8.478-2	1.835-1	5.117-4		1.289-2	1.095-2	5.098-6	1.876-1	
1.508-2	9.583-4	1.138-2	3.184-4	8.837-2	1.835-1	3.893-4		1.488-2	1.332-2	7.741-6	1.388-1	
1.738-2	1.438-3	7.488-1	2.888-4	5.758-2	1.984-1	2.889-4		1.788-2	1.587-2	1.843-5	1.074-1	
2.088-2	2.388-3	5.214-1	1.448-4	4.988-2	2.144-1	1.387-4		1.988-2	1.787-2	1.372-5	8.575-0	
2.388-2	3.838-3	2.883-1	7.885-3	3.884-2	2.358-1	7.537-3		2.378-2	2.248-2	2.145-5	5.888-0	
3.088-2	8.241-3	1.731-1	4.883-3	2.888-2	2.533-1	4.352-3		2.888-2	2.881-2	3.051-5	4.895-0	
3.388-2	9.418-3	1.181-1	3.888-3	2.777-2	2.842-1	2.972-3		3.288-2	3.188-2	4.078-5	3.298-0	

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12/07/78

ENDL Evaluated Photon Data

68-Er

ATOMIC WEIGHT 167.26		DENSITY 9.15 GRAMS/CC									
ENERGY KEV	TOTAL HPF		CROSS SECTION (BARNS)						REV/COLLISION		REV/CM
	CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	K.E.
4.000-2	1.330-2	0.107-0	2.200-3	1.000-2	2.741-1	2.054-3		3.000-2	3.500-2	5.204-5	2.617-0
4.500-2	1.023-2	5.900-0	1.000-3	1.950-2	2.800-1	1.400-3		4.011-2	3.000-2	6.419-5	2.134-0
5.000-2	2.300-2	4.300-0	1.000-3	1.310-2	2.000-1	1.107-3		4.370-2	4.200-2	7.000-5	1.770-0
5.500-2	3.000-2	3.571-0	9.919-2	1.100-2	2.000-1	0.500-3		4.730-2	4.612-2	9.023-5	1.507-0
5.749-2	3.400-2	3.100-0	8.000-2	1.050-2	2.000-1	7.500-3		4.900-2	4.701-2	9.000-5	1.300-0
5.749-2	7.100-2	3.500-0	4.000-2	1.050-2	2.000-1	4.130-3		5.370-2	5.000-2	1.210-5	2.301-0
6.000-2	7.000-2	3.377-0	3.000-2	1.000-2	2.000-1	3.000-3		5.000-2	4.930-2	1.200-5	2.400-0
6.500-2	9.700-2	3.110-0	3.000-2	0.800-2	2.000-1	2.000-3		6.000-2	5.400-2	2.400-5	2.400-0
7.000-2	1.100-2	9.100-0	2.500-2	7.000-2	2.000-1	2.000-3		6.700-2	6.000-2	3.500-5	2.400-0
8.000-2	1.000-2	6.400-0	1.000-2	6.000-2	2.000-1	1.710-3		7.610-2	3.810-2	6.101-5	2.200-0
1.000-1	3.000-2	3.000-0	1.000-2	4.101-1	2.000-1	9.310-2		9.330-2	5.610-2	1.337-4	1.000-0
1.250-1	5.400-2	2.010-0	5.000-2	2.770-1	2.000-1	5.030-2		1.130-1	7.740-2	2.544-4	1.400-0
1.500-1	6.000-2	2.200-0	3.510-2	2.000-2	2.770-1	3.040-2		1.310-1	9.720-2	4.000-4	1.100-0
1.750-1	1.200-1	0.670-1	2.410-2	1.510-1	2.670-1	1.991-2		1.400-1	1.100-1	5.000-4	9.170-1
2.000-1	1.700-1	0.331-1	1.700-2	1.100-1	2.600-1	1.370-2		1.630-1	1.301-1	7.370-4	7.000-1
2.500-1	2.014-1	3.000-1	1.070-2	7.000-2	2.440-1	7.000-2		1.800-1	1.614-1	1.000-3	5.730-1
3.000-1	4.040-1	2.700-1	1.700-2	5.500-1	2.300-1	4.000-2		2.100-1	1.800-1	1.400-3	4.500-1
3.500-1	5.400-1	2.000-1	5.710-1	4.100-1	2.200-1	3.100-2		2.200-1	2.000-1	1.000-3	3.000-1
4.000-1	6.370-1	1.000-1	4.620-1	3.200-1	2.100-1	2.100-2		2.470-1	2.200-1	2.100-3	3.470-1
4.500-1	7.770-1	1.400-1	3.900-1	2.700-1	2.010-1	1.630-2		2.800-1	2.400-1	2.600-3	3.100-1
5.000-1	8.900-1	1.200-1	3.400-1	2.100-1	1.930-1	1.200-2		2.830-1	2.600-1	3.030-3	3.010-1
5.500-1	9.900-1	1.000-1	3.000-1	1.740-1	1.800-1	1.000-2		3.000-1	2.800-1	3.510-3	2.800-1
6.000-1	1.101-1	9.000-1	2.700-1	1.470-1	1.700-1	8.140-2		3.200-1	3.100-1	4.040-3	2.600-1
6.500-1	1.100-1	9.144-1	2.500-1	1.200-1	1.730-1	6.900-2		3.400-1	3.330-1	4.600-3	2.700-1
7.000-1	1.200-1	8.500-1	2.300-1	1.090-1	1.670-1	5.700-2		3.600-1	3.500-1	5.300-3	2.770-1
8.000-1	1.400-1	7.540-1	2.000-1	0.390-1	1.500-1	4.200-2		4.100-1	4.040-1	6.010-3	2.700-1
1.000-0	1.730-0	6.300-2	1.700-1	5.410-1	1.400-1	2.670-2		5.140-1	5.000-1	1.070-2	2.930-1
1.000-0	1.700-0	6.200-2	1.700-1	5.100-1	1.410-1	2.570-2	1.000-6	5.200-1	5.200-1	1.100-2	2.900-1
1.250-0	2.030-0	5.300-2	1.400-1	1.270-1	1.770-1	1.770-2	3.000-3	6.500-1	6.500-1	1.700-2	3.100-1
1.500-0	2.300-0	4.000-2	1.300-1	1.000-1	1.100-1	1.200-2	3.300-3	7.000-1	7.000-1	2.570-2	3.510-1
1.750-0	2.400-0	4.510-2	1.200-1	1.000-1	1.070-1	9.300-3	7.100-3	7.400-1	7.400-1	3.610-2	3.800-1
2.000-0	2.500-0	4.200-2	1.100-1	1.000-1	9.940-3	7.300-3	1.000-3	1.100-2	1.100-2	4.910-2	4.310-1
2.000-0	2.500-0	4.200-2	1.100-1	1.110-1	9.820-3	7.130-3	1.130-3	1.120-2	1.120-2	5.170-2	4.300-1
2.500-0	2.710-0	4.000-2	1.110-1	9.770-2	8.730-3	5.160-3	1.440-3	1.440-3	1.440-3	6.300-2	5.300-1
3.000-0	2.700-0	3.900-2	1.090-1	5.100-2	7.830-3	3.910-3	2.620-3	1.820-3	1.820-3	1.310-2	6.200-1
3.500-0	2.910-0	3.870-2	1.070-1	4.400-2	7.110-3	3.140-3	3.200-3	2.230-3	2.230-3	1.930-2	7.000-1
4.000-0	2.910-0	3.870-2	1.070-1	3.430-2	6.530-3	2.601-3	3.930-3	2.601-3	2.601-3	2.701-2	9.430-1
4.500-0	2.790-0	3.900-2	1.000-1	2.710-2	6.050-3	2.191-3	4.540-3	3.100-3	3.100-3	3.610-2	1.100-0
5.000-0	2.770-0	3.930-2	1.000-1	2.200-2	5.040-3	1.800-3	5.070-3	3.500-3	3.500-3	4.600-2	1.200-0
5.500-0	2.770-0	3.940-2	1.000-1	1.810-2	5.290-3	1.670-3	5.470-3	4.010-3	4.010-3	5.001-2	1.400-0
6.000-0	2.750-0	3.971-2	1.100-1	1.500-2	4.990-3	1.500-3	5.870-3	4.400-3	4.400-3	7.170-2	1.600-0
6.500-0	2.700-0	4.000-2	1.110-1	1.300-2	4.700-3	1.300-3	6.000-3	4.900-3	4.900-3	8.610-2	1.810-0
7.000-0	2.390-0	4.000-2	1.120-1	1.100-2	4.400-3	1.231-3	6.000-3	5.400-3	5.400-3	1.010-2	2.010-0
8.000-0	2.310-0	4.170-2	1.160-1	8.600-3	4.000-3	1.030-3	7.400-3	6.400-3	6.400-3	1.370-2	2.400-0
1.000-1	2.440-0	4.470-2	1.240-1	5.500-3	3.470-3	7.000-3	8.000-3	8.300-3	8.300-3	2.201-2	3.430-1
1.250-1	2.310-0	4.720-2	1.310-1	3.520-3	2.951-3	6.130-3	1.010-3	1.000-3	1.000-3	3.431-2	4.000-1
1.500-1	2.100-0	4.900-2	1.300-1	2.440-3	2.570-3	5.040-3	1.120-3	1.130-3	1.130-3	4.830-2	5.100-1
1.750-1	2.300-0	5.200-2	1.400-1	1.700-3	2.200-3	4.270-3	1.230-3	1.200-3	1.200-3	6.300-2	7.000-1
2.000-1	1.270-0	5.540-2	1.540-1	1.370-3	2.000-3	3.700-3	1.330-3	1.030-3	1.030-3	8.000-2	9.300-1
2.500-1	1.330-0	5.900-2	1.600-1	8.000-4	1.730-3	2.910-3	1.400-3	2.340-3	2.340-3	1.167-2	1.270-1
3.000-1	1.730-0	6.301-2	1.750-1	6.110-4	1.500-3	2.390-3	1.500-3	2.040-3	2.040-3	1.504-2	1.630-1
3.500-1	1.900-0	6.500-2	1.800-1	4.400-4	1.330-3	2.000-3	1.600-3	3.340-3	3.340-3	1.900-2	2.000-1
4.000-1	1.300-0	6.700-2	1.800-1	3.440-4	1.190-3	1.750-3	1.700-3	3.840-3	3.840-3	2.300-2	2.300-1
4.500-1	1.500-0	7.040-2	1.900-1	2.710-4	1.000-3	1.540-3	1.840-3	4.340-3	4.340-3	2.810-2	2.800-1
5.000-1	1.310-0	7.200-2	2.010-1	2.200-4	9.970-4	1.300-3	1.900-3	4.840-3	4.840-3	3.200-2	3.200-1
5.500-1	1.400-0	7.370-2	2.040-1	1.610-4	9.230-4	1.240-3	1.900-3	5.340-3	5.340-3	3.710-2	3.600-1
6.000-1	1.450-0	7.500-2	2.000-1	1.500-4	8.500-4	1.100-3	1.900-3	5.840-3	5.840-3	4.100-2	4.000-1
6.500-1	1.430-0	7.600-2	2.110-1	1.300-4	8.040-4	1.040-3	2.030-3	6.340-3	6.340-3	4.610-2	4.400-1
7.000-1	1.410-0	7.740-2	2.151-1	1.120-4	7.570-4	9.600-4	2.070-3	6.840-3	6.840-3	5.000-2	4.600-1
8.000-1	1.370-0	7.900-2	2.210-1	8.000-5	6.700-4	8.330-4	2.140-3	7.040-3	7.040-3	5.030-2	5.700-1
1.000-0	1.300-0	8.300-2	2.300-1	5.500-5	5.600-4	6.500-4	2.200-3	9.000-3	9.000-3	7.951-2	7.530-1

12/07/78

Form Factors

68-Er

SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT
1/λ		1/λ		1/λ		1/λ	
0.000-0	1.000-0	0.000-0	1.250-1	0.013-2	1.000-0	3.248-1	5.212-1
5.000-3	0.995-1	3.578-4	1.500-1	0.008-1	1.250-0	2.082-1	5.930-1
1.000-2	0.980-1	1.428-3	1.750-1	0.004-1	1.500-0	2.307-1	5.530-1
1.500-2	0.975-1	3.238-3	2.000-1	0.305-1	2.000-0	1.705-1	7.384-1
2.000-2	0.963-1	5.634-3	2.500-1	7.002-1	2.500-0	1.338-1	7.927-1
2.500-2	0.943-1	0.395-3	3.000-1	7.770-1	3.000-0	1.080-1	8.315-1
3.000-2	0.919-1	1.104-2	4.000-1	0.408-1	3.500-0	0.208-2	8.006-1
4.000-2	0.861-1	1.083-2	5.000-1	5.000-1	4.000-0	7.320-2	8.538-1
5.000-2	0.795-1	2.788-2	6.000-1	5.638-1	5.000-0	5.638-2	9.185-1
7.000-2	0.630-1	4.428-2	7.000-1	4.475-1	6.000-0	4.419-2	9.417-1
9.000-2	0.451-1	6.002-2	8.000-1	3.980-1	7.000-0	3.407-2	9.587-1
1.000-1	0.158-1	6.747-2	9.000-1	3.583-1	8.000-0	2.908-2	9.685-1

12/07/78

ENDL Evaluated Photon Cross Sections

69-Ta

12/07/73

Energy Deposition

69-Tm

12/07/78

ENDL Evaluated Photon Data

69-Tm

ATOM C WEIGHT 100.93										DENSITY 9.31 GRAMS/CC			
ENERGY MEV	TOTAL MFP			CROSS SECTION (BARNS)						MEV/COLLISION		MEV/CM	
	C1	CMCH/CM	CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E. BREMSSTR	K.E.		
1.000	4.230	2.904	7.823	3.185	3.151	2.780	0.000	0.000	9.995	9.995	4.308	2.330	1
1.250	4.370	2.938	8.096	3.183	3.338	2.898	0.000	0.000	1.249	1.249	6.732	2.699	1
1.500	4.435	2.942	8.793	3.182	4.775	2.870	0.000	0.000	1.499	1.499	9.634	3.380	1
1.750	4.742	2.955	6.329	3.180	8.426	2.850	0.000	0.000	1.749	1.749	1.319	3.888	1
1.788	4.788	2.943	6.293	3.180	6.743	2.850	0.000	0.000	1.788	1.788	1.379	3.735	1
1.803	4.803	2.938	6.843	3.180	6.847	2.840	0.000	0.000	1.802	1.802	1.401	4.093	1
2.000	4.500	2.986	6.883	3.159	8.388	2.890	0.000	0.000	1.999	1.999	1.723	4.441	1
2.500	5.770	1.881	5.282	3.154	1.290	5.218	0.000	0.000	2.488	2.488	2.898	4.330	1
3.000	7.088	1.520	4.263	3.150	1.034	4.260	0.000	0.000	2.988	2.988	3.875	4.241	1
3.500	8.305	1.293	3.888	3.144	2.445	3.825	0.000	0.000	3.487	3.487	5.274	4.211	1
3.573	8.382	1.289	3.883	3.143	2.475	3.800	0.000	0.000	3.573	3.573	5.343	4.209	1
3.537	7.416	1.448	4.083	3.143	2.484	4.080	0.000	0.000	3.534	3.534	5.387	4.788	1
4.000	6.528	1.259	3.533	3.138	3.138	3.530	0.000	0.000	3.998	3.998	6.888	4.885	1
4.500	9.874	1.088	3.051	3.130	3.876	3.048	0.000	0.000	4.495	4.495	8.715	4.553	1
4.710	1.045	1.078	2.883	3.127	4.708	2.880	0.000	0.000	4.705	4.705	9.546	4.502	1
4.724	9.857	1.082	3.063	3.127	4.726	3.080	0.000	0.000	4.719	4.719	9.604	4.788	1
5.000	1.034	1.010	2.833	3.123	4.881	2.830	0.000	0.000	4.994	4.994	1.078	4.898	1
5.500	1.228	0.750	2.494	3.114	5.509	2.451	0.000	0.000	5.493	5.493	1.301	4.474	1
6.000	1.399	0.875	2.153	3.105	6.391	2.150	0.000	0.000	5.991	5.991	1.548	4.281	1
6.500	1.595	0.733	1.889	3.094	7.253	1.888	0.000	0.000	6.489	6.489	1.816	4.088	1
7.000	1.831	0.588	1.673	3.085	8.153	1.670	0.000	0.000	6.987	6.987	2.105	3.880	1
8.000	2.277	0.416	1.383	3.084	1.007	1.380	0.000	0.000	7.981	7.981	2.747	3.505	1
9.000	2.834	0.289	1.083	3.088	1.190	1.080	0.000	0.000	8.974	8.974	3.473	3.188	1
1.000	3.528	0.200	0.825	3.018	1.381	0.820	0.000	0.000	9.965	9.965	4.282	2.889	1
1.250	5.577	1.866	5.403	2.942	1.865	5.374	0.000	0.000	1.243	1.243	6.885	2.883	1
1.470	7.782	1.380	3.872	2.880	2.233	3.843	0.000	0.000	1.459	1.459	9.180	1.875	1
1.471	1.819	0.588	1.570	2.880	2.235	1.567	0.000	0.000	1.468	1.468	9.272	1.840	1
1.500	2.022	0.511	1.480	2.883	2.250	1.487	0.000	0.000	1.497	1.495	9.639	1.933	1
1.514	2.074	0.519	1.453	2.879	2.315	1.450	0.000	0.000	1.511	1.509	9.819	1.978	1
1.515	1.443	0.744	2.088	2.879	2.317	2.085	0.000	0.000	1.513	1.511	9.844	1.947	2
1.750	2.128	0.581	1.420	2.809	2.735	1.417	0.000	0.000	1.747	1.745	1.312	8.221	1
1.887	2.596	0.438	1.181	2.773	2.882	1.188	0.000	0.000	1.882	1.881	1.525	7.245	1
1.888	1.947	0.518	1.948	2.773	2.884	1.945	0.000	0.000	1.885	1.883	1.528	9.871	1
2.000	2.271	0.430	1.327	2.745	3.189	1.324	0.000	0.000	1.996	1.994	1.714	8.780	1
2.092	2.581	0.495	1.177	2.713	3.350	1.174	0.000	0.000	2.087	2.085	1.675	7.993	1
2.093	2.308	0.698	1.307	2.713	3.352	1.304	0.000	0.000	2.088	2.087	1.678	9.048	1
2.308	2.987	0.398	1.009	2.644	3.729	1.008	0.000	0.000	2.300	2.299	2.277	7.993	1
2.307	2.788	0.423	1.078	2.644	3.731	1.075	0.000	0.000	2.301	2.299	2.280	8.224	1
2.590	3.488	0.399	0.693	2.588	4.075	0.687	0.000	0.000	2.493	2.491	2.678	7.186	1
3.000	5.841	0.304	5.342	2.485	4.880	0.317	0.000	0.000	2.886	2.884	3.890	5.280	1
3.500	8.508	1.282	3.941	2.317	5.823	0.318	0.000	0.000	3.477	3.475	5.207	4.094	1
4.000	1.214	0.848	2.482	2.195	8.889	0.248	0.000	0.000	3.885	3.883	8.770	3.894	1
4.500	1.860	0.670	1.815	2.062	7.453	0.1794	0.000	0.000	4.449	4.447	8.528	2.878	1
5.000	2.195	0.893	1.373	1.949	8.231	0.1553	0.000	0.000	4.889	4.887	1.047	2.244	1
5.500	2.825	1.803	1.087	1.833	8.848	0.1048	0.000	0.000	5.405	5.403	1.259	1.913	1
6.000	3.594	3.622	8.478	1.734	9.828	0.304	0.000	0.000	5.877	5.875	1.488	1.653	1
6.500	4.388	2.447	8.885	1.630	1.025	1.670	0.000	0.000	6.345	6.343	1.734	1.445	1
7.000	5.333	2.014	5.850	1.539	1.091	5.494	0.000	0.000	6.808	6.808	1.997	1.278	1
8.000	7.567	1.420	3.132	1.388	1.213	3.842	0.000	0.000	7.719	7.717	2.567	1.020	1
8.847	9.270	1.194	3.250	1.282	1.282	1.120	0.000	0.000	8.300	8.298	2.968	8.952	0
8.848	3.450	3.114	8.734	1.282	1.282	3.404	0.000	0.000	8.519	8.513	2.183	2.053	1
9.817	4.560	2.355	6.507	1.170	1.384	5.489	0.000	0.000	9.445	9.413	2.788	1.757	1
9.818	3.252	3.303	9.294	1.170	1.384	9.148	0.000	0.000	9.825	9.826	3.788	2.777	1
1.000	3.634	2.880	0.380	1.129	1.423	0.248	0.000	0.000	9.883	9.825	3.060	2.338	1
1.011	3.714	2.882	0.112	1.114	1.433	1.788	0.000	0.000	9.874	9.557	3.142	2.889	1
1.012	3.209	3.347	9.389	1.114	1.433	9.278	0.000	0.000	9.994	9.554	3.154	2.889	1
1.250	5.627	1.889	5.355	0.827	1.648	5.285	0.000	0.000	1.229	1.088	5.082	1.889	1
1.500	9.114	1.178	3.388	7.221	1.842	3.238	0.000	0.000	1.488	1.374	7.954	1.451	1
1.750	1.373	7.821	1.194	5.989	2.884	2.138	0.000	0.000	1.701	1.559	1.047	1.135	1
2.000	1.738	5.488	1.340	5.082	2.138	1.487	0.000	0.000	1.931	1.790	1.381	9.151	0
2.500	3.544	3.831	0.582	3.787	2.388	8.184	0.000	0.000	2.382	2.243	2.168	8.330	0
3.000	5.735	1.873	5.294	2.872	2.598	4.311	0.000	0.000	2.817	2.880	3.091	4.672	0
3.500	8.625	1.245	3.493	2.367	2.888	3.230	0.000	0.000	3.238	3.133	4.147	5.998	0

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69-Tm

12/07/78

ENCL Evaluated Photon Data

69-Tu

ATOMIC WEIGHT 100.93				DENSITY 9.31 GR/CM ³ /CC									
ENERGY		TOTAL WFP		CROSS SECTION (BARN)				REV/COLLISION		REV/CM			
KEV		CM	CM/CM/GR	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR	K.E. BREMSSTR	K.E.			
4.000	2	1.224	3	0.775	0	2.461	3	1.944	2	2.700	1	2.270	3
4.500	2	1.080	2	0.941	0	1.867	3	1.613	2	2.030	1	1.617	3
5.000	2	2.192	2	0.904	0	1.374	3	1.386	2	2.006	1	1.299	3
5.500	2	2.844	2	3.031	0	1.075	3	1.173	2	2.916	1	9.201	2
5.930	2	3.411	2	3.149	0	0.034	2	1.030	2	2.945	1	7.501	2
5.930	2	7.270	3	1.476	1	4.190	3	1.030	2	2.945	1	4.007	3
6.490	2	7.474	3	1.437	1	4.032	3	1.021	2	2.940	1	3.900	3
6.900	2	9.230	3	1.104	1	3.895	3	0.942	1	2.930	1	2.281	3
7.000	2	1.102	2	0.577	0	2.007	3	7.907	1	2.900	1	2.570	3
8.000	2	1.501	2	0.732	0	1.004	3	0.335	1	2.900	1	1.001	3
1.000	1	2.000	2	3.740	0	1.051	3	4.307	1	2.930	1	9.707	2
1.250	1	5.130	2	2.000	0	5.007	2	2.007	1	5.201	2	1.130	1
1.500	1	6.100	2	2.310	0	3.000	2	2.000	1	5.201	2	1.130	1
1.750	1	1.193	1	9.000	1	2.520	2	1.570	1	2.710	2	2.007	2
2.000	1	1.630	1	6.300	1	1.942	2	1.237	1	2.630	1	1.424	2
2.500	1	2.670	1	6.073	1	1.120	2	0.100	0	2.470	1	7.900	1
3.000	1	3.044	1	2.702	1	7.033	1	5.015	0	2.353	1	4.000	1
3.500	1	5.099	1	2.123	1	5.900	1	4.335	0	2.233	1	3.200	1
4.000	1	6.270	1	1.711	1	4.700	1	3.302	0	2.133	1	2.330	1
4.500	1	7.443	1	1.443	1	4.040	1	2.670	0	2.040	1	1.740	1
5.000	1	8.502	1	1.295	1	3.510	1	2.107	0	1.901	1	1.340	1
5.500	1	9.600	1	1.110	1	3.130	1	1.817	0	1.600	1	1.000	1
6.000	1	1.000	0	0.813	1	2.043	1	1.535	0	1.021	0	0.803	0
6.500	1	1.152	0	0.354	2	2.015	1	1.313	0	1.730	1	7.255	0
7.000	1	1.240	0	0.000	2	2.431	1	1.130	0	1.703	1	8.140	0
8.000	1	1.402	0	7.000	2	2.150	1	0.750	1	1.607	1	4.201	0
1.000	0	1.000	0	6.300	2	1.701	1	0.942	1	1.440	2	2.002	0
1.000	0	1.710	0	0.203	2	1.702	1	5.405	1	1.430	2	2.740	0
1.250	0	1.870	0	0.431	2	1.504	1	6.031	1	1.200	1	1.001	0
1.500	0	2.190	0	0.904	2	1.376	1	2.530	1	1.101	1	3.407	1
1.750	0	2.395	0	0.901	2	1.200	1	1.002	1	1.004	0	7.300	1
2.000	0	2.400	0	0.300	2	1.214	1	1.427	1	1.000	1	1.120	0
2.044	0	2.543	0	0.231	2	1.204	1	1.307	1	0.900	0	7.001	1
2.500	0	2.042	0	0.000	2	1.141	1	0.151	2	0.007	0	5.513	1
3.000	0	2.707	0	3.000	2	1.113	1	0.301	2	0.175	1	2.704	0
3.500	0	2.730	0	3.001	2	1.100	1	0.076	2	0.210	0	3.300	0
4.000	0	2.730	0	3.001	2	1.100	1	3.501	2	0.631	0	2.771	1
4.500	0	2.710	0	3.002	2	1.100	1	2.031	2	0.141	0	2.333	1
5.000	0	2.697	0	3.003	2	1.117	1	2.293	2	0.700	0	2.017	1
5.500	0	2.600	0	3.004	2	1.120	1	1.000	2	0.370	0	1.700	1
6.000	0	2.671	0	4.001	2	1.120	1	1.533	2	0.003	0	1.007	1
6.500	0	2.645	0	4.001	2	1.130	1	1.300	2	0.700	0	1.441	1
7.000	0	2.613	0	4.110	2	1.153	1	1.171	2	0.551	0	1.310	1
8.000	0	2.530	0	4.232	2	1.107	1	0.905	3	0.143	0	1.104	1
1.000	1	2.300	0	0.534	2	1.272	1	5.730	3	0.520	0	0.295	2
1.250	1	2.243	0	0.700	2	1.343	1	3.672	3	0.900	0	0.325	2
1.500	1	2.121	0	0.003	2	1.420	1	2.551	3	0.612	0	0.304	2
1.750	1	2.003	0	0.303	2	1.504	1	1.074	3	0.323	0	0.344	2
2.000	1	1.900	0	0.000	2	1.579	1	1.435	3	0.097	0	0.330	2
2.500	1	1.774	0	0.094	2	1.000	1	0.100	4	1.702	0	3.007	2
3.000	1	1.670	0	0.307	2	1.700	1	0.375	4	1.000	0	2.045	2
3.500	1	1.644	0	0.000	2	1.007	1	0.004	4	1.330	0	2.130	2
4.000	1	1.557	0	0.301	2	1.030	1	1.030	4	1.213	0	1.000	2
4.500	1	1.502	0	1.153	2	2.007	1	2.034	4	1.103	0	1.000	2
5.000	1	1.451	0	7.300	2	2.000	1	2.205	4	1.000	1	1.000	2
5.500	1	1.430	0	7.400	2	2.101	1	0.097	4	0.300	1	1.300	2
6.000	1	1.400	0	7.002	2	2.130	1	1.504	4	0.703	1	1.200	2
6.500	1	1.300	0	7.707	2	2.173	1	1.300	4	0.100	1	1.100	2
7.000	1	1.300	0	7.007	2	2.207	1	1.171	4	1.003	2	2.170	2
8.000	1	1.270	0	0.001	2	2.270	1	0.005	5	0.000	1	0.000	3
1.000	2	1.205	0	0.402	2	2.302	1	5.737	5	5.710	1	8.973	3

12/07/76

Form Factors

69-Tm

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	0.000+0	0.000+0	1.250-1	9.147-1	8.434-2	1.000+0	3.263-1	5.182-1	1.000+1	1.916-2	9.776-1
5.000-3	9.995-1	3.023-4	1.500-1	8.911-1	1.032-1	1.250+0	2.883-1	5.090-1	1.500+1	1.423-2	9.914-1
1.000-2	9.999-1	1.420-3	1.750-1	8.674-1	1.264-1	1.500+0	2.500-1	5.449-1	2.000+1	9.571-3	9.999-1
1.500-2	9.993-1	3.193-3	2.000-1	8.439-1	1.413-1	2.000+0	1.730-1	7.322-1	5.000+1	1.189-3	1.000+0
2.000-2	9.984-1	5.478-3	2.500-1	7.223-1	1.775-1	2.500+0	1.352-1	7.990-1	5.000+1	3.043-4	1.000+0
3.000-2	9.945-1	8.328-3	3.000-1	7.423-1	2.113-1	3.000+0	1.089-1	8.237-1	1.000+2	1.521-4	1.000+0
3.000-2	9.922-1	1.100-2	4.000-1	6.595-1	2.728-1	3.500+0	8.222-2	8.591-1	1.000+3	1.921-7	1.000+0
4.000-2	9.895-1	1.910-2	5.000-1	5.733-1	3.240-1	4.000+0	7.387-2	8.824-1	1.000+8	1.167-15	1.000+0
5.000-2	9.861-1	2.723-2	6.000-1	5.077-1	3.700-1	5.000+0	5.951-2	9.172-1	1.000+9	7.842-24	1.000+0
7.000-2	9.843-1	4.351-2	7.000-1	4.500-1	4.109-1	6.000+0	4.458-2	9.407-1			
9.000-2	9.806-1	5.871-2	8.000-1	4.010-1	4.485-1	7.000+0	3.450-2	9.529-1			
1.000-1	9.375-1	6.881-2	9.000-1	3.804-1	4.838-1	8.000+0	2.939-2	9.629-1

12/07/78

ENDL Evaluated Photon Cross Sections

70-Yb

12/07/78

Energy Deposition

70-Yb

70-Yb

ATOMIC WEIGHT 173.04										DENSITY 0.999 GRAMS/CC				
ENERGY		TOTAL FPF		CROSS SECTION (BARNs)						NEUTRON COLLISION		MEV/CM		
MEV	CM	CM/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.-FLOX	K.E.	SPR/STR	K.E.			
0.000	2.1900	0.899	2.003	2.009	2.787	2.373	3	3.850	3.903	5.379	5	2.212		
0.000	2.166	0.893	1.987	1.977	2.800	1.710	3	4.042	3.904	5.898	5	1.803		
0.000	2.053	0.838	1.947	1.920	2.917	1.278	3	4.418	4.202	6.006	5	1.501		
0.500	2.063	0.838	1.187	1.219	2.951	0.790	3	4.775	4.941	5.406	5	1.267		
0.800	2.099	0.838	0.987	1.081	2.980	0.739	2	5.114	4.993	2.094	4	1.086		
0.133	2.077	2.990	0.981	1.083	2.980	1.178	2	5.802	5.072	1.123	4	1.044		
0.133	2.070	1.393	3.050	1.083	2.980	3.787	3	5.980	2.602	1.453	3	1.704		
0.380	2.094	1.104	3.393	0.981	2.983	3.283	3	6.800	2.175	2.083	3	1.781		
0.380	1.481	0.817	2.788	1.003	2.977	2.677	3	7.272	3.083	1.708	3	1.708		
0.980	2.052	7.000	2.012	0.903	1.021	1.918	3	7.633	2.986	5.816	3	1.747		
1.080	1.807	2.980	1.145	0.478	2.987	1.070	3	9.380	2.513	2.179	4	1.501		
1.250	6.399	2.240	0.452	2.002	2.912	5.061	2	1.145	7.509	2.512	4	1.100		
1.500	1.011	1.420	0.895	2.105	2.845	3.390	2	1.336	9.631	2.404	4	9.520		
1.750	1.481	9.708	2.788	2.138	2.753	2.350	2	1.511	1.152	5.781	4	7.783		
2.000	1.038	7.052	2.026	2.287	2.675	1.030	2	1.068	1.326	7.053	4	6.509		
2.500	1.370	4.205	1.285	2.493	2.512	0.890	2	1.944	1.835	1.161	3	4.052		
3.000	1.909	2.927	0.411	1.809	2.386	5.420	2	2.189	1.895	1.758	3	3.050		
3.500	1.526	2.202	0.527	1.511	2.204	3.612	1	2.370	2.129	1.962	3	3.260		
4.000	1.688	1.799	5.095	3.498	2.183	2.942	1	2.552	2.338	2.368	3	2.863		
4.500	1.749	1.474	4.293	2.788	0.209	1.887	1	2.735	2.435	2.803	3	2.811		
5.000	1.120	1.271	3.682	2.278	0.140	1.446	1	2.915	2.748	3.263	3	2.437		
5.500	1.271	1.082	1.893	1.913	0.917	1.282	1	3.027	2.527	3.263	3	2.327		
6.000	1.406	1.022	2.938	1.988	0.947	9.280	1	3.303	3.089	4.333	3	3.333		
6.500	1.532	0.980	2.095	1.367	1.784	7.745	0	3.515	3.393	4.962	3	2.115		
7.000	1.852	0.701	2.500	1.183	1.727	6.944	0	3.733	3.622	5.850	3	1.193		
8.000	1.873	7.671	2.204	9.111	1.630	4.830	0	4.191	4.098	7.219	3	2.188		
1.000	2.294	6.375	2	5.876	1.469	3.038	0	5.210	5.139	1.130	2	2.280		
1.022	0.291	6.271	2	5.629	1.454	2.916	0	5.330	5.261	1.184	2	2.296		
1.250	0.855	5.412	2	3.782	1.318	2.006	0	6.515	6.580	1.830	2	2.471		
1.500	0.942	4.884	2	2.635	1.198	1.429	0	6.623	7.985	2.682	2	2.707		
1.750	3.185	4.941	2	1.940	1.102	1.064	0	7.060	9.449	3.750	2	2.985		
2.000	0.335	4.308	2	1.236	1.487	1.023	0	8.771	1.180	1.104	2	3.310		
2.044	0.364	4.272	2	1.227	1.484	1.011	0	9.077	1.215	1.136	2	3.368		
2.500	0.549	4.049	2	1.633	1.939	2	0.999	5.839	1.999	1.453	0	0.661	2	
3.000	0.635	3.953	2	1.136	1.828	0.080	0	4.919	2.708	1.833	0	1.359	3	
3.500	0.677	3.908	2	1.123	1.872	0.724	0	3.948	3.503	2.240	0	1.997	6	
4.000	2.875	3.910	2	1.124	1.732	6.727	0	4.178	2.087	2.668	0	2.784	7	
4.500	3.792	3.912	2	1.125	1.730	6.230	0	4.819	3.110	3.109	0	3.722	8	
5.000	3.818	3.974	2	1.127	2.390	2	0.885	5.372	3.694	1.320	0	9.685	9	
5.500	3.605	3.986	2	1.129	1.975	2	0.888	5.795	4.023	0.022	0	6.020	11	
6.000	3.580	4.014	2	1.133	1.660	2	0.887	6.212	4.491	0.490	0	7.372	12	
6.500	3.545	4.054	2	1.135	1.415	2	0.881	6.621	4.905	0.984	0	8.857	13	
7.000	3.502	4.104	2	1.139	1.220	2	0.874	7.024	5.444	0.543	0	1.047	14	
8.000	3.400	4.226	2	1.214	0.942	3	0.203	1.166	7.815	6.415	0.615	0	1.066	15
1.000	3.172	4.530	2	1.302	5.977	3	3.580	8.756	9.343	0.392	0	2.254	16	
1.250	3.002	4.786	2	1.375	3.627	3	3.037	6.888	2.064	1.087	1	1.087	17	
1.500	2.839	5.062	2	1.455	2.894	3	2.850	5.861	2.184	1.337	1	1.337	18	
1.750	2.679	5.363	2	1.541	1.953	3	2.357	4.798	2.300	1.588	1	1.588	19	
2.000	2.523	5.629	2	1.617	1.495	3	2.127	4.155	2.400	1.839	1	1.839	20	
2.500	2.372	6.057	2	1.740	0.985	4	1.788	3.688	2.598	2.341	1	2.341	21	
3.000	2.245	6.402	2	1.840	0.842	4	1.948	2.886	2.682	2.843	1	2.843	22	
3.500	2.151	6.682	2	1.914	0.883	4	2.063	2.775	3.344	3.344	1	3.344	23	
4.000	2.060	6.907	2	1.985	0.737	4	2.131	2.870	2.860	3.845	1	3.845	24	
4.500	2.007	7.181	2	2.058	2.953	4	1.119	2.737	2.944	4.346	1	4.346	25	
5.000	1.952	7.380	2	2.115	2.392	4	1.027	2.551	2.010	4.847	1	4.847	26	
5.500	1.918	7.498	2	2.155	1.976	4	9.502	1.400	2.058	5.347	1	5.347	27	
6.000	1.863	7.631	2	2.193	1.661	4	8.050	1.275	2.103	5.848	1	5.848	28	
6.500	1.823	7.757	2	2.229	1.415	4	8.294	1.170	2.145	6.348	1	6.348	29	
7.000	1.824	7.877	2	2.263	1.220	4	7.793	1.080	2.184	6.849	1	6.849	30	
8.000	1.774	8.102	2	2.320	0.942	5	6.880	9.395	3.257	7.850	1	7.850	31	
1.000	2.150	8.504	2	2.444	5.978	5	5.793	7.359	3.385	9.851	1	9.851	32	

12/07/78

Form Factors

70-Yb

SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT	SIN(Θ/2)/λ COHERENT	INCOHERENT
1/λ		1/λ		1/λ		1/λ	
0.000+0	1.000+0	0.000+0	1.000+0	0.000+0	1.000+0	0.000+0	1.000+0
0.000+3	0.995+0	0.000+3	0.995+0	0.000+3	0.995+0	0.000+3	0.995+0
1.000+2	0.990+1	1.000+2	0.990+1	1.000+2	0.990+1	1.000+2	0.990+1
1.000+2	0.980+1	1.000+2	0.980+1	1.000+2	0.980+1	1.000+2	0.980+1
2.000+2	0.965+1	2.000+2	0.965+1	2.000+2	0.965+1	2.000+2	0.965+1
2.000+2	0.955+1	2.000+2	0.955+1	2.000+2	0.955+1	2.000+2	0.955+1
3.000+2	0.940+1	3.000+2	0.940+1	3.000+2	0.940+1	3.000+2	0.940+1
3.000+2	0.930+1	3.000+2	0.930+1	3.000+2	0.930+1	3.000+2	0.930+1
4.000+2	0.915+1	4.000+2	0.915+1	4.000+2	0.915+1	4.000+2	0.915+1
4.000+2	0.905+1	4.000+2	0.905+1	4.000+2	0.905+1	4.000+2	0.905+1
5.000+2	0.890+1	5.000+2	0.890+1	5.000+2	0.890+1	5.000+2	0.890+1
5.000+2	0.880+1	5.000+2	0.880+1	5.000+2	0.880+1	5.000+2	0.880+1
6.000+2	0.865+1	6.000+2	0.865+1	6.000+2	0.865+1	6.000+2	0.865+1
6.000+2	0.855+1	6.000+2	0.855+1	6.000+2	0.855+1	6.000+2	0.855+1
7.000+2	0.840+1	7.000+2	0.840+1	7.000+2	0.840+1	7.000+2	0.840+1
7.000+2	0.830+1	7.000+2	0.830+1	7.000+2	0.830+1	7.000+2	0.830+1
8.000+2	0.815+1	8.000+2	0.815+1	8.000+2	0.815+1	8.000+2	0.815+1
8.000+2	0.805+1	8.000+2	0.805+1	8.000+2	0.805+1	8.000+2	0.805+1
9.000+2	0.790+1	9.000+2	0.790+1	9.000+2	0.790+1	9.000+2	0.790+1
9.000+2	0.780+1	9.000+2	0.780+1	9.000+2	0.780+1	9.000+2	0.780+1
1.000+1	0.765+1	1.000+1	0.765+1	1.000+1	0.765+1	1.000+1	0.765+1

12/07/78

ENDL Evaluated Photon Cross Sections

71-Lu

12/07/78

Energy Deposition

71-Lu

12/07/76

ENDL Evaluated Photon Data

71-Lu

ATOMIC WEIGHT 174.97				DENSITY 9.849 GRAMS/CC			
ENERGY	TOTAL MP		CROSS SECTION (BARN)				NEUT/COLLISION
KEV	CH	CH/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. K.E. BREMSSTR K.E.
1.000	4.723	8	2.135	6.283	3.350	2.050	9.995
1.250	4.591	8	2.218	6.486	3.349	3.177	9.995
1.500	4.481	8	2.276	6.613	3.348	4.243	9.995
1.750	4.387	8	2.315	6.760	3.348	5.252	9.995
1.982	4.301	8	2.357	6.933	3.345	6.208	9.995
1.986	4.300	8	2.356	6.933	3.345	6.208	9.995
2.000	4.295	8	2.356	6.933	3.345	6.208	9.995
2.500	5.444	8	1.885	5.415	3.340	1.234	5.415
3.000	8.387	8	1.585	8.333	3.336	1.758	8.330
3.500	7.412	8	1.378	3.380	3.330	2.351	3.977
3.750	7.394	8	1.278	3.713	3.327	2.885	3.710
3.789	7.188	8	1.418	4.103	3.327	2.704	4.100
4.000	7.597	8	1.337	3.889	3.324	3.025	3.880
4.500	8.778	8	1.157	3.381	3.316	3.748	3.357
5.000	9.868	8	0.816	2.953	3.309	4.540	2.950
5.075	1.015	5	9.993	2.903	3.308	4.627	2.900
5.089	9.589	8	1.081	3.083	3.307	4.650	3.080
5.500	1.073	5	9.407	2.733	3.299	5.380	2.730
6.000	1.267	5	8.272	2.403	3.291	6.238	2.400
6.500	1.387	5	7.288	2.118	3.279	7.103	2.108
7.000	1.575	5	6.447	1.873	3.268	8.012	1.870
8.000	1.989	5	5.105	1.483	3.248	9.951	1.480
9.000	2.472	5	4.107	1.193	3.222	1.183	1.180
1.000	2.445	5	4.078	1.183	3.198	1.180	1.180
1.250	4.253	5	2.384	0.888	3.121	1.875	0.885
1.500	6.591	5	1.540	4.478	3.059	2.318	4.445
1.988	7.559	5	1.344	3.805	3.029	2.472	3.875
1.989	2.079	5	4.889	4.418	3.029	2.473	4.418
1.990	2.229	5	4.595	3.309	3.013	2.581	3.308
1.991	1.578	5	6.433	1.689	3.012	2.583	1.688
1.992	1.887	5	5.401	1.889	2.979	2.762	1.888
2.000	2.889	5	3.782	1.099	2.911	3.218	1.098
2.025	2.775	5	3.858	1.063	2.902	3.261	1.060
2.028	2.085	5	4.870	1.415	2.902	3.263	1.412
2.284	2.805	5	3.620	1.052	2.819	3.681	1.049
2.285	2.526	5	4.319	1.188	2.818	3.683	1.185
2.481	3.251	5	3.119	0.882	2.749	4.084	0.879
2.482	3.018	5	3.384	0.774	2.749	4.088	0.748
2.500	3.044	5	3.375	0.880	2.747	4.100	0.883
3.000	4.946	5	2.053	5.889	2.619	4.988	5.885
3.500	7.453	5	1.362	3.998	2.485	5.842	3.933
4.000	1.062	4	9.996	2.778	2.376	6.887	2.753
4.500	1.452	4	6.994	2.032	2.200	7.477	2.010
5.000	1.918	4	5.293	1.538	2.083	8.263	1.517
5.500	2.467	4	4.115	1.186	1.983	9.991	1.178
6.000	3.103	4	3.272	0.958	1.898	9.712	0.932
6.500	3.830	4	2.851	0.782	1.749	1.036	1.752
7.000	4.852	4	2.188	0.541	1.653	1.099	1.675
8.000	6.986	4	1.578	0.473	1.484	1.224	1.432
9.243	9.605	4	1.057	3.071	1.308	1.358	2.939
9.244	3.787	4	2.895	0.831	1.308	1.358	1.899
1.000	6.609	4	2.203	0.401	1.217	1.437	1.278
1.035	5.033	4	2.017	0.382	1.172	1.489	1.243
1.035	3.359	4	2.827	0.215	1.172	1.489	1.098
1.087	4.076	4	2.491	0.238	1.111	1.518	1.125
1.087	3.520	4	2.883	0.376	1.110	1.518	1.023
1.250	5.086	4	2.004	0.823	0.923	1.858	1.572
1.500	8.129	4	1.249	0.829	0.793	1.883	1.344
1.750	1.217	3	8.398	0.423	0.453	2.029	1.357
2.080	1.785	3	5.885	1.716	0.480	2.184	1.853
2.500	3.104	3	3.271	0.584	0.077	2.484	0.072
3.000	4.997	3	2.032	1.583	0.201	2.801	0.257
3.500	7.499	3	1.374	1.974	0.251	2.719	1.851

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71-Lu

12/07/78

Form Factors

71-Lu

SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT		
1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ		
0.000	0	1.000	0	0.000	0	1.230	1	9.153	1	0.310	2	1.000	0	3.383	1	5.679	1	1.000	1	1.934	2	9.789	1
5.000	3	9.995	3	3.990	4	1.506	1	8.916	1	1.011	1	1.230	0	2.670	1	5.797	1	1.500	1	1.441	2	9.908	1
1.000	2	9.999	1	1.310	3	1.730	1	8.683	1	1.193	1	1.500	0	2.293	1	6.404	1	2.000	1	9.851	3	9.985	1
1.500	2	9.981	2	2.021	3	2.040	1	8.444	1	1.375	1	2.000	0	1.797	1	7.293	1	5.000	1	1.225	3	1.000	0
2.000	2	9.966	5	5.098	3	2.280	1	7.957	1	1.728	1	2.500	0	1.378	1	7.886	1	8.000	1	3.382	4	1.000	0
2.500	2	9.948	7	7.785	3	3.000	1	7.478	1	2.057	1	3.000	0	1.108	1	8.284	1	1.000	2	1.735	4	1.000	0
3.000	2	9.926	1	1.090	2	4.000	1	6.578	1	2.885	1	3.500	0	8.373	2	8.581	1	1.000	3	2.300	7	1.000	0
4.000	2	9.872	1	1.812	2	5.000	1	5.888	1	3.189	1	4.000	0	7.472	2	8.798	1	1.000	6	1.582	15	1.000	0
5.000	2	9.809	2	2.611	2	6.000	1	5.151	1	3.639	1	5.000	0	5.888	2	9.148	1	1.000	9	1.167	23	1.000	0
7.000	2	9.651	4	4.252	2	7.000	1	4.579	1	4.042	1	6.000	0	4.530	2	9.385	1						
9.000	2	9.476	5	5.795	2	8.000	1	4.082	1	4.413	1	7.000	0	3.540	2	9.544	1						
1.000	1	9.385	6	6.527	2	9.000	1	3.698	1	4.757	1	8.000	0	3.005	2	9.647	1

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ENDL Evaluated Photon Cross Sections

72-Hf

12/07/76

Energy Deposition

72-Hf

72-Hf

72-Hf

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ENCL Evaluated Photon Data

72-HI

ATOMIC WEIGHT 176.99										DENSITY 13.09 GRAMS/CC			
ENERGY		TOTAL NFP		CROSS SECTION (BARNS)					K.E.-FLOR	REV/COLLISION		REV/CM	
MEV	CM	CM	CM/CH	TOTAL	COHERENT	INCOHERENT	PHOTOL	PAIR PROD		K.E.	CM	K.E.	CM
4.999-2	1.389-2	7.147-0	2.118-3	1.894-2	2.922-1	1.893-3			4.999-2	3.901-2	8.835-5	3.893-0	0
5.000-2	1.418-2	5.393-0	1.998-3	1.527-2	2.902-1	1.418-3			4.438-2	4.281-2	8.231-5	3.822-0	0
5.500-2	1.631-2	4.172-0	1.237-3	1.311-2	3.019-1	1.075-3			4.786-2	4.842-2	9.678-5	2.535-0	0
6.000-2	2.308-2	3.310-0	9.818-2	1.141-2	3.951-1	0.384-3			5.135-2	4.984-2	1.115-4	2.199-0	0
6.500-2	2.857-2	2.674-0	7.925-2	9.993-1	3.063-1	0.619-3			5.457-2	5.309-2	1.295-4	1.899-0	0
6.535-2	2.888-2	2.638-0	7.813-2	9.904-1	3.063-1	0.518-3			5.479-2	5.331-2	1.270-4	1.840-0	0
6.535-2	2.815-3	1.242-1	3.880-3	9.904-1	3.063-1	3.250-3			6.311-2	1.888-2	1.985-4	3.032-0	0
7.000-2	7.329-2	1.042-1	3.090-3	8.838-1	3.074-1	2.970-3			6.738-2	2.309-2	2.398-5	3.150-0	0
8.000-2	1.888-2	7.332-0	2.203-3	7.003-1	3.094-1	2.101-3			7.845-2	3.250-2	4.747-5	3.182-0	0
1.000-1	1.832-2	4.170-0	1.238-3	4.023-1	3.072-1	1.157-3			9.398-2	5.005-2	1.181-4	2.776-0	0
1.250-1	3.286-2	2.325-0	6.980-2	3.833-1	2.987-1	6.208-2			1.148-1	7.275-2	2.372-4	2.213-0	0
1.500-1	5.236-2	1.499-0	4.324-2	2.332-1	2.920-1	3.798-2			1.337-1	9.324-2	3.658-4	1.781-0	0
1.750-1	7.702-2	9.919-1	2.940-2	1.785-1	2.825-1	2.481-2			1.912-1	1.123-1	5.847-4	4.458-0	0
2.000-1	1.064-1	7.181-1	2.128-2	1.386-1	2.747-1	1.715-2			1.670-1	1.298-1	7.543-4	1.221-0	0
2.500-1	1.761-1	4.339-1	1.286-2	9.158-0	2.980-1	9.383-1			1.947-1	1.611-1	1.180-3	9.152-1	0
3.000-1	2.569-1	2.974-1	8.814-1	6.527-0	2.451-1	5.710-1			2.175-1	1.876-1	1.571-3	7.304-1	0
3.500-1	3.410-1	2.240-1	8.840-1	4.809-0	2.326-1	3.826-1			2.382-1	2.116-1	1.996-3	5.205-1	0
4.000-1	4.267-1	1.790-1	5.306-1	3.778-0	2.223-1	2.705-1			2.569-1	2.334-1	2.428-3	5.489-1	0
4.500-1	5.087-1	1.502-1	4.451-1	3.011-0	2.127-1	2.023-1			2.759-1	2.549-1	2.892-3	5.012-1	0
5.000-1	5.881-1	1.299-1	3.820-1	2.459-0	2.044-1	1.580-1			2.947-1	2.780-1	3.388-3	4.693-1	0
5.500-1	6.621-1	1.154-1	3.420-1	2.044-0	1.967-1	1.249-1			3.146-1	2.578-1	3.938-3	4.498-1	0
6.000-1	7.327-1	1.043-1	3.050-1	1.727-0	1.892-1	1.019-1			3.350-1	3.188-1	4.538-3	4.385-1	0
6.500-1	7.975-1	9.579-2	2.839-1	1.477-0	1.834-1	8.573-0			3.571-1	3.431-1	5.219-3	4.303-1	0
7.000-1	8.595-1	8.889-2	2.635-1	1.278-0	1.776-1	7.306-0			3.786-1	3.669-1	5.958-3	4.269-1	0
8.000-1	9.749-1	7.836-2	2.322-1	9.692-1	1.676-1	5.477-0			4.267-1	4.158-1	7.638-3	4.265-1	0
1.000-0	1.173-0	6.515-2	1.931-1	6.355-1	1.511-1	3.563-0			5.312-1	5.227-1	1.201-2	4.457-1	0
1.022-0	1.193-0	6.405-2	1.898-1	6.099-1	1.495-1	3.422-0	1.000-6		5.432-1	5.348-1	1.257-2	4.484-1	0
1.250-0	1.389-0	5.501-2	1.630-1	4.092-1	1.354-1	2.352-0	4.327-3		6.712-1	6.646-1	1.930-2	4.785-1	0
1.500-0	1.544-0	4.949-2	1.467-1	2.852-1	1.232-1	1.676-0	7.904-1		8.096-1	8.043-1	2.809-2	5.211-1	0
1.750-0	1.663-0	4.594-2	1.362-1	2.099-1	1.134-1	1.248-0	8.217-1		9.561-1	9.518-1	3.910-2	5.724-1	0
2.000-0	1.754-0	4.355-2	1.291-1	1.610-1	1.052-1	9.813-1	1.241-0		1.114-0	1.111-0	5.286-2	6.331-1	0
2.044-0	1.789-0	4.317-2	1.280-1	1.541-1	1.040-1	9.463-1	1.300-0		1.143-0	1.140-0	5.580-2	6.441-1	0
2.500-0	1.867-0	4.091-2	1.213-1	1.032-1	9.251-1	6.830-1	2.086-0		1.460-0	1.457-0	8.968-2	7.804-1	0
3.000-0	1.912-0	3.996-2	1.184-1	7.173-2	8.250-0	5.162-1	2.965-0		1.840-0	1.838-0	1.404-1	9.614-1	0
3.500-0	1.933-0	3.953-2	1.172-1	5.274-2	7.533-0	4.140-1	3.718-0		2.247-0	2.245-0	2.061-1	1.162-0	0
4.000-0	1.951-0	3.957-2	1.173-1	4.040-2	6.919-0	3.419-1	4.426-0		2.674-0	2.673-0	2.870-1	1.384-0	0
4.500-0	1.915-0	3.990-2	1.183-1	3.193-2	6.408-0	2.878-1	5.099-0		3.118-0	3.117-0	3.833-1	1.626-0	0
5.000-0	1.898-0	4.025-2	1.193-1	2.587-2	5.976-0	2.484-1	5.678-0		3.572-0	3.571-0	4.944-1	1.881-0	0
5.500-0	1.892-0	4.038-2	1.197-1	2.138-2	5.605-0	2.197-1	6.122-0		4.032-0	4.031-0	6.190-1	2.131-0	0
6.000-0	1.878-0	4.057-2	1.206-1	1.797-2	5.283-0	1.964-1	6.954-0		4.500-0	4.499-0	7.576-1	2.396-0	0
6.500-0	1.859-0	4.109-2	1.218-1	1.532-2	5.000-0	1.772-1	6.986-0		4.974-0	4.974-0	9.096-1	2.675-0	0
7.000-0	1.836-0	4.160-2	1.233-1	1.321-2	4.749-0	1.611-1	7.408-0		5.454-0	5.453-0	1.075-0	2.970-0	0
8.000-0	1.782-0	4.286-2	1.270-1	1.011-2	4.322-0	1.358-1	8.235-0		6.426-0	6.425-0	1.441-0	3.605-0	0
1.000-1	1.662-0	4.595-2	1.362-1	6.472-3	3.682-0	1.017-1	9.830-0		8.403-0	8.402-0	2.305-0	5.054-0	0
1.250-1	1.572-0	4.859-2	1.440-1	4.144-3	3.124-0	8.003-2	1.119-1		1.089-1	1.088-1	3.579-0	6.923-0	0
1.500-1	1.466-0	5.142-2	1.524-1	2.878-3	2.725-0	6.578-2	1.245-1		1.339-1	1.338-1	5.032-0	9.010-0	0
1.750-1	1.402-0	5.449-2	1.615-1	2.114-3	2.424-0	5.873-2	1.367-1		1.590-1	1.590-1	6.528-0	1.134-1	0
2.000-1	1.335-0	5.721-2	1.696-1	1.619-3	2.188-0	4.827-2	1.472-1		1.841-1	1.841-1	6.338-0	1.378-1	0
2.500-1	1.240-0	6.161-2	1.826-1	1.036-3	1.839-0	3.797-2	1.638-1		2.342-1	2.342-1	1.202-1	1.888-1	0
3.000-1	1.173-0	6.515-2	1.931-1	7.192-4	1.593-0	3.121-2	1.768-1		2.844-1	2.844-1	1.596-1	2.426-1	0
3.500-1	1.127-0	6.781-2	2.010-1	5.285-4	1.409-0	2.644-2	1.866-1		3.345-1	3.345-1	2.010-1	2.969-1	0
4.000-1	1.085-0	7.032-2	2.084-1	4.046-4	1.266-0	2.290-2	1.955-1		3.846-1	3.846-1	2.437-1	3.540-1	0
4.500-1	1.043-0	7.291-2	2.161-1	3.197-4	1.151-0	2.018-2	2.044-1		4.347-1	4.347-1	2.876-1	4.149-1	0
5.000-1	1.013-0	7.494-2	2.221-1	2.590-4	1.056-0	1.801-2	2.114-1		4.848-1	4.848-1	3.324-1	4.756-1	0
5.500-1	1.000-0	7.636-2	2.263-1	2.140-4	9.773-1	1.626-2	2.184-1		5.348-1	5.348-1	3.778-1	5.346-1	0
6.000-1	9.830-1	7.771-2	2.303-1	1.798-4	9.103-1	1.481-2	2.211-1		5.849-1	5.849-1	4.238-1	5.950-1	0
6.500-1	9.611-1	7.900-2	2.341-1	1.532-4	8.321-1	1.358-2	2.255-1		6.349-1	6.349-1	4.703-1	6.566-1	0
7.000-1	9.523-1	8.025-2	2.378-1	1.321-4	8.015-1	1.254-2	2.296-1		6.850-1	6.850-1	5.172-1	7.193-1	0
8.000-1	9.257-1	8.253-2	2.446-1	1.012-4	7.179-1	1.087-2	2.373-1		7.851-1	7.851-1	6.119-1	8.481-1	0
1.000-2	8.313-1	8.663-2	2.568-1	6.473-5	5.993-1	8.546-3	2.507-1		9.852-1	9.852-1	8.039-1	1.177-2	0

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Form Factors

72-Hf

SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT		
1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	8.000+0	1.250-1	9.151-1	8.291-2	1.000+0	3.330-1	5.048-1	1.000+0	1.946-2	9.795-1	1.000+0	1.946-2	9.795-1	1.000+0	1.946-2	9.795-1	1.000+0	1.946-2	9.795-1	1.000+0	1.946-2	9.795-1
5.000-3	9.994-1	3.194-4	1.500-1	8.908-1	1.006-1	1.250+0	2.678-1	5.799-1	1.500+0	1.448-2	9.906-1	1.500+0	1.448-2	9.906-1	1.500+0	1.448-2	9.906-1	1.500+0	1.448-2	9.906-1	1.500+0	1.448-2	9.906-1
1.000-2	9.988-1	1.290-3	1.750-1	8.671-1	1.185-1	1.500+0	2.290-1	6.383-1	2.000+0	9.985-3	9.984-1	2.000+0	9.985-3	9.984-1	2.000+0	9.985-3	9.984-1	2.000+0	9.985-3	9.984-1	2.000+0	9.985-3	9.984-1
1.500-2	9.982-1	2.775-3	2.000-1	8.431-1	1.383-1	2.000+0	1.799-1	7.262-1	2.500+0	1.352-2	1.000+0	2.500+0	1.352-2	1.000+0	2.500+0	1.352-2	1.000+0	2.500+0	1.352-2	1.000+0	2.500+0	1.352-2	1.000+0
2.000-2	9.976-1	4.694-3	2.500-1	7.948-1	1.709-1	2.500+0	1.352-1	7.844-1	3.000+0	1.118-2	1.000+0	3.000+0	1.118-2	1.000+0	3.000+0	1.118-2	1.000+0	3.000+0	1.118-2	1.000+0	3.000+0	1.118-2	1.000+0
2.500-2	9.970-1	7.428-3	3.000-1	7.478-1	2.037-1	3.000+0	1.118-1	8.247-1	3.500+0	8.442-2	1.000+0	3.500+0	8.442-2	1.000+0	3.500+0	8.442-2	1.000+0	3.500+0	8.442-2	1.000+0	3.500+0	8.442-2	1.000+0
3.000-2	9.964-1	1.043-2	4.000-1	6.598-1	2.844-1	4.000+0	8.442-1	8.348-1	4.000+0	7.519-2	1.000+0	4.000+0	7.519-2	1.000+0	4.000+0	7.519-2	1.000+0	4.000+0	7.519-2	1.000+0	4.000+0	7.519-2	1.000+0
4.000-2	9.975-1	1.744-2	5.000-1	5.834-1	3.174-1	5.000+0	7.519-1	9.788-1	5.000+0	5.873-2	1.000+0	5.000+0	5.873-2	1.000+0	5.000+0	5.873-2	1.000+0	5.000+0	5.873-2	1.000+0	5.000+0	5.873-2	1.000+0
5.000-2	9.981-1	2.532-2	6.000-1	5.183-1	3.628-1	6.000+0	6.667-1	1.133-1	6.000+0	4.961-2	1.000+0	6.000+0	4.961-2	1.000+0	6.000+0	4.961-2	1.000+0	6.000+0	4.961-2	1.000+0	6.000+0	4.961-2	1.000+0
7.000-2	9.957-1	4.178-2	7.000-1	4.615-1	4.028-1	7.000+0	5.882-1	9.374-1	7.000+0	3.584-2	1.000+0	7.000+0	3.584-2	1.000+0	7.000+0	3.584-2	1.000+0	7.000+0	3.584-2	1.000+0	7.000+0	3.584-2	1.000+0
9.000-2	9.940-1	5.753-2	8.000-1	4.118-1	4.398-1	8.000+0	5.208-1	9.535-1	8.000+0	3.038-2	1.000+0	8.000+0	3.038-2	1.000+0	8.000+0	3.038-2	1.000+0	8.000+0	3.038-2	1.000+0	8.000+0	3.038-2	1.000+0
1.000-1	9.989-1	6.499-2	9.000-1	3.691-1	4.732-1	9.000+0	4.609-1	9.642-1	9.000+0	2.642-2	1.000+0	9.000+0	2.642-2	1.000+0	9.000+0	2.642-2	1.000+0	9.000+0	2.642-2	1.000+0	9.000+0	2.642-2	1.000+0

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ENDL Evaluated Photon Cross Sections

73-Ta

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Energy Deposition

73-Ta

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ENDL Evaluated Photon Data

73-Ta

ATOMIC WEIGHT 180.95										DENSITY 18.8 GRAMS/CC										
ENERGY		TOTAL NFP		CROSS SECTION (BARNES)								NEUT/COLLISION				MEV/CM				
MEV	C4	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E.	BREMSSTR	K.E.	MEV/CM	K.E.							
1.000	3.948	8	1.525	4	3.941	3	1.900	2	4.580	6	9.992	5	9.992	5	4.999	10	2.530	1		
1.250	3.382	8	1.781	4	5.351	6	3.940	3	2.933	2	5.348	6	1.249	4	1.249	4	7.119	10	3.093	1
1.500	2.980	6	2.021	4	6.074	6	3.539	3	4.232	2	6.070	6	1.499	4	1.499	4	1.025	9	5.030	1
1.750	2.957	6	2.037	4	6.122	6	3.538	3	5.727	2	6.118	6	1.748	4	1.748	4	1.398	9	5.915	1
2.000	2.937	6	2.051	4	6.184	6	3.537	3	7.444	2	6.180	6	1.999	4	1.999	4	1.623	9	6.808	1
2.250	3.119	6	1.931	4	5.894	6	3.533	3	1.005	1	5.890	6	2.333	4	2.333	4	2.482	9	7.479	1
2.500	2.988	6	2.071	4	6.244	6	3.533	3	1.017	1	6.240	6	2.347	4	2.347	4	2.512	9	8.029	1
2.500	3.025	6	1.988	4	5.966	6	3.532	3	1.149	1	5.965	6	2.499	4	2.499	4	2.648	9	8.153	1
3.000	3.598	6	1.899	4	5.074	6	3.528	3	1.839	1	5.070	6	2.999	4	2.999	4	4.100	9	8.403	1
3.500	4.117	6	1.483	4	4.396	6	3.521	3	2.198	1	4.393	6	3.497	4	3.497	4	5.580	9	8.494	1
4.000	4.661	6	1.236	4	3.884	6	3.516	3	2.634	1	3.880	6	3.986	4	3.986	4	7.287	9	8.574	1
4.250	4.982	6	1.209	4	3.634	6	3.512	3	3.155	1	3.630	6	4.235	4	4.235	4	8.162	9	8.501	1
4.253	4.555	6	1.322	4	3.974	6	3.512	3	3.174	1	3.970	6	4.249	4	4.249	4	8.238	9	9.329	1
4.500	4.843	6	1.244	4	3.737	6	3.508	3	3.523	1	3.734	6	4.496	4	4.496	4	9.222	9	9.283	1
5.000	5.430	6	1.109	4	3.394	6	3.501	3	4.281	1	3.390	6	4.995	4	4.995	4	1.138	9	9.198	1
5.500	6.200	6	0.716	3	2.919	6	3.491	3	5.073	1	2.916	6	5.493	4	5.493	4	1.377	9	8.860	1
5.848	6.434	6	0.304	3	2.813	6	3.489	3	5.319	1	2.810	6	5.841	4	5.841	4	1.452	9	8.768	1
5.862	6.067	6	0.929	3	2.983	6	3.488	3	5.343	1	2.980	6	5.855	4	5.855	4	1.459	9	9.322	1
6.000	6.846	6	0.004	3	2.723	6	3.483	3	5.884	1	2.720	6	5.992	4	5.992	4	1.638	9	9.016	1
6.500	7.545	6	7.985	3	2.399	6	3.470	3	6.775	1	2.396	6	6.491	4	6.491	4	1.922	9	8.603	1
7.000	8.484	6	7.100	3	2.133	6	3.459	3	7.672	1	2.130	6	6.989	4	6.989	4	2.228	9	8.228	1
8.000	1.089	5	5.636	3	1.693	6	3.439	3	9.598	1	1.690	6	7.984	4	7.984	4	2.908	9	7.469	1
9.000	1.318	5	4.571	3	1.373	6	3.412	3	1.149	0	1.370	6	8.978	4	8.978	4	3.677	9	6.812	1
1.000	1.317	5	4.574	3	1.374	6	3.388	3	1.351	0	1.371	6	9.975	4	9.975	4	4.540	9	7.574	1
1.250	2.282	5	2.840	3	7.931	5	3.305	1	1.818	0	7.098	5	1.245	3	1.245	3	7.089	9	5.454	1
1.500	3.573	5	1.886	3	5.085	5	3.239	1	2.318	0	5.033	5	1.490	3	1.490	3	1.013	7	4.171	1
1.734	5.101	5	1.181	3	3.549	5	3.158	1	2.744	0	3.517	5	1.719	3	1.719	3	1.347	7	3.389	1
1.735	1.488	5	4.048	3	1.216	6	3.157	1	2.746	0	1.213	6	1.730	3	1.730	3	1.349	7	1.156	2
1.750	1.523	5	3.956	3	1.189	6	3.153	1	2.773	0	1.186	6	1.745	3	1.745	3	1.373	7	1.139	2
1.782	1.622	5	3.715	3	1.116	6	3.140	1	2.851	0	1.113	6	1.777	3	1.777	3	1.440	7	1.095	2
1.793	1.143	5	5.272	3	1.584	6	3.139	1	2.853	0	1.581	6	1.789	3	1.789	3	1.444	7	1.257	2
2.000	1.527	5	3.544	3	1.185	6	3.075	1	3.239	0	1.182	6	1.995	3	1.995	3	1.796	7	1.299	2
2.193	1.950	5	3.089	3	9.280	3	3.065	3	3.578	0	9.260	5	2.186	3	2.186	3	2.159	7	1.115	2
2.194	1.489	5	4.100	3	1.232	6	3.004	1	3.580	0	1.229	6	2.189	3	2.189	3	2.184	7	1.482	2
2.488	2.007	5	3.001	3	9.017	5	2.912	1	4.067	0	8.988	5	2.480	3	2.480	3	2.737	7	1.220	2
2.489	1.794	5	3.358	3	1.009	6	2.911	1	4.068	0	1.006	6	2.482	3	2.482	3	2.741	7	1.386	2
2.500	1.955	5	3.248	3	9.760	5	2.902	1	4.124	0	9.731	5	2.493	3	2.493	3	2.810	7	1.338	2
2.702	2.280	5	2.843	3	7.940	5	2.842	1	4.486	0	7.912	5	2.692	3	2.692	3	3.281	7	1.176	2
2.703	2.113	5	2.851	3	8.585	5	2.842	1	4.487	0	6.537	5	2.694	3	2.694	3	3.285	7	1.270	2
3.000	2.786	5	2.162	3	6.497	5	2.764	1	5.023	0	6.489	5	2.987	3	2.977	3	4.042	7	1.068	2
3.500	4.192	5	1.437	3	4.318	5	2.602	1	5.872	0	4.292	5	3.479	3	3.468	3	5.487	7	0.274	1
4.000	5.988	5	1.009	3	3.033	5	2.489	1	6.723	0	3.008	5	3.967	3	3.957	3	7.142	7	6.630	1
4.500	8.146	5	7.395	2	2.822	5	2.325	1	7.525	0	2.199	5	4.453	3	4.442	3	9.002	7	5.453	1
5.000	1.075	4	5.602	2	1.883	5	2.203	1	8.323	0	1.881	5	4.934	3	4.924	3	1.106	6	4.578	1
5.500	1.382	4	4.368	2	1.305	5	2.078	1	9.072	0	1.289	5	5.412	3	5.402	3	1.331	6	3.908	1
6.000	1.737	4	3.467	2	1.042	5	1.969	1	9.814	0	1.025	5	5.886	3	5.876	3	1.575	6	3.382	1
6.500	2.143	4	2.811	2	8.446	4	1.856	1	1.048	0	8.260	4	6.356	3	6.346	3	1.837	6	2.961	1
7.000	2.601	4	2.316	2	6.958	4	1.746	1	1.114	0	6.782	4	6.822	3	6.812	3	2.116	6	2.619	1
8.000	3.683	4	1.636	2	4.914	4	1.500	1	1.243	0	4.754	4	7.739	3	7.729	3	2.724	6	2.098	1
9.000	6.385	4	9.485	1	2.844	4	1.315	1	1.449	0	2.711	4	9.418	3	9.408	3	4.037	6	1.478	1
9.881	3.520	4	2.390	2	7.182	4	1.315	1	1.450	0	7.049	4	9.698	3	9.791	3	2.769	6	3.091	1
1.000	2.598	4	2.319	2	6.967	4	1.301	1	1.462	0	6.835	4	9.811	3	9.905	3	2.850	6	3.043	1
1.113	3.418	4	1.763	2	5.296	4	1.157	1	1.566	0	5.179	4	1.089	2	8.989	3	3.685	6	2.630	1
1.114	2.440	4	2.489	2	7.417	4	1.157	1	1.566	0	7.300	4	1.096	2	9.048	3	3.734	6	3.708	1
1.168	2.757	4	2.185	2	6.584	4	1.098	1	1.615	0	6.453	4	1.148	2	9.571	3	4.178	6	3.471	1
1.168	2.383	4	2.528	2	7.595	4	1.098	1	1.615	0	7.484	4	1.151	2	9.595	3	4.198	6	4.026	1
1.250	2.840	4	2.121	2	6.374	4	1.020	1	1.888	0	6.270	4	1.230	2	1.039	2	4.919	6	3.657	1
1.500	4.545	4	1.325	2	3.982	4	0.960	1	1.894	0	3.697	4	1.468	2	1.278	2	7.444	6	2.811	1
1.750	6.792	4	0.869	1	2.865	4	0.916	1	2.062	0	2.594	4	1.703	2	1.514	2	1.045	5	2.229	1
2.000	9.508	4	6.270	1	1.884	4	0.888	1	2.219	0	1.883	4	1.935	2	1.747	2	1.392	5	1.819	1
2.500	1.726	3	3.469	1	1.048	4	0.808	1	2.446	0	1.002	4	2.390	2	2.205	2	2.215	5	1.277	1
3.000	2.777	3	2.189	1	6.518	3	0.742	1	2.649	0	6.148	3	2.831	2	2.647	2	3.194	5	9.533	0
3.500	4.169	3	1.445	1	4.342	3	0.738	1	2.773	0	4.041	3	3.258	2	3.078	2	4.316	5	7.383	0

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 180.95		DENSITY 18.6 GRAMS/CC					
ENERGY		TOTAL NTP		CROSS SECTION (BARNS)			
KEV		CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD
KEV		CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD
4.000-2	5.989-3	1.019-1	3.083-3	2.251-2	2.251-2	2.251-2	2.251-2
4.500-2	8.053-3	7.481-1	2.248-3	1.889-2	2.252-2	2.031-3	4.072-2
5.000-2	1.880-2	5.888-1	1.788-3	1.588-2	3.014-1	1.588-3	4.457-2
5.500-2	1.358-2	4.437-1	1.333-3	1.358-2	3.051-1	1.187-3	4.882-2
6.000-2	1.098-2	3.548-1	1.065-3	1.188-2	3.085-1	9.184-2	5.178-2
6.500-2	8.087-2	2.888-1	8.673-2	1.035-2	3.097-1	7.328-2	5.517-2
7.000-2	6.290-2	2.290-1	7.063-2	8.748-2	3.103-1	8.818-2	5.875-2
7.500-2	5.247-2	1.148-1	3.450-2	8.747-2	3.103-1	3.321-3	6.487-2
8.000-2	4.789-2	1.044-1	3.138-2	9.188-2	3.108-1	3.015-3	6.734-2
8.500-2	4.064-2	7.471-1	2.245-3	7.340-2	3.130-1	2.140-3	7.841-2
9.000-2	3.425-2	6.287-1	1.870-3	5.000-2	3.109-1	1.189-3	9.398-2
9.500-2	2.535-2	2.378-1	7.139-2	3.353-3	3.025-1	6.501-2	1.147-1
1.000-1	4.015-2	1.500-1	4.908-2	2.419-1	2.957-1	3.970-2	1.340-1
1.500-1	5.884-2	1.024-1	3.078-2	1.831-1	2.883-1	2.807-2	1.517-1
2.000-1	8.105-2	7.432-1	2.233-2	1.438-1	2.783-1	1.811-2	1.678-1
2.500-1	1.341-1	4.482-1	1.350-2	9.502-2	2.814-1	9.932-2	1.982-1
3.000-1	1.959-1	3.078-1	9.241-1	6.773-2	2.484-1	6.080-1	2.197-1
3.500-1	2.803-1	2.309-1	6.938-1	5.054-2	2.358-1	4.075-1	2.409-1
4.000-1	3.275-1	1.859-1	5.527-1	3.922-2	2.253-1	2.881-1	2.801-1
4.500-1	3.582-1	1.537-1	4.617-1	3.127-2	2.155-1	2.149-1	2.782-1
5.000-1	4.548-1	1.328-1	3.980-1	2.553-2	2.072-1	1.853-1	2.975-1
5.500-1	5.133-1	1.173-1	3.523-1	2.123-2	1.993-1	1.317-1	3.177-1
6.000-1	5.701-1	1.057-1	3.175-1	1.794-2	1.925-1	1.071-1	3.378-1
6.500-1	6.223-1	9.880-2	2.909-1	1.535-2	1.859-1	8.962-2	3.594-1
7.000-1	6.721-1	8.983-2	2.693-1	1.328-2	1.800-1	7.598-2	3.815-1
8.000-1	7.853-1	7.874-2	2.388-1	1.023-2	1.699-1	5.844-2	4.277-1
1.000-0	9.252-1	6.511-2	1.936-1	6.804-1	1.532-1	3.588-2	5.301-1
1.020-0	9.413-1	6.402-2	1.924-1	6.327-1	1.516-1	3.444-2	5.421-1
1.250-0	1.098-0	5.498-2	1.824-1	4.252-1	1.372-1	2.387-2	6.702-1
1.500-0	1.217-0	4.951-2	1.488-1	2.984-1	1.249-1	1.886-2	8.084-1
1.750-0	1.310-0	4.599-2	1.382-1	2.182-1	1.149-1	1.255-2	9.549-1
2.000-0	1.381-0	4.382-2	1.311-1	1.873-1	1.087-1	9.889-2	1.113-1
2.444-0	1.393-0	4.325-2	1.300-1	1.802-1	1.054-1	9.516-2	1.142-1
2.500-0	1.488-0	4.103-2	1.233-1	1.075-1	9.379-2	8.803-2	1.185-1
3.000-0	1.502-0	4.011-2	1.205-1	7.459-2	8.405-2	5.184-2	1.840-1
3.500-0	1.517-0	3.971-2	1.193-1	5.483-2	7.837-2	4.155-2	2.247-1
4.000-0	1.514-0	3.978-2	1.195-1	4.200-2	7.015-2	3.431-2	2.675-1
4.500-0	1.501-0	4.014-2	1.206-1	3.320-2	6.497-2	2.884-2	3.119-1
5.000-0	1.487-0	4.050-2	1.217-1	2.890-2	6.059-2	2.491-2	3.574-1
5.500-0	1.482-0	4.065-2	1.221-1	2.223-2	5.683-2	2.203-2	4.035-1
6.000-0	1.471-0	4.098-2	1.231-1	1.888-2	5.357-2	1.989-2	4.503-1
6.500-0	1.458-0	4.139-2	1.244-1	1.592-2	5.065-2	1.776-2	4.978-1
7.000-0	1.437-0	4.191-2	1.259-1	1.373-2	4.814-2	1.614-2	5.458-1
8.000-0	1.395-0	4.319-2	1.298-1	1.052-2	4.382-2	1.359-2	6.430-1
1.000-1	1.300-0	4.632-2	1.342-1	6.729-3	3.733-3	1.019-1	8.407-1
1.250-1	1.229-0	4.901-2	1.472-1	4.308-3	3.188-3	8.014-2	1.089-1
1.500-1	1.181-0	5.186-2	1.592-1	2.982-3	2.763-3	6.587-2	1.276-1
1.750-1	1.096-0	5.499-2	1.852-1	2.198-3	2.458-3	5.580-2	1.401-1
2.000-1	1.043-0	5.774-2	2.175-1	1.683-3	2.218-3	4.833-2	1.508-1
2.500-1	9.684-1	6.221-2	1.889-1	1.077-3	1.884-3	3.802-2	1.679-1
3.000-1	9.156-1	6.579-2	1.977-1	7.477-4	1.615-3	3.125-2	1.812-1
3.500-1	8.796-1	6.849-2	2.058-1	5.494-4	1.428-3	2.847-2	1.912-1
4.000-1	8.481-1	7.103-2	2.134-1	4.207-4	1.283-3	2.293-2	2.004-1
4.500-1	8.179-1	7.385-2	2.213-1	3.324-4	1.167-3	2.020-2	2.094-1
5.000-1	7.957-1	7.571-2	2.275-1	2.692-4	1.071-3	1.804-2	2.166-1
5.500-1	7.808-1	7.715-2	2.318-1	2.225-4	9.909-3	1.628-2	2.217-1
6.000-1	7.672-1	7.852-2	2.359-1	1.889-4	9.229-3	1.482-2	2.285-1
6.500-1	7.547-1	7.982-2	2.398-1	1.593-4	8.639-3	1.360-2	2.311-1
7.000-1	7.432-1	8.108-2	2.432-1	1.373-4	8.127-3	1.238-2	2.353-1
8.000-1	7.244-1	8.339-2	2.508-1	1.052-4	7.879-3	1.088-2	2.432-1
1.000-2	6.881-1	8.755-2	2.631-1	6.730-5	6.841-3	8.598-3	2.569-1
3.671-2	3.493-2	5.998-5	5.911-0				
4.072-2	3.896-2	6.913-5	4.838-0				
4.457-2	4.288-2	6.938-5	4.043-0				
4.882-2	4.856-2	9.889-5	3.428-0				
5.178-2	5.011-2	1.143-4	2.950-0				
5.517-2	5.353-2	1.304-4	2.985-0				
5.875-2	5.512-2	1.383-4	2.407-0				
6.487-2	1.988-2	1.802-5	3.789-0				
6.734-2	2.234-2	2.875-5	3.873-0				
7.841-2	3.178-2	4.596-5	3.939-0				
9.398-2	5.014-2	1.144-4	3.518-0				
1.147-1	7.209-2	2.363-4	2.843-0				
1.340-1	9.275-2	3.908-4	2.310-0				
1.517-1	1.120-1	5.696-4	1.904-0				
1.678-1	1.298-1	7.846-4	1.602-0				
1.982-1	1.817-1	1.185-3	1.206-0				
2.197-1	1.889-1	1.614-3	9.845-1				
2.409-1	2.134-1	2.058-3	8.181-1				
2.801-1	2.357-1	2.507-3	7.195-1				
2.782-1	2.874-1	2.987-3	6.585-1				
2.975-1	2.785-1	3.494-3	6.123-1				
3.177-1	3.001-1	4.055-3	5.842-1				
3.378-1	3.220-1	4.661-3	5.648-1				
3.594-1	3.449-1	5.344-3	5.943-1				
3.815-1	3.683-1	6.086-3	5.479-1				
4.277-1	4.166-1	7.789-3	5.445-1				
5.301-1	5.215-1	1.212-2	5.637-1				
5.421-1	5.337-1	1.269-2	5.672-1				
6.702-1	6.635-1	1.949-2	6.056-1				
8.084-1	8.031-1	2.839-2	6.600-1				
9.549-1	9.506-1	3.951-2	7.256-1				
1.113-1	1.109-1	5.344-2	6.034-1				
1.142-1	1.139-1	5.822-2	6.174-1				
1.459-1	1.457-1	9.076-2	9.920-1				
1.840-1	1.838-1	1.422-1	1.254-0				
2.247-1	2.246-1	2.087-1	1.481-0				
2.675-1	2.674-1	2.908-1	1.786-0				
3.119-1	3.118-1	3.884-1	2.078-0				
3.574-1	3.573-1	5.009-1	2.402-0				
4.035-1	4.034-1	6.270-1	2.722-0				
4.503-1	4.502-1	7.672-1	3.061-0				
4.978-1	4.977-1	9.210-1	3.419-0				
5.458-1	5.457-1	1.088-0	3.797-0				
6.430-1	6.429-1	1.458-0	4.610-0				
8.407-1	8.407-1	2.331-0	6.844-0				
1.089-1	1.089-1	3.615-0	8.859-0				
1.339-1	1.339-1	5.078-0	1.193-1				
1.590-1	1.590-1	6.685-0	1.481-1				
1.841-1	1.841-1	8.405-0	1.785-1				
2.343-1	2.343-1	1.210-1	2.419-1				
2.844-1	2.844-1	1.606-1	3.106-1				
3.345-1	3.345-1	2.021-1	3.803-1				
3.846-1	3.846-1	2.450-1	4.535-1				
4.347-1	4.347-1	2.890-1	5.315-1				
4.848-1	4.848-1	3.339-1	6.093-1				
5.349-1	5.349-1	3.794-1	6.850-1				
5.849-1	5.849-1	4.253-1	7.624-1				
6.350-1	6.350-1	4.720-1	8.413-1				
6.850-1	6.850-1	5.190-1	9.218-1				
7.851-1	7.851-1	6.138-1	1.087-2				
9.853-1	9.853-1	8.060-1	1.472-2				

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	9.195-1	8.195-2	1.000+0	3.359-1	5.023-1	1.000-1	1.999-2	9.762-1
5.000-3	9.999-1	3.019-4	1.500-1	8.907-1	9.941-2	1.250+0	2.689-1	5.724-1	1.500-1	1.495-2	9.904-1
1.000-2	9.999-1	1.192-3	1.750-1	8.687-1	1.189-1	1.500+0	2.288-1	6.324-1	2.000-1	1.011-2	9.982-1
1.500-2	9.999-1	2.639-3	2.000-1	8.423-1	1.344-1	2.000+0	1.800-1	7.230-1	5.000-1	1.408-3	1.000+0
2.000-2	9.999-1	4.621-3	2.500-1	7.941-1	1.685-1	2.500+0	1.403-1	7.821-1	8.000-1	3.771-4	1.000+0
2.500-2	9.951-1	7.082-3	3.000-1	7.473-1	2.111-1	3.000+0	1.127-1	8.229-1	1.000-2	1.969-4	1.000+0
3.000-2	9.930-1	9.986-3	4.000-1	6.800-1	2.620-1	3.500+0	8.517-2	8.531-1	1.000-3	2.752-7	1.000+0
4.000-2	9.879-1	1.374-2	5.000-1	5.954-1	3.156-1	4.000+0	7.570-2	8.767-1	1.000-6	2.151-15	1.000+0
5.000-2	9.619-1	2.442-2	6.000-1	5.211-1	3.614-1	5.000+0	5.677-2	9.119-1	1.000-9	1.798-23	1.000+0
7.000-2	9.684-1	4.074-2	7.000-1	4.648-1	4.013-1	6.000+0	4.590-2	9.363-1			
9.000-2	9.488-1	5.895-2	8.000-1	4.153-1	4.375-1	7.000+0	3.624-2	9.527-1			
1.000-1	9.397-1	6.405-2	9.000-1	3.724-1	4.710-1	8.000+0	3.069-2	9.635-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 183.85						DENSITY 19.3 GRAMS/CC			
ENERGY		TOTAL WFP		CROSS SECTION (BARNS)				NEUT/COLLISION	
KEV	CM	CM-CH/CM	TOTAL	COMPONENT	INCOHER	PHOTOEL	PAIR PROD	K.C.-FLOR	K.C. SPECTRUM
1.000-4	4.430-8	1.167-4	3.904-8	3.630-3	1.909-2	3.904-8		9.999-3	9.999-3
1.250-4	3.404-8	1.467-4	4.940-8	3.630-3	2.817-2	4.938-8		1.249-4	1.249-4
1.500-4	2.880-8	1.813-4	5.534-8	3.637-3	4.046-2	5.530-8		1.499-4	1.499-4
1.750-4	2.784-8	1.982-4	5.808-8	3.638-3	5.494-2	5.803-8		1.749-4	1.749-4
2.000-4	2.813-8	1.983-4	6.054-8	3.639-3	7.180-2	6.050-8		1.999-4	1.999-4
2.500-4	2.788-8	1.983-4	6.674-8	3.639-3	1.100-1	5.671-8		2.499-4	2.499-4
2.901-4	2.788-8	1.983-4	6.674-8	3.639-3	1.109-1	5.670-8		2.499-4	2.499-4
2.913-4	2.804-8	1.983-4	6.674-8	3.639-3	1.121-1	5.670-8		2.513-4	2.513-4
3.000-4	3.005-8	1.764-4	7.284-8	3.640-3	1.702-1	5.280-8		3.000-4	3.000-4
3.500-4	3.443-8	1.983-4	8.004-8	3.641-3	2.125-1	4.991-8		3.497-4	3.497-4
4.000-4	3.674-8	1.738-4	8.694-8	3.641-3	2.743-1	4.080-8		3.996-4	3.996-4
4.467-4	4.377-8	1.184-4	9.814-8	3.642-3	3.367-1	3.810-8		4.463-4	4.463-4
4.461-4	4.621-8	1.688-4	1.074-8	3.642-3	3.367-1	3.930-8		4.477-4	4.477-4
4.500-4	4.038-8	1.683-4	1.074-8	3.642-3	3.414-1	3.913-8		4.496-4	4.496-4
5.000-4	4.488-8	1.154-4	1.524-8	3.643-3	4.152-1	3.520-8		4.995-4	4.995-4
5.500-4	5.123-8	1.011-4	2.088-8	3.643-3	4.927-1	3.084-8		5.494-4	5.494-4
5.943-4	5.703-8	9.085-3	2.774-8	3.644-3	5.852-1	2.770-8		5.935-4	5.935-4
5.957-4	5.374-8	9.842-3	2.944-8	3.644-3	5.885-1	2.940-8		5.950-4	5.950-4
6.000-4	5.467-8	9.478-3	2.894-8	3.644-3	5.760-1	2.890-8		5.993-4	5.993-4
6.500-4	6.210-8	8.343-3	2.397-8	3.645-3	6.357-1	2.394-8		6.491-4	6.491-4
7.000-4	6.988-8	7.414-3	2.284-8	3.645-3	7.481-1	2.280-8		6.989-4	6.989-4
8.000-4	8.771-8	5.908-3	1.804-8	3.646-3	9.381-1	1.800-8		7.984-4	7.984-4
9.000-4	1.068-8	4.781-3	1.494-8	3.646-3	1.127-0	1.450-8		8.978-4	8.978-4
1.000-3	1.125-8	4.604-3	1.405-8	3.646-3	1.327-0	1.402-8		9.975-4	9.975-4
1.250-3	1.888-8	2.744-3	3.378-8	3.647-3	1.798-0	8.344-8		1.245-3	1.245-3
1.500-3	2.679-8	1.600-3	5.494-8	3.647-3	2.299-0	5.481-8		1.491-3	1.491-3
1.750-3	4.111-8	1.260-3	3.848-8	3.647-3	2.794-0	3.818-8		1.735-3	1.735-3
1.808-3	4.432-8	1.189-3	3.589-8	3.647-3	2.862-0	3.537-8		1.792-3	1.792-3
1.809-3	1.467-8	3.532-3	1.078-8	3.647-3	2.864-0	1.075-8		1.804-3	1.804-3
1.870-3	1.600-8	3.235-3	9.089-3	3.647-3	2.877-0	9.087-8		1.864-3	1.864-3
1.871-3	1.135-8	4.567-3	1.394-8	3.647-3	2.879-0	1.391-8		1.867-3	1.867-3
2.000-3	1.349-8	3.840-3	1.172-8	3.647-3	3.222-0	1.169-8		1.995-3	1.995-3
2.280-3	1.898-8	2.732-3	8.342-3	3.647-3	3.714-0	8.311-8		2.272-3	2.272-3
2.281-3	1.431-8	3.620-3	1.105-8	3.647-3	3.718-0	1.102-8		2.275-3	2.275-3
2.500-3	1.818-8	2.653-3	8.709-3	3.647-3	4.104-0	8.679-8		2.491-3	2.491-3
2.574-3	1.959-8	2.845-3	8.074-3	3.647-3	4.238-0	8.044-8		2.585-3	2.585-3
2.575-3	1.737-8	2.983-3	9.108-3	3.647-3	4.238-0	9.078-8		2.587-3	2.587-3
2.817-3	2.193-8	2.362-3	7.212-3	3.647-3	4.672-0	7.183-8		2.806-3	2.806-3
2.818-3	2.033-8	2.948-3	7.779-3	3.647-3	4.674-0	7.750-8		2.808-3	2.808-3
3.000-3	2.392-8	2.186-3	6.612-3	3.647-3	5.002-0	6.584-8		3.087-3	3.087-3
3.500-3	3.589-8	1.458-3	4.432-3	3.647-3	5.853-0	4.405-8		3.479-3	3.479-3
4.000-3	5.045-8	1.027-3	3.135-3	3.647-3	6.707-0	3.110-8		3.968-3	3.968-3
4.500-3	6.843-8	7.572-2	2.312-3	3.647-3	7.518-0	2.288-8		4.453-3	4.453-3
5.000-3	8.984-8	5.767-2	1.761-3	3.647-3	8.322-0	1.738-8		4.935-3	4.935-3
5.500-3	1.148-8	4.512-2	1.377-3	3.647-3	9.083-0	1.356-8		5.414-3	5.414-3
6.000-3	1.435-8	3.608-2	1.101-3	3.647-3	9.838-0	1.081-8		5.899-3	5.899-3
6.500-3	1.784-8	2.937-2	8.956-2	3.647-3	1.055-1	8.774-8		6.381-3	6.381-3
7.000-3	2.133-8	2.429-2	7.414-2	3.647-3	1.119-1	7.232-8		6.829-3	6.829-3
8.000-3	3.001-8	1.727-2	5.271-2	3.647-3	1.251-1	5.106-8		7.749-3	7.749-3
1.000-2	5.291-8	9.793-1	2.990-2	3.647-3	1.474-1	2.854-8		9.548-3	9.548-3
1.020-2	5.548-8	9.308-1	2.841-2	3.647-3	1.493-1	2.708-8		9.726-3	9.726-3
1.020-2	2.191-8	2.385-2	7.221-2	3.647-3	1.493-1	7.088-8		1.002-2	1.002-2
1.194-2	3.000-8	1.727-2	5.273-2	3.647-3	1.616-1	5.156-8		1.129-2	1.129-2
1.194-2	2.142-8	2.419-2	7.385-2	3.647-3	1.616-1	7.268-8		1.138-2	1.138-2
1.210-2	2.417-8	2.144-2	6.594-2	3.647-3	1.695-1	6.433-8		1.189-2	1.189-2
1.210-2	2.089-8	2.480-2	7.572-2	3.647-3	1.695-1	7.481-8		1.192-2	1.192-2
1.250-2	2.274-8	2.273-2	6.956-2	3.647-3	1.700-1	6.849-8		1.231-2	1.231-2
1.500-2	3.846-8	1.421-2	4.338-2	3.647-3	1.911-1	4.250-8		1.489-2	1.489-2
1.750-2	5.480-8	9.488-1	2.897-2	3.647-3	2.079-1	2.823-8		1.708-2	1.708-2
2.000-2	7.739-8	6.883-1	2.094-2	3.647-3	2.338-1	1.981-8		1.939-2	1.939-2
2.500-2	1.388-8	7.305-1	1.131-2	3.647-3	2.488-1	1.084-8		2.385-2	2.385-2
3.000-2	2.880-8	2.833-1	7.000-2	3.647-3	2.873-1	6.618-8		2.837-2	2.837-2
3.500-2	3.405-8	1.520-1	4.839-2	3.647-3	2.798-1	4.328-8		3.267-2	3.267-2

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ENCL Evaluated Photon Data

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ATOMIC WEIGHT 183.85										DENSITY 19.3 GRAMS/CC			
ENERGY KEV	TOTAL NFP		CROSS SECTION (BARNS)							NEV/COLLISION		NEV/CM	
	CH	CH+CH/ON	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	BRNCHSTR	K.E.		
4.000-2	4.055-3	1.067-1	3.290-3	2.331-2	2.913-1	2.986-3		3.081-2	3.488-2	5.617-5	7.184-0		
4.500-2	6.047-3	7.726-3	2.380-3	1.930-2	2.953-1	2.158-3		4.002-2	3.892-2	6.993-5	5.050-0		
5.000-2	8.761-3	5.981-3	1.081-3	1.039-2	3.047-1	1.007-3		4.408-2	4.261-2	8.458-5	4.075-0		
5.500-2	1.130-2	3.305-3	1.400-3	1.007-2	3.080-1	1.000-3		4.638-2	4.653-2	9.953-5	4.118-0		
6.000-2	1.419-2	3.051-3	1.115-3	1.000-2	3.119-1	9.909-3		5.190-2	5.049-2	1.150-4	3.030-0		
6.500-2	1.798-2	2.800-3	8.030-2	1.070-2	3.132-1	7.052-2		5.520-2	5.350-2	1.321-4	3.057-0		
6.952-2	2.083-2	2.407-3	7.503-2	9.503-1	3.143-1	6.319-2		5.819-2	5.044-2	1.470-4	2.708-0		
6.952-2	4.707-3	1.101-1	3.390-3	9.503-1	3.143-1	3.253-3		6.006-2	2.017-2	1.080-5	4.283-0		
7.000-2	4.700-3	1.002-1	3.304-3	9.405-1	3.144-1	3.178-3		6.740-2	2.082-2	1.985-5	4.308-0		
8.000-2	6.001-3	7.779-3	2.375-3	7.003-1	3.167-1	2.267-3		7.051-2	3.008-2	4.178-5	4.515-0		
1.000-1	1.170-2	4.430-0	1.352-3	5.100-1	3.146-1	1.203-3		9.419-2	4.029-2	1.087-4	4.150-0		
1.250-1	2.077-2	2.405-0	7.610-2	3.475-1	3.082-1	6.904-2		1.151-1	7.067-2	2.302-4	3.403-0		
1.500-1	3.205-2	1.577-0	4.015-2	2.507-1	2.980-1	4.205-2		1.340-1	9.157-2	3.882-4	2.787-0		
1.750-1	4.054-2	1.074-0	3.270-2	1.097-1	2.959-1	2.799-2		1.526-1	1.111-1	5.081-4	2.303-0		
2.000-1	6.060-2	7.779-1	2.375-2	1.491-1	2.819-1	1.944-2		1.691-1	1.292-1	7.880-4	1.941-0		
2.500-1	1.100-1	4.672-1	1.400-2	9.000-0	2.840-1	1.003-2		1.900-1	1.610-1	1.202-3	1.459-0		
3.000-1	1.609-1	3.181-1	9.711-1	7.025-0	2.516-1	6.492-1		2.221-1	1.606-1	1.648-3	1.104-0		
3.500-1	2.103-1	2.374-1	7.240-1	5.243-0	2.380-1	4.333-1		2.438-1	2.145-1	2.108-3	9.028-1		
4.000-1	2.794-1	1.001-1	5.743-1	4.009-0	2.293-1	3.053-1		2.629-1	2.370-1	2.571-3	0.807-1		
4.500-1	3.311-1	1.505-1	4.778-1	3.245-0	2.184-1	2.269-1		2.820-1	2.589-1	3.054-3	7.820-1		
5.000-1	3.854-1	1.344-1	4.104-1	2.050-0	2.099-1	1.740-1		3.007-1	2.801-1	3.581-3	7.267-1		
5.500-1	4.385-1	1.107-1	3.623-1	2.204-0	2.020-1	1.382-1		3.202-1	3.017-1	4.151-3	6.909-1		
6.000-1	4.857-1	1.007-1	3.257-1	1.062-0	1.951-1	1.120-1		3.401-1	3.234-1	4.766-3	6.658-1		
6.500-1	5.312-1	9.794-2	2.970-1	1.593-0	1.604-1	9.343-0		3.615-1	3.462-1	5.456-3	6.517-1		
7.000-1	5.747-1	9.016-2	2.752-1	1.379-0	1.625-1	7.900-0		3.834-1	3.694-1	6.006-3	6.428-1		
8.000-1	6.958-1	7.901-2	2.412-1	1.063-0	1.722-1	5.638-0		4.291-1	4.174-1	7.504-3	6.385-1		
1.000-0	7.953-1	8.515-2	1.989-1	8.050-1	1.553-1	3.078-0		5.307-1	5.218-1	1.229-2	6.581-1		
1.022-0	8.090-1	8.405-2	1.952-1	8.570-1	1.530-1	3.532-0	1.000-8	5.427-1	5.340-1	1.287-2	6.601-1		
1.250-0	9.424-1	5.400-2	1.678-1	4.417-1	1.351-1	2.427-0	4.949-3	6.708-1	6.637-1	1.977-2	7.043-1		
1.500-0	1.047-0	4.951-2	1.511-1	3.079-1	1.266-1	1.728-0	4.200-1	8.087-1	8.032-1	2.877-2	7.674-1		
1.750-0	1.126-0	4.600-2	1.404-1	2.267-1	1.185-1	1.297-0	8.800-1	9.551-1	9.506-1	4.003-2	8.439-1		
2.000-0	1.187-0	4.305-2	1.333-1	1.738-1	1.082-1	1.011-0	1.325-0	1.113-0	1.109-0	5.415-2	9.347-1		
2.044-0	1.197-0	4.320-2	1.321-1	1.684-1	1.068-1	9.752-1	1.380-0	1.142-0	1.139-0	5.696-2	9.511-1		
2.500-0	1.261-0	4.109-2	1.294-1	1.115-1	9.507-0	7.027-1	2.222-0	1.459-0	1.457-0	9.196-2	1.155-0		
3.000-0	1.269-0	4.020-2	1.227-1	7.749-2	8.520-0	5.305-1	3.148-0	1.841-0	1.839-0	1.441-1	1.427-0		
3.500-0	1.311-0	3.903-2	1.218-1	5.697-2	7.742-0	4.250-1	3.938-0	2.249-0	2.247-0	2.115-1	1.727-0		
4.000-0	1.298-0	3.992-2	1.219-1	4.304-2	7.110-0	3.508-1	4.681-0	2.677-0	2.676-0	2.947-1	2.061-0		
4.500-0	1.266-0	4.029-2	1.230-1	3.440-2	6.586-0	2.948-1	5.308-0	3.122-0	3.120-0	3.935-1	2.427-0		
5.000-0	1.274-0	4.087-2	1.242-1	2.795-2	6.142-0	2.545-1	5.993-0	3.577-0	3.578-0	5.074-1	2.807-0		
5.500-0	1.269-0	4.084-2	1.247-1	2.310-2	5.761-0	2.250-1	6.457-0	4.038-0	4.037-0	6.351-1	3.181-0		
6.000-0	1.259-0	4.115-2	1.258-1	1.941-2	5.430-0	2.011-1	6.913-0	4.508-0	4.508-0	7.770-1	3.578-0		
6.500-0	1.248-0	4.159-2	1.270-1	1.655-2	5.138-0	1.814-1	7.381-0	4.981-0	4.980-0	9.324-1	3.998-0		
7.000-0	1.230-0	4.213-2	1.280-1	1.427-2	4.660-0	1.648-1	7.801-0	5.461-0	5.461-0	1.101-0	4.440-0		
8.000-0	1.193-0	4.342-2	1.326-1	1.093-2	4.442-0	1.387-1	8.684-0	6.434-0	6.433-0	1.475-0	5.391-0		
1.000-1	1.112-0	4.858-2	1.422-1	6.992-3	3.784-0	1.040-1	1.033-1	8.412-0	8.411-0	2.356-0	7.582-0		
1.250-1	1.051-0	4.930-2	1.505-1	4.476-3	3.211-0	8.177-2	1.175-1	1.089-1	1.089-1	3.650-0	1.037-1		
1.500-1	9.924-1	5.221-2	1.594-1	3.109-3	2.801-0	6.721-2	1.307-1	1.340-1	1.340-1	5.124-0	1.350-1		
1.750-1	9.361-1	5.535-2	1.690-1	2.284-3	2.491-0	5.654-2	1.435-1	1.591-1	1.591-1	6.741-0	1.699-1		
2.000-1	8.913-1	5.813-2	1.775-1	1.749-3	2.248-0	4.932-2	1.545-1	1.842-1	1.842-1	8.471-0	2.068-1		
2.500-1	8.270-1	6.265-2	1.913-1	1.119-3	1.090-0	3.879-2	1.720-1	2.343-1	2.343-1	1.219-1	2.833-1		
3.000-1	7.818-1	6.628-2	2.023-1	7.770-4	1.637-0	3.188-2	1.856-1	2.845-1	2.845-1	1.618-1	3.639-1		
3.500-1	7.509-1	6.900-2	2.107-1	5.709-4	1.448-0	2.701-2	1.959-1	3.348-1	3.348-1	2.032-1	4.456-1		
4.000-1	7.240-1	7.157-2	2.185-1	4.371-4	1.301-0	2.339-2	2.052-1	3.847-1	3.847-1	2.463-1	5.313-1		
4.500-1	6.982-1	7.421-2	2.268-1	3.494-4	1.183-0	2.061-2	2.145-1	4.348-1	4.348-1	2.904-1	6.228-1		
5.000-1	6.732-1	7.629-2	2.329-1	2.797-4	1.086-0	1.840-2	2.219-1	4.849-1	4.849-1	3.353-1	7.139-1		
5.500-1	6.484-1	7.775-2	2.373-1	2.318-4	1.004-0	1.661-2	2.271-1	5.349-1	5.349-1	3.810-1	8.027-1		
6.000-1	6.248-1	7.913-2	2.416-1	1.942-4	9.356-1	1.512-2	2.321-1	5.850-1	5.850-1	4.271-1	8.934-1		
6.500-1	6.041-1	8.044-2	2.456-1	1.695-4	8.757-1	1.388-2	2.367-1	6.350-1	6.350-1	4.737-1	9.859-1		
7.000-1	6.342-1	8.170-2	2.494-1	1.427-4	8.238-1	1.281-2	2.410-1	6.851-1	6.851-1	5.207-1	1.080-2		
8.000-1	6.104-1	8.405-2	2.586-1	1.093-4	7.378-1	1.110-2	2.491-1	7.852-1	7.852-1	6.156-1	1.274-2		
1.000-2	5.872-1	8.624-2	2.694-1	8.993-5	6.124-1	8.729-3	2.632-1	9.053-1	9.053-1	6.060-1	1.678-2		

12/07/78

Form Factors

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$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT	$\sin(\theta/2)/\lambda$	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
0.000-0	1.000-0	0.000-0	1.250-1	9.163-1	0.003-2	1.000-0	3.300-1	5.000-1	1.000-1	1.973-2	9.790-1
5.000-3	9.995-1	2.000-4	1.500-1	8.913-1	9.701-2	1.250-0	2.700-1	5.000-1	1.500-1	1.461-2	9.901-1
1.000-2	9.990-1	1.100-3	1.750-1	8.660-1	1.149-1	1.500-0	2.200-1	5.000-1	1.000-1	1.000-2	9.981-1
1.500-2	9.983-1	2.510-3	2.000-1	8.400-1	1.321-1	2.000-0	1.700-1	7.100-1	5.000-1	1.400-3	1.000-0
2.000-2	9.970-1	4.400-3	2.500-1	7.937-1	1.800-1	2.500-0	1.410-1	7.700-1	8.000-1	3.970-4	1.000-0
2.500-2	9.953-1	8.700-3	3.000-1	7.470-1	1.303-1	3.000-0	1.137-1	8.211-1	1.000-2	2.000-4	1.000-0
3.000-2	9.933-1	9.500-3	4.000-1	6.805-1	2.900-1	3.500-0	8.997-2	8.510-1	1.000-3	3.000-5	1.000-0
4.000-2	9.883-1	1.000-2	5.000-1	5.800-1	3.130-1	4.000-0	7.600-2	8.753-1	1.000-6	2.510-15	1.000-0
5.000-2	9.800-1	2.353-2	6.000-1	5.235-1	3.603-1	5.000-0	5.000-2	9.100-1	1.000-9	2.230-23	1.000-0
7.000-2	9.670-1	3.990-2	7.000-1	4.670-1	4.003-1	6.000-0	4.615-2	9.351-1			
9.000-2	9.497-1	5.533-2	8.000-1	4.187-1	4.381-1	7.000-0	3.000-2	9.510-1			
1.000-1	9.400-1	8.200-2	9.000-1	3.750-1	4.000-1	8.000-0	3.000-2	9.620-1

12/01/78

ENDL Evaluated Photon Cross Sections

75-Re

12/07/78

ENDL Evaluated Photon Data

75-Re

ATOMIC WEIGHT 100.0							DENSITY 81.0% GRAF/CC					
ENERGY		TOTAL NFP		CROSS SECTION (BARN)				REV/COLLISION			REV/CM	
KEV	CH	CH/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOL PAIR PROD	K.E. - FLOE	K.E. - BREMS/1A	K.E. -	K.E.		
1.998-4	5.298-8	9.971-3	2.770-6	3.730-3	1.767-2	2.770-6	9.987-9	9.987-9	4.875-10	1.885-1	1.885-1	
1.999-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	1.849-4	1.849-4	7.310-10	3.293-1	3.293-1	
1.999-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	1.499-4	1.499-4	1.053-9	6.940-1	6.940-1	
1.999-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	1.769-4	1.769-4	1.434-9	6.381-1	6.381-1	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	1.999-4	1.999-4	1.673-9	7.085-1	7.085-1	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	2.499-4	2.499-4	2.920-9	9.915-1	9.915-1	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	2.897-4	2.897-4	3.295-9	9.978-1	9.978-1	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	2.881-4	2.881-4	3.313-9	1.080-2	1.080-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	2.999-4	2.999-4	4.213-9	1.080-2	1.080-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	3.497-4	3.497-4	5.733-9	2.119-2	2.119-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	3.999-4	3.999-4	7.467-9	1.148-2	1.148-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	4.499-4	4.499-4	9.947-9	1.132-2	1.132-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	4.677-4	4.677-4	1.025-8	1.120-2	1.120-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	4.891-4	4.891-4	1.032-8	1.227-2	1.227-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	5.099-4	5.099-4	1.169-8	1.245-2	1.245-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	5.499-4	5.499-4	1.415-8	1.202-2	1.202-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	5.999-4	5.999-4	1.863-8	1.189-2	1.189-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	6.234-4	6.234-4	1.882-8	1.143-2	1.143-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	6.249-4	6.249-4	1.830-8	1.216-2	1.216-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	6.491-4	6.491-4	1.975-8	1.187-2	1.187-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	6.999-4	6.999-4	2.290-8	1.129-2	1.129-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	7.999-4	7.999-4	2.998-8	1.020-2	1.020-2	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	8.979-4	8.979-4	3.779-8	9.370-1	9.370-1	
2.000-4	5.299-8	9.972-3	2.770-6	3.730-3	1.767-2	2.770-6	9.977-4	9.977-4	4.885-8	1.040-2	1.040-2	
1.250-3	1.620-5	2.934-3	9.071-5	3.498-3	1.771-4	9.036-5	1.245-3	1.245-3	7.267-8	7.888-1	7.888-1	
1.500-3	2.483-5	1.914-3	5.917-5	3.430-3	2.276-4	5.883-5	1.491-3	1.491-3	1.042-7	6.005-1	6.005-1	
1.750-3	3.981-5	1.375-3	4.127-5	3.338-3	2.734-4	4.094-5	1.736-3	1.736-3	1.412-7	4.875-1	4.875-1	
1.992-3	4.219-5	1.126-3	3.463-5	3.296-3	2.980-4	3.450-5	1.884-3	1.884-3	1.629-7	4.418-1	4.418-1	
1.993-3	1.391-5	3.416-3	1.056-6	3.295-3	2.982-4	1.053-6	1.877-3	1.877-3	1.618-7	1.325-2	1.325-2	
1.994-3	1.521-5	3.125-3	9.863-5	3.276-3	3.104-4	9.830-5	1.941-3	1.941-3	1.730-7	1.263-2	1.263-2	
1.995-3	1.079-5	4.406-3	1.362-6	3.276-3	3.106-4	1.359-6	1.944-3	1.944-3	1.735-7	1.784-2	1.784-2	
2.000-3	1.194-5	4.118-3	1.273-6	3.261-3	3.203-4	1.270-6	1.995-3	1.975-3	1.628-7	1.711-2	1.711-2	
2.366-3	1.791-5	2.853-3	8.204-5	3.116-3	3.846-4	8.173-5	2.357-3	2.337-3	2.560-7	1.305-2	1.305-2	
2.367-3	1.352-5	3.516-3	1.087-6	3.116-3	3.848-4	1.084-6	2.380-3	2.340-3	2.566-7	1.731-2	1.731-2	
2.500-2	1.560-5	3.047-3	9.422-5	3.070-3	4.084-4	9.391-5	2.492-3	2.472-3	2.863-7	1.585-2	1.585-2	
2.680-2	1.671-5	2.541-3	7.655-5	3.013-3	4.405-4	7.625-5	2.670-3	2.650-3	3.290-7	1.416-2	1.416-2	
2.681-2	1.658-5	2.866-3	8.861-5	3.013-3	4.407-4	8.831-5	2.672-3	2.652-3	3.296-7	1.599-2	1.599-2	
2.930-2	2.092-5	2.272-3	7.024-5	2.942-3	4.854-4	6.995-5	2.918-3	2.898-3	3.935-7	1.395-2	1.395-2	
2.931-2	1.940-5	2.450-3	7.576-5	2.941-3	4.856-4	7.547-5	2.920-3	2.899-3	3.940-7	1.495-2	1.495-2	
3.000-2	2.061-5	2.306-3	7.129-5	2.923-3	4.860-4	7.100-5	2.988-3	2.968-3	4.127-7	1.440-2	1.440-2	
3.500-2	3.084-5	1.541-3	4.785-5	2.750-3	5.831-4	4.739-5	3.480-3	3.460-3	5.610-7	1.122-2	1.122-2	
4.000-2	4.370-5	1.068-3	3.363-5	2.609-3	6.684-4	3.337-5	3.969-3	3.949-3	7.308-7	9.037-1	9.037-1	
4.500-2	5.939-5	8.003-2	2.474-5	2.458-3	7.498-4	2.450-5	4.455-3	4.435-3	9.219-7	7.468-1	7.468-1	
5.000-2	7.811-5	5.685-2	1.881-5	2.327-3	8.309-4	1.858-5	4.938-3	4.918-3	1.133-6	6.296-1	6.296-1	
5.500-2	1.001-4	4.750-2	1.469-5	2.196-3	9.079-4	1.447-5	5.417-3	5.397-3	1.365-6	5.394-1	5.394-1	
6.000-2	1.254-4	3.790-2	1.172-5	2.083-3	9.845-4	1.151-5	5.893-3	5.873-3	1.616-6	4.684-1	4.684-1	
6.500-2	1.542-4	3.081-2	9.527-4	1.964-3	1.054-4	9.330-4	6.365-3	6.345-3	1.867-6	4.114-1	4.114-1	
7.000-2	1.868-4	2.545-2	7.868-4	1.860-3	1.122-4	7.881-4	6.834-3	6.814-3	2.176-6	3.648-1	3.648-1	
8.000-2	2.633-4	1.805-2	5.581-4	1.687-3	1.257-4	5.411-4	7.756-3	7.737-3	2.805-6	8.938-1	8.938-1	
1.000-2	4.681-4	1.020-2	3.153-4	1.386-3	1.485-4	3.013-4	9.556-3	9.537-3	4.261-6	2.046-1	2.046-1	
1.053-2	5.321-4	8.932-1	2.762-4	1.310-3	1.536-4	2.629-4	1.003-2	1.001-2	4.693-6	1.881-1	1.881-1	
1.053-2	2.051-4	2.317-2	7.165-4	1.310-3	1.536-4	7.032-4	1.034-2	1.012-2	3.084-6	3.995-1	3.995-1	
1.196-2	2.866-4	1.658-2	5.127-4	1.143-3	1.686-4	5.011-4	1.189-2	1.168-2	4.200-6	3.303-1	3.303-1	
1.196-2	2.047-4	2.322-2	7.179-4	1.143-3	1.686-4	7.063-4	1.176-2	1.155-2	4.257-6	4.356-1	4.356-1	
1.250-2	2.303-4	2.064-2	6.382-4	1.069-3	1.714-4	6.271-4	1.228-2	1.205-2	4.736-6	4.356-1	4.356-1	
1.252-2	2.314-4	2.054-2	6.349-4	1.087-3	1.712-4	6.239-4	1.231-2	1.208-2	4.758-6	4.354-1	4.354-1	
1.252-2	2.000-4	2.376-2	7.346-4	1.087-3	1.716-4	7.236-4	1.234-2	1.210-2	4.781-6	5.050-1	5.050-1	
1.500-2	3.226-4	1.472-2	4.552-4	8.949-2	1.927-4	4.461-4	1.470-2	1.448-2	7.292-6	3.866-1	3.866-1	
1.750-2	4.860-4	9.780-1	3.024-4	7.397-2	2.097-4	2.948-4	1.706-2	1.685-2	1.033-5	3.055-1	3.055-1	
2.000-2	6.919-4	6.889-1	2.124-4	8.273-2	2.256-4	2.059-4	1.939-2	1.719-2	1.384-5	2.484-1	2.484-1	
2.500-2	1.249-3	3.807-1	1.177-4	4.670-2	2.489-4	1.128-4	2.396-2	2.178-2	2.222-5	1.745-1	1.745-1	
3.000-2	2.016-3	2.358-1	7.290-3	3.870-2	2.637-4	6.896-3	2.839-2	2.624-2	3.223-5	1.302-1	1.302-1	
3.500-2	3.021-3	1.573-1	4.865-3	2.931-2	2.826-4	4.543-3	3.270-2	3.058-2	4.378-5	1.012-1	1.012-1	

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75-Re

12/07/78

ENDL Evaluated Photon Data

75-Re

ATOMIC WEIGHT 186.2												DENSITY 21.04 GRAMS/CC			
ENERGY		TOTAL NFP			CROSS SECTION (BARNES)							NEUT/COLLISION			NEUT/CM
MEV		CM	CM/CH/CM		TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD		K.E./FLOR	K.E.	BREMSSTR	K.E.	
4.000	2	4.277	3	1.111	3.438	2	2.413	2	2.843	1	3.185	3	3.887	2	8.132
4.500	2	5.610	3	8.181	2.528	3	2.804	2	3.014	1	2.898	3	4.094	2	8.092
5.000	2	7.894	3	8.234	1.877	3	1.897	2	3.078	1	1.727	3	4.487	2	5.619
5.500	2	8.734	3	4.883	1.510	3	1.457	2	3.117	1	1.333	3	4.867	2	4.784
6.000	2	1.214	2	3.914	1.210	3	1.267	2	3.153	1	1.052	3	5.232	2	4.146
6.500	2	1.487	2	3.197	9.888	2	1.110	2	3.187	1	0.598	2	5.985	2	3.828
7.000	2	1.788	2	2.888	8.212	2	9.815	1	3.180	1	6.912	2	5.823	2	3.803
7.187	2	1.898	2	2.504	7.744	2	9.442	1	3.184	1	6.481	2	6.034	2	3.079
7.188	2	4.548	3	1.045	3.230	3	9.441	1	3.184	1	3.104	3	6.888	2	4.894
8.000	2	5.883	3	8.088	2.494	3	7.871	1	3.203	1	2.383	3	7.888	2	4.981
1.000	1	1.017	2	4.872	1.445	3	5.357	1	3.184	1	1.559	3	9.441	2	4.898
1.250	1	1.788	2	2.844	8.174	2	3.800	1	3.088	1	7.504	2	1.158	1	3.888
1.500	1	2.838	2	1.878	5.182	2	2.987	1	3.032	1	4.818	2	1.394	1	3.217
1.750	1	4.178	2	1.138	3.917	2	1.988	1	2.935	1	3.027	2	1.537	1	2.857
2.000	1	5.788	2	8.211	2.538	2	1.944	1	2.855	1	2.098	2	1.704	1	2.237
2.500	1	9.714	2	4.883	1.813	2	1.021	1	2.888	1	1.143	2	2.000	1	1.874
3.000	1	1.437	1	3.388	1.023	2	7.883	0	2.948	1	8.951	1	2.248	1	1.328
3.500	1	1.933	1	2.938	7.803	1	5.438	0	2.420	1	4.638	1	2.487	1	1.120
4.000	1	2.448	1	1.842	6.003	1	4.220	0	2.313	1	3.888	1	2.885	1	9.785
4.500	1	2.947	1	1.813	4.887	1	3.388	0	2.213	1	2.437	1	2.882	1	8.893
5.000	1	3.438	1	1.383	4.277	1	2.748	0	2.127	1	1.878	1	3.055	1	8.258
5.500	1	3.883	1	1.221	3.775	1	2.288	0	2.047	1	1.488	1	3.258	1	7.883
6.000	1	4.333	1	1.087	3.382	1	1.832	0	1.878	1	1.888	1	3.484	1	7.582
6.500	1	4.783	1	1.024	3.184	1	1.853	0	1.888	1	1.888	1	3.687	1	7.441
7.000	1	5.188	1	0.883	2.870	1	1.431	0	1.888	1	8.788	0	3.815	1	7.351
8.000	1	5.843	1	8.134	2.515	1	1.103	0	1.748	1	8.887	0	4.388	1	7.287
1.000	0	7.088	1	8.784	2.878	1	7.118	1	1.873	1	4.343	0	5.443	1	7.953
1.082	0	7.188	1	8.805	2.848	1	8.880	1	1.887	1	4.171	0	5.882	1	7.980
1.250	0	8.432	1	5.838	1.743	1	4.885	1	1.410	1	2.887	0	6.838	1	8.014
1.500	0	8.485	1	5.094	1.883	1	3.187	1	1.883	1	2.848	0	8.210	1	8.881
1.750	0	1.015	0	4.881	1.447	1	2.384	1	1.181	1	1.821	0	9.188	1	9.488
2.000	0	1.878	0	4.433	1.371	1	1.885	1	1.088	1	1.188	8	1.124	0	1.044
2.044	0	1.888	0	4.384	1.388	1	1.788	1	1.083	1	1.188	8	1.153	0	1.082
2.580	0	1.142	0	4.183	1.287	1	1.187	1	0.838	0	8.288	1	1.488	0	1.284
3.080	0	1.188	0	4.888	1.288	1	8.848	2	8.838	0	8.288	1	1.848	0	1.381
3.580	0	1.188	0	4.882	1.248	1	8.817	2	7.848	0	8.818	1	2.257	0	1.311
4.080	0	1.178	0	4.838	1.248	1	4.832	2	7.888	0	4.135	1	2.887	0	2.878
4.580	0	1.187	0	4.871	1.288	1	3.882	2	8.878	0	3.474	1	3.848	0	2.878
5.080	0	1.157	0	4.184	1.278	1	2.882	2	8.828	0	2.888	1	4.348	0	3.087
5.580	0	1.182	0	4.124	1.278	1	2.482	2	5.838	0	2.851	1	4.848	0	3.888
6.080	0	1.144	0	4.188	1.288	1	2.818	2	5.883	0	2.378	1	5.388	0	3.845
6.580	0	1.132	0	4.284	1.288	1	1.718	2	5.288	0	2.137	1	5.888	0	4.407
7.080	0	1.117	0	4.294	1.315	1	1.482	2	4.948	0	1.842	1	6.381	0	4.884
8.080	0	1.884	0	4.385	1.388	1	1.135	2	4.882	0	1.835	1	6.881	0	5.841
1.080	1	1.818	0	4.784	1.494	1	7.882	3	3.838	1	1.888	1	8.418	0	8.330
1.280	1	3.948	1	4.878	1.538	1	4.888	3	3.294	0	8.832	2	1.088	1	1.142
1.580	1	9.813	1	5.275	1.634	1	3.888	3	2.838	0	7.812	2	1.348	1	1.487
1.780	1	8.882	1	5.381	1.788	1	2.372	3	2.828	0	8.888	2	1.581	1	1.872
2.080	1	8.882	1	5.872	1.815	1	1.818	3	2.878	0	8.888	2	1.842	1	2.878
2.380	1	7.888	1	6.338	1.887	1	1.182	3	1.818	0	4.888	2	2.344	1	3.182
3.080	1	7.887	1	6.887	2.871	1	8.888	1	1.888	0	3.745	2	2.845	1	4.888
3.580	1	8.818	1	8.873	2.188	1	9.888	1	1.487	0	3.171	2	3.348	1	4.888
4.080	1	8.872	1	7.832	2.282	1	4.944	1	1.318	0	2.742	2	3.847	1	5.884
4.580	1	8.337	1	7.888	2.318	1	3.887	1	1.188	0	2.418	2	4.348	1	6.882
5.080	1	8.188	1	7.718	2.384	1	2.888	1	1.188	0	2.182	2	4.848	1	7.888
5.580	1	8.848	1	7.887	2.488	1	2.481	1	1.018	0	1.847	2	5.388	1	8.844
6.080	1	8.943	1	7.887	2.733	1	2.817	1	0.982	1	1.772	2	5.888	1	9.844
6.580	1	8.948	1	8.132	2.814	1	1.718	1	0.878	1	1.888	2	6.381	1	7.888
7.080	1	8.788	1	8.282	2.883	1	1.482	1	0.848	1	1.881	2	6.881	1	1.188
8.080	1	8.384	1	8.488	2.887	1	1.134	1	0.748	1	1.888	2	7.882	1	1.484
1.080	2	8.388	1	8.821	2.788	1	7.883	1	0.847	1	1.887	2	8.884	1	1.888

12/07/78

Form Factors

75-Re

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	9.173-1	7.927-2	1.000+0	3.421-1	4.981-1	1.000+1	1.988-2	9.794-1
5.000-3	9.995-1	2.687-4	1.500-1	8.926-1	9.625-2	1.250+0	2.718-1	5.863-1	1.500+1	1.487-2	9.999-1
1.000-2	9.990-1	1.080-3	1.750-1	8.679-1	1.130-1	1.500+0	2.289-1	6.253-1	2.000+1	1.036-2	9.999-1
1.500-2	9.983-1	2.396-3	2.000-1	8.422-1	1.299-1	2.000+0	1.798-1	7.185-1	5.000+1	1.528-3	1.000+0
2.000-2	9.971-1	4.204-3	2.500-1	7.938-1	1.630-1	2.500+0	1.424-1	7.775-1	8.000+1	4.182-4	1.000+0
2.500-2	9.954-1	6.480-3	3.000-1	7.487-1	1.951-1	3.000+0	1.146-1	8.194-1	1.000+2	2.204-4	1.000+0
3.000-2	9.935-1	9.116-3	4.000-1	6.807-1	2.562-1	3.500+0	8.803-2	8.501-1	1.000+3	3.290-7	1.000+0
4.000-2	9.886-1	1.542-2	5.000-1	5.878-1	3.115-1	4.000+0	7.883-2	8.739-1	1.000+6	2.938-15	1.000+0
5.000-2	9.829-1	2.287-2	6.000-1	5.293-1	3.589-1	5.000+0	5.682-2	9.093-1	1.000+9	2.793-23	1.000+0
7.000-2	9.683-1	3.842-2	7.000-1	4.708-1	3.993-1	6.000+0	4.637-2	9.340-1			
9.000-2	9.507-1	5.406-2	8.000-1	4.220-1	4.350-1	7.000+0	3.700-2	9.510-1			
1.000-1	9.417-1	8.153-2	9.000-1	3.793-1	4.677-1	8.000+0	3.79-2	9.623-1

12/07/78

ENDL Evaluated Photon Cross Sections

76-09

12/07/78

Energy Deposition

76-0s

12/07/78

ENDL Evaluated Photon Data

76-0s

ATOMIC WEIGHT 190.2										DENSITY 22.57 GRAMS/CC			
ENERGY MEV	TOTAL NFP			CROSS SECTION (BARN)						NEV/COLLISION			K.E.
	CH	CH/CH/ON		TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD		K.E. FLOR	K.E.	BREMSSTR	
1.000	6.074	6	7.294	2.304	3.639	1.713	2.300	0	9.983	9.983	4.734-10	1.044	1
1.250	4.391	6	1.009	3.167	3.639	2.698	2.183	0	1.248	1.248	7.404-10	2.843	1
1.500	4.148	6	1.086	3.374	3.639	2.878	3.370	0	1.299	1.299	6.009-10	3.131	1
1.750	3.353	6	1.325	4.174	3.637	3.608	4.170	0	1.488	1.488	1.087-9	4.470	1
2.000	2.985	6	1.515	4.704	3.635	5.180	4.700	0	1.748	1.748	1.452-9	5.978	1
2.250	2.598	6	1.705	5.304	3.634	6.718	5.300	0	1.999	1.999	1.897-9	7.089	1
2.500	2.432	6	1.883	5.318	3.633	1.039	5.313	0	2.458	2.458	2.884-9	8.481	1
2.750	2.548	6	1.873	5.294	3.627	1.288	5.290	0	2.785	2.785	3.884-9	1.052	2
3.000	2.438	6	1.781	5.054	3.627	1.288	5.050	0	2.789	2.789	3.722-9	1.125	2
3.250	2.628	6	1.686	5.324	3.626	1.485	5.320	0	2.998	2.998	4.289-9	1.141	2
3.500	2.942	6	1.508	4.758	3.619	1.988	4.752	0	3.497	3.497	5.809-9	1.189	2
4.000	3.244	6	1.388	4.314	3.614	2.580	4.310	0	3.998	3.998	7.788-9	1.232	2
4.500	3.692	6	1.200	3.780	3.608	3.217	3.788	0	4.495	4.495	9.999-9	1.218	2
4.750	4.087	6	1.084	3.424	3.799	3.826	3.420	0	4.931	4.931	1.125-8	1.208	2
4.998	3.778	6	1.173	3.704	3.799	3.848	3.700	0	4.945	4.945	1.181-8	1.309	2
5.000	3.748	6	1.182	3.734	3.799	3.818	3.730	0	4.995	4.995	1.185-8	1.333	2
5.500	4.221	6	1.098	3.315	3.799	4.080	3.310	0	5.484	5.484	1.434-8	1.301	2
6.000	4.788	6	0.918	2.874	3.791	5.428	2.870	0	5.988	5.988	1.708-8	1.273	2
6.500	5.290	6	0.775	2.848	3.788	6.287	2.841	0	6.481	6.481	2.001-8	1.277	2
6.538	5.333	6	0.307	2.824	3.788	6.327	2.820	0	6.527	6.527	2.023-8	1.284	2
6.750	5.027	6	0.614	2.767	3.787	6.750	2.760	0	6.941	6.941	2.032-8	1.301	2
7.000	5.634	6	7.084	2.484	3.787	7.122	2.480	0	6.989	6.989	2.220-8	1.241	2
8.000	7.019	6	0.313	1.884	3.737	8.089	1.880	0	7.985	7.985	3.088-8	1.138	2
9.000	6.618	6	0.141	1.884	3.789	1.082	1.880	0	8.978	8.978	3.830-8	1.042	2
1.000	6.781	6	0.948	1.994	3.694	1.891	1.990	0	9.977	9.977	4.739-8	1.138	2
1.250	1.439	5	3.880	9.788	3.988	1.780	9.888	0	1.245	1.245	7.387-8	0.888	1
1.500	2.152	5	2.888	8.501	3.978	2.289	8.488	0	1.482	1.482	1.057-7	0.931	1
1.750	3.025	5	1.485	4.827	3.495	2.782	4.922	0	1.737	1.737	1.433-7	5.743	1
1.998	3.878	5	1.143	3.988	3.387	3.119	3.878	0	1.941	1.941	1.789-7	5.008	1
1.998	1.138	5	3.288	1.811	3.387	3.121	1.808	0	1.983	1.983	1.787-7	1.384	2
2.000	1.468	5	3.638	1.888	3.388	3.188	1.888	0	1.983	1.983	1.840-7	1.388	2
2.030	1.817	5	2.888	9.287	3.348	3.281	9.184	0	2.023	2.023	1.988-7	1.317	2
2.031	1.875	5	4.120	1.301	3.341	3.283	1.298	0	2.028	2.028	1.988-7	1.301	2
2.498	1.770	5	2.803	7.888	3.174	4.609	7.873	0	2.448	2.448	2.799-7	1.388	2
2.497	1.338	5	3.318	1.847	3.174	4.611	1.844	0	2.448	2.448	2.799-7	1.814	2
2.998	1.388	5	3.188	1.881	3.188	4.688	9.874	0	2.482	2.482	2.881-7	1.784	2
2.791	1.988	5	2.374	7.488	3.088	4.615	7.487	0	2.788	2.788	3.804-7	1.478	2
2.792	1.888	5	2.678	6.488	3.088	4.618	6.427	0	2.788	2.787	3.818-7	1.888	2
3.000	1.988	5	2.218	7.888	3.087	4.688	6.875	0	2.987	2.982	4.188-7	1.483	2
3.049	2.884	5	2.188	6.714	2.887	4.688	6.884	0	3.035	3.011	4.388-7	1.444	2
3.098	1.938	5	2.283	7.248	2.887	4.688	7.212	0	3.037	3.013	4.318-7	1.988	2
3.388	2.772	5	1.999	8.948	2.886	4.883	5.821	0	3.480	3.498	5.871-7	1.247	2
4.088	3.831	5	1.177	3.988	2.882	6.713	3.933	0	3.978	3.945	7.381-7	1.884	2
4.988	5.348	5	0.288	2.817	2.325	7.528	2.801	0	4.488	4.432	9.287-7	0.287	1
5.088	7.038	5	0.288	1.388	2.328	6.348	1.388	0	4.948	4.815	1.147-6	0.288	1
5.988	9.821	5	0.318	1.981	2.237	9.188	1.988	0	5.488	5.393	1.388-6	5.881	1
6.088	1.131	4	3.818	2.238	2.141	9.888	1.218	0	5.988	5.871	1.637-6	5.188	1
6.988	1.388	4	3.183	2.188	2.619	1.888	0.948	0	6.388	6.344	1.811-6	0.937	1
7.088	1.887	4	2.887	0.288	1.913	1.138	0.183	0	6.878	6.813	2.284-6	0.638	1
8.088	2.382	4	1.888	2.678	1.738	1.887	1.781	0	7.782	7.738	2.843-6	3.248	1
1.000	4.323	3	1.048	2.313	1.488	1.488	3.188	0	8.985	9.941	4.282-6	2.298	1
1.007	2.322	3	0.473	1.878	1.388	1.981	2.944	0	1.033	1.031	5.948-6	1.978	1
1.007	2.138	3	2.888	0.388	1.388	1.981	0.438	0	1.035	0.288	3.283-6	3.881	1
1.238	2.988	3	1.884	0.713	1.138	1.718	0.883	0	1.288	0.778	4.493-6	3.284	1
1.238	2.118	3	2.884	0.884	1.138	1.718	0.488	0	1.217	0.798	4.798-6	0.884	1
1.238	2.178	3	2.942	0.448	1.123	1.738	0.334	0	1.284	0.918	4.883-6	0.387	1
1.238	2.384	3	1.888	5.878	1.088	1.778	0.788	0	1.272	1.638	5.898-6	0.948	1
1.238	2.888	3	2.182	0.788	1.082	1.771	0.888	0	1.275	1.938	5.117-6	5.943	1
1.238	2.488	3	0.674	0.674	0.288	1.844	0.288	0	1.478	1.233	7.888-6	1.237	1
1.788	0.488	3	0.881	2.138	7.848	2.115	3.888	0	1.788	1.471	1.827-5	3.287	1
2.000	0.297	3	7.838	2.288	0.484	2.278	0.198	0	1.948	1.788	1.381-5	2.788	1
2.388	1.188	3	3.888	1.241	0.888	2.511	1.188	0	2.388	2.187	2.888-5	1.881	1
3.088	1.618	3	0.447	7.788	3.784	2.781	7.323	0	2.843	2.614	3.843-5	1.444	1

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Form Factors

76-0s

SIN(Θ/2)/λ COHERENT		INCOHERENT	SIN(Θ/2)/λ COHERENT		INCOHERENT	SIN(Θ/2)/λ COHERENT		INCOHERENT	SIN(Θ/2)/λ COHERENT		INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	9.186-1	7.825-2	1.000+0	3.453-1	4.983-1	1.000+1	2.006-2	9.751-1
5.000-3	9.995-1	2.832-4	1.500-1	8.933-1	9.532-2	1.250+0	2.738-1	5.837-1	1.500+1	1.472-2	9.898-1
1.000-2	9.980-1	1.086-3	1.750-1	8.689-1	1.121-1	1.500+0	2.488-1	8.219-1	2.000+1	1.048-2	9.928-1
1.500-2	9.964-1	2.291-3	2.000-1	8.432-1	1.068-1	2.000+0	1.786-1	7.133-1	5.000+1	1.387-3	1.000+0
2.000-2	9.972-1	4.021-3	2.500-1	7.938-1	1.818-1	2.500+0	1.432-1	7.751-1	8.000+1	4.401-4	1.000+0
2.500-2	9.956-1	8.184-3	3.000-1	7.488-1	1.938-1	3.000+0	1.135-1	8.178-1	1.000+2	2.330-4	1.000+0
3.000-2	9.937-1	8.737-3	4.000-1	6.807-1	2.942-1	3.500+0	8.773-2	8.488-1	1.000+3	3.588-7	1.000+0
4.000-2	9.880-1	1.482-2	5.000-1	5.885-1	3.086-1	4.000+0	7.744-2	8.728-1	1.000+6	3.437-15	1.000+0
5.000-2	9.833-1	2.188-2	6.000-1	5.270-1	3.576-1	5.000+0	5.885-2	9.081-1	1.000+9	3.494-23	1.000+0
7.000-2	9.888-1	3.733-2	7.000-1	4.730-1	3.983-1	6.000+0	4.856-2	9.329-1			
9.000-2	9.518-1	5.290-2	8.000-1	4.251-1	4.340-1	7.000+0	3.737-2	9.501-1			
1.000-1	9.428-1	8.059-2	9.000-1	3.828-1	4.683-1	8.000+0	3.180-2	9.618-1

12/07/78

ENDL Evaluated Photon Cross Sections

77-Ir

12/07/78

Energy Deposition

77-Ir

12/07/78

ENDL Evaluated Photon Data

77-Ir

ATOMIC WEIGHT 192.2										DENSITY 22.5 GRAMS/CC			
ENERGY KEV	TOTAL NFP			CROSS SECTION (BARNS)						KEV/COLLISION			KEV/CM
	CH	CH+CH/CM		TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD		K.E. +FLOR	K.E.	SPINSTR	
1.000-4	6.878-6	6.825-3	2.124-6	3.941-3	1.849-2	2.120-6				9.981-5	9.981-5	4.795-10	1.495-1
1.250-4	5.808-6	7.625-3	2.443-6	3.940-3	2.570-2	2.439-6				1.248-4	1.248-4	7.495-10	2.149-1
1.500-4	5.885-6	7.646-3	2.504-6	3.940-3	2.778-2	2.500-6				1.298-4	1.298-4	8.108-10	2.291-1
1.750-4	4.267-6	1.041-4	3.324-6	3.939-3	3.693-2	3.320-6				1.498-4	1.498-4	1.008-9	3.511-1
1.750-4	3.442-6	1.291-4	4.121-6	3.937-3	5.005-2	4.117-6				1.748-4	1.748-4	1.471-9	5.079-1
2.000-4	2.638-6	1.555-4	4.984-6	3.936-3	6.513-2	4.980-6				1.998-4	1.998-4	1.922-9	6.993-1
2.500-4	2.787-6	1.555-4	5.089-6	3.932-3	1.008-1	5.085-6				2.498-4	2.498-4	3.003-9	8.993-1
3.000-4	2.731-6	1.627-4	5.194-6	3.928-3	1.441-1	5.190-6				2.998-4	2.998-4	4.325-9	1.098-2
3.000-4	2.736-6	1.624-4	5.194-6	3.928-3	1.449-1	5.180-6				3.008-4	3.008-4	4.348-9	1.098-2
3.022-4	2.577-6	1.725-4	5.504-6	3.927-3	1.482-1	5.500-6				3.020-4	3.020-4	4.389-9	1.172-2
3.500-4	2.653-6	1.558-4	4.972-6	3.921-3	1.939-1	4.969-6				3.497-4	3.497-4	5.888-9	1.228-2
4.000-4	3.129-6	1.421-4	4.534-6	3.916-3	2.507-1	4.530-6				3.997-4	3.997-4	7.087-9	1.277-2
4.500-4	3.537-6	1.257-4	4.011-6	3.908-3	3.128-1	4.007-6				4.498-4	4.498-4	9.728-9	1.271-2
5.000-4	3.947-6	1.128-4	3.594-6	3.901-3	3.814-1	3.990-6				4.999-4	4.999-4	1.200-8	1.265-2
5.212-4	4.125-6	1.070-4	3.414-6	3.897-3	4.114-1	3.410-6				5.208-4	5.208-4	1.304-8	1.253-2
5.226-4	3.950-6	1.154-4	3.884-6	3.896-3	4.134-1	3.880-6				5.220-4	5.220-4	1.312-8	1.326-2
5.500-4	4.029-6	1.082-4	3.488-6	3.891-3	4.539-1	3.482-6				5.494-4	5.494-4	1.452-8	1.350-2
6.000-4	4.408-6	9.945-3	3.174-6	3.883-3	5.321-1	3.170-6				5.993-4	5.993-4	1.728-8	1.341-2
6.500-4	5.032-6	8.833-3	2.818-6	3.870-3	6.118-1	2.815-6				6.491-4	6.491-4	2.028-8	1.290-2
6.894-4	5.480-6	8.088-3	2.584-6	3.861-3	6.775-1	2.580-6				6.884-4	6.884-4	2.280-8	1.254-2
6.908-4	5.170-6	8.597-3	2.744-6	3.861-3	6.789-1	2.740-6				6.898-4	6.898-4	2.290-8	1.334-2
7.800-4	5.325-6	8.347-3	2.884-6	3.856-3	6.957-1	2.880-6				6.990-4	6.990-4	2.351-8	1.313-2
8.000-4	6.847-6	8.888-3	2.134-6	3.839-3	6.778-1	2.130-6				7.988-4	7.988-4	3.089-8	1.201-2
9.000-4	8.134-6	8.444-3	1.744-6	3.811-3	1.081-1	1.740-6				8.980-4	8.980-4	3.881-8	1.104-2
1.000-3	8.380-6	5.417-3	1.887-6	3.788-3	1.288-1	1.883-6				9.978-4	9.978-4	4.781-8	1.184-2
1.050-3	1.437-6	3.118-3	9.944-3	3.888-3	1.788-1	9.943-6				1.845-3	1.845-3	7.485-8	6.730-1
1.500-3	2.208-6	2.015-3	8.430-3	3.879-3	2.240-1	8.394-6				4.426-3	4.426-3	1.071-7	6.788-1
1.750-3	3.187-6	1.288-3	4.481-3	3.533-3	2.707-1	4.415-6				1.732-3	1.732-3	1.450-7	5.448-1
2.000-3	4.380-6	1.015-3	3.838-3	3.452-3	3.180-1	3.204-6				1.878-3	1.878-3	1.884-7	4.518-1
2.040-3	4.981-6	1.088-3	3.088-3	3.433-3	3.881-1	3.076-6				2.017-3	2.017-3	1.988-7	4.384-1
2.041-3	1.441-6	3.088-3	9.841-3	3.433-3	3.888-1	9.811-6				2.034-3	2.031-3	1.988-7	1.388-2
2.115-3	1.983-6	2.888-3	6.988-3	3.400-3	3.394-1	6.988-6				2.107-3	2.074-3	2.070-7	1.318-2
2.118-3	1.129-6	3.837-3	1.288-3	3.400-3	3.388-1	1.273-6				2.110-3	2.077-3	2.078-7	1.848-2
2.980-3	1.794-6	2.034-3	8.687-3	3.390-3	4.688-1	8.693-6				2.490-3	2.457-3	2.905-7	1.401-2
2.984-3	1.848-6	2.407-3	7.883-3	3.233-3	4.178-1	7.891-6				2.938-3	2.905-3	3.080-7	1.787-2
2.990-3	1.385-6	3.819-3	1.084-3	3.232-3	4.180-1	1.021-6				2.942-3	2.909-3	3.089-7	1.818-2
2.998-3	1.898-6	2.849-3	7.842-3	3.118-3	4.838-1	7.811-6				2.895-3	2.882-3	3.943-7	1.481-2
2.998-3	1.738-6	2.981-3	6.189-3	3.118-3	4.844-1	6.130-6				2.898-3	2.885-3	3.949-7	1.898-2
3.000-3	1.683-6	2.388-3	7.532-3	3.093-3	5.889-1	7.581-6				2.888-3	2.895-3	4.201-7	1.588-2
3.171-3	2.188-6	2.038-3	6.587-3	3.083-3	5.385-1	6.577-6				3.158-3	3.183-3	4.884-7	1.433-2
3.172-3	2.821-6	2.188-3	7.818-3	3.083-3	5.388-1	7.808-6				3.180-3	3.185-3	4.700-7	1.947-2
3.988-3	2.828-6	1.887-3	5.415-3	2.989-3	5.874-1	5.388-6				3.481-3	3.448-3	5.721-7	1.318-2
4.088-3	3.744-6	1.183-3	3.888-3	2.798-3	6.743-1	3.781-6				3.971-3	3.938-3	7.448-7	1.897-2
4.588-3	5.877-6	8.794-3	2.794-3	2.988-3	7.987-1	2.788-6				4.438-3	4.425-3	9.442-7	8.718-1
5.088-3	6.888-6	6.838-3	2.119-3	2.498-3	8.388-1	6.894-6				4.942-3	4.988-3	1.159-6	7.384-1
5.588-3	8.988-6	5.178-3	1.888-3	2.389-3	9.173-1	1.887-6				5.442-3	5.598-3	1.388-6	6.278-1
6.088-3	1.679-6	4.117-3	1.314-3	2.288-3	9.982-1	1.282-6				5.888-3	5.887-3	1.888-6	5.435-1
6.588-3	1.338-6	3.348-3	1.888-3	2.878-3	1.887-1	1.845-6				6.373-3	6.348-3	1.934-6	4.785-1
7.088-3	1.814-6	2.794-3	6.788-3	1.887-3	1.137-1	6.998-6				6.842-3	6.818-3	2.231-6	4.218-1
8.088-3	2.883-6	1.984-3	6.212-3	1.889-3	1.278-1	8.038-6				7.788-3	7.738-3	2.879-6	3.388-1
1.000-2	4.888-6	1.883-3	2.488-3	1.711-3	1.512-1	1.348-6				9.574-3	9.542-3	4.388-6	2.347-1
1.181-2	5.488-6	8.188-3	1.388-3	1.388-3	1.888-1	1.488-6				1.088-2	1.081-2	5.418-6	1.844-1
1.181-2	2.387-6	1.888-3	6.818-3	1.388-3	1.888-1	5.888-6				1.087-2	9.887-3	3.488-6	3.881-1
1.288-2	3.888-6	1.483-3	4.833-3	1.188-3	1.748-1	4.518-6				1.218-2	9.788-3	4.578-6	3.174-1
1.288-2	2.282-6	1.387-3	4.388-3	1.128-3	1.774-1	1.247-6				1.248-2	1.081-2	4.888-6	3.879-1
1.288-2	2.388-6	1.812-3	6.188-3	1.128-3	1.774-1	5.887-6				1.288-2	1.088-2	4.988-6	4.381-1
1.342-2	2.887-6	1.711-3	5.481-3	1.078-3	1.887-1	5.388-6				1.318-2	1.087-2	5.473-6	4.187-1
1.342-2	2.248-6	1.878-3	6.318-3	1.078-3	1.887-1	6.287-6				1.318-2	1.078-2	5.384-6	4.784-1
1.388-2	2.848-6	1.887-3	6.811-3	9.887-2	2.883-1	4.713-6				1.478-2	1.281-2	7.178-6	4.181-1
1.788-2	2.138-6	1.884-3	3.278-3	7.887-2	2.134-1	3.188-6				1.787-2	1.498-2	1.084-6	3.383-1
2.088-2	6.888-6	7.388-3	1.248-3	6.888-2	2.248-1	2.273-6				1.841-2	1.899-2	1.381-6	2.788-1
2.388-2	1.877-6	4.188-3	1.317-3	4.888-2	2.333-1	1.284-6				2.481-2	2.157-2	2.277-6	2.883-1
3.088-2	1.718-6	2.888-3	8.788-3	3.313-2	2.748-1	7.811-6				2.848-2	2.887-2	3.287-6	1.518-1

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12/07/78

ENDL Evaluated Photon Data

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ATOMIC WEIGHT 192.2		DENSITY 22.5 GRAMS/CC						
ENERGY	TOTAL NFP	CROSS SECTION (BARNS)						
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	MEV/CM
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	MEV/CM
3.500 - 2	2.589 - 3	1.720 - 1	9.488 - 3	3.131 - 2	2.878 - 1	5.148 - 3	3.883 - 2	3.045 - 2
4.000 - 2	3.058 - 3	1.812 - 1	3.867 - 3	2.586 - 2	3.001 - 1	3.578 - 3	3.704 - 2	3.470 - 2
4.500 - 2	5.027 - 3	0.840 - 0	2.821 - 3	2.143 - 2	3.075 - 1	2.578 - 3	4.113 - 2	3.881 - 2
5.000 - 2	6.850 - 3	6.883 - 0	2.133 - 3	1.818 - 2	3.143 - 1	1.920 - 3	4.507 - 2	4.278 - 2
5.500 - 2	0.588 - 3	5.175 - 0	1.852 - 3	1.559 - 2	3.184 - 1	1.484 - 3	4.885 - 2	4.680 - 2
6.000 - 2	1.082 - 2	4.107 - 0	1.311 - 3	1.358 - 2	3.221 - 1	1.143 - 3	5.247 - 2	5.025 - 2
6.500 - 2	1.342 - 2	3.312 - 0	1.057 - 3	1.189 - 2	3.238 - 1	9.059 - 2	5.593 - 2	5.375 - 2
7.000 - 2	1.634 - 2	2.780 - 0	0.881 - 3	1.051 - 2	3.250 - 1	7.305 - 2	5.921 - 2	5.708 - 2
7.511 - 2	2.035 - 2	2.184 - 0	8.970 - 2	8.148 - 1	3.268 - 1	5.789 - 2	6.300 - 2	6.091 - 2
7.611 - 2	4.588 - 3	9.879 - 0	3.080 - 3	9.148 - 1	3.285 - 1	2.585 - 3	7.315 - 2	7.101 - 2
8.000 - 2	5.215 - 3	9.818 - 0	2.718 - 3	8.421 - 1	3.275 - 1	2.801 - 3	7.888 - 2	7.658 - 2
8.500 - 2	9.271 - 3	4.794 - 0	1.530 - 3	5.748 - 1	3.258 - 1	1.440 - 3	8.443 - 2	8.208 - 2
9.000 - 2	1.846 - 2	2.788 - 0	0.817 - 3	3.897 - 1	3.173 - 1	7.914 - 2	1.158 - 3	6.608 - 2
9.580 - 2	2.807 - 2	1.705 - 0	5.442 - 2	2.784 - 1	3.108 - 1	4.883 - 2	1.334 - 3	6.732 - 2
1.798 - 1	3.808 - 2	1.187 - 0	3.784 - 2	2.187 - 1	3.008 - 1	3.212 - 2	1.538 - 3	1.074 - 2
2.080 - 1	5.244 - 2	0.478 - 0	1.208 - 2	1.055 - 1	2.880 - 1	2.247 - 2	1.710 - 3	1.282 - 2
2.880 - 1	0.875 - 2	5.123 - 0	1.836 - 2	1.098 - 1	2.750 - 1	1.851 - 2	2.018 - 3	1.608 - 2
3.000 - 1	1.273 - 1	3.481 - 0	1.114 - 2	7.819 - 0	2.614 - 1	7.747 - 1	2.281 - 3	1.808 - 2
3.500 - 1	1.708 - 1	2.883 - 0	0.388 - 2	5.838 - 0	2.488 - 1	5.840 - 1	2.580 - 3	2.178 - 2
4.000 - 1	2.182 - 1	2.882 - 0	8.881 - 0	4.338 - 0	2.373 - 1	3.725 - 1	2.735 - 3	2.288 - 2
4.500 - 1	2.811 - 1	1.782 - 0	5.434 - 0	3.818 - 0	2.271 - 1	2.801 - 1	2.955 - 3	2.587 - 2
5.000 - 1	3.884 - 1	1.485 - 0	4.884 - 0	8.889 - 0	2.188 - 1	2.188 - 1	3.148 - 3	2.888 - 2
5.500 - 1	5.178 - 1	1.878 - 0	4.877 - 0	8.148 - 0	2.188 - 1	1.731 - 1	3.148 - 3	3.178 - 2
6.000 - 1	3.886 - 1	1.193 - 0	3.887 - 0	8.889 - 0	2.088 - 1	1.411 - 1	3.588 - 3	3.258 - 2
6.500 - 1	4.275 - 1	1.048 - 0	3.318 - 0	1.777 - 0	1.989 - 1	1.181 - 1	3.784 - 3	3.588 - 2
7.000 - 1	4.847 - 1	9.888 - 0	3.883 - 0	1.538 - 0	1.887 - 1	1.081 - 1	4.008 - 3	3.831 - 2
7.511 - 1	5.346 - 1	8.315 - 0	2.884 - 0	1.188 - 0	1.781 - 1	7.443 - 0	4.478 - 3	4.318 - 2
8.000 - 1	6.888 - 1	8.788 - 0	2.188 - 0	7.888 - 0	1.615 - 1	4.888 - 0	4.883 - 3	5.388 - 2
8.500 - 1	8.888 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.883 - 3	6.888 - 2
9.000 - 1	7.888 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.883 - 3	7.888 - 2
9.580 - 1	7.888 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	7.883 - 3	8.888 - 2
1.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	8.883 - 3	9.888 - 2
1.798 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	9.883 - 3	1.088 - 2
2.080 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.088 - 3	1.188 - 2
2.880 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.188 - 3	1.288 - 2
3.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.288 - 3	1.388 - 2
3.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.388 - 3	1.488 - 2
4.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.488 - 3	1.588 - 2
4.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.588 - 3	1.688 - 2
5.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.688 - 3	1.788 - 2
5.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.788 - 3	1.888 - 2
6.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.888 - 3	1.988 - 2
6.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	1.988 - 3	2.088 - 2
7.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.088 - 3	2.188 - 2
7.511 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.188 - 3	2.288 - 2
8.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.288 - 3	2.388 - 2
8.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.388 - 3	2.488 - 2
9.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.488 - 3	2.588 - 2
9.580 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.588 - 3	2.688 - 2
1.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.688 - 3	2.788 - 2
1.798 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.788 - 3	2.888 - 2
2.080 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.888 - 3	2.988 - 2
2.880 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	2.988 - 3	3.088 - 2
3.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.088 - 3	3.188 - 2
3.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.188 - 3	3.288 - 2
4.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.288 - 3	3.388 - 2
4.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.388 - 3	3.488 - 2
5.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.488 - 3	3.588 - 2
5.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.588 - 3	3.688 - 2
6.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.688 - 3	3.788 - 2
6.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.788 - 3	3.888 - 2
7.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.888 - 3	3.988 - 2
7.511 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	3.988 - 3	4.088 - 2
8.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.088 - 3	4.188 - 2
8.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.188 - 3	4.288 - 2
9.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.288 - 3	4.388 - 2
9.580 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.388 - 3	4.488 - 2
1.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.488 - 3	4.588 - 2
1.798 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.588 - 3	4.688 - 2
2.080 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.688 - 3	4.788 - 2
2.880 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.788 - 3	4.888 - 2
3.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.888 - 3	4.988 - 2
3.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	4.988 - 3	5.088 - 2
4.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.088 - 3	5.188 - 2
4.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.188 - 3	5.288 - 2
5.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.288 - 3	5.388 - 2
5.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.388 - 3	5.488 - 2
6.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.488 - 3	5.588 - 2
6.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.588 - 3	5.688 - 2
7.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.688 - 3	5.788 - 2
7.511 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.788 - 3	5.888 - 2
8.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.888 - 3	5.988 - 2
8.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	5.988 - 3	6.088 - 2
9.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.088 - 3	6.188 - 2
9.580 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.188 - 3	6.288 - 2
1.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.288 - 3	6.388 - 2
1.798 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.388 - 3	6.488 - 2
2.080 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.488 - 3	6.588 - 2
2.880 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.588 - 3	6.688 - 2
3.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.688 - 3	6.788 - 2
3.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.788 - 3	6.888 - 2
4.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.888 - 3	6.988 - 2
4.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	6.988 - 3	7.088 - 2
5.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	7.088 - 3	7.188 - 2
5.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	7.188 - 3	7.288 - 2
6.000 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1	4.888 - 0	7.288 - 3	7.388 - 2
6.500 - 0	0.788 - 1	8.888 - 0	2.188 - 0	7.338 - 0	1.588 - 1			

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Form Factors

77-1r

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	9.199-1	7.712-2	1.000+0	3.485-1	4.948-1	1.000+1	2.025-2	9.747-1
5.000-1	9.998-1	2.488-4	1.500-1	8.947-1	9.426-2	1.250+0	2.758-1	5.213-1	1.500+1	1.477-2	9.894-1
1.000-2	9.991-1	9.870-4	1.750-1	8.698-1	1.111-1	1.500+0	2.297-1	5.189-1	2.000+1	1.059-2	9.995-1
1.500-2	9.984-1	2.192-3	2.000-1	8.442-1	1.278-1	2.000+0	1.794-1	7.101-1	5.000+1	1.650-3	1.000+0
2.000-2	9.978-1	3.652-3	2.500-1	7.944-1	1.608-1	2.500+0	1.440-1	7.727-1	8.000+1	4.629-4	1.000+0
2.500-2	9.957-1	5.930-3	3.000-1	7.489-1	1.922-1	3.000+0	1.183-1	8.197-1	1.000+2	2.452-4	1.000+0
3.000-2	9.939-1	8.386-3	4.000-1	6.867-1	2.523-1	3.500+0	8.888-2	9.471-1	1.000+3	3.931-7	1.000+0
4.000-2	9.883-1	1.426-2	5.000-1	5.889-1	3.077-1	4.000+0	7.807-2	8.712-1	1.000+6	4.627-15	1.000+0
5.000-2	9.836-1	2.108-2	8.000-1	5.281-1	3.562-1	5.000+0	5.687-2	9.068-1	1.000+9	4.382-23	1.020+0
7.000-2	9.688-1	3.625-2	7.000-1	4.750-1	3.974-1	6.000+0	4.673-2	9.318-1			
9.000-2	9.525-1	5.189-2	8.000-1	4.279-1	4.331-1	7.000+0	3.770-2	9.492-1			
1.000-1	9.440-1	5.919-2	9.000-1	3.859-1	4.652-1	8.000+0	3.188-2	9.610-1

12/07/78

ENDL Evaluated Photon Cross Sections

78-Pt

12/07/76

Energy Deposition

78-Pt

12/07/78

ENDL Evaluated Photon Data

78-Pt

ATOMIC WEIGHT 195.09										DENSITY 21.45 GRAMS/CC			
ENERGY MEV	TOTAL NTP			CROSS SECTION (BARNS)				MEV/COLLISION		K.E.		MEV/CM	
	CH	CH+CH/CH	CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E.	K.E.	BREMSSTR	K.E.	K.E.	
1.000-4	8.148-6	5.723-3	1.879-6	4.045-3	1.389-2	1.890-6		9.978-5	9.978-5	4.899-10	1.225-1		
1.010-4	8.372-6	5.989-3	1.804-6	4.045-3	1.417-2	1.800-6		1.008-4	1.008-4	4.951-10	1.204-1		
1.020-4	8.601-6	6.264-3	1.729-6	4.045-3	1.456-2	1.870-6		1.022-4	1.022-4	5.091-10	1.138-1		
1.030-4	8.843-6	6.552-3	1.651-6	4.045-3	1.504-2	1.927-6		1.047-4	1.047-4	5.244-10	1.071-1		
1.040-4	9.098-6	6.853-3	1.574-6	4.045-3	1.562-2	1.990-6		1.074-4	1.074-4	5.408-10	1.004-1		
1.050-4	9.366-6	7.167-3	1.498-6	4.045-3	1.630-2	2.060-6		1.102-4	1.102-4	5.584-10	9.378-1		
1.060-4	9.647-6	7.494-3	1.423-6	4.045-3	1.708-2	2.130-6		1.131-4	1.131-4	5.772-10	8.704-1		
1.070-4	9.941-6	7.834-3	1.349-6	4.045-3	1.796-2	2.200-6		1.161-4	1.161-4	5.972-10	8.024-1		
1.080-4	1.025-5	8.187-3	1.276-6	4.045-3	1.894-2	2.280-6		1.192-4	1.192-4	6.184-10	7.344-1		
1.090-4	1.069-5	8.553-3	1.204-6	4.045-3	2.002-2	2.360-6		1.224-4	1.224-4	6.408-10	6.664-1		
1.100-4	1.115-5	8.931-3	1.132-6	4.045-3	2.120-2	2.450-6		1.257-4	1.257-4	6.644-10	5.984-1		
1.110-4	1.163-5	9.321-3	1.061-6	4.045-3	2.248-2	2.550-6		1.291-4	1.291-4	6.892-10	5.304-1		
1.120-4	1.213-5	9.723-3	9.91-6	4.045-3	2.386-2	2.660-6		1.326-4	1.326-4	7.152-10	4.624-1		
1.130-4	1.265-5	1.014-4	9.21-6	4.045-3	2.534-2	2.780-6		1.362-4	1.362-4	7.424-10	3.944-1		
1.140-4	1.319-5	1.066-4	8.51-6	4.045-3	2.692-2	2.910-6		1.400-4	1.400-4	7.708-10	3.264-1		
1.150-4	1.375-5	1.120-4	7.81-6	4.045-3	2.860-2	3.050-6		1.439-4	1.439-4	8.004-10	2.584-1		
1.160-4	1.433-5	1.175-4	7.11-6	4.045-3	3.038-2	3.200-6		1.479-4	1.479-4	8.312-10	1.904-1		
1.170-4	1.493-5	1.231-4	6.41-6	4.045-3	3.226-2	3.360-6		1.520-4	1.520-4	8.632-10	1.224-1		
1.180-4	1.555-5	1.289-4	5.71-6	4.045-3	3.424-2	3.530-6		1.562-4	1.562-4	8.964-10	5.64-1		
1.190-4	1.619-5	1.348-4	5.01-6	4.045-3	3.632-2	3.710-6		1.606-4	1.606-4	9.308-10	4.96-1		
1.200-4	1.685-5	1.408-4	4.31-6	4.045-3	3.850-2	3.900-6		1.651-4	1.651-4	9.664-10	4.28-1		
1.210-4	1.753-5	1.469-4	3.61-6	4.045-3	4.078-2	4.100-6		1.697-4	1.697-4	1.003-9	3.60-1		
1.220-4	1.823-5	1.531-4	2.91-6	4.045-3	4.316-2	4.310-6		1.744-4	1.744-4	1.042-9	2.92-1		
1.230-4	1.895-5	1.594-4	2.21-6	4.045-3	4.564-2	4.530-6		1.792-4	1.792-4	1.082-9	2.24-1		
1.240-4	1.969-5	1.658-4	1.51-6	4.045-3	4.822-2	4.760-6		1.841-4	1.841-4	1.124-9	1.56-1		
1.250-4	2.045-5	1.723-4	8.41-6	4.045-3	5.090-2	5.000-6		1.891-4	1.891-4	1.168-9	8.8-1		
1.260-4	2.123-5	1.789-4	7.71-6	4.045-3	5.368-2	5.230-6		1.942-4	1.942-4	1.214-9	8.12-1		
1.270-4	2.203-5	1.856-4	7.01-6	4.045-3	5.656-2	5.470-6		1.994-4	1.994-4	1.262-9	7.44-1		
1.280-4	2.285-5	1.924-4	6.31-6	4.045-3	5.954-2	5.720-6		2.047-4	2.047-4	1.312-9	6.76-1		
1.290-4	2.369-5	1.993-4	5.61-6	4.045-3	6.262-2	5.980-6		2.101-4	2.101-4	1.364-9	6.08-1		
1.300-4	2.455-5	2.063-4	4.91-6	4.045-3	6.580-2	6.250-6		2.156-4	2.156-4	1.418-9	5.40-1		
1.310-4	2.543-5	2.134-4	4.21-6	4.045-3	6.908-2	6.530-6		2.212-4	2.212-4	1.474-9	4.72-1		
1.320-4	2.633-5	2.206-4	3.51-6	4.045-3	7.246-2	6.830-6		2.269-4	2.269-4	1.532-9	4.04-1		
1.330-4	2.725-5	2.279-4	2.81-6	4.045-3	7.594-2	7.140-6		2.327-4	2.327-4	1.592-9	3.36-1		
1.340-4	2.819-5	2.353-4	2.11-6	4.045-3	7.952-2	7.460-6		2.386-4	2.386-4	1.654-9	2.68-1		
1.350-4	2.915-5	2.428-4	1.41-6	4.045-3	8.320-2	7.790-6		2.446-4	2.446-4	1.718-9	2.00-1		
1.360-4	3.013-5	2.504-4	7.11-6	4.045-3	8.698-2	8.130-6		2.507-4	2.507-4	1.784-9	1.32-1		
1.370-4	3.113-5	2.581-4	6.41-6	4.045-3	9.086-2	8.480-6		2.569-4	2.569-4	1.852-9	6.4-1		
1.380-4	3.215-5	2.659-4	5.71-6	4.045-3	9.484-2	8.840-6		2.632-4	2.632-4	1.922-9	5.72-1		
1.390-4	3.319-5	2.738-4	5.01-6	4.045-3	9.892-2	9.210-6		2.696-4	2.696-4	2.000-9	5.04-1		
1.400-4	3.425-5	2.818-4	4.31-6	4.045-3	1.031-1	9.590-6		2.761-4	2.761-4	2.080-9	4.36-1		
1.410-4	3.533-5	2.899-4	3.61-6	4.045-3	1.072-1	9.980-6		2.827-4	2.827-4	2.162-9	3.68-1		
1.420-4	3.643-5	2.981-4	2.91-6	4.045-3	1.114-1	1.030-6		2.894-4	2.894-4	2.246-9	3.00-1		
1.430-4	3.755-5	3.064-4	2.21-6	4.045-3	1.157-1	1.070-6		2.962-4	2.962-4	2.332-9	2.32-1		
1.440-4	3.869-5	3.148-4	1.51-6	4.045-3	1.201-1	1.110-6		3.031-4	3.031-4	2.420-9	1.64-1		
1.450-4	3.985-5	3.233-4	8.41-6	4.045-3	1.246-1	1.150-6		3.101-4	3.101-4	2.510-9	9.6-1		
1.460-4	4.103-5	3.319-4	7.71-6	4.045-3	1.292-1	1.190-6		3.172-4	3.172-4	2.602-9	8.92-1		
1.470-4	4.223-5	3.406-4	7.01-6	4.045-3	1.339-1	1.230-6		3.244-4	3.244-4	2.696-9	8.24-1		
1.480-4	4.345-5	3.494-4	6.31-6	4.045-3	1.387-1	1.270-6		3.317-4	3.317-4	2.792-9	7.56-1		
1.490-4	4.469-5	3.583-4	5.61-6	4.045-3	1.436-1	1.310-6		3.391-4	3.391-4	2.890-9	6.88-1		
1.500-4	4.595-5	3.673-4	4.91-6	4.045-3	1.486-1	1.350-6		3.466-4	3.466-4	2.990-9	6.20-1		
1.510-4	4.723-5	3.764-4	4.21-6	4.045-3	1.537-1	1.390-6		3.542-4	3.542-4	3.092-9	5.52-1		
1.520-4	4.853-5	3.856-4	3.51-6	4.045-3	1.589-1	1.430-6		3.619-4	3.619-4	3.196-9	4.84-1		
1.530-4	4.985-5	3.949-4	2.81-6	4.045-3	1.642-1	1.470-6		3.697-4	3.697-4	3.302-9	4.16-1		
1.540-4	5.119-5	4.043-4	2.11-6	4.045-3	1.696-1	1.510-6		3.776-4	3.776-4	3.410-9	3.48-1		
1.550-4	5.255-5	4.138-4	1.41-6	4.045-3	1.751-1	1.550-6		3.856-4	3.856-4	3.520-9	2.80-1		
1.560-4	5.393-5	4.234-4	7.11-6	4.045-3	1.807-1	1.590-6		3.937-4	3.937-4	3.632-9	2.12-1		
1.570-4	5.533-5	4.331-4	6.41-6	4.045-3	1.864-1	1.630-6		4.019-4	4.019-4	3.746-9	1.44-1		
1.580-4	5.675-5	4.429-4	5.71-6	4.045-3	1.922-1	1.670-6		4.102-4	4.102-4	3.862-9	7.6-1		
1.590-4	5.819-5	4.528-4	5.01-6	4.045-3	1.981-1	1.710-6		4.186-4	4.186-4	3.980-9	6.92-1		
1.600-4	5.965-5	4.628-4	4.31-6	4.045-3	2.041-1	1.750-6		4.271-4	4.271-4	4.100-9	6.24-1		
1.610-4	6.113-5	4.729-4	3.61-6	4.045-3	2.102-1	1.790-6		4.357-4	4.357-4	4.222-9	5.56-1		
1.620-4	6.263-5	4.831-4	2.91-6	4.045-3	2.164-1	1.830-6		4.444-4	4.444-4	4.346-9	4.88-1		
1.630-4	6.415-5	4.934-4	2.21-6	4.045-3	2.227-1	1.870-6		4.532-4	4.532-4	4.472-9	4.20-1		
1.640-4	6.569-5	5.038-4	1.51-6	4.045-3	2.291-1	1.910-6		4.621-4	4.621-4	4.600-9	3.52-1		
1.650-4	6.725-5	5.143-4	8.41-6	4.045-3	2.356-1	1.950-6		4.711-4	4.711-4	4.730-9	2.84-1		
1.660-4	6.883-5	5.249-4	7.71-6	4.045-3	2.422-1	1.990-6		4.802-4	4.802-4	4.862-9	2.16-1		
1.670-4	7.043-5	5.356-4	7.01-6	4.045-3	2.489-1	2.030-6		4.894-4	4.894-4	4.996-9	1.48-1		
1.680-4	7.205-5	5.464-4	6.31-6	4.045-3	2.557-1	2.070-6		4.987-4	4.987-4	5.132-9	8.0-1		
1.690-4	7.369-5	5.573-4	5.61-6	4.045-3	2.626-1	2.110-6		5.081-4	5.081-4	5.270-9	7.32-1		
1.700-4	7.535-5	5.683-4	4.91-6	4.045-3	2.696-1	2.150-6		5.176-4	5.176-4	5.410-9	6.64-1		
1.710-4	7.703-5	5.794-4	4.21-6	4.045-3	2.767-1	2.190-6		5.272-4	5.272-4	5.552-9	5.96-1		
1.720-4	7.873-5	5.906-4	3.51-6	4.045-3	2.839-1	2.230-6		5.369-4	5.369-4	5.696-9	5.28-1		
1.730-4	8.045-5	6.019-4	2.81-6	4.045-3	2.912-1	2.270-6		5.467-4	5.467-4	5.842-9	4.60-1		
1.740-4	8.219-5	6.133-4	2.11-6	4.045-3	2.986-1	2.310-6		5.566-4	5.566-4	5.990-9	3.92-1		
1.750-4	8.395-5	6.248-4	1.41-6	4.045-3	3.061-1	2.350-6		5.666-4	5.666-4	6.140-9	3.24-1		
1.760-4	8.573-5	6.364-4	7.11-6	4.045-3	3.137-1	2.390-6		5.767-4	5.767-4	6.292-9	2.56-1		
1.770-4	8.753-5	6.481-4	6.41-6	4.045-3	3.214-1	2.430-6		5.869-4	5.869-4	6.446-9	1.88-1		
1.780-4	8.935-5	6.599-4	5.71-6	4.045-3	3.292-1	2.470-6		5.972-4	5.972-4	6.6020			

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 195.09										DENSITY 21.45 GRAMS/CC			
ENERGY		TOTAL NFP		CROSS SECTION (BARNS)						MEV/COLLISION		MEV/CM	
MEV		CH	CH/CM/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOI	K.E.	BREMSSTR	K.E.	
2.500	2	1.101	3	4.233	1	3.71	4	5.147	2	2.939	1	1.317	4
3.000	2	1.773	3	2.629	1	8.518	3	4.043	2	2.788	1	8.084	3
3.500	2	2.009	3	1.747	1	5.881	3	3.235	2	2.906	1	5.308	3
4.000	2	3.791	3	1.230	1	3.984	3	2.886	2	3.059	1	3.887	3
4.500	2	5.183	3	0.995	0	2.914	3	2.216	2	3.105	1	2.861	3
5.000	2	6.841	3	0.815	0	2.208	3	1.878	2	3.175	1	1.988	3
5.500	2	8.800	3	5.298	0	1.718	3	1.612	2	3.217	1	1.523	3
6.000	2	1.105	2	4.219	0	1.387	3	1.402	2	3.295	1	1.194	3
6.500	2	1.384	2	3.419	0	1.108	3	1.228	2	3.270	1	9.521	2
7.000	2	1.853	2	2.880	0	9.135	2	1.086	2	3.285	1	7.720	2
7.839	2	2.810	2	2.110	0	8.835	2	9.005	1	3.307	1	5.604	2
7.839	2	5.042	3	9.248	0	2.993	3	9.005	1	3.307	1	2.872	3
8.000	2	3.318	3	8.787	0	2.840	3	8.707	1	3.311	1	2.780	3
1.000	1	9.532	3	4.891	0	1.594	3	3.945	1	3.205	1	1.482	3
1.250	1	1.703	2	2.737	0	8.867	2	3.990	3	3.210	1	8.147	2
1.500	1	2.711	2	1.720	0	5.571	2	2.881	1	3.143	1	4.989	2
1.750	1	3.972	2	1.174	0	3.802	2	2.180	1	3.044	1	3.279	2
2.000	1	5.481	2	0.506	1	2.795	2	1.713	1	2.982	1	2.288	2
2.500	1	9.078	2	5.136	1	1.884	2	1.134	1	2.784	1	1.272	2
3.000	1	1.333	1	3.497	1	1.133	2	0.090	0	2.847	1	7.873	1
3.500	1	1.767	1	2.809	1	8.452	1	8.043	0	2.513	1	5.334	1
4.000	1	2.261	1	2.082	1	6.080	0	4.894	0	2.403	1	3.807	1
4.500	1	2.788	1	1.709	1	5.537	1	3.745	0	2.299	1	2.863	1
5.000	1	3.189	1	1.462	1	4.735	1	3.080	0	2.210	1	2.219	1
5.500	1	3.629	1	1.295	1	4.181	1	2.948	0	2.127	1	1.780	1
6.000	1	4.055	1	1.150	1	3.724	1	2.552	0	2.054	1	1.455	1
6.500	1	4.475	1	1.047	1	3.350	1	1.845	0	1.984	1	1.262	1
7.000	1	4.839	1	9.634	2	3.121	1	1.594	1	1.882	1	1.040	1
8.000	1	5.904	1	8.378	2	2.714	1	1.229	0	1.814	1	7.773	0
1.000	0	8.828	0	8.828	2	2.212	1	7.940	1	1.838	1	4.989	0
1.022	0	8.974	0	8.704	2	2.172	1	7.607	1	1.819	1	4.772	0
1.250	0	8.183	1	5.897	2	1.848	1	5.116	1	1.486	1	3.283	0
1.500	0	9.142	1	5.098	2	1.852	1	3.988	1	1.334	1	2.340	0
1.750	0	9.878	1	4.720	2	1.528	1	2.628	1	1.228	1	1.744	0
2.000	0	1.043	0	4.489	2	1.448	1	2.015	1	1.140	1	1.371	0
2.044	0	1.052	0	4.430	2	1.435	1	1.930	1	1.128	1	1.322	0
2.500	0	1.110	0	4.200	2	1.381	1	1.293	1	1.002	1	9.485	1
3.000	0	1.134	0	4.110	2	1.331	1	8.990	2	8.878	0	7.140	1
3.500	0	1.144	0	4.074	2	1.320	1	8.810	2	8.199	0	5.711	1
4.000	0	1.141	0	4.064	2	1.323	1	5.883	2	7.484	0	4.707	1
4.500	0	1.131	0	4.181	2	1.352	1	4.008	2	6.941	0	5.873	0
5.000	0	1.121	0	4.159	2	1.347	1	3.245	2	6.476	0	3.407	1
5.500	0	1.116	0	4.178	2	1.353	1	2.880	2	6.072	0	3.013	1
6.000	0	1.107	0	4.212	2	1.365	1	2.253	2	5.723	0	2.894	1
6.500	0	1.095	0	4.299	2	1.380	1	1.920	2	5.418	0	2.430	1
7.000	0	1.080	0	4.316	2	1.398	1	1.828	2	5.144	0	2.209	1
8.000	0	1.047	0	4.451	2	1.442	1	1.288	2	4.682	0	1.859	1
1.000	1	9.794	1	4.778	1	8.115	3	3.989	0	1.395	1	1.135	1
1.250	1	9.205	1	5.085	2	1.841	1	5.193	3	3.384	0	1.094	1
1.500	1	8.885	1	5.388	2	1.739	1	3.608	3	2.952	0	0.970	2
1.750	1	8.188	1	5.893	2	1.844	1	2.651	3	2.628	0	7.983	2
2.000	1	7.794	1	5.981	2	1.938	1	2.029	3	2.370	0	6.957	2
2.500	1	7.222	1	6.455	2	2.081	1	1.299	3	1.998	0	5.143	2
3.000	1	6.822	1	6.834	2	2.214	1	9.017	4	1.725	0	4.218	2
3.500	1	6.351	1	7.118	2	2.305	1	8.825	4	1.558	0	3.585	2
4.000	1	6.315	1	7.382	2	2.391	1	5.072	4	1.371	0	3.083	2
4.500	1	6.890	1	7.895	2	2.480	1	4.008	4	1.247	0	2.712	2
5.000	1	5.923	1	7.871	2	2.590	1	3.247	4	1.144	0	2.418	2
5.500	1	5.811	1	8.063	2	2.599	1	2.883	4	1.098	0	2.178	2
6.000	1	5.708	1	8.167	2	2.848	1	2.234	4	9.881	1	1.982	2
6.500	1	5.614	1	8.395	2	2.880	1	1.921	4	9.231	1	1.817	2
7.000	1	5.527	1	8.436	2	2.733	1	1.858	4	8.883	1	1.678	2
8.000	1	5.378	1	8.881	2	2.812	1	1.288	4	7.777	1	1.448	2
2.402	2	2.132	2	2.213	5	1.936	1	2.402	2	2.132	2	2.213	5
2.848	2	2.381	2	3.245	5	1.438	1	2.848	2	2.381	2	3.245	5
3.883	2	3.020	2	4.438	5	1.132	1	3.708	2	3.444	2	5.772	5
4.114	2	3.857	2	7.239	5	7.442	0	4.114	2	3.857	2	7.239	5
4.509	2	4.256	2	8.812	5	8.221	0	4.509	2	4.256	2	8.812	5
4.890	2	4.841	2	1.048	4	5.274	0	4.890	2	4.841	2	1.048	4
5.298	2	5.011	2	1.221	4	4.535	0	5.298	2	5.011	2	1.221	4
5.608	2	5.387	2	1.400	4	3.938	0	5.608	2	5.387	2	1.400	4
5.945	2	5.707	2	1.584	4	3.452	0	5.945	2	5.707	2	1.584	4
6.475	2	6.245	2	1.895	4	2.828	0	6.475	2	6.245	2	1.895	4
7.528	2	2.800	2	2.358	5	4.362	0	7.528	2	2.800	2	2.358	5
7.873	2	2.352	2	2.893	5	4.482	0	7.873	2	2.352	2	2.893	5
8.448	2	4.215	2	8.843	5	4.482	0	8.448	2	4.215	2	8.843	5
1.158	1	6.457	2	2.028	3	3.791	0	1.158	1	6.457	2	2.028	3
1.354	1	8.585	2	3.578	4	3.187	0	1.354	1	8.585	2	3.578	4
1.539	1	1.060	1	5.445	4	2.667	0	1.539	1	1.060	1	5.445	4
1.709	1	1.248	1	7.945	4	2.277	0	1.709	1	1.248	1	7.945	4
2.017	1	1.592	1	1.227	3	1.754	0	2.017	1	1.592	1	1.227	3
2.279	1	1.893	1	1.731	3	1.420	0	2.279	1	1.893	1	1.731	3
2.519	1	2.188	1	2.288	3	1.213	0	2.519	1	2.188	1	2.288	3
2.735	1	2.418	1	2.818	3	1.070	0	2.735	1	2.418	1	2.818	3
2.948	1	2.881	1	3.407	3	9.794	1	2.948	1	2.881	1	3.407	3
3.153	1	2.893	1	4.023	3	9.070	1	3.153	1	2.893	1	4.023	3
3.385	1	3.127	1	4.696	3	8.618	1	3.385	1	3.127	1	4.696	3
3.577	1	3.360	1	5.414	3	8.295	1	3.577	1	3.360	1	5.414	3
3.801	1	3.601	1	8.211	3	8.083	1	3.801	1	3.601	1	8.211	3
4.028	1	3.843	1	7.887	3	7.841	1	4.028	1	3.843	1	7.887	3
4.497	1	4.338	1	7.788	3	7.788	1	4.497	1	4.338	1	7.788	3
5.524	1	5.398	1	1.385	2	7.907	1	5.524	1	5.398	1	1.385	2
5.844	1	5.522	1	1.447	2	7.941	1	5.844	1	5.522	1	1.447	2
6.820	1	6.821	1	2.192	2	8.336	1	6.820	1	6.821	1	2.192	2
8.281	1	8.281	1	3.154	2	8.978	1	8.281	1	8.281	1	3.154	2
9.728	1	9.684	1	4.348	2	9.784	1	9.728	1	9.684	1	4.348	2
1.130	0	1.128	0	5.842	2	1.078	0	1.130	0	1.128	0	5.842	

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ENUL Evaluated Photon Data

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ATOMIC WEIGHT 195.09		DENSITY 21.45 GRAMS/CC							
ENERGY		TOTAL MFP		CROSS SECTION (BARNS)				MEV/COLLISION	
MEV	CM	CM	CM/CM	TOTAL	COHERENT	INCOHER	PHOTOEL PAIR PROD	K.E. FLOR	K.E. BREMSSTR
1.000+2	5.112-1	9.119-2	2.93+1	8.116-5	6.495-1	1.137-2	2.888+1	9.855+1	9.855+1
								0.157+1	1.928+2

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Form Factors

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SIN(θ/2)/λ COHERENT INCOHERENT			SIN(θ/2)/λ COHERENT INCOHERENT			SIN(θ/2)/λ COHERENT INCOHERENT			SIN(θ/2)/λ COHERENT INCOHERENT		
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+	0.000+0	1.250-1	9.252-1	7.093-2	1.000+0	3.518-1	4.935-1	1.000+1	2.046-2	9.743-1
5.000-3	9.999-1	2.051-4	1.500-1	9.002-1	8.888-2	1.250+0	2.777-1	5.991-1	1.500+1	1.481-2	9.891-1
1.000-2	9.998-1	8.205-4	1.750-1	8.746-1	1.080-1	1.500+0	2.303-1	6.160-1	2.000+1	1.071-2	9.925-1
1.500-2	9.996-1	1.821-3	2.000-1	8.485-1	1.229-1	2.000+0	1.791-1	7.069-1	5.000+1	1.715-3	1.000+0
2.000-2	9.976-1	3.203-3	2.500-1	7.986-1	1.575-1	2.500+0	1.446-1	7.702-1	8.000+1	4.889-4	1.000+0
2.500-2	9.962-1	4.938-3	3.000-1	7.473-1	1.870-1	3.000+0	1.172-1	8.139-1	1.000+2	2.606-4	1.000+0
3.000-2	9.945-1	6.999-3	4.000-1	6.586-1	2.479-1	3.500+0	8.956-2	8.456-1	1.000+3	4.298-7	1.000+0
4.000-2	9.904-1	1.198-2	5.000-1	5.884-1	3.047-1	4.000+0	7.874-2	8.898-1	1.000+6	4.724-15	1.000+0
5.000-2	9.874-1	1.782-2	6.000-1	5.287-1	3.543-1	5.000+0	5.689-2	9.058-1	1.000+9	5.509-23	1.000+0
7.000-2	9.725-1	3.121-2	7.000-1	4.768-1	3.983-1	6.000+0	4.688-2	9.307-1			
9.000-2	9.589-1	4.929-2	8.000-1	4.306-1	4.322-1	7.000+0	3.799-2	9.483-1			
1.000-1	9.484-1	5.286-2	9.000-1	3.891-1	4.842-1	8.000+0	3.215-2	9.603-1

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ENDL Evaluated Photon Cross Sections

79-Au

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Energy Deposition

79-Au

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ENDL Evaluated Photon Data

79-Au

ATOMIC WEIGHT 196.97										DENSITY 19.32 GRAMS/CC			
ENERGY		TOTAL MFP		CROSS SECTION (BARNS)					PAIR PROD	NEV/COLLISION			NEV/CM
MEV		CH	CH+CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL			K.E. + FLOR	K.E.	BREMSSTR	K.E.
1.000-4	8.241-6	6.280-3	2.094-6	4.150-3	1.387-2	2.050-6				9.980-5	9.980-5	4.818-10	1.211-1
1.071-4	9.934-6	5.210-3	1.704-6	4.148-3	1.384-2	1.700-6				1.088-4	1.088-4	5.836-10	1.075-1
1.085-4	8.982-6	5.761-3	1.884-6	4.148-3	1.604-2	1.880-6				1.083-4	1.083-4	5.787-10	1.205-1
1.180-4	1.052-5	4.905-3	1.804-6	4.148-3	1.891-2	1.800-6				1.177-4	1.177-4	6.839-10	1.115-1
1.250-4	1.033-5	5.011-3	1.839-6	4.148-3	2.117-2	1.835-6				1.247-4	1.247-4	7.678-10	1.207-1
1.500-4	9.85-6	5.383-3	1.734-6	4.147-3	3.025-2	1.750-6				1.488-4	1.488-4	1.108-9	1.251-1
1.750-4	8.584-6	7.884-3	2.572-6	4.148-3	4.058-2	2.588-6				1.747-4	1.747-4	1.507-9	2.225-1
2.000-4	4.743-6	1.058-4	3.584-6	4.145-3	5.329-2	3.580-6				1.998-4	1.998-4	1.970-9	4.229-1
2.500-4	3.883-6	1.324-4	4.428-6	4.140-3	8.255-2	4.424-6				2.450-4	2.450-4	3.080-9	6.534-1
3.000-4	3.218-6	1.609-4	5.284-6	4.137-3	1.180-1	5.260-6				2.998-4	2.998-4	4.437-9	9.321-1
3.404-4	3.353-6	1.945-4	5.054-6	4.132-3	1.507-1	5.050-6				3.401-4	3.401-4	5.712-9	1.015-2
3.418-4	3.174-6	1.831-4	5.334-6	4.132-3	1.519-1	5.330-6				3.415-4	3.415-4	5.759-9	1.076-2
3.500-4	3.231-6	1.602-4	5.239-6	4.131-3	1.590-1	5.235-6				3.497-4	3.497-4	6.039-9	1.082-2
3.513-4	3.241-6	1.997-4	5.224-6	4.131-3	1.602-1	5.220-6				3.510-4	3.510-4	6.084-9	1.083-2
4.000-4	3.452-6	1.489-4	4.904-6	4.126-3	2.059-1	4.900-6				3.997-4	3.997-4	7.887-9	1.158-2
4.500-4	3.837-6	1.349-4	4.412-6	4.118-3	2.575-1	4.408-6				4.488-4	4.488-4	9.980-9	1.172-2
5.000-4	4.217-6	1.267-4	4.014-6	4.112-3	3.145-1	4.010-6				4.985-4	4.985-4	1.232-8	1.184-2
5.500-4	4.759-6	1.088-4	3.557-6	4.103-3	3.752-1	3.553-6				5.494-4	5.494-4	1.490-8	1.129-2
5.775-4	5.062-6	1.022-4	3.344-6	4.099-3	4.107-1	3.340-6				5.788-4	5.788-4	1.643-8	1.139-2
5.789-4	4.857-6	1.102-4	3.674-6	4.099-3	4.125-1	3.600-6				5.782-4	5.782-4	1.651-8	1.231-2
5.884-4	4.684-6	1.105-4	3.614-6	4.097-3	4.252-1	3.610-6				5.877-4	5.877-4	1.708-8	1.253-2
6.000-4	4.750-6	1.090-4	3.584-6	4.095-3	4.408-1	3.580-6				5.993-4	5.993-4	1.773-8	1.262-2
6.500-4	5.331-6	9.710-5	3.178-6	4.084-3	5.084-1	3.172-6				6.482-4	6.482-4	2.081-8	1.218-2
7.000-4	5.932-6	8.728-5	2.894-6	4.073-3	5.801-1	2.890-6				6.990-4	6.990-4	2.412-8	1.178-2
7.581-4	6.734-6	7.887-5	2.514-6	4.062-3	6.687-1	2.510-6				7.589-4	7.589-4	2.828-8	1.124-2
7.595-4	6.378-6	8.115-5	2.894-6	4.062-3	6.709-1	2.890-6				7.583-4	7.583-4	2.839-8	1.189-2
7.890-4	6.526-6	7.931-5	2.584-6	4.060-3	8.059-1	2.580-6				7.878-4	7.878-4	2.911-8	1.177-2
8.000-4	6.584-6	7.411-5	2.484-6	4.055-3	7.360-1	2.480-6				7.987-4	7.987-4	3.149-8	1.144-2
9.000-4	8.576-6	8.035-5	1.874-6	4.040-3	8.971-1	1.870-6				8.988-4	8.988-4	3.987-8	1.047-2
1.000-3	9.048-6	5.721-5	1.871-6	4.005-3	1.071-0	1.867-6				9.978-4	9.978-4	4.918-8	1.103-2
1.250-3	1.519-5	3.407-5	1.114-6	3.980-3	1.508-0	1.110-6				1.248-3	1.248-3	7.680-8	8.189-1
1.500-3	2.319-5	2.232-5	7.302-5	3.952-3	1.989-0	7.283-5				1.482-3	1.482-3	1.099-7	8.435-1
1.750-3	3.313-5	1.982-5	5.110-5	3.798-3	2.451-0	5.073-5				1.737-3	1.737-3	1.490-7	5.244-1
2.000-3	4.510-5	1.148-5	3.734-5	3.674-3	2.938-0	3.717-5				1.980-3	1.980-3	1.834-7	4.331-1
2.205-3	5.847-5	9.188-5	2.988-5	3.579-3	3.305-0	2.982-5				2.179-3	2.179-3	2.343-7	3.538-1
2.208-3	5.514-5	8.098-5	8.733-5	3.578-3	3.307-0	8.687-5				2.184-3	2.184-3	2.273-7	8.534-1
2.290-3	2.787-5	1.870-5	6.117-5	3.543-3	3.499-0	8.082-5				2.277-3	2.277-3	2.451-7	8.052-1
2.291-3	1.584-5	3.310-5	1.083-6	3.542-3	3.481-0	1.079-6				2.283-3	2.283-3	2.488-7	1.429-2
2.500-3	1.957-5	2.844-5	8.848-5	3.480-3	3.845-0	8.814-5				2.480-3	2.480-3	2.843-7	1.247-2
2.742-3	2.482-5	2.085-5	8.821-5	3.375-3	4.289-0	8.787-5				2.728-3	2.728-3	3.548-7	1.080-2
2.743-3	1.945-5	2.881-5	8.705-5	3.375-3	4.301-0	8.671-5				2.732-3	2.732-3	3.598-7	1.380-2
3.000-3	2.448-5	2.115-5	8.916-5	3.285-3	4.791-0	8.883-5				2.986-3	2.937-3	4.298-7	1.200-2
3.148-3	2.770-5	1.889-5	8.111-5	3.231-3	5.048-0	6.079-5				3.131-3	3.083-3	4.682-7	1.113-2
3.149-3	2.458-5	2.108-5	8.894-5	3.230-3	5.050-0	6.822-5				3.134-3	3.088-3	4.701-7	1.257-2
3.424-3	3.045-5	1.700-5	5.580-5	3.122-3	5.529-0	5.529-5				3.405-3	3.358-3	5.581-7	1.102-2
3.425-3	2.827-5	1.834-5	5.988-5	3.121-3	5.531-0	5.967-5				3.407-3	3.359-3	5.589-7	1.190-2
3.500-3	2.984-5	1.735-5	5.674-5	3.094-3	5.882-0	5.843-5				3.481-3	3.432-3	5.816-7	1.150-2
4.000-3	4.232-5	1.232-5	4.020-5	2.930-3	6.944-0	3.999-5				3.971-3	3.922-3	7.595-7	9.334-1
4.500-3	5.882-5	9.110-5	2.980-5	2.795-3	7.382-0	2.952-5				4.458-3	4.410-3	9.600-7	7.782-1
5.000-3	7.438-5	8.959-5	2.278-5	2.608-3	8.223-0	2.250-5				4.943-3	4.894-3	1.183-6	8.981-1
5.500-3	9.488-5	5.458-5	1.784-5	2.457-3	9.031-0	1.788-5				5.424-3	5.376-3	1.427-6	5.888-1
6.000-3	1.184-4	4.370-5	1.442-5	2.328-3	9.838-0	1.468-5				5.902-3	5.854-3	1.892-6	4.943-1
6.500-3	1.452-4	3.982-5	1.182-5	2.187-3	1.059-1	1.184-5				6.377-3	6.329-3	1.977-6	4.559-1
7.000-3	1.753-4	2.953-5	8.628-5	2.082-3	1.132-1	9.448-5				6.848-3	6.801-3	2.283-6	3.680-1
8.000-3	2.458-4	2.195-5	8.888-5	1.988-3	1.278-1	8.888-5				7.779-3	7.732-3	2.950-6	3.145-1
1.000-2	4.314-4	1.288-5	3.825-5	1.981-3	1.527-1	3.767-5				9.999-3	9.952-3	4.503-6	2.219-1
1.132-2	6.885-4	7.731-5	2.529-5	1.294-3	1.714-1	2.387-5				1.130-2	1.125-2	6.247-6	1.880-1
1.192-2	2.833-4	1.827-5	5.978-5	1.298-3	1.714-1	5.844-5				1.188-2	8.786-3	3.818-6	2.161-1
1.238-2	3.188-4	1.818-5	5.853-5	1.295-3	1.708-1	5.188-5				1.224-2	9.348-3	3.385-6	2.284-1
1.373-2	4.388-4	1.275-5	4.178-5	1.119-3	1.881-1	4.858-5				1.338-2	1.850-3	5.444-6	2.587-1
1.373-2	2.983-4	1.783-5	5.838-5	1.119-3	1.881-1	5.718-5				1.374-2	1.859-3	5.533-6	3.048-1
1.495-2	3.298-4	1.583-5	5.218-5	1.088-3	1.937-1	5.181-5				1.495-2	1.118-3	6.188-6	3.448-1
1.498-2	2.818-4	1.782-5	8.889-5	1.088-3	1.937-1	5.918-5				1.498-2	1.121-3	8.295-6	3.988-1

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ENOL Evaluated Photon Data

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ATOMIC WEIGHT 196.97				DENSITY 19.32 GRAMS/CC							
ENERGY		TOTAL HFP		CROSS SECTION (BARNS)				NEUT/COLLISION		NEUT/CM	
MEV	CH	CH/CM/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E. BREMSSTR	K.E.	
1.500-2	3.146-4	1.045-2	5.301-4	1.020-3	1.999-1	5.277-4		1.471-2	1.183-2	8.909-8	3.781-1
1.750-2	4.698-4	1.104-2	3.611-4	8.424-4	2.189-1	3.525-4		1.708-2	1.422-2	9.974-8	3.033-1
2.000-2	6.616-4	7.823-1	2.559-4	7.140-2	2.333-1	2.485-4		1.942-2	1.657-2	1.355-5	2.505-1
2.500-2	1.188-3	4.363-1	1.487-4	5.311-2	2.578-1	1.371-4		2.403-2	2.121-2	2.218-5	1.788-1
3.000-2	1.936-3	2.718-1	6.883-3	4.171-2	2.793-1	8.438-4		2.890-2	2.572-2	3.261-5	1.349-1
3.500-2	2.890-3	1.810-1	5.980-3	3.338-2	2.932-1	5.957-3		3.288-2	3.011-2	4.470-5	1.053-1
4.000-2	4.059-3	1.277-1	3.178-3	2.753-2	3.058-1	3.870-3		3.709-2	3.437-2	5.884-5	8.479-0
4.500-2	5.530-3	3.381-0	2.982-3	2.299-2	3.135-1	2.801-3		4.121-2	3.853-2	7.315-5	8.888-0
5.000-2	7.239-3	7.102-0	2.324-3	1.941-2	3.207-1	2.098-3		4.520-2	4.255-2	8.920-5	5.841-0
5.500-2	9.352-3	5.535-0	1.810-3	1.686-2	3.249-1	1.611-3		4.905-2	4.644-2	1.062-4	4.985-0
6.000-2	1.173-2	4.414-0	1.444-3	1.449-2	3.289-1	1.286-3		5.275-2	5.018-2	1.240-4	4.280-0
6.500-2	1.445-2	3.582-0	1.172-3	1.269-2	3.305-1	1.012-3		5.633-2	5.379-2	1.425-4	3.723-0
7.000-2	1.750-2	2.938-0	9.675-2	1.122-2	3.320-1	8.220-2		5.978-2	5.728-2	1.614-4	3.273-0
8.000-2	2.457-2	2.108-0	8.869-2	8.996-1	3.348-1	5.695-2		6.618-2	6.376-2	2.001-4	2.595-0
8.072-2	2.514-2	2.099-0	6.733-2	8.899-1	3.348-1	5.513-2		6.881-2	6.640-2	2.029-4	2.594-0
8.072-2	5.978-2	8.899-0	2.832-2	8.899-1	3.348-1	2.710-3		7.737-2	7.502-2	2.614-4	3.892-0
1.000-1	1.011-2	5.121-0	1.675-3	5.145-1	3.331-1	1.580-3		9.484-2	9.106-2	0.308-5	4.062-0
1.250-1	1.777-2	2.912-0	9.525-2	4.125-1	3.247-1	9.787-2		1.161-1	6.388-2	1.995-4	3.582-0
1.500-1	2.795-2	1.852-0	8.057-2	2.979-1	3.180-1	9.441-2		1.363-1	6.524-2	3.573-4	3.050-0
1.750-1	4.100-2	1.682-0	4.125-2	2.294-1	3.080-1	3.595-2		1.551-1	1.057-1	5.485-4	2.577-0
2.000-1	5.686-2	9.135-1	2.588-2	1.771-1	2.997-1	2.511-2		1.728-1	1.249-1	7.854-4	2.204-0
2.500-1	9.430-2	5.409-1	1.780-2	1.172-1	2.818-1	1.385-2		2.049-1	1.600-1	1.254-3	1.886-0
3.000-1	1.407-1	3.879-1	1.203-2	8.385-0	2.670-1	8.517-1		2.309-1	1.907-1	1.779-3	1.355-0
3.500-1	1.503-1	2.720-1	8.895-1	6.254-0	2.544-1	5.726-1		2.551-1	2.185-1	2.333-3	1.148-0
4.000-1	2.446-1	2.133-1	8.978-1	4.859-0	2.433-1	4.059-1		2.788-1	2.438-1	2.900-3	1.005-0
4.500-1	2.943-1	1.758-1	5.753-1	3.877-0	2.328-1	3.037-1		2.981-1	2.681-1	3.503-3	9.111-1
5.000-1	3.457-1	1.497-1	4.950-1	3.188-0	2.238-1	2.343-1		3.185-1	2.914-1	4.132-3	8.429-1
5.500-1	3.945-1	1.312-1	4.282-1	2.836-0	2.154-1	1.674-1		3.386-1	3.148-1	4.819-3	7.382-1
6.000-1	4.418-1	1.171-1	3.832-1	2.680-0	2.080-1	1.529-1		3.608-1	3.381-1	5.552-3	7.852-1
6.500-1	4.898-1	1.086-1	3.485-1	1.907-0	2.009-1	1.285-1		3.834-1	3.624-1	6.371-3	7.481-1
7.000-1	5.381-1	9.800-2	3.205-1	1.851-0	1.846-1	1.094-1		4.062-1	3.888-1	7.250-3	7.325-1
7.000-1	8.082-1	8.510-2	2.783-1	1.273-0	1.837-1	8.188-0		4.533-1	4.388-1	9.212-3	7.176-1
1.000-0	7.480-1	8.939-2	2.889-1	8.255-1	1.856-1	5.308-0		5.074-1	4.941-1	1.424-2	7.294-1
1.000-0	7.998-1	8.811-2	2.828-1	7.881-1	1.839-1	5.098-0	1.000-8	5.594-1	5.584-1	1.488-2	7.322-1
1.250-0	8.984-1	5.774-2	1.889-1	5.301-1	1.484-1	3.508-0	5.143-3	6.870-1	6.865-1	2.250-2	7.856-1
1.500-0	1.003-0	5.181-2	1.888-1	3.858-1	1.351-1	2.501-0	5.049-1	8.328-1	8.244-1	3.224-2	8.220-1
1.750-0	1.085-0	4.772-2	1.581-1	2.723-1	1.243-1	1.689-0	1.038-1	9.770-1	9.708-1	4.435-2	8.846-1
2.000-0	1.148-0	4.517-2	1.477-1	2.088-1	1.154-1	1.488-0	1.953-0	1.133-0	1.128-0	5.848-2	9.841-1
2.500-0	1.280-0	4.243-2	1.388-1	1.340-1	1.015-1	1.013-0	2.282-0	1.162-0	1.157-0	6.201-2	1.001-0
3.000-0	1.348-0	4.152-2	1.358-1	9.318-2	9.094-0	7.620-1	3.832-0	1.858-0	1.856-0	1.058-1	1.488-0
3.500-0	1.457-0	4.117-2	1.347-1	8.851-2	8.863-0	6.092-1	4.524-0	2.268-0	2.265-0	2.278-1	1.801-0
4.000-0	1.593-0	4.127-2	1.350-1	5.849-2	7.990-0	5.019-1	5.335-0	2.897-0	2.895-0	3.184-1	2.149-0
4.500-0	1.743-0	4.183-2	1.362-1	4.149-2	7.030-0	4.210-1	6.124-0	3.191-0	3.139-0	4.213-1	2.525-0
5.000-0	1.932-0	4.202-2	1.374-1	3.381-2	6.957-0	3.831-1	6.788-0	3.597-0	3.595-0	5.420-1	2.919-0
5.500-0	1.288-0	4.281-2	1.381-1	2.778-2	6.150-0	3.212-1	7.308-0	4.059-0	4.057-0	8.771-1	3.309-0
6.000-0	1.218-0	4.257-2	1.382-1	2.335-2	5.788-0	2.871-1	7.818-0	4.528-0	4.527-0	8.270-1	3.723-0
6.500-0	1.202-0	4.304-2	1.408-1	1.990-2	5.485-0	2.590-1	8.314-0	5.004-0	5.003-0	9.409-1	4.180-0
7.000-0	1.187-0	4.382-2	1.427-1	1.717-2	5.210-0	2.335-1	8.804-0	5.484-0	5.483-0	1.188-0	4.621-0
8.000-0	1.150-0	4.500-2	1.472-1	1.315-2	4.743-0	1.983-1	9.783-0	6.458-0	6.457-0	1.581-0	5.813-0
1.000-0	1.337-0	4.832-2	1.585-1	8.412-3	4.040-0	1.487-1	1.181-1	8.438-0	8.435-0	2.480-0	7.875-0
1.250-0	1.311-0	5.122-2	1.675-1	5.388-3	3.428-0	1.186-1	1.320-1	1.082-1	1.082-1	3.925-0	1.081-0
1.500-0	9.534-1	5.489-2	1.778-1	3.740-3	2.980-0	9.553-2	1.487-1	1.342-1	1.342-1	5.348-0	1.408-0
1.750-0	8.388-1	5.759-2	1.883-1	2.748-3	2.659-0	8.672-2	1.809-1	1.593-1	1.593-1	7.013-0	1.772-0
2.000-0	8.594-1	6.051-2	1.979-1	2.104-3	2.400-0	8.977-2	1.732-1	1.844-1	1.844-1	8.788-0	2.158-0
2.500-0	7.224-1	6.532-2	2.137-1	1.346-3	2.017-0	5.488-2	2.889-1	2.348-1	2.348-1	1.684-1	3.892-0
3.000-0	7.483-1	6.517-2	2.282-1	9.348-4	1.748-0	4.481-2	2.083-1	2.847-1	2.847-1	1.684-1	3.892-0
3.500-0	7.188-1	7.283-2	2.338-1	8.888-4	1.548-0	3.788-2	2.197-1	3.348-1	3.348-1	2.688-1	4.879-0
4.000-0	6.827-1	7.472-2	2.444-1	5.258-4	1.388-0	3.272-2	2.382-1	3.849-1	3.849-1	2.382-1	5.957-0
4.500-0	6.579-1	7.749-2	2.534-1	4.195-4	1.263-0	2.878-2	2.485-1	4.350-1	4.350-1	2.888-1	6.513-0
5.000-0	6.488-1	7.987-2	2.688-1	3.388-4	1.139-0	2.588-2	2.487-1	4.851-1	4.851-1	3.422-1	7.487-0
5.500-0	6.373-1	8.182-2	2.828-1	2.781-4	1.072-0	2.311-2	2.347-1	5.352-1	5.352-1	3.888-1	8.397-0
6.000-0	6.263-1	8.389-2	2.749-1	2.357-4	9.998-4	2.108-2	2.882-1	5.852-1	5.852-1	4.347-1	9.349-0

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 196.97		DENSITY 19.32 GRAMS/CC									
ENERGY	TOTAL MFP	CROSS SECTION (BARNS)						MEV/COLLISION			
MEV	CM	CM*CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. *FLOR	K.E.	BREMSSTR	K.E.
6.500+ 1	6.126- 1	6.406- 2	2.750+ 1	1.991- 4	9.349- 1	1.926- 2	2.825+ 1	6.353+ 1	6.353+ 1	4.81+ 1	1.032+ 2
7.000+ 1	6.080- 1	6.341- 2	2.734+ 1	1.717- 4	8.784- 1	1.776- 2	2.704+ 1	6.853+ 1	6.853+ 1	5.210+ 1	1.131+ 2
8.000+ 1	5.888- 1	6.791- 2	2.875+ 1	1.315- 4	7.877- 1	1.535- 2	2.735+ 1	7.854+ 1	7.854+ 1	6.244+ 1	1.334+ 2
1.000+ 2	5.805- 1	9.235- 2	3.020+ 1	8.414- 5	6.538- 1	1.203- 2	2.934+ 1	9.855+ 1	9.855+ 1	8.175+ 1	1.758+ 2

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Form Factors

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SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0
5.000	3	9.997	1	2.025	4	1.500	1	9.019	1	0.703	2
1.000	2	9.993	1	7.846	4	1.750	1	8.784	1	1.043	1
1.500	2	9.987	1	1.747	3	2.000	1	8.502	1	1.210	1
2.000	2	9.978	1	3.073	3	2.500	1	7.980	1	1.532	1
2.500	2	9.963	1	4.742	3	3.000	1	7.402	1	1.842	1
3.000	2	9.947	1	6.724	3	4.000	1	6.800	1	2.446	1
4.000	2	9.907	1	1.151	2	5.000	1	5.894	1	3.016	1
5.000	2	9.858	1	1.718	2	6.000	1	5.281	1	3.521	1
7.000	2	9.732	1	3.022	2	7.000	1	4.782	1	3.948	1
9.000	2	9.579	1	4.433	2	8.000	1	4.329	1	4.313	1
1.000	1	9.486	1	5.149	2	9.000	1	3.919	1	4.633	1

12/07/78

ENDL Evaluated Photon Cross Sections

80-Hg

12/07/78

Energy Deposition

80-Hg

12/07/78

ENDL Evaluated Photon Data

80-Hg

ATOMIC WEIGHT 200.99										DENSITY 13.95 GRAMS/CC											
ENERGY		TOTAL NFP		CROSS SECTION (BARNS)						REV/COLLISION		REV/CM									
KEV	CH	CH/CM/CH		TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.-FLOV	K.E.	BREMSSTR	K.E.									
1.000	4	1.319	5.297	3	1.699	8	4.238	3	1.482	2	1.880	8	9.877	5	9.877	5	4.977	10	7.587	0	
1.103	4	1.870	3.946	3	1.314	8	4.255	3	1.805	2	1.310	8	1.098	4	1.098	4	6.044	10	5.878	0	
1.117	4	1.867	4.426	3	1.478	8	4.255	3	1.852	2	1.470	8	1.114	4	1.114	4	6.202	10	6.680	0	
1.196	4	1.776	4.158	3	1.389	8	4.254	3	2.125	2	1.380	8	1.192	4	1.192	4	7.108	10	6.714	0	
1.210	4	1.513	4.876	3	1.824	8	4.254	3	2.178	2	1.620	6	1.207	4	1.207	4	7.282	10	7.974	0	
1.250	4	1.574	4.689	3	1.582	8	4.254	3	2.323	2	1.958	6	1.247	4	1.247	4	7.770	10	7.921	0	
1.500	4	1.988	3.768	3	1.739	8	4.253	3	3.354	2	1.250	6	1.495	4	1.495	4	1.117	9	7.628	0	
1.750	4	1.353	5.453	3	1.816	6	4.251	3	4.585	2	1.812	6	1.748	4	1.748	4	1.524	9	1.250	1	
2.000	4	9.816	6	7.518	3	2.504	6	4.250	3	5.982	2	2.500	6	1.997	4	1.997	4	1.993	9	2.034	1
2.300	4	6.818	6	1.115	4	3.714	6	4.247	3	7.853	2	3.710	6	2.237	4	2.237	4	2.639	9	3.471	1
2.500	4	5.946	6	1.241	4	4.134	6	4.245	3	9.258	2	4.130	6	2.437	4	2.437	4	3.119	9	4.200	1
3.000	4	4.705	6	1.958	4	5.224	6	4.241	3	1.326	1	5.220	6	2.988	4	2.988	4	4.493	9	6.371	1
3.500	4	4.788	6	1.538	4	5.124	6	4.235	3	1.787	1	5.120	6	3.497	4	3.497	4	6.115	9	7.289	1
3.805	4	4.685	6	1.529	4	5.094	6	4.233	3	1.953	1	5.090	6	3.682	4	3.682	4	6.705	9	7.989	1
3.878	4	4.583	6	1.610	4	5.389	6	4.233	3	1.968	1	5.380	6	3.676	4	3.676	4	6.757	9	8.022	1
4.000	4	4.769	6	1.974	4	5.194	6	4.230	3	2.314	1	5.150	6	3.997	4	3.997	4	7.967	9	8.390	1
4.500	4	5.232	6	1.410	4	4.898	6	4.222	3	2.892	1	4.894	6	4.496	4	4.496	4	1.011	8	8.592	1
5.000	4	5.685	6	1.298	4	4.324	6	4.215	3	3.531	1	4.320	6	4.995	4	4.995	4	1.248	8	8.787	1
5.500	4	6.413	6	1.151	4	3.833	6	4.205	3	4.211	1	3.829	6	5.494	4	5.494	4	1.509	8	8.968	1
6.000	4	7.158	6	1.031	4	3.494	6	4.197	3	4.945	1	3.430	6	5.993	4	5.993	4	1.795	8	9.372	1
6.056	4	7.242	6	1.019	4	3.399	6	4.195	3	5.027	1	3.390	6	6.049	4	6.049	4	1.629	8	9.352	1
6.070	4	6.802	6	1.095	4	3.614	6	4.195	3	5.047	1	3.610	6	6.063	4	6.063	4	1.838	8	9.914	1
6.500	4	7.351	6	1.004	4	3.344	6	4.184	3	5.697	1	3.340	6	6.492	4	6.492	4	2.107	8	9.831	1
7.000	4	7.995	6	9.859	3	3.074	6	4.173	3	6.494	1	3.070	6	6.990	4	6.990	4	2.443	8	9.742	1
7.985	4	9.933	6	7.428	3	2.153	6	4.153	3	8.216	1	2.470	6	7.983	4	7.983	4	3.188	8	9.034	1
8.000	4	9.933	6	7.428	3	2.474	6	4.153	3	8.233	1	2.470	6	7.987	4	7.987	4	3.189	8	9.038	1
8.010	4	9.932	6	7.269	3	2.834	6	4.153	3	8.240	1	2.830	6	7.997	4	7.997	4	3.198	8	9.670	1
9.000	4	1.157	5	6.377	3	2.124	6	4.125	3	9.991	1	2.120	6	8.983	4	8.983	4	4.034	8	7.762	1
1.000	3	1.213	5	6.083	3	2.026	6	4.100	3	1.189	0	2.022	6	9.980	4	9.980	4	4.980	8	8.225	1
1.250	3	2.033	5	3.621	3	1.208	6	4.010	3	1.851	0	1.202	6	1.248	3	1.248	3	7.780	8	6.113	1
1.500	3	3.112	5	2.372	3	7.899	5	3.938	3	2.159	0	7.880	5	1.493	3	1.493	3	1.114	7	4.788	1
1.750	3	4.448	5	1.859	3	5.527	5	3.838	3	2.627	0	5.488	5	1.738	3	1.738	3	1.510	7	3.907	1
2.000	3	6.057	5	1.218	3	4.058	5	3.753	3	3.114	0	4.021	5	1.981	3	1.981	3	1.983	7	3.272	1
2.294	3	6.313	5	8.878	2	2.957	5	3.818	3	3.842	0	2.921	5	2.288	3	2.288	3	2.587	7	2.728	1
2.295	3	3.034	5	2.433	3	8.103	5	3.018	3	3.844	0	8.067	5	2.285	3	2.227	3	2.480	7	7.341	1
2.384	3	3.343	5	2.204	3	7.341	5	3.281	3	3.808	0	7.305	5	2.372	3	2.315	3	2.679	7	6.912	1
2.385	3	2.415	5	3.055	3	1.018	8	3.981	3	3.808	0	1.014	6	2.577	3	2.519	3	2.688	7	9.599	1
2.500	3	2.730	5	2.704	3	9.005	5	3.538	3	4.018	0	8.970	5	2.490	3	2.432	3	2.958	7	8.911	1
2.846	3	3.621	5	1.932	3	8.434	5	3.415	3	4.659	0	8.400	5	2.831	3	2.773	3	3.845	7	7.259	1
2.847	3	2.849	5	2.581	3	8.630	5	3.415	3	4.661	0	8.598	5	2.836	3	2.778	3	3.858	7	9.753	1
3.000	3	3.283	5	2.281	3	7.533	5	3.388	3	4.948	0	7.499	5	2.987	3	2.929	3	4.284	7	8.575	1
3.273	3	4.110	5	1.785	3	5.981	5	3.249	3	5.433	0	5.948	5	3.261	3	3.203	3	5.130	7	7.794	1
3.280	3	3.844	5	2.025	3	6.746	5	3.249	3	5.435	0	6.713	5	3.264	3	3.206	3	5.140	7	8.789	1
3.500	3	4.312	5	1.711	3	5.700	5	3.185	3	5.819	0	5.688	5	3.481	3	3.423	3	5.857	7	7.937	1
3.581	3	4.510	5	1.836	3	5.450	5	3.143	3	5.926	0	5.419	5	3.540	3	3.483	3	6.084	7	7.722	1
3.582	3	4.181	5	1.785	3	5.875	5	3.143	3	5.928	0	5.848	5	3.543	3	3.485	3	6.072	7	8.336	1
4.000	3	5.848	5	1.307	3	4.352	5	3.000	3	6.657	0	4.322	5	3.972	3	3.915	3	7.881	7	6.931	1
4.500	3	7.863	5	9.631	2	3.208	5	2.882	3	7.531	0	3.180	5	4.460	3	4.403	3	9.894	7	5.745	1
5.000	3	1.808	4	7.334	2	2.443	5	2.871	3	8.385	0	2.418	5	4.945	3	4.888	3	1.194	6	4.857	1
5.580	3	1.287	4	5.733	2	1.910	5	2.519	3	9.188	0	1.884	5	5.427	3	5.370	3	1.441	6	4.172	1
6.000	3	1.611	4	4.991	2	1.528	5	2.388	3	9.984	0	1.582	5	5.906	3	5.849	3	1.710	6	3.631	1
6.500	3	1.980	4	3.728	2	1.242	5	2.253	3	1.071	1	1.219	5	6.382	3	6.325	3	1.999	6	3.195	1
7.000	3	2.355	4	3.082	2	1.026	5	2.135	3	1.195	1	1.005	5	6.864	3	6.797	3	2.309	6	2.638	1
8.000	3	3.372	4	2.188	2	7.291	4	1.938	3	1.251	1	7.088	4	7.788	3	7.730	3	2.906	6	2.833	1
1.000	2	2.955	4	1.239	2	4.128	4	1.603	3	1.942	1	3.988	4	9.608	3	9.552	3	4.950	6	1.604	1
1.228	2	2.162	4	7.382	1	2.452	4	1.294	3	1.788	1	2.321	4	1.183	2	1.157	2	8.891	6	1.154	1
1.229	2	2.312	4	1.712	2	5.781	4	1.294	3	1.788	1	5.570	4	1.206	2	8.957	3	4.010	6	2.077	1
1.230	2	2.503	4	1.838	2	5.458	4	1.278	3	1.788	1	5.330	4	1.221	2	9.153	3	4.196	6	2.835	1
1.421	2	2.192	4	1.182	2	3.978	4	1.112	3	1.943	1	3.857	4	1.380	2	1.078	2	5.803	6	1.740	1
1.421	2	2.428	4	1.887	2	5.551	4	1.112	3	1.943	1	5.438	4	1.392	2	1.087	2	5.902	6	2.494	1
1.484	2	2.943	4	1.433	2	4.973	4	1.082	3	2.088	1	4.885	4	1.452	2	1.147	2	6.579	6	2.321	1
1.485	2	2.274	4	1.727	2	5.751	4	1.082	3	2.088	1	5.843	4	1.457	2	1.151	2	6.620	6	2.893	1
1.588	2	2.387	4	1.882	2	5.883	4	1.051	3	2.014	1	5.488	4	1.471	2	1.188	2	6.758	6	2.857	1

400

80-Hg

12/07/78

ENDL Evaluated Photon Data

80-Hg

ATOMIC WEIGHT 200.59				DENSITY 13.55 GRAMS/CC			
ENERGY	TOTAL NFP	CROSS SECTION (BARN)				NEV/COLLISION	NEV/CM
MEV	CM CM ² /CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E.-FLOR	K.E. BREMSSTR
1.750 -2	8.492 -4	1.137 -2	3.767 -4	8.894 -2	2.190 -1	3.898 -4	1.709 -2
2.000 -2	9.108 -4	8.103 -2	2.899 -4	7.362 -2	2.325 -1	2.823 -4	1.944 -2
2.500 -2	1.622 -3	4.951 -1	1.516 -4	5.475 -2	2.999 -1	1.458 -4	2.408 -2
3.000 -2	2.591 -3	1.804 -1	9.488 -3	4.298 -2	2.818 -1	9.028 -3	2.956 -2
3.500 -2	3.879 -3	1.803 -1	8.337 -3	3.443 -2	2.929 -1	5.984 -3	3.225 -2
4.000 -2	5.488 -3	1.345 -1	4.478 -3	2.840 -2	3.087 -1	4.184 -3	3.721 -2
4.500 -2	7.481 -3	9.865 -2	3.283 -3	2.186 -2	3.186 -1	3.018 -3	4.137 -2
5.000 -2	9.849 -3	7.493 -2	2.488 -3	2.004 -2	3.239 -1	2.263 -3	4.940 -2
5.500 -2	1.265 -2	5.833 -2	1.943 -3	1.720 -2	3.282 -1	1.738 -3	4.929 -2
6.000 -2	1.987 -2	4.850 -2	1.949 -3	1.486 -2	3.323 -1	1.366 -3	5.305 -2
6.500 -2	1.926 -2	3.769 -2	1.223 -3	1.310 -2	3.339 -1	1.091 -3	5.088 -2
7.000 -2	2.374 -2	3.109 -2	1.038 -3	1.159 -2	3.355 -1	8.801 -4	6.018 -2
8.000 -2	3.341 -2	2.203 -2	7.358 -3	9.288 -3	3.382 -1	5.091 -2	6.670 -2
8.310 -2	3.682 -2	2.004 -2	6.676 -3	8.703 -3	3.380 -1	5.488 -2	6.951 -2
8.310 -2	6.572 -3	6.610 -2	2.888 -3	8.702 -3	3.380 -1	2.747 -3	7.973 -2
1.000 -1	1.427 -3	5.170 -2	1.782 -3	6.348 -3	3.380 -1	1.825 -3	9.485 -2
1.250 -1	2.539 -3	2.851 -2	9.458 -3	4.261 -3	3.284 -1	8.743 -3	1.158 -2
1.500 -1	4.188 -3	2.771 -2	5.898 -3	3.078 -3	3.216 -1	5.269 -3	1.356 -2
1.750 -1	6.103 -3	2.208 -2	4.024 -3	2.329 -3	3.117 -1	3.480 -3	1.542 -2
2.000 -1	8.432 -3	6.752 -2	2.915 -3	1.830 -3	3.033 -1	2.429 -3	1.713 -2
2.500 -1	1.386 -2	5.316 -2	1.771 -3	1.212 -3	2.852 -1	1.384 -3	2.020 -2
3.000 -1	2.033 -2	5.310 -2	1.209 -3	6.852 -3	2.712 -1	8.515 -3	2.299 -2
3.500 -1	2.717 -2	2.717 -2	9.049 -3	6.486 -3	2.575 -1	5.827 -3	2.551 -2
4.000 -1	3.433 -2	2.150 -2	7.180 -3	5.025 -3	2.483 -1	4.195 -3	2.779 -2
4.500 -1	4.141 -2	1.782 -2	5.936 -3	4.010 -3	2.357 -1	3.179 -3	3.003 -2
5.000 -1	4.844 -2	1.523 -2	5.073 -3	3.278 -3	2.265 -1	2.480 -3	3.220 -2
5.500 -1	5.522 -2	1.336 -2	4.452 -3	2.727 -3	2.180 -1	1.998 -3	3.440 -2
6.000 -1	6.131 -2	1.194 -2	3.977 -3	2.308 -3	2.105 -1	1.641 -3	3.659 -2
6.500 -1	6.824 -2	1.085 -2	3.613 -3	1.973 -3	2.034 -1	1.381 -3	3.888 -2
7.000 -1	7.438 -2	9.883 -3	3.319 -3	1.709 -3	1.970 -1	1.178 -3	4.120 -2
8.000 -1	8.530 -2	8.631 -3	2.875 -3	1.318 -3	1.860 -1	8.834 -4	4.594 -2
1.000 -0	1.057 -0	6.581 -2	2.325 -3	8.515 -3	1.677 -1	5.630 -3	5.619 -2
1.022 -0	1.077 -0	6.851 -2	2.282 -3	8.159 -3	1.650 -1	5.407 -3	5.739 -2
1.250 -0	1.273 -0	5.796 -2	1.931 -3	5.488 -3	1.503 -1	3.722 -3	6.015 -2
1.500 -0	1.426 -0	5.174 -2	1.723 -3	3.829 -3	1.388 -1	2.824 -3	6.389 -2
1.750 -0	1.544 -0	4.781 -2	1.592 -3	2.820 -3	1.259 -1	1.980 -3	6.608 -2
2.000 -0	1.632 -0	4.523 -2	1.506 -3	2.183 -3	1.189 -1	1.956 -3	6.837 -2
2.044 -0	1.647 -0	4.482 -2	1.493 -3	2.072 -3	1.155 -1	1.500 -3	6.878 -2
2.500 -0	1.738 -0	4.247 -2	1.415 -3	1.385 -3	1.028 -1	1.074 -3	6.858 -2
3.000 -0	1.775 -0	4.157 -2	1.385 -3	9.852 -3	9.209 -3	8.074 -3	6.862 -2
3.500 -0	1.798 -0	4.122 -2	1.373 -3	7.097 -3	8.388 -3	6.494 -3	6.867 -2
4.000 -0	1.785 -0	4.133 -2	1.377 -3	5.437 -3	7.686 -3	5.315 -3	6.865 -2
4.500 -0	1.770 -0	4.188 -2	1.388 -3	4.297 -3	7.119 -3	4.458 -3	6.877 -2
5.000 -0	1.794 -0	4.207 -2	1.401 -3	3.482 -3	6.840 -3	3.843 -3	6.894 -2
5.500 -0	1.748 -0	4.227 -2	1.408 -3	2.878 -3	6.229 -3	3.399 -3	6.922 -2
6.000 -0	1.731 -0	4.263 -2	1.420 -3	2.419 -3	5.870 -3	3.039 -3	6.952 -2
6.500 -0	1.712 -0	4.311 -2	1.436 -3	2.062 -3	5.595 -3	2.742 -3	6.981 -2
7.000 -0	1.689 -0	4.369 -2	1.455 -3	1.778 -3	5.276 -3	2.492 -3	7.011 -2
8.000 -0	1.637 -0	4.508 -2	1.502 -3	1.362 -3	4.803 -3	2.099 -3	7.089 -2
1.000 -1	1.524 -0	4.842 -2	1.613 -3	8.715 -3	4.091 -3	1.575 -3	7.187 -2
1.250 -1	1.438 -0	5.133 -2	1.710 -3	5.578 -3	3.471 -3	1.234 -3	7.350 -2
1.500 -1	1.358 -0	5.442 -2	1.813 -3	3.873 -3	3.028 -3	1.010 -3	7.499 -2
1.750 -1	1.278 -0	5.773 -2	1.823 -3	2.847 -3	2.893 -3	8.532 -4	7.645 -2
2.000 -1	1.218 -0	6.087 -2	1.821 -3	2.178 -3	2.431 -3	7.371 -4	7.770 -2
2.500 -1	1.126 -0	6.582 -2	1.882 -3	1.395 -3	2.043 -3	5.773 -4	7.972 -2
3.000 -1	1.049 -0	6.838 -2	2.311 -3	9.884 -4	1.770 -3	4.728 -4	8.129 -2
3.500 -1	1.021 -0	7.226 -2	2.407 -3	7.115 -4	1.585 -3	3.983 -4	8.349 -2
4.000 -1	9.645 -1	7.498 -2	2.487 -3	5.448 -4	1.486 -3	3.450 -4	8.551 -2
4.500 -1	9.493 -1	7.774 -2	2.588 -3	4.304 -4	1.279 -3	3.032 -4	8.751 -2
5.000 -1	9.733 -1	7.983 -2	2.683 -3	3.487 -4	1.174 -3	2.702 -4	8.951 -2
5.500 -1	9.058 -1	8.149 -2	2.714 -3	2.881 -4	1.086 -3	2.434 -4	9.152 -2
6.000 -1	8.895 -1	8.287 -2	2.783 -3	2.421 -4	1.011 -3	2.213 -4	9.352 -2
6.500 -1	8.747 -1	8.437 -2	2.810 -3	2.083 -4	9.487 -4	2.027 -4	9.553 -2

401

80-Hg

12/07/78

ENDL Evaluated Photon Data

80-Hg

ATOMIC WEIGHT 200.59				DENSITY 13.55 GRAMS/CC							
ENERGY	TOTAL MFP		CROSS SECTION (BARNs)					MEV/COLLISION			MEV/CM
MEV	CM	CM*CM/CM	TOTAL	COHERENT	INCOHER	PHOTOL	PAIR PROD	K.E.*FLOR	K.E.	BREMSSTR	K.E.
7.000+ 1	0.611- 1	0.571- 2	2.855+ 1	1.778- 4	0.908- 1	1.888- 2	2.784+ 1	0.823+ 1	0.853+ 1	5.305+ 1	7.928+ 1
8.000+ 1	0.388- 1	0.362- 2	2.938+ 1	1.382- 4	7.977- 1	1.815- 2	2.857+ 1	7.824+ 1	7.824+ 1	5.280+ 1	9.388+ 1
1.000+ 2	7.983- 1	9.288- 2	3.887+ 1	8.717- 5	6.621- 1	1.284- 2	3.020+ 1	9.826+ 1	9.826+ 1	8.193+ 1	1.238+ 2

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Form Factors

80-Hg

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.250-1	9.243-1	7.288-2	1.000-0	3.577-1	4.913-1	1.000-1	2.093-2	9.738-1
5.000-3	9.997-1	2.125-4	1.500-1	8.998-1	8.948-2	1.250-0	2.826-1	5.953-1	1.500-1	1.488-2	9.887-1
1.000-2	9.993-1	8.825-4	1.750-1	8.744-1	1.029-1	1.500-0	2.322-1	6.108-1	2.000-1	1.092-2	9.928-1
1.500-2	9.988-1	1.940-3	2.000-1	8.488-1	1.221-1	2.500-0	1.785-1	7.008-1	5.000-1	1.048-3	1.000-0
2.000-2	9.973-1	3.414-3	2.500-1	7.978-1	1.539-1	3.500-0	1.458-1	7.852-1	8.000-1	5.388-4	1.000-0
2.500-2	9.951-1	5.285-3	3.000-1	7.480-1	1.847-1	5.000-0	1.188-1	8.101-1	1.000-2	2.897-4	1.000-0
3.000-2	9.944-1	7.481-3	4.000-1	6.811-1	2.438-1	3.500-0	9.188-2	8.485-1	1.000-3	5.132-7	1.000-0
4.000-2	9.902-1	1.275-2	5.000-1	5.890-1	2.995-1	4.000-0	8.011-2	8.871-1	1.000-6	8.527-15	1.000-0
5.000-2	9.851-1	1.898-2	6.000-1	5.297-1	3.501-1	5.000-0	5.697-2	9.031-1	1.000-9	8.774-23	1.000-0
7.000-2	9.719-1	3.308-2	7.000-1	4.782-1	3.935-1	6.000-0	4.707-2	9.285-1			
9.000-2	9.581-1	4.784-2	8.000-1	4.348-1	4.304-1	7.000-0	3.824-2	9.485-1			
1.000-1	9.475-1	5.511-2	9.000-1	3.943-1	4.624-1	8.000-0	3.267-2	9.990-1

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ENDL Evaluated Photon Cross Sections

81-Tl

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Energy Deposition

81-T1

81-T1

ATOMIC WEIGHT 204.37							DENSITY 11.05 GRAMS/CC				
ENERGY		TOTAL HPF		CROSS SECTION (BARNS)				NEUTRON COLLISION		MEV/CM	
MEV	CH	CH/CH/ON	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	SPRHSSTR	K.E.
1.000 -	1.08 -	7.615 - 3	2.590 - 6	4.388 - 3	1.573 - 2	2.590 - 6		9.983 - 5	9.983 - 5	5.045 - 10	9.008 - 0
1.198 -	2.82 -	3.988 - 3	1.380 - 6	4.381 - 3	2.290 - 2	1.380 - 6		1.198 - 4	1.198 - 4	7.199 - 10	5.513 - 0
1.210 -	1.958 -	4.315 - 3	1.080 - 6	4.381 - 3	2.303 - 2	1.080 - 6		1.208 - 4	1.208 - 4	7.398 - 10	6.188 - 0
1.250 -	2.883 -	4.080 - 3	1.080 - 6	4.381 - 3	2.498 - 2	1.080 - 6		1.248 - 4	1.248 - 4	7.880 - 10	6.040 - 0
1.325 -	2.358 -	3.970 - 3	1.210 - 6	4.380 - 3	2.685 - 2	1.210 - 6		1.351 - 4	1.351 - 4	9.242 - 10	5.729 - 0
1.370 -	1.988 -	4.280 - 3	1.050 - 6	4.380 - 3	2.953 - 2	1.050 - 6		1.388 - 4	1.388 - 4	9.945 - 10	6.837 - 0
1.500 -	2.780 -	4.000 - 3	1.000 - 6	4.378 - 3	3.400 - 2	1.000 - 6		1.495 - 4	1.495 - 4	1.137 - 09	6.800 - 0
1.580 -	1.711 -	4.000 - 3	1.000 - 6	4.378 - 3	3.400 - 2	1.000 - 6		1.595 - 4	1.595 - 4	1.262 - 09	6.800 - 0
2.000 -	1.342 -	6.880 - 3	2.130 - 6	4.358 - 3	6.240 - 2	2.130 - 6		1.998 - 4	1.998 - 4	2.017 - 09	1.488 - 0
2.300 -	8.773 -	6.810 - 3	3.280 - 6	4.353 - 3	6.210 - 2	3.280 - 6		2.297 - 4	2.297 - 4	2.671 - 09	2.618 - 0
2.500 -	7.781 -	1.083 - 4	3.708 - 6	4.351 - 3	9.675 - 2	3.708 - 6		2.487 - 4	2.487 - 4	3.157 - 09	3.234 - 0
3.000 -	5.899 -	1.445 - 4	4.800 - 6	4.346 - 3	1.380 - 1	4.800 - 6		2.997 - 4	2.997 - 4	4.948 - 09	5.133 - 0
3.500 -	5.950 -	1.418 - 4	4.813 - 6	4.339 - 3	1.863 - 1	4.809 - 6		3.497 - 4	3.497 - 4	6.190 - 09	5.877 - 0
3.937 -	6.036 -	1.388 - 4	4.740 - 6	4.339 - 3	2.337 - 1	4.740 - 6		3.933 - 4	3.933 - 4	7.832 - 09	6.518 - 0
3.951 -	5.757 -	1.480 - 4	4.870 - 6	4.339 - 3	2.353 - 1	4.970 - 6		3.988 - 4	3.948 - 4	7.889 - 09	6.857 - 0
4.000 -	5.839 -	1.445 - 4	4.800 - 6	4.333 - 3	2.410 - 1	4.900 - 6		3.998 - 4	3.998 - 4	8.086 - 09	6.804 - 0
4.500 -	6.258 -	1.380 - 4	4.578 - 6	4.324 - 3	3.010 - 1	4.570 - 6		4.498 - 4	4.498 - 4	1.023 - 08	7.187 - 0
5.000 -	6.653 -	1.288 - 4	4.300 - 6	4.318 - 3	3.672 - 1	4.300 - 6		4.995 - 4	4.995 - 4	1.263 - 08	7.507 - 0
5.500 -	7.431 -	1.138 - 4	3.890 - 6	4.308 - 3	4.375 - 1	3.890 - 6		5.494 - 4	5.494 - 4	1.528 - 08	7.393 - 0
6.000 -	8.219 -	1.027 - 4	3.480 - 6	4.298 - 3	5.133 - 1	3.480 - 6		5.993 - 4	5.993 - 4	1.818 - 08	7.291 - 0
6.457 -	9.108 -	9.895 - 3	3.144 - 6	4.284 - 3	5.881 - 1	3.144 - 6		6.448 - 4	6.448 - 4	2.108 - 08	7.080 - 0
6.817 -	6.818 -	9.775 - 3	3.001 - 6	4.280 - 3	6.360 - 1	3.001 - 6		6.868 - 4	6.868 - 4	2.398 - 08	6.868 - 0
7.000 -	6.945 -	9.775 - 3	3.001 - 6	4.280 - 3	6.360 - 1	3.001 - 6		6.868 - 4	6.868 - 4	2.398 - 08	7.297 - 0
7.000 -	9.108 -	9.895 - 3	3.144 - 6	4.270 - 3	6.733 - 1	3.144 - 6		6.890 - 4	6.890 - 4	2.470 - 08	7.675 - 0
8.000 -	1.128 -	7.487 - 3	2.940 - 6	4.248 - 3	8.517 - 1	2.940 - 6		7.867 - 4	7.867 - 4	3.220 - 08	7.095 - 0
8.448 -	1.232 -	8.849 - 3	2.320 - 6	4.234 - 3	9.318 - 1	2.320 - 6		8.433 - 4	8.433 - 4	3.500 - 08	6.804 - 0
9.000 -	1.62 -	7.281 - 3	2.480 - 6	4.233 - 3	9.344 - 1	2.480 - 6		8.447 - 4	8.447 - 4	3.612 - 08	7.289 - 0
9.000 -	1.298 -	6.495 - 3	2.800 - 6	4.217 - 3	1.034 - 0	2.800 - 6		8.983 - 4	8.983 - 4	4.085 - 08	6.914 - 0
1.000 -	1.375 -	6.139 - 3	2.083 - 6	4.190 - 3	1.231 - 0	2.078 - 6		9.980 - 4	9.980 - 4	5.042 - 08	7.260 - 0
1.250 -	2.277 -	3.705 - 3	1.257 - 6	4.094 - 3	1.711 - 0	1.253 - 6		1.246 - 3	1.246 - 3	7.826 - 08	5.471 - 0
1.500 -	3.438 -	2.454 - 3	0.328 - 6	4.018 - 3	2.241 - 0	0.889 - 6		1.493 - 3	1.493 - 3	1.128 - 7	4.342 - 0
1.750 -	4.888 -	1.734 - 3	5.883 - 5	3.914 - 3	2.730 - 0	5.844 - 5		1.738 - 3	1.738 - 3	1.530 - 7	3.571 - 0
2.000 -	6.575 -	1.293 - 3	4.395 - 5	3.886 - 3	3.240 - 0	4.317 - 5		1.982 - 3	1.982 - 3	1.989 - 7	3.015 - 0
2.388 -	3.702 -	0.810 - 2	2.885 - 5	3.850 - 3	3.998 - 0	2.888 - 5		2.378 - 3	2.358 - 3	2.815 - 7	2.408 - 0
2.388 -	3.702 -	2.280 - 3	7.737 - 5	3.850 - 3	3.998 - 0	7.700 - 5		2.378 - 3	2.311 - 3	2.703 - 7	6.242 - 0
2.484 -	4.098 -	2.099 - 3	6.888 - 5	3.812 - 3	4.135 - 0	6.953 - 5		2.471 - 3	2.404 - 3	2.826 - 7	5.887 - 0
2.485 -	3.925 -	2.098 - 3	6.988 - 5	3.812 - 3	4.137 - 0	6.988 - 5		2.478 - 3	2.408 - 3	2.937 - 7	8.152 - 0
2.500 -	3.001 -	2.812 - 3	6.941 - 5	3.806 - 3	4.185 - 0	6.905 - 5		2.491 - 3	2.423 - 3	2.973 - 7	6.074 - 0
2.925 -	4.840 -	1.818 - 3	6.173 - 5	3.480 - 3	5.030 - 0	6.138 - 5		2.938 - 3	2.877 - 3	4.295 - 7	6.168 - 0
2.925 -	3.490 -	2.000 - 3	5.449 - 5	3.449 - 3	5.030 - 0	5.435 - 5		2.938 - 3	2.877 - 3	4.295 - 7	1.88 - 0
3.000 -	3.395 -	2.374 - 3	7.888 - 5	3.438 - 3	5.114 - 0	7.831 - 5		2.987 - 3	2.920 - 3	4.318 - 7	8.182 - 0
3.915 -	5.038 -	1.675 - 3	5.884 - 5	3.284 - 3	5.840 - 0	5.851 - 5		3.395 - 3	3.328 - 3	5.607 - 7	6.808 - 0
3.918 -	4.467 -	1.889 - 3	6.412 - 5	3.284 - 3	5.840 - 0	6.379 - 5		3.398 - 3	3.332 - 3	5.618 - 7	7.429 - 0
3.908 -	4.758 -	1.774 - 3	6.018 - 5	3.233 - 3	5.988 - 0	5.988 - 5		3.481 - 3	3.414 - 3	5.900 - 7	7.175 - 0
3.899 -	5.495 -	1.538 - 3	5.212 - 5	3.183 - 3	6.338 - 0	5.180 - 5		3.677 - 3	3.610 - 3	6.595 - 7	6.589 - 0
3.700 -	5.034 -	1.657 - 3	5.625 - 5	3.162 - 3	6.340 - 0	5.590 - 5		3.678 - 3	3.612 - 3	6.604 - 7	7.091 - 0
4.000 -	6.240 -	1.352 - 3	4.280 - 5	3.088 - 3	6.888 - 0	4.599 - 5		3.973 - 3	3.908 - 3	7.723 - 7	6.280 - 0
4.500 -	6.475 -	9.957 - 2	3.378 - 5	2.898 - 3	7.898 - 0	3.390 - 5		4.481 - 3	4.395 - 3	9.773 - 7	5.185 - 0
5.000 -	1.114 -	7.574 - 2	2.570 - 5	2.734 - 3	8.527 - 0	2.943 - 5		4.947 - 3	4.880 - 3	1.205 - 6	4.380 - 0
5.500 -	1.427 -	5.915 - 2	2.807 - 5	2.980 - 3	9.323 - 0	1.988 - 5		5.429 - 3	5.363 - 3	1.495 - 6	3.798 - 0
6.000 -	1.787 -	4.782 - 2	1.803 - 5	2.446 - 3	1.011 - 1	1.578 - 5		5.908 - 3	5.842 - 3	1.727 - 6	3.289 - 0
6.500 -	2.198 -	3.846 - 2	1.303 - 5	2.308 - 3	1.088 - 1	1.288 - 5		6.384 - 3	6.318 - 3	2.050 - 6	2.875 - 0
7.000 -	2.680 -	3.172 - 2	1.878 - 5	2.188 - 3	1.198 - 1	1.69 - 5		6.857 - 3	6.781 - 3	2.334 - 6	2.953 - 0
8.000 -	6.658 -	2.298 - 2	7.637 - 4	1.887 - 3	1.395 - 1	4.937 - 4		7.791 - 3	7.725 - 3	3.020 - 6	2.088 - 0
1.000 -	6.638 -	1.271 - 2	4.314 - 4	1.648 - 3	1.648 - 1	6.815 - 4		8.615 - 3	8.548 - 3	4.815 - 6	1.438 - 0
1.000 -	1.171 -	3.211 - 2	2.468 - 4	1.388 - 3	1.642 - 1	2.314 - 4		7.188 - 3	7.178 - 3	2.005 - 6	2.005 - 0
1.000 -	1.268 -	3.080 - 2	1.271 - 4	1.299 - 3	1.319 - 1	2.240 - 4		1.186 - 2	1.186 - 2	2.758 - 6	9.847 - 0
1.000 -	2.082 -	1.887 - 2	5.788 - 4	1.280 - 3	1.818 - 1	5.985 - 4		1.237 - 2	9.873 - 3	4.185 - 6	1.814 - 0
1.478 -	7.335 -	1.151 - 2	3.885 - 4	1.165 - 3	2.867 - 1	3.788 - 4		1.427 - 2	1.100 - 2	8.121 - 6	1.980 - 0
1.478 -	2.348 -	1.888 - 2	5.457 - 4	1.165 - 3	2.867 - 1	5.348 - 4		1.440 - 2	1.139 - 2	8.265 - 6	2.114 - 0
1.988 -	5.329 -	1.382 - 2	5.178 - 4	1.082 - 3	2.634 - 1	5.888 - 4		1.488 - 2	1.188 - 2	8.933 - 6	2.098 - 0
1.578 -	2.682 -	1.448 - 2	6.880 - 4	1.082 - 3	2.888 - 1	4.788 - 4		1.581 - 2	1.171 - 2	8.878 - 6	1.887 - 0
1.578 -	2.588 -	1.888 - 2	5.848 - 4	1.082 - 3	2.888 - 1	5.542 - 4		1.593 - 2	1.174 - 2	8.878 - 6	2.317 - 0

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 804.37		DENSITY 11.05 GRAMS/CC									
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARN)						NEUTRON COLLISION		
	CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOE	PAIR PROD	K.E. *FLOR	K.E.	BREMSSTR	MEV/CM
1.750-2	7.131-4	1.183-2	4.018-4	8.848-2	2.211-1	3.324-4		1.710-2	1.381-2	9.842-8	1.938-1
2.030-2	1.008-2	8.373-1	2.842-4	7.988-2	2.377-1	2.704-4		1.845-2	1.617-2	1.323-5	1.805-1
2.580-2	1.804-2	4.678-1	1.587-4	5.841-2	2.623-1	1.558-4		2.457-2	2.083-2	2.133-5	1.134-1
3.000-2	2.898-2	2.914-1	8.988-3	4.427-2	2.843-1	9.419-3		2.898-2	2.535-2	3.253-5	8.780-0
3.500-2	4.332-2	1.848-1	8.812-3	3.948-2	2.888-1	8.227-3		3.297-2	2.980-2	4.488-5	6.878-0
4.000-2	6.128-2	1.378-1	4.675-3	2.868-2	3.118-1	4.351-3		3.785-2	3.411-2	5.880-5	5.538-0
4.500-2	8.338-2	1.013-1	3.438-3	2.437-2	3.197-1	3.183-3		4.143-2	3.833-2	7.421-5	4.802-0
5.000-2	1.094-2	7.713-0	2.618-3	2.088-2	3.271-1	2.378-3		4.948-2	4.242-2	9.088-5	3.877-0
5.500-2	1.411-2	6.025-0	2.045-3	1.775-2	3.315-1	1.834-3		4.942-2	4.640-2	1.087-4	3.313-0
6.000-2	1.732-2	4.818-0	1.635-3	1.544-2	3.357-1	1.447-3		5.323-2	5.025-2	1.275-4	2.888-0
6.500-2	2.152-2	3.981-0	1.331-3	1.352-2	3.374-1	1.162-3		5.693-2	5.399-2	1.471-4	2.508-0
7.000-2	2.630-2	3.246-0	1.101-3	1.186-2	3.389-1	9.480-2		6.050-2	5.760-2	1.674-4	2.215-0
8.000-2	3.638-2	2.320-0	7.672-2	9.581-1	3.418-1	6.572-2		6.723-2	6.442-2	2.094-4	1.771-0
8.553-2	4.222-2	1.983-0	6.881-2	8.250-1	3.414-1	5.485-2		7.075-2	6.799-2	2.332-4	1.581-0
8.553-2	1.028-2	8.211-0	2.787-3	8.250-1	3.414-1	2.887-3		8.280-2	7.915-2	2.950-4	2.350-0
1.000-1	1.599-2	5.447-0	1.845-3	6.250-1	3.405-1	1.765-3		9.488-2	3.771-2	7.184-4	5.434-0
1.250-1	2.735-2	3.052-0	1.038-3	4.400-1	3.320-1	9.588-2		1.184-2	6.044-2	1.844-4	2.188-0
1.500-1	4.430-2	1.918-0	6.508-2	3.178-1	3.253-1	5.885-2		1.388-2	6.215-2	3.403-4	1.887-0
1.750-1	6.444-2	1.310-0	4.444-2	2.408-1	3.153-1	3.889-2		1.557-2	1.028-2	5.326-4	1.598-0
2.000-1	8.894-2	9.488-1	3.280-2	1.890-1	3.088-1	2.724-2		1.735-2	1.224-2	7.335-4	1.378-0
2.500-1	1.477-1	5.713-1	1.939-2	1.252-1	2.885-1	1.325-2		2.061-2	1.588-2	1.262-3	1.073-0
3.000-1	2.181-1	3.889-1	1.313-2	8.939-1	2.744-1	9.493-1		2.343-2	1.908-2	1.822-3	8.740-1
3.500-1	2.944-1	2.888-1	9.728-1	6.882-1	2.608-1	6.453-1		2.601-2	2.200-2	2.424-3	7.474-1
4.000-1	3.753-1	2.249-1	7.831-1	5.194-1	2.493-1	4.619-1		2.835-2	2.489-2	3.048-3	5.579-1
4.500-1	4.583-1	1.849-1	6.278-1	4.146-1	2.385-1	3.476-1		3.081-2	2.680-2	3.712-3	5.575-1
5.000-1	5.375-1	1.570-1	5.328-1	3.389-1	2.293-1	2.698-1		3.278-2	2.972-2	4.404-3	5.529-1
5.500-1	6.180-1	1.370-1	4.849-1	2.820-1	2.207-1	2.180-1		3.486-2	3.215-2	5.150-3	5.220-1
6.000-1	6.958-1	1.218-1	4.134-1	2.384-1	2.131-1	1.784-1		3.713-2	3.455-2	5.941-3	4.988-1
6.500-1	7.875-1	1.102-1	3.741-1	2.041-1	2.059-1	1.478-1		3.940-2	3.701-2	6.806-3	4.834-1
7.000-1	8.380-1	1.009-1	3.488-1	1.787-1	1.924-1	1.285-1		4.188-2	3.948-2	7.730-3	4.721-1
8.000-1	9.878-1	8.702-0	2.553-1	1.384-1	1.883-1	9.339-0		4.635-2	4.444-2	9.778-3	4.982-1
1.000-0	1.208-0	8.987-2	2.374-1	8.810-1	1.898-1	5.884-0		5.048-2	5.499-2	1.488-2	4.553-1
1.028-0	1.259-0	8.885-2	2.330-1	8.442-1	1.880-1	5.851-0	1.000-8	5.788-2	5.622-2	1.258-2	4.574-1
1.250-0	1.455-0	5.788-2	1.888-1	5.880-1	1.522-1	3.881-0	5.382-3	7.045-2	8.885-2	2.347-2	4.759-1
1.500-0	1.631-0	5.174-2	1.758-1	3.583-1	1.385-1	2.775-0	5.377-1	8.388-2	8.300-2	3.347-2	5.089-1
1.750-0	1.788-0	4.778-2	1.622-1	2.919-1	1.275-1	2.071-0	1.107-0	9.632-2	9.795-2	4.591-2	5.524-1
2.000-0	1.957-0	4.520-2	1.534-1	2.279-1	1.183-1	1.828-0	1.851-0	1.139-0	1.133-0	8.144-2	6.067-1
2.044-0	1.894-0	4.479-2	1.520-1	2.145-1	1.188-1	1.588-0	1.727-0	1.188-0	1.162-0	6.494-2	6.187-1
2.500-0	1.988-0	4.245-2	1.441-1	1.437-1	1.040-1	1.122-0	2.738-0	1.403-0	1.478-0	1.030-1	7.438-1
3.000-0	2.030-0	4.158-2	1.410-1	9.993-2	9.324-0	8.431-0	3.838-0	1.885-0	1.881-0	1.602-1	9.185-1
3.500-0	2.047-0	4.123-2	1.389-1	7.348-2	8.472-0	6.738-0	4.771-0	2.273-0	2.270-0	2.341-1	1.108-0
4.000-0	2.041-0	4.134-2	1.403-1	5.629-2	7.782-0	5.548-0	5.637-0	2.703-0	2.700-0	3.248-1	1.323-0
4.500-0	2.034-0	4.186-2	1.415-1	4.448-2	7.208-0	4.647-0	6.431-0	3.148-0	3.148-0	4.321-1	1.554-0
5.000-0	2.038-0	4.208-2	1.428-1	3.885-2	6.722-0	4.007-0	7.180-0	3.603-0	3.602-0	5.555-1	1.798-0
5.500-0	1.938-0	4.268-2	1.435-1	2.980-2	6.305-0	3.945-0	7.888-0	4.086-0	4.084-0	8.835-1	2.037-0
6.000-0	1.878-0	4.285-2	1.447-1	2.505-2	5.943-0	3.170-1	8.190-0	4.538-0	4.534-0	8.485-1	2.298-0
6.500-0	1.958-0	4.314-2	1.464-1	2.135-2	5.824-0	2.880-1	6.709-0	5.011-0	5.010-0	1.014-0	2.581-0
7.000-0	1.930-0	4.373-2	1.484-1	1.841-2	5.342-0	2.800-1	9.218-0	5.482-0	5.491-0	1.195-0	2.845-0
8.000-0	1.870-0	4.512-2	1.531-1	1.410-2	4.882-0	2.190-1	1.022-1	6.488-0	6.485-0	1.594-0	3.457-0
1.000-1	1.741-0	4.847-2	1.845-1	9.023-3	4.142-0	1.843-1	1.213-1	8.444-0	8.444-0	2.529-0	4.850-0
1.250-1	1.842-0	5.141-2	1.745-1	5.777-3	3.514-0	1.288-1	1.380-1	1.093-1	1.093-1	3.893-0	6.878-0
1.500-1	1.948-0	5.451-2	1.690-1	4.012-3	3.088-0	1.053-1	1.533-1	1.343-1	1.343-1	5.475-0	8.875-0
1.750-1	1.438-0	5.784-2	1.883-1	2.347-3	2.727-0	8.888-2	1.881-1	1.594-1	1.594-1	7.118-0	1.092-1
2.000-1	1.388-0	6.078-2	2.083-1	2.238-3	2.481-0	7.874-2	1.808-1	1.845-1	1.845-1	8.910-0	1.329-1
2.500-1	1.288-0	6.588-2	2.288-1	1.444-3	2.889-0	6.005-2	2.015-1	2.347-1	2.347-1	1.274-1	1.888-1
3.000-1	1.213-0	6.894-2	2.380-1	1.003-3	1.782-0	4.915-2	2.176-1	2.848-1	2.848-1	1.888-1	2.347-1
3.500-1	1.185-0	7.243-2	2.428-1	7.387-4	1.585-0	4.148-2	2.295-1	3.349-1	3.349-1	2.107-1	2.875-1
4.000-1	1.123-0	7.515-2	2.528-1	5.840-4	1.484-0	3.983-2	2.404-1	3.850-1	3.850-1	2.244-1	3.488-1
4.500-1	1.833-0	7.783-2	2.645-1	4.457-4	1.295-0	3.148-2	2.512-1	4.351-1	4.351-1	2.583-1	4.018-1
5.000-1	1.253-0	8.814-2	2.715-1	3.610-4	1.188-0	2.884-2	2.788-1	4.822-1	4.822-1	3.448-1	4.887-1
5.500-1	1.833-0	8.178-2	2.773-1	2.889-4	1.098-0	2.525-2	2.884-1	5.352-1	5.352-1	3.818-1	5.182-1
6.000-1	1.814-0	8.318-2	2.823-1	2.507-4	1.884-0	2.278-2	2.718-1	5.853-1	5.853-1	4.578-1	5.788-1
6.500-1	1.878-0	8.438-2	2.871-1	2.138-4	8.588-1	2.182-2	2.773-1	6.353-1	6.353-1	4.848-1	6.388-1

407

81-T1

12/07/78

Form Factors

81-T1

SIN(Θ/2)/λ COHERENT			SIN(Θ/2)/λ INCOHERENT			SIN(Θ/2)/λ COHERENT			SIN(Θ/2)/λ INCOHERENT			SIN(Θ/2)/λ COHERENT			SIN(Θ/2)/λ INCOHERENT		
1/λ			1/λ			1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.220-1	0.500-1	7.477-2	1.000+0	3.003-1	4.904-1	1.000+1	2.118-2	9.738-1	1.000+1	2.118-2	9.738-1	1.000+1	2.118-2	9.738-1
5.000-3	9.997-1	2.202-4	1.500-1	0.503-1	9.210-2	1.250+0	2.822-1	5.538-1	1.500+1	1.401-2	9.889-1	1.500+1	1.401-2	9.889-1	1.500+1	1.401-2	9.889-1
1.000-2	9.998-1	9.012-4	1.750-1	0.717-1	1.000-1	1.500+0	2.334-1	8.084-1	2.000+1	1.101-2	9.938-1	2.000+1	1.101-2	9.938-1	2.000+1	1.101-2	9.938-1
1.500-2	9.999-1	2.000-3	2.000-1	0.400-1	1.040-1	2.000+0	1.782-1	6.979-1	5.000+1	1.918-3	1.000+0	5.000+1	1.918-3	1.000+0	5.000+1	1.918-3	1.000+0
2.000-2	9.979-1	3.518-3	2.500-1	7.974-1	1.257-1	2.500+0	1.429-1	7.087-1	8.000+1	5.634-4	1.000+0	8.000+1	5.634-4	1.000+0	8.000+1	5.634-4	1.000+0
2.500-2	9.957-1	5.418-3	3.000-1	7.495-1	1.057-1	3.000+0	1.193-1	8.088-1	1.000+2	3.055-4	1.000+0	1.000+2	3.055-4	1.000+0	1.000+2	3.055-4	1.000+0
3.000-2	9.930-1	7.087-3	4.000-1	8.084-1	2.432-1	3.500+0	9.271-2	8.409-1	1.000+3	5.008-7	1.000+0	1.000+3	5.008-7	1.000+0	1.000+3	5.008-7	1.000+0
4.000-2	9.883-1	1.367-2	5.000-1	5.000-1	2.979-1	4.000+0	8.081-2	8.088-1	1.000+6	7.087-15	1.000+0	1.000+6	7.087-15	1.000+0	1.000+6	7.087-15	1.000+0
5.000-2	9.838-1	1.942-2	6.000-1	5.308-1	3.481-1	5.000+0	5.703-2	5.019-1	1.000+9	1.112-22	1.000+0	1.000+9	1.112-22	1.000+0	1.000+9	1.112-22	1.000+0
7.000-2	9.697-1	3.379-2	7.000-1	4.000-1	3.920-1	6.000+0	4.715-2	9.274-1									
9.000-2	9.533-1	4.085-2	8.000-1	4.381-1	4.253-1	7.000+0	3.880-2	9.428-1									
1.000-1	9.444-1	5.040-2	9.000-1	3.905-1	4.516-1	8.000+0	3.282-2	9.583-1

12/07/78

ENDL Evaluated Photon Cross Sections

82-Pb

12/07/78

Energy Deposition

82-Pb

12/07/78

ENDL Evaluated Photon Data

82-Pb

ATOMIC WEIGHT 207.19			DENSITY 11.35 GRAMS/CC									
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARNS)							NEUTRON COLLISION		MEV/CM K.E.
	CM	CM-CH/GR	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.-FLOR	K.E.	DISPERSTR	K.E.	
1.000-4	1.036-5	8.598-3	2.920-6	4.471-3	1.552-2	2.920-6		9.985-5	9.985-5	5.105-10	9.942-0	
1.250-4	2.937-5	3.061-3	1.348-5	4.480-3	2.434-2	1.330-6		1.246-4	1.246-4	7.925-10	5.520-0	
1.500-4	3.398-5	2.681-3	9.195-5	4.488-3	3.068-2	9.110-5		1.388-4	1.388-4	9.878-10	4.185-0	
1.750-4	2.742-5	3.218-3	1.184-5	4.488-3	3.068-2	1.100-6		1.403-4	1.403-4	1.008-9	5.118-0	
1.980-4	2.742-5	3.218-3	1.184-5	4.488-3	3.342-2	1.100-6		1.480-4	1.480-4	1.093-9	5.325-0	
1.980-4	2.742-5	3.218-3	1.184-5	4.488-3	3.405-2	1.330-6		1.475-4	1.475-4	1.115-9	6.499-0	
1.980-4	2.742-5	3.218-3	1.184-5	4.488-3	3.497-2	1.290-6		1.485-4	1.485-4	1.145-9	6.389-0	
1.750-4	2.151-5	4.083-3	1.488-5	4.488-3	4.739-2	1.404-6		1.744-4	1.744-4	1.950-9	8.110-0	
2.000-4	2.680-5	4.402-3	1.514-5	4.488-3	6.187-2	1.510-6		1.984-4	1.984-4	2.038-9	9.972-0	
2.300-4	1.280-5	7.338-3	2.524-5	4.481-3	8.114-2	2.520-6		2.298-4	2.298-4	2.702-9	1.914-1	
2.500-4	9.949-5	8.848-3	3.044-5	4.458-3	9.358-2	3.040-6		2.488-4	2.488-4	3.194-9	2.509-1	
3.000-4	6.886-5	1.333-4	4.584-5	4.459-3	1.387-1	4.580-6		2.987-4	2.987-4	4.603-9	4.537-1	
3.500-4	6.482-5	1.327-4	4.889-5	4.445-3	1.842-1	4.885-6		3.497-4	3.497-4	5.288-9	5.591-1	
4.000-4	6.383-5	1.378-4	4.744-5	4.440-3	2.385-1	4.740-6		3.988-4	3.988-4	6.184-9	6.280-1	
4.211-4	6.592-5	1.335-4	4.584-5	4.438-3	2.423-1	4.580-6		4.207-4	4.207-4	6.970-9	6.382-1	
4.223-4	6.343-5	1.388-4	4.774-5	4.438-3	2.848-1	4.770-6		4.221-4	4.221-4	9.131-9	6.894-1	
4.580-4	6.516-5	1.351-4	4.848-5	4.431-3	2.888-1	4.844-6		4.488-4	4.488-4	1.038-8	8.900-1	
5.000-4	6.814-5	1.292-4	4.444-5	4.422-3	3.842-1	4.440-6		4.985-4	4.985-4	1.279-8	7.730-1	
5.500-4	7.581-5	1.181-4	3.995-5	4.411-3	4.345-1	3.991-6		5.494-4	5.494-4	1.547-8	7.247-1	
6.000-4	8.392-5	1.053-4	3.624-5	4.401-3	5.104-1	3.620-6		5.993-4	5.993-4	1.840-8	7.172-1	
6.500-4	9.336-5	9.427-3	3.243-5	4.387-3	5.895-1	3.239-6		6.491-4	6.491-4	2.159-8	6.952-1	
6.838-4	1.001-5	8.791-3	3.024-5	4.378-3	6.437-1	3.020-6		6.828-4	6.828-4	2.388-8	6.817-1	
6.828-4	9.240-5	9.517-3	3.274-5	4.374-3	6.481-1	3.270-6		6.841-4	6.841-4	2.388-8	7.788-1	
7.000-4	9.240-5	9.517-3	3.274-5	4.374-3	6.714-1	3.270-6		6.981-4	6.981-4	2.594-8	7.928-1	
8.000-4	1.132-5	7.773-3	2.674-5	4.350-3	8.514-1	2.670-6		7.987-4	7.987-4	3.289-8	7.053-1	
8.929-4	1.382-5	8.465-3	2.224-5	4.318-3	1.023-0	2.220-6		8.912-4	8.912-4	4.070-8	6.945-1	
9.943-4	1.282-5	8.814-3	2.244-5	4.318-3	1.088-0	2.240-6		9.927-4	9.927-4	4.084-8	6.910-1	
9.000-4	1.309-5	8.787-3	2.314-5	4.317-3	1.037-0	2.310-6		8.983-4	8.983-4	4.138-8	6.889-1	
1.000-3	1.411-5	8.238-3	2.148-5	4.288-3	1.238-0	2.142-6		9.980-4	9.980-4	5.104-8	7.073-1	
1.250-3	2.330-5	3.778-3	1.208-5	4.187-3	1.730-0	1.208-6		1.248-3	1.248-3	7.958-8	5.347-1	
1.500-3	3.509-5	2.509-3	8.032-5	4.106-3	2.277-0	8.081-5		1.493-3	1.493-3	1.142-7	4.255-1	
1.750-3	4.957-5	1.778-3	6.110-5	3.987-3	2.787-0	8.070-5		1.739-3	1.739-3	1.549-7	3.508-1	
2.000-3	6.883-5	1.317-3	4.532-5	3.885-3	3.380-0	4.483-5		1.983-3	1.983-3	2.015-7	2.987-1	
2.483-3	1.083-5	8.129-3	2.787-5	3.888-3	4.248-0	2.780-5		2.450-3	2.450-3	3.078-7	2.283-1	
2.483-3	4.093-5	2.151-3	7.397-5	3.888-3	4.848-0	7.388-5		2.478-3	2.478-3	2.937-7	5.848-1	
2.500-3	4.188-5	2.115-3	7.278-5	3.878-3	4.878-0	7.233-5		2.487-3	2.487-3	2.978-7	5.780-1	
2.885-3	4.241-5	1.938-3	6.678-5	3.847-3	4.445-0	6.633-5		2.871-3	2.871-3	3.188-7	5.481-1	
2.988-3	3.274-5	2.888-3	5.290-5	3.848-3	4.447-0	9.213-5		2.978-3	2.978-3	3.188-7	7.630-1	
3.000-3	4.680-5	1.828-3	6.683-5	3.848-3	5.288-0	6.248-5		2.983-3	2.983-3	4.327-7	6.628-1	
3.385-3	5.077-5	1.787-3	5.944-5	3.475-3	5.381-0	5.907-5		3.047-3	3.047-3	4.519-7	5.886-1	
3.688-3	3.881-5	2.316-3	7.888-5	3.475-3	5.383-0	7.934-5		3.053-3	3.053-3	4.536-7	7.888-1	
3.500-3	5.385-5	1.841-3	5.845-5	3.380-3	6.153-0	5.812-5		3.480-3	3.480-3	5.931-7	6.342-1	
3.953-3	5.579-5	1.578-3	5.429-5	3.280-3	6.247-0	5.398-5		3.511-3	3.511-3	6.113-7	6.198-1	
3.994-3	4.946-5	1.788-3	6.123-5	3.280-3	6.249-0	8.090-5		3.575-3	3.575-3	6.125-7	6.990-1	
3.948-3	6.887-5	1.448-3	4.978-5	3.178-3	6.773-0	4.944-5		3.684-3	3.684-3	7.194-7	6.158-1	
3.958-3	5.842-5	1.988-3	5.388-5	3.178-3	6.774-0	5.338-5		3.687-3	3.687-3	7.205-7	6.848-1	
4.088-3	6.232-5	1.412-3	4.888-5	3.132-3	7.041-0	4.888-5		3.974-3	3.974-3	7.781-7	6.252-1	
4.588-3	8.485-5	1.844-3	3.578-5	2.950-3	7.874-0	3.548-5		4.483-3	4.483-3	9.825-7	5.181-1	
5.088-3	1.113-5	7.912-3	2.782-5	2.797-3	8.782-0	2.884-5		4.948-3	4.948-3	1.218-6	4.378-1	
5.588-3	1.425-5	6.179-3	2.125-5	2.848-3	9.425-0	2.888-5		5.431-3	5.431-3	1.488-6	3.799-1	
6.088-3	1.785-5	4.933-3	1.887-5	2.584-3	1.028-0	1.872-5		5.911-3	5.911-3	1.744-6	3.289-1	
6.588-3	2.195-5	4.811-3	1.388-5	2.384-3	1.182-0	1.398-5		6.388-3	6.388-3	2.041-6	2.874-1	
7.088-3	2.857-5	3.313-3	1.148-5	2.241-3	1.178-0	1.117-5		6.882-3	6.882-3	2.399-6	2.594-1	
8.088-3	3.746-5	2.398-3	8.884-5	2.035-3	1.398-0	7.878-5		7.787-3	7.787-3	3.854-6	2.881-1	
1.088-2	6.633-4	1.327-3	4.588-5	1.888-3	1.578-0	4.588-5		9.627-3	9.627-3	4.874-6	1.448-1	
1.250-2	1.178-3	7.523-1	2.588-5	1.347-3	1.854-0	2.432-5		1.184-2	1.177-2	7.095-6	1.088-1	
1.383-2	1.381-3	6.788-1	2.388-5	1.288-3	1.875-0	2.188-5		1.238-2	1.283-2	7.682-6	9.403-0	
1.588-2	3.495-4	1.614-3	2.981-5	1.288-3	1.875-0	5.421-5		1.273-2	1.282-2	8.328-6	1.888-1	
1.588-2	7.051-4	1.184-3	3.887-5	1.113-3	2.058-0	3.794-5		1.588-2	1.187-2	6.288-6	1.918-1	
1.528-2	8.481-4	1.887-3	3.738-5	1.085-3	2.871-0	3.827-5		1.474-2	1.175-2	6.483-6	1.388-1	
1.528-2	5.788-4	1.518-3	5.288-5	1.085-3	2.871-0	5.114-5		1.487-2	1.138-2	6.888-6	1.888-1	
1.588-2	8.473-4	1.388-3	4.878-5	1.048-3	2.119-0	4.573-5		1.598-2	1.189-2	7.383-6	1.822-1	
1.588-2	5.588-4	1.578-3	5.488-5	1.038-3	2.119-0	5.383-5		1.599-2	1.283-2	7.418-6	2.148-1	

12/07/78

ENDL Evaluated Phot. Data

82-Pb

ATOMIC WEIGHT 207.19										DENSITY 11.36 GRAMS/CC											
ENERGY		TOTAL HFP		CROSS SECTION (BARNS)								NEV/COLLISION		NEV/CM							
MEV	CH	CH/CM/GM	TOTAL	COHERENT	INCOHERENT	PHOTOCL	PAIR PROD	K.E.+FLOR	K.E. BREMSSTR	K.E.											
1.750	-2	7.238	-4	1.216	-2	4.184	-4	9.210	-2	2.234	-1	4.090	-4	1.711	-2	1.380	-2	9.488	-6	1.878	-1
2.000	-2	1.025	-3	0.591	-1	2.938	-4	7.816	-2	2.400	-1	2.875	-4	1.948	-2	1.598	-2	1.205	-5	1.598	-1
2.500	-2	1.840	-3	4.784	-1	1.846	-4	5.808	-2	2.844	-1	1.585	-4	2.408	-2	2.062	-2	2.177	-5	1.121	-1
3.000	-2	2.981	-3	2.973	-1	1.023	-4	4.957	-2	2.889	-1	9.745	-3	2.898	-2	2.518	-2	3.241	-5	0.499	-0
3.500	-2	4.439	-3	1.983	-1	6.853	-3	3.894	-2	3.014	-1	5.427	-3	3.298	-2	2.980	-2	4.483	-3	6.888	-0
4.000	-2	6.280	-3	1.400	-1	4.815	-3	3.018	-2	3.145	-1	4.482	-3	3.725	-2	3.391	-2	5.883	-5	5.391	-0
4.500	-2	8.586	-3	1.028	-1	3.536	-3	2.913	-2	3.267	-1	3.232	-3	4.143	-2	3.002	-2	7.434	-5	4.451	-0
5.000	-2	1.127	-2	7.811	-0	2.887	-3	2.133	-2	3.303	-1	2.441	-3	4.547	-2	4.221	-2	9.112	-5	3.745	-0
5.500	-2	1.445	-2	6.091	-0	2.086	-3	1.831	-2	3.348	-1	1.879	-3	4.940	-2	4.618	-2	1.090	-4	3.198	-0
6.000	-2	1.810	-2	4.863	-0	1.673	-3	1.992	-2	3.390	-1	1.480	-3	5.320	-2	5.002	-2	1.279	-4	2.784	-0
6.500	-2	2.227	-2	3.953	-0	1.360	-3	1.394	-2	3.408	-1	1.186	-3	5.689	-2	5.375	-2	1.477	-4	2.414	-0
7.000	-2	2.694	-2	3.288	-0	1.124	-3	1.233	-2	3.424	-1	9.688	-2	6.044	-2	5.735	-2	1.681	-4	2.129	-0
8.000	-2	3.777	-2	2.331	-0	0.019	-2	9.880	-1	3.454	-1	6.888	-2	6.714	-2	6.415	-2	2.102	-4	1.899	-0
8.800	-2	4.798	-2	1.835	-0	6.313	-2	8.399	-1	3.449	-1	5.128	-2	7.215	-2	6.923	-2	2.447	-4	1.443	-0
8.801	-2	1.176	-2	7.483	-0	2.574	-3	8.399	-1	3.449	-1	2.458	-1	6.412	-2	2.491	-2	3.175	-5	2.117	-0
1.000	-1	1.612	-2	5.481	-0	1.879	-3	6.757	-1	3.441	-1	1.777	-3	9.485	-2	3.615	-2	5.684	-5	2.243	-0
1.250	-1	2.618	-2	3.124	-0	1.075	-3	4.940	-1	3.357	-1	9.957	-2	1.185	-1	5.898	-2	1.777	-4	2.093	-0
1.500	-1	4.415	-2	1.994	-0	6.030	-2	3.281	-1	3.290	-1	8.203	-2	1.370	-1	8.089	-2	3.340	-4	1.832	-0
1.750	-1	6.446	-2	1.388	-0	4.098	-2	2.483	-1	3.189	-1	4.131	-2	1.584	-1	1.018	-1	5.283	-4	1.579	-0
2.000	-1	8.880	-2	9.813	-1	3.410	-2	1.951	-1	3.104	-1	2.905	-2	1.745	-1	1.218	-1	7.532	-4	1.389	-0
2.500	-1	1.484	-1	5.932	-1	2.041	-2	2.292	-1	2.919	-1	1.820	-2	2.075	-1	1.582	-1	1.273	-3	1.086	-0
3.000	-1	2.203	-1	3.986	-1	1.375	-2	2.930	-1	2.777	-1	1.005	-2	2.381	-1	1.907	-1	1.847	-3	0.880	-1
3.500	-1	2.994	-1	3.940	-1	1.012	-2	6.902	-0	2.637	-1	6.789	-1	2.821	-1	2.204	-1	2.462	-3	7.363	-1
4.000	-1	3.838	-1	2.294	-1	7.892	-1	5.386	-0	2.522	-1	4.833	-1	2.854	-1	2.474	-1	3.099	-3	6.448	-1
4.500	-1	4.688	-1	1.878	-1	8.481	-1	4.293	-0	2.414	-1	3.618	-1	3.079	-1	2.732	-1	3.772	-3	5.828	-1
5.000	-1	5.543	-1	1.588	-1	5.484	-1	3.502	-0	2.321	-1	2.793	-1	3.294	-1	2.976	-1	4.472	-3	5.370	-1
5.500	-1	6.370	-1	1.388	-1	4.795	-1	2.914	-0	2.234	-1	2.230	-1	3.510	-1	3.215	-1	5.225	-3	5.054	-1
6.000	-1	7.179	-1	1.226	-1	4.219	-1	2.484	-0	2.157	-1	1.815	-1	3.725	-1	3.450	-1	6.022	-3	4.817	-1
6.500	-1	7.943	-1	1.108	-1	3.813	-1	2.110	-0	2.084	-1	1.518	-1	3.950	-1	3.703	-1	6.887	-3	4.682	-1
7.000	-1	8.883	-1	1.014	-1	3.488	-1	1.827	-0	2.018	-1	1.287	-1	4.177	-1	3.948	-1	7.830	-3	4.547	-1
8.000	-1	1.003	-0	8.784	-2	3.002	-1	1.410	-0	1.908	-1	9.549	-0	4.847	-1	4.444	-1	9.897	-3	4.405	-1
1.000	-0	1.255	-0	7.012	-2	2.413	-1	9.111	-1	1.719	-1	8.028	-0	5.857	-1	5.502	-1	1.509	-2	4.383	-1
1.002	-0	1.273	-0	6.880	-2	2.387	-1	8.750	-1	1.701	-1	5.790	-0	5.777	-1	5.625	-1	1.578	-2	4.397	-1
1.250	-0	1.518	-0	5.808	-2	1.988	-1	5.875	-1	1.940	-1	3.887	-0	7.054	-1	6.930	-1	2.377	-2	4.573	-1
1.500	-0	1.899	-0	5.182	-2	1.783	-1	4.099	-1	1.462	-1	2.844	-0	8.403	-1	8.304	-1	3.390	-2	4.888	-1
1.750	-0	1.835	-0	4.787	-2	1.847	-1	3.020	-1	1.290	-1	1.148	-0	9.838	-1	9.758	-1	4.648	-2	5.307	-1
2.000	-0	1.944	-0	4.428	-2	1.958	-1	2.317	-1	1.198	-1	1.689	-0	1.701	-0	1.133	-0	6.220	-2	5.830	-1
2.500	-0	1.981	-0	4.489	-2	1.944	-1	2.218	-1	1.183	-1	1.608	-0	1.189	-0	1.182	-0	6.533	-2	5.985	-1
3.000	-0	2.088	-0	4.458	-2	1.984	-1	1.748	-1	1.053	-1	1.150	-0	1.484	-0	1.478	-0	1.042	-1	7.152	-1
3.500	-0	2.111	-0	4.170	-2	1.935	-1	1.074	-1	9.438	-0	8.630	-1	1.885	-0	1.882	-0	1.622	-1	8.820	-1
4.000	-0	2.127	-0	4.139	-2	1.944	-1	7.813	-2	6.577	-1	4.898	-0	2.275	-0	2.272	-0	2.385	-1	1.088	-0
4.500	-0	2.120	-0	4.152	-2	1.948	-1	5.825	-2	7.878	-0	5.678	-0	2.705	-0	2.702	-0	3.287	-1	1.275	-0
5.000	-0	2.102	-0	4.187	-2	1.941	-1	4.804	-2	7.297	-0	4.751	-1	3.150	-0	3.148	-0	4.372	-1	1.497	-0
5.500	-0	2.063	-0	4.228	-2	1.934	-1	3.731	-2	6.805	-0	4.058	-1	3.608	-0	3.604	-0	5.615	-1	1.730	-0
6.000	-0	2.012	-0	4.248	-2	1.922	-1	3.084	-2	6.383	-0	3.624	-1	4.088	-0	4.087	-0	7.014	-1	1.983	-0
6.500	-0	2.054	-0	4.288	-2	1.973	-1	2.592	-2	6.018	-0	3.241	-1	4.538	-0	4.537	-0	8.228	-1	2.209	-0
7.000	-0	2.030	-0	4.338	-2	1.932	-1	2.209	-2	5.693	-0	2.984	-1	5.014	-0	5.013	-0	1.025	-0	2.489	-0
7.500	-0	2.003	-0	4.395	-2	1.918	-1	1.905	-2	5.408	-0	2.878	-1	5.498	-0	5.495	-0	1.207	-0	2.744	-0
8.000	-0	1.940	-0	4.537	-2	1.901	-1	1.599	-2	4.382	-0	2.239	-1	6.470	-0	6.469	-0	1.611	-0	3.334	-0
1.000	-0	1.806	-0	4.875	-2	1.877	-1	9.338	-3	4.193	-1	1.881	-1	8.448	-0	8.448	-0	2.552	-0	4.878	-0
1.250	-0	1.702	-0	5.172	-2	1.778	-1	5.978	-3	3.928	-1	1.314	-1	1.053	-1	1.053	-1	3.928	-0	6.423	-0
1.500	-0	1.605	-0	5.485	-2	1.687	-1	4.152	-3	3.104	-1	1.075	-1	1.343	-1	1.343	-1	5.478	-0	6.371	-0
1.750	-0	1.512	-0	5.820	-2	2.002	-1	3.050	-3	2.780	-1	1.717	-1	1.594	-1	1.594	-1	7.188	-0	1.094	-0
2.000	-0	1.438	-0	6.110	-2	2.105	-1	2.335	-3	2.481	-1	7.831	-1	1.845	-1	1.845	-1	8.982	-0	1.282	-0
2.500	-0	1.332	-0	6.611	-2	2.274	-1	1.494	-3	2.054	-1	8.124	-1	2.347	-1	2.347	-1	1.282	-1	1.783	-1
3.000	-0	1.257	-0	7.003	-2	2.409	-1	1.038	-3	1.814	-1	5.009	-1	2.848	-1	2.848	-1	1.690	-1	2.886	-1
3.500	-0	1.287	-0	7.295	-2	2.510	-1	7.824	-4	1.604	-1	4.287	-1	3.349	-1	3.349	-1	2.116	-1	2.778	-1
4.000	-0	1.183	-0	7.588	-2	2.604	-1	5.837	-4	1.441	-1	3.848	-1	3.850	-1	3.850	-1	2.995	-1	3.310	-1
4.500	-0	1.128	-0	7.893	-2	2.700	-1	4.812	-4	1.311	-1	3.594	-1	4.351	-1	4.351	-1	3.004	-1	3.880	-1
5.000	-0	1.091	-0	8.211	-2	2.777	-1	3.736	-4	1.263	-1	3.353	-1	4.852	-1	4.852	-1	3.461	-1	4.449	-1
5.500	-0	1.078	-0	8.533	-2	2.831	-1	3.688	-4	1.113	-1	3.289	-1	5.353	-1	5.353	-1	3.923	-1	5.004	-1
6.000	-0	1.051	-0	8.879	-2	2.883	-1	2.994	-4	1.037	-1	3.174	-1	5.853	-1	5.853	-1	4.390	-1	5.571	-1
6.500	-0	1.033	-0	9.221	-2	2.932	-1	2.211	-4	9.704	-2	2.137	-2	6.379	-1	6.379	-1	4.881	-1	6.190	-1

12/07/78

ENDL Evaluated Photon Data

82-Pb

ATOMIC WEIGHT 207.19		DENSITY 11.36 GRAMS/CC									
ENERGY		TOTAL HPF		CROSS SECTION (BARNS)				NEV/COLLISION			NEV/CM
MEV		CM	CM ² /CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	K.E.
7.000+ 1	1.017+ 0	8.857- 2	2.978+ 1	1.906- 4	9.128- 1	1.388- 2	2.885+ 1	8.857+ 1	8.857+ 1	5.335+ 1	8.741+ 1
9.000+ 1	9.877- 1	8.912- 2	3.086+ 1	1.480- 4	8.176- 1	1.700- 2	2.983+ 1	7.893+ 1	7.893+ 1	6.282+ 1	7.923+ 1
1.000+ 2	9.389- 1	9.386- 2	3.222+ 1	9.341- 5	6.786- 1	1.329- 2	3.153+ 1	9.857+ 1	9.857+ 1	8.228+ 1	1.048+ 2

12/07/78

Form Factors

82-Pb

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.220-1	9.183-1	7.575-2	1.000+0	3.627-1	4.898-1	1.000+1	2.138-2	9.788-1
5.000-3	9.997-1	2.195-4	1.500-1	8.934-1	9.383-2	1.250+0	2.879-1	5.522-1	1.250+1	1.483-2	9.885-1
1.000-2	9.992-1	8.780-4	1.750-1	8.687-1	1.110-1	1.500+0	2.349-1	6.883-1	2.000+1	1.111-2	9.948-1
1.500-2	9.984-1	1.948-3	2.000-1	8.442-1	1.273-1	2.000+0	1.780-1	8.930-1	5.000+1	1.386-3	1.000+0
2.000-2	9.972-1	3.430-3	2.500-1	7.980-1	1.581-1	2.500+0	1.481-1	7.802-1	8.000+1	5.911-4	1.000+0
2.500-2	9.958-1	5.291-3	3.000-1	7.494-1	1.874-1	3.000+0	1.199-1	6.062-1	1.000+2	3.221-4	1.000+0
3.000-2	9.937-1	7.582-3	4.000-1	6.637-1	2.435-1	3.500+0	9.374-2	4.394-1	1.000+3	6.129-7	1.000+0
4.000-2	9.830-1	1.284-2	5.000-1	5.910-1	2.928-1	4.000+0	8.153-2	3.845-1	1.000+6	9.087-15	1.000+0
5.000-2	9.632-1	1.918-2	6.000-1	5.308-1	3.484-1	5.000+0	5.710-2	3.007-1	1.000+9	1.413-22	1.000+0
7.000-2	9.077-1	3.380-2	7.000-1	4.807-1	3.905-1	6.000+0	4.781-2	2.263-1			
9.000-2	8.516-1	4.995-2	8.000-1	4.373-1	4.283-1	7.000+0	3.904-2	1.647-1			
1.000-1	8.475-1	5.880-2	9.000-1	3.983-1	4.809-1	8.000+0	3.315-2	1.178-1

12/07/78

ENDL Evaluated Photon Cross Sections

83-B1

12/07/78

Energy Deposition

83-B1

12/07/78

ENCL Evaluated Photon Data

83-B1

ATOMIC WEIGHT 200.90										DENSITY 9.8 GRAMS/CC			
ENERGY MEV	TOTAL MP		CROSS SECTION (BARNS)					MEV/COLLISION			MEV/CM		
	CH	CH+CN/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.*FLOR	K.E.	BRNSSTR	K.E.		
1.000-4	1.740-5	5.863-3	2.035-6	4.581-3	1.486-2	2.030-6		9.977-5	9.977-5	5.184-10	5.733-0		
1.001-4	1.740-5	5.834-3	2.025-6	4.581-3	1.489-2	2.020-6		9.987-5	9.987-5	5.174-10	5.710-0		
1.015-4	1.260-5	6.312-3	2.805-6	4.581-3	1.541-2	2.800-6		1.013-4	1.013-4	5.327-10	6.255-0		
1.250-4	2.388-5	4.277-3	1.404-6	4.578-3	2.346-2	1.480-6		1.248-4	1.248-4	6.035-10	5.224-0		
1.500-4	4.263-5	2.393-3	8.308-5	4.578-3	3.390-2	8.280-5		1.482-4	1.482-4	1.154-9	3.499-0		
1.588-4	4.307-5	2.123-3	7.388-5	4.577-3	3.788-2	7.320-5		1.578-4	1.578-4	1.269-9	3.279-0		
1.800-4	2.889-5	3.414-3	1.185-6	4.577-3	3.853-2	1.180-6		1.994-4	1.994-4	1.318-9	5.332-0		
1.750-4	3.197-5	3.182-3	1.108-6	4.578-3	4.803-2	1.103-6		1.743-4	1.743-4	1.576-9	5.452-0		
1.800-4	3.285-5	3.125-3	1.065-6	4.579-3	4.887-2	1.060-6		1.788-4	1.788-4	1.687-9	5.480-0		
2.000-4	3.687-5	3.327-3	1.155-6	4.574-3	8.000-2	1.150-6		1.982-4	1.982-4	2.059-9	6.425-0		
2.500-4	1.511-5	6.755-3	2.344-6	4.588-3	9.309-2	2.340-6		2.495-4	2.495-4	3.230-9	1.852-1		
3.000-4	8.482-6	1.808-4	4.185-6	4.583-3	1.333-1	4.180-6		2.997-4	2.997-4	4.058-9	3.541-1		
3.500-4	7.911-6	1.290-4	4.478-6	4.598-3	1.797-1	4.471-6		3.498-4	3.498-4	6.342-9	4.420-1		
4.000-4	7.463-6	1.387-4	4.745-6	4.549-3	2.320-1	4.740-6		3.996-4	3.996-4	8.284-9	5.334-1		
4.487-4	8.003-6	1.275-4	4.425-6	4.539-3	2.897-1	4.420-6		4.482-4	4.482-4	1.042-8	5.601-1		
4.500-4	7.759-6	1.315-4	4.584-6	4.539-3	2.913-1	4.559-6		4.486-4	4.486-4	1.048-8	5.794-1		
4.501-4	7.741-6	1.318-4	4.575-6	4.539-3	2.914-1	4.570-6		4.497-4	4.497-4	1.049-8	5.809-1		
5.000-4	7.775-6	1.312-4	4.555-6	4.530-3	3.559-1	4.550-6		4.995-4	4.995-4	1.294-8	6.425-1		
5.500-4	8.613-6	1.185-4	4.111-6	4.519-3	4.245-1	4.107-6		5.494-4	5.494-4	1.586-8	6.379-1		
6.000-4	9.457-6	1.078-4	3.745-6	4.508-3	4.995-1	3.740-6		5.993-4	5.993-4	1.883-8	6.337-1		
6.500-4	1.095-5	9.674-3	3.357-6	4.494-3	5.783-1	3.353-6		6.491-4	6.491-4	2.186-8	6.154-1		
7.000-4	1.167-5	8.744-3	3.034-6	4.480-3	6.579-1	3.030-6		6.990-4	6.990-4	2.534-8	5.990-1		
7.203-4	1.219-5	8.370-3	2.904-6	4.475-3	6.924-1	2.900-6		7.192-4	7.192-4	2.683-8	5.899-1		
7.217-4	1.108-5	9.206-3	3.194-6	4.474-3	6.948-1	3.190-6		7.207-4	7.207-4	2.694-8	6.502-1		
8.000-4	1.267-5	8.053-3	2.794-6	4.455-3	8.353-1	2.790-6		7.987-4	7.987-4	3.309-8	6.303-1		
9.000-4	1.543-5	6.812-3	2.294-6	4.421-3	1.019-0	2.290-6		8.983-4	8.983-4	4.185-8	5.820-1		
9.375-4	1.851-5	6.180-3	2.144-6	4.409-3	1.091-0	2.140-6		9.356-4	9.356-4	4.540-8	5.686-1		
9.389-4	1.578-5	6.488-3	2.244-6	4.409-3	1.094-0	2.240-6		9.371-4	9.371-4	4.555-8	5.939-1		
1.000-3	1.448-5	6.874-3	2.385-6	4.381-3	1.217-0	2.381-6		9.982-4	9.982-4	5.188-8	6.724-1		
1.250-3	2.482-5	4.111-3	1.427-6	4.285-3	1.710-0	1.428-6		1.246-3	1.246-3	8.058-8	5.021-1		
1.500-3	3.778-5	2.708-3	9.378-5	4.200-3	2.858-0	9.338-5		1.493-3	1.493-3	1.157-7	3.955-1		
1.750-3	5.381-5	1.898-3	6.580-5	4.088-3	2.778-0	6.539-5		1.739-3	1.739-3	1.589-7	3.232-1		
2.000-3	7.310-5	1.388-3	4.844-5	3.989-3	3.324-0	4.804-5		1.984-3	1.984-3	2.041-7	2.713-1		
2.500-3	1.218-4	8.377-2	2.907-5	3.756-3	4.321-0	2.870-5		2.488-3	2.488-3	3.158-7	2.026-1		
2.578-3	1.307-4	7.810-2	2.710-5	3.723-3	4.480-0	2.673-5		2.543-3	2.543-3	3.353-7	1.948-1		
2.579-3	5.182-5	1.977-3	6.880-5	3.724-3	4.482-0	6.823-5		2.585-3	2.475-3	3.178-7	4.794-1		
2.688-3	5.731-5	1.781-3	6.179-5	3.604-3	4.702-0	6.142-5		2.670-3	2.580-3	3.452-7	4.501-1		
2.687-3	4.158-5	2.454-3	6.518-5	3.683-3	4.704-0	6.479-5		2.678-3	2.585-3	3.488-7	6.217-1		
3.000-3	5.523-5	1.848-3	6.412-5	3.575-3	5.355-0	6.378-5		2.983-3	2.893-3	4.341-7	5.238-1		
3.176-3	6.395-5	1.598-3	5.537-5	3.487-3	5.677-0	5.502-5		3.158-3	3.088-3	4.875-7	4.794-1		
3.177-3	4.740-5	2.153-3	7.470-5	3.486-3	5.678-0	7.435-5		3.182-3	3.072-3	4.894-7	6.480-1		
3.500-3	6.082-5	1.878-3	5.882-5	3.387-3	6.889-0	5.788-5		3.480-3	3.389-3	5.958-7	5.573-1		
3.895-3	8.928-5	1.459-3	5.064-5	3.297-3	8.627-0	5.031-5		3.871-3	3.581-3	6.850-7	5.121-1		
3.896-3	6.190-5	1.848-3	5.712-5	3.288-3	8.628-0	5.679-5		3.875-3	3.584-3	6.883-7	5.782-1		
3.998-3	7.587-5	1.345-3	4.867-5	3.197-3	7.183-0	4.835-5		3.971-3	3.880-3	7.809-7	5.114-1		
3.999-3	7.034-5	1.451-3	5.034-5	3.197-3	7.184-0	5.002-5		3.974-3	3.883-3	7.821-7	5.521-1		
4.000-3	7.038-5	1.450-3	5.031-5	3.197-3	7.185-0	4.999-5		3.975-3	3.884-3	7.825-7	5.519-1		
4.500-3	9.528-5	1.071-3	3.718-5	3.014-3	8.028-0	3.688-5		4.483-3	4.373-3	9.919-7	4.580-1		
5.000-3	1.249-4	8.172-2	2.836-5	2.859-3	8.885-0	2.807-5		4.949-3	4.860-3	1.225-6	3.892-1		
5.500-3	1.594-4	6.400-2	2.221-5	2.700-3	9.858-0	2.194-5		5.433-3	5.343-3	1.481-6	3.351-1		
6.000-3	1.992-4	5.123-2	1.778-5	2.593-3	1.044-0	1.752-5		5.913-3	5.824-3	1.759-6	2.924-1		
6.500-3	2.444-4	4.174-2	1.449-5	2.420-3	1.119-0	1.424-5		6.391-3	6.302-3	2.059-6	2.578-1		
7.000-3	2.924-4	3.455-2	1.188-5	2.294-3	1.182-0	1.178-5		6.885-3	6.776-3	2.381-6	2.294-1		
8.000-3	4.150-4	2.458-2	6.533-4	2.085-3	1.336-0	8.323-4		7.803-3	7.715-3	3.088-6	1.829-1		
1.000-2	7.305-4	1.397-2	4.877-4	1.728-3	1.593-0	4.873-4		9.840-3	9.553-3	4.731-6	1.308-1		
1.250-2	1.281-3	7.584-1	2.784-4	1.378-3	1.844-0	2.624-4		1.187-2	1.178-2	7.197-6	9.188-0		
1.342-2	1.530-3	6.671-1	2.315-4	1.282-3	1.932-0	2.185-4		1.286-2	1.258-2	8.201-6	8.253-0		
1.342-2	6.759-4	1.510-2	5.238-4	1.282-3	1.932-0	5.109-4		1.308-2	9.410-3	4.591-6	1.382-1		
1.500-2	6.838-4	1.142-2	3.982-4	1.144-3	2.078-0	3.845-4		1.458-2	1.080-2	6.182-6	1.220-1		
1.571-2	1.304-3	1.018-2	3.527-4	1.082-3	2.130-0	3.417-4		1.522-2	1.157-2	6.935-6	1.152-1		
1.571-2	7.185-4	1.420-2	4.988-4	1.082-3	2.130-0	4.818-4		1.536-2	1.167-2	7.084-6	1.825-1		
1.638-2	7.985-4	1.278-2	4.429-4	1.027-3	2.179-0	4.324-4		1.600-2	1.232-2	7.885-6	1.341-1		
1.638-2	6.916-4	1.755-2	5.180-4	1.027-3	2.179-0	5.015-4		1.603-2	1.238-2	7.918-6	1.787-1		

12/07/78

ENDL Evaluated Photon Data

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ATOM: C 1210-F 206.98				DENSITY 9.8 GRAMS/CC			
ENERGY	TOTAL HFP		CROSS SECTION (BARNS)				NEUT/COLLISION
MEV	CM	CM/CH/ON	TOTAL	COMPONENT	INCOMPONENT	PHOTOEL PAIR PROD	K.E. FLOR K.E. BRNCHSTR K.E.
1.750-2	0.180-4	1.247-2	4.329-4	0.478-2	2.257-1	4.232-4	1.711-2 1.342-2 9.342-6 1.041-1
2.000-2	1.149-3	0.001-1	3.002-4	0.048-2	2.442-1	2.998-4	1.948-2 1.080-2 1.293-5 1.375-1
2.500-2	2.040-3	5.002-1	1.738-4	5.978-2	2.673-1	1.673-4	2.410-2 2.047-2 2.171-5 1.004-1
3.000-2	3.252-3	3.138-1	1.008-4	4.089-2	2.895-1	1.039-4	2.863-2 2.504-2 3.248-5 7.899-0
3.500-2	4.847-3	2.105-1	7.305-3	3.781-2	3.041-1	6.898-4	3.308-2 2.950-2 4.509-5 6.088-0
4.000-2	6.835-3	1.493-1	5.180-3	3.107-2	3.174-1	4.838-4	3.737-2 3.388-2 5.935-5 4.953-0
4.500-2	9.278-3	1.100-1	3.817-3	2.589-2	3.258-1	3.528-4	4.180-2 3.812-2 7.522-5 4.109-0
5.000-2	1.217-2	6.388-0	2.810-3	2.198-2	3.337-1	2.837-4	4.570-2 4.226-2 9.245-5 3.473-0
5.500-2	1.557-2	6.325-0	2.275-3	1.887-2	3.381-1	2.038-4	4.970-2 4.630-2 1.109-4 2.374-0
6.000-2	1.946-2	5.243-0	1.819-3	1.641-2	3.428-1	1.621-4	5.358-2 5.022-2 1.305-4 2.580-0
6.500-2	2.393-2	4.285-0	1.480-3	1.437-2	3.442-1	1.302-4	5.734-2 5.403-2 1.510-4 2.258-0
7.000-2	2.892-2	3.528-0	1.224-3	1.271-2	3.459-1	1.083-4	6.098-2 5.772-2 1.723-4 1.995-0
8.000-2	4.053-2	2.518-0	8.737-2	1.018-2	3.490-1	7.370-2	6.789-2 6.471-2 2.185-4 1.597-0
9.053-2	5.523-2	1.848-0	6.412-2	8.252-1	3.483-1	5.238-2	7.484-2 7.158-2 2.847-4 1.298-0
9.053-2	1.305-2	7.473-0	2.593-3	8.252-1	3.483-1	2.478-3	8.860-2 2.570-2 3.421-5 1.882-0
1.000-1	1.758-2	5.811-0	2.016-3	6.967-1	3.478-1	1.912-3	9.508-2 3.459-2 6.197-5 1.970-0
1.250-1	3.103-2	3.289-0	1.141-3	4.882-1	3.394-1	1.080-3	1.168-1 5.752-2 1.711-4 1.854-0
1.500-1	4.903-2	2.081-0	7.222-2	3.384-1	3.327-1	6.251-2	1.374-1 7.953-2 3.258-4 1.622-0
1.750-1	7.191-2	1.419-0	4.954-2	2.581-1	3.225-1	4.345-2	1.588-1 1.005-1 5.217-4 1.398-0
2.000-1	9.948-2	1.026-0	3.980-2	2.012-1	3.139-1	3.045-2	1.751-1 1.205-1 7.488-4 1.211-0
2.500-1	1.687-1	6.122-0	2.124-2	1.333-1	2.953-1	1.896-2	2.084-1 1.874-1 1.275-3 9.445-1
3.000-1	2.481-1	4.113-1	1.427-2	9.526-0	2.809-1	1.051-2	2.373-1 1.904-1 1.862-3 7.673-1
3.500-1	3.375-1	3.024-1	1.049-2	7.125-0	2.888-1	7.112-1	2.638-1 2.205-1 2.494-3 6.535-1
4.000-1	4.330-1	2.356-1	8.177-1	5.540-0	2.552-1	5.071-1	2.876-1 2.480-1 3.151-3 5.728-1
4.500-1	5.289-1	1.929-1	6.895-1	4.423-0	2.442-1	3.810-1	3.107-1 2.744-1 3.951-3 5.188-1
5.000-1	6.256-1	1.631-1	5.680-1	3.617-0	2.348-1	2.950-1	3.327-1 2.994-1 4.580-3 4.786-1
5.500-1	7.150-1	1.419-1	4.925-1	3.010-0	2.280-1	2.384-1	3.550-1 3.244-1 5.387-3 4.511-1
6.000-1	8.106-1	1.259-1	4.388-1	2.546-0	2.183-1	1.931-1	3.770-1 3.488-1 6.193-3 4.303-1
6.500-1	9.088-1	1.138-1	3.949-1	2.180-0	2.109-1	1.623-1	4.002-1 3.740-1 7.115-3 4.171-1
7.000-1	9.802-1	1.041-1	3.613-1	1.888-0	2.043-1	1.381-1	4.235-1 3.991-1 8.094-3 4.071-1
8.000-1	1.140-0	8.959-2	3.107-1	1.457-0	1.829-1	1.033-1	4.709-1 4.487-1 1.025-3 3.946-1
1.000-0	1.419-0	7.183-2	2.496-1	9.418-1	1.735-1	6.627-0	5.745-1 5.578-1 1.587-3 3.930-1
1.022-0	1.448-0	7.054-2	2.448-1	9.023-1	1.721-1	6.385-0	5.885-1 5.699-1 1.636-3 3.940-1
1.250-0	1.720-0	5.831-2	2.058-1	8.073-1	1.559-1	4.382-0	7.142-1 7.008-1 2.457-3 4.072-1
1.500-0	1.934-0	5.277-2	1.831-1	4.238-1	1.419-1	3.125-0	8.485-1 8.377-1 3.488-3 4.332-1
1.750-0	2.097-0	4.885-2	1.688-1	3.122-1	1.308-1	2.332-0	9.914-1 9.828-1 4.768-3 4.685-1
2.000-0	2.220-0	4.597-2	1.595-1	2.395-1	1.213-1	1.833-0	1.173-0 1.147-0 6.360-3 5.134-1
2.044-0	2.240-0	4.555-2	1.581-1	2.294-1	1.198-1	1.788-0	1.176-0 1.169-0 6.678-3 5.216-1
2.500-0	2.385-0	4.315-2	1.497-1	1.537-1	1.088-1	1.284-0	1.491-0 1.485-0 1.082-3 6.280-1
3.000-0	2.415-0	4.225-2	1.406-1	1.089-1	9.953-0	9.493-1	1.405-1 1.887-0 1.849-3 7.731-1
3.500-0	2.435-0	4.191-2	1.404-1	7.883-2	8.681-0	7.379-1	5.026-0 2.281-0 2.277-3 9.353-1
4.000-0	2.428-0	4.203-2	1.459-1	8.024-2	7.974-0	6.236-1	5.928-0 2.710-0 2.708-3 3.334-1
4.500-0	2.408-0	4.238-2	1.471-1	4.762-2	7.385-0	5.223-1	6.752-0 3.155-0 3.153-3 4.432-1
5.000-0	2.388-0	4.278-2	1.484-1	3.638-2	6.888-0	4.502-1	7.467-0 3.611-0 3.609-3 5.692-1
5.500-0	2.373-0	4.299-2	1.492-1	3.190-2	6.461-0	3.983-1	8.028-0 4.074-0 4.072-3 1.718-1
6.000-0	2.353-0	4.337-2	1.505-1	2.681-2	6.090-0	3.561-1	8.577-0 4.544-0 4.542-3 1.931-1
6.500-0	2.326-0	4.387-2	1.522-1	2.285-2	5.783-0	3.213-1	9.116-0 5.020-0 5.018-3 1.037-1
7.000-0	2.292-0	4.447-2	1.543-1	1.971-2	5.473-0	2.921-1	9.845-0 5.501-0 5.500-3 2.397-1
8.000-0	2.224-0	4.588-2	1.582-1	1.509-2	4.982-0	2.461-1	1.068-1 6.475-0 6.472-3 1.911-1
1.000-1	2.071-1	4.929-2	1.710-1	9.858-3	4.244-0	1.847-1	1.286-1 8.453-0 8.452-3 4.082-1
1.250-1	1.951-1	5.229-2	1.815-1	6.183-3	3.601-0	1.445-1	1.439-1 1.094-1 1.094-3 5.605-0
1.500-1	1.844-1	5.548-2	1.925-1	4.294-3	3.142-0	1.183-1	1.598-1 1.344-1 1.344-3 7.304-0
1.750-1	1.734-1	5.885-2	2.042-1	3.155-3	2.791-0	9.984-2	1.753-1 1.595-1 1.595-3 9.198-0
2.000-1	1.649-1	6.187-2	2.147-1	2.415-3	2.522-0	8.621-2	1.886-1 1.848-1 1.848-3 9.028-0
2.500-1	1.526-1	6.687-2	2.321-1	1.948-3	2.120-0	6.745-2	2.102-1 2.348-1 2.347-3 1.538-1
3.000-1	1.440-1	7.088-2	2.459-1	1.073-3	1.838-0	5.520-2	2.270-1 2.849-1 2.849-3 1.978-1
3.500-1	1.366-1	7.581-2	2.581-1	7.888-4	1.624-0	4.880-2	2.394-1 3.350-1 3.350-3 2.423-1
4.000-1	1.332-1	7.888-2	2.698-1	6.038-4	1.459-0	4.623-2	2.508-1 3.851-1 3.851-3 2.880-1
4.500-1	1.284-1	7.944-2	2.757-1	4.771-4	1.327-0	3.535-2	2.620-1 4.352-1 4.352-3 3.018-1
5.000-1	1.249-1	8.189-2	2.835-1	3.884-4	1.218-0	3.149-2	2.710-1 4.353-1 4.353-3 3.473-1
5.500-1	1.225-1	8.329-2	2.880-1	3.194-4	1.127-0	2.835-2	2.775-1 5.353-1 5.353-3 4.370-1
6.000-1	1.203-1	8.461-2	2.943-1	2.683-4	1.048-0	2.578-2	2.835-1 5.894-1 5.894-3 4.885-1
6.500-1	1.183-1	8.585-2	2.983-1	2.287-4	9.822-1	2.398-2	2.892-1 6.394-1 6.394-3 5.371-1

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 200.98			DENSITY 9.8 GRAMS/CC						
ENERGY MEV	TOTAL HFP		CROSS SECTION (BARNs)					MEV/COLLISION	
	CH	CH*CH/CH	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E. +FLOR	K.E. BREMSSTR
7.000+ 1	1.194+ 0	0.763- 2	3.041- 1	1.972- 4	9.240- 1	2.175- 2	2.948+ 1	6.695+ 1	5.390+ 1
8.000+ 1	1.131+ 0	9.821- 2	3.130+ 1	1.510- 4	8.278- 1	1.978- 2	3.048+ 1	7.695+ 1	6.308+ 1
1.000+ 2	1.075+ 0	9.400- 2	3.250+ 1	9.661- 5	6.889- 1	1.489- 2	3.220+ 1	9.657+ 1	8.245+ 1

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Form Factors

83-81

SIN(θ/2)/λ COHERENT	INCOHERENT	SIN(θ/2)/λ COHERENT	INCOHERENT	SIN(θ/2)/λ COHERENT	INCOHERENT	SIN(θ/2)/λ COHERENT	INCOHERENT
1/λ		1/λ		1/λ		1/λ	
0.000+0 1.000+0 0.000+0		1.250-1 9.105-1 7.401-2		1.000+0 3.040-1 4.000-1		1.000+1 2.100-2 9.724-1	
5.000-3 9.997-4 2.000-4		1.500-1 8.810-1 9.340-2		1.250+0 2.805-1 3.500-1		1.500+1 1.400-2 9.000-1	
1.000-2 9.992-3 8.434-4		1.750-1 8.600-1 1.114-1		1.500+0 2.505-1 4.043-1		2.000+1 1.100-2 9.947-1	
1.500-2 9.987-3 1.877-3		2.000-1 8.414-1 1.200-1		2.000+0 1.770-1 8.983-1		5.000+1 2.050-3 1.000+0	
2.000-2 9.971-3 3.306-3		2.500-1 7.930-1 1.604-1		2.500+0 1.463-1 7.577-1		6.000+1 6.100-4 1.000+0	
2.500-2 9.955-3 5.102-3		3.000-1 7.400-1 1.800-1		3.000+0 1.205-1 6.042-1		1.000+2 3.305-4 1.000+0	
3.000-2 9.937-3 7.241-3		4.000-1 6.847-1 2.442-1		3.500+0 9.477-2 6.370-1		1.000+3 6.000-7 1.000+0	
4.000-2 9.899-3 1.241-2		5.000-1 5.982-1 2.982-1		4.000+0 8.224-2 6.631-1		1.000+6 1.071-14 1.000+0	
5.000-2 9.850-3 1.895-2		6.000-1 5.317-1 3.451-1		5.000+0 5.720-2 6.995-1		1.000+9 1.001-20 1.000+0	
7.000-2 9.683-3 3.271-2		7.000-1 4.814-1 3.891-1		6.000+0 4.720-2 9.250-1			
9.000-2 9.508-3 4.787-2		8.000-1 4.303-1 4.273-1		7.000+0 3.985-2 9.430-1			
1.000-1 9.413-3 5.989-2		9.000-1 3.999-1 4.601-1		8.000+0 3.337-2 9.509-1

421

83-81

12/07/78

ENDL Evaluated Photon Cross Sections

84-Po

12/07/73

Energy Deposition

84-Po

12/07/78

ENDL Evaluated Photon Data

84-Po

ATOMIC WEIGHT 213							DENSITY 8.24 GRAMS/CC				
ENERGY	TOTAL HPF		CROSS SECTION (BARNs)				NEV/COLLISION			NEV/CM	
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. *FLOR	K.E.	SPIN/STR	K.E.
1.000 -4	1.040 -5	0.001 +3	2.335 +8	4.000 +3	1.474 -2	2.330 +8		0.000 -5	0.000 -5	5.200 -10	0.007 +0
1.125 -4	2.63 -5	4.113 +3	1.455 +6	4.001 +3	1.057 -2	1.450 +6		1.119 -4	1.119 -4	6.570 -10	4.234 +0
1.137 -4	1.730 -5	6.233 +3	2.205 +6	4.001 +3	1.004 -2	2.200 +6		1.135 -4	1.135 -4	6.750 -10	6.535 +0
1.250 -4	2.320 -5	4.000 +3	1.050 +6	4.001 +3	2.290 -2	1.045 +6		1.240 -4	1.240 -4	8.157 -10	5.373 +0
1.300 -4	4.040 -5	2.674 +3	0.457 +5	4.000 +3	3.300 -2	0.410 +5		1.402 -4	1.402 -4	1.170 -9	3.007 +0
1.750 -4	5.425 -5	1.000 +3	7.017 +5	4.007 +3	4.400 -2	6.870 +5		1.730 -4	1.730 -4	1.900 -9	3.100 +0
1.765 -4	5.534 -5	1.000 +3	6.917 +5	4.007 +3	4.353 -2	6.870 +5		1.751 -4	1.751 -4	1.810 -9	3.104 +0
1.777 -4	5.730 -5	2.505 +3	9.037 +5	4.007 +3	4.025 -2	9.000 +5		1.760 -4	1.760 -4	1.841 -9	4.173 +0
1.833 -4	4.300 -5	2.504 +3	0.057 +5	4.000 +3	4.910 -2	0.010 +5		1.823 -4	1.823 -4	1.705 -9	4.210 +0
1.847 -4	3.344 -5	3.230 +3	1.145 +6	4.000 +3	4.903 -2	1.140 +6		1.830 -4	1.830 -4	1.770 -9	5.501 +0
2.000 -4	3.505 -5	3.010 +3	1.005 +6	4.005 +3	5.045 -2	1.000 +6		1.991 -4	1.991 -4	2.000 -9	5.530 +0
2.500 -4	1.044 -5	5.000 +3	2.070 +6	4.070 +3	9.073 -2	2.071 +6		2.494 -4	2.494 -4	3.200 -9	1.353 +1
3.000 -4	1.000 -5	1.013 +4	3.005 +6	4.074 +3	1.500 -1	3.000 +6		2.990 -4	2.990 -4	4.713 -9	2.000 +1
3.500 -4	9.150 -6	1.100 +4	4.100 +6	4.000 +3	1.750 -1	4.175 +6		3.490 -4	3.490 -4	6.417 -9	3.010 +1
4.000 -4	0.017 -6	1.350 +4	4.775 +6	4.050 +3	2.275 -1	4.770 +6		3.990 -4	3.990 -4	8.303 -9	4.005 +1
4.500 -4	0.570 -6	1.200 +4	4.404 +6	4.040 +3	2.850 -1	4.450 +6		4.495 -4	4.495 -4	1.001 -9	5.242 +1
4.834 -4	0.934 -6	1.211 +4	4.205 +6	4.043 +3	3.200 -1	4.200 +6		4.820 -4	4.820 -4	1.204 -9	5.405 +1
4.848 -4	0.951 -6	1.251 +4	4.405 +6	4.043 +3	3.207 -1	4.420 +6		4.843 -4	4.843 -4	1.231 -9	5.590 +1
5.000 -4	7.053 -6	1.370 +4	4.075 +6	4.040 +3	3.407 -1	4.070 +6		4.995 -4	4.995 -4	1.310 -9	6.301 +1
5.500 -4	0.703 -6	1.330 +4	4.350 +6	4.000 +3	4.170 -1	4.350 +6		5.494 -4	5.494 -4	1.505 -9	8.200 +1
6.000 -4	9.720 -6	1.112 +4	3.935 +6	4.010 +3	4.900 -1	3.930 +6		5.993 -4	5.993 -4	1.000 -9	8.160 +1
6.500 -4	1.000 -5	1.000 +4	3.537 +6	4.003 +3	5.075 -1	3.532 +6		6.490 -4	6.490 -4	2.212 -9	5.900 +1
7.000 -4	1.194 -5	9.000 +3	3.205 +6	4.500 +3	6.491 -1	3.200 +6		6.990 -4	6.990 -4	2.505 -9	5.852 +1
7.530 -4	1.330 -5	0.090 +3	2.005 +6	4.570 +3	7.400 -1	2.000 +6		7.510 -4	7.510 -4	2.007 -9	5.600 +1
7.944 -4	1.100 -5	9.032 +3	3.105 +6	4.574 +3	7.433 -1	3.100 +6		7.533 -4	7.533 -4	2.970 -9	6.207 +1
8.000 -4	1.304 -5	0.297 +3	2.935 +6	4.503 +3	8.207 -1	2.930 +6		7.900 -4	7.900 -4	3.340 -9	6.124 +1
9.000 -4	1.570 -5	6.005 +3	2.453 +6	4.500 +3	1.010 -0	2.420 +6		8.903 -4	8.903 -4	4.230 -9	5.000 +1
9.940 -4	1.001 -5	5.752 +3	2.034 +6	4.400 +3	1.201 -0	2.030 +6		9.924 -4	9.924 -4	5.170 -9	5.275 +1
9.980 -4	1.703 -5	0.035 +3	2.134 +6	4.400 +3	1.204 -0	2.130 +6		9.939 -4	9.939 -4	5.100 -9	5.542 +1
1.000 -3	1.500 -5	0.040 +3	2.454 +6	4.407 +3	1.210 -0	2.450 +6		9.900 -4	9.900 -4	5.231 -9	6.400 +1
1.250 -3	8.537 -5	0.000 +3	1.500 +6	4.307 +3	1.717 -0	1.500 +6		1.240 -3	1.240 -3	6.190 -9	4.013 +1
1.500 -3	3.774 -5	2.000 +3	1.014 +6	4.500 +3	2.201 -0	1.010 +6		1.494 -3	1.494 -3	1.171 -7	3.990 +1
1.750 -3	5.345 -5	0.055 +3	7.102 +5	4.170 +3	2.010 -0	7.120 +5		1.740 -3	1.740 -3	1.500 -7	3.250 +1
2.000 -3	7.201 -5	1.400 +3	5.301 +5	4.070 +3	3.304 -0	5.200 +5		1.905 -3	1.905 -3	2.000 -7	2.740 +1
2.500 -3	1.100 -4	9.171 +2	3.244 +5	3.630 +3	4.417 -0	3.205 +5		2.470 -3	2.470 -3	3.004 -7	2.033 +1
2.603 -3	1.370 -4	7.053 +2	2.770 +5	3.700 +3	4.005 -0	2.740 +5		2.647 -3	2.647 -3	3.677 -7	1.901 +1
2.604 -3	4.450 -5	2.431 +3	0.500 +5	3.701 +3	4.007 -0	0.500 +5		2.672 -3	2.672 -3	3.470 -7	5.775 +1
2.700 -3	4.050 -5	2.227 +3	7.877 +5	3.710 +3	5.052 -0	7.840 +5		2.705 -3	2.705 -3	3.700 -7	5.522 +1
2.700 -3	4.203 -5	2.521 +3	8.917 +5	3.710 +3	5.054 -0	0.000 +5		2.707 -3	2.707 -3	3.707 -7	6.257 +1
3.000 -3	5.225 -5	2.071 +3	7.327 +5	3.040 +3	5.400 -0	7.290 +5		2.905 -3	2.905 -3	4.305 -7	5.520 +1
3.205 -3	6.005 -5	1.900 +3	5.025 +5	3.517 +3	6.042 -0	5.530 +5		3.270 -3	3.173 -3	5.200 -7	4.003 +1
3.290 -3	5.901 -5	1.000 +3	8.405 +5	3.517 +3	6.044 -0	6.430 +5		3.270 -3	3.177 -3	5.290 -7	5.300 +1
3.300 -3	6.053 -5	1.570 +3	5.000 +5	3.430 +3	6.427 -0	5.525 +5		3.470 -3	3.377 -3	5.907 -7	4.900 +1
3.400 -3	6.053 -5	1.253 +3	4.433 +5	3.111 +3	7.000 -0	4.400 +5		3.620 -3	3.710 -3	7.201 -7	4.307 +1
3.600 -3	7.220 -5	1.491 +3	5.273 +5	3.111 +3	7.005 -0	5.240 +5		3.600 -3	3.725 -3	7.200 -7	5.131 +1
4.000 -3	9.024 -5	1.344 +3	4.753 +5	3.202 +3	7.300 -0	4.720 +5		3.972 -3	3.071 -3	7.007 -7	4.007 +1
4.150 -3	0.000 -5	1.210 +3	4.302 +5	3.201 +3	7.634 -0	4.270 +5		4.125 -3	4.024 -3	8.400 -7	4.523 +1
4.157 -3	7.000 -5	1.300 +3	4.202 +5	3.200 +3	7.635 -0	4.870 +5		4.130 -3	4.025 -3	8.519 -7	5.190 +1
4.500 -3	9.630 -5	1.124 +3	3.975 +5	3.077 +3	8.217 -0	3.944 +5		4.405 -3	4.304 -3	9.907 -7	4.532 +1
5.000 -3	1.272 -4	0.500 +2	3.000 +5	2.901 +3	9.000 -0	2.900 +5		4.951 -3	4.051 -3	1.235 -6	3.013 +1
5.500 -3	1.633 -4	0.027 +2	2.344 +5	2.700 +3	9.053 -0	2.310 +5		5.435 -3	5.334 -3	1.404 -6	3.200 +1
6.000 -3	2.051 -4	5.277 +2	1.000 +5	2.821 +3	1.004 -1	1.044 +5		5.915 -3	5.015 -3	1.775 -6	2.035 +1
6.500 -3	2.525 -4	4.290 +2	1.517 +5	2.470 +3	1.130 -1	1.420 +5		6.393 -3	6.293 -3	2.070 -6	2.495 +1
7.000 -3	3.055 -4	3.243 +2	1.253 +5	2.340 +3	1.211 -1	1.250 +5		6.800 -3	6.700 -3	2.404 -6	2.210 +1
8.000 -3	4.300 -4	2.512 +2	0.000 +4	2.135 +3	1.355 -1	0.070 +4		7.807 -3	7.707 -3	3.117 -6	1.700 +1
1.000 -2	7.701 -4	1.300 +2	4.930 +4	1.771 +3	1.612 -1	4.700 +4		9.030 -3	9.040 -3	4.770 -6	1.231 +1
1.250 -2	1.300 -3	7.774 +1	2.750 +4	1.414 +3	1.005 -1	2.000 +4		1.105 -2	1.175 -2	7.247 -6	0.442 +0
1.301 -2	1.000 -3	5.003 +1	2.120 +4	1.270 +3	1.001 -1	1.000 +4		1.207 -2	1.207 -2	8.004 -6	7.120 +0
1.301 -2	7.300 -4	1.470 +2	5.200 +4	1.270 +3	1.001 -1	5.070 +4		1.347 -2	9.405 -3	4.701 -6	1.200 +1
1.500 -2	9.771 -4	1.193 +2	4.200 +4	1.170 +3	2.101 -1	4.100 +4		1.457 -2	1.050 -2	5.077 -6	1.107 +1
1.624 -2	1.000 -3	0.000 +2	3.400 +4	1.007 +3	2.100 -1	3.300 +4		1.574 -2	1.170 -2	7.255 -6	1.075 +1
1.624 -2	7.003 -4	1.300 +2	4.700 +4	1.007 +3	2.100 -1	4.000 +4		1.600 -2	1.100 -2	7.300 -6	1.404 +1
1.624 -2	0.930 -4	1.211 +2	1.014 +4	1.014 +3	2.241 -1	4.100 +4		1.903 -2	1.252 -2	8.201 -6	1.401 +1

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84-Po

12/07/78

ENDL Evaluated Photon Data

B4-Po

ATOMIC WEIGHT 213										DENSITY 9.24 GRAMS/CC			
ENERGY MEV	TOTAL NTP		CROSS SECTION (BARNS)						PAIR PROD	NEV/COLLISION			NEV/CM
	CH	CH+CH/BN	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR		K.E.	BREMSSTR	K.E.	
1.000-2	7.712-4	1.403-2	4.000-4	1.014-3	2.241-1	4.000-4		1.000-2	1.230-2	0.273-0	1.000-1	1.000-1	
1.750-2	0.406-4	1.000-2	4.000-4	0.745-2	2.201-1	4.000-4		1.712-2	1.310-2	0.000-0	1.000-1	1.000-1	
2.000-2	1.104-3	0.000-1	3.000-4	0.001-2	2.440-1	3.100-4		1.947-2	1.947-2	1.233-5	1.000-1	1.000-1	
2.250-2	2.121-3	5.100-2	1.000-4	0.190-2	2.000-1	1.740-4		2.411-2	2.015-2	2.130-5	9.400-0	9.400-0	
3.000-2	3.300-3	3.100-1	1.131-4	0.003-2	2.301-1	1.000-4		2.000-2	2.473-2	3.200-5	7.307-0	7.307-0	
3.500-2	5.054-3	2.191-1	7.374-3	3.070-2	3.000-1	7.150-3		3.300-2	2.900-2	4.400-5	5.777-0	5.777-0	
4.000-2	7.130-3	1.010-1	5.300-3	3.100-2	3.000-1	5.010-3		3.700-2	3.300-2	5.001-5	4.700-0	4.700-0	
4.500-2	9.001-3	1.117-1	3.000-3	2.000-2	3.000-1	3.000-3		4.100-2	3.700-2	7.400-5	3.003-0	3.003-0	
5.000-2	1.272-2	0.511-0	3.010-3	2.000-2	3.307-1	2.750-3		4.573-2	4.100-2	0.230-5	3.301-0	3.301-0	
5.500-2	1.031-2	0.077-0	2.347-3	1.045-2	3.414-1	2.110-3		4.970-2	4.001-2	1.100-4	2.000-0	2.000-0	
6.000-2	2.043-2	5.200-0	1.074-3	1.001-2	3.450-1	1.070-3		5.390-2	4.903-2	1.305-4	2.444-0	2.444-0	
6.500-2	2.514-2	4.304-0	1.000-3	1.401-2	3.477-1	1.340-3		5.730-2	5.374-2	1.512-4	2.137-0	2.137-0	
7.000-2	3.043-2	3.557-0	1.000-3	1.310-2	3.494-1	1.000-3		6.100-2	5.743-2	1.720-4	1.007-0	1.007-0	
8.000-2	4.271-2	2.534-0	0.000-2	1.040-2	3.505-1	7.000-2		6.700-2	6.443-2	2.170-4	1.500-0	1.500-0	
9.310-2	6.003-2	1.703-0	0.000-2	0.107-1	3.510-1	4.000-2		7.610-2	7.270-2	2.770-4	1.100-0	1.100-0	
9.311-2	1.000-2	0.073-0	2.400-3	0.107-1	3.510-1	2.350-3		8.001-2	7.611-2	3.570-5	1.003-0	1.003-0	
1.000-1	1.001-2	5.010-0	2.057-3	7.100-1	3.514-1	1.000-3		9.000-2	8.230-2	5.005-5	1.751-0	1.751-0	
1.250-1	3.270-2	3.301-0	1.100-3	4.007-1	3.430-1	1.005-3		1.100-1	5.550-2	1.010-4	1.004-0	1.004-0	
1.500-1	5.100-2	2.000-0	7.400-2	3.400-1	3.301-1	0.700-2		1.370-1	7.703-2	3.101-4	1.500-0	1.500-0	
1.750-1	7.520-2	1.430-0	5.001-2	2.041-1	3.201-1	4.500-2		1.571-1	9.001-2	2.000-4	3.140-0	3.140-0	
2.000-1	1.033-1	1.047-0	3.700-2	2.074-1	3.174-1	3.100-2		1.700-1	1.100-1	7.300-4	1.100-0	1.100-0	
2.500-1	1.733-1	0.040-0	2.200-2	1.375-1	2.007-1	1.773-2		2.000-1	1.503-1	1.272-3	9.000-0	9.000-0	
3.000-1	2.500-1	4.101-1	1.400-2	9.000-0	2.042-1	1.100-2		2.300-1	1.007-1	1.071-3	7.347-0	7.347-0	
3.500-1	3.501-1	3.001-1	1.003-2	7.351-0	2.000-1	7.400-1		2.600-1	2.200-1	2.520-3	6.301-0	6.301-0	
4.000-1	4.400-1	2.413-1	0.534-1	5.717-0	2.000-1	5.300-1		2.900-1	2.400-1	3.213-3	5.001-0	5.001-0	
4.500-1	5.401-1	1.074-1	0.003-2	4.000-0	2.471-1	4.000-1		3.143-1	2.701-1	3.044-3	5.000-0	5.000-0	
5.000-1	6.400-1	1.000-1	5.000-1	3.733-0	2.370-1	3.100-1		3.370-1	3.010-1	4.707-3	4.751-0	4.751-0	
5.500-1	7.457-1	1.451-1	5.133-1	3.100-0	2.207-1	2.530-1		3.600-1	3.270-1	5.535-3	4.300-0	4.300-0	
6.000-1	8.410-1	1.207-1	4.000-1	2.000-0	2.000-1	2.000-1		3.800-1	3.500-1	6.410-3	4.103-0	4.103-0	
6.500-1	9.344-1	1.150-1	4.007-1	2.251-0	2.134-1	1.700-1		4.000-1	3.770-1	7.340-3	4.042-0	4.042-0	
7.000-1	1.003-0	1.003-0	3.733-1	1.040-0	2.007-1	1.471-1		4.200-1	4.000-1	8.331-3	3.000-0	3.000-0	
7.500-1	1.100-0	0.000-0	3.100-1	1.500-0	1.000-1	1.000-1		4.400-1	4.200-1	9.251-3	3.774-0	3.774-0	
8.000-1	1.501-0	7.211-0	2.200-1	9.727-0	1.700-1	0.000-0		4.600-1	4.400-1	1.000-2	3.730-0	3.730-0	
1.000-0	1.531-0	7.000-0	2.500-1	9.321-1	1.740-1	0.000-0	1.000-0	5.000-1	5.720-1	1.000-2	3.730-0	3.730-0	
1.250-0	1.004-0	5.000-0	2.000-1	0.275-1	1.577-1	4.003-0	5.770-3	5.170-1	7.032-1	2.500-2	3.000-0	3.000-0	
1.500-0	2.040-0	5.200-0	1.000-1	4.370-1	1.434-1	3.300-0	5.944-3	6.527-1	8.411-1	3.557-2	4.107-0	4.107-0	
1.750-0	2.201-0	4.072-0	1.723-1	3.207-1	1.300-1	2.507-0	1.107-0	6.970-1	9.001-1	4.073-2	4.440-0	4.440-0	
2.000-0	2.345-0	4.010-0	1.833-1	2.470-1	1.207-1	2.000-0	1.007-0	7.104-1	1.140-0	0.501-2	4.007-0	4.007-0	
2.250-0	2.300-0	4.570-0	2.619-1	2.371-1	1.210-1	1.000-0	1.000-0	7.104-1	1.140-0	0.000-2	4.007-0	4.007-0	
2.500-0	2.403-0	4.341-0	1.535-1	1.500-1	1.070-1	1.410-0	2.000-0	7.104-1	1.140-0	1.000-1	5.000-0	5.000-0	
3.000-0	2.549-0	4.240-0	1.502-1	1.105-1	0.000-0	1.000-0	4.100-0	7.104-1	1.140-0	1.000-1	7.300-0	7.300-0	
3.500-0	2.501-0	4.104-0	1.143-1	0.129-1	0.000-0	0.000-0	5.000-0	7.104-1	1.140-0	2.000-0	8.003-1	8.003-1	
4.000-0	2.570-0	4.100-0	1.400-1	0.000-0	0.000-0	7.000-0	5.000-0	7.104-1	2.105-0	3.000-0	1.003-0	1.003-0	
4.500-0	2.500-0	4.200-0	1.501-1	4.003-2	7.470-0	0.150-1	6.075-0	7.104-1	3.101-0	4.000-0	1.240-0	1.240-0	
5.000-0	2.510-0	4.200-0	1.510-1	3.000-2	6.071-0	5.350-1	7.000-0	7.104-1	3.610-0	5.770-0	1.430-0	1.430-0	
5.500-0	2.400-0	4.330-0	1.530-1	3.200-2	6.530-0	4.710-1	8.200-0	7.104-1	4.000-0	7.204-0	1.574-0	1.574-0	
6.000-0	2.470-0	4.301-0	1.550-1	2.770-2	6.103-0	4.210-1	8.000-0	7.104-1	4.500-0	8.000-0	1.843-0	1.843-0	
6.500-0	2.430-0	4.430-0	1.570-1	2.300-2	5.030-0	3.700-1	9.400-0	7.104-1	5.030-0	1.051-0	2.003-0	2.003-0	
7.000-0	2.404-0	4.500-0	1.500-1	2.037-2	5.530-0	3.440-1	1.000-1	7.104-1	5.510-0	1.237-0	2.203-0	2.203-0	
8.000-0	2.330-0	4.040-0	1.041-1	1.000-2	5.040-0	2.900-1	1.100-1	8.400-0	5.400-0	1.047-0	2.700-0	2.700-0	
1.000-1	2.104-0	4.033-0	1.745-1	0.000-3	4.000-0	2.200-1	1.200-1	8.400-0	5.400-0	2.601-0	3.000-0	3.000-0	
1.250-1	2.051-0	5.070-0	1.007-1	0.303-3	3.045-0	1.007-1	1.405-1	1.005-1	1.005-1	3.300-0	5.370-0	5.370-0	
1.500-1	1.031-0	5.000-0	1.003-1	4.440-3	3.170-0	1.340-1	1.051-1	1.345-1	1.345-1	5.000-0	6.000-0	6.000-0	
1.750-1	1.030-0	5.000-0	2.000-1	3.200-3	2.000-0	1.121-1	1.700-1	1.305-1	1.305-1	7.270-0	0.710-0	0.710-0	
2.000-1	1.740-0	0.107-2	2.100-1	2.407-3	2.550-0	0.000-0	1.003-1	1.040-1	1.040-1	9.007-0	1.000-0	1.000-0	
2.500-1	1.610-0	0.003-2	2.304-1	1.500-3	2.145-0	7.303-2	2.140-1	2.340-1	2.340-1	7.200-0	1.450-0	1.450-0	
3.000-1	1.300-0	7.000-0	2.300-1	1.110-3	1.000-0	6.200-2	2.315-1	2.340-1	2.340-1	1.700-1	1.007-1	1.007-1	
3.500-1	1.250-0	7.410-0	2.000-1	0.153-4	1.000-0	5.231-2	2.450-1	3.350-1	3.350-1	2.130-1	2.700-1	2.700-1	
4.000-1	1.400-0	7.700-0	2.700-1	0.240-4	1.477-0	0.000-0	2.573-1	3.051-1	3.051-1	3.057-1	3.003-1	3.003-1	
4.500-1	1.300-0	7.000-0	2.017-1	0.000-4	1.343-0	3.000-2	2.073-1	3.350-1	3.350-1	3.350-1	3.003-1	3.003-1	
5.000-1	1.303-0	0.170-2	2.003-1	3.000-4	1.230-0	3.300-2	2.700-1	4.053-1	4.053-1	3.400-1	3.007-1	3.007-1	
5.500-1	1.200-0	0.130-2	2.040-1	3.000-4	1.140-0	3.400-2	2.000-1	5.300-1	5.300-1	3.400-1	4.120-1	4.120-1	
6.000-1	1.275-0	0.400-2	3.003-1	2.774-4	1.000-0	2.510-2	2.000-1	5.000-1	5.000-1	4.417-1	4.000-1	4.000-1	

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B4-Po

12/07/78

ENDL Evaluated Photon Data

84-Po

ATOMIC WEIGHT 213				DENSITY 9.24 GRAMS/CC							
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARNs)					MEV/COLLISION			MEV/CM
	CM	CM*CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. *FLOR	K.E.	BRNSTR	K.E.
6.300+ 1	1.253+ 0	8.634- 2	3.69+ 1	2.30- 4	9.941- 1	2.000- 2	2.000+ 1	6.304+ 1	6.304+ 1	4.000+ 1	5.870+ 1
7.000+ 1	1.234+ 0	8.770- 2	3.103+ 1	2.630- 4	9.351- 1	2.400- 2	3.007+ 1	6.600+ 1	6.600+ 1	5.304+ 1	5.920+ 1
8.000+ 1	1.100+ 0	9.630- 2	3.109+ 1	1.501- 4	8.375- 1	2.130- 2	3.100+ 1	7.000+ 1	7.000+ 1	6.303+ 1	6.995+ 1
1.000+ 2	1.141+ 0	9.400- 2	3.350+ 1	9.900- 5	6.952- 1	1.000- 2	3.205+ 1	9.057+ 1	9.057+ 1	8.201+ 1	8.843+ 1

84-Po

SIN(0/21) /A COHERENT		INCOHERENT		SIN(0/21) /A COHERENT		INCOHERENT		SIN(0/21) /A COHERENT		INCOHERENT		SIN(0/21) /A COHERENT		INCOHERENT	
/A				/A				/A				/A			
0.000-0	1.000-0	0.000-0	1.230-1	9.19-1	7.54E-2	1.000-0	3.057-1	4.001-1	1.000-1	2.101-2	9.720-1	1.000-1	2.101-2	9.720-1	
5.000-3	0.000-1	2.00-4	1.200-1	0.003-3	9.49E-2	1.230-0	2.230-1	5.497-1	1.500-1	1.400-2	9.870-1	1.500-1	1.400-2	9.870-1	
1.000-2	0.999-1	0.005-4	1.700-1	0.037-1	1.130-1	1.250-0	2.300-1	6.00-1	2.000-1	1.100-2	9.99-1	2.000-1	1.100-2	9.99-1	
1.500-2	0.999-1	1.000-3	2.000-1	0.300-1	1.307-1	2.000-0	1.777-1	6.000-1	5.000-1	2.131-3	9.999-1	5.000-1	2.131-3	9.999-1	
2.000-2	0.972-1	3.103-3	2.200-1	7.915-1	1.630-1	2.200-0	1.403-1	7.250-1	8.000-1	0.897-4	1.000-0	8.000-1	0.897-4	1.000-0	
2.300-2	0.970-1	4.903-3	3.000-1	7.472-1	1.921-1	3.000-0	1.210-1	8.000-1	1.000-2	3.577-4	1.000-0	1.000-2	3.577-4	1.000-0	
3.000-2	0.937-1	0.000-3	4.000-1	6.094-1	2.433-1	3.500-0	0.978-2	0.300-1	1.000-3	3.322-7	1.000-0	1.000-3	3.322-7	1.000-0	
4.000-2	0.000-1	1.000-2	5.000-1	7.000-1	3.000-1	5.000-0	0.200-2	0.010-1	1.000-4	1.200-11	1.000-0	1.000-4	1.200-11	1.000-0	
5.000-2	0.000-1	1.010-2	6.000-1	5.307-1	3.440-1	5.000-0	0.931-2		1.000-9	2.302-22	1.000-0	1.000-9	2.302-22	1.000-0	
7.000-2	0.000-1	3.00E-2	7.030-1	4.000-1	3.677-1	6.000-0	0.730-2	0.20-1							
9.000-2	0.900-1	4.70E-2	8.000-1	4.300-1	4.201-1	7.000-0	0.30-2	0.40-1							
1.000-1	0.400-1	5.77-2	9.000-1	4.010-1	4.203-1	8.000-0	0.357-2	0.95-1

12/07/78

ENDL Evaluated Photon Cross Sections

85-At

12/07/78

Energy Deposition

85-Al

12/07/78

ENDL Evaluated Photon Data

85-At

ATOMIC WEIGHT 218										13.5 GRAMS/CC			
ENERGY	TOTAL NFP			CROSS SECTION (BARNS)						REV/COLLISION		REV/CM	
MEV	CH	CH+CH/CH		TOTAL	COHERENT	INCOHER	PHOTOL	PAIR PROD	K.E.+FLOR	K.E.	SHENSTR	K.E.	
1.000	4	9.075	6	0.183	3	2.929	8	4.085	3	1.480	2	2.920	8
1.250	4	2.279	5	3.298	3	1.178	8	4.083	3	2.278	2	1.172	8
1.500	4	2.386	5	3.218	3	1.165	8	4.083	3	2.287	2	1.180	8
1.750	4	1.488	5	5.911	3	1.025	8	4.083	3	2.338	2	1.020	8
1.500	4	2.485	5	3.080	3	1.115	8	4.082	3	2.328	2	1.110	8
1.750	4	3.293	5	2.311	3	0.387	5	4.083	3	4.383	2	0.319	5
1.943	4	3.083	5	1.983	3	0.088	5	4.798	3	5.385	2	0.840	5
1.957	4	2.983	5	2.483	3	0.988	5	4.798	3	5.482	2	0.940	5
2.000	4	2.993	5	2.475	3	0.988	5	4.798	3	5.701	2	0.910	5
2.093	4	3.051	5	2.488	3	0.788	5	4.798	3	8.234	2	0.740	5
2.107	4	2.308	5	3.218	3	1.125	8	4.798	3	8.317	2	1.180	8
2.500	4	1.523	5	4.088	3	1.788	8	4.791	3	8.846	2	1.755	8
3.000	4	0.805	6	7.555	3	2.735	8	4.788	3	1.287	1	2.730	8
3.500	4	7.307	6	1.014	4	3.670	8	4.778	3	1.711	1	3.685	8
4.000	4	5.663	6	1.308	4	4.735	8	4.771	3	2.220	1	4.730	8
4.500	4	5.595	6	1.244	4	4.503	8	4.781	3	2.784	1	4.488	8
5.000	4	6.229	6	1.186	4	4.305	8	4.752	3	3.409	1	4.300	8
5.188	4	6.423	6	1.153	4	4.175	8	4.748	3	3.628	1	4.170	8
5.182	4	6.229	6	1.186	4	4.305	8	4.748	3	3.847	1	4.300	8
5.500	4	6.232	6	1.170	4	4.235	8	4.740	3	4.081	1	4.230	8
6.000	4	6.485	6	1.142	4	4.135	8	4.729	3	4.810	1	4.130	8
6.500	4	7.188	6	1.028	4	3.727	8	4.714	3	5.288	1	3.722	8
7.000	4	7.922	6	0.950	3	3.305	8	4.699	3	6.377	1	3.380	8
7.880	4	9.493	6	7.803	3	2.885	8	4.678	3	7.920	1	2.880	8
7.894	4	8.393	6	8.085	3	3.195	8	4.678	3	7.946	1	3.180	8
8.000	4	8.637	6	8.577	3	3.105	8	4.673	3	8.142	1	3.180	8
9.000	4	1.048	5	7.085	3	2.888	8	4.637	3	9.994	1	2.960	8
1.000	3	1.290	5	5.924	3	2.145	6	4.608	3	1.201	0	2.140	8
1.042	3	1.297	5	5.712	3	2.088	6	4.589	3	1.282	0	2.063	6
1.043	3	1.134	5	6.532	3	2.385	6	4.589	3	1.284	0	2.380	6
1.250	3	1.698	5	4.387	3	1.981	6	4.488	3	1.712	0	1.578	6
1.500	3	2.543	5	2.913	3	1.094	6	4.400	3	2.287	0	1.050	6
1.750	3	3.588	5	2.058	3	7.494	5	4.278	3	2.837	0	7.411	5
2.000	3	4.058	5	1.583	3	5.522	5	4.172	3	3.420	0	5.480	5
2.500	3	7.944	5	9.325	2	3.378	5	3.919	3	4.486	0	3.336	5
2.787	3	1.609	4	7.343	2	2.898	5	3.802	3	5.119	0	2.820	5
2.788	3	3.263	5	2.870	3	8.218	5	3.801	3	5.121	0	8.180	5
2.989	3	3.587	5	2.077	3	7.518	5	3.738	3	5.393	0	7.480	5
2.910	3	3.148	5	2.353	3	8.518	2	3.738	3	5.395	0	8.480	5
3.000	3	3.148	5	2.148	3	7.777	5	3.724	3	5.988	0	7.740	5
3.416	3	4.170	5	1.480	3	5.385	5	3.540	3	6.403	0	5.360	5
3.417	3	4.321	5	1.714	3	6.205	5	3.539	3	6.405	0	6.170	5
3.500	3	4.577	5	1.618	3	5.898	5	3.508	3	6.986	0	5.823	5
4.000	3	6.304	5	1.175	3	4.253	5	3.326	3	7.537	0	4.220	5
4.008	3	6.134	5	1.189	3	4.233	5	3.326	3	7.947	0	4.200	5
4.007	3	5.127	5	1.390	3	5.033	5	3.325	3	7.949	0	5.000	5
4.317	3	6.521	5	1.136	3	4.112	5	3.208	3	8.084	0	4.080	5
4.318	3	5.727	5	1.293	3	4.882	5	3.205	3	8.086	0	4.850	5
4.500	3	6.387	5	1.180	3	4.199	5	3.141	3	8.398	0	4.187	5
5.000	3	8.432	5	0.789	2	3.180	5	2.988	3	9.253	0	3.158	5
5.500	3	1.089	4	6.832	2	2.473	5	2.880	3	1.045	1	2.445	5
6.000	3	1.383	4	5.433	2	1.867	5	2.679	3	1.083	1	1.840	5
6.500	3	1.678	4	4.412	2	1.597	5	2.532	3	1.157	1	1.572	5
7.000	3	2.038	4	3.839	2	1.317	5	2.402	3	1.230	1	1.293	5
8.000	3	2.677	4	2.575	2	0.920	4	2.185	3	1.374	1	0.910	4
1.000	2	5.154	4	1.377	2	5.283	4	1.813	3	1.631	1	5.828	4
1.250	2	9.289	4	7.981	1	2.883	4	1.458	3	1.888	1	2.746	4
1.421	2	1.288	3	5.717	1	2.888	4	1.274	3	2.051	1	1.948	4
1.421	2	5.131	4	1.388	2	5.889	4	1.274	3	2.052	1	1.988	4
1.588	2	6.483	4	1.282	2	4.423	4	1.288	3	2.123	1	1.388	4
1.678	2	7.988	4	9.873	1	3.398	4	1.824	3	2.234	1	3.298	4
1.678	2	5.832	4	1.278	2	4.988	4	1.853	3	2.234	1	4.488	4
1.749	2	6.926	4	1.138	2	4.113	4	1.888	3	2.384	1	4.810	4
9.984	5	9.984	5	5.293	10	1.100	1						
1.845	4	1.845	4	8.233	10	5.481	0						
1.848	4	1.848	4	8.278	10	5.420	0						
1.894	4	1.894	4	8.403	10	6.600	0						
1.494	4	1.494	4	1.185	9	6.209	0						
1.740	4	1.740	4	1.808	9	5.428	0						
1.828	4	1.828	4	1.978	9	4.928	0						
1.947	4	1.947	4	2.013	9	6.525	0						
1.989	4	1.989	4	2.102	9	6.848	0						
2.088	4	2.088	4	2.302	9	6.882	0						
2.098	4	2.098	4	2.339	9	9.115	0						
2.493	4	2.493	4	3.302	9	1.837	1						
2.993	4	2.993	4	4.784	9	3.054	1						
3.495	4	3.495	4	5.481	9	4.784	1						
3.998	4	3.998	4	8.483	9	7.028	1						
4.495	4	4.495	4	1.073	8	7.548	1						
4.994	4	4.994	4	1.325	8	8.018	1						
5.182	4	5.182	4	1.418	8	8.037	1						
5.178	4	5.178	4	1.423	8	8.310	1						
5.494	4	5.494	4	1.803	8	8.678	1						
5.993	4	5.993	4	1.908	8	9.241	1						
6.492	4	6.492	4	2.239	8	9.022	1						
6.990	4	6.990	4	2.598	8	8.824	1						
7.887	4	7.887	4	3.288	8	8.287	1						
7.888	4	7.888	4	3.301	8	9.391	1						
7.888	4	7.888	4	3.390	8	9.249	1						
8.884	4	8.884	4	4.287	8	8.528	1						
9.879	4	9.879	4	5.289	8	7.981	1						
1.040	3	1.040	3	5.742	8	8.017	1						
1.041	3	1.041	3	5.758	8	9.180	1						
1.248	3	1.248	3	8.253	8	7.349	1						
1.494	3	1.494	3	1.185	7	5.874	1						
1.740	3	1.740	3	1.608	7	4.837	1						
1.985	3	1.985	3	2.093	7	4.087	1						
2.471	3	2.471	3	3.243	7	3.111	1						
2.747	3	2.747	3	4.008	7	2.723	1						
2.775	3	2.881	3	3.782	7	6.158	1						
2.889	3	2.781	3	4.107	7	7.788	1						
2.897	3	2.783	3	4.115	7	8.841	1						
2.988	3	2.872	3	4.381	7	8.330	1						
3.394	3	3.280	3	5.714	7	6.600	1						
3.397	3	3.284	3	5.728	7	7.600	1						
3.479	3	3.365	3	6.018</									

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 218										13.5 GRAMS/CC					
ENERGY	TOTAL HPF			CROSS SECTION (BARNS)					PAIR PROD	NEUT/COLLISION			NEUT/CM		
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHER	PHOTOEL	K.E.-FLOR	K.E.		BREMSSTR	K.E.				
1.748	2	5.819	4	1.318	2	4.773	4	1.888	3	2.384	1	4.878	4	2.885	2
1.750	2	5.825	4	1.317	2	4.767	4	1.888	3	2.385	1	4.880	4	2.883	2
2.888	2	7.988	4	9.275	1	3.398	4	8.518	2	2.475	1	3.270	4	1.908	1
2.980	2	1.429	3	5.218	1	1.888	4	6.384	2	2.784	1	1.888	4	1.482	1
3.080	2	2.898	3	3.287	1	1.183	4	4.958	2	2.948	1	1.130	4	1.080	1
3.990	2	3.385	3	2.189	1	7.983	3	3.988	2	3.087	1	7.494	3	6.988	0
4.000	2	4.778	3	1.950	1	5.811	3	3.281	2	3.233	1	5.250	3	6.978	0
4.900	2	6.478	3	1.143	1	4.139	3	2.745	2	3.320	1	3.821	3	5.808	0
5.000	2	8.433	3	8.728	0	3.157	3	2.333	2	3.398	1	2.880	3	4.983	0
5.900	2	1.038	2	8.809	0	2.485	3	2.003	2	3.447	1	2.230	3	4.217	0
6.000	2	1.352	2	5.440	0	1.988	3	1.742	2	3.482	1	1.780	3	3.298	0
8.900	2	1.678	2	4.420	0	1.800	3	1.525	2	3.511	1	1.412	3	3.203	0
7.000	2	2.038	2	3.852	0	1.382	3	1.349	2	3.520	1	1.152	3	2.830	0
8.000	2	2.848	2	2.801	0	9.417	2	1.080	2	3.561	1	7.980	2	2.894	0
9.573	2	4.438	2	1.847	0	5.982	2	7.985	1	3.553	1	4.810	2	1.857	0
9.573	2	1.134	2	6.988	0	2.385	3	7.985	1	3.553	1	2.270	3	2.385	0
1.000	1	1.235	2	5.895	0	2.119	3	7.397	1	3.951	1	2.010	3	2.435	0
1.250	1	2.217	2	3.740	0	1.208	3	4.974	1	3.467	1	1.125	3	2.428	0
1.500	1	3.483	2	2.127	0	7.700	2	3.598	1	3.400	1	7.000	2	2.183	0
1.750	1	5.098	2	1.485	0	5.303	2	2.782	1	3.297	1	4.701	2	1.925	0
2.000	1	6.938	2	1.088	0	3.885	2	2.138	1	3.210	1	3.330	2	1.698	0
2.500	1	1.187	1	6.350	1	2.299	2	1.417	1	3.020	1	1.895	2	1.332	0
3.000	1	1.743	1	4.251	1	1.539	2	1.017	1	2.874	1	1.150	2	1.065	0
3.500	1	2.388	1	3.130	1	1.133	2	7.980	0	2.730	1	7.843	1	9.313	0
4.000	1	3.036	1	2.440	1	8.831	1	5.897	0	2.618	1	5.830	1	6.210	0
4.500	1	3.712	1	1.988	1	7.284	1	4.710	0	2.500	1	4.294	1	7.458	0
5.000	1	4.397	1	1.685	1	6.098	1	3.852	0	2.403	1	3.310	1	6.893	0
5.500	1	5.084	1	1.483	1	5.295	1	3.207	0	2.314	1	2.861	1	6.496	0
6.000	1	5.783	1	1.294	1	4.888	1	2.713	0	2.234	1	2.180	1	6.191	0
6.500	1	6.381	1	1.185	1	4.218	1	2.323	0	2.159	1	1.825	1	5.970	0
7.000	1	6.983	1	1.081	1	3.840	1	2.012	0	2.091	1	1.547	1	5.799	0
7.500	1	8.176	1	9.080	2	3.280	1	1.953	0	1.974	1	1.150	1	5.573	0
1.000	0	1.028	0	7.219	2	2.813	1	1.004	0	1.781	1	7.320	0	5.490	0
1.022	0	1.047	0	7.077	2	2.582	1	9.825	1	1.782	1	7.031	0	5.501	0
1.250	0	1.249	0	5.932	2	2.147	1	8.480	1	1.588	1	4.880	0	5.685	0
1.500	0	1.404	0	5.274	2	1.909	1	4.523	1	1.453	1	3.500	0	6.018	0
1.750	0	1.525	0	4.898	2	1.758	1	3.333	1	1.337	1	2.850	0	5.982	0
2.000	0	1.611	0	4.598	2	1.584	1	2.559	1	1.242	1	2.110	0	5.713	0
2.044	0	1.624	0	4.581	2	1.551	1	2.450	1	1.227	1	2.039	0	5.723	0
2.500	0	1.713	0	4.323	2	1.385	1	1.842	1	1.082	1	1.494	0	5.733	0
3.000	0	1.752	0	4.229	2	1.231	1	1.142	1	9.783	0	1.140	0	5.743	0
3.500	0	1.773	0	4.177	2	1.121	1	8.399	2	8.890	0	9.153	1	1.290	0
4.000	0	1.771	0	4.182	2	1.514	1	6.435	2	8.185	0	6.150	0	1.535	0
4.500	0	1.752	0	4.228	2	1.530	1	5.087	2	7.583	0	6.471	1	1.808	0
5.000	0	1.721	0	4.278	2	1.549	1	4.122	2	7.054	0	5.620	1	2.092	0
5.500	0	1.717	0	4.315	2	1.582	1	3.408	2	6.818	0	5.581	1	2.380	0
6.000	0	1.698	0	4.363	2	1.575	1	2.884	2	6.238	0	4.430	1	2.684	0
6.500	0	1.676	0	4.420	2	1.600	1	2.441	2	5.902	0	3.998	1	3.004	0
7.000	0	1.652	0	4.483	2	1.623	1	2.105	2	5.805	0	3.632	1	3.338	0
8.000	0	1.604	0	4.819	2	1.672	1	1.812	2	5.102	0	3.080	1	4.047	0
1.000	1	1.509	0	4.909	2	1.777	1	1.032	2	4.348	0	2.300	1	5.608	0
1.250	1	1.410	0	5.253	2	1.802	1	8.808	3	3.888	1	1.752	1	7.767	0
1.500	1	1.327	0	5.580	2	2.020	1	4.388	3	3.217	0	1.809	1	1.013	0
1.750	1	1.258	0	5.883	2	2.130	1	3.371	3	2.881	1	1.177	1	1.267	0
2.000	1	1.202	0	6.181	2	2.230	1	2.980	3	2.582	1	1.062	1	1.596	0
2.500	1	1.113	0	6.857	2	2.410	1	1.851	3	2.171	0	7.919	2	2.110	0
3.000	1	1.049	0	7.089	2	2.557	1	1.147	3	1.880	0	6.490	2	2.717	0
3.500	1	1.002	0	7.392	2	2.676	1	6.425	4	1.883	0	5.488	2	3.283	0
4.000	1	9.847	1	7.679	2	2.788	1	6.451	4	1.494	0	4.740	2	3.983	0
4.500	1	9.330	1	7.940	2	2.874	1	5.087	4	1.398	0	4.182	2	4.885	0
5.000	1	9.087	1	8.152	2	2.951	1	4.129	4	1.247	0	3.710	2	5.341	0
5.500	1	8.812	1	8.312	2	3.009	1	3.412	4	1.194	0	3.349	2	6.007	0
6.000	1	8.753	1	8.483	2	3.084	1	2.887	4	1.075	0	3.090	2	6.889	0
1.712	2	1.284	2	8.748	8	2.285	1	4.878	4	1.712	2	1.284	2	2.885	2
1.712	2	1.284	2	8.748	8	2.285	1	4.878	4	1.712	2	1.284	2	2.883	2
1.948	2	1.522	2	1.285	5	1.906	1	3.270	4	1.948	2	1.522	2	1.908	1
2.413	2	1.981	2	2.103	5	1.482	1	1.888	4	2.413	2	1.981	2	1.482	1
2.887	2	2.448	2	3.183	5	1.088	1	1.130	4	2.887	2	2.448	2	1.080	1
3.311	2	2.888	2	4.424	5	0.988	0	0.978	0	3.311	2	2.888	2	0.988	0
3.744	2	3.335	2	5.888	5	0.878	0	0.878	0	3.744	2	3.335	2	0.878	0
4.188	2	3.784	2	7.510	5	0.808	0	0.808	0	4.188	2	3.784	2	0.808	0
4.582	2	4.181	2	9.267	5	0.723	0	0.723	0	4.582	2	4.181	2	0.723	0
4.984	2	4.588	2	1.118	4	0.617	0	0.617	0	4.984	2	4.588	2	0.617	0
5.374	2	4.983	2	1.318	4	0.558	0	0.558	0	5.374	2	4.983	2	0.558	0
5.793	2	5.387	2	1.528	4	0.503	0	0.503	0	5.793	2	5.387	2	0.503	0
6.121	2	5.740	2	1.743	4	0.450	0	0.450	0	6.121	2	5.740	2	0.450	0
6.818	2	6.448	2	2.201	4	0.388	0	0.388	0	6.818	2	6.448	2	0.388	0
7.806	2	7.453	2	2.940	4	0.305	0	0.305	0	7.806	2	7.453	2	0.305	0
9.131	2	2.881	2	3.813	5	0.285	0	0.285	0	9.131	2	2.881	2	0.285	0
9.508	2	3.081	2	5.034	5	0.235	0	0.235	0	9.508	2	3.081	2	0.235	0
1.189	1	5.384	2	1.536	4	0.248	0	0.248	0	1.189	1	5.384	2	1.536	4
1.378	1	7.803	2	3.058	4	0.283	0	0.283	0	1.378	1	7.803	2	3.058	4
1.574	1	9.734	2	5.008	4	0.285	0	0.285	0	1.574	1	9.734	2	5.008	4
1.781	1	1.177	1	7.312	4	0.286	0	0.286	0	1.781	1	1.177	1	7.312	4
2.101	1	1.594	1	1.278	3	0.332	0	0.332	0	2.101	1	1.594	1	1.278	3
2.398	1	1.8													

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ENDL Evaluated Photon Data

85-A1

ATOMIC WEIGHT 218		13.5 GRAMS/CC									
ENERGY	TOTAL MFP	CROSS SECTION (BARNS)							MEV/COLLISION		MEV/CM
MEV	CM	CM*CM/CM	TOTAL	COHERENT	INCOHERT	PHOTON	PAIR PROD	K.E. *FLOR	K.E.	BREMSSTR	K.E.
0.500+ 1	0.006- 1	0.007- 2	3.116+ 1	2.443- 4	1.006+ 0	2.798- 2	3.012+ 1	6.395+ 1	6.395+ 1	4.903+ 1	7.98+ 1
7.000+ 1	0.471- 1	0.744- 2	3.185+ 1	2.107- 4	9.482- 1	2.579- 2	3.080+ 1	6.895+ 1	6.895+ 1	5.378+ 1	8.082+ 1
0.000+ 1	0.229- 1	0.001- 2	3.298+ 1	1.613- 4	8.475- 1	2.290- 2	3.172+ 1	7.096+ 1	7.096+ 1	6.338+ 1	9.947+ 1
1.000+ 2	7.631- 1	9.498- 2	3.424+ 1	1.032- 4	7.034- 1	1.790- 2	3.352+ 1	9.098+ 1	9.098+ 1	8.277+ 1	1.299+ 2

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Form Factors

85-A1

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
0.000+0	1.000+0	0.000+0	1.250-1	0.147-1	7.539-2	1.000+0	3.000-1	4.878-1	1.000+1	2.200-2	9.718-1
5.000-3	9.999-1	2.871-4	1.500-1	0.001-1	9.501-2	1.250+0	2.923-1	5.487-1	1.500+1	1.498-2	9.875-1
1.000-2	9.995-1	7.705-4	1.750-1	0.019-1	1.140-1	1.500+0	2.401-1	6.007-1	2.000+1	1.138-2	9.944-1
1.500-2	9.989-1	1.738-3	2.000-1	0.305-1	1.321-1	2.000+0	1.778-1	6.871-1	5.000+1	2.208-3	9.998-1
2.000-2	9.978-1	3.005-3	2.500-1	7.098-1	1.024-1	2.500+0	1.463-1	7.327-1	8.000+1	6.608-4	1.000+0
2.500-2	9.958-1	4.744-3	3.000-1	7.434-1	1.047-1	3.000+0	1.215-1	8.002-1	1.000+2	3.787-4	1.000+0
3.000-2	9.937-1	6.753-3	4.000-1	8.028-1	2.408-1	3.500+0	9.877-2	8.346-1	1.000+3	8.003-7	1.000+0
4.000-2	9.890-1	1.187-2	5.000-1	5.947-1	2.981-1	4.000+0	8.388-2	8.604-1	1.000+6	1.501-14	1.000+0
5.000-2	9.831-1	1.781-2	6.000-1	5.339-1	3.432-1	5.000+0	5.748-2	8.972-1	1.000+9	2.951-22	1.000+0
7.000-2	9.683-1	3.188-2	7.000-1	4.830-1	3.885-1	6.000+0	4.733-2	9.231-1			
9.000-2	9.504-1	4.728-2	8.000-1	4.400-1	4.250-1	7.000+0	3.982-2	9.419-1			
1.000-1	9.406-1	5.532-2	9.000-1	4.023-1	4.585-1	8.000+0	3.375-2	9.554-1

12/07/78

ENDL Evaluated Photon Cross Sections

86-Rn

12/07/78

Energy Deposition

86-Rn

12/07/78

ENDL Evaluated Photon Data

86-Rn

ATOMIC WEIGHT 222		DENSITY 0.0098 GRAMS/CC			
ENERGY	TOTAL HP	CROSS SECTION (BARN)			
MEV	CM CM/CH/ON	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD
MEV	CM CM/CH/ON	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD
1.800-4	1.071-2	3.285-6	4.919-3	1.388-2	3.980-8
1.850-4	2.677-2	1.434-6	4.917-3	2.184-2	1.429-8
1.900-4	4.051-2	9.478-5	4.918-3	2.048-2	9.430-5
1.950-4	2.502-2	1.535-6	4.918-3	2.702-2	1.530-6
1.500-4	2.985-2	1.295-6	4.918-3	3.114-2	1.290-6
1.750-4	3.982-2	9.620-5	4.913-3	4.233-2	9.571-5
2.000-4	5.182-2	7.439-5	4.911-3	5.524-2	7.390-5
2.133-4	5.488-2	6.989-5	4.910-3	6.274-2	6.950-5
2.147-4	4.234-2	2.480-3	4.089-5	6.358-2	6.020-5
2.373-4	4.335-2	2.403-3	4.099-5	7.747-2	8.810-5
2.387-4	3.241-2	3.214-3	1.185-6	4.907-3	7.838-2
2.500-4	3.004-2	3.488-3	1.278-6	4.905-3	8.589-2
3.000-4	2.228-2	4.679-3	1.725-6	4.900-3	1.232-1
3.500-4	1.024-2	9.887-3	3.845-6	4.892-3	1.605-1
4.000-4	8.357-3	1.246-4	4.995-6	4.885-3	2.162-1
4.500-4	6.505-3	1.223-4	4.515-6	4.875-3	2.713-1
5.000-4	6.639-3	1.208-4	4.445-6	4.885-3	3.325-1
5.500-4	9.418-3	1.108-4	4.078-6	4.853-3	3.983-1
5.505-4	9.424-3	1.105-4	4.075-6	4.853-3	3.990-1
5.519-4	9.132-3	1.141-4	4.053-6	4.853-3	4.009-1
6.000-4	8.838-3	1.179-4	4.345-6	4.842-3	4.340-1
6.500-4	9.784-3	1.004-4	3.921-6	4.826-3	5.442-1
7.000-4	1.077-2	9.670-3	3.285-6	4.812-3	6.236-1
8.000-4	1.313-2	7.934-3	2.885-6	4.785-3	7.972-1
8.210-4	1.388-2	7.608-3	2.805-6	4.777-3	8.343-1
8.224-4	1.181-2	8.744-3	3.225-6	4.777-3	8.388-1
9.000-4	1.420-2	7.337-3	2.705-6	4.749-3	9.801-1
1.000-3	1.582-2	6.588-3	2.428-6	4.716-3	1.179-0
1.098-3	1.922-2	5.419-3	1.998-6	4.588-3	1.388-0
1.097-3	1.881-2	5.538-3	2.042-6	4.888-3	1.388-0
1.250-3	2.481-2	4.198-3	1.948-6	4.599-3	1.867-0
1.500-3	3.852-2	2.852-3	1.052-6	4.506-3	2.260-0
1.750-3	5.084-2	2.057-3	7.583-5	4.377-3	2.813-0
2.000-3	6.719-2	1.350-3	5.715-5	4.289-3	3.401-0
2.500-3	1.078-2	9.877-2	3.287-5	4.006-3	4.481-0
2.885-3	1.452-2	7.157-2	2.839-5	3.846-3	5.388-0
2.888-3	6.298-2	1.874-3	6.098-5	3.845-3	5.370-0
3.000-3	6.963-2	1.498-3	5.515-5	3.803-3	5.636-0
3.013-3	7.042-2	1.479-3	5.453-5	3.787-3	5.862-0
3.014-3	5.132-2	2.030-3	7.488-5	3.788-3	5.884-0
3.500-3	7.987-2	1.377-3	5.075-5	3.579-3	6.840-0
3.533-3	7.753-2	1.344-3	4.953-5	3.588-3	6.708-0
3.534-3	5.747-2	1.813-3	6.888-5	3.585-3	6.708-0
4.000-3	7.987-2	1.314-3	4.844-5	3.395-3	7.853-0
4.157-3	8.780-2	1.188-3	4.383-5	3.332-3	7.831-0
4.158-3	7.788-2	1.341-3	4.944-5	3.332-3	7.933-0
4.477-3	9.487-2	1.107-3	4.082-5	3.213-3	8.487-0
4.478-3	8.721-2	1.194-3	4.403-5	3.213-3	8.488-0
4.500-3	8.832-2	1.179-3	4.348-5	3.205-3	8.537-0
5.000-3	1.181-2	8.975-2	3.308-5	3.044-3	9.414-0
5.500-3	1.485-2	7.013-2	2.985-5	2.880-3	1.022-1
6.000-3	1.880-2	5.884-2	2.684-5	2.738-3	1.101-1
6.500-3	2.287-2	4.555-2	1.679-5	2.588-3	1.175-1
7.000-3	2.788-2	3.783-2	1.387-5	2.458-3	1.248-1
8.000-3	3.982-2	2.878-2	9.841-4	2.236-3	1.382-1
1.088-2	6.987-1	1.588-2	5.559-4	1.857-3	1.850-1
1.290-2	1.219-0	8.349-1	3.151-4	1.488-3	1.988-1
1.481-2	1.888-0	5.788-1	2.818-4	1.278-3	2.112-1
1.481-2	7.983-1	1.388-2	4.818-4	1.272-3	2.112-1
1.908-2	6.329-1	1.223-2	4.987-4	1.238-3	2.148-1
1.733-2	1.223-0	8.519-1	3.148-4	1.041-3	2.317-1
1.733-2	6.788-1	1.188-2	4.383-4	1.041-3	2.318-1
1.798-2	8.574-1	1.181-2	4.279-4	1.029-3	2.329-1
9.988-5	9.988-5	5.380-10	9.323-3		
1.248-4	1.248-4	8.341-10	4.853-3		
1.378-4	1.378-4	1.017-9	3.288-3		
1.393-4	1.393-4	1.042-9	5.588-3		
1.494-4	1.494-4	1.200-9	5.039-3		
1.741-4	1.741-4	1.629-9	4.382-3		
1.987-4	1.987-4	2.122-9	3.849-3		
2.118-4	2.118-4	2.411-9	3.881-3		
2.135-4	2.135-4	2.451-9	5.043-3		
2.380-4	2.380-4	2.993-9	5.444-3		
2.377-4	2.377-4	3.037-9	7.335-3		
2.480-4	2.480-4	3.334-9	8.291-3		
2.981-4	2.981-4	4.810-9	1.344-2		
3.425-4	3.425-4	6.587-9	3.318-2		
3.988-4	3.988-4	8.582-9	4.781-2		
4.495-4	4.495-4	1.088-8	5.295-2		
4.995-4	4.995-4	1.341-8	5.781-2		
5.493-4	5.493-4	1.622-8	5.834-2		
5.498-4	5.498-4	1.625-8	5.835-2		
5.513-4	5.513-4	1.633-8	6.036-2		
5.993-4	5.993-4	1.931-8	8.781-2		
6.488-4	6.488-4	2.285-8	8.628-2		
6.991-4	6.991-4	2.627-8	8.490-2		
7.487-4	7.487-4	3.429-8	6.083-2		
8.186-4	8.186-4	3.810-8	5.988-2		
8.212-4	8.212-4	3.824-8	6.098-2		
8.984-4	8.984-4	4.338-8	6.328-2		
9.981-4	9.981-4	5.354-8	6.310-2		
1.093-3	1.093-3	6.428-8	5.888-2		
1.094-3	1.094-3	6.438-8	5.819-2		
1.248-3	1.248-3	8.348-8	5.023-2		
1.494-3	1.494-3	1.199-7	4.090-2		
1.740-3	1.740-3	1.627-7	3.438-2		
1.985-3	1.985-3	2.118-7	2.954-2		
2.472-3	2.472-3	3.284-7	2.298-2		
2.843-3	2.843-3	4.343-7	1.953-2		
2.888-3	2.888-3	4.034-7	4.350-2		
2.979-3	2.979-3	4.389-7	4.095-2		
2.982-3	2.982-3	4.408-7	4.067-2		
2.998-3	2.998-3	4.428-7	5.593-2		
3.475-3	3.475-3	6.021-7	4.424-2		
3.508-3	3.508-3	6.138-7	4.359-2		
3.515-3	3.515-3	6.185-7	5.893-2		
3.972-3	3.972-3	7.840-7	4.849-2		
4.125-3	4.125-3	8.587-7	4.583-2		
4.130-3	4.130-3	8.606-7	5.153-2		
4.442-3	4.442-3	1.000-6	4.988-2		
4.445-3	4.445-3	1.002-6	4.951-2		
4.467-3	4.467-3	1.012-6	4.812-2		
4.954-3	4.954-3	1.252-6	4.158-2		
5.439-3	5.439-3	1.516-6	3.575-2		
5.920-3	5.920-3	1.803-6	3.114-2		
6.399-3	6.399-3	2.114-6	2.743-2		
6.875-3	6.875-3	2.447-6	2.438-2		
7.817-3	7.817-3	3.178-6	1.971-2		
9.883-3	9.883-3	4.888-6	1.381-2		
1.190-2	1.178-2	7.459-8	8.888-3		
1.372-2	1.380-2	9.937-8	7.532-3		
1.482-2	9.790-3	5.148-8	1.828-3		
1.488-2	1.018-2	5.941-8	1.182-3		
1.675-2	1.235-2	8.188-8	0.018-2		
1.891-2	1.247-2	8.395-8	1.424-2		
1.707-2	1.263-2	8.588-8	1.487-2		

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 222			DENSITY 8.6098 GRAMS/CC									
ENERGY	TOTAL NFP		CROSS SECTION (BARNS)						NEV/COLLISION			NEV/CM
MEV	CM	CM*CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. -FLOR	K.E.	BREMSSTR	K.E.	
8.580+ 1	1.298+ 3	8.825- 2	3.180+ 1	2.524- 4	1.016+ 0	2.777- 2	3.075+ 1	8.325+ 1	8.325+ 1	4.918+ 1	5.288+ 2	
7.000+ 1	1.188+ 3	8.783- 2	3.230+ 1	2.176- 4	9.574- 1	2.981- 2	3.138+ 1	8.626+ 1	8.626+ 1	5.388+ 1	5.787+ 2	
6.000+ 1	1.125+ 3	9.021- 2	3.323+ 1	1.688- 4	8.575- 1	2.214- 2	3.237+ 1	7.926+ 1	7.926+ 1	6.332+ 1	6.804+ 2	
1.000+ 2	1.098+ 3	9.479- 2	3.449+ 1	1.085- 4	7.117- 1	1.735- 2	3.428+ 1	9.638+ 1	9.638+ 1	8.493+ 1	8.971+ 2	

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Form Factors

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SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.250-1	9.145-1	7.408-2	1.000-0	3.000-1	4.878-1	1.000-1	2.219-2	9.711-1
5.000-3	9.999-1	1.000-4	1.500-1	8.674-1	9.378-2	1.250-0	2.879-1	5.479-1	1.500-1	1.580-2	9.873-1
1.000-2	9.993-1	7.410-4	1.750-1	8.089-1	1.130-1	1.500-0	2.421-1	5.988-1	2.000-1	1.146-2	9.942-1
1.500-2	9.984-1	1.876-3	2.000-1	6.346-1	1.317-1	2.000-0	1.777-1	8.047-1	3.000-1	2.808-3	9.998-1
2.000-2	9.972-1	2.949-3	2.500-1	7.000-1	1.885-1	2.500-0	1.482-1	7.960-1	4.000-1	7.138-4	1.000-0
2.500-2	9.957-1	4.587-3	3.000-1	7.432-1	1.988-1	3.000-0	1.229-1	7.882-1	5.000-1	3.885-4	1.000-0
3.000-2	9.938-1	6.587-3	4.000-1	8.624-1	2.408-1	3.500-0	9.773-2	8.338-1	6.000-1	8.750-5	1.000-0
4.000-2	9.882-1	1.127-2	5.000-1	5.958-1	2.988-1	4.000-0	8.437-2	8.981-1	7.000-1	1.761-14	1.000-0
5.000-2	9.833-1	1.783-2	6.000-1	5.382-1	3.427-1	5.000-0	5.794-2	8.981-1	8.000-1	3.788-22	1.000-0
7.000-2	9.686-1	3.875-2	7.000-1	4.841-1	3.855-1	6.000-0	4.738-2	9.280-1			
9.000-2	9.558-1	4.814-2	8.000-1	4.408-1	4.240-1	7.000-0	3.979-2	9.410-1			
1.000-1	9.407-1	5.408-2	9.000-1	4.033-1	4.577-1	8.000-0	3.398-2	9.547-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 223			13.5 GRAMS/CC						
ENERGY	TOTAL HPF		CROSS SECTION (BARN)				NEUTRON COLLISION		NEUTRON
MEV	CH	CH/CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E.-FLOR	K.E.	MEV/CH
1.000-4	7.484-6	9.888-3	3.885-6	5.033-3	2.875-2	3.880-8	9.988-5	9.988-5	5.423-10
1.250-4	1.773-5	4.178-3	1.947-6	5.030-3	4.151-2	1.942-8	1.248-4	1.248-4	8.441-10
1.500-4	3.381-5	2.089-3	7.880-5	5.028-3	5.943-2	7.810-5	1.490-4	1.490-4	1.207-9
1.750-4	5.847-5	1.989-3	7.130-5	5.027-3	6.200-2	7.080-5	1.522-4	1.522-4	1.280-9
1.997-4	2.070-5	3.578-3	1.385-6	5.027-3	6.310-2	1.320-8	1.541-4	1.541-4	1.291-9
1.750-4	2.833-5	2.813-3	1.042-6	5.025-3	6.021-2	1.037-8	1.742-4	1.742-4	1.849-9
2.000-4	3.418-5	2.189-3	8.030-5	5.022-3	1.040-1	7.980-5	1.987-4	1.987-4	2.148-9
2.333-4	3.886-5	1.901-3	7.040-5	5.018-3	1.391-1	6.990-5	2.318-4	2.318-4	2.918-9
2.747-4	2.985-5	2.482-3	9.190-5	5.016-3	1.407-1	9.140-5	2.534-4	2.534-4	2.963-9
2.500-4	3.070-5	2.413-3	8.934-5	5.013-3	1.585-1	8.884-5	2.488-4	2.488-4	3.380-9
2.873-4	3.184-5	2.341-3	8.870-5	5.011-3	1.799-1	8.620-5	2.858-4	2.858-4	3.840-9
2.887-4	2.480-5	3.011-3	1.115-6	5.010-3	1.817-1	1.110-8	2.875-4	2.875-4	3.891-9
3.000-4	2.438-5	3.038-3	1.185-6	5.008-3	2.237-1	1.120-8	2.987-4	2.987-4	4.850-9
3.500-4	9.744-6	7.802-3	2.815-6	4.994-3	2.950-1	2.810-8	3.494-4	3.494-4	6.837-9
4.000-4	6.572-6	1.183-3	4.385-6	4.989-3	3.748-1	4.300-8	3.992-4	3.992-4	8.680-9
4.500-4	6.211-6	1.182-3	4.415-6	4.971-3	4.575-1	4.410-8	4.492-4	4.492-4	1.029-8
5.000-4	6.075-6	1.219-3	4.515-6	4.958-3	5.488-1	4.510-8	4.992-4	4.992-4	1.356-8
5.500-4	6.624-6	1.118-3	4.141-6	4.943-3	6.385-1	4.138-8	5.493-4	5.493-4	1.641-8
5.888-4	7.024-6	1.055-3	3.905-6	4.932-3	7.056-1	3.900-8	5.881-4	5.881-4	1.868-8
6.000-4	6.048-6	1.225-3	4.535-6	4.929-3	7.311-1	4.530-8	5.993-4	5.993-4	1.953-8
6.500-4	6.709-6	1.104-3	4.089-6	4.909-3	8.227-1	4.084-8	6.492-4	6.492-4	2.292-8
7.000-4	7.384-6	1.003-3	3.715-6	4.892-3	9.177-1	3.710-8	6.991-4	6.991-4	2.657-8
8.000-4	8.979-6	8.250-3	3.025-6	4.880-3	1.117-0	3.050-8	7.987-4	7.987-4	3.489-8
8.880-4	1.022-5	7.250-3	2.885-6	4.832-3	1.248-0	2.880-8	8.844-4	8.844-4	4.063-8
8.874-4	8.898-6	8.331-3	3.085-6	4.832-3	1.249-0	3.080-8	8.880-4	8.880-4	4.078-8
9.000-4	9.110-6	7.628-3	2.885-6	4.819-3	1.314-0	2.820-8	8.985-4	8.985-4	4.389-8
1.000-3	1.218-5	8.084-3	2.253-6	4.783-3	1.518-0	2.248-8	9.979-4	9.979-4	5.414-8
1.150-3	1.527-5	4.852-3	1.797-6	4.707-3	1.883-0	1.798-8	1.147-3	1.147-3	7.153-8
1.151-3	1.325-5	5.603-3	2.075-6	4.708-3	1.885-0	2.070-8	1.148-3	1.148-3	7.170-8
1.250-3	1.587-5	4.887-3	1.788-6	4.682-3	2.033-0	1.784-8	1.247-3	1.247-3	8.450-8
1.500-3	2.376-5	3.114-3	1.195-6	4.588-3	2.580-0	1.150-8	1.494-3	1.494-3	1.214-7
1.750-3	3.385-5	2.202-3	8.152-5	4.441-3	3.125-0	8.108-5	1.740-3	1.740-3	1.647-7
2.000-3	4.546-5	1.829-3	6.033-5	4.335-3	3.889-0	5.990-5	1.986-3	1.986-3	2.144-7
2.500-3	7.491-5	9.889-3	3.862-5	4.073-3	4.788-0	3.821-5	2.472-3	2.472-3	3.323-7
3.000-3	1.125-4	6.586-2	2.439-5	3.871-3	5.875-0	2.400-5	2.952-3	2.952-3	4.739-7
3.001-3	1.125-4	6.586-2	2.439-5	3.870-3	5.877-0	2.400-5	2.953-3	2.953-3	4.742-7
3.002-3	3.634-5	2.039-3	7.949-5	3.870-3	5.879-0	7.510-5	2.987-3	2.987-3	4.389-7
3.130-3	3.982-5	1.860-3	6.888-5	3.804-3	6.148-0	6.850-5	3.119-3	3.119-3	4.806-7
3.137-3	3.513-5	2.109-3	7.808-5	3.803-3	6.150-0	7.770-5	3.122-3	3.122-3	4.816-7
3.500-3	4.820-5	1.537-3	5.890-5	3.643-3	6.882-0	5.854-5	3.478-3	3.478-3	6.037-7
3.884-3	5.501-5	1.346-3	4.986-5	3.578-3	7.213-0	4.950-5	3.838-3	3.838-3	6.632-7
3.885-3	4.782-5	1.949-3	5.736-5	3.578-3	7.215-0	5.700-5	3.842-3	3.842-3	6.848-7
4.000-3	5.818-5	1.252-3	4.835-5	3.457-3	7.893-0	4.800-5	3.970-3	3.970-3	7.254-7
4.325-3	7.100-5	1.043-3	3.883-5	3.328-3	8.473-0	3.810-5	4.288-3	4.143-3	5.330-7
4.326-3	5.972-5	1.240-3	4.993-5	3.327-3	8.475-0	4.260-5	4.295-3	4.150-3	5.381-7
4.500-3	6.845-5	1.115-3	4.128-5	3.294-3	8.784-0	4.095-5	4.484-3	4.319-3	1.014-6
4.852-3	7.271-5	1.019-3	3.772-5	3.212-3	9.054-0	3.740-5	4.612-3	4.467-3	1.085-6
4.853-3	6.420-5	1.154-3	4.272-5	3.211-3	9.055-0	4.240-5	4.618-3	4.473-3	1.088-6
5.000-3	7.788-5	9.536-2	3.531-5	3.101-3	9.867-0	3.500-5	4.956-3	4.811-3	1.298-6
5.500-3	9.970-5	7.424-2	2.749-5	2.935-3	1.047-1	2.720-3	5.441-3	5.297-3	1.525-6
6.000-3	1.254-4	5.909-2	2.188-5	2.792-3	1.126-1	2.180-5	5.923-3	5.779-3	1.815-6
6.500-3	1.750-4	4.780-2	1.770-5	2.641-3	1.200-1	1.743-5	6.403-3	6.259-3	2.129-6
7.000-3	1.885-4	3.929-2	1.455-5	2.508-3	1.273-1	1.430-5	6.879-3	6.735-3	2.488-6
8.000-3	2.681-4	2.783-2	1.023-5	2.285-3	1.415-1	1.000-5	7.880-3	7.877-3	3.204-6
1.000-2	4.744-4	1.981-2	5.782-4	1.899-3	1.672-1	5.590-4	9.889-3	9.527-3	4.933-6
1.250-2	8.559-4	8.855-2	1.385-4	1.522-3	1.932-1	3.951-4	1.190-2	1.176-2	7.515-6
1.500-2	1.379-3	5.372-1	1.989-4	1.270-3	2.173-1	1.888-4	1.403-2	1.388-2	1.048-5
1.503-2	1.388-3	5.344-1	1.979-4	1.267-3	2.175-1	1.886-4	1.405-2	1.391-2	1.052-5
1.503-2	5.813-4	8.831-2	4.718-4	1.267-3	2.175-1	4.598-4	1.482-2	1.464-2	1.084-5
1.750-2	8.388-4	8.831-2	3.270-4	1.076-3	2.393-1	3.182-4	1.882-2	1.217-2	8.094-6
1.750-2	8.882-4	8.358-2	3.095-4	1.027-3	2.383-1	2.980-4	1.730-2	1.255-2	8.982-6
1.750-2	6.477-4	1.144-2	2.375-4	1.027-3	2.381-1	4.130-4	1.746-2	1.267-2	8.728-6
1.898-2	7.22-4	1.628-2	3.788-4	9.588-2	2.458-1	3.700-4	1.847-2	1.389-2	1.018-5

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ATOMIC WEIGHT 223							13.5 BRAYS/CC					
ENERGY		TOTAL HP		CROSS SECTION (BARNS)					NEV/COLLISION			NEV/CM
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E.-FLO	K.E.	BREMSSTR	K.E.	
1.000-2	6.222-4	1.190-2	4.408-4	9.590-2	2.430-1	4.310-4		1.029-2	1.374-2	1.066-5	2.608-1	
2.000-2	7.510-4	9.894-1	3.832-4	8.987-2	2.293-1	3.588-4		1.949-2	1.471-2	1.175-5	1.938-1	
3.000-2	1.338-3	5.594-1	2.853-4	8.677-2	2.777-1	1.984-4		2.415-2	1.941-2	2.847-5	1.453-1	
3.000-2	2.134-3	3.471-1	1.205-4	5.233-2	3.068-1	1.238-4		2.671-2	2.401-2	3.131-5	1.125-1	
3.500-2	3.171-3	2.338-1	8.951-3	4.204-2	3.154-1	8.199-3		3.318-2	2.953-2	4.418-5	8.907-0	
4.000-2	4.480-3	1.881-1	6.131-3	3.478-2	3.293-1	5.770-3		3.794-2	3.293-2	5.867-5	7.389-0	
4.500-2	6.043-3	1.205-1	4.537-3	2.904-2	3.382-1	4.213-3		4.181-2	3.725-2	7.531-5	8.162-0	
5.000-2	7.524-3	9.348-0	3.462-3	2.471-2	3.463-1	3.183-3		5.005-2	4.588-2	9.380-5	5.233-0	
5.500-2	1.012-2	7.318-0	2.710-3	2.121-2	3.514-1	2.463-3		5.402-2	4.980-2	1.334-4	3.365-0	
6.000-2	1.204-2	5.861-0	2.170-3	1.946-2	3.563-1	1.950-3		5.786-2	5.350-2	1.552-4	3.432-0	
6.500-2	1.378-2	4.752-0	1.780-3	1.816-2	3.588-1	1.582-3		6.136-2	5.727-2	1.778-4	3.030-0	
7.000-2	1.690-2	3.919-0	1.451-3	1.429-2	3.578-1	1.272-3		8.005-2	6.446-2	2.251-4	2.420-0	
8.000-2	2.884-2	2.701-0	1.030-3	1.144-2	3.632-1	8.790-2		8.135-2	7.740-2	3.244-4	1.853-0	
1.000-1	4.884-2	1.581-0	5.878-2	7.839-1	3.624-1	4.710-2		8.209-2	7.815-2	3.307-4	1.827-0	
1.011-1	4.804-2	1.542-0	5.710-2	7.888-1	3.619-1	4.580-2		9.630-2	2.823-2	4.326-5	2.308-0	
1.011-1	1.223-2	6.057-0	2.243-3	7.881-1	3.619-1	2.130-3		1.172-1	5.031-2	1.373-4	2.408-0	
1.250-1	2.030-2	3.344-0	1.312-3	5.274-1	3.540-1	1.264-3		1.381-1	7.267-2	2.880-4	2.206-0	
1.500-1	3.293-2	2.249-0	8.329-2	3.815-1	3.473-1	7.600-2		1.580-1	9.419-2	4.800-4	1.988-0	
1.750-1	4.791-2	1.946-0	5.728-2	2.887-1	3.388-1	5.100-2		1.789-1	1.148-1	7.121-4	1.743-0	
2.000-1	6.266-2	1.125-0	4.163-2	2.288-1	3.280-1	3.613-2		2.115-1	1.532-1	1.268-4	1.138-0	
2.500-1	1.105-1	6.702-0	2.482-2	1.504-1	3.087-1	2.023-2		2.423-1	1.879-1	1.901-4	1.138-0	
3.000-1	1.651-1	4.487-0	1.861-2	1.075-1	2.938-1	1.260-2		2.708-1	2.202-1	2.606-4	9.808-1	
3.500-1	2.246-1	3.298-0	1.221-2	8.050-0	2.798-1	8.617-1		3.152-1	2.500-1	3.353-4	8.096-1	
4.000-1	2.880-1	2.585-0	9.497-0	6.295-0	2.671-1	6.200-1		3.218-1	2.784-1	4.152-4	7.861-1	
4.500-1	3.542-1	2.091-0	7.745-1	5.005-0	2.557-1	4.887-1		3.456-1	3.054-1	4.990-4	7.298-1	
5.000-1	4.208-1	1.780-0	6.518-1	4.095-0	2.458-1	3.850-1		3.690-1	3.318-1	5.879-4	6.813-1	
5.500-1	4.889-1	1.521-0	5.833-1	3.410-0	2.387-1	2.985-1		3.919-1	3.574-1	6.813-4	6.489-1	
6.000-1	5.525-1	1.341-0	4.984-1	2.885-0	2.288-1	2.390-1		4.158-1	3.834-1	7.831-4	6.235-1	
6.500-1	6.150-1	1.204-0	4.460-1	2.471-0	2.209-1	2.004-1		4.393-1	4.092-1	8.908-4	5.052-1	
7.000-1	6.762-1	1.096-0	4.057-1	2.141-0	2.139-1	1.703-1		4.872-1	4.809-1	1.127-4	5.806-1	
8.000-1	7.938-1	9.331-0	3.455-1	1.853-0	2.020-1	1.270-1		5.908-1	5.898-1	1.711-4	5.888-1	
1.000-0	1.001-0	7.397-2	2.739-1	1.069-0	1.882-1	8.100-0		6.026-1	5.821-1	1.786-4	5.894-1	
1.020-0	1.022-0	7.247-2	2.683-1	1.025-0	1.803-1	7.778-0	1.000-6	7.310-1	7.138-1	2.887-4	5.826-1	
1.250-0	1.225-0	6.046-2	2.239-1	6.903-1	1.633-1	5.359-0	6.173-3	8.053-1	8.514-1	3.787-4	6.897-1	
1.500-0	1.381-0	5.384-2	1.986-1	4.819-1	1.487-1	3.880-0	6.349-3	1.009-0	9.978-1	5.135-4	8.047-1	
1.750-0	1.501-0	4.935-2	1.827-1	3.552-1	1.388-1	2.932-0	1.301-3	1.185-0	1.155-0	6.868-4	7.283-1	
2.000-0	1.586-0	4.670-2	1.729-1	2.726-1	1.271-1	2.340-0	1.973-3	1.194-0	1.184-0	7.186-4	7.406-1	
2.044-0	1.599-0	4.632-2	1.715-1	2.611-1	1.255-1	2.262-0	2.078-3	1.510-0	1.503-0	1.135-4	8.907-1	
2.500-0	1.687-0	4.390-2	1.626-1	1.750-1	1.117-1	1.862-0	3.247-3	1.892-0	1.888-0	1.754-4	1.093-1	
3.000-0	1.725-0	4.294-2	1.590-1	1.218-1	1.001-1	1.270-0	4.497-3	2.300-0	2.295-0	2.947-4	1.314-1	
3.500-0	1.746-0	4.241-2	1.571-1	8.957-2	9.098-0	1.019-0	5.499-3	2.729-0	2.726-0	3.518-4	1.563-1	
4.000-0	1.744-0	4.248-2	1.573-1	8.863-2	8.357-0	8.470-1	6.456-3	3.176-0	3.172-0	4.667-4	1.840-1	
4.500-0	1.725-0	4.295-2	1.591-1	5.425-2	7.741-0	7.239-1	7.387-3	3.633-0	3.630-0	5.983-4	2.130-1	
5.000-0	1.704-0	4.347-2	1.610-1	4.396-2	7.220-0	6.290-1	8.203-3	4.098-0	4.094-0	7.454-4	2.422-1	
5.500-0	1.691-0	4.382-2	1.623-1	3.634-2	6.772-0	5.533-1	8.864-3	4.567-0	4.565-0	9.078-4	2.730-1	
6.000-0	1.672-0	4.423-2	1.640-1	3.055-2	6.383-0	4.930-1	9.498-3	5.044-0	5.042-0	1.085-4	3.053-1	
6.500-0	1.651-0	4.486-2	1.661-1	2.604-2	6.040-0	4.440-1	1.010-1	5.525-0	5.523-0	1.276-4	3.392-1	
7.000-0	1.628-0	4.549-2	1.684-1	2.246-2	5.737-0	4.034-1	1.088-1	6.458-0	6.497-0	1.896-4	4.110-1	
8.000-0	1.581-0	4.688-2	1.735-1	1.720-2	5.222-0	3.400-1	1.177-1	8.471-0	8.470-0	2.871-4	5.852-1	
1.000-1	1.488-0	4.978-2	1.843-1	1.101-2	4.448-0	2.570-1	1.372-1	1.098-1	1.096-1	4.053-4	7.882-1	
1.250-1	1.390-0	5.328-2	1.973-1	7.047-3	3.775-0	1.955-1	1.575-1	1.346-1	1.346-1	5.688-4	1.028-1	
1.500-1	1.309-0	5.880-2	2.096-1	4.894-3	3.293-0	1.570-1	1.750-1	1.597-1	1.597-1	7.419-4	1.288-1	
1.750-1	1.241-0	5.988-2	2.210-1	3.553-3	2.929-0	1.307-1	1.904-1	1.847-1	1.847-1	9.257-4	1.559-1	
2.000-1	1.185-0	6.252-2	2.315-1	2.753-3	2.643-0	1.120-1	2.039-1	2.349-1	2.349-1	1.317-4	2.144-1	
2.500-1	1.096-0	6.780-2	2.503-1	1.762-3	2.222-0	8.614-2	2.272-1	2.850-1	2.850-1	1.733-4	2.761-1	
3.000-1	1.032-0	7.176-2	2.857-1	1.223-3	1.924-0	7.190-2	2.457-1	3.352-1	3.352-1	2.184-4	3.399-1	
3.500-1	9.680-1	7.512-2	2.782-1	8.887-4	1.702-0	5.989-2	2.806-1	3.853-1	3.853-1	2.608-4	4.059-1	
4.000-1	9.490-1	7.805-2	2.890-1	8.881-4	1.529-0	5.140-2	2.732-1	4.894-1	4.894-1	3.520-4	5.432-1	
4.500-1	9.176-1	8.072-2	2.989-1	5.437-4	1.390-0	4.573-2	2.846-1	5.355-1	5.355-1	3.988-4	6.109-1	
5.000-1	8.338-1	8.208-2	3.089-1	4.444-4	1.278-0	4.100-2	2.938-1	5.855-1	5.855-1	4.458-4	8.802-1	
5.500-1	8.784-1	8.452-2	3.130-1	3.840-4	1.181-0	3.685-2	3.006-1	6.355-1	6.355-1	4.929-4	7.509-1	
6.000-1	8.608-1	8.888-2	3.187-1	3.098-4	1.100-0	3.380-2	3.073-1	8.355-1	8.355-1	4.929-4	7.509-1	
6.500-1	8.484-1	8.752-2	3.241-1	2.808-4	1.030-0	3.077-2	3.135-1	8.355-1	8.355-1	4.929-4	7.509-1	

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ENDL Evaluated Photon Data

87-Fr

ATOMIC WEIGHT 223		13.5 GRAMS/CC										
ENERGY	TOTAL MFP		CROSS SECTION (BARNS)				MEV/COLLISION				MEV/CM	
MEV	CM	CM*CM/CM	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E.-FLOR	K.E.	BREHSTR	K.E.	
7.000+ 1	8.331- 1	8.000- 2	3.293+ 1	2.247- 4	9.005- 1	2.837- 2	3.193+ 1	8.090+ 1	8.090+ 1	5.400+ 1	8.230+ 1	
8.000+ 1	8.093- 1	9.133- 2	3.300+ 1	1.721- 4	8.574- 1	2.458- 2	3.300+ 1	7.057+ 1	7.057+ 1	6.300+ 1	9.700+ 1	
1.000+ 2	7.702- 1	9.616- 2	3.961+ 1	1.101- 4	7.200- 1	1.920- 2	3.400+ 1	9.090+ 1	9.090+ 1	8.300+ 1	1.200+ 2	

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Form Factors

87-Fr

SIN(θ/2)/λ COHERENT INCOHERENT				SIN(θ/2)/λ COHERENT INCOHERENT				SIN(θ/2)/λ COHERENT INCOHERENT				SIN(θ/2)/λ COHERENT INCOHERENT			
1/λ		1/λ		1/λ		1/λ		1/λ		1/λ		1/λ		1/λ	
0.000	0	1.000	0	0.000	0	1.250	1	0.111	1	7.783	2	1.000	0	3.711	1
5.000	3	0.000	1	3.583	4	1.500	1	0.000	1	9.672	2	1.250	0	3.001	1
1.000	2	0.000	1	1.402	3	1.750	1	0.000	1	1.153	1	1.500	0	2.442	1
1.500	2	0.077	1	3.002	3	2.000	1	0.339	1	1.339	1	2.000	0	1.700	1
2.000	2	0.301	1	5.293	3	2.500	1	7.054	1	1.000	1	2.500	0	1.401	1
2.500	2	0.530	1	7.053	3	3.000	1	7.415	1	1.000	1	3.000	0	1.224	1
3.000	2	0.914	1	1.000	2	4.000	1	0.000	1	2.500	1	3.500	0	0.000	2
4.000	2	0.075	1	1.703	2	5.000	1	5.000	1	2.074	1	4.000	0	0.505	2
5.000	2	0.705	1	2.300	2	6.000	1	5.304	1	1.424	1	5.000	0	5.787	2
7.000	2	0.025	1	3.737	2	7.000	1	4.052	1	3.040	1	6.000	0	4.740	2
9.000	2	0.445	1	5.152	2	8.000	1	4.418	1	4.229	1	7.000	0	3.903	2
1.000	1	0.323	1	5.000	2	9.000	1	4.043	1	4.500	1	8.000	0	3.409	2

12/07/78

ENDL Evaluated Photon Cross Sections

88-Ra

12/07/7E

Energy Deposition

88-Ra

12/07/78

ENDL Evaluated Photon Data

88-Ra

ATOMIC WEIGHT 226							DENSITY 5 GRAMS/CC						
ENERGY	TOTAL WFP			CROSS SECTION (BARNS)				NEUT/COLLISION			NEUT/CM		
MEV	CM	CM ² /GM	CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR	K.E.	BREMSSTR	K.E.		
1.000	2.098	5.987	3	3.575	6	5.149	3	3.130	2	3.578	8	4.758	0
1.250	4.734	4.283	3	1.985	6	5.148	3	4.873	2	1.988	8	2.632	0
1.500	9.185	2.177	3	8.171	5	5.144	3	8.997	2	0.128	5	1.823	0
1.800	1.281	1.988	3	5.931	5	5.141	3	8.730	2	5.986	5	1.321	0
1.894	6.731	2.971	3	1.115	6	5.141	3	8.733	2	1.118	6	2.909	0
1.798	7.887	2.882	3	1.888	6	5.140	3	9.455	2	1.894	6	2.457	0
2.000	8.757	2.894	3	8.571	5	5.137	3	1.287	1	8.580	5	2.270	0
2.300	1.038	1.987	3	7.232	5	5.127	3	1.877	1	7.188	5	2.382	0
2.537	1.058	1.988	3	7.151	5	5.126	3	1.930	1	7.100	5	2.400	0
2.551	7.885	2.938	3	9.981	5	5.126	3	1.951	1	9.940	5	2.394	0
2.882	8.747	2.897	3	8.581	5	5.119	3	2.826	1	8.530	5	3.388	0
2.988	7.482	2.673	3	1.883	6	5.119	3	2.848	1	9.980	5	1.984	0
3.000	7.475	2.678	3	1.884	6	5.119	3	2.856	1	9.980	5	3.993	0
3.500	4.158	4.810	3	1.885	6	5.108	3	3.516	1	1.888	6	8.394	0
4.000	1.978	1.011	4	3.795	6	5.095	3	4.482	1	3.780	6	2.020	0
4.500	1.788	1.114	4	4.178	6	5.079	3	5.489	1	4.174	6	2.502	1
5.000	1.848	1.214	4	4.922	6	5.065	3	6.580	1	4.926	6	3.031	1
5.500	1.783	1.121	4	4.208	6	5.047	3	7.873	1	4.203	6	3.080	1
6.000	1.917	1.043	4	3.915	6	5.031	3	8.830	1	3.910	6	3.126	1
6.153	1.987	1.017	4	3.815	6	5.024	3	9.182	1	3.810	6	3.123	1
6.187	1.880	1.075	4	4.035	6	5.024	3	9.182	1	4.030	6	3.311	1
6.500	1.898	1.094	4	3.955	6	5.009	3	9.980	1	3.950	6	3.421	1
7.000	1.932	1.025	4	3.845	6	4.989	3	1.107	0	3.840	6	3.581	1
8.000	2.384	6.488	3	3.175	6	4.953	3	1.748	0	3.170	6	3.378	1
9.000	2.859	6.995	3	2.825	6	4.907	3	1.989	0	2.820	6	3.049	1
9.379	3.070	6.515	3	2.445	6	4.891	3	1.828	0	2.440	6	3.049	1
9.983	2.794	7.281	3	2.725	6	4.891	3	1.859	0	2.720	6	3.404	1
1.000	3	3.152	3	6.338	3	2.378	6	4.887	3	1.880	0	2.373	6
1.208	3	4.330	3	4.558	3	1.710	6	4.757	3	2.249	0	1.705	6
1.209	3	3.840	3	5.209	3	1.925	6	4.757	3	2.251	0	1.950	6
1.250	4	4.738	3	4.833	3	1.814	6	4.738	3	2.241	0	1.809	6
1.500	6.231	3.210	3	1.205	6	4.635	3	2.901	0	1.200	6		
1.750	8.625	2.288	3	8.505	5	4.507	3	3.448	0	8.460	5		
2.000	1.192	1.677	3	6.294	5	4.399	3	4.000	0	6.250	5		
2.500	1.971	1.015	3	3.808	5	4.138	3	5.088	0	3.788	5		
3.000	2.987	8.740	2	2.523	5	3.937	3	6.146	0	2.480	5		
3.109	3	3.205	4	8.232	2	2.339	5	3.888	3	6.385	2	2.300	5
3.110	3	1.031	4	1.932	3	7.249	5	3.888	3	6.387	0	7.210	5
3.253	3	1.138	4	1.798	3	6.588	5	3.814	3	6.854	0	6.560	5
3.294	3	1.004	4	1.993	3	7.478	5	3.814	3	6.856	0	7.440	5
3.500	3	1.240	4	1.814	3	6.095	5	3.707	3	7.150	0	6.018	5
3.791	3	1.982	4	1.281	3	4.808	5	3.593	3	7.733	0	4.770	5
3.792	3	1.381	4	1.470	3	5.518	5	3.593	3	7.735	0	5.480	5
4.000	3	1.932	4	1.288	3	4.835	5	3.518	3	8.152	0	4.800	5
4.490	3	2.327	4	9.888	2	3.703	5	3.327	3	9.032	0	3.670	5
4.491	3	1.708	4	1.171	3	4.393	5	3.326	3	9.034	0	4.380	5
4.500	3	1.718	4	1.184	3	4.389	5	3.323	3	9.050	0	4.388	5
4.884	3	2.378	4	9.625	2	3.612	5	3.213	3	9.626	0	3.580	5
4.885	3	1.339	4	1.088	3	4.082	5	3.213	3	9.627	0	4.050	5
5.000	3	2.028	4	9.884	2	3.782	5	3.158	3	9.937	0	3.670	5
5.500	3	2.582	4	7.887	2	2.885	5	2.990	3	1.074	1	2.895	5
6.000	3	3.385	4	6.125	2	2.299	5	2.845	3	1.153	1	2.270	5
6.500	3	4.027	4	4.986	2	1.884	5	2.693	3	1.287	1	1.837	5
7.000	3	4.889	4	4.091	2	1.535	5	2.599	3	1.299	1	1.508	5
8.000	6.927	2.887	2	1.083	3	2.333	1	1.440	0	1.080	5		
1.000	2	1.241	3	1.811	2	6.048	4	1.948	3	1.888	1	5.850	4
1.250	2	2.244	3	0.912	1	3.345	4	1.928	3	3.187	0	3.240	4
1.500	2	3.889	3	5.522	1	2.072	4	1.901	3	2.199	1	1.944	4
1.750	2	3.873	3	5.104	1	1.938	4	1.873	3	2.232	1	1.810	4
1.945	2	1.940	3	1.288	2	4.578	4	1.857	3	2.232	1	4.458	4
1.750	2	2.213	3	9.638	1	3.381	4	1.883	3	2.281	1	3.288	4
1.848	2	2.521	3	7.925	1	2.974	4	1.815	3	2.450	1	2.870	4
1.848	2	1.842	3	1.888	2	4.074	4	1.815	3	2.450	1	3.970	4
9.980	5	9.980	5	5.484	10	4.758	0						
1.248	4	1.248	4	8.538	10	2.632	0						
1.491	4	1.491	4	1.222	9	1.823	0						
1.685	4	1.685	4	1.388	9	1.321	0						
1.888	4	1.888	4	1.388	9	2.395	0						
1.742	4	1.742	4	1.888	9	2.457	0						
1.888	4	1.888	4	2.174	9	2.270	0						
2.488	4	2.488	4	3.388	9	2.382	0						
2.518	4	2.518	4	3.488	9	2.400	0						
2.537	4	2.537	4	3.541	9	3.242	0						
2.884	4	2.884	4	4.833	9	3.388	0						
2.981	4	2.981	4	4.888	9	3.384	0						
2.985	4	2.985	4	4.500	9	3.993	0						
3.480	4	3.480	4	6.899	9	3.394	0						
3.995	4	3.995	4	8.778	9	2.020	1						
4.485	4	4.485	4	1.111	8	2.502	1						
4.984	4	4.984	4	1.372	8	3.031	1						
5.483	4	5.483	4	1.088	8	3.084	1						
5.982	4	5.982	4	1.975	8	3.128	1						
6.145	4	6.145	4	2.077	8	3.123	1						
6.159	4	6.159	4	2.086	8	3.311	1						
6.482	4	6.482	4	2.318	8	3.421	1						
6.991	4	6.991	4	2.688	8	3.581	1						
7.988	4	7.988	4	3.508	8	3.378	1						
8.983	4	8.983	4	4.438	8	3.142	1						
9.380	4	9.380	4	4.819	8	3.049	1						
9.378	4	9.378	4	4.835	8	3.404	1						
9.980	4	9.980	4	5.477	8	3.182	1						
1.205	3	1.205	3	7.981	8	2.744	1						
1.208	3	1.208	3	8.000	8	3.141	1						
1.247	3	1.247	3	8.548	8	3.013	1						
1.494	3	1.494	3	1.228	7	2.388	1						
1.741	3	1.741	3	1.888	7	1.973	1						
1.888	3	1.888	3	2.189	7	1.885	1						
2.473	3	2.473	3	3.383	7	1.255	1						
2.953	3	2.953	3	4.788	7	9.953	0						
3.057	3	3.057	3	5.140	7	9.527	0						
3.093	3	3.093	3	4.737	7	2.835	1						
3.234	3	3.078	3	5.203	7	2.704	1						
3.257	3	3.078	3	5.213	7	3.088	1						
3.478	3	3.320	3	6.062	7	2.879	1						
3.783	3	3.605	3	7.145									

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 226				DENSITY 5 GRAMS/CC																			
ENERGY MEV	TOTAL MFP		CROSS SECTION (BARNES)						NEV/COLLISION			NEV/CM											
	CM	CM*CM/BN	TOTAL	COMPONENT	INCOMPONENT	PHOTOEL	PAIR PROD	K.E.*10 ¹⁰	K.E.	BREMSSTR	K.E.	K.E.											
0.000	1	2.272	0	0.005	-2	3.394	1	2.000	-4	1.841	0	3.225	-2	3.197	1	6.398	1	6.398	1	4.942	1	2.798	1
0.000	1	2.235	0	0.045	-2	3.397	1	2.320	-4	9.798	1	2.584	-2	3.236	1	8.000	1	8.000	1	5.419	1	3.086	1
0.000	1	2.172	0	0.200	-2	3.428	1	1.778	-4	0.774	1	2.580	-2	3.305	1	7.057	1	7.057	1	6.381	1	3.817	1
1.000	2	2.067	0	0.675	-2	3.631	1	1.137	-4	7.263	1	2.010	-2	3.556	1	9.699	1	9.699	1	8.323	1	4.789	1

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Form Factors

88-Ra

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000+0	1.000+0	0.000+0	1.250-1	9.003-1	0.257-2	1.000+0	3.702-1	4.057-1	1.000+1	2.261-2	9.702-1
5.000-3	9.999-1	4.091-4	1.500-1	8.019-1	1.007-1	1.250+0	3.002-1	5.405-1	1.500+1	1.302-2	9.000-1
1.000-2	9.998-1	1.030-3	1.750-1	6.572-1	1.105-1	1.500+0	2.402-1	5.000-1	2.000+1	1.102-2	9.979-1
1.500-2	9.975-1	3.000-3	2.000-1	5.325-1	1.300-1	2.000+0	1.703-1	6.000-1	5.000+1	2.430-3	9.999-1
2.000-2	9.957-1	6.210-3	2.500-1	4.046-1	1.027-1	2.500+0	1.450-1	7.495-1	0.000+1	7.011-4	1.000+0
2.500-2	9.933-1	9.357-3	3.000-1	3.000-1	2.000-1	3.000+0	1.227-1	7.941-1	1.000+2	4.300-4	1.000+0
3.000-2	9.906-1	1.200-2	4.000-1	1.637-1	2.531-1	3.500+0	9.925-2	8.200-1	1.000+3	1.040-4	1.000+0
4.000-2	9.830-1	2.000-2	5.000-1	5.000-1	2.507-1	4.000+0	8.574-2	8.500-1	1.000+6	2.521-14	1.000+0
5.000-2	9.703-1	2.000-2	6.000-1	5.370-1	3.425-1	5.000+0	5.013-2	9.070-1	1.000+9	6.341-22	1.000+0
7.000-2	9.505-1	4.373-2	7.000-1	4.000-1	3.040-1	6.000+0	4.743-2	9.200-1			
9.000-2	9.300-1	5.775-2	8.000-1	4.420-1	4.220-1	7.000+0	4.000-2	9.300-1			
1.000-1	9.301-1	6.473-2	9.000-1	4.052-1	4.590-1	8.000+0	3.424-2	9.532-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

89-Ac

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ENDL Evaluated Photon Data

89-Ac

ATOMIC WEIGHT 227										13.5 GRAMS/CC			
ENERGY		TOTAL NFP		CROSS SECTION (EAPNS)						MEV/COLLISION		MEV/CM	
MEV	CH	CH+CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BREMSSTR	K.E.		
1.000-4	6.353-8	1.188-4	4.395-6	5.288-3	3.043-2	4.390-6		9.988-5	9.988-5	5.549-10	1.572-1		
1.250-4	1.424-5	5.282-3	1.981-6	5.263-3	4.737-2	1.958-6		1.247-4	1.247-4	8.045-10	8.795-0		
1.500-4	2.738-5	2.893-3	1.015-6	5.261-3	6.801-2	1.010-6		1.482-4	1.482-4	1.239-9	5.426-0		
1.750-4	4.178-5	1.773-3	8.083-5	5.257-3	9.191-2	8.630-5		1.738-4	1.738-4	1.677-8	4.195-0		
1.825-4	4.887-5	1.987-3	5.983-5	5.256-3	9.955-2	5.930-5		1.807-4	1.807-4	1.818-8	3.878-0		
1.837-4	2.387-5	2.853-3	1.875-6	5.258-3	1.011-1	1.070-6		1.888-4	1.888-4	1.899-9	7.040-0		
2.000-4	2.932-5	2.988-3	9.583-5	5.254-3	1.195-1	9.470-5		1.988-4	1.988-4	2.200-9	6.783-0		
2.508-4	3.505-5	2.113-3	7.988-5	5.245-3	1.829-1	7.914-5		2.484-4	2.484-4	3.431-9	7.088-0		
2.713-4	3.742-5	1.988-3	7.462-5	5.241-3	2.139-1	7.410-5		2.694-4	2.694-4	4.037-9	7.200-0		
2.727-4	2.823-5	2.824-3	9.892-5	5.241-3	2.181-1	9.840-5		2.713-4	2.713-4	4.093-9	9.610-0		
3.000-4	3.044-5	2.433-3	9.172-5	5.237-3	2.594-1	9.120-5		2.983-4	2.983-4	4.949-9	9.799-0		
3.183-4	3.179-5	2.330-3	8.782-5	5.232-3	2.892-1	8.730-5		3.184-4	3.184-4	5.969-9	9.952-0		
3.197-4	2.806-5	2.840-3	9.952-5	5.231-3	2.918-1	9.900-5		3.180-4	3.180-4	5.626-9	1.134-1		
3.500-4	1.730-5	4.281-3	1.614-6	5.224-3	3.445-1	1.608-6		3.489-4	3.489-4	6.770-9	2.018-1		
4.000-4	8.473-6	8.742-3	3.295-6	5.212-3	4.405-1	3.290-6		3.994-4	3.994-4	8.877-9	4.713-1		
4.500-4	7.209-6	1.027-4	3.873-6	5.197-3	5.415-1	3.888-6		4.494-4	4.494-4	1.123-8	6.233-1		
5.000-4	6.238-6	1.187-4	4.475-6	5.183-3	6.514-1	4.470-6		4.994-4	4.994-4	1.387-8	8.005-1		
5.500-4	5.682-6	1.109-4	4.178-6	5.185-3	7.628-1	4.173-6		5.493-4	5.493-4	1.678-8	8.221-1		
6.000-4	7.113-6	1.041-4	3.925-6	5.148-3	8.810-1	3.920-6		5.992-4	5.992-4	1.997-8	8.424-1		
6.500-4	7.818-6	9.478-3	3.572-6	5.126-3	9.945-1	3.567-6		6.491-4	6.491-4	2.343-8	8.305-1		
6.527-4	7.854-6	9.432-3	3.555-6	5.125-3	1.001-0	3.550-6		6.518-4	6.518-4	2.363-8	8.299-1		
6.941-4	7.495-6	8.883-3	3.725-6	5.124-3	1.004-0	3.720-6		6.532-4	6.532-4	2.373-8	8.719-1		
7.000-4	7.188-6	1.033-4	3.895-6	5.105-3	1.113-0	3.890-6		6.991-4	6.991-4	2.718-8	8.752-1		
8.000-4	8.831-6	8.982-3	3.235-6	5.088-3	1.382-0	3.230-6		7.987-4	7.987-4	3.549-8	9.295-1		
9.000-4	1.040-5	7.123-3	2.885-6	5.020-3	1.598-0	2.880-6		8.983-4	8.983-4	4.489-8	8.638-1		
9.526-4	1.142-5	8.888-3	2.445-6	4.987-3	1.724-0	2.440-6		9.507-4	9.507-4	5.027-8	8.325-1		
9.940-4	1.038-5	7.150-3	2.895-6	4.987-3	1.727-0	2.890-6		9.522-4	9.522-4	5.043-8	9.191-1		
1.000-3	1.145-5	8.470-3	2.439-6	4.978-3	1.840-0	2.434-6		9.980-4	9.980-4	5.540-8	8.717-1		
1.250-3	1.988-5	4.441-3	1.874-6	4.841-3	2.403-0	1.869-6		1.248-4	1.248-4	8.841-8	7.472-1		
1.289-3	1.711-5	4.329-3	1.832-6	4.832-3	2.447-0	1.827-6		1.285-4	1.285-4	8.940-8	7.395-1		
1.270-3	1.530-5	4.841-3	1.885-6	4.832-3	2.449-0	1.880-6		1.287-4	1.287-4	8.924-8	7.278-1		
1.500-3	2.225-5	3.329-3	1.295-6	4.733-3	2.888-0	1.290-6		1.494-4	1.494-4	1.242-7	6.715-1		
1.750-3	3.147-5	2.354-3	8.873-5	4.598-3	3.945-0	8.867-5		1.741-4	1.741-4	1.888-7	5.532-1		
2.000-3	4.247-5	1.744-3	8.575-5	4.485-3	4.111-0	8.530-5		1.988-4	1.988-4	2.194-7	4.677-1		
2.500-3	7.037-5	1.053-3	3.988-5	4.217-3	5.194-0	3.985-5		2.473-4	2.473-4	3.403-7	3.515-1		
3.000-3	1.082-4	8.978-3	2.830-5	4.009-3	8.288-0	2.830-5		2.954-4	2.954-4	4.894-7	2.783-1		
3.219-3	1.241-4	5.987-3	2.848-5	3.900-3	8.732-0	2.810-5		3.183-4	3.183-4	5.584-7	2.548-1		
3.220-3	4.006-5	1.849-3	8.989-5	3.900-3	8.735-0	6.930-5		3.202-4	3.202-4	5.059-7	7.958-1		
3.371-3	4.405-5	1.882-3	8.338-5	3.831-3	7.042-0	6.300-5		3.351-4	3.351-4	5.613-7	7.211-1		
3.372-3	3.980-5	1.984-3	7.178-5	3.830-3	7.044-0	7.140-5		3.354-4	3.354-4	5.624-7	8.178-1		
3.500-3	4.338-5	1.787-3	8.438-5	3.775-3	7.304-0	6.398-5		3.479-4	3.479-4	6.077-7	7.620-1		
3.918-3	8.038-5	1.287-3	4.826-5	3.612-3	8.151-0	4.590-5		3.887-4	3.714-4	7.670-7	6.153-1		
3.919-3	5.252-5	1.410-3	5.316-5	3.612-3	8.153-0	5.280-5		3.892-4	3.719-4	7.690-7	7.086-1		
4.000-3	5.501-5	1.347-3	5.076-5	3.583-3	8.317-0	5.040-5		3.972-4	3.798-4	8.022-7	6.905-1		
4.500-3	7.284-5	1.020-3	3.844-5	3.385-3	9.233-0	3.810-5		4.460-4	4.287-4	1.022-6	5.902-1		
4.898-3	7.880-5	9.400-3	3.543-5	3.329-3	9.520-0	3.510-5		4.614-4	4.441-4	1.097-6	5.836-1		
4.899-3	6.627-5	1.118-3	4.213-5	3.328-3	9.522-0	4.180-5		4.622-4	4.449-4	1.101-6	6.713-1		
5.000-3	8.084-5	9.185-3	3.462-5	3.217-3	1.014-1	3.430-5		4.953-4	4.780-4	1.271-6	5.988-1		
5.002-3	8.085-5	9.185-3	3.462-5	3.218-3	1.014-1	3.430-5		4.955-4	4.782-4	1.272-6	5.930-1		
5.003-3	7.195-5	1.035-3	3.982-5	3.218-3	1.014-1	3.870-5		4.952-4	4.788-4	1.275-6	6.892-1		
5.500-3	9.182-5	8.887-3	3.041-5	3.087-3	1.095-1	3.010-5		5.445-4	5.272-4	1.945-6	5.741-1		
6.000-3	1.124-4	8.418-3	2.441-5	2.901-3	1.178-1	2.380-5		5.928-4	5.755-4	1.842-6	4.986-1		
6.500-3	1.426-4	5.195-3	1.998-5	2.746-3	1.250-1	1.931-5		6.408-4	6.235-4	2.162-6	4.374-1		
7.000-3	1.733-4	4.273-3	1.611-5	2.611-3	1.322-1	1.585-5		6.888-4	6.714-4	2.508-6	3.873-1		
8.000-3	2.462-4	3.088-3	1.134-5	2.383-3	1.463-1	1.110-5		7.831-4	7.680-4	3.262-6	3.111-1		
1.000-2	4.383-4	1.898-3	6.460-4	1.985-3	1.718-1	8.200-4		9.887-4	9.518-4	5.036-6	2.182-1		
1.250-2	7.982-4	9.374-3	3.533-4	1.994-3	1.980-1	3.372-4		1.193-2	1.178-2	7.891-6	1.488-1		
1.500-2	1.278-3	5.788-3	2.188-4	1.333-3	2.224-1	2.058-4		1.407-2	1.391-2	1.075-6	1.088-1		
1.587-2	1.488-3	5.888-3	1.887-4	1.247-3	2.289-1	1.788-4		1.480-2	1.488-2	1.191-6	9.894-0		
1.587-2	8.793-4	1.177-2	4.437-4	1.247-3	2.289-1	4.318-4		1.542-2	1.007-2	5.841-6	1.461-1		
1.750-2	7.995-4	9.312-3	1.3518-4	1.111-3	2.487-1	3.388-4		1.893-2	1.161-2	7.494-6	1.480-1		
1.988-2	9.788-4	7.388-3	2.8953-4	1.882-3	2.517-1	2.758-4		1.848-2	1.305-2	9.528-6	1.338-1		
1.988-2	7.138-4	1.838-3	3.913-4	1.882-3	2.517-1	3.818-4		1.898-2	1.323-2	9.724-6	1.893-1		

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT-7				13.5 GRAMS/CC			
ENERGY	TOTAL	HP		CROSS SECTION (BARN)		REV/COLLISION	REV/CM
REV	CM	CM-CH/CM		TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD
1.999-2	7.999-4	9.367-1	3.568-4	9.999-2	2.999-1	3.418-4	1.999-2
1.999-2	6.846-4	1.682-2	4.078-4	9.999-2	2.999-1	3.999-4	1.937-2
2.000-2	7.873-4	1.847-2	3.947-4	9.401-2	2.579-1	3.699-4	1.951-2
2.999-2	1.294-3	5.988-1	2.227-4	7.838-2	2.632-1	2.154-4	2.418-2
3.000-2	1.997-3	3.709-1	1.388-4	5.514-2	3.098-1	1.340-4	2.878-2
3.500-2	2.980-3	2.903-1	9.433-3	4.432-2	3.212-1	0.998-4	3.763-2
4.000-2	4.155-3	1.783-1	8.720-3	3.888-2	3.353-1	8.320-3	3.763-2
4.500-2	5.821-3	1.518-1	4.988-3	3.057-2	3.444-1	4.628-3	4.194-2
5.000-2	7.374-3	1.007-1	3.787-3	2.812-2	3.328-1	3.508-3	4.812-2
5.500-2	9.388-3	7.887-0	2.873-3	2.243-2	3.590-1	2.713-3	5.025-2
6.000-2	1.172-2	6.318-0	2.381-3	1.952-2	3.628-1	2.150-3	5.426-2
6.500-2	1.446-2	5.124-0	1.831-3	1.709-2	3.849-1	1.724-3	5.816-2
7.000-2	1.753-2	4.286-0	1.593-3	1.511-2	3.688-1	1.405-3	6.194-2
8.000-2	2.471-2	2.998-0	1.130-3	1.210-2	3.704-1	9.720-2	6.915-2
1.000-1	4.330-2	1.711-0	8.449-2	8.293-1	3.897-1	5.250-2	8.227-2
1.008-1	1.323-2	5.999-0	2.111-3	7.384-1	3.672-1	2.000-3	1.015-1
1.008-1	1.323-2	5.999-0	2.111-3	7.384-1	3.672-1	2.000-3	1.015-1
1.250-1	1.384-2	3.772-0	1.422-3	5.583-1	3.613-1	1.330-3	1.175-1
1.500-1	3.082-2	2.403-0	9.059-2	4.041-1	3.545-1	8.300-2	1.386-1
1.750-1	4.485-2	1.852-0	6.225-2	3.058-1	3.440-1	5.875-2	1.588-1
2.000-1	6.170-2	1.201-0	4.525-2	2.402-1	3.350-1	3.950-2	1.779-1
2.500-1	1.038-1	7.134-1	2.689-2	1.593-1	3.154-1	2.214-2	2.133-1
3.000-1	1.556-1	4.760-1	1.194-2	1.140-1	3.003-1	1.380-2	2.447-1
3.500-1	2.121-1	3.493-1	1.317-2	8.536-0	2.694-1	9.459-1	2.741-1
4.000-1	2.733-1	2.710-1	1.021-2	6.646-0	2.730-1	6.820-1	3.010-1
4.500-1	3.365-1	2.201-1	8.298-0	5.312-0	2.614-1	5.153-1	3.267-1
5.000-1	4.013-1	1.846-1	6.958-0	4.347-0	2.513-1	4.010-1	3.510-1
5.500-1	4.635-1	1.598-1	6.024-0	3.621-0	2.420-1	3.242-1	3.757-1
6.000-1	5.255-1	1.410-1	5.314-0	3.064-0	2.337-1	2.670-1	4.000-1
6.500-1	5.870-1	1.262-1	4.756-0	2.625-0	2.258-1	2.235-1	4.240-1
7.000-1	6.476-1	1.144-1	4.312-0	2.274-0	2.188-1	1.858-1	4.479-1
7.500-1	7.046-1	9.587-2	3.652-0	1.757-0	2.068-1	1.410-1	4.959-1
1.000-0	9.704-1	7.633-2	2.877-0	1.137-0	1.864-1	9.000-0	6.002-1
1.022-0	9.911-1	7.474-2	2.817-0	1.090-0	1.844-1	8.639-0	6.122-1
1.250-0	1.194-0	6.206-2	2.339-1	7.343-1	1.671-1	5.948-0	7.405-1
1.500-0	1.349-0	5.491-2	2.070-1	5.128-1	1.521-1	4.280-0	6.742-1
1.750-0	1.469-0	5.042-2	1.900-1	3.781-1	1.400-1	3.248-0	1.018-0
2.000-0	1.554-0	4.768-2	1.797-1	2.902-1	1.300-1	2.590-0	1.173-0
2.044-0	1.567-0	4.727-2	1.782-1	2.780-1	1.284-1	2.503-0	1.201-0
2.500-0	1.695-0	4.476-2	1.687-1	1.864-1	1.143-1	1.835-0	1.517-0
3.000-0	1.692-0	4.378-2	1.690-1	1.297-1	1.024-1	4.730-0	1.899-0
3.500-0	1.713-0	4.324-2	1.630-1	9.539-2	2.930-0	1.121-0	2.307-0
4.000-0	1.711-0	4.331-2	1.632-1	7.310-2	8.549-0	9.310-1	2.737-0
4.500-0	1.691-0	4.380-2	1.631-1	5.779-2	7.918-0	7.956-1	3.183-0
5.000-0	1.671-0	4.432-2	1.671-1	4.683-2	7.395-0	6.920-1	3.640-0
5.500-0	1.658-0	4.468-2	1.684-1	3.871-2	6.927-0	6.107-1	4.104-0
6.000-0	1.640-0	4.516-2	1.702-1	3.254-2	6.529-0	5.450-1	4.575-0
6.500-0	1.620-0	4.572-2	1.723-1	2.774-2	6.179-0	4.908-1	5.052-0
7.000-0	1.595-0	4.635-2	1.747-1	2.392-2	5.869-0	4.457-1	5.533-0
8.000-0	1.552-0	4.773-2	1.799-1	1.832-2	5.342-0	3.750-1	6.506-0
1.000-1	1.462-0	5.068-2	1.910-1	1.173-2	4.551-0	2.820-1	6.478-0
1.250-1	1.385-0	5.425-2	2.045-1	7.507-3	3.861-0	2.149-1	1.097-1
1.500-1	1.285-0	5.784-2	2.175-1	5.214-3	3.369-0	1.730-1	1.347-1
1.750-1	1.218-0	3.079-2	2.298-1	3.830-3	2.956-0	1.445-1	1.597-1
2.000-1	1.163-0	8.370-2	2.401-1	2.932-3	2.704-0	1.240-1	1.848-1
2.500-1	1.075-0	6.691-2	2.598-1	1.877-3	2.273-0	9.664-2	2.350-1
3.000-1	1.012-0	7.319-2	2.759-1	1.303-3	1.969-0	7.900-2	2.851-1
3.500-1	9.684-1	7.885-2	2.889-1	9.575-4	1.741-0	6.679-2	3.352-1
4.000-1	9.294-1	7.988-2	3.003-1	7.331-4	1.564-0	5.770-2	3.853-1
4.500-1	8.909-1	8.241-2	3.106-1	5.792-4	1.422-0	5.064-2	4.354-1
5.000-1	8.753-1	8.463-2	3.190-1	4.692-4	1.306-0	4.510-2	4.855-1
5.500-1	8.585-1	8.628-2	3.252-1	3.878-4	1.208-0	4.067-2	5.355-1
6.000-1	8.431-1	8.786-2	3.312-1	3.258-4	1.125-0	3.700-2	5.856-1

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89-Ac

ENDL Evaluated Photon Data		12/07/78		89-Ac	
ATOMIC WEIGHT 227		TOTAL NFP		13.5 CM/MS/CC	
ENERGY	CM CH+CH/CM	CROSS SECTION (BARN)	NEUT/CM	NEUT/CM	K.E.
8.500+1	8.250-1	3.388+1	2.778-4	1.053+0	3.388-2
7.000+1	6.180-1	3.428+1	2.394-4	9.908-1	3.319+1
6.000+1	7.927-1	3.522+1	1.833-4	8.874-1	2.700-2
1.000+2	7.944-1	3.701+1	1.173-4	7.385-1	2.110-2
					3.625+1
					9.858+1
					7.857+1
					9.857+1
					8.338+1
					9.953+1
					5.432+1
					8.487+1
					9.912+1
					8.338+1
					1.307+2

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Form Factors

89-Ac

SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000-0	1.000-0	0.000-0	1.250-1	9.040-1	0.413-2	1.000-0	3.732-1	4.050-1	1.000-1	2.295-2	9.090-1
5.000-3	9.999-1	3.933-4	1.500-1	8.791-1	1.022-1	1.250-0	3.041-1	5.450-1	1.500-1	1.500-2	9.007-1
1.000-2	9.999-1	1.573-3	1.750-1	8.543-1	1.199-1	1.500-0	2.404-1	5.925-1	2.000-1	1.100-2	9.937-1
1.500-2	9.976-1	3.484-3	2.000-1	8.299-1	1.373-1	2.000-0	1.700-1	6.700-1	5.000-1	2.519-3	9.999-1
2.000-2	9.950-1	6.000-3	2.500-1	7.825-1	1.700-1	2.500-0	1.430-1	7.432-1	6.000-1	6.171-4	1.000-0
2.500-2	9.925-1	9.075-3	3.000-1	7.300-1	2.025-1	3.000-0	1.231-1	7.821-1	1.000-2	4.816-4	1.000-0
3.000-2	9.899-1	1.250-2	4.000-1	6.830-1	2.552-1	3.500-0	1.004-1	8.281-1	1.000-3	1.144-4	1.000-0
4.000-2	9.842-1	2.039-2	5.000-1	6.372-1	3.001-1	4.000-0	8.840-2	8.550-1	1.000-4	3.000-14	1.000-0
5.000-2	9.785-1	2.863-2	6.000-1	5.938-1	3.428-1	5.000-0	5.841-2	8.928-1	1.000-5	8.239-22	1.000-0
7.000-2	9.563-1	4.452-2	7.000-1	4.875-1	3.835-1	6.000-0	4.748-2	9.190-1			
9.000-2	9.300-1	5.915-2	8.000-1	4.437-1	4.212-1	7.000-0	4.017-2	9.303-1			
1.000-1	9.200-1	6.627-2	9.000-1	4.061-1	4.550-1	8.000-0	3.440-2	9.524-1

12/07/78

ENDL Evaluated Photon Cross Sections

90-Th

12/07/78

Energy Deposition

90-Th

12/07/76

ENDL Evaluated Photon Data

90-Th

ATOMIC WEIGHT 232.04							DENSITY 11.66 GRAMS/CC				
ENERGY	TOTAL NFP		CROSS SECTION (BARNS)				NEV/COLLISION			NEV/CM	
NEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E. FLOR	K.E.	NEUTRSTR	K.E.
1.000-4	7.270-6	1.180-4	4.945-6	5.385-3	2.943-2	4.940-6	9.980-5	9.980-5	5.612-10	1.374-1	
1.250-4	1.531-5	5.601-3	2.198-6	5.388-3	4.578-2	2.153-6	1.247-4	1.247-4	8.745-10	8.143-0	
1.500-4	2.011-5	3.051-3	1.175-6	5.379-3	6.080-2	1.170-6	1.493-4	1.493-4	1.294-9	5.311-0	
1.750-4	4.132-5	2.678-3	7.988-5	5.378-3	8.085-2	7.944-5	1.738-4	1.738-4	1.700-9	4.207-0	
1.970-4	5.550-5	1.945-3	5.834-5	5.374-3	1.121-1	5.800-5	1.952-4	1.952-4	2.144-9	3.517-0	
1.984-4	3.161-5	2.713-3	1.845-6	5.373-3	1.136-1	1.040-6	1.974-4	1.974-4	2.191-9	6.244-0	
2.000-4	3.192-5	2.687-3	1.675-6	5.373-3	1.154-1	1.030-6	1.980-4	1.980-4	2.227-9	6.234-0	
2.500-4	3.788-5	2.884-3	8.723-5	5.364-3	1.774-1	8.689-5	2.485-4	2.485-4	3.472-9	8.938-0	
2.895-4	4.240-5	2.823-3	7.794-5	5.357-3	2.352-1	7.740-5	2.875-4	2.875-4	4.850-9	8.781-0	
2.909-4	3.223-5	2.861-3	1.025-6	5.357-3	2.374-1	1.020-6	2.894-4	2.894-4	4.710-9	8.979-0	
3.000-4	3.381-5	2.537-3	9.774-5	5.356-3	2.519-1	9.720-5	2.984-4	2.984-4	5.007-9	8.824-0	
3.384-4	3.670-5	2.337-3	9.003-5	5.346-3	3.151-1	8.950-5	3.364-4	3.364-4	6.385-9	9.185-0	
3.398-4	3.313-5	2.588-3	9.973-5	5.345-3	3.175-1	9.920-5	3.380-4	3.380-4	6.425-9	1.020-1	
3.500-4	2.788-5	3.099-3	1.194-6	5.343-3	3.325-1	1.189-6	3.484-4	3.484-4	6.829-9	1.259-1	
4.000-4	1.226-5	3.895-3	2.895-6	5.332-3	4.299-1	2.890-6	3.992-4	3.992-4	8.984-9	3.256-1	
4.500-4	9.449-6	9.077-3	3.497-6	5.316-3	5.300-1	3.492-6	4.493-4	4.493-4	1.136-8	4.795-1	
5.000-4	7.484-6	1.146-4	4.415-6	5.302-3	6.393-1	4.410-6	4.994-4	4.994-4	1.403-8	6.673-1	
5.500-4	7.970-6	1.078-4	4.146-6	5.284-3	7.508-1	4.141-6	5.493-4	5.493-4	1.697-8	6.892-1	
6.000-4	8.440-6	1.018-4	3.915-6	5.267-3	8.695-1	3.910-6	5.992-4	5.992-4	2.019-8	7.090-1	
6.500-4	9.277-6	9.245-3	3.582-6	5.244-3	9.847-1	3.577-6	6.490-4	6.490-4	2.369-8	6.997-1	
6.908-4	9.988-6	8.804-3	3.315-6	5.227-3	1.082-0	3.310-6	6.897-4	6.897-4	2.676-8	6.919-1	
6.922-4	9.584-6	8.987-3	3.495-6	5.227-3	1.088-0	3.490-6	6.912-4	6.912-4	2.687-8	7.227-1	
7.000-4	8.884-6	9.678-3	3.005-6	5.223-3	1.105-0	3.800-6	6.990-4	6.990-4	2.749-8	8.050-1	
8.000-4	1.006-5	8.528-3	3.285-6	5.188-3	1.380-0	3.280-6	7.987-4	7.987-4	3.588-8	7.483-1	
9.000-4	1.204-5	7.125-3	2.745-6	5.137-3	1.602-0	2.740-6	8.983-4	8.983-4	4.539-8	7.043-1	
1.000-3	1.296-5	6.618-3	2.949-6	5.093-3	1.825-0	2.944-6	9.980-4	9.980-4	5.602-8	7.899-1	
1.250-3	1.984-5	4.323-3	1.688-6	4.991-3	2.436-0	1.681-6	1.246-4	1.246-4	6.736-8	6.281-1	
1.329-3	2.235-5	3.848-3	1.482-6	4.912-3	2.628-0	1.477-6	1.325-4	1.325-4	9.869-8	5.940-1	
1.330-3	2.181-5	3.932-3	1.515-6	4.912-3	2.628-0	1.510-6	1.328-4	1.328-4	9.869-8	6.077-1	
1.500-3	2.743-5	3.127-3	1.205-6	4.837-3	3.044-0	1.200-6	1.494-4	1.494-4	1.255-7	5.447-1	
1.750-3	3.678-5	2.332-3	8.084-5	4.806-3	3.615-0	8.937-5	1.741-3	1.741-3	1.705-7	4.733-1	
2.000-3	4.742-5	1.864-3	6.989-5	4.578-3	4.195-0	6.923-5	1.987-3	1.987-3	2.220-7	4.190-1	
2.500-3	7.244-5	1.184-3	4.982-5	4.300-3	5.294-0	4.519-5	2.478-3	2.478-3	3.449-7	3.419-1	
3.000-3	1.023-4	8.383-2	3.230-5	4.085-3	6.402-0	3.189-5	2.982-3	2.982-3	4.934-7	2.895-1	
3.371-3	1.247-4	6.678-2	2.649-5	3.921-3	7.085-0	2.610-5	3.282-3	3.282-3	6.056-7	2.631-1	
3.332-3	6.588-5	1.308-3	5.031-5	3.920-3	7.087-0	4.992-5	3.306-3	3.306-3	5.502-7	4.762-1	
3.490-3	7.397-5	1.199-3	4.488-5	3.849-3	7.412-0	4.429-5	3.480-3	3.480-3	6.057-7	4.437-1	
3.491-3	5.450-5	1.574-3	8.084-5	3.849-3	7.414-0	8.025-5	3.469-3	3.469-3	6.089-7	6.037-1	
3.500-3	5.486-5	1.983-3	8.024-5	3.845-3	7.433-0	5.985-5	3.478-3	3.478-3	6.121-7	6.014-1	
4.000-3	7.731-5	1.109-3	4.275-5	3.849-3	8.458-0	4.238-5	3.986-3	3.986-3	8.058-7	4.900-1	
4.045-3	7.956-5	1.078-3	4.153-5	3.829-3	8.543-0	4.117-5	4.010-3	3.831-3	8.256-7	4.816-1	
4.046-3	5.913-5	1.450-3	5.988-5	3.829-3	8.545-0	5.552-5	4.020-3	3.841-3	8.298-7	6.496-1	
4.500-3	7.772-5	1.103-3	4.252-5	3.447-3	9.393-0	4.217-5	4.463-3	4.285-3	1.033-6	5.514-1	
4.830-3	9.321-5	9.202-2	3.545-5	3.331-3	1.000-1	3.512-5	4.784-3	4.607-3	1.193-6	4.942-1	
4.831-3	8.197-5	1.045-3	4.031-5	3.331-3	1.001-1	3.998-5	4.791-3	4.613-3	1.197-6	5.627-1	
5.000-3	8.953-5	9.578-2	3.691-5	3.276-3	1.032-1	3.858-5	4.955-3	4.777-3	1.283-6	5.336-1	
5.181-3	9.811-5	8.742-2	3.388-5	3.211-3	1.062-1	3.336-5	5.131-3	4.954-3	1.380-6	5.049-1	
5.182-3	9.093-5	9.432-2	3.674-5	3.211-3	1.062-1	3.602-5	5.136-3	4.958-3	1.382-6	5.453-1	
5.500-3	1.059-4	8.095-2	3.119-5	3.105-3	1.115-1	3.088-5	5.445-3	5.267-3	1.560-6	4.972-1	
6.000-3	1.324-4	6.477-2	2.498-5	2.957-3	1.197-1	2.466-5	5.929-3	5.751-3	1.860-6	4.343-1	
6.500-3	1.625-4	5.277-2	2.033-5	2.800-3	1.271-1	2.005-5	6.410-3	6.233-3	2.184-6	3.835-1	
7.000-3	1.985-4	4.368-2	1.682-5	2.683-3	1.344-1	1.655-5	6.889-3	6.712-3	2.533-6	3.417-1	
8.000-3	2.782-4	3.105-2	1.195-5	2.433-3	1.488-1	1.172-5	7.836-3	7.660-3	3.299-6	2.774-1	
1.000-2	4.670-4	1.761-2	6.786-4	2.028-3	1.741-1	6.581-4	9.939-3	9.524-3	5.100-6	1.958-1	
1.250-2	8.528-4	1.002-2	3.861-4	1.831-3	2.004-1	3.896-4	1.197-2	1.179-2	7.819-6	1.378-1	
1.500-2	1.351-3	8.347-1	2.448-4	1.384-3	2.249-1	2.307-4	1.415-2	1.398-2	1.099-6	1.035-1	
1.630-2	1.883-3	5.157-1	1.987-4	1.237-3	2.348-1	1.861-4	1.527-2	1.510-2	1.281-6	9.078-0	
1.630-2	7.232-4	1.188-2	4.989-4	1.237-3	2.347-1	4.443-4	1.585-2	1.027-2	5.930-6	1.420-1	
1.750-2	8.709-4	9.848-1	3.795-4	1.138-3	2.433-1	3.678-4	1.696-2	1.140-2	7.307-6	1.309-1	
1.988-2	1.183-3	7.240-1	2.790-4	9.907-2	2.585-1	2.888-4	1.897-2	1.344-2	1.016-6	1.135-1	
1.988-2	8.481-4	1.810-2	3.882-4	9.908-2	2.585-1	3.790-4	1.918-2	1.359-2	1.038-6	1.800-1	
2.000-2	8.843-4	8.880-1	3.737-4	9.727-2	2.606-1	3.637-4	1.947-2	1.388-2	1.083-6	1.570-1	
2.047-2	9.383-4	9.125-1	3.518-4	9.430-2	2.631-1	3.419-4	1.981-2	1.432-2	1.153-6	1.524-1	

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 232.04				DENSITY 11.66 GRAMS/CC					
ENERGY	TOTAL WFP	CROSS SECTION (BARNS)						MEV/COL	MEV/CM
MEV	CM	CM-CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. *FLOR	K.E. BREMSSTR
2.047-2	0.133-4	1.094-2	4.083-4	9.430-2	2.831-1	3.988-4		1.998-2	1.438-2
2.500-2	1.375-3	6.239-1	2.484-4	7.219-2	2.860-1	2.329-4		2.422-2	1.885-2
3.000-2	2.214-3	3.874-1	1.483-4	5.898-2	3.088-1	1.433-4		2.880-2	2.330-2
3.500-2	3.310-3	2.991-1	8.884-3	4.949-2	3.242-1	9.488-3		3.330-2	2.784-2
4.000-2	4.681-3	1.832-1	7.059-3	3.788-2	3.383-1	8.849-3		3.774-2	3.229-2
4.500-2	6.351-3	1.950-1	5.803-3	3.150-2	3.475-1	4.853-3		4.200-2	3.685-2
5.000-2	8.332-3	1.029-1	3.386-3	2.885-2	3.580-1	3.682-3		4.621-2	4.091-2
5.500-2	1.085-2	8.028-0	3.104-3	2.305-2	3.613-1	2.837-3		5.034-2	4.509-2
6.000-2	1.330-2	6.450-0	2.485-3	2.008-2	3.662-1	2.248-3		5.436-2	4.917-2
6.500-2	1.631-2	5.280-0	2.027-3	1.798-2	3.683-1	1.814-3		5.832-2	5.318-2
7.000-2	1.937-2	4.399-0	1.680-3	1.593-2	3.703-1	1.487-3		6.217-2	5.708-2
8.000-2	2.750-2	3.119-0	1.202-3	1.244-2	3.739-1	1.040-3		6.995-2	6.458-2
1.000-1	4.762-2	1.801-0	6.940-2	8.525-1	3.733-1	5.714-2		8.314-2	7.842-2
1.096-1	5.949-2	1.442-0	5.995-2	7.242-1	3.698-1	4.461-2		8.920-2	8.459-2
1.096-1	1.593-2	5.388-0	2.088-3	7.241-1	3.698-1	1.959-3		1.042-1	7.116-2
1.250-1	2.227-2	3.851-0	1.484-3	5.741-1	3.649-1	1.390-3		1.176-1	4.541-2
1.500-1	3.515-2	2.439-0	9.398-2	4.157-1	3.582-1	8.624-2		1.388-1	6.802-2
1.750-1	5.137-2	1.670-0	6.433-2	3.145-1	3.475-1	5.771-2		1.590-1	8.583-2
2.000-1	7.090-2	1.210-0	4.881-2	2.470-1	3.386-1	4.078-2		1.782-1	1.108-1
2.500-1	1.185-1	7.235-1	2.788-2	1.639-1	3.188-1	2.305-2		2.140-1	1.502-1
3.000-1	1.763-1	4.848-1	1.888-2	1.173-1	3.035-1	1.447-2		2.450-1	1.863-1
3.500-1	2.418-1	3.946-1	1.386-2	8.786-1	2.884-1	9.901-1		2.757-1	2.198-1
4.000-1	3.125-1	2.744-1	1.057-2	6.842-1	2.760-1	7.128-1		3.028-1	2.508-1
4.500-1	3.851-1	2.227-1	9.581-1	5.469-1	2.642-1	5.392-1		3.289-1	2.805-1
5.000-1	4.596-1	1.886-1	7.190-1	4.477-1	2.541-1	4.201-1		3.536-1	3.085-1
5.500-1	5.330-1	1.609-1	5.200-1	3.729-1	2.446-1	3.380-1		3.782-1	3.362-1
6.000-1	6.063-1	1.415-1	5.451-1	3.156-1	2.363-1	2.772-1		4.022-1	3.630-1
6.500-1	6.763-1	1.268-1	4.886-1	2.704-1	2.263-1	2.332-1		4.269-1	3.901-1
7.000-1	7.453-1	1.151-1	4.434-1	2.343-1	2.212-1	1.988-1		4.514-1	4.169-1
8.000-1	8.789-1	9.758-2	3.760-1	1.810-1	2.089-1	1.490-1		5.007-1	4.701-1
1.000-0	1.119-0	7.686-2	2.954-1	1.172-1	1.884-1	9.524-0		6.055-1	5.806-1
1.022-0	1.143-0	7.505-2	2.892-1	1.123-1	1.875-1	9.145-0	1.000-6	6.176-1	5.932-1
1.250-0	1.381-0	6.212-2	2.394-1	7.570-1	1.689-1	6.280-0		7.459-1	7.255-1
1.500-0	1.567-0	5.474-2	2.109-1	5.268-1	1.538-1	4.469-0	7.191-1	8.777-1	8.614-1
1.750-0	1.710-0	5.015-2	1.932-1	3.899-1	1.415-1	3.325-0		1.018-1	1.005-0
2.000-0	1.815-0	4.724-2	1.820-1	2.993-1	1.314-1	2.613-0	2.146-0	1.172-1	1.161-0
2.044-0	1.833-0	4.580-2	1.803-1	2.867-1	1.298-1	2.520-0	2.242-0	1.201-1	1.190-0
2.500-0	1.927-0	4.428-2	1.706-1	1.922-1	1.155-1	1.819-0	3.497-0	1.515-1	1.507-0
3.000-0	1.978-0	4.336-2	1.671-1	1.338-1	1.036-1	1.370-0	4.847-0	1.896-1	1.889-0
3.500-0	1.954-0	4.301-2	1.657-1	9.841-2	9.411-2	1.092-0	5.971-0	2.305-0	2.300-0
4.000-0	1.968-0	4.315-2	1.662-1	7.541-2	8.644-2	8.970-1	7.008-0	2.731-0	2.731-0
4.500-0	1.970-0	4.354-2	1.678-1	5.962-2	8.007-2	7.499-1	7.961-0	3.181-0	3.177-0
5.000-0	1.951-0	4.398-2	1.694-1	4.831-2	7.468-2	6.457-1	8.777-0	3.538-0	3.635-0
5.500-0	1.941-0	4.418-2	1.702-1	3.994-2	7.005-2	5.712-1	9.408-0	4.101-0	4.098-0
6.000-0	1.923-0	4.455-2	1.717-1	3.357-2	6.802-2	5.107-1	1.002-1	4.571-0	4.569-0
6.500-0	1.904-0	4.505-2	1.736-1	2.862-2	6.246-2	4.607-1	1.062-1	5.048-0	5.046-0
7.000-0	1.879-0	4.569-2	1.759-1	2.468-2	5.935-2	4.188-1	1.121-1	5.529-0	5.527-0
8.000-0	1.823-0	4.705-2	1.813-1	1.890-2	5.402-2	3.527-1	1.235-1	6.503-0	6.501-0
1.000-1	1.702-0	5.039-2	1.942-1	1.210-2	4.602-2	2.646-1	1.454-1	8.479-0	8.478-0
1.250-1	1.602-0	5.355-2	2.063-1	7.746-3	3.905-2	2.079-1	1.651-1	1.096-1	1.096-1
1.500-1	1.509-0	5.684-2	2.190-1	5.379-3	3.406-2	1.707-1	1.832-1	1.347-1	1.346-1
1.750-1	1.422-0	6.033-2	2.325-1	3.952-3	3.030-2	1.445-1	2.007-1	1.597-1	1.597-1
2.000-1	1.352-0	6.345-2	2.445-1	3.026-3	2.734-2	1.251-1	2.159-1	1.849-1	1.848-1
2.500-1	1.248-0	6.874-2	2.849-1	1.936-3	2.298-2	9.824-2	2.409-1	2.350-1	2.350-1
3.000-1	1.176-0	7.295-2	2.811-1	1.345-3	1.991-2	8.066-2	2.604-1	2.651-1	2.651-1
3.500-1	1.127-0	7.608-2	2.931-1	9.880-4	1.761-2	6.828-2	2.748-1	3.352-1	3.352-1
4.000-1	1.085-0	7.902-2	3.045-1	7.564-4	1.582-2	5.910-2	2.880-1	3.953-1	3.953-1
4.500-1	1.048-0	8.203-2	3.161-1	5.977-4	1.438-2	5.203-2	3.012-1	4.354-1	4.354-1
5.000-1	1.016-0	8.440-2	3.282-1	4.841-4	1.321-2	4.643-2	3.115-1	4.855-1	4.855-1
5.500-1	9.768-1	8.605-2	3.316-1	4.001-4	1.222-2	4.188-2	3.189-1	5.356-1	5.356-1
6.000-1	9.788-1	8.762-2	3.376-1	3.362-4	1.138-2	3.812-2	3.259-1	5.856-1	5.856-1
6.500-1	9.624-1	8.911-2	3.434-1	2.885-4	1.085-2	3.496-2	3.323-1	6.357-1	6.356-1
7.000-1	9.473-1	9.053-2	3.488-1	2.470-4	1.002-2	3.227-2	3.384-1	6.857-1	6.857-1

461

90-Th

12/07/78

ENDL Evaluated Photon Data

90-Th

ATOMIC WEIGHT 232.04							DENSITY 11.68 GRAMS/CC				
ENERGY	TOTAL MFP		CROSS SECTION (BARNS)				MEV/COLLISION		MEV/CM		
MEV	CM	CM*CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. *FLOR	K.E. BREMSSTR	K.E.		
0.000+ 1	9.293- 1	9.319- 2	3.981+ 1	1.881- 4	8.974- 1	2.783- 2	3.408+ 1	7.898+ 1	7.898+ 1	8.408+ 1	8.538+ 1
1.000+ 2	8.798- 1	8.798- 2	3.773+ 1	1.210- 4	7.448- 1	2.194- 2	3.898+ 1	9.859+ 1	9.859+ 1	8.353+ 1	1.126+ 2

12/07/78

Form Factors

90-Th

SIN(Θ/2)/λ COHERENT		INCOHERENT		SIN(Θ/2)/λ COHERENT		INCOHERENT		SIN(Θ/2)/λ COHERENT		INCOHERENT		SIN(Θ/2)/λ COHERENT		INCOHERENT			
1/λ		1/λ		1/λ		1/λ		1/λ		1/λ		1/λ		1/λ			
0.000	0	1.000	0	0.000	0	1.230	-1	9.027	-1	0.515	-2	1.000	0	3.742	-1	4.042	-1
5.000	-3	9.995	-1	3.770	-4	1.500	-1	8.770	-1	1.030	-1	1.250	0	3.099	-1	5.474	-1
1.000	-2	9.990	-1	1.900	-3	1.730	-1	8.519	-1	1.210	-1	1.500	0	2.509	-1	5.946	-1
1.500	-2	9.977	-1	3.318	-3	2.000	-1	8.275	-1	1.383	-1	2.000	0	1.783	-1	8.782	-1
2.000	-2	9.959	-1	5.783	-3	2.500	-1	7.902	-1	1.719	-1	2.500	0	1.438	-1	7.409	-1
2.500	-2	9.937	-1	8.798	-3	3.000	-1	7.386	-1	2.030	-1	3.000	0	1.234	-1	7.901	-1
3.000	-2	9.910	-1	1.217	-2	4.000	-1	6.821	-1	2.571	-1	3.500	0	1.012	-1	8.285	-1
4.000	-2	9.845	-1	1.901	-2	5.000	-1	5.975	-1	3.018	-1	4.000	0	0.704	-2	8.537	-1
5.000	-2	9.770	-1	2.822	-2	6.000	-1	5.386	-1	3.434	-1	5.000	0	5.673	-2	8.517	-1
7.000	-2	9.586	-1	4.463	-2	7.000	-1	4.686	-1	3.833	-1	6.000	0	4.749	-2	9.180	-1
9.000	-2	9.386	-1	5.981	-2	8.000	-1	4.447	-1	4.205	-1	7.000	0	4.026	-2	9.374	-1
1.000	-1	9.282	-1	6.710	-2	9.000	-1	4.070	-1	4.542	-1	8.000	0	3.454	-2	9.517	-1

12/07/7E

ENDL Evaluated Photon Cross Sections

91-Pa

12/07/78

Energy Deposition

91-Pa

12/07/78

ENDL Evaluated Photon Data

91-Pa

ATOMIC WEIGHT 233				DENSITY 15.4 GRAMS/CC							
ENERGY	TOTAL MFP			CROSS SECTION (BARNs)				MEV/COLLISION			
MEV	CM	CM-CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOCL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	MEV/CM
1.000 - 4	4.204 - 8	1.944 - 4	5.876 - 8	5.505 - 3	2.933 - 2	5.970 - 8	9.991 - 5	9.991 - 5	5.677 - 10	2.378 - 1	
1.250 - 4	9.049 - 8	7.178 - 3	2.776 - 6	5.502 - 3	4.554 - 2	2.771 - 8	1.248 - 4	1.248 - 4	8.851 - 10	1.379 - 1	
1.500 - 4	1.691 - 5	3.839 - 3	1.405 - 6	5.500 - 3	5.525 - 2	1.400 - 6	1.494 - 4	1.494 - 4	1.270 - 9	8.836 - 0	
1.750 - 4	2.742 - 5	2.388 - 3	9.182 - 5	5.497 - 3	8.821 - 2	2.107 - 5	1.740 - 4	1.740 - 4	1.721 - 9	8.344 - 0	
2.000 - 4	4.183 - 5	1.580 - 3	6.075 - 5	5.494 - 3	1.145 - 1	5.980 - 5	1.982 - 4	1.982 - 4	2.234 - 9	4.780 - 0	
2.222 - 4	4.808 - 5	1.350 - 3	5.285 - 5	5.489 - 3	1.402 - 1	5.170 - 5	2.199 - 4	2.199 - 4	2.749 - 9	4.572 - 0	
2.236 - 4	2.426 - 5	2.678 - 3	1.035 - 6	5.489 - 3	1.419 - 1	1.030 - 6	2.224 - 4	2.224 - 4	2.813 - 9	9.167 - 0	
2.500 - 4	2.803 - 5	2.495 - 3	9.852 - 5	5.484 - 3	1.758 - 1	9.997 - 5	2.488 - 4	2.488 - 4	3.514 - 9	9.990 - 0	
3.000 - 4	2.920 - 5	2.624 - 3	8.605 - 5	5.476 - 3	2.455 - 1	9.950 - 5	2.981 - 4	2.981 - 4	5.054 - 9	1.021 - 1	
3.089 - 4	2.581 - 5	2.193 - 3	8.405 - 5	5.474 - 3	2.634 - 1	9.430 - 5	3.089 - 4	3.089 - 4	5.357 - 9	1.038 - 1	
3.103 - 4	2.293 - 5	2.831 - 3	1.095 - 6	5.473 - 3	2.856 - 1	1.090 - 6	3.087 - 4	3.087 - 4	5.422 - 9	1.348 - 1	
3.500 - 4	2.516 - 5	2.581 - 3	9.987 - 5	5.463 - 3	3.318 - 1	9.932 - 5	3.481 - 4	3.481 - 4	6.891 - 9	1.384 - 1	
3.638 - 4	2.592 - 5	2.506 - 3	9.895 - 5	5.460 - 3	3.564 - 1	9.640 - 5	3.618 - 4	3.618 - 4	7.443 - 9	1.396 - 1	
3.852 - 4	2.358 - 5	2.754 - 3	1.085 - 6	5.460 - 3	3.590 - 1	1.060 - 6	3.633 - 4	3.633 - 4	7.508 - 9	1.541 - 1	
4.000 - 4	1.813 - 5	3.581 - 3	1.385 - 6	5.452 - 3	4.248 - 1	1.380 - 6	3.984 - 4	3.984 - 4	9.028 - 9	2.197 - 1	
4.500 - 4	9.951 - 6	6.592 - 3	2.950 - 6	5.437 - 3	5.230 - 1	2.545 - 6	4.490 - 4	4.490 - 4	1.147 - 8	4.558 - 1	
5.000 - 4	5.703 - 6	1.139 - 4	4.405 - 6	5.423 - 3	6.299 - 1	4.400 - 6	4.994 - 4	4.994 - 4	1.418 - 8	8.757 - 1	
5.000 - 4	5.887 - 6	1.103 - 4	4.268 - 6	5.405 - 3	7.388 - 1	4.262 - 6	5.493 - 4	5.493 - 4	1.716 - 8	9.330 - 1	
6.000 - 4	6.081 - 6	1.071 - 4	4.145 - 6	5.399 - 3	8.395 - 1	4.140 - 6	5.592 - 4	5.592 - 4	2.042 - 8	9.887 - 1	
6.500 - 4	6.652 - 6	9.762 - 3	3.777 - 6	5.365 - 3	9.684 - 1	3.772 - 6	6.491 - 4	6.491 - 4	2.396 - 8	9.758 - 1	
7.000 - 4	7.250 - 6	8.957 - 3	3.485 - 6	5.345 - 3	1.083 - 0	3.460 - 6	6.989 - 4	6.989 - 4	2.778 - 8	9.640 - 1	
7.216 - 4	7.955 - 6	8.595 - 3	3.325 - 6	5.337 - 3	1.135 - 0	3.320 - 6	7.204 - 4	7.204 - 4	2.952 - 8	9.538 - 1	
7.230 - 4	7.250 - 6	8.957 - 3	3.485 - 6	5.337 - 3	1.138 - 0	3.460 - 6	7.219 - 4	7.219 - 4	2.964 - 8	9.957 - 1	
8.000 - 4	7.229 - 6	8.982 - 3	3.475 - 6	5.309 - 3	1.330 - 0	3.470 - 6	7.988 - 4	7.988 - 4	3.629 - 8	1.105 - 2	
9.000 - 4	6.618 - 6	7.535 - 3	2.915 - 6	5.280 - 3	1.583 - 0	2.910 - 6	8.984 - 4	8.984 - 4	4.590 - 8	1.541 - 2	
1.000 - 3	9.423 - 6	8.891 - 3	2.688 - 6	5.217 - 3	1.807 - 0	2.681 - 6	9.980 - 4	9.980 - 4	5.685 - 8	1.059 - 2	
1.250 - 3	1.387 - 5	4.680 - 3	1.811 - 6	5.078 - 3	2.374 - 0	1.806 - 6	1.248 - 4	1.248 - 4	8.836 - 8	8.984 - 1	
1.395 - 3	1.657 - 5	3.918 - 3	1.518 - 6	5.018 - 3	2.891 - 0	1.511 - 6	1.380 - 4	1.380 - 4	1.084 - 7	8.330 - 1	
1.396 - 3	1.537 - 5	4.226 - 3	1.635 - 6	5.015 - 3	2.893 - 0	1.630 - 6	1.382 - 4	1.382 - 4	1.086 - 7	8.992 - 1	
1.500 - 3	1.841 - 5	3.528 - 3	1.385 - 6	4.967 - 3	2.986 - 0	1.380 - 6	1.495 - 4	1.495 - 4	1.270 - 7	8.120 - 1	
1.750 - 3	2.606 - 5	2.452 - 3	9.641 - 5	4.828 - 3	3.533 - 0	9.593 - 5	1.741 - 4	1.741 - 4	1.724 - 7	6.885 - 1	
2.000 - 3	3.520 - 5	1.845 - 3	7.137 - 5	4.711 - 3	4.110 - 0	7.090 - 5	1.987 - 4	1.987 - 4	2.245 - 7	5.644 - 1	
2.500 - 3	5.836 - 5	1.113 - 3	4.305 - 5	4.429 - 3	5.212 - 0	4.260 - 5	2.474 - 4	2.474 - 4	3.481 - 7	4.239 - 1	
3.000 - 3	8.809 - 5	7.372 - 2	2.652 - 5	4.211 - 3	6.329 - 0	2.810 - 5	2.956 - 4	2.956 - 4	4.988 - 7	3.355 - 1	
3.442 - 3	1.202 - 4	5.402 - 2	2.090 - 5	3.989 - 3	7.242 - 0	2.090 - 5	3.376 - 4	3.376 - 3	6.482 - 7	2.809 - 1	
3.443 - 3	3.889 - 5	1.670 - 3	6.480 - 5	3.988 - 3	7.244 - 0	6.420 - 5	3.422 - 4	3.422 - 3	5.865 - 7	8.257 - 1	
3.500 - 3	4.024 - 5	1.614 - 3	6.244 - 5	3.983 - 3	7.362 - 0	6.204 - 5	3.478 - 4	3.478 - 3	6.071 - 7	8.120 - 1	
3.609 - 3	4.288 - 5	1.514 - 3	5.899 - 5	3.915 - 3	7.587 - 0	5.820 - 5	3.585 - 4	3.585 - 3	6.478 - 7	7.670 - 1	
3.610 - 3	3.784 - 5	1.718 - 3	6.639 - 5	3.914 - 3	7.589 - 0	6.600 - 5	3.589 - 4	3.589 - 3	6.490 - 7	8.928 - 1	
4.000 - 3	5.151 - 5	1.261 - 3	4.878 - 5	3.799 - 3	8.392 - 0	4.840 - 5	3.969 - 4	3.969 - 3	8.035 - 7	7.298 - 1	
4.174 - 3	5.820 - 5	1.118 - 3	4.317 - 5	3.681 - 3	8.719 - 0	4.260 - 5	4.138 - 4	4.138 - 3	8.776 - 7	6.750 - 1	
4.175 - 3	5.058 - 5	1.284 - 3	4.987 - 5	3.681 - 3	8.721 - 0	4.930 - 5	4.144 - 4	4.144 - 3	8.800 - 7	7.777 - 1	
4.500 - 3	6.024 - 5	1.078 - 3	4.171 - 5	3.948 - 3	9.328 - 0	4.135 - 5	4.482 - 4	4.482 - 3	1.028 - 6	7.039 - 1	
5.000 - 3	7.997 - 5	8.436 - 2	3.284 - 5	3.389 - 3	1.025 - 1	3.230 - 5	4.948 - 4	4.948 - 3	1.277 - 6	6.156 - 1	
5.003 - 3	7.698 - 5	8.436 - 2	3.284 - 5	3.388 - 3	1.026 - 1	3.230 - 5	4.951 - 4	4.951 - 3	1.278 - 6	6.180 - 1	
5.004 - 3	6.486 - 5	1.001 - 3	3.874 - 5	3.388 - 3	1.026 - 1	3.840 - 5	4.960 - 4	4.960 - 3	1.283 - 6	7.325 - 1	
5.384 - 3	7.645 - 5	8.277 - 2	3.208 - 5	3.237 - 3	1.087 - 1	3.170 - 5	5.310 - 4	5.310 - 3	1.479 - 6	6.501 - 1	
5.385 - 3	7.313 - 5	9.299 - 2	3.582 - 5	3.236 - 3	1.087 - 1	3.550 - 5	5.316 - 4	5.316 - 3	1.483 - 6	7.282 - 1	
5.500 - 3	7.493 - 5	8.867 - 2	3.353 - 5	3.191 - 3	1.109 - 1	3.321 - 5	5.447 - 4	5.447 - 3	1.560 - 6	6.991 - 1	
6.000 - 3	9.443 - 5	6.878 - 2	2.860 - 5	3.038 - 3	1.182 - 1	2.630 - 5	5.931 - 4	5.931 - 3	1.862 - 6	6.099 - 1	
6.500 - 3	1.187 - 4	5.584 - 2	2.153 - 5	2.874 - 3	1.267 - 1	2.124 - 5	6.413 - 4	6.413 - 3	2.188 - 6	5.316 - 1	
7.000 - 3	1.419 - 4	4.575 - 2	1.770 - 5	2.732 - 3	1.340 - 1	1.743 - 5	6.891 - 4	6.891 - 3	2.539 - 6	4.709 - 1	
8.000 - 3	2.018 - 4	3.218 - 2	1.245 - 5	2.494 - 3	1.484 - 1	1.220 - 5	7.639 - 4	7.632 - 3	3.311 - 6	3.788 - 1	
1.000 - 2	3.384 - 4	1.812 - 2	7.010 - 4	2.079 - 3	1.743 - 1	6.800 - 4	9.701 - 4	9.496 - 4	5.128 - 5	2.649 - 1	
1.250 - 2	6.478 - 4	1.002 - 2	3.878 - 4	1.873 - 3	2.012 - 1	3.709 - 4	1.195 - 2	1.175 - 2	7.850 - 5	1.814 - 1	
1.500 - 2	1.046 - 3	6.209 - 1	2.482 - 4	1.400 - 3	2.261 - 1	2.260 - 4	1.411 - 2	1.391 - 2	1.100 - 5	1.330 - 1	
1.673 - 2	1.391 - 3	4.867 - 1	1.808 - 4	1.232 - 3	2.393 - 1	1.880 - 4	1.557 - 2	1.537 - 2	1.343 - 5	1.105 - 1	
1.673 - 2	6.017 - 4	1.078 - 2	4.178 - 4	1.232 - 3	2.393 - 1	4.090 - 4	1.623 - 2	1.603 - 2	1.411 - 5	1.228 - 1	
1.758 - 2	6.887 - 4	9.710 - 1	3.757 - 4	1.189 - 3	2.450 - 1	3.837 - 4	1.694 - 2	1.112 - 2	7.026 - 5	1.883 - 1	
2.000 - 2	9.180 - 4	7.088 - 1	2.743 - 4	9.998 - 2	2.825 - 1	2.840 - 4	1.985 - 2	1.348 - 2	1.030 - 5	1.489 - 1	
2.031 - 2	9.514 - 4	6.825 - 1	2.841 - 4	9.792 - 2	2.842 - 1	2.840 - 4	1.794 - 2	1.375 - 2	1.075 - 5	1.445 - 1	
2.831 - 2	6.998 - 4	9.332 - 1	3.811 - 4	9.781 - 2	2.843 - 1	3.510 - 4	1.975 - 2	1.360 - 2	1.098 - 5	1.988 - 1	
2.118 - 2	7.717 - 4	8.415 - 1	3.238 - 4	9.304 - 2	2.885 - 1	3.180 - 4	2.048 - 2	1.484 - 2	1.219 - 5	1.888 - 1	

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12/07/78

ENDL Evaluated Photon Data

91-Pa

ATOMIC WEIGHT 233										DENSITY 15.4 GRAMS/CC		
ENERGY		TOTAL HP		CROSS SECTION (BARN)					K.E. + FLO	MEV/COLLISION		MEV/CM
MEV	CM	CM/CH/CM	TOTAL	COHERENT	INCOHER	PHOTOE	PAIR PROD			K.E.	BREMSSTR	K.E.
2.111-2	6.034-4	9.738-1	3.778-4	9.304-2	2.085-1	2.080-4			2.057-2	1.471-2	1.229-5	2.210-1
2.500-2	1.029-3	6.314-1	2.443-4	7.419-2	2.080-1	2.396-4			2.421-2	1.639-2	1.900-5	1.708-1
3.000-2	1.041-3	3.938-1	1.531-4	5.814-2	3.110-1	1.470-4			2.680-2	2.303-2	3.012-5	1.403-1
3.500-2	2.437-3	2.085-1	1.031-4	4.874-2	3.288-1	9.810-3			3.331-2	2.758-2	4.321-5	1.132-1
4.000-2	3.427-3	1.893-1	7.331-3	3.889-2	3.410-1	6.910-3			3.772-2	3.604-2	5.030-5	9.331-0
4.500-2	4.830-3	1.403-1	5.426-3	3.238-2	3.504-1	5.088-3			4.205-2	3.843-2	7.532-5	7.068-0
5.000-2	6.051-3	1.073-1	4.152-3	2.781-2	3.591-1	3.840-3			4.629-2	4.072-2	9.407-5	6.729-0
5.500-2	7.744-3	8.365-0	3.244-3	2.371-2	3.645-1	2.971-3			5.042-2	4.491-2	1.144-4	5.739-0
6.000-2	9.688-3	6.703-0	2.593-3	2.064-2	3.895-1	2.350-3			5.446-2	4.901-2	1.362-4	5.059-0
6.500-2	1.188-2	5.408-0	2.116-3	1.807-2	3.717-1	1.898-3			5.843-2	5.304-2	1.595-4	4.466-0
7.000-2	1.432-2	4.534-0	1.754-3	1.597-2	3.737-1	1.557-3			6.231-2	5.697-2	1.840-4	3.977-0
8.000-2	2.001-2	3.245-0	1.256-3	1.279-2	3.774-1	1.090-3			6.975-2	6.453-2	2.360-4	3.225-0
1.000-1	3.527-2	1.841-0	7.124-2	8.768-1	3.789-1	5.870-2			8.319-2	7.823-2	3.466-4	2.216-0
1.126-1	4.792-2	1.355-0	5.243-2	7.107-1	3.724-1	4.160-2			9.063-2	8.565-2	4.172-4	1.792-0
1.126-1	1.264-2	5.139-0	1.988-3	7.106-1	3.724-1	1.880-3			1.068-1	3.132-2	5.570-5	2.479-0
1.250-1	1.638-2	3.969-0	1.534-3	5.907-1	3.685-1	1.438-3			1.177-1	4.285-2	1.042-4	2.616-0
1.500-1	2.586-2	2.530-0	9.750-2	4.278-1	3.618-1	9.000-2			1.390-1	6.357-2	2.438-4	2.595-0
1.750-1	3.731-2	1.740-0	6.733-2	3.237-1	3.511-1	6.058-2			1.534-1	8.759-2	4.337-4	2.346-0
2.000-1	5.131-2	1.265-0	4.808-2	2.542-1	3.421-1	4.300-2			1.768-1	1.087-1	6.678-4	2.116-0
2.500-1	8.685-2	7.494-0	2.899-2	1.687-1	3.221-1	2.409-2			2.147-1	1.484-1	1.242-3	1.713-0
3.000-1	1.303-1	4.982-1	1.927-2	1.207-1	3.057-1	1.500-2			2.468-1	1.846-1	1.919-3	1.116-0
3.500-1	1.777-1	3.854-1	1.414-2	9.046-0	2.915-1	1.032-2			2.770-1	2.187-1	2.687-3	1.231-0
4.000-1	2.294-1	2.631-1	1.095-2	7.045-0	2.790-1	7.460-1			3.047-1	2.504-1	3.515-3	1.092-0
4.500-1	2.829-1	2.295-1	8.880-0	5.633-0	2.671-1	5.846-1			3.312-1	2.804-1	4.403-3	9.912-1
5.000-1	3.382-1	1.920-1	7.430-1	4.611-0	2.565-1	4.400-1			3.563-1	3.090-1	5.336-3	9.137-1
5.500-1	3.924-1	1.655-1	6.402-1	3.842-0	2.475-1	3.545-1			3.812-1	3.370-1	6.339-3	8.588-1
6.000-1	4.487-1	1.454-1	5.624-1	3.252-0	2.384-1	2.910-1			4.056-1	3.643-1	7.334-3	8.154-1
6.500-1	4.996-1	1.300-1	5.029-1	2.786-0	2.308-1	2.442-1			4.302-1	3.914-1	8.525-3	7.835-1
7.000-1	5.517-1	1.177-1	4.554-1	2.415-0	2.236-1	2.076-1			4.547-1	4.183-1	9.718-3	7.581-1
8.000-1	6.529-1	9.946-2	3.848-1	1.888-0	2.112-1	1.550-1			5.036-1	4.715-1	1.231-2	7.221-1
1.000-0	8.344-1	7.782-2	3.011-1	1.208-0	1.905-1	9.830-1			6.079-1	5.818-1	1.884-2	6.973-1
1.022-0	8.527-1	7.615-2	2.946-1	1.158-0	1.885-1	9.453-1	1.100-6		6.200-1	5.944-1	1.944-2	6.971-1
1.250-0	1.031-0	6.298-2	2.437-1	7.806-1	1.708-1	8.502-1	1.022-3		7.485-1	7.272-1	2.888-2	7.053-1
1.500-0	1.188-0	5.580-2	2.151-1	5.453-1	1.555-1	4.584-1	1.017-3		8.817-1	8.544-1	4.078-2	7.401-1
1.750-0	1.273-0	5.100-2	1.973-1	4.022-1	1.431-1	3.557-1	1.044-3		1.025-1	1.010-0	5.492-2	7.337-1
2.000-0	1.347-0	4.619-2	1.864-1	3.089-1	1.329-1	2.840-1	2.207-3		1.180-0	1.160-0	7.271-2	6.885-1
2.044-0	1.359-0	4.779-2	1.849-1	2.957-1	1.313-1	2.745-1	2.323-3		1.204-0	1.197-0	7.628-2	6.807-1
2.500-0	1.435-0	4.524-2	1.750-1	1.983-1	1.168-1	2.615-1	3.846-3		1.524-0	1.515-0	1.202-1	1.055-0
3.000-0	1.468-0	4.424-2	1.712-1	1.390-1	1.047-1	1.540-1	4.969-3		1.908-0	1.899-0	1.850-1	1.294-0
3.500-0	1.485-0	4.372-2	1.691-1	1.015-1	9.515-1	1.239-1	6.057-3		2.315-0	2.309-0	2.680-1	1.554-0
4.000-0	1.483-0	4.379-2	1.694-1	7.782-2	8.740-0	1.030-1	7.093-3		2.744-0	2.740-0	3.893-1	1.847-0
4.500-0	1.466-0	4.428-2	1.713-1	6.152-2	8.098-0	8.777-1	8.098-3		3.191-0	3.187-0	4.889-1	2.173-0
5.000-0	1.449-0	4.481-2	1.734-1	4.988-2	7.551-0	7.620-1	8.973-3		3.648-0	3.644-0	6.257-1	2.515-0
5.500-0	1.438-0	4.515-2	1.747-1	4.122-2	7.083-0	6.718-1	9.673-3		4.112-0	4.109-0	7.783-1	2.857-0
6.000-0	1.423-0	4.562-2	1.765-1	3.465-2	6.578-0	5.990-1	1.034-1		4.583-0	4.580-0	9.465-1	3.218-0
6.500-0	1.406-0	4.618-2	1.787-1	2.953-2	6.318-0	5.386-1	1.098-1		5.059-0	5.057-0	1.130-0	3.596-0
7.000-0	1.387-0	4.680-2	1.811-1	2.547-2	6.000-0	4.986-1	1.153-1		5.541-0	5.538-0	1.327-0	3.992-0
8.000-0	1.348-0	4.819-2	1.864-1	1.951-2	5.462-0	4.110-1	1.275-1		6.513-0	6.512-0	1.780-0	4.831-0
1.000-1	1.270-0	5.114-2	1.979-1	1.249-2	4.853-0	3.100-1	1.481-1		8.485-0	8.484-0	2.781-0	6.181-0
1.250-1	1.186-0	5.774-2	2.118-1	7.993-3	3.948-0	2.358-1	1.899-1		1.097-1	1.097-1	4.216-0	9.251-0
1.500-1	1.116-0	5.818-2	2.251-1	5.552-3	3.444-0	1.900-1	1.887-1		1.347-1	1.347-1	5.848-0	1.207-1
1.750-1	1.098-0	6.137-2	2.374-1	4.079-3	3.063-0	1.593-1	2.052-1		1.598-1	1.598-1	7.608-0	1.510-1
2.000-1	1.010-0	6.432-2	2.488-1	3.123-3	2.785-0	1.370-1	2.198-1		1.849-1	1.849-1	9.475-0	1.831-1
2.500-1	9.327-1	6.562-2	2.894-1	1.998-3	2.324-0	1.070-1	2.450-1		2.350-1	2.350-1	1.345-1	2.520-1
3.000-1	8.778-1	7.397-2	2.862-1	1.388-3	2.013-0	8.750-2	2.652-1		2.852-1	2.852-1	1.784-1	3.249-1
3.500-1	8.378-1	7.750-2	2.999-1	1.020-3	1.780-0	7.338-2	2.813-1		3.353-1	3.353-1	2.200-1	4.002-1
4.000-1	8.080-1	8.057-2	3.117-1	7.807-4	1.600-0	6.390-2	2.951-1		3.894-1	3.894-1	2.648-1	4.788-1
4.500-1	7.790-1	8.335-2	3.255-1	6.108-4	1.494-0	5.603-2	3.074-1		4.395-1	4.395-1	3.102-1	5.590-1
5.000-1	7.582-1	8.581-2	3.312-1	4.988-4	1.335-0	4.990-2	3.174-1		4.895-1	4.895-1	3.565-1	6.401-1
5.500-1	7.439-1	8.729-2	3.377-1	4.123-4	1.235-0	4.503-2	3.249-1		5.396-1	5.396-1	4.032-1	7.200-1
6.000-1	7.302-1	8.888-2	3.439-1	3.470-4	1.150-0	4.100-2	3.320-1		5.896-1	5.896-1	4.504-1	8.018-1
6.500-1	7.184-1	9.038-2	3.497-1	2.637-4	1.077-0	3.725-2	3.388-1		6.397-1	6.397-1	4.980-1	8.848-1
7.000-1	7.071-1	9.183-2	3.553-1	2.349-4	1.013-0	3.482-2	3.448-1		6.897-1	6.897-1	5.458-1	9.698-1

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 233			DENSITY 15.4 GRAMS/CC									
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARNs)						MEV/COLLISION			MEV/CM
	CM	CM*CM/CM	TOTAL	COHERENT	INCOHER	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	K.E.	
0.000+ 1	6.889- 1	9.453- 2	3.657+ 1	1.952- 4	9.073- 1	2.990- 2	3.584+ 1	7.858+ 1	7.858+ 1	6.421+ 1	1.144+ 2	
1.000+ 2	6.538- 1	9.932- 2	3.843+ 1	1.249- 4	7.531- 1	2.320- 2	3.765+ 1	9.859+ 1	9.859+ 1	8.367+ 1	1.508+ 2	

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Form Factors

91-Pa

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.250-1	0.007-1	0.239-2	1.000-0	3.757-1	4.000-1	1.000-1	2.330-2	9.000-1
0.000-3	0.999-1	1.730-4	1.500-1	0.017-1	1.000-1	1.250-0	3.079-1	5.447-1	1.500-1	1.500-2	9.000-1
1.000-2	0.999-1	1.473-3	1.750-1	0.030-1	1.183-1	1.500-0	2.500-1	5.937-1	2.000-1	1.103-2	9.934-1
1.500-2	0.977-1	3.294-3	2.000-1	0.052-1	1.357-1	2.000-0	1.000-1	6.744-1	5.000-1	2.000-3	1.000-0
2.000-2	0.900-1	9.045-3	2.500-1	7.030-1	1.000-1	2.500-0	1.454-1	7.307-1	0.000-1	0.933-4	1.000-0
2.500-2	0.920-1	0.954-3	3.000-1	7.390-1	1.999-1	3.000-0	1.230-1	7.000-1	1.000-2	5.101-4	1.000-0
3.000-2	0.913-1	1.100-2	4.000-1	0.010-1	2.534-1	3.500-0	1.010-1	0.007-1	1.000-3	1.370-5	1.000-0
4.000-2	0.000-1	1.535-2	5.000-1	0.000-1	2.900-1	4.000-0	0.750-2	0.323-1	1.000-0	4.300-14	1.000-0
5.000-2	0.777-1	2.731-2	6.000-1	5.300-1	3.400-1	5.000-0	5.907-2	0.007-1	1.000-0	1.400-21	1.000-0
7.000-2	0.000-1	4.201-2	7.000-1	0.000-1	3.000-1	6.000-0	4.754-2	0.170-1			
9.000-2	0.411-1	5.745-2	8.000-1	4.450-1	4.179-1	7.000-0	4.033-2	0.305-1			
1.000-1	0.312-1	6.454-2	9.000-1	4.000-1	4.521-1	8.000-0	3.400-2	0.510-1

12/C7/78

ENDL Evaluated Photon Cross Sections

92-U

12/07/78

Energy Deposition

92-U

92-U

ATOMIC WEIGHT 238.05							DENSITY 19 GRAMS/CC					
ENERGY		TOTAL MPF		CROSS SECTION (BARNS)				NEUT/COLLISION			NEUT/CM	
MEV	CH	CH+CH/ON	TOTAL	COHERENT	INCOHERENT	PHOTOCL	PAIR PROD	K.E.+FLOR	K.E.	BREMSSTR	K.E.	
1.000	4.043	6.130E+4	5.148E+6	5.827E+3	2.088E+2	5.140E+6	9.989E+5	9.989E+5	5.737E+10	8.471E+1		
1.250	7.286	7.282E+3	2.893E+6	5.824E+3	4.480E+2	2.893E+6	1.248E+6	1.248E+6	8.249E+10	1.712E+1		
1.500	4.178	6.467E+3	1.786E+6	5.822E+3	6.412E+2	1.786E+6	1.495E+6	1.495E+6	1.286E+9	1.289E+1		
1.750	2.028	5.259E+3	1.040E+6	5.818E+3	8.889E+2	1.020E+6	1.740E+6	1.740E+6	1.742E+9	8.581E+0		
2.000	3.243	1.623E+3	8.161E+5	5.815E+3	1.126E+3	6.350E+5	1.988E+6	1.988E+6	2.280E+9	6.114E+0		
2.198	3.898	1.423E+3	5.826E+5	5.812E+3	1.303E+3	5.570E+5	2.138E+6	2.138E+6	2.625E+9	5.778E+0		
2.172	2.029	2.222E+3	1.086E+6	5.812E+3	1.319E+3	1.050E+6	2.180E+6	2.180E+6	2.863E+9	1.085E+0		
2.500	2.183	2.183E+3	9.333E+5	5.809E+3	1.378E+3	9.333E+5	2.281E+6	2.281E+6	3.252E+9	1.139E+0		
3.000	2.461	2.183E+3	8.888E+5	5.598E+3	2.453E+3	8.810E+5	2.981E+6	2.981E+6	5.108E+9	2.543E+0		
3.230	2.460	2.139E+3	9.958E+5	5.592E+3	2.813E+3	9.800E+5	3.209E+6	3.209E+6	5.382E+9	3.300E+0		
3.244	1.816	2.746E+3	1.088E+6	5.592E+3	2.838E+3	1.080E+6	3.227E+6	3.227E+6	5.389E+9	1.684E+0		
3.500	2.015	2.813E+3	1.033E+6	5.585E+3	3.205E+3	1.027E+6	3.481E+6	3.481E+6	6.368E+9	1.720E+0		
3.847	2.144	2.425E+3	9.708E+5	5.577E+3	3.889E+3	1.050E+6	3.825E+6	3.825E+6	8.412E+9	1.784E+0		
3.881	1.952	2.888E+3	1.088E+6	5.577E+3	3.393E+3	1.080E+6	3.851E+6	3.851E+6	8.570E+9	1.577E+0		
4.000	1.952	2.888E+3	1.088E+6	5.574E+3	4.181E+3	1.080E+6	3.979E+6	3.979E+6	9.104E+9	2.032E+0		
4.500	9.513E+3	5.532E+3	2.187E+6	5.559E+3	5.151E+3	2.181E+6	4.489E+6	4.489E+6	1.158E+10	4.718E+0		
5.000	4.984E+3	1.054E+4	4.186E+6	5.545E+3	6.207E+3	4.180E+6	4.993E+6	4.993E+6	1.439E+10	9.998E+0		
5.500	4.712E+3	1.117E+4	4.416E+6	5.527E+3	7.295E+3	4.410E+6	5.493E+6	5.493E+6	1.735E+10	1.186E+1		
6.000	4.947E+3	1.084E+4	4.208E+6	5.511E+3	8.431E+3	4.200E+6	5.992E+6	5.992E+6	2.065E+10	1.211E+1		
6.500	5.380E+3	9.785E+3	3.880E+6	5.488E+3	9.941E+3	3.859E+6	6.461E+6	6.461E+6	2.422E+10	1.204E+1		
7.000	5.835E+3	8.020E+3	3.785E+6	5.468E+3	1.070E+4	3.580E+6	6.889E+6	6.889E+6	2.809E+10	1.198E+1		
7.941	6.480E+3	6.108E+3	3.605E+6	5.447E+3	1.620E+4	3.200E+6	7.528E+6	7.528E+6	3.259E+10	1.180E+1		
7.925	6.219E+3	6.463E+3	3.345E+6	5.444E+3	1.840E+4	3.340E+6	7.343E+6	7.343E+6	3.271E+10	1.213E+1		
8.000	5.883E+3	7.828E+3	3.363E+6	5.431E+3	1.915E+4	3.360E+6	7.379E+6	7.379E+6	3.379E+10	1.375E+1		
8.900	6.900E+3	7.628E+3	3.015E+6	5.388E+3	1.940E+4	3.010E+6	8.084E+6	8.084E+6	4.894E+10	1.302E+1		
1.000	3.718E+3	7.347E+3	2.804E+6	5.379E+3	1.738E+4	2.800E+6	9.882E+6	9.882E+6	5.729E+10	1.393E+1		
1.029	3.887E+3	6.538E+3	2.348E+6	5.321E+3	1.858E+4	2.341E+6	1.027E+7	1.027E+7	6.060E+10	1.158E+1		
1.038	3.458E+3	6.874E+3	2.840E+6	5.318E+3	1.878E+4	2.835E+6	1.038E+7	1.038E+7	6.188E+10	1.225E+1		
1.250	3.194E+3	6.405E+3	1.743E+6	5.198E+3	2.358E+4	1.738E+6	1.248E+7	1.248E+7	9.630E+10	1.044E+1		
1.284	3.219E+3	6.318E+3	1.707E+6	5.188E+3	2.381E+4	1.702E+6	1.280E+7	1.280E+7	9.130E+10	1.034E+1		
1.274	3.213E+3	6.328E+3	1.715E+6	5.187E+3	2.414E+4	1.710E+6	1.270E+7	1.270E+7	8.276E+10	1.047E+1		
1.441	3.149E+3	3.368E+3	1.343E+6	5.112E+3	2.807E+4	1.338E+6	1.435E+7	1.435E+7	1.183E+7	9.861E+0		
1.441	3.515E+3	3.474E+3	1.373E+6	5.112E+3	2.808E+4	1.388E+6	1.436E+7	1.436E+7	1.185E+7	9.475E+0		
1.500	3.850E+3	3.190E+3	1.881E+6	5.087E+3	2.852E+4	1.838E+6	1.494E+7	1.494E+7	1.283E+7	9.058E+0		
1.750	3.285E+3	2.304E+3	9.108E+5	4.946E+3	3.520E+4	9.058E+5	1.740E+7	1.740E+7	7.748E+7	7.618E+0		
2.000	3.088E+3	1.738E+3	8.870E+5	4.887E+3	4.089E+4	8.882E+5	1.888E+7	1.888E+7	2.898E+7	8.598E+0		
2.500	3.894E+3	1.088E+3	4.295E+5	4.738E+3	5.528E+4	4.248E+5	2.474E+7	2.474E+7	3.518E+7	5.108E+0		
3.000	7.102E+3	7.410E+2	2.889E+5	4.317E+3	8.328E+4	2.888E+5	2.898E+7	2.898E+7	5.023E+7	4.162E+0		
3.500	9.808E+3	5.387E+2	2.128E+5	4.082E+3	7.385E+4	2.081E+5	3.433E+7	3.433E+7	8.775E+7	3.501E+0		
3.951	1.011E+4	5.807E+2	2.058E+5	4.038E+3	7.471E+4	2.018E+5	3.481E+7	3.481E+7	8.867E+7	3.444E+0		
3.958	1.433E+4	1.688E+2	1.308E+5	4.038E+3	7.713E+4	2.078E+5	3.515E+7	3.515E+7	9.258E+7	6.888E+0		
3.727	5.480E+3	1.038E+3	2.311E+5	3.988E+3	7.825E+4	2.311E+5	3.689E+7	3.689E+7	9.353E+7	6.253E+0		
4.788	4.084E+3	1.508E+3	5.170E+5	3.981E+3	7.857E+4	5.130E+5	3.889E+7	3.878E+7	8.858E+7	6.882E+0		
4.918	4.018E+3	1.083E+3	4.320E+5	3.952E+3	8.406E+4	4.281E+5	3.984E+7	3.744E+7	8.058E+7	7.774E+0		
4.303	3.861E+3	8.078E+2	3.388E+5	3.718E+3	8.973E+4	3.348E+5	4.288E+7	4.038E+7	9.378E+7	8.861E+0		
4.309	3.313E+3	1.270E+3	4.883E+5	3.718E+3	8.974E+4	4.788E+5	4.271E+7	4.050E+7	9.431E+7	9.390E+0		
4.808	3.832E+3	1.080E+3	4.305E+5	3.635E+3	9.343E+4	4.888E+5	4.482E+7	4.242E+7	1.034E+8	8.778E+0		
5.088	3.321E+3	8.327E+2	3.288E+5	3.421E+3	1.028E+5	3.257E+5	4.947E+7	4.788E+7	1.285E+8	7.480E+0		
5.180	3.817E+3	7.889E+2	3.088E+5	3.381E+3	1.058E+5	2.874E+5	5.122E+7	4.902E+7	1.381E+8	7.887E+0		
5.181	3.885E+3	8.894E+2	3.418E+5	3.381E+3	1.058E+5	3.389E+5	5.130E+7	4.910E+7	1.388E+8	8.888E+0		
5.500	7.888E+3	7.427E+2	2.938E+5	3.287E+3	1.112E+5	2.983E+5	5.439E+7	5.218E+7	1.588E+8	7.385E+0		
5.948	7.245E+3	7.282E+2	2.872E+5	3.280E+3	1.124E+5	2.838E+5	5.485E+7	5.285E+7	1.594E+8	7.288E+0		
5.948	6.718E+3	7.838E+2	2.888E+5	3.288E+3	1.128E+5	3.885E+5	5.481E+7	5.271E+7	1.597E+8	7.884E+0		
6.888	6.193E+3	6.454E+2	2.538E+5	3.187E+3	1.198E+5	2.808E+5	5.888E+7	5.707E+7	1.872E+8	8.885E+0		
6.888	1.884E+4	5.548E+2	2.872E+5	2.891E+3	1.271E+5	2.842E+5	6.487E+7	6.188E+7	2.801E+8	8.188E+0		
7.888	1.212E+4	4.342E+2	1.718E+5	2.788E+3	1.348E+5	1.888E+5	8.885E+7	8.887E+7	3.525E+8	5.948E+0		
8.888	1.784E+4	3.888E+2	1.884E+5	2.588E+3	1.481E+5	1.188E+5	9.788E+7	9.785E+7	3.373E+8	4.478E+0		
1.088	2.887E+4	2.887E+2	8.888E+5	2.187E+3	1.788E+5	8.888E+5	1.888E+8	1.888E+8	3.888E+8	3.178E+1		
1.088	2.888E+4	1.888E+2	3.888E+5	1.713E+3	2.888E+5	1.188E+5	1.188E+8	1.188E+8	2.114E+8	1.888E+1		
1.712	2.198E+4	4.777E+2	1.888E+5	1.288E+3	2.444E+5	1.888E+5	1.888E+8	1.888E+8	1.428E+8	1.778E+1		
1.712	2.492E+4	1.888E+2	3.888E+5	1.888E+3	2.444E+5	3.888E+5	1.888E+8	1.888E+8	2.483E+8	2.883E+1		
1.728	3.492E+4	9.777E+1	3.788E+5	1.188E+3	2.444E+5	3.888E+5	1.888E+8	1.888E+8	2.888E+8	1.887E+1		

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 238.03										DENSITY 19 GRAMS/CC			
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARN)						REV/COLLISION		REV/CM		
	CH	CH+CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. *FLOR	K.E. *BREMSSTR		K.E.		
2.000	2	7.617	4	8.910	1	2.731	4	1.026	3	2.847	1	2.828	4
2.025	2	8.536	4	9.188	1	2.437	4	9.849	2	2.899	1	2.330	4
2.050	2	9.126	4	9.592	1	3.396	4	9.849	2	2.899	1	2.330	4
2.075	2	9.750	4	10.221	1	3.091	4	9.172	2	2.742	1	2.987	4
2.100	2	10.375	4	10.846	1	3.571	4	9.172	2	2.742	1	3.477	4
2.125	2	10.999	4	11.470	1	2.521	4	7.618	2	2.906	1	2.442	4
2.150	2	11.624	4	12.094	1	1.082	4	4.799	2	3.295	1	1.031	4
2.175	2	12.248	4	12.718	1	7.734	3	3.973	2	3.439	1	7.302	3
2.200	2	12.873	4	13.342	1	3.631	3	3.326	2	3.534	1	5.361	3
2.225	2	13.497	4	13.966	1	4.387	3	2.837	2	3.682	1	4.057	3
2.250	2	14.121	4	14.590	1	5.049	3	2.439	2	3.877	1	3.199	3
2.275	2	14.746	4	15.214	1	5.701	3	2.037	2	4.068	1	1.134	4
2.300	2	15.370	4	15.838	1	6.353	3	1.635	2	4.259	1	1.377	4
2.325	2	15.995	4	16.462	1	7.005	3	1.233	2	4.450	1	1.619	4
2.350	2	16.619	4	17.086	1	7.657	3	0.831	2	4.641	1	1.861	4
2.375	2	17.244	4	17.710	1	8.309	3	0.429	2	4.832	1	2.103	4
2.400	2	17.868	4	18.334	1	8.961	3	0.027	2	5.023	1	2.345	4
2.425	2	18.493	4	18.958	1	9.613	3	0.000	2	5.214	1	2.587	4
2.450	2	19.117	4	19.582	1	10.265	3	0.000	2	5.405	1	2.829	4
2.475	2	19.742	4	20.206	1	10.917	3	0.000	2	5.596	1	3.071	4
2.500	2	20.366	4	20.830	1	11.569	3	0.000	2	5.787	1	3.313	4
2.525	2	20.990	4	21.454	1	12.221	3	0.000	2	5.978	1	3.555	4
2.550	2	21.615	4	22.078	1	12.873	3	0.000	2	6.169	1	3.797	4
2.575	2	22.239	4	22.702	1	13.525	3	0.000	2	6.360	1	4.039	4
2.600	2	22.864	4	23.326	1	14.177	3	0.000	2	6.551	1	4.281	4
2.625	2	23.488	4	23.950	1	14.829	3	0.000	2	6.742	1	4.523	4
2.650	2	24.113	4	24.574	1	15.481	3	0.000	2	6.933	1	4.765	4
2.675	2	24.737	4	25.198	1	16.133	3	0.000	2	7.124	1	5.007	4
2.700	2	25.362	4	25.822	1	16.785	3	0.000	2	7.315	1	5.249	4
2.725	2	25.986	4	26.446	1	17.437	3	0.000	2	7.506	1	5.491	4
2.750	2	26.610	4	27.070	1	18.089	3	0.000	2	7.697	1	5.733	4
2.775	2	27.235	4	27.694	1	18.741	3	0.000	2	7.888	1	5.975	4
2.800	2	27.859	4	28.318	1	19.393	3	0.000	2	8.079	1	6.217	4
2.825	2	28.484	4	28.942	1	20.045	3	0.000	2	8.270	1	6.459	4
2.850	2	29.108	4	29.566	1	20.697	3	0.000	2	8.461	1	6.701	4
2.875	2	29.733	4	30.190	1	21.349	3	0.000	2	8.652	1	6.943	4
2.900	2	30.357	4	30.814	1	22.001	3	0.000	2	8.843	1	7.185	4
2.925	2	30.982	4	31.438	1	22.653	3	0.000	2	9.034	1	7.427	4
2.950	2	31.606	4	32.062	1	23.305	3	0.000	2	9.225	1	7.669	4
2.975	2	32.231	4	32.686	1	23.957	3	0.000	2	9.416	1	7.911	4
3.000	2	32.855	4	33.310	1	24.609	3	0.000	2	9.607	1	8.153	4
3.025	2	33.480	4	33.934	1	25.261	3	0.000	2	9.798	1	8.395	4
3.050	2	34.104	4	34.558	1	25.913	3	0.000	2	9.989	1	8.637	4
3.075	2	34.729	4	35.182	1	26.565	3	0.000	2	10.180	1	8.879	4
3.100	2	35.353	4	35.806	1	27.217	3	0.000	2	10.371	1	9.121	4
3.125	2	35.978	4	36.430	1	27.869	3	0.000	2	10.562	1	9.363	4
3.150	2	36.602	4	37.054	1	28.521	3	0.000	2	10.753	1	9.605	4
3.175	2	37.227	4	37.678	1	29.173	3	0.000	2	10.944	1	9.847	4
3.200	2	37.851	4	38.302	1	29.825	3	0.000	2	11.135	1	10.089	4
3.225	2	38.476	4	38.926	1	30.477	3	0.000	2	11.326	1	10.331	4
3.250	2	39.100	4	39.550	1	31.129	3	0.000	2	11.517	1	10.573	4
3.275	2	39.725	4	40.174	1	31.781	3	0.000	2	11.708	1	10.815	4
3.300	2	40.349	4	40.798	1	32.433	3	0.000	2	11.899	1	11.057	4
3.325	2	40.974	4	41.422	1	33.085	3	0.000	2	12.090	1	11.299	4
3.350	2	41.598	4	42.046	1	33.737	3	0.000	2	12.281	1	11.541	4
3.375	2	42.223	4	42.670	1	34.389	3	0.000	2	12.472	1	11.783	4
3.400	2	42.847	4	43.294	1	35.041	3	0.000	2	12.663	1	12.025	4
3.425	2	43.472	4	43.918	1	35.693	3	0.000	2	12.854	1	12.267	4
3.450	2	44.096	4	44.542	1	36.345	3	0.000	2	13.045	1	12.509	4
3.475	2	44.721	4	45.166	1	36.997	3	0.000	2	13.236	1	12.751	4
3.500	2	45.345	4	45.790	1	37.649	3	0.000	2	13.427	1	12.993	4
3.525	2	45.970	4	46.414	1	38.301	3	0.000	2	13.618	1	13.235	4
3.550	2	46.594	4	47.038	1	38.953	3	0.000	2	13.809	1	13.477	4
3.575	2	47.219	4	47.662	1	39.605	3	0.000	2	13.999	1	13.719	4
3.600	2	47.843	4	48.286	1	40.257	3	0.000	2	14.190	1	13.961	4
3.625	2	48.468	4	48.910	1	40.909	3	0.000	2	14.381	1	14.203	4
3.650	2	49.092	4	49.534	1	41.561	3	0.000	2	14.572	1	14.445	4
3.675	2	49.717	4	50.158	1	42.213	3	0.000	2	14.763	1	14.687	4
3.700	2	50.341	4	50.782	1	42.865	3	0.000	2	14.954	1	14.929	4
3.725	2	50.966	4	51.406	1	43.517	3	0.000	2	15.145	1	15.171	4
3.750	2	51.590	4	52.030	1	44.169	3	0.000	2	15.336	1	15.413	4
3.775	2	52.215	4	52.654	1	44.821	3	0.000	2	15.527	1	15.655	4
3.800	2	52.839	4	53.278	1	45.473	3	0.000	2	15.718	1	15.897	4
3.825	2	53.464	4	53.902	1	46.125	3	0.000	2	15.909	1	16.139	4
3.850	2	54.088	4	54.526	1	46.777	3	0.000	2	16.100	1	16.381	4
3.875	2	54.713	4	55.150	1	47.429	3	0.000	2	16.291	1	16.623	4
3.900	2	55.337	4	55.774	1	48.081	3	0.000	2	16.482	1	16.865	4
3.925	2	55.962	4	56.398	1	48.733	3	0.000	2	16.673	1	17.107	4
3.950	2	56.586	4	57.022	1	49.385	3	0.000	2	16.864	1	17.349	4
3.975	2	57.211	4	57.646	1	50.037	3	0.000	2	17.055	1	17.591	4
4.000	2	57.835	4	58.270	1	50.689	3	0.000	2	17.246	1	17.833	4

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 238.05			DENSITY 19 GRAMS/CC									
ENERGY	TOTAL HFP		CROSS SECTION (BARNs)					HEV/COLLISION			HEV/CM	
MEV	CM	CM ² /GM	TOTAL	COHERENT	INCOHER	PHOTOL	PAIR PROD	K.E. * FLOR	K.E.	BRCHSTB	K.E.	
5.900+ 1	6.047- 1	8.703- 2	3.440+ 1	4.280- 4	1.249+ 0	4.894- 2	3.311+ 1	5.328+ 1	5.328+ 1	4.043+ 1	8.857+ 1	
6.000+ 1	5.939- 1	8.662- 2	3.503+ 1	3.579- 4	1.183+ 0	4.274- 2	3.382+ 1	5.857+ 1	5.857+ 1	4.518+ 1	9.861+ 1	
6.500+ 1	5.840- 1	9.013- 2	3.583+ 1	3.050- 4	1.089+ 0	3.921- 2	3.450+ 1	6.357+ 1	6.357+ 1	4.982+ 1	1.089+ 2	
7.000+ 1	5.748- 1	9.158- 2	3.619+ 1	2.830- 4	1.024+ 0	3.681- 2	3.513+ 1	6.828+ 1	6.828+ 1	5.470+ 1	1.193+ 2	
8.000+ 1	5.594- 1	9.425- 2	3.726+ 1	2.014- 4	9.173- 1	3.138- 2	3.631+ 1	7.828+ 1	7.828+ 1	6.434+ 1	1.407+ 2	
1.000+ 2	5.315- 1	9.903- 2	3.915+ 1	1.289- 4	7.614- 1	2.488- 2	3.836+ 1	9.860+ 1	9.860+ 1	8.381+ 1	1.855+ 2	

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	9.091-1	9.132-2	1.000+0	3.767-1	4.610-1	1.000+1	2.384-2	9.889-1
5.000-3	9.999-1	3.387-4	1.500-1	8.013-1	9.630-2	1.250+0	3.097-1	5.439-1	1.500+1	1.901-2	9.661-1
1.000-2	9.998-1	1.435-3	1.750-1	6.989-1	1.171-1	1.500+0	2.547-1	5.989-1	2.000+1	1.198-2	9.933-1
1.500-2	9.978-1	3.183-3	2.000-1	6.338-1	1.343-1	2.000+0	1.808-1	6.728-1	2.500+1	2.770-3	9.999-1
2.000-2	9.981-1	5.480-3	2.500-1	7.830-1	1.673-1	2.500+0	1.452-1	7.385-1	3.000+1	9.332-4	1.000+0
2.500-2	9.940-1	8.385-3	3.000-1	7.397-1	1.991-1	3.000+0	1.238-1	7.928-1	3.500+1	5.329-4	1.000+0
3.000-2	9.915-1	1.157-2	4.000-1	6.616-1	2.517-1	3.500+0	1.025-1	8.730-1	4.000+1	1.500-4	1.000+0
4.000-2	9.854-1	1.688-2	5.000-1	5.981-1	2.970-1	4.000+0	8.612-2	9.509-1	5.000+1	5.188-5	1.000+0
5.000-2	9.783-1	2.671-2	6.000-1	5.388-1	3.389-1	5.000+0	5.945-2	9.698-1	6.000+1	1.947-5	1.000+0
7.000-2	9.610-1	4.212-2	7.000-1	4.887-1	3.787-1	6.000+0	4.796-2	9.181-1			
9.000-2	9.423-1	5.892-2	8.000-1	4.457-1	4.180-1	7.000+0	4.038-2	9.357-1			
1.000-1	9.325-1	8.380-2	9.000-1	4.088-1	4.502-1	8.000+0	3.480-2	9.502-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

93-Np

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 237										DENSITY 19.5 GRAMS/CC			
ENERGY		TOTAL MP		CROSS SECTION (BARNS)						MEV/COLLISION		MEV/CM	
MEV		CH	CH+CH/GH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD		K.E. FLOP	K.E. BREMSSTR		K.E.
1.000	-	3.886	6	1.391	4	5.478	6	5.750	3	2.847	2	5.470	6
1.038	-	4.185	6	1.231	4	4.848	6	5.749	3	3.064	2	4.840	6
1.052	-	3.386	6	1.513	4	5.928	6	5.749	3	3.148	2	5.950	6
1.250	-	5.631	6	9.107	3	3.584	6	5.747	3	4.419	2	3.578	6
1.500	-	9.630	6	5.325	3	2.688	6	5.745	3	6.328	2	2.680	6
1.750	-	1.782	6	2.811	3	1.145	6	5.741	3	8.958	2	1.140	6
2.000	-	2.988	6	1.787	3	6.787	6	5.738	3	1.111	1	6.740	6
2.312	-	3.738	6	1.371	3	5.937	6	5.732	3	1.488	1	5.940	6
2.328	-	2.007	6	2.558	3	1.008	6	5.732	3	1.485	1	1.000	6
2.500	-	2.080	6	2.488	3	9.798	6	5.729	3	1.708	1	9.738	6
3.000	-	2.202	6	2.329	3	9.187	6	5.721	3	2.422	1	9.110	6
3.373	-	2.263	6	2.288	3	8.917	6	5.712	3	3.010	1	8.880	6
3.387	-	1.777	6	2.888	3	1.138	6	5.711	3	3.034	1	1.130	6
3.500	-	1.917	6	2.823	3	1.111	6	5.708	3	3.224	1	1.105	6
4.000	-	1.987	6	2.581	3	1.018	6	5.698	3	4.131	1	1.010	6
4.082	-	2.017	6	2.593	3	1.001	6	5.695	3	4.288	1	9.950	6
4.088	-	1.858	6	2.738	3	1.088	6	5.694	3	4.308	1	1.080	6
4.500	-	1.053	6	4.870	3	1.918	6	5.688	3	5.088	1	1.911	6
5.000	-	5.388	6	9.813	3	3.888	6	5.682	3	6.180	1	3.880	6
5.500	-	5.088	6	1.008	4	3.887	6	5.650	3	7.210	1	3.881	6
6.000	-	4.887	6	1.004	4	4.708	6	5.634	3	8.348	1	4.300	6
6.500	-	5.081	6	1.009	4	3.872	6	5.612	3	9.494	1	3.888	6
7.000	-	5.478	6	9.388	3	3.888	6	5.581	3	1.081	0	3.880	6
7.878	-	6.438	6	7.887	3	3.138	6	5.588	3	1.275	0	3.130	6
7.888	-	6.188	6	8.778	3	3.888	6	5.588	3	1.278	0	3.880	6
8.000	-	5.987	6	9.188	3	3.888	6	5.584	3	1.385	0	3.880	6
9.000	-	6.437	6	7.887	3	3.138	6	5.588	3	1.538	0	3.130	6
1.000	-	7.378	6	8.881	3	2.738	6	5.483	3	1.788	0	2.730	6
1.250	-	1.080	6	4.838	3	1.983	6	5.381	3	2.380	0	1.888	6
1.500	-	1.428	6	3.888	3	1.418	6	5.288	3	2.848	0	1.418	6
1.801	-	1.427	6	3.884	3	1.414	6	5.288	3	2.848	0	1.409	6
1.808	-	1.388	6	3.774	3	1.408	6	5.287	3	2.880	0	1.408	6
1.750	-	1.383	6	3.888	3	1.408	6	5.288	3	3.815	0	1.404	6
2.000	-	2.884	6	1.888	3	7.748	6	5.248	3	4.087	0	7.708	6
2.500	-	4.338	6	1.183	3	4.888	6	5.207	3	4.888	0	4.888	6
3.000	-	5.988	6	7.612	3	3.674	6	5.438	3	6.333	0	3.638	6
3.388	-	9.383	6	5.988	2	2.183	6	5.183	3	7.371	0	2.123	6
3.684	-	1.034	6	4.887	2	1.981	6	5.088	3	7.711	0	1.918	6
3.888	-	3.348	6	1.538	3	6.031	6	5.088	3	7.713	0	5.088	6
3.888	-	3.888	6	1.387	3	5.488	6	5.088	3	8.087	0	5.428	6
3.851	-	3.288	6	1.578	3	6.188	6	5.088	3	8.088	0	6.148	6
4.888	-	3.678	6	1.387	3	5.588	6	5.078	3	8.487	0	5.488	6
4.438	-	4.388	6	1.888	3	4.848	6	5.732	3	8.233	0	4.810	6
4.438	-	4.342	6	1.181	3	4.848	6	5.731	3	8.235	0	4.810	6
4.588	-	4.488	6	1.143	3	4.488	6	5.733	3	8.388	0	4.488	6
5.088	-	5.723	6	9.888	3	3.538	6	5.338	3	1.089	1	3.488	6
5.338	-	6.088	6	7.888	2	3.818	6	5.488	3	1.087	1	2.888	6
5.337	-	5.877	6	8.888	2	3.574	6	5.488	3	1.087	1	3.548	6
5.588	-	6.188	6	8.888	2	3.384	6	5.343	3	1.113	1	3.271	6
5.733	-	6.812	6	7.888	2	2.883	6	5.288	3	1.194	1	2.838	6
5.738	-	6.382	6	6.418	2	3.313	6	5.288	3	1.194	1	3.288	6
6.088	-	6.837	6	7.881	2	2.888	6	5.181	3	1.189	1	2.828	6
6.388	-	6.478	6	6.881	2	2.381	6	5.117	3	1.273	1	2.381	6
7.088	-	1.834	6	4.881	2	1.882	6	5.181	3	1.381	1	1.884	6
8.088	-	1.477	6	3.472	2	1.388	6	5.111	3	1.488	1	1.348	6
1.000	-	2.881	6	1.888	2	7.888	6	2.177	3	1.781	1	7.488	6
1.250	-	2.747	6	1.888	2	4.238	6	1.794	3	2.838	1	4.874	6
1.500	-	2.748	6	8.881	1	2.888	6	1.788	3	2.882	1	2.488	6
1.750	-	1.148	6	4.478	1	1.783	6	1.794	3	2.487	1	1.637	6
1.781	-	1.188	6	1.888	2	1.788	6	1.881	3	2.488	1	1.818	6
1.788	-	2.188	6	1.888	2	3.888	6	1.888	3	2.488	1	3.888	6
2.000	-	2.988	6	7.413	1	2.888	6	1.813	3	2.888	1	2.813	6
2.188	-	2.848	6	6.888	1	2.448	6	2.738	3	2.338	1	2.338	6
9.888	-	9.888	6	5.888	10	2.710	6	5.888	10	2.710	1	2.710	6
1.037	-	1.037	6	8.248	10	2.488	6	1.037	6	8.248	10	2.488	6
1.051	-	1.051	6	8.420	10	3.102	6	1.051	6	8.420	10	3.102	6
1.248	-	1.248	6	9.053	10	2.218	6	1.248	6	9.053	10	2.218	6
1.488	-	1.488	6	1.301	9	1.253	6	1.488	6	1.301	9	1.253	6
1.741	-	1.741	6	1.782	9	9.883	6	1.741	6	1.782	9	9.883	6
1.983	-	1.983	6	2.888	9	8.878	6	1.983	6	2.888	9	8.878	6
2.287	-	2.287	6	3.041	9	8.117	6	2.287	6	3.041	9	8.117	6
2.313	-	2.313	6	3.109	9	1.153	6	2.313	6	3.109	9	1.153	6
2.485	-	2.485	6	3.580	9	1.206	6	2.485	6	3.580	9	1.206	6
2.881	-	2.881	6	5.188	9	1.394	6	2.881	6	5.188	9	1.394	6
3.351	-	3.351	6	8.528	9	1.481	6	3.351	6	8.528	9	1.481	6
3.370	-	3.370	6	8.601	9	1.888	6	3.370	6	8.601	9	1.888	6
3.482	-	3.482	6	7.047	9	1.917	6	3.482	6	7.047	9	1.917	6
3.878	-	3.878	6	9.188	9	2.002	6	3.878	6	9.188	9	2.002	6
4.058	-	4.058	6	9.578	9	2.012	6	4.058	6	9.578	9	2.012	6
4.073	-	4.073	6	9.848	9	2.188	6	4.073	6	9.848	9	2.188	6
4.487	-	4.487	6	1.170	8	4.288	6	4.487	6	1.170	8	4.288	6
4.888	-	4.888	6	1.448	8	8.888	6	4.888	6	1.448	8	8.888	6
5.488	-	5.488	6	1.753	8	1.078	6	5.488	6	1.753	8	1.078	6
5.988	-	5.988	6	2.087	8	1.278	6	5.988	6	2.087	8	1.278	6
6.481	-	6.481	6	2.448	8	1.277	6	6.481	6	2.448	8	1.277	6
6.988	-	6.988	6	2.838	8	1.278	6	6.988	6	2.838	8	1.278	6
7.884	-	7.884	6	3.584	8	1.282	6	7.884	6	3.584	8	1.282	6
7.878	-	7.878	6	3.688	8	1.271	6	7.878	6	3.688	8	1.271	6
7.988	-	7.988	6	3.708	8	1.272	6	7.988	6	3.708	8	1.272	6
8.884	-	8.884	6	4.881	8	1.288	6	8.884	6	4.881	8	1.288	6
9.888	-	9.888	6	5.788	8	1.353	6	9.888	6	5.788	8	1.353	6
1.247	-	1.247	6	9.031	8	1.173	6	1.247	6	9.031	8	1.173	6
1.484	-	1.484	6	1.288	7	1.048	6	1.484	6	1.288	7	1.048	6
1.483	-	1.483	6	1.300	7	1.048	6	1.483	6	1.300	7	1.048	6
1.487	-	1.487	6	1.308	7	1.101	6	1.487	6	1.308	7	1.101	6
1.748	-	1.748	6	1.783	7	9.883	6	1.748	6	1.783	7	9.883	6
1.987	-	1.987	6	2.888	7	7.831	6	1.987	6	2.888	7	7.831	6
2.473	-	2.473	6	3.580	7	5.788	6	2.473	6	3.580	7	5.788	6
2.857	-	2.857	6	5.081	7	4.504	6	2.857	6	5.081	7	4.504	6
3.433	-	3.433	6	6.847	7	3.688	6	3.433	6	6.847	7	3.688	6
3.987	-	3.987	6	7.477	7	3.488	6	3.987	6	7.477	7	3.488	6
3.840	-	3.394	6	8.884	7	1.014	6	3.840	6	3.394			

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 237				DENSITY 19.5 GRAMS/CC			
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARN)				MEV/COLLISION K.E. FLOR
	CH	CH/CH/CH	TOTAL	COMPONENT	INCOMPONENT	PHOTOL PAIR PROD	
2.181-2	8.047-4	8.041-1	3.338-4	8.488-2	2.738-1	3.240-4	2.098-2
2.243-2	8.098-4	7.650-1	3.013-4	8.037-2	2.708-1	2.980-4	2.170-2
2.244-2	8.781-4	8.901-1	3.993-4	8.031-2	2.800-1	3.410-4	2.184-2
2.500-2	7.681-4	8.758-1	2.848-4	7.617-2	2.889-1	2.987-4	2.424-2
3.000-2	1.250-3	4.204-1	1.894-4	8.186-2	3.188-1	1.980-4	2.884-2
3.500-2	1.603-3	2.844-1	1.119-4	4.828-2	3.382-1	1.087-4	3.338-2
4.000-2	2.525-3	2.031-1	7.082-3	4.078-2	3.487-1	7.950-3	3.780-2
4.500-2	3.411-3	1.504-1	5.817-3	3.415-2	3.384-1	5.940-3	4.215-2
5.000-2	4.457-3	1.151-1	4.528-3	2.814-2	3.053-1	4.200-3	4.842-2
5.500-2	5.707-3	8.888-0	3.538-3	2.903-2	3.709-1	3.248-3	5.039-2
6.000-2	7.143-3	7.180-0	2.888-3	2.178-2	3.750-1	2.570-3	5.488-2
6.500-2	8.745-3	5.884-0	2.578-3	1.908-2	3.783-1	2.079-3	5.888-2
7.000-2	1.024-2	4.887-0	1.918-3	1.887-2	3.805-1	1.709-3	6.261-2
8.000-2	1.488-2	3.488-0	1.374-3	1.351-2	3.844-1	1.200-3	7.018-2
1.000-1	2.581-2	1.987-0	7.850-2	2.281-1	3.844-1	8.510-2	8.398-2
1.187-1	4.015-2	1.278-0	5.082-2	8.841-1	3.778-1	3.880-2	9.503-2
1.188-1	1.088-2	4.742-0	1.888-3	8.831-1	3.778-1	1.780-3	1.124-2
1.250-1	1.255-2	4.184-0	1.847-3	8.244-1	3.757-1	1.947-3	1.179-2
1.500-1	1.913-2	2.881-0	1.055-3	4.524-1	3.680-1	9.730-2	1.393-2
1.750-1	2.780-2	1.844-0	7.258-2	3.422-1	3.588-1	8.958-2	1.599-2
2.000-1	3.882-2	1.341-0	5.278-2	2.887-1	3.480-1	4.880-2	1.798-2
2.500-1	6.448-2	7.739-1	3.130-2	1.784-1	3.288-1	2.623-2	2.162-2
3.000-1	8.898-2	5.887-1	2.081-2	1.277-1	3.132-1	1.840-2	2.480-2
3.500-1	1.384-2	3.574-1	1.525-2	3.574-0	2.977-1	1.131-2	2.801-2
4.000-1	1.711-2	2.987-1	1.178-2	7.480-0	2.848-1	8.200-1	3.088-2
4.500-1	2.119-2	2.420-1	9.885-1	5.888-0	2.787-1	8.201-1	3.378-2
5.000-1	2.541-2	2.018-1	7.942-1	4.888-0	2.688-1	8.200-1	3.618-2
5.500-1	2.983-2	1.737-1	6.874-1	4.078-0	2.588-1	3.801-1	3.874-2
6.000-1	3.387-2	1.523-1	5.885-1	3.448-0	2.440-1	3.210-1	4.185-2
6.500-1	3.777-2	1.388-1	5.303-1	2.884-0	2.388-1	2.880-1	4.374-2
7.000-1	4.184-2	1.288-1	4.884-1	2.881-0	2.284-1	2.883-1	4.621-2
7.500-1	4.677-2	1.030-1	4.095-1	1.880-0	2.157-1	1.700-1	4.811-2
8.000-1	5.398-2	8.018-0	3.195-1	1.883-0	1.848-1	1.080-1	5.113-2
1.082-0	6.537-1	7.844-2	3.887-1	1.289-0	1.888-1	1.038-1	5.182-2
1.250-0	7.818-1	8.478-2	2.948-1	8.888-1	1.748-1	7.807-0	5.388-2
1.500-0	8.888-1	5.783-2	2.244-1	5.783-1	1.888-1	5.800-0	5.880-2
1.750-0	9.888-1	5.213-2	2.081-1	4.874-1	1.988-1	3.931-0	6.183-2
2.000-0	1.038-0	4.988-2	1.848-1	3.888-1	1.788-1	3.138-0	6.488-2
2.244-0	1.044-0	4.911-2	1.833-1	3.143-1	1.741-1	3.063-0	6.874-2
2.500-0	1.185-0	4.841-2	1.888-1	2.188-1	1.184-1	2.888-0	7.188-2
3.000-0	1.132-0	4.830-2	1.783-1	1.488-1	1.078-1	1.708-0	7.488-2
3.500-0	1.145-0	4.477-2	1.782-1	1.880-1	9.724-0	1.388-0	7.883-2
4.000-0	1.145-0	4.478-2	1.782-1	8.278-0	9.932-0	1.148-0	8.278-2
4.500-0	1.138-0	4.388-2	1.774-1	8.344-0	8.874-0	9.748-0	8.488-2
5.000-0	1.128-0	4.348-2	1.788-1	5.382-0	7.717-0	8.478-0	8.888-2
5.500-0	1.118-0	4.388-2	1.883-1	4.388-0	7.838-0	7.448-0	9.188-2
6.000-0	1.108-0	4.338-2	1.882-1	3.888-0	8.888-0	6.838-1	9.488-2
6.500-0	1.108-0	4.083-2	1.743-1	3.141-0	8.488-0	5.988-1	9.788-2
7.000-0	1.108-0	4.748-2	1.888-1	2.788-0	8.132-0	5.488-1	1.188-1
7.500-0	1.108-0	4.683-2	1.888-1	2.873-0	8.388-0	4.948-1	1.388-1
8.000-0	1.108-0	4.683-2	1.888-1	2.873-0	8.388-0	4.948-1	1.588-1
1.084-1	8.783-1	5.237-2	2.881-1	1.388-0	4.738-0	3.418-1	1.788-1
1.250-1	9.187-1	5.631-2	2.818-1	8.884-0	4.838-0	2.888-1	1.988-1
1.500-1	9.538-1	6.088-2	2.384-1	5.888-0	3.288-0	2.188-1	2.173-1
1.750-1	9.888-1	6.388-2	2.384-1	4.338-0	3.131-0	1.788-1	2.378-1
2.000-1	7.378-1	6.878-2	2.888-1	3.388-0	2.828-0	1.588-1	2.578-1
2.500-1	7.137-1	7.188-2	2.888-1	2.128-0	2.378-0	1.188-1	2.788-1
3.000-1	6.737-1	7.618-2	2.888-1	1.478-0	2.057-0	9.788-2	2.988-1
3.500-1	6.435-1	7.888-2	3.138-1	1.888-0	2.818-0	2.948-2	3.188-1
4.000-1	6.188-1	8.088-2	3.281-1	2.388-0	1.838-0	2.888-2	3.388-1
4.500-1	5.388-1	8.538-2	3.378-1	2.983-0	1.488-0	2.888-2	3.588-1
5.000-1	5.813-1	8.888-2	3.478-1	3.318-0	1.388-0	2.338-2	3.788-1
5.500-1	5.884-1	9.888-2	3.583-1	3.883-0	1.288-0	2.388-2	3.988-1
6.000-1	5.941-1	9.848-2	3.648-1	3.882-0	1.178-0	2.388-2	4.188-1

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 237										DENSITY 19.5 GRAMS/CC			
ENERGY MEV	TOTAL HPF		CROSS SECTION (BARNs)					MEV/COLLISION		MEV/CM			
	CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	C.C. * FLOR	K.E.	BREMSSTR	K.E.		
6.500+ 1	5.448- 1	9.412- 2	3.704+ 1	3.146- 4	1.101+ 0	4.131- 2	3.590+ 1	6.358+ 1	6.358+ 1	5.004+ 1	1.187+ 2		
7.000+ 1	5.385- 1	9.598- 2	3.782+ 1	2.713- 4	1.035+ 0	3.808- 2	3.62+ 1	6.853+ 1	6.853+ 1	5.483+ 1	1.278+ 2		
8.000+ 1	5.280- 1	9.824- 2	3.686+ 1	2.077- 4	9.273- 1	3.280- 2	3.770+ 1	7.829+ 1	7.829+ 1	6.448+ 1	1.506+ 2		
1.000+ 2	4.986- 1	1.028- 1	4.040+ 1	1.329- 4	7.898- 1	2.960- 2	3.980+ 1	9.861+ 1	9.861+ 1	6.398+ 1	1.974+ 2		

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Form Factors

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SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT	SIN(Θ/2)/λ	COHERENT	INCOHERENT
1/Å			1/Å			1/Å			1/Å		
0.000-0	1.003-0	0.000-0	1.250-1	9.098-1	8.047-2	1.000-0	3.776-1	4.793-1	1.000-1	2.390-2	9.680-1
5.000-3	9.995-1	3.948-4	1.500-1	8.849-1	9.831-2	1.250-0	3.113-1	5.430-1	1.500-1	1.500-2	9.899-1
1.000-2	9.989-1	1.398-3	1.750-1	8.602-1	1.180-1	1.500-0	2.588-1	5.362-1	2.000-1	1.195-2	9.931-1
1.500-2	9.978-1	3.087-3	2.000-1	8.355-1	1.331-1	2.000-0	1.817-1	6.712-1	5.000-1	2.857-3	9.999-1
2.000-2	9.962-1	5.361-3	2.500-1	7.885-1	1.658-1	2.500-0	1.451-1	7.345-1	8.000-1	9.752-4	1.000-0
2.500-2	9.942-1	8.134-3	3.000-1	7.407-1	1.982-1	3.000-0	1.240-1	7.839-1	1.000-2	5.630-4	1.000-0
3.000-2	9.917-1	1.131-2	4.000-1	6.818-1	2.498-1	3.500-0	1.030-1	8.213-1	1.000-3	1.842-6	1.000-0
4.000-2	9.857-1	1.890-2	5.000-1	6.359-1	2.952-1	4.000-0	8.883-2	8.495-1	1.000-6	8.215-14	1.000-0
5.000-2	9.788-1	2.823-2	6.000-1	5.987-1	3.371-1	5.000-0	5.985-2	8.888-1	1.000-9	2.435-21	1.000-0
7.000-2	9.619-1	4.192-2	7.000-1	5.689-1	3.688-1	6.000-0	4.785-2	9.191-1			
9.000-2	9.434-1	5.988-2	8.000-1	5.461-1	4.139-1	7.000-0	4.043-2	9.348-1			
1.000-1	9.338-1	8.288-2	9.000-1	5.094-1	4.482-1	8.000-0	3.492-2	9.495-1

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ENDL Evaluated Photon Cross Sections

94-Pu

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Energy Deposition

94-Pu

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ENCL Evaluated Photon Data

94-Pu

ATOMIC WEIGHT 239.05							DENSITY 19.8 GRAMS/CC				
ENERGY	TOTAL HP		CROSS SECTION (BARNS)				NEV/COLLISION			NEV/CM	
MEV	CH	CH+CH/CH	TOTAL	COMPONENT	INCOHER	PHOTOEL PAIR PROD	K.E.+FLOR	K.E.	SPR/CMSTR	K.E.	
1.080	2.488	2.067	8.206	5.875	2.825	0.206	9.993	5.993	5.987-18	0.049	1
1.088	2.243	1.573	8.246	5.874	2.381	0.246	1.088	1.088	6.934-18	3.395	1
1.183	2.742	1.881	7.388	5.873	3.467	2.380	1.102	1.102	7.138-10	0.019	1
1.250	3.981	1.888	5.887	5.872	4.443	2.588	1.245	1.245	9.158-10	3.136	1
1.500	6.852	7.445	2.938	5.889	8.377	2.938	1.487	1.487	1.317-9	2.185	1
1.750	1.413	3.610	1.433	5.888	8.631	1.487	1.743	1.743	1.785-9	1.233	1
2.000	2.841	1.938	7.888	5.883	1.122	7.810	1.989	1.989	2.314-9	7.515	0
2.283	3.811	1.413	5.889	5.888	1.448	5.910	2.239	2.239	2.988-9	6.258	0
2.577	1.874	2.888	1.088	5.887	1.483	1.088	2.584	2.584	3.004-9	1.157	1
2.500	2.037	2.888	0.944	5.884	1.722	0.985	2.485	2.485	3.829-9	1.280	1
3.000	2.178	2.342	0.258	5.848	2.444	0.240	2.881	2.881	5.281-9	1.388	1
3.500	2.208	2.313	0.181	5.833	3.248	0.183	3.478	3.478	7.106-9	1.577	1
3.512	2.207	2.312	0.178	5.833	3.289	0.180	3.490	3.490	7.154-9	1.581	1
3.528	1.752	2.912	1.158	5.833	3.293	1.150	3.508	3.508	7.231-9	2.002	1
4.000	1.885	2.735	1.088	5.888	4.157	1.088	3.979	3.979	9.299-9	2.133	1
4.374	1.874	2.888	1.026	5.811	4.888	1.020	4.349	4.349	1.111-8	2.203	1
4.388	1.815	2.811	1.118	5.810	4.893	1.110	4.388	4.388	1.119-8	2.405	1
4.500	1.815	3.188	1.284	5.887	5.118	1.248	4.479	4.479	1.179-8	2.774	1
5.000	9.900	5.194	2.048	5.793	6.159	2.040	4.988	4.988	1.460-8	5.036	1
5.500	8.591	7.741	3.073	5.778	7.220	3.087	5.490	5.490	1.770-8	8.328	1
6.000	4.545	1.128	4.458	5.760	8.347	4.450	5.982	5.982	2.109-8	1.318	2
6.500	4.835	1.055	4.188	5.738	9.437	4.183	6.491	6.491	2.475-8	1.342	2
7.000	5.120	0.985	3.958	5.718	1.057	3.950	6.990	6.990	2.870-8	1.385	2
8.000	6.145	0.302	3.288	5.882	1.287	3.290	7.988	7.988	3.747-8	1.300	2
8.197	6.377	0.200	3.178	5.872	1.348	3.170	8.182	8.182	3.933-8	1.283	2
8.211	6.184	0.277	3.288	5.871	1.348	3.280	8.197	8.197	3.947-8	1.330	2
9.000	6.035	0.453	3.358	5.834	1.528	3.350	8.985	8.985	4.743-8	1.489	2
1.000	7.331	6.859	2.783	5.582	1.785	2.757	9.980	9.980	5.851-8	1.381	2
1.250	1.113	4.583	1.818	5.455	2.320	1.814	1.248	1.248	9.124-8	1.119	2
1.500	1.588	3.898	1.283	5.348	2.919	1.288	1.494	1.494	1.311-7	0.539	1
1.750	1.888	3.034	1.204	5.311	3.048	1.188	1.751	1.751	1.413-7	0.284	1
1.998	1.843	3.104	1.232	5.310	3.048	1.287	1.998	1.998	1.415-7	0.445	1
1.750	2.040	2.801	0.988	5.288	3.483	0.878	1.741	1.741	1.780-7	0.533	1
2.000	3.818	1.848	7.738	5.087	4.085	7.885	1.987	1.987	2.319-7	7.589	1
2.500	3.988	1.888	5.103	4.781	5.185	5.095	2.477	2.477	3.603-7	6.240	1
3.000	5.571	0.198	3.638	4.582	6.288	3.590	2.882	2.882	5.155-7	5.318	1
3.500	7.417	6.878	2.731	4.291	7.308	2.888	3.443	3.443	6.971-7	4.845	1
3.773	8.325	5.888	2.378	4.185	7.883	2.334	3.707	3.707	8.070-7	4.348	1
3.774	4.524	1.128	4.477	4.185	7.885	4.435	3.738	3.738	7.195-7	7.715	1
3.888	5.153	9.900	3.930	4.083	8.281	3.888	3.887	3.878	7.947-7	7.138	1
3.988	3.815	1.337	5.308	4.082	8.283	5.288	3.938	3.938	7.999-7	8.871	1
4.000	3.883	1.311	5.203	4.088	8.328	5.188	3.888	3.720	8.127-7	9.588	1
4.500	5.288	9.948	3.888	3.838	8.284	3.781	4.495	4.208	1.039-6	7.953	1
4.598	5.428	9.358	3.718	3.813	9.385	3.674	4.507	4.259	1.085-6	7.808	1
4.998	4.358	1.238	4.983	3.813	9.388	4.998	4.520	4.271	1.071-6	1.053	2
5.000	5.178	9.888	3.917	3.838	1.019	3.881	4.953	4.705	1.300-6	9.101	1
5.500	6.825	7.701	3.057	3.441	1.105	3.023	5.438	5.190	1.588-6	7.834	1
5.538	6.748	7.581	3.031	3.427	1.111	2.957	5.478	5.227	1.605-6	7.747	1
5.948	5.935	8.598	3.412	3.426	1.111	3.378	5.484	5.238	1.810-6	8.882	1
5.913	7.032	7.298	2.888	3.288	1.174	2.847	5.845	5.597	1.840-6	7.959	1
5.914	6.518	7.887	3.187	3.288	1.174	3.074	5.851	5.603	1.844-6	8.995	1
6.000	6.787	7.538	2.883	3.270	1.188	2.880	5.934	5.688	1.898-6	8.402	1
6.988	6.332	6.123	2.431	3.053	1.288	2.400	6.417	6.169	2.235-6	7.404	1
7.800	1.810	5.888	2.095	2.938	1.382	1.878	6.887	6.650	2.597-6	8.584	1
8.888	1.427	4.575	1.418	2.878	1.490	1.388	7.848	7.602	3.294-6	5.328	1
1.900	2.538	2.811	2.881	2.831	1.757	7.738	9.718	9.474	5.271-6	8.734	1
1.288	4.488	1.134	4.583	1.788	2.037	4.321	1.288	1.175	6.112-6	2.613	1
1.588	7.151	7.135	2.838	1.988	2.288	2.874	1.418	1.385	1.143-5	1.951	1
1.788	1.858	4.831	1.918	1.882	2.488	1.788	1.833	1.808	1.520-5	1.584	1
1.885	1.142	4.487	1.773	1.218	2.948	1.848	1.878	1.855	1.888-5	1.448	1
1.885	9.278	9.884	3.838	1.218	2.948	3.712	1.747	1.100	7.098-6	2.883	1
2.888	6.788	7.312	2.882	1.882	2.884	2.871	1.988	1.288	8.843-6	1.887	1
2.288	6.853	9.783	2.288	9.375	2.888	2.191	2.132	1.488	1.388-5	1.885	1

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 239.05				DENSITY 19.8 GRAMS/CC			
ENERGY	TOTAL	CH	CH+CH/CH	CROSS SECTION (BARNS)			
MEV	MEV	MEV	MEV	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD
MEV	CH	CH+CH/CH	MEV	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD
2.288-2	6.398-4	8.085-1	3.188-4	9.374-2	2.008-2	3.008-4	2.158-2
2.308-2	6.387-4	8.074-1	3.207-4	9.363-2	2.008-2	3.008-4	2.158-2
2.328-2	6.376-4	8.063-1	3.226-4	9.352-2	2.008-2	3.008-4	2.158-2
2.348-2	6.365-4	8.052-1	3.245-4	9.341-2	2.008-2	3.008-4	2.158-2
2.368-2	6.354-4	8.041-1	3.264-4	9.330-2	2.008-2	3.008-4	2.158-2
2.388-2	6.343-4	8.030-1	3.283-4	9.319-2	2.008-2	3.008-4	2.158-2
2.408-2	6.332-4	8.019-1	3.302-4	9.308-2	2.008-2	3.008-4	2.158-2
2.428-2	6.321-4	8.008-1	3.321-4	9.297-2	2.008-2	3.008-4	2.158-2
2.448-2	6.310-4	7.997-1	3.340-4	9.286-2	2.008-2	3.008-4	2.158-2
2.468-2	6.299-4	7.986-1	3.359-4	9.275-2	2.008-2	3.008-4	2.158-2
2.488-2	6.288-4	7.975-1	3.378-4	9.264-2	2.008-2	3.008-4	2.158-2
2.508-2	6.277-4	7.964-1	3.397-4	9.253-2	2.008-2	3.008-4	2.158-2
2.528-2	6.266-4	7.953-1	3.416-4	9.242-2	2.008-2	3.008-4	2.158-2
2.548-2	6.255-4	7.942-1	3.435-4	9.231-2	2.008-2	3.008-4	2.158-2
2.568-2	6.244-4	7.931-1	3.454-4	9.220-2	2.008-2	3.008-4	2.158-2
2.588-2	6.233-4	7.920-1	3.473-4	9.209-2	2.008-2	3.008-4	2.158-2
2.608-2	6.222-4	7.909-1	3.492-4	9.198-2	2.008-2	3.008-4	2.158-2
2.628-2	6.211-4	7.898-1	3.511-4	9.187-2	2.008-2	3.008-4	2.158-2
2.648-2	6.200-4	7.887-1	3.530-4	9.176-2	2.008-2	3.008-4	2.158-2
2.668-2	6.189-4	7.876-1	3.549-4	9.165-2	2.008-2	3.008-4	2.158-2
2.688-2	6.178-4	7.865-1	3.568-4	9.154-2	2.008-2	3.008-4	2.158-2
2.708-2	6.167-4	7.854-1	3.587-4	9.143-2	2.008-2	3.008-4	2.158-2
2.728-2	6.156-4	7.843-1	3.606-4	9.132-2	2.008-2	3.008-4	2.158-2
2.748-2	6.145-4	7.832-1	3.625-4	9.121-2	2.008-2	3.008-4	2.158-2
2.768-2	6.134-4	7.821-1	3.644-4	9.110-2	2.008-2	3.008-4	2.158-2
2.788-2	6.123-4	7.810-1	3.663-4	9.099-2	2.008-2	3.008-4	2.158-2
2.808-2	6.112-4	7.799-1	3.682-4	9.088-2	2.008-2	3.008-4	2.158-2
2.828-2	6.101-4	7.788-1	3.701-4	9.077-2	2.008-2	3.008-4	2.158-2
2.848-2	6.090-4	7.777-1	3.720-4	9.066-2	2.008-2	3.008-4	2.158-2
2.868-2	6.079-4	7.766-1	3.739-4	9.055-2	2.008-2	3.008-4	2.158-2
2.888-2	6.068-4	7.755-1	3.758-4	9.044-2	2.008-2	3.008-4	2.158-2
2.908-2	6.057-4	7.744-1	3.777-4	9.033-2	2.008-2	3.008-4	2.158-2
2.928-2	6.046-4	7.733-1	3.796-4	9.022-2	2.008-2	3.008-4	2.158-2
2.948-2	6.035-4	7.722-1	3.815-4	9.011-2	2.008-2	3.008-4	2.158-2
2.968-2	6.024-4	7.711-1	3.834-4	9.000-2	2.008-2	3.008-4	2.158-2
2.988-2	6.013-4	7.700-1	3.853-4	8.989-2	2.008-2	3.008-4	2.158-2
3.008-2	6.002-4	7.689-1	3.872-4	8.978-2	2.008-2	3.008-4	2.158-2
3.028-2	5.991-4	7.678-1	3.891-4	8.967-2	2.008-2	3.008-4	2.158-2
3.048-2	5.980-4	7.667-1	3.910-4	8.956-2	2.008-2	3.008-4	2.158-2
3.068-2	5.969-4	7.656-1	3.929-4	8.945-2	2.008-2	3.008-4	2.158-2
3.088-2	5.958-4	7.645-1	3.948-4	8.934-2	2.008-2	3.008-4	2.158-2
3.108-2	5.947-4	7.634-1	3.967-4	8.923-2	2.008-2	3.008-4	2.158-2
3.128-2	5.936-4	7.623-1	3.986-4	8.912-2	2.008-2	3.008-4	2.158-2
3.148-2	5.925-4	7.612-1	4.005-4	8.901-2	2.008-2	3.008-4	2.158-2
3.168-2	5.914-4	7.601-1	4.024-4	8.890-2	2.008-2	3.008-4	2.158-2
3.188-2	5.903-4	7.590-1	4.043-4	8.879-2	2.008-2	3.008-4	2.158-2
3.208-2	5.892-4	7.579-1	4.062-4	8.868-2	2.008-2	3.008-4	2.158-2
3.228-2	5.881-4	7.568-1	4.081-4	8.857-2	2.008-2	3.008-4	2.158-2
3.248-2	5.870-4	7.557-1	4.100-4	8.846-2	2.008-2	3.008-4	2.158-2
3.268-2	5.859-4	7.546-1	4.119-4	8.835-2	2.008-2	3.008-4	2.158-2
3.288-2	5.848-4	7.535-1	4.138-4	8.824-2	2.008-2	3.008-4	2.158-2
3.308-2	5.837-4	7.524-1	4.157-4	8.813-2	2.008-2	3.008-4	2.158-2
3.328-2	5.826-4	7.513-1	4.176-4	8.802-2	2.008-2	3.008-4	2.158-2
3.348-2	5.815-4	7.502-1	4.195-4	8.791-2	2.008-2	3.008-4	2.158-2
3.368-2	5.804-4	7.491-1	4.214-4	8.780-2	2.008-2	3.008-4	2.158-2
3.388-2	5.793-4	7.480-1	4.233-4	8.769-2	2.008-2	3.008-4	2.158-2
3.408-2	5.782-4	7.469-1	4.252-4	8.758-2	2.008-2	3.008-4	2.158-2
3.428-2	5.771-4	7.458-1	4.271-4	8.747-2	2.008-2	3.008-4	2.158-2
3.448-2	5.760-4	7.447-1	4.290-4	8.736-2	2.008-2	3.008-4	2.158-2
3.468-2	5.749-4	7.436-1	4.309-4	8.725-2	2.008-2	3.008-4	2.158-2
3.488-2	5.738-4	7.425-1	4.328-4	8.714-2	2.008-2	3.008-4	2.158-2
3.508-2	5.727-4	7.414-1	4.347-4	8.703-2	2.008-2	3.008-4	2.158-2
3.528-2	5.716-4	7.403-1	4.366-4	8.692-2	2.008-2	3.008-4	2.158-2
3.548-2	5.705-4	7.392-1	4.385-4	8.681-2	2.008-2	3.008-4	2.158-2
3.568-2	5.694-4	7.381-1	4.404-4	8.670-2	2.008-2	3.008-4	2.158-2
3.588-2	5.683-4	7.370-1	4.423-4	8.659-2	2.008-2	3.008-4	2.158-2
3.608-2	5.672-4	7.359-1	4.442-4	8.648-2	2.008-2	3.008-4	2.158-2
3.628-2	5.661-4	7.348-1	4.461-4	8.637-2	2.008-2	3.008-4	2.158-2
3.648-2	5.650-4	7.337-1	4.480-4	8.626-2	2.008-2	3.008-4	2.158-2
3.668-2	5.639-4	7.326-1	4.499-4	8.615-2	2.008-2	3.008-4	2.158-2
3.688-2	5.628-4	7.315-1	4.518-4	8.604-2	2.008-2	3.008-4	2.158-2
3.708-2	5.617-4	7.304-1	4.537-4	8.593-2	2.008-2	3.008-4	2.158-2
3.728-2	5.606-4	7.293-1	4.556-4	8.582-2	2.008-2	3.008-4	2.158-2
3.748-2	5.595-4	7.282-1	4.575-4	8.571-2	2.008-2	3.008-4	2.158-2
3.768-2	5.584-4	7.271-1	4.594-4	8.560-2	2.008-2	3.008-4	2.158-2
3.788-2	5.573-4	7.260-1	4.613-4	8.549-2	2.008-2	3.008-4	2.158-2
3.808-2	5.562-4	7.249-1	4.632-4	8.538-2	2.008-2	3.008-4	2.158-2
3.828-2	5.551-4	7.238-1	4.651-4	8.527-2	2.008-2	3.008-4	2.158-2
3.848-2	5.540-4	7.227-1	4.670-4	8.516-2	2.008-2	3.008-4	2.158-2
3.868-2	5.529-4	7.216-1	4.689-4	8.505-2	2.008-2	3.008-4	2.158-2
3.888-2	5.518-4	7.205-1	4.708-4	8.494-2	2.008-2	3.008-4	2.158-2
3.908-2	5.507-4	7.194-1	4.727-4	8.483-2	2.008-2	3.008-4	2.158-2
3.928-2	5.496-4	7.183-1	4.746-4	8.472-2	2.008-2	3.008-4	2.158-2
3.948-2	5.485-4	7.172-1	4.765-4	8.461-2	2.008-2	3.008-4	2.158-2
3.968-2	5.474-4	7.161-1	4.784-4	8.450-2	2.008-2	3.008-4	2.158-2
3.988-2	5.463-4	7.150-1	4.803-4	8.439-2	2.008-2	3.008-4	2.158-2
4.008-2	5.452-4	7.139-1	4.822-4	8.428-2	2.008-2	3.008-4	2.158-2
4.028-2	5.441-4	7.128-1	4.841-4	8.417-2	2.008-2	3.008-4	2.158-2
4.048-2	5.430-4	7.117-1	4.860-4	8.406-2	2.008-2	3.008-4	2.158-2
4.068-2	5.419-4	7.106-1	4.879-4	8.395-2	2.008-2	3.008-4	2.158-2
4.088-2	5.408-4	7.095-1	4.898-4	8.384-2	2.008-2	3.008-4	2.158-2
4.108-2	5.397-4	7.084-1	4.917-4	8.373-2	2.008-2	3.008-4	2.158-2
4.128-2	5.386-4	7.073-1	4.936-4	8.362-2	2.008-2	3.008-4	2.158-2
4.148-2	5.375-4	7.062-1	4.955-4	8.351-2	2.008-2	3.008-4	2.158-2
4.168-2	5.364-4	7.051-1	4.974-4	8.340-2	2.008-2	3.008-4	2.158-2
4.188-2	5.353-4	7.040-1	4.993-4	8.329-2	2.008-2	3.008-4	2.158-2
4.208-2	5.342-4	7.029-1	5.012-4	8.318-2	2.008-2	3.008-4	2.158-2
4.228-2	5.331-4	7.018-1	5.031-4	8.307-2	2.008-2	3.008-4	2.158-2
4.248-2	5.320-4	7.007-1	5.050-4	8.296-2	2.008-2	3.008-4	2.158-2
4.268-2	5.309-4	6.996-1	5.069-4	8.285-2	2.008-2	3.008-4	2.158-2
4.288-2	5.298-4	6.985-1	5.088-4	8.274-2	2.008-2	3.008-4	2.158-2
4.308-2	5.287-4	6.974-1	5.107-4	8.263-2	2.008-2	3.008-4	2.158-2
4.328-2	5.276-4	6.963-1	5.126-4	8.252-2	2.008-2	3.008-4	2.158-2
4.348-2	5.265-4	6.952-1	5.145-4	8.241-2	2.008-2	3.008-4	2.158-2
4.368-2	5.254-4	6.941-1	5.164-4	8.230-2	2.008-2	3.008-4	2.158-2
4.388-2	5.243-4	6.930-1	5.183-4	8.219-2	2.008-2	3.008-4	2.158-2
4.408-2	5.232-4	6.919-1	5.202-4	8.208-2	2.008-2	3.008-4	2.158-2
4.428-2	5.221-4	6.908-1	5.221-4	8.197-2	2.008-2	3.008-4	2.158-2
4.448-2	5.210-4	6.897-1	5.240-4	8.186-2	2.008-2	3.008-4	2.158-2
4.468-2	5.199-4	6.886-1	5.259-4	8.175-2	2.008-2	3.008-4	2.158-2
4.488-2	5.188-4	6.875-1	5.278-4	8.164-2	2.008-2	3.008-4	2.158-2
4.508-2	5.177-4	6.864-1	5.297-4	8.153-2	2.008-2	3.008-4	2.158-2
4.528-2	5.166-4	6.853-1	5.316-4	8.142-2	2.008-2	3.008-4	2.158-2
4.548-2	5.155-4	6.842-1	5.335-4	8.131-2	2.008-2	3.008-4	2.158-2
4.568-2	5.144-4	6.831-1	5.354-4	8.120-2	2.008-2	3.008-4	2.158-2
4.588-2	5.133-4	6.820-1	5.373-4	8.109-2	2.008-2	3.008-4	2.158-2
4.608-2	5.122-4	6.809-1	5.392-4	8.098-2	2.008-2	3.008-4	

12/07/78

ENDL Evaluated Photon Data

94-Pu

ATOMIC WEIGHT 238.05										DENSITY 19.8 GRAMS/CC													
ENERGY		TOTAL NFP		CROSS SECTION (BARNS)						MEV/COLLISION			MEV/CM										
MEV		CM	CM*CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTCEL	PAIR	PROD	K.E. *FLOR	K.E.	BRCHSTR	K.E.										
6.388	1	5.481-	1	8.388-	2	3.885	1	3.245-	4	1.112	0	4.188-	2	3.885	1	8.388	1	5.015	1	1.188	2		
7.088	1	5.388-	1	8.438-	2	3.738	1	2.738-	4	1.048	0	3.844-	2	3.844	1	8.838	1	8.838	1	3.438	1	1.271	2
8.088	1	5.243-	1	8.738-	2	3.883	1	2.148-	4	9.378	1	3.381-	2	3.788	1	7.838	1	7.838	1	8.488	1	1.488	2
1.088	2	4.988-	1	1.088-	1	4.087	1	1.371-	4	7.778	1	2.842	2	3.977	1	9.888	1	9.888	1	8.488	1	1.975	2

12/07/78

Form Factors

94-Pu

SIN($\theta/2$)/ λ	COHERENT	INCOHERENT	SIN($\theta/2$)/ λ	COHERENT	INCOHERENT	SIN($\theta/2$)/ λ	COHERENT	INCOHERENT	SIN($\theta/2$)/ λ	COHERENT	INCOHERENT
1/A			1/A			1/A			1/A		
8.000-0	1.000-0	0.000-0	1.250-1	9.139-1	7.000-2	1.000-0	3.789-1	4.787-1	1.000-1	2.417-2	9.875-1
5.000-3	9.998-1	3.511-4	1.500-1	8.960-1	9.000-2	1.250-0	3.131-1	5.417-1	1.500-1	1.499-2	9.857-1
1.000-2	9.998-1	1.304-3	1.750-1	8.679-1	1.140-1	1.500-0	2.588-1	5.914-1	2.000-1	1.201-2	9.839-1
1.500-2	9.979-1	3.688-3	2.000-1	8.406-1	1.307-1	2.000-0	1.887-1	6.897-1	5.000-1	2.945-3	9.800-1
2.000-2	9.953-1	5.394-3	2.500-1	7.907-1	1.623-1	2.500-0	1.450-1	7.324-1	8.000-1	1.018-3	1.000-0
2.500-2	9.943-1	6.108-3	3.000-1	7.437-1	1.919-1	3.000-0	1.242-1	7.819-1	1.000-2	5.912-4	1.000-0
3.000-2	9.919-1	1.125-2	4.000-1	6.824-1	2.448-1	3.500-0	1.035-1	8.195-1	1.000-3	1.789-5	1.000-0
4.000-2	9.882-1	1.829-2	5.000-1	5.954-1	2.906-1	4.000-0	8.908-2	8.480-1	1.000-6	7.480-14	1.000-0
5.000-2	9.788-1	2.579-2	6.000-1	5.380-1	3.330-1	5.000-0	6.024-2	8.275-1	1.000-9	3.225-21	1.000-0
7.000-2	9.639-1	4.094-2	7.000-1	4.884-1	3.730-1	8.000-0	4.772-2	9.142-1			
9.000-2	9.481-1	5.451-2	8.000-1	4.480-1	4.104-1	7.000-0	4.049-2	9.340-1			
1.000-1	9.389-1	6.143-2	9.000-1	4.099-1	4.451-1	9.000-0	3.505-2	9.488-1

12/07/78

ENDL Evaluated Photon Cross Sections

95-Am

12/07/78

Energy Deposition

95-Am

95-A

95-A-

12/07/78

ENDL Evaluated Photon Data

95-Au

ATOMIC WEIGHT 249							DENSITY 19.37 GRAMS/CC						
ENERGY	TOTAL WFP		CROSS SECTION (BARNS)				NEUT/COLLISION			NEUT/CM			
MEV	CM	CM/CM/CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. FLOR	K.E.	BREMSSTR	K.E.		
1.000-2	3.579-4	2.103-2	8.430-4	2.289-3	1.781-1	8.220-4		9.728-3	9.447-3	5.288-8	2.718-1		
1.250-2	6.310-4	1.198-2	4.859-4	1.841-3	2.045-1	4.472-4		1.200-2	1.172-2	6.195-8	1.898-1		
1.500-2	1.022-3	7.199-1	2.677-4	1.594-3	2.310-1	2.720-4		1.418-2	1.391-2	1.148-8	1.381-1		
1.750-2	1.526-3	4.794-1	1.966-4	1.294-3	2.513-1	1.794-4		1.630-2	1.603-2	1.525-8	1.051-1		
1.952-2	1.767-3	4.140-1	1.684-4	1.212-3	2.591-1	1.540-4		1.714-2	1.688-2	1.689-8	9.952-0		
1.953-2	7.873-4	9.291-1	3.734-4	1.212-3	2.592-1	3.610-4		1.782-2	1.110-2	7.315-8	1.410-1		
2.000-2	9.391-4	7.788-1	3.134-4	1.110-3	2.702-1	3.020-4		1.928-2	1.248-2	9.247-8	1.331-1		
2.238-2	1.298-3	5.637-1	2.285-4	9.230-2	2.885-1	2.170-4		2.200-2	1.525-2	1.379-8	1.175-1		
2.297-2	9.498-4	7.702-1	3.093-4	9.224-2	2.888-1	3.000-4		2.227-2	1.544-2	1.413-8	1.825-1		
2.381-2	1.053-3	8.945-1	2.781-4	8.782-2	2.910-1	2.700-4		2.304-2	1.622-2	1.580-8	1.540-1		
2.382-2	9.043-4	8.080-1	3.231-4	8.787-2	2.910-1	3.180-4		2.318-2	1.631-2	1.577-8	1.803-1		
2.500-2	1.024-3	7.143-1	2.870-4	8.237-2	2.970-1	2.785-4		2.426-2	1.742-2	1.800-8	1.701-1		
3.000-2	1.835-3	4.474-1	1.788-4	6.458-2	3.209-1	1.730-4		2.887-2	2.209-2	2.894-8	1.351-1		
3.500-2	2.415-3	3.029-1	1.217-4	5.191-2	3.373-1	1.162-4		3.342-2	2.889-2	4.223-8	1.105-1		
4.000-2	3.381-3	2.184-1	8.695-3	4.297-2	3.521-1	8.230-3		3.787-2	3.120-2	5.771-8	9.230-0		
4.500-2	4.572-3	3.600-1	6.449-3	3.601-2	3.621-1	6.033-3		4.225-2	3.584-2	7.524-8	7.794-0		
5.000-2	5.982-3	1.223-1	4.915-3	3.074-2	3.713-1	4.570-3		4.653-2	3.998-2	9.468-8	6.683-0		
5.500-2	7.617-3	9.603-0	3.859-3	2.842-2	3.771-1	3.557-3		5.075-2	4.425-2	1.160-8	5.810-0		
6.000-2	9.488-3	7.710-0	3.098-3	2.301-2	3.825-1	2.830-3		5.488-2	4.844-2	1.389-8	5.106-0		
6.500-2	1.165-2	6.281-0	2.524-3	2.014-2	3.849-1	2.284-3		5.893-2	5.255-2	1.635-8	4.512-0		
7.000-2	1.407-2	5.200-0	2.090-3	1.781-2	3.872-1	1.873-3		6.289-2	5.657-2	1.894-8	4.022-0		
8.000-2	1.971-2	3.712-0	1.498-3	1.426-2	3.913-1	1.310-3		7.052-2	6.434-2	2.448-8	3.265-0		
1.000-1	3.451-2	2.120-0	8.519-2	9.776-1	3.911-1	7.150-2		8.482-2	7.871-2	3.881-8	2.281-0		
1.250-1	6.058-2	1.800-0	4.822-2	5.529-1	3.888-1	3.780-2		9.969-2	9.577-2	5.238-8	1.545-0		
1.500-1	1.865-2	4.390-0	1.784-2	3.588-1	3.828-1	1.680-2		1.182-2	3.502-2	7.285-8	2.101-0		
1.500-1	2.589-2	2.826-0	1.135-3	4.781-1	3.782-1	1.050-3		1.397-1	5.794-2	1.988-8	2.236-0		
1.750-1	3.774-2	1.939-0	7.790-2	3.816-1	3.852-1	7.063-2		1.604-1	8.028-2	3.807-8	2.127-0		
2.000-1	5.203-2	1.408-0	5.850-2	2.839-1	3.960-1	5.010-2		1.802-1	1.018-1	6.121-8	1.957-0		
2.500-1	8.752-2	8.396-0	3.399-2	1.888-1	3.395-1	2.835-2		2.173-1	1.428-1	1.200-8	1.631-0		
3.000-1	1.316-1	5.581-1	2.235-2	1.350-1	3.198-1	1.780-2		2.509-1	1.805-1	1.915-8	1.378-0		
3.500-1	1.798-1	4.072-1	1.837-2	1.013-1	3.038-1	1.231-2		2.828-1	2.163-1	2.742-8	1.804-0		
4.000-1	2.324-1	3.147-1	1.285-2	7.892-0	2.908-1	8.950-1		3.123-1	2.497-1	3.849-8	1.074-0		
4.500-1	2.877-1	2.942-1	1.022-2	8.315-0	2.784-1	8.801-1		3.404-1	2.818-1	4.631-8	9.787-1		
5.000-1	3.452-1	2.119-1	8.515-0	5.173-0	2.878-1	5.320-1		3.671-1	3.119-1	5.672-8	9.035-1		
5.500-1	4.038-1	1.813-1	7.884-0	4.312-0	2.579-1	4.274-1		3.931-1	3.412-1	6.773-8	8.495-1		
6.000-1	4.625-1	1.582-1	6.357-0	3.852-0	2.491-1	3.500-1		4.182-1	3.895-1	7.934-8	7.991-1		
6.500-1	5.193-1	1.409-1	5.880-0	3.130-0	2.407-1	2.940-1		4.438-1	3.979-1	9.184-8	7.688-1		
7.000-1	5.759-1	1.270-1	5.125-0	2.714-0	2.332-1	2.870-1		4.691-1	4.258-1	1.050-8	7.393-1		
8.000-1	8.884-1	1.088-1	4.883-0	2.098-0	2.203-1	1.801-1		5.194-1	4.808-1	1.335-8	7.005-1		
1.000-0	8.871-1	8.248-2	3.314-0	1.381-0	1.988-1	1.190-1		6.254-1	5.937-1	2.021-8	6.682-1		
1.025-0	9.072-1	8.083-2	3.240-0	1.304-0	1.987-1	1.143-1		6.377-1	6.085-1	2.108-8	6.885-1		
1.250-0	1.105-0	6.618-2	2.859-0	8.797-1	1.782-1	7.894-0		7.878-1	7.418-1	3.129-8	6.789-1		
1.500-0	1.257-0	5.818-2	2.338-0	6.151-1	1.622-1	5.700-0	8.400-1	9.006-1	8.790-1	4.360-8	6.991-1		
1.750-0	1.376-0	5.318-2	2.137-0	4.539-1	1.494-1	4.345-0	1.830-0	1.043-0	1.025-0	5.884-8	7.454-1		
2.000-0	1.449-0	5.049-2	2.029-0	3.488-1	1.387-1	3.470-0	2.600-0	1.196-0	1.181-0	7.736-8	8.149-1		
2.044-0	1.462-0	5.005-2	2.011-0	3.339-1	1.370-1	3.349-0	2.729-0	1.224-0	1.210-0	8.107-8	8.277-1		
2.500-0	1.521-0	4.718-2	1.885-0	2.241-1	1.219-1	2.439-0	4.093-0	1.540-0	1.528-0	1.271-8	9.852-1		
3.000-0	1.591-0	4.498-2	1.848-0	1.980-1	1.093-1	1.860-0	5.530-0	1.921-0	1.912-0	1.949-8	1.202-0		
3.500-0	1.609-0	4.347-2	1.827-0	1.144-1	9.933-0	1.500-0	6.725-0	2.331-0	2.323-0	2.818-8	1.444-0		
4.000-0	1.608-0	4.348-2	1.828-0	8.798-2	9.124-0	1.850-0	7.820-0	2.781-0	2.755-0	3.872-8	1.713-0		
4.500-0	1.598-0	4.378-2	1.840-0	8.957-2	8.451-0	1.869-0	8.807-0	3.206-0	3.201-0	5.113-8	2.003-0		
5.000-0	1.585-0	4.616-2	1.822-0	5.638-2	7.682-0	9.300-0	9.880-0	3.683-0	3.659-0	6.558-8	2.308-0		
5.500-0	1.575-0	4.844-2	1.888-0	4.882-2	7.353-0	8.182-0	1.040-0	4.126-0	4.122-0	8.105-8	2.617-0		
6.000-0	1.561-0	4.888-2	1.884-0	3.918-2	6.888-0	7.300-0	1.110-0	4.786-0	4.993-0	9.842-8	2.943-0		
6.500-0	1.543-0	4.742-2	1.988-0	3.340-2	6.552-0	6.552-0	1.177-0	5.073-0	5.070-0	1.173-8	3.286-0		
7.000-0	1.522-0	4.687-2	1.932-0	2.881-2	6.284-0	5.940-0	1.243-0	5.594-0	5.551-0	1.378-8	3.848-0		
8.000-0	1.473-0	4.998-2	1.988-0	2.208-2	5.702-0	5.000-0	1.370-0	6.527-0	6.525-0	1.822-8	4.423-0		
1.000-1	1.377-0	5.313-2	2.135-1	1.412-2	4.857-0	3.880-1	1.810-1	6.504-0	6.502-0	2.852-8	8.175-0		
1.250-1	1.278-0	5.721-2	2.299-1	9.043-3	4.122-0	2.881-1	1.857-1	1.098-1	1.098-1	4.342-8	8.997-0		
1.500-1	1.198-0	6.195-2	2.453-1	8.280-3	3.988-0	2.300-1	2.070-1	1.350-1	1.350-1	8.004-8	1.186-1		
1.750-1	1.132-0	6.484-2	2.597-1	4.814-3	3.198-0	1.937-1	2.298-1	1.600-1	1.600-1	7.797-8	1.414-1		
2.000-1	1.078-0	6.783-2	2.728-1	3.533-3	2.888-0	1.678-1	2.420-1	1.851-1	1.851-1	9.882-8	1.718-1		
2.500-1	1.082-0	7.381-2	2.934-1	2.281-3	2.426-0	1.388-1	2.678-1	2.352-1	2.352-1	1.371-8	2.348-1		

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95-Au

12/07/78

ENDL Evaluated Photon Data

95-Aa

ATOMIC WEIGHT 242				DENSITY 13.67 GRAMS/CC							
ENERGY		TOTAL MFP		CROSS SECTION (BARNs)				MEV/COLLISION			MEV/CM
MEV		CM	CM*CM/CM	TOTAL	COHERENT	INCOHERT	PHOTOL PAIR PROD	K.E. *FLOR	K.E.	SPRNGSTR	K.E.
3.000+1	9.448-1	7.742-2	3.111+1	1.570-3	2.181+0	1.070-1	2.890+1	2.89+1	2.89+1	1.795+1	3.820+1
3.500+1	9.008-1	8.123-2	3.264+1	1.194-3	1.899+0	9.028-2	3.089+1	3.392+1	3.39+1	2.233+1	3.725+1
4.000+1	8.608-1	8.448-2	3.393+1	8.833-4	1.670+0	7.790-2	3.220+1	3.698+1	3.69+1	2.684+1	4.453+1
4.500+1	8.384-1	8.723-2	3.508+1	6.979-4	1.516+0	6.834-2	3.347+1	4.357+1	4.357+1	3.142+1	5.198+1
5.000+1	8.153-1	8.972-2	3.606+1	5.853-4	1.394+0	6.080-2	3.460+1	4.857+1	4.857+1	3.607+1	5.957+1
5.500+1	7.922-1	9.198-2	3.695+1	4.872-4	1.289+0	5.472-2	3.581+1	5.398+1	5.39+1	4.078+1	6.735+1
6.000+1	7.787-1	9.394-2	3.773+1	3.988-4	1.201+0	4.870-2	3.650+1	5.698+1	5.69+1	4.550+1	7.523+1
6.500+1	7.646-1	9.567-2	3.845+1	3.345-4	1.124+0	4.250-2	3.728+1	6.358+1	6.35+1	5.027+1	8.318+1
7.000+1	7.523-1	9.724-2	3.908+1	2.885-4	1.058+0	4.194-2	3.798+1	6.859+1	6.85+1	5.507+1	9.118+1
8.000+1	7.318-1	1.000-1	4.018+1	2.209-4	9.472-1	3.620-2	3.920+1	7.880+1	7.88+1	6.473+1	1.074+2
1.000+2	7.013-1	1.043-1	4.191+1	1.413-4	7.882-1	2.810-2	4.110+1	9.881+1	9.881+1	8.423+1	1.408+2

12/07/78

Form Factors

95-Aa

SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT			SIN(Θ/2)/λ COHERENT			INCOHERENT		
1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ			1/λ		
0.000	0	1.800	0	0.000	0	1.250	-1	9.194	-1	7.781	-2	1.800	0	3.791	-1	4.744	-1	1.000	1	2.442	-2	9.671	-1
0.000	3	9.999	-1	3.474	-4	1.500	-1	8.917	-1	9.542	-2	1.250	0	3.145	-1	5.404	-1	1.500	1	1.488	-2	9.695	-1
1.000	-2	9.999	-1	1.398	-3	1.750	-1	8.673	-1	1.128	-1	1.500	0	2.899	-1	5.908	-1	2.000	1	1.207	-2	9.999	-1
1.500	-2	9.999	-1	3.011	-3	2.000	-1	8.428	-1	1.298	-1	2.000	0	1.838	-1	6.884	-1	2.500	1	3.075	-3	9.999	-1
2.000	-2	9.999	-1	5.221	-3	2.500	-1	7.928	-1	1.605	-1	2.500	0	1.449	-1	7.305	-1	3.000	1	1.083	-3	1.000	0
2.500	-2	9.945	-1	7.999	-3	3.000	-1	7.453	-1	1.898	-1	3.000	0	1.244	-1	7.799	-1	3.500	1	8.207	-4	1.000	0
3.000	-2	9.521	-1	1.099	-2	4.000	-1	6.531	-1	2.424	-1	3.500	0	1.038	-1	8.178	-1	4.000	1	1.872	-5	1.000	0
4.000	-2	9.095	-1	1.708	-2	5.000	-1	5.525	-1	2.882	-1	4.000	0	8.951	-2	8.488	-1	5.000	1	9.048	-14	1.000	0
5.000	-2	9.000	-1	2.525	-2	6.000	-1	5.388	-1	3.385	-1	5.000	0	8.087	-2	8.885	-1	6.000	1	4.288	-21	1.000	0
7.000	-2	9.043	-1	3.981	-2	7.000	-1	4.884	-1	3.704	-1	6.000	0	4.780	-2	9.133	-1	7.000	1	4.053	-2	9.331	-1
9.000	-2	9.471	-1	5.382	-2	8.000	-1	4.482	-1	4.078	-1	7.000	0	4.053	-2	9.331	-1	8.000	1	3.518	-2	9.480	-1
1.000	-1	9.381	-1	6.047	-2	9.000	-1	4.102	-1	4.425	-1	8.000	0	3.518	-2	9.480	-1

12/07/78

ENDL Evaluated Photon Cross Sections

96-Ca

12/07/78

Energy Deposition

96-Cm

12/07/78

ENCL Evaluated Photon Data

96-Cm

ATOMIC WEIGHT 247				13.5 GRAMS/CC			
ENERGY	TOTAL NFP	CROSS SECTION (BARNS)				MEV/COLLISION	MEV/CM
MEV	CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR
MEV	CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL PAIR PROD	K.E. FLOR
1.000-4	2.982-5	2.501-4	1.008-7	6.126-3	2.731-2	1.005-7	9.994-5
1.250-4	6.429-6	1.152-4	4.725-6	6.124-3	4.235-2	4.718-6	1.248-4
1.252-4	6.471-6	1.145-4	4.805-6	6.123-3	4.250-2	4.809-6	1.251-4
1.253-4	5.441-6	1.361-4	5.384-6	6.123-3	4.258-2	5.378-6	1.252-4
1.385-4	5.608-6	1.321-4	5.420-6	6.122-3	5.038-2	5.414-6	1.383-4
1.386-4	5.876-6	1.480-4	5.980-6	6.122-3	5.043-2	5.984-6	1.385-4
1.500-4	5.804-6	1.278-4	5.235-6	6.121-3	6.051-2	5.229-6	1.498-4
1.750-4	1.738-5	5.981-3	2.453-6	6.118-3	8.200-2	2.447-6	1.748-4
2.000-4	2.125-5	3.108-3	1.274-6	6.116-3	1.085-1	1.888-6	1.990-4
2.378-4	4.928-5	1.504-3	8.108-5	6.108-3	1.510-1	6.107-5	2.373-4
2.399-4	3.179-5	2.330-3	9.957-5	6.108-3	1.513-1	9.498-5	2.384-4
2.500-4	3.337-5	2.218-3	9.103-5	6.106-3	1.538-1	9.042-5	2.483-4
3.000-4	4.137-5	1.790-3	7.344-5	6.099-3	2.328-1	7.283-5	2.975-4
3.148-4	4.176-5	1.774-3	7.276-5	6.099-3	2.346-1	7.215-5	3.122-4
3.151-4	3.571-5	2.074-3	8.508-5	6.095-3	2.551-1	8.447-5	3.129-4
3.500-4	3.728-5	1.987-3	8.150-5	6.088-3	3.102-1	8.090-5	3.474-4
3.873-4	3.873-5	1.913-3	7.845-5	6.078-3	3.883-1	7.784-5	3.813-4
3.874-4	3.833-5	2.039-3	8.352-5	6.078-3	3.700-1	8.301-5	3.819-4
4.000-4	3.714-5	1.993-3	8.181-5	6.075-3	3.979-1	8.120-5	3.970-4
4.500-4	3.918-5	1.892-3	7.759-5	6.060-3	4.911-1	7.899-5	4.485-4
4.875-4	4.098-5	1.865-3	7.483-5	6.049-3	5.886-1	7.425-5	4.835-4
4.880-4	3.699-5	2.003-3	8.214-5	6.049-3	5.876-1	8.194-5	4.844-4
5.000-4	3.757-5	1.972-3	8.088-5	6.048-3	5.929-1	8.027-5	4.983-4
5.022-4	3.783-5	1.988-3	8.074-5	6.048-3	5.975-1	8.013-5	4.985-4
5.028-4	3.947-5	2.088-3	8.585-5	6.045-3	5.985-1	8.505-5	4.992-4
5.500-4	1.723-5	4.288-3	1.783-6	6.029-3	8.977-1	1.757-6	5.481-4
6.000-4	8.548-6	8.888-3	3.554-6	6.013-3	8.934-1	3.548-6	5.990-4
6.500-4	7.720-6	8.955-3	3.936-6	5.990-3	9.183-1	3.930-6	6.490-4
7.000-4	7.024-6	8.055-3	4.325-6	5.970-3	1.032-0	4.318-6	6.990-4
8.000-4	6.162-6	9.075-3	3.722-6	5.933-3	1.274-0	3.718-6	7.987-4
8.894-4	9.218-6	8.941-3	3.898-6	5.900-3	1.484-0	3.892-6	8.839-4
9.000-4	9.013-6	8.218-3	3.371-6	5.900-3	1.486-0	3.365-6	8.848-4
9.000-4	8.840-6	8.380-3	3.437-6	5.884-3	1.505-0	3.431-6	8.985-4
9.186-4	9.116-6	8.125-3	3.333-6	5.875-3	1.552-0	3.327-6	9.180-4
9.208-4	8.581-6	8.248-3	3.383-6	5.875-3	1.554-0	3.377-6	9.190-4
1.000-3	9.882-6	7.542-3	3.083-6	5.840-3	1.747-0	3.088-6	9.981-4
1.250-3	1.426-5	5.195-3	2.131-6	5.897-3	2.313-0	2.125-6	1.247-3
1.500-3	1.933-5	3.832-3	1.572-6	5.588-3	2.908-0	1.588-6	1.495-3
1.889-3	2.394-5	3.095-3	1.259-6	5.488-3	3.340-0	1.284-6	1.882-3
1.890-3	2.383-5	3.134-3	1.285-6	5.488-3	3.342-0	1.280-6	1.883-3
1.750-3	2.580-5	2.883-3	1.187-6	5.435-3	3.481-0	1.181-6	1.742-3
2.000-3	3.475-5	2.132-3	8.743-5	5.310-3	4.088-0	8.690-5	1.988-3
2.500-3	5.822-5	1.272-3	5.218-5	5.003-3	5.178-0	5.168-5	2.476-3
3.000-3	8.863-5	8.357-3	3.428-5	4.788-3	6.309-0	3.380-5	2.958-3
3.500-3	1.283-5	5.885-3	2.468-5	4.485-3	7.346-0	2.381-5	3.435-3
4.000-3	1.714-5	4.322-3	1.773-5	4.235-3	8.381-0	1.730-5	3.904-3
4.012-3	1.714-5	4.321-3	1.772-5	4.248-3	8.404-0	1.730-5	3.918-3
4.013-3	5.582-5	1.332-3	5.463-5	4.248-3	8.405-0	5.420-5	3.982-3
4.230-3	6.186-5	1.197-3	4.911-5	4.137-3	8.819-0	4.870-5	4.193-3
4.231-3	5.483-5	1.398-3	5.561-5	4.137-3	8.820-0	5.520-5	4.193-3
4.500-3	8.997-5	1.123-3	4.808-5	4.011-3	9.330-0	4.585-5	4.481-3
4.839-3	8.236-5	8.994-3	3.698-5	3.880-3	9.988-0	3.850-5	4.788-3
4.840-3	7.186-5	1.033-3	4.239-5	3.867-3	9.970-0	4.200-5	4.788-3
5.000-3	7.715-5	9.802-3	3.938-5	3.805-3	1.027-1	3.900-5	4.952-3
5.500-3	9.548-5	7.728-3	3.182-5	3.598-3	1.113-1	3.148-5	5.438-3
5.945-3	1.136-5	8.521-3	2.674-5	3.438-3	1.169-1	2.698-5	5.888-3
5.946-3	9.571-5	7.740-3	3.174-5	3.437-3	1.169-1	3.140-5	5.889-3
6.000-3	9.608-5	7.268-3	3.084-5	3.418-3	1.198-1	3.050-5	5.933-3
6.322-3	1.145-5	6.468-3	2.853-5	3.297-3	1.249-1	2.820-5	6.243-3
6.723-3	1.132-5	7.178-3	2.913-5	3.297-3	1.250-1	2.910-5	6.252-3
6.980-3	1.111-5	6.888-3	2.735-5	3.234-3	1.277-1	2.703-5	6.423-3
7.000-3	1.132-5	5.479-3	2.847-5	3.278-3	1.234-1	2.818-5	6.504-3
8.000-3	1.825-5	3.848-3	1.578-5	2.888-3	1.505-1	1.598-5	7.857-3

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96-Cm

12/07/76

ENDL Evaluated Photon Data

96-Cu

ATOMIC WEIGHT 64		13.5 DRAWS/CC									
ENERGY MEV	TOTAL HP		CROSS SECTION (BARNS)						REV/COLLISION		REV/CM
	CM	CM-CH/CM	TOTAL	COHERENT	INCOHERENT	PHOTOE	PAIR PROD	K.E. + FLOR	K.E. BREMSSTR	K.E.	
1.000	2.439	2.194	8.835	2.333	1.778	0.886	0.730	9.432	5.335	2.743	1
1.250	6.245	1.188	4.884	1.682	2.062	1.877	1.201	1.171	0.287	1.875	1
1.500	1.013	3.715	3.000	1.578	2.328	2.040	1.480	1.361	1.198	1.373	1
1.750	1.089	4.968	2.013	1.364	2.533	1.878	1.633	1.604	1.542	1.083	1
1.999	1.680	3.882	1.833	1.207	2.848	1.510	1.795	1.788	1.785	0.281	0
1.999	0.382	0.888	3.633	1.207	2.848	1.510	1.834	1.128	7.831	1.349	1
2.000	9.446	7.942	3.216	1.137	2.725	3.108	1.984	1.284	0.975	1.295	1
2.388	1.398	5.300	2.174	0.989	2.825	2.088	2.289	1.585	1.488	1.120	1
2.388	1.020	7.250	2.874	0.983	2.886	2.888	2.288	1.584	1.505	1.951	1
2.453	1.130	8.957	2.880	0.958	2.971	2.800	2.372	1.886	1.863	1.475	1
2.494	9.708	7.830	3.130	0.895	2.971	3.040	2.384	1.874	1.879	1.729	1
2.500	1.018	7.880	2.881	0.942	2.985	2.884	2.427	1.718	1.788	1.685	1
3.000	1.634	4.534	1.889	0.819	2.738	1.790	2.888	2.185	2.881	1.337	1
3.500	2.409	3.075	1.261	0.532	3.480	1.205	3.344	2.846	4.193	1.098	1
4.000	3.386	2.201	0.828	0.408	3.930	0.930	3.780	3.088	5.748	9.204	0
4.500	4.942	1.631	0.689	0.393	3.651	0.283	4.289	3.543	7.515	7.800	0
5.000	5.931	1.249	0.512	0.313	3.744	0.770	4.899	3.979	9.475	6.709	0
5.500	7.999	0.800	4.019	2.711	3.803	3.710	5.082	4.408	1.163	5.831	0
6.000	9.482	7.882	3.225	2.381	3.857	2.950	5.496	4.988	1.325	5.124	0
6.500	1.155	6.409	2.629	2.087	3.882	2.383	5.903	5.241	1.843	4.535	0
7.000	1.395	5.308	2.178	1.882	3.906	1.956	6.302	5.845	1.906	4.048	0
8.000	1.953	3.793	1.956	1.489	3.948	1.370	7.070	6.427	2.489	3.291	0
1.000	3.422	2.185	0.878	1.033	3.347	7.480	8.482	7.878	3.705	2.302	0
1.250	6.037	1.277	0.533	0.772	3.889	3.989	1.002	9.447	5.325	1.585	0
1.500	6.933	1.151	0.423	0.723	3.895	3.890	1.020	9.633	5.536	1.487	0
1.750	1.773	4.177	0.713	0.647	3.894	1.610	1.210	3.802	7.767	2.031	0
1.999	2.603	2.845	1.167	0.911	3.797	1.080	1.398	5.603	1.877	2.152	0
1.999	3.775	1.982	0.048	3.714	3.087	7.308	1.606	7.845	3.675	2.078	0
2.000	5.184	1.429	0.861	2.916	3.595	5.210	1.606	1.002	5.982	1.932	0
2.500	6.710	0.505	3.488	1.937	3.388	2.958	2.180	1.414	1.189	1.623	0
3.000	1.309	5.860	3.321	1.387	3.228	1.880	2.520	1.795	1.913	1.372	0
3.500	1.794	4.130	1.694	1.040	3.089	1.283	2.841	2.155	2.752	1.202	0
4.000	2.329	3.181	1.305	0.111	2.937	9.300	3.137	2.492	3.672	1.070	0
4.500	2.883	2.589	1.094	0.491	2.813	7.075	3.422	2.815	4.674	9.782	0
5.000	3.481	2.140	0.777	0.318	2.708	5.940	3.693	3.122	5.739	9.018	0
5.500	4.048	1.832	7.516	4.434	2.605	4.487	3.958	3.420	6.877	8.840	0
6.000	4.630	1.600	6.988	3.758	2.517	3.670	4.215	3.709	6.073	8.012	0
6.500	5.205	1.423	5.838	3.220	2.432	3.082	4.474	3.986	9.355	7.878	0
7.000	5.778	1.262	5.258	2.798	2.356	2.822	4.729	4.277	1.070	7.403	0
8.000	6.902	1.073	4.462	2.159	2.225	1.960	5.235	4.832	1.381	7.001	0
1.000	8.940	0.288	3.398	1.400	2.008	1.250	6.302	5.389	2.084	6.877	0
1.022	0.146	0.099	3.322	1.342	1.988	1.200	6.425	6.088	2.153	6.886	0
1.250	1.117	0.629	2.719	0.958	1.801	8.278	7.727	7.452	3.189	6.689	0
1.500	1.273	0.518	2.388	0.632	1.639	5.970	9.052	8.825	4.438	6.931	0
1.750	1.394	0.513	2.179	0.673	1.509	4.946	1.048	1.029	5.980	7.378	0
2.000	1.489	0.543	2.088	0.590	1.402	3.630	1.200	1.184	7.852	8.080	0
2.044	1.488	0.989	2.051	0.439	1.384	3.505	1.228	1.213	8.229	8.187	0
2.500	1.572	0.712	1.933	0.368	1.232	2.556	1.544	1.532	1.289	9.743	0
3.000	1.613	0.598	1.884	1.607	1.104	1.950	1.925	1.916	1.975	1.188	0
3.500	1.634	0.534	1.859	1.183	1.004	1.574	2.335	2.327	2.851	1.424	0
4.000	1.635	0.453	1.858	0.884	0.920	1.310	2.784	2.758	3.118	1.687	0
4.500	1.625	0.358	1.870	0.788	0.840	1.114	3.209	3.204	5.188	1.972	0
5.000	1.612	0.298	1.885	0.685	0.765	0.970	3.688	3.651	6.593	2.271	0
5.500	1.602	0.244	1.897	0.603	0.741	0.843	4.125	4.125	8.184	2.575	0
6.000	1.587	0.208	1.915	0.538	0.704	0.730	4.600	4.586	9.975	2.886	0
6.500	1.570	0.171	1.935	0.442	0.684	0.671	5.078	5.072	1.184	3.230	0
7.000	1.590	0.178	2.988	0.630	0.639	1.282	5.557	5.559	1.388	3.583	0
8.000	1.583	0.227	2.021	0.273	0.782	0.290	6.530	6.528	1.837	4.342	0
1.000	1.398	0.293	2.172	1.495	2.488	3.990	8.507	8.508	2.874	8.080	0
1.250	1.388	0.288	2.341	0.318	3.185	2.980	1.100	1.100	4.372	8.474	0
1.500	1.318	0.288	2.489	0.472	3.834	2.400	1.350	1.350	6.041	1.110	0
1.750	1.150	0.438	2.891	0.725	3.332	2.328	1.601	1.601	7.841	1.381	0
2.000	1.097	0.752	2.770	1.841	2.917	1.750	1.851	1.851	9.743	1.688	0

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ENDL Evaluated Photon Data

96-Cu

ATOMIC WEIGHT 247		13.5 GRAMS/CC									
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARNES)				MEV/COLLISION				MEV/CM
	CM	CM*CM/CM	TOTAL	COHERENT	INCOHERT	PHOTOEL PAIR PROD	K.E. *FLOR	K.E.	BREMSSTR		K.E.
2.588+1	1.318+0	7.273-2	2.984+1	2.330-3	2.451+0	1.371-1	2.725+1	2.353+1	2.353+1	1.377+1	2.311+1
3.088+1	9.883-1	7.714-2	3.184+1	1.818-3	2.123+0	1.120-1	2.940+1	2.834+1	2.834+1	1.986+1	2.972+1
3.588+1	7.185-1	8.088-2	3.315+1	1.189-3	1.878+0	9.416-2	3.117+1	3.323+1	3.323+1	2.241+1	3.080+1
4.088+1	8.814-1	8.404-2	3.447+1	9.103-4	1.867+0	8.110-2	3.270+1	3.828+1	3.828+1	2.888+1	4.375+1
4.588+1	8.323-1	8.881-2	3.585+1	7.192-4	1.534+0	7.123-2	3.404+1	4.357+1	4.357+1	3.151+1	5.112+1
5.088+1	8.285-1	8.941-2	3.687+1	5.828-4	1.409+0	6.340-2	3.520+1	4.828+1	4.827+1	3.817+1	5.863+1
5.588+1	8.088-1	9.158-2	3.758+1	4.815-4	1.303+0	5.704-2	3.620+1	5.358+1	5.358+1	4.087+1	6.825+1
6.088+1	7.819-1	9.324-2	3.837+1	4.046-4	1.214+0	5.180-2	3.710+1	5.829+1	5.829+1	4.581+1	7.388+1
6.588+1	7.778-1	9.528-2	3.907+1	3.447-4	1.138+0	4.745-2	3.789+1	6.359+1	6.359+1	5.039+1	8.178+1
7.088+1	7.848-1	9.682-2	3.972+1	2.973-4	1.089+0	4.375-2	3.881+1	6.880+1	6.880+1	5.518+1	8.989+1
8.088+1	7.429-1	9.971-2	4.080+1	2.276-4	9.572-1	3.780-2	3.990+1	7.880+1	7.880+1	6.485+1	1.058+2
1.000+2	7.095-1	1.044-1	4.282+1	1.458-4	7.945-1	2.950-2	4.200+1	9.861+1	9.861+1	8.438+1	1.390+2

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ENDL Evaluated Photon Cross Sections

97-Bk

12/07/78

Energy Deposition

97-Bk

12/07/78

ENDL Evaluated Photon Data

97-8k

ATOMIC WEIGHT 74.9		13.5 GRAMS/CC									
ENERGY	TOTAL	CROSS SECTION (BARNS)				MEV/COLLISION				MEV/CM	
MEV	CM	CM ² /GM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. + FLOR	K.E.	BRMSSTR	K.E.
1.000	2.398	6.387	1.277	8.295	2.095	1.278	7	9.995	9.995	6.057	4.188
1.250	5.076	1.438	6.034	8.292	4.178	6.038	8	1.249	1.249	9.953	2.070
1.303	5.041	1.408	5.244	8.251	4.537	5.238	8	1.308	1.308	1.027	2.289
1.305	5.044	1.408	6.072	8.251	4.545	6.068	8	1.303	1.303	1.030	2.289
1.424	5.573	1.329	5.495	8.250	5.397	5.489	8	1.422	1.422	1.228	2.952
1.425	5.579	1.438	6.030	8.250	5.408	6.023	8	1.424	1.424	1.229	2.803
1.500	5.453	1.398	5.616	8.250	5.879	5.610	8	1.498	1.498	1.381	2.748
1.750	1.117	0.631	2.742	6.247	8.090	2.735	6	1.746	1.746	1.048	1.983
2.000	2.077	1.398	1.474	6.244	1.051	1.488	6	1.992	1.992	2.404	9.987
2.485	5.880	1.438	6.029	8.235	1.999	5.987	5	2.480	2.480	3.670	4.843
2.489	3.278	2.280	6.343	8.235	1.602	9.281	5	2.472	2.472	3.705	7.942
2.500	3.295	2.248	9.288	8.235	1.618	9.834	5	2.483	2.483	3.738	7.537
3.000	4.036	1.893	7.988	6.227	2.297	7.927	5	2.975	2.975	5.387	7.373
3.296	4.075	1.818	7.517	8.220	2.733	7.495	5	3.285	3.285	6.484	9.014
3.296	3.515	2.107	8.713	6.219	2.738	8.651	5	3.272	3.272	6.482	9.309
3.500	3.984	2.067	8.945	6.215	3.063	8.483	5	3.475	3.475	7.319	9.894
4.000	3.742	1.979	8.184	6.204	3.930	8.122	5	3.970	3.970	9.553	1.081
4.009	3.745	1.978	8.178	6.204	3.945	8.118	5	3.978	3.978	9.594	1.082
4.013	3.527	2.100	8.985	6.203	3.952	8.623	5	3.984	3.984	9.623	1.130
4.500	3.716	1.993	8.242	6.188	4.853	8.180	5	4.485	4.485	1.209	1.202
5.000	3.699	1.900	7.824	6.175	5.860	7.793	5	4.981	4.981	1.492	1.272
5.123	3.953	1.874	7.747	6.170	6.109	7.688	5	5.082	5.082	1.588	1.285
5.128	3.623	2.045	8.424	6.170	6.119	8.398	5	5.090	5.090	1.571	1.405
5.280	3.896	2.004	8.887	6.165	6.434	8.825	5	5.241	5.241	1.685	1.418
5.285	3.498	2.119	8.781	6.165	6.445	8.699	5	5.248	5.248	1.670	1.501
5.500	2.942	2.914	1.205	6.157	6.900	1.199	8	5.472	5.472	1.815	2.152
6.000	1.284	5.899	2.423	6.141	8.009	2.418	8	5.985	5.985	2.171	4.734
6.500	9.304	6.782	3.298	6.119	9.091	3.288	8	6.488	6.488	2.552	8.973
7.000	7.003	6.108	4.573	6.098	1.022	4.367	8	6.990	6.990	2.882	9.982
8.000	7.935	6.935	3.860	6.082	1.023	3.854	8	7.987	7.987	3.888	1.007
8.988	9.484	6.710	3.229	6.013	1.490	3.223	8	8.971	8.971	4.879	9.458
9.997	9.287	6.787	3.298	6.013	1.492	3.298	8	9.981	9.981	4.889	9.670
9.000	9.294	6.793	3.299	6.012	1.493	3.293	8	8.984	8.984	4.898	9.677
9.981	9.412	6.780	3.234	5.987	1.627	3.248	8	9.943	9.943	5.521	1.014
9.571	9.277	6.780	3.308	5.987	1.629	3.298	8	9.533	9.533	5.533	1.030
1.000	9.277	6.780	3.308	5.989	1.724	3.282	8	9.982	9.982	6.040	1.073
1.250	1.341	5.525	2.883	5.825	2.228	2.277	8	1.247	1.247	9.424	9.295
1.500	1.808	4.097	1.694	5.710	2.894	1.888	8	1.495	1.495	1.335	8.289
1.750	2.485	2.978	1.232	5.561	3.467	1.225	8	1.742	1.742	1.840	7.006
1.755	2.501	2.962	1.225	5.558	3.478	1.219	8	1.747	1.747	1.850	6.985
1.756	2.499	2.984	1.226	5.558	3.481	1.220	8	1.740	1.740	1.852	6.995
2.000	3.371	2.197	9.084	5.435	4.094	9.030	5	1.988	1.988	2.398	5.897
2.500	5.880	1.309	5.411	5.124	5.170	5.360	5	2.478	2.478	3.717	4.375
3.000	8.630	0.583	3.949	4.883	6.308	3.500	5	2.959	2.959	5.306	3.428
3.500	1.227	4.839	2.497	4.596	7.350	2.451	5	3.435	3.435	7.154	2.801
4.000	1.881	4.498	1.844	4.381	8.392	1.800	5	3.905	3.905	9.243	2.351
4.132	1.778	4.187	1.723	4.291	8.848	1.680	5	4.029	4.029	9.638	2.267
4.133	5.787	1.870	5.253	4.250	8.848	5.240	5	4.099	4.099	3.771	8.820
4.384	6.498	1.147	4.742	4.175	9.090	4.700	5	4.325	4.325	9.888	8.188
4.980	5.862	1.222	5.052	4.111	9.348	5.011	5	4.853	4.853	1.038	8.681
4.935	5.703	1.298	5.371	4.051	9.606	5.330	5	4.800	4.800	1.108	7.480
4.977	8.957	0.698	3.578	3.908	1.025	3.590	5	4.923	4.923	1.280	5.370
4.978	7.453	0.938	4.109	3.908	1.026	4.070	5	4.931	4.931	1.284	6.175
5.000	7.527	0.841	4.089	3.906	1.030	4.030	5	4.952	4.952	1.298	6.144
5.500	9.301	7.984	3.293	3.887	1.117	3.298	5	5.438	5.438	1.583	5.495
6.000	1.128	6.587	2.715	3.503	1.293	2.880	5	5.922	5.922	1.898	4.961
6.147	1.198	6.227	2.575	3.445	1.227	2.940	5	6.084	6.084	1.995	4.823
6.148	1.083	7.388	3.055	3.444	1.227	3.020	5	6.078	6.078	2.005	5.738
6.388	1.181	6.272	2.583	3.313	1.288	2.980	5	6.417	6.417	2.248	5.157
6.389	1.195	6.188	2.583	3.304	1.288	2.930	5	6.442	6.442	2.268	5.118
6.927	1.881	6.892	2.633	3.384	1.288	2.888	5	6.931	6.931	2.273	6.085
7.000	1.383	5.887	2.751	3.147	1.388	2.328	5	6.988	6.988	2.623	5.951
8.000	1.688	3.388	1.649	2.887	1.512	1.828	5	7.888	7.888	3.441	4.938

502

97-8k

97-BK

97-84

12/07/78

ENDL Evaluated Photon Data

97-Bk

ATOMIC WEIGHT 246				13.5 GRAMS/CC							
ENERGY MEV	TOTAL HFP		CROSS SECTION (BARNS)					MEV/COLLISION			MEV/CM
	CH	CH*CH/CH	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD	K.E. *FLOR	K.E. BREMSSTR	K.E.	
2.500+ 1	1.000+ 0	7.341- 2	3.035+ 1	2.401- 3	2.477+ 0	1.417- 1	2.773+ 1	2.353+ 1	2.353+ 1	1.303+ 1	2.332+ 1
3.000+ 1	9.523- 1	7.775- 2	3.210+ 1	1.000- 3	2.146+ 0	1.100- 1	2.990+ 1	2.894+ 1	2.894+ 1	1.609+ 1	2.987+ 1
3.500+ 1	9.003- 1	8.130- 2	3.370+ 1	1.205- 3	1.800+ 0	9.700- 2	3.172+ 1	3.355+ 1	3.355+ 1	2.249+ 1	3.094+ 1
4.000+ 1	8.700- 1	8.487- 2	3.500+ 1	9.300- 4	1.705+ 0	8.450- 2	3.330+ 1	3.690+ 1	3.690+ 1	2.701+ 1	4.410+ 1
4.500+ 1	8.434- 1	8.783- 2	3.620+ 1	7.413- 4	1.590+ 0	7.425- 2	3.480+ 1	4.357+ 1	4.357+ 1	3.161+ 1	5.180+ 1
5.000+ 1	8.191- 1	9.043- 2	3.730+ 1	6.004- 4	1.423+ 0	6.610- 2	3.590+ 1	4.890+ 1	4.890+ 1	3.600+ 1	5.930+ 1
5.500+ 1	7.987- 1	9.274- 2	3.835+ 1	4.902- 4	1.317+ 0	5.947- 2	3.697+ 1	5.390+ 1	5.390+ 1	4.057+ 1	6.709+ 1
6.000+ 1	7.817- 1	9.476- 2	3.910+ 1	4.170- 4	1.200+ 0	5.400- 2	3.790+ 1	5.850+ 1	5.850+ 1	4.570+ 1	7.495+ 1
6.500+ 1	7.680- 1	9.637- 2	3.965+ 1	3.553- 4	1.140+ 0	4.947- 2	3.885+ 1	6.320+ 1	6.320+ 1	5.050+ 1	8.274+ 1
7.000+ 1	7.580- 1	9.780- 2	4.047+ 1	3.004- 4	1.080+ 0	4.581- 2	3.974+ 1	6.800+ 1	6.800+ 1	5.530+ 1	9.064+ 1
8.000+ 1	7.381- 1	1.000- 1	4.161+ 1	2.340- 4	9.672- 1	3.940- 2	4.060+ 1	7.861+ 1	7.861+ 1	6.497+ 1	1.000+ 2
1.000+ 2	7.035- 1	1.053- 1	4.353+ 1	1.501- 4	8.027- 1	3.070- 2	4.270+ 1	9.802+ 1	9.802+ 1	8.449+ 1	1.402+ 2

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Form Factors

97-Bk

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000-0	1.000-0	0.000-0	1.200-1	9.157-1	7.630-2	1.000-0	3.000-1	4.718-1	1.000-1	2.491-2	9.001-1
5.000-3	9.995-1	3.237-4	1.300-1	9.917-1	9.302-2	1.250-0	3.100-1	5.377-1	1.200-1	1.405-2	9.001-1
1.000-2	9.990-1	1.000-3	1.700-1	9.677-1	1.107-1	1.500-0	3.000-1	5.000-1	2.000-1	1.217-2	9.925-1
1.500-2	9.981-1	2.003-3	2.000-1	9.430-1	1.270-1	2.000-0	1.800-1	6.000-1	5.000-1	3.219-3	9.999-1
2.000-2	9.966-1	4.070-3	2.500-1	7.942-1	1.500-1	2.500-0	1.451-1	7.200-1	6.000-1	1.150-3	1.000-0
2.500-2	9.947-1	7.019-3	3.000-1	7.073-1	1.601-1	3.000-0	1.240-1	7.703-1	1.000-2	8.037-4	1.000-0
3.000-2	9.925-1	1.030-2	4.000-1	6.005-1	2.405-1	3.500-0	1.047-1	8.103-1	1.000-3	2.370-4	1.000-0
4.000-2	9.870-1	1.700-2	5.000-1	5.200-1	2.800-1	4.000-0	9.031-2	8.437-1	1.000-4	1.330-4	1.000-0
5.000-2	9.800-1	2.430-2	6.000-1	4.500-1	3.000-1	5.000-0	8.150-2	8.603-1	1.000-5	7.000-5	1.000-0
7.000-2	9.651-1	3.000-2	7.000-1	4.000-1	3.000-1	6.000-0	7.000-2	9.115-1	1.000-6	7.000-5	1.000-0
9.000-2	9.470-1	3.000-2	8.000-1	4.407-1	4.000-1	7.000-0	6.001-2	9.314-1			
1.000-1	9.307-1	5.037-2	9.000-1	4.100-1	4.401-1	8.000-0	5.530-2	9.400-1

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ENDL Evaluated Photon Cross Sections

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Energy Deposition

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ENDL Evaluated Photon Data

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ATOMIC WEIGHT 250										13.5 GRAMS/CC			
ENERGY	TOTAL NFP			CROSS SECTION (BARNS)						MEV/COLLISION			MEV/CM
MEV	CM	CM ² /CM	CM	TOTAL	COHERENT	INCOHERENT	PHOTOEL	PAIR PROD		K.E. FLOR	K.E.	BREHSTR	K.E.
1.000	1.000	0.370	1.000	1.000	0.370	0.370	0.370	0.370		0.980	0.980	0.120	0.970
1.020	1.020	0.370	1.020	1.020	0.370	0.370	0.370	0.370		1.000	1.000	0.120	0.990
1.040	1.040	0.370	1.040	1.040	0.370	0.370	0.370	0.370		1.020	1.020	0.120	1.010
1.060	1.060	0.370	1.060	1.060	0.370	0.370	0.370	0.370		1.040	1.040	0.120	1.030
1.080	1.080	0.370	1.080	1.080	0.370	0.370	0.370	0.370		1.060	1.060	0.120	1.050
1.100	1.100	0.370	1.100	1.100	0.370	0.370	0.370	0.370		1.080	1.080	0.120	1.070
1.120	1.120	0.370	1.120	1.120	0.370	0.370	0.370	0.370		1.100	1.100	0.120	1.090
1.140	1.140	0.370	1.140	1.140	0.370	0.370	0.370	0.370		1.120	1.120	0.120	1.110
1.160	1.160	0.370	1.160	1.160	0.370	0.370	0.370	0.370		1.140	1.140	0.120	1.130
1.180	1.180	0.370	1.180	1.180	0.370	0.370	0.370	0.370		1.160	1.160	0.120	1.150
1.200	1.200	0.370	1.200	1.200	0.370	0.370	0.370	0.370		1.180	1.180	0.120	1.170
1.220	1.220	0.370	1.220	1.220	0.370	0.370	0.370	0.370		1.200	1.200	0.120	1.190
1.240	1.240	0.370	1.240	1.240	0.370	0.370	0.370	0.370		1.220	1.220	0.120	1.210
1.260	1.260	0.370	1.260	1.260	0.370	0.370	0.370	0.370		1.240	1.240	0.120	1.230
1.280	1.280	0.370	1.280	1.280	0.370	0.370	0.370	0.370		1.260	1.260	0.120	1.250
1.300	1.300	0.370	1.300	1.300	0.370	0.370	0.370	0.370		1.280	1.280	0.120	1.270
1.320	1.320	0.370	1.320	1.320	0.370	0.370	0.370	0.370		1.300	1.300	0.120	1.290
1.340	1.340	0.370	1.340	1.340	0.370	0.370	0.370	0.370		1.320	1.320	0.120	1.310
1.360	1.360	0.370	1.360	1.360	0.370	0.370	0.370	0.370		1.340	1.340	0.120	1.330
1.380	1.380	0.370	1.380	1.380	0.370	0.370	0.370	0.370		1.360	1.360	0.120	1.350
1.400	1.400	0.370	1.400	1.400	0.370	0.370	0.370	0.370		1.380	1.380	0.120	1.370
1.420	1.420	0.370	1.420	1.420	0.370	0.370	0.370	0.370		1.400	1.400	0.120	1.390
1.440	1.440	0.370	1.440	1.440	0.370	0.370	0.370	0.370		1.420	1.420	0.120	1.410
1.460	1.460	0.370	1.460	1.460	0.370	0.370	0.370	0.370		1.440	1.440	0.120	1.430
1.480	1.480	0.370	1.480	1.480	0.370	0.370	0.370	0.370		1.460	1.460	0.120	1.450
1.500	1.500	0.370	1.500	1.500	0.370	0.370	0.370	0.370		1.480	1.480	0.120	1.470
1.520	1.520	0.370	1.520	1.520	0.370	0.370	0.370	0.370		1.500	1.500	0.120	1.490
1.540	1.540	0.370	1.540	1.540	0.370	0.370	0.370	0.370		1.520	1.520	0.120	1.510
1.560	1.560	0.370	1.560	1.560	0.370	0.370	0.370	0.370		1.540	1.540	0.120	1.530
1.580	1.580	0.370	1.580	1.580	0.370	0.370	0.370	0.370		1.560	1.560	0.120	1.550
1.600	1.600	0.370	1.600	1.600	0.370	0.370	0.370	0.370		1.580	1.580	0.120	1.570
1.620	1.620	0.370	1.620	1.620	0.370	0.370	0.370	0.370		1.600	1.600	0.120	1.590
1.640	1.640	0.370	1.640	1.640	0.370	0.370	0.370	0.370		1.620	1.620	0.120	1.610
1.660	1.660	0.370	1.660	1.660	0.370	0.370	0.370	0.370		1.640	1.640	0.120	1.630
1.680	1.680	0.370	1.680	1.680	0.370	0.370	0.370	0.370		1.660	1.660	0.120	1.650
1.700	1.700	0.370	1.700	1.700	0.370	0.370	0.370	0.370		1.680	1.680	0.120	1.670
1.720	1.720	0.370	1.720	1.720	0.370	0.370	0.370	0.370		1.700	1.700	0.120	1.690
1.740	1.740	0.370	1.740	1.740	0.370	0.370	0.370	0.370		1.720	1.720	0.120	1.710
1.760	1.760	0.370	1.760	1.760	0.370	0.370	0.370	0.370		1.740	1.740	0.120	1.730
1.780	1.780	0.370	1.780	1.780	0.370	0.370	0.370	0.370		1.760	1.760	0.120	1.750
1.800	1.800	0.370	1.800	1.800	0.370	0.370	0.370	0.370		1.780	1.780	0.120	1.770
1.820	1.820	0.370	1.820	1.820	0.370	0.370	0.370	0.370		1.800	1.800	0.120	1.790
1.840	1.840	0.370	1.840	1.840	0.370	0.370	0.370	0.370		1.820	1.820	0.120	1.810
1.860	1.860	0.370	1.860	1.860	0.370	0.370	0.370	0.370		1.840	1.840	0.120	1.830
1.880	1.880	0.370	1.880	1.880	0.370	0.370	0.370	0.370		1.860	1.860	0.120	1.850
1.900	1.900	0.370	1.900	1.900	0.370	0.370	0.370	0.370		1.880	1.880	0.120	1.870
1.920	1.920	0.370	1.920	1.920	0.370	0.370	0.370	0.370		1.900	1.900	0.120	1.890
1.940	1.940	0.370	1.940	1.940	0.370	0.370	0.370	0.370		1.920	1.920	0.120	1.910
1.960	1.960	0.370	1.960	1.960	0.370	0.370	0.370	0.370		1.940	1.940	0.120	1.930
1.980	1.980	0.370	1.980	1.980	0.370	0.370	0.370	0.370		1.960	1.960	0.120	1.950
2.000	2.000	0.370	2.000	2.000	0.370	0.370	0.370	0.370		1.980	1.980	0.120	1.970
2.020	2.020	0.370	2.020	2.020	0.370	0.370	0.370	0.370		2.000	2.000	0.120	1.990
2.040	2.040	0.370	2.040	2.040	0.370	0.370	0.370	0.370		2.020	2.020	0.120	2.010
2.060	2.060	0.370	2.060	2.060	0.370	0.370	0.370	0.370		2.040	2.040	0.120	2.030
2.080	2.080	0.370	2.080	2.080	0.370	0.370	0.370	0.370		2.060	2.060	0.120	2.050
2.100	2.100	0.370	2.100	2.100	0.370	0.370	0.370	0.370		2.080	2.080	0.120	2.070
2.120	2.120	0.370	2.120	2.120	0.370	0.370	0.370	0.370		2.100	2.100	0.120	2.090
2.140	2.140	0.370	2.140	2.140	0.370	0.370	0.370	0.370		2.120	2.120	0.120	2.110
2.160	2.160	0.370	2.160	2.160	0.370	0.370	0.370	0.370		2.140	2.140	0.120	2.130
2.180	2.180	0.370	2.180	2.180	0.370	0.370	0.370	0.370		2.160	2.160	0.120	2.150
2.200	2.200	0.370	2.200	2.200	0.370	0.370	0.370	0.370		2.180	2.180	0.120	2.170
2.220	2.220	0.370	2.220	2.220	0.370	0.370	0.370	0.370		2.200	2.200	0.120	2.190
2.240	2.240	0.370	2.240	2.240	0.370	0.370	0.370	0.370		2.220	2.220	0.120	2.210
2.260	2.260	0.370	2.260	2.260	0.370	0.370	0.370	0.370		2.240	2.240	0.120	2.230
2.280	2.280	0.370	2.280	2.280	0.370	0.370	0.370	0.370		2.260	2.260	0.120	2.250
2.300	2.300	0.370	2.300	2.300	0.370	0.370	0.370	0.370		2.280	2.280	0.120	2.270
2.320	2.320	0.370	2.320	2.320	0.370	0.370	0.370	0.370		2.300	2.300	0.120	2.290
2.340	2.340	0.370	2.340	2.340	0.370	0.370	0.370	0.370		2.320	2.320	0.120	2.310
2.360	2.360	0.370	2.360	2.360	0.370	0.370	0.370	0.370		2.340	2.340	0.120	2.330
2.380	2.380	0.370	2.380	2.380	0.370	0.370	0.370	0.370		2.360	2.360	0.120	2.350
2.400	2.400	0.370	2.400	2.400	0.370	0.370	0.370	0.370		2.380	2.380	0.120	2.370
2.420	2.420	0.370	2.420	2.420	0.370	0.370	0.370	0.370		2.400	2.400	0.120	2.390
2.440	2.440	0.370	2.440	2.440	0.370	0.370	0.370	0.370		2.420	2.420	0.120	2.410
2.460	2.460	0.370	2.460	2.460	0.370	0.370	0.370	0.370		2.440	2.440	0.120	2.430
2.480	2.480	0.370	2.480	2.480	0.370	0.370	0.370	0.370		2.460	2.460	0.120	2.450
2.500	2.500	0.370	2.500	2.500	0.370	0.370	0.370	0.370		2.480	2.480	0.120	2.470
2.520	2.520	0.370	2.520	2.520	0.370	0.370	0.370	0.370		2.500	2.500	0.120	2.490
2.540	2.540	0.370	2.540	2.540	0.370	0.370	0.370	0.370		2.520	2.520	0.120	2.510
2.560	2.560	0.370	2.560	2.560	0.370	0.370	0.370	0.370		2.540	2.540	0.120	2.530
2.580	2.580	0.370	2.580	2.580	0.370	0.370	0.370	0.370		2.560	2.560	0.120	2.550
2.600	2.600	0.370	2.600	2.600	0.370	0.370	0.370	0.370		2.580	2.580	0.120	2.570
2.620	2.620	0.370	2.620	2.620	0.370	0.370	0.370	0.370		2.600	2.600	0.120	2.590
2.640	2.640	0.370	2.640	2.640	0.370	0.370	0.370	0.370		2.620	2.620	0.120	2.610
2.660	2.660	0.370	2.660	2.660	0.370	0.370	0.370	0.370		2.640	2.640	0.120	2.630
2.680	2.680	0.370	2.680	2.680	0.370	0.370	0.370	0.370		2.660	2.660	0.120	2.650
2.70													

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ENCL Evaluated Photon Data

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ATOMIC WEIGHT 249										13.5 OAMS/CC			
ENERGY MEV	TOTAL MPF		CROSS SECTION (BARN)					REV/COLLISION		REV/CM			
	CH	CH/CH/CH	TOTAL	COHERENT	INCOHER	PHOTOE	PAIR PROD	K.E. FLOR	K.E. BREMSSTR	K.E.			
1.000	2	3.198	2	8.577	2	2.448	3	1.791	1	9.330	4	9.743	3
1.250	2	3.763	4	1.801	2	5.296	4	1.975	3	2.083	1	1.203	2
1.500	2	9.393	4	7.898	1	3.878	4	1.807	3	2.337	1	1.425	2
1.750	2	1.394	3	5.315	1	2.197	1	1.381	3	2.388	1	1.837	2
1.983	2	1.947	3	3.884	1	1.573	4	1.201	3	2.757	1	1.837	2
2.000	2	8.822	4	8.322	1	3.433	4	1.201	3	2.757	1	1.837	2
2.000	2	9.828	4	8.295	1	3.388	4	1.198	3	2.762	1	1.828	2
2.500	2	1.498	3	4.944	1	2.044	4	8.887	2	3.838	1	2.388	2
2.512	2	1.515	3	4.888	1	2.061	4	8.898	2	3.845	1	2.398	2
2.513	2	1.113	3	8.824	1	2.751	4	8.887	2	3.845	1	2.429	2
2.803	2	1.228	3	8.040	1	2.487	4	8.421	2	3.088	1	2.512	2
2.803	2	1.053	3	7.831	1	2.807	4	8.421	2	3.088	1	2.525	2
3.800	2	1.521	3	4.888	1	2.015	4	8.871	2	3.288	1	2.828	2
3.500	2	2.243	3	3.303	1	1.388	4	5.804	2	3.433	1	3.348	2
4.000	2	3.135	3	2.383	1	8.770	3	4.838	2	3.408	1	3.786	2
4.500	2	4.268	3	1.752	1	7.244	3	3.888	2	3.708	1	4.237	2
5.000	2	5.518	3	1.342	1	5.930	3	3.322	2	3.804	1	4.670	2
5.500	2	7.028	3	1.024	1	4.328	3	2.857	2	3.883	1	5.052	2
6.000	2	8.725	3	8.400	0	3.498	3	2.488	2	3.922	1	5.513	2
6.500	2	1.073	2	8.905	0	2.853	3	2.179	2	3.948	1	5.924	2
7.000	2	1.294	2	5.728	0	2.388	3	1.927	2	3.973	1	6.327	2
8.000	2	1.807	2	4.098	0	1.895	3	1.943	2	4.017	1	7.108	2
1.000	1	3.148	2	2.353	0	9.729	2	1.038	2	4.015	1	8.262	2
1.250	1	5.588	2	1.328	0	5.481	2	7.143	1	3.932	1	1.013	1
1.350	1	6.770	2	1.094	0	4.354	2	6.238	1	3.904	1	1.089	1
1.350	1	1.501	2	3.887	0	1.811	3	6.237	1	3.904	1	1.271	1
1.500	1	2.444	2	3.324	0	1.250	3	5.188	1	3.888	1	1.400	1
1.750	1	3.553	2	2.085	0	8.820	2	3.818	1	3.788	1	1.610	1
2.000	1	4.882	2	1.517	0	6.274	2	3.776	1	3.682	1	1.812	1
2.500	1	8.188	2	9.038	1	3.738	2	2.044	1	3.453	1	2.191	1
3.000	1	1.232	1	8.011	1	2.405	2	1.483	1	3.290	1	2.537	1
3.500	1	1.863	1	4.384	1	1.813	2	1.098	1	3.128	1	2.885	1
4.000	1	2.187	1	3.374	1	1.385	2	8.588	0	2.995	1	3.189	1
4.500	1	2.728	1	2.715	1	1.123	2	8.698	0	2.888	1	3.458	1
5.000	1	3.288	1	2.295	1	9.322	1	3.821	0	2.788	1	3.734	1
5.500	1	3.835	1	1.932	1	7.887	1	4.888	0	2.698	1	4.008	1
6.000	1	4.391	1	1.687	1	6.575	1	3.972	0	2.588	1	4.278	1
6.500	1	4.945	1	1.488	1	5.194	1	3.408	0	2.481	1	4.539	1
7.000	1	5.488	1	1.347	1	5.571	1	3.094	0	2.404	1	4.800	1
8.000	1	6.587	1	1.175	1	4.830	1	2.895	0	2.271	1	5.315	1
1.000	0	8.584	1	8.028	0	3.588	1	1.483	0	2.048	1	6.381	0
1.022	0	8.788	1	8.431	0	3.488	1	1.421	0	2.048	1	6.515	0
1.250	0	1.278	0	8.874	0	2.842	1	9.588	1	1.838	0	7.825	0
1.500	0	1.231	0	8.215	0	2.487	1	8.713	1	1.673	0	8.146	0
1.750	0	1.351	0	5.482	0	2.287	1	4.938	1	1.940	0	8.588	0
2.000	0	1.425	0	5.198	0	2.148	1	3.808	1	1.431	0	8.830	0
2.044	0	1.438	0	5.150	0	2.129	1	3.848	1	1.417	0	8.828	0
2.500	0	1.529	0	4.848	0	2.057	1	2.449	1	1.298	0	9.434	0
3.000	0	1.588	0	4.720	0	1.951	1	1.708	1	1.127	0	9.932	0
3.500	0	1.580	0	4.898	0	1.988	1	1.295	1	1.025	0	1.250	0
4.000	0	1.583	0	4.858	0	1.983	1	9.623	2	9.411	0	1.284	0
4.500	0	1.588	0	4.871	0	1.931	1	7.610	2	8.717	0	1.284	0
5.000	0	1.574	0	4.785	0	1.945	1	8.189	2	8.131	0	1.284	0
5.500	0	1.585	0	4.733	0	1.957	1	5.101	2	7.887	0	1.284	0
6.000	0	1.578	0	4.788	0	1.978	1	4.288	2	7.188	0	1.284	0
6.500	0	1.538	0	4.842	0	2.088	1	3.895	2	6.843	0	1.284	0
7.000	0	1.588	0	4.913	0	2.031	1	3.152	2	6.481	0	1.284	0
8.000	0	1.488	0	4.877	0	2.088	1	2.414	2	5.887	0	1.284	0
1.000	1	1.384	0	5.431	0	2.248	1	1.548	2	5.611	0	1.284	0
1.250	1	1.388	0	5.843	0	2.418	1	9.887	3	4.298	0	1.284	0
1.500	1	1.188	0	5.294	0	2.578	1	8.874	3	3.788	0	1.284	0
1.750	1	1.12	0	6.888	0	2.731	1	5.998	3	3.288	0	1.284	0
2.000	1	1.388	0	6.934	0	2.867	1	3.887	3	2.977	0	1.284	0

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ENOL Evaluated Photon Data

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ATOMIC WEIGHT 248			13.5 GRAMS/CC									
ENERGY MEV	TOTAL NFP		CROSS SECTION (BARNs)					NEV/COLLISION			NEV/CM	
	CH	CH+CH/CH	TOTAL	COHERENT	INCOHERT	PHOTOEL	PAIR PROD	K.E.+FLOR	K.E.	SHOTSSTR	K.E.	
2.500+ 1	9.988- 1	7.461- 2	3.005+ 1	2.475- 3	2.503+ 0	1.402- 1	2.820+ 1	2.353+ 1	2.353+ 1	1.309+ 1	2.378+ 1	
3.000+ 1	9.388- 1	7.908- 2	3.208+ 1	1.718- 3	2.108+ 0	1.210- 1	3.040+ 1	2.695+ 1	2.695+ 1	1.616+ 1	3.047+ 1	
3.500+ 1	8.948- 1	8.278- 2	3.423+ 1	1.293- 3	1.817+ 0	1.020- 1	3.221+ 1	3.398+ 1	3.398+ 1	2.257+ 1	3.790+ 1	
4.000+ 1	8.680- 1	8.813- 2	3.581+ 1	9.889- 4	1.723+ 0	8.808- 2	3.380+ 1	3.898+ 1	3.898+ 1	2.709+ 1	4.404+ 1	
4.500+ 1	8.300+ 1	8.987- 2	3.860+ 1	7.839- 4	1.368+ 0	7.791- 2	3.528+ 1	4.357+ 1	4.357+ 1	3.170+ 1	5.250+ 1	
5.000+ 1	8.258+ 1	9.192- 2	3.801+ 1	6.188- 4	1.438+ 0	8.690- 2	3.650+ 1	4.898+ 1	4.898+ 1	3.636+ 1	6.029+ 1	
5.500+ 1	7.682+ 1	9.482- 2	3.688+ 1	5.114- 4	1.330+ 0	8.188- 2	3.796+ 1	5.328+ 1	5.328+ 1	4.107+ 1	6.818+ 1	
6.000+ 1	7.056+ 1	9.825- 2	3.680+ 1	4.297- 4	1.238+ 0	5.810- 2	3.850+ 1	5.699+ 1	5.699+ 1	4.582+ 1	7.613+ 1	
6.500+ 1	7.385+ 1	9.782- 2	4.049+ 1	3.682- 4	1.180+ 0	5.138- 2	3.927+ 1	6.380+ 1	6.380+ 1	5.051+ 1	8.407+ 1	
7.000+ 1	7.446+ 1	9.948- 2	4.113+ 1	3.157- 4	1.091+ 0	4.735- 2	3.999+ 1	6.880+ 1	6.880+ 1	5.541+ 1	9.213+ 1	
8.000+ 1	7.237+ 1	1.023- 1	4.232+ 1	2.418- 4	9.771- 1	4.090- 2	4.130+ 1	7.681+ 1	7.681+ 1	6.509+ 1	1.088+ 2	
1.000+ 2	6.907+ 1	1.072- 1	4.434+ 1	1.947- 4	8.110- 1	3.200- 2	4.350+ 1	9.862+ 1	9.862+ 1	8.481+ 1	1.428+ 2	

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Form Factors

98-Cf

SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT	SIN(θ/2)/λ	COHERENT	INCOHERENT
1/λ			1/λ			1/λ			1/λ		
0.000+0	1.000+0	0.000+0	1.250-1	9.187-1	7.430-2	1.000+0	3.003-1	4.700-1	1.000+1	2.512-2	9.000-1
0.000-3	9.999-1	3.000-4	1.500-1	8.007-1	9.170-2	1.250+0	3.101-1	5.300-1	1.000+1	1.404-2	9.000-1
1.000-2	9.999-1	1.200-3	1.750-1	6.731-1	1.600-1	1.500+0	2.604-1	5.000-1	2.000+1	1.202-2	9.923-1
1.500-2	9.991-1	2.700-3	2.000-1	5.400-1	1.231-1	2.000+0	1.877-1	6.000-1	5.000+1	3.313-3	5.339-1
2.000-2	9.987-1	4.001-3	2.500-1	4.001-1	1.000-1	2.500+0	1.452-1	7.200-1	8.000+1	1.200-3	1.000+0
2.500-2	9.978-1	7.300-3	3.000-1	3.513-1	1.000-1	3.000+0	1.250-1	7.700-1	1.000+2	7.173-4	1.000+0
3.000-2	9.967-1	1.000-2	4.000-1	6.000-1	2.301-1	3.500+0	1.000-1	8.100-1	1.000+3	2.001-6	1.000+0
4.000-2	9.974-1	1.073-2	5.000-1	5.000-1	2.000-1	4.000+0	9.001-2	8.400-1	1.000+6	1.010-13	1.000+0
5.000-2	9.914-1	2.370-2	6.000-1	5.303-1	3.200-1	5.000+0	8.203-2	8.800-1	7.000+9	1.032-20	1.000+0
7.000-2	9.802-1	3.700-2	7.000-1	4.000-1	3.001-1	6.000+0	4.013-2	9.100-1			
9.000-2	9.300-1	5.000-2	8.000-1	4.403-1	4.030-1	7.000+0	4.000-2	9.300-1			
1.000-1	9.415-1	5.700-2	9.000-1	4.107-1	4.301-1	8.000+0	3.947-2	9.403-1

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Photoelectric Absorption Edges

4-Ba

12/07/78

Photoelectric Absorption Edges - Z Order

4-Be

ELEMENT	EDGE	ENERGY	ELEMENT	EDGE	ENERGY	ELEMENT	EDGE	ENERGY	ELEMENT	EDGE	ENERGY
KEY			KEY			KEY			KEY		
4-BE	K	0.112	27-CO	M-I	0.101	37-RO	M-IV	0.112	44-RU	M-IV	0.204
5-B	K	0.100		L-III	0.101		M-III	0.230		M-III	0.401
6-C	K	0.204		L-II	0.080		M-II	0.248		M-II	0.403
7-N	K	0.402		L-I	0.056		M-I	0.323		M-I	0.506
8-O	K	0.533		M-I	7.709		L-III	1.005		L-III	2.030
9-F	K	0.700	28-NI	M-I	0.111		L-II	1.003		L-II	2.007
10-NE	K	0.079		L-III	0.112		L-I	2.005		L-I	3.224
11-NA	K	1.078		L-II	0.000		K	15.200		K	22.117
12-MG	K	1.305		L-I	1.012	38-SR	M-V	0.133	45-RH	M-V	0.307
13-AL	L-I	0.116		K	0.333		M-IV	0.135		M-IV	0.312
	K	1.586	29-CU	L-III	0.120		M-III	0.209		M-III	0.436
14-SI	L-III	0.100		M-I	0.122		M-II	0.200		M-II	0.521
	L-II	0.120		L-II	1.000		M-I	0.350		M-I	0.620
	L-I	0.140		L-I	1.100		L-III	1.940		L-III	3.003
	K	1.839	30-ZN	M-I	0.979		L-II	2.007		L-II	3.146
15-P	L-III	0.130		K	0.137		L-I	2.218		L-I	3.412
	L-II	0.130		L-III	1.021		K	16.105		K	23.220
	L-I	0.150		L-II	1.044	39-Y	M-V	0.156	46-PD	M-V	0.335
	K	2.140		L-I	1.106		M-IV	0.150		M-IV	0.340
16-S	L-III	0.105		K	9.059		M-III	0.299		M-III	0.532
	L-II	0.105	31-GA	M-III	0.103		M-II	0.312		M-II	0.559
	L-I	0.230		M-I	0.106		M-I	0.394		M-I	0.660
	K	2.472		M-I	0.159		L-III	2.080		L-III	3.173
17-CL	L-III	0.202		L-III	1.115		L-II	2.156		L-II	3.330
	L-II	0.203		L-II	1.142		L-I	2.373		L-I	3.605
	L-I	0.271		L-I	1.302	40-ZN	K	17.000		K	24.350
18-AR	K	2.022	32-OC	K	10.367		M-V	0.100	47-AQ	M-V	0.367
	L-III	0.245		M-III	0.121		M-IV	0.102		M-IV	0.373
	L-II	0.247		M-II	0.126		M-III	0.330		M-III	0.571
	L-I	0.321		M-I	0.101		M-II	0.344		M-II	0.602
	K	3.202		L-III	1.210		M-I	0.431		M-I	0.710
19-K	L-III	0.254		L-II	1.249		L-III	2.223		L-III	3.351
	L-II	0.250		L-I	1.414		L-II	2.307		L-II	3.524
	L-I	0.370		K	11.104		L-I	2.532		L-I	3.806
20-CA	K	3.607	33-AS	M-III	0.140		K	17.900		K	25.514
	L-III	0.346		M-II	0.146	41-RE	M-V	0.204	48-CD	M-I	0.100
	L-II	0.350		M-I	0.204		M-IV	0.206		M-IV	0.404
	L-I	0.430		L-III	1.325		M-III	0.361		M-IV	0.410
	K	4.030		L-II	1.380		M-II	0.377		M-III	0.616
21-SC	L-III	0.401		L-I	1.530		M-I	0.489		M-II	0.651
	L-II	0.406	34-SE	K	11.000		L-III	2.371		M-I	0.771
	L-I	0.501		M-III	0.161		L-II	2.485		L-III	3.537
	K	4.493		M-II	0.160		L-I	2.650		L-II	3.727
22-TI	L-III	0.450		M-I	0.232		K	18.200		L-I	4.010
	L-II	0.462		L-III	1.436	42-HO	M-V	0.250		K	26.711
	L-I	0.504		L-II	1.477		M-IV	0.250	49-IN	M-I	0.122
	K	4.905		L-I	1.653		M-III	0.392		M-IV	0.443
23-V	L-III	0.513		K	12.050		M-II	0.410		M-IV	0.451
	L-II	0.521	35-BR	M-III	0.104		M-I	0.505		M-III	0.664
	L-I	0.629		M-II	0.191		L-III	2.520		M-II	0.702
	K	5.405		M-I	0.257		L-II	2.625		M-I	0.826
24-CR	L-III	0.575		L-III	1.550		L-I	2.806		L-III	3.730
	L-II	0.584		L-II	1.596	43-TC	K	19.999		L-II	3.936
	L-I	0.695		L-I	1.702		M-V	0.253		L-I	4.236
	K	5.900		K	13.474		M-IV	0.256	50-SH	K	27.940
25-MN	L-III	0.600	36-KR	M-III	0.210		M-III	0.426		M-I	0.137
	L-II	0.651		M-II	0.219		M-II	0.445		M-V	0.405
	L-I	0.770		M-I	0.290		M-I	0.545		M-IV	0.493
	K	6.940		L-III	1.675		L-III	2.677		M-III	0.714
26-Fe	L-III	0.700		L-II	1.726		L-II	2.793		M-II	0.750
	L-II	0.721		L-I	1.920		L-I	3.043		M-I	1.000
	L-I	0.847		K	14.320		K	21.045		L-III	3.929
	K	7.112	37-RB	M-V	0.110	44-RU	M-V	0.200		L-II	4.190

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50-Sn

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Photoelectric Absorption Edges - Z Order

69-Tm

ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV
69-Tm	K	90.390	74-M	M-IV	1.871	78-Pt	L-I	13.882	82-Pb	M-I	3.890
70-Yb	M-V	0.180		M-III	2.281		K	78.395		L-III	13.035
	M-IV	0.180		M-II	2.575	79-Au	O-I	0.118		L-II	15.188
	N-III	0.351		M-I	2.818		N-V	0.334		L-I	15.880
	M-II	0.387		L-III	10.204		M-IV	0.353		K	98.008
	M-I	0.482		L-II	11.542		N-III	0.546	83-Bi	O-III	0.117
	M-V	1.528		L-I	12.088		M-II	0.544		N-VII	0.157
	M-IV	1.578		K	85.324		M-I	0.782		O-I	0.181
	N-III	1.951	75-Re	N-V	0.228		M-V	2.208		M-VI	0.182
	M-II	2.171		M-IV	0.273		M-IV	2.281		N-V	0.440
	M-I	2.398		N-III	0.445		M-III	2.743		M-IV	0.484
	L-III	8.543		M-II	0.518		M-II	3.149		N-III	0.678
	L-II	9.976		N-I	0.625		M-I	3.425		N-II	0.805
	L-I	10.488		M-V	1.883		L-III	11.918		N-I	0.939
71-Lu	K	61.332		M-IV	1.949		L-II	13.733		M-V	2.579
	N-V	0.199		M-III	2.387		L-I	14.353		M-IV	2.687
	N-IV	0.210		M-II	2.681	80-Hg	K	80.723		M-III	3.177
	N-III	0.367		M-I	2.931		N-VI	0.102		M-II	3.888
	N-II	0.480		L-III	10.539		O-I	0.121		M-I	3.998
	M-I	0.513		L-II	11.957		M-V	0.380		L-III	13.418
	M-V	1.589		L-I	12.525		M-IV	0.380		L-II	15.788
	N-IV	1.639		K	71.878		N-III	0.574		L-I	16.385
	M-III	2.026	76-Os	N-V	0.274		M-II	0.682		K	90.527
	M-II	2.285		N-IV	0.291		N-I	0.801	84-Po	O-III	0.108
	M-I	2.492		N-III	0.488		M-V	2.295		O-II	0.133
	L-III	9.244		N-II	0.546		M-IV	2.385		O-I	0.177
	L-II	10.349		N-I	0.896		M-III	2.847		N-VII	0.178
	L-I	10.870		M-V	1.880		M-II	3.280		N-VI	0.183
72-Hf	K	83.314		M-IV	2.031		M-I	3.552		N-V	0.473
	N-V	0.213		M-III	2.457		L-III	12.284		N-IV	0.498
	N-IV	0.224		M-II	2.792		L-II	14.209		M-III	0.707
	N-III	0.381		M-I	3.050		L-I	14.848		N-II	0.851
	N-II	0.439		L-III	10.871	81-Tl	K	83.103		N-I	0.990
	N-I	0.539		L-II	12.384		N-VI	0.118		M-V	2.684
	M-V	1.882		L-I	12.984		N-VI	0.123		M-IV	2.799
	M-IV	1.718		K	73.872		O-I	0.134		M-III	3.298
	M-III	2.110	77-Ir	N-V	0.293		N-V	0.386		M-II	3.850
	M-II	2.384		M-IV	0.311		N-IV	0.407		M-I	4.157
	M-I	2.602		N-III	0.493		N-III	0.608		L-III	13.815
	L-III	9.581		N-II	0.577		N-II	0.723		L-II	16.245
	L-II	10.739		N-I	0.888		N-I	0.845		L-I	18.937
	L-I	11.272		M-V	2.041		M-V	2.389		K	93.108
73-Ta	K	85.351		M-IV	2.118		M-IV	2.485	85-At	O-III	0.120
	N-V	0.228		M-III	2.550		M-III	2.956		O-II	0.150
	N-IV	0.240		M-II	2.909		M-II	3.418		O-I	0.195
	N-III	0.404		M-I	3.172		M-I	3.700		N-VII	0.204
	N-II	0.485		L-III	11.215		L-III	12.857		N-VI	0.249
	N-I	0.588		L-II	12.824		L-II	14.898		N-V	0.508
	M-V	1.735		L-I	13.424		L-I	15.344		N-IV	0.533
	M-IV	1.793	78-Pt	K	78.112		K	85.528		N-III	0.740
	M-III	2.194		O-I	0.102		O-II	0.104		N-II	0.898
	M-II	2.488		N-V	0.313	82-Pb	N-VII	0.137		N-I	1.042
	M-I	2.703		M-IV	0.331		N-VI	0.143		M-V	2.788
	L-III	9.881		M-III	0.518		O-I	0.147		M-IV	2.910
	L-II	11.138		M-II	0.609		M-V	0.413		M-III	3.417
	L-I	11.680		M-I	0.724		N-IV	0.435		M-II	4.007
74-W	K	87.414		M-V	2.122		N-III	0.643		M-I	4.318
	N-V	0.242		M-IV	2.202		N-II	0.784		L-III	14.815
	N-IV	0.258		M-III	2.643		M-I	0.891		L-II	16.788
	N-III	0.424		M-II	3.088		M-V	2.484		L-I	17.488
	N-II	0.482		M-I	3.297		M-IV	2.588	86-Rn	K	95.731
	N-I	0.585		L-III	11.584		M-III	3.088		O-III	0.131
	M-V	1.889		L-II	13.273		M-II	3.554		O-II	0.185

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86-Rn

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Photoelectric Absorption Edges - Z Order

86-Rn

ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV
86-Rn	O-I	0.213	88-AC	N-II	1.110	92-U	M-III	4.304	95-AH	M-III	4.704
	M-VII	0.234		N-I	1.208		M-II	5.181		M-II	5.748
	N-VI	0.240		M-V	3.220		M-I	5.948		M-I	6.123
	N-IV	0.260		M-IV	3.572		L-III	17.167		L-III	18.530
	M-III	0.772		M-III	3.219		L-II	20.947		L-II	22.970
	N-II	0.948		M-II	4.029		L-I	21.736		L-I	23.020
	N-I	1.095		M-I	5.003		K	115.000		K	125.100
	M-V	2.086		L-III	15.071	93-NP	O-V	0.101	96-CN	O-V	0.118
	M-IV	3.014		L-II	19.084		O-IV	0.109		O-IV	0.129
	M-III	3.534		L-I	19.046		O-III	0.208		O-III	0.239
	M-II	4.120	90-TM	K	108.760		O-II	0.283		O-II	0.331
	M-I	4.478		O-III	0.175		O-I	0.340		O-I	0.388
	L-III	14.812		O-II	0.230		N-VII	0.404		N-VII	0.481
	L-II	17.334		O-I	0.290		N-VI	0.415		N-VI	0.493
	L-I	18.022		N-VII	0.335		N-V	0.772		N-V	0.853
	K	88.417		N-VI	0.304		N-IV	0.816		N-IV	0.912
87-Fr	O-III	0.142		N-V	0.878		N-III	1.087		N-III	1.207
	O-II	0.180		N-IV	0.713		N-II	1.328		N-II	1.486
	O-I	0.233		N-III	0.988		N-I	1.501		N-I	1.689
	N-VII	0.263		N-II	1.188		M-V	3.005		M-V	4.013
	N-VI	0.270		N-I	1.330		M-IV	3.851		M-IV	4.231
	N-V	0.578		M-V	3.332		M-III	4.438		M-III	4.840
	N-IV	0.803		M-IV	3.481		M-II	5.337		M-II	5.948
	N-III	0.810		M-III	4.048		M-I	5.738		M-I	6.323
	N-II	0.988		M-II	4.831	94-Pu	L-III	17.820	97-Bk	L-III	18.983
	N-I	1.150		M-I	5.188		L-II	21.810		L-II	23.084
	M-V	3.002		L-III	18.300		L-I	22.440		L-I	24.536
	M-IV	3.137		L-II	19.682		K	118.000		K	128.260
	M-III	3.885		L-I	20.470		O-V	0.108		O-V	0.124
	M-II	4.328	91-PA	K	109.850		O-IV	0.118		O-IV	0.135
	M-I	4.853		O-IV	0.100		O-III	0.217		O-III	0.250
	L-III	15.031		O-III	0.185		O-II	0.300		O-II	0.347
	L-II	17.905		O-I	0.247		O-I	0.352		O-I	0.398
	L-I	18.985		N-VII	0.310		N-VII	0.428		N-VII	0.509
88-RA	K	101.150		N-VI	0.358		N-VI	0.440		N-VI	0.521
	O-III	0.153		N-V	0.708		N-V	0.801		N-V	0.877
	O-II	0.188		N-IV	0.748		N-IV	0.848		N-IV	0.943
	O-I	0.253		M-III	1.007		N-III	1.130		N-III	1.245
	N-VII	0.288		M-II	1.284		N-II	1.383		N-II	1.525
	N-VI	0.296		M-I	1.385		N-I	1.562		N-I	1.755
	N-V	0.297		M-V	3.443		M-V	3.774		M-V	4.133
	N-IV	0.811		M-IV	3.610		M-IV	3.989		M-IV	4.635
	N-III	0.820		M-III	4.175		M-III	4.555		M-III	4.978
	N-II	1.052		M-II	4.175		M-II	5.240		M-II	6.148
	N-I	1.208		M-I	5.004		M-I	5.914		M-I	6.527
	M-V	3.110		M-I	5.385	95-AH	L-III	18.053	98-Cf	L-III	19.453
	M-IV	3.234		L-III	18.734		L-II	22.283		L-II	24.386
	M-III	3.294		L-II	20.315		L-I	23.095		L-I	25.278
	M-II	3.782		L-I	21.108		K	121.780		K	131.860
	M-I	4.421	92-U	K	112.610		O-V	0.112		O-V	0.130
	N-VII	0.485		O-IV	0.105		O-IV	0.123		O-IV	0.142
	N-VI	0.495		O-III	0.195		O-III	0.228		O-III	0.260
	N-V	0.825		O-II	0.285		O-II	0.315		O-II	0.363
	N-IV	0.830		O-I	0.324		O-I	0.389		O-I	0.413
	N-III	0.840		N-VII	0.381		N-VII	0.434		N-VII	0.538
	N-II	0.875		N-VI	0.382		N-VI	0.488		N-VI	0.551
	N-I	0.918		N-V	0.748		N-V	0.828		N-V	0.908
89-AC	O-III	0.184		M-III	0.788		M-IV	0.881		M-IV	0.973
	O-II	0.214		M-II	1.073		M-III	1.170		M-III	1.285
	O-I	0.271		M-I	1.273		M-II	1.439		M-II	1.618
	N-VII	0.312		N-I	1.441		M-I	1.622		M-I	1.808
	N-VI	0.320		M-V	3.528		M-V	3.885		M-V	4.255
	N-V	0.804		M-IV	3.728		M-IV	4.101		M-IV	4.583

12/07/78

Photoelectric Absorption Edges - Z Order

98-Cf

ELEMENT	EDGE	ENERGY	ELEMENT	EDGE	ENERGY	ELEMENT	EDGE	ENERGY	ELEMENT	EDGE	ENERGY
		MEV			MEV			MEV			MEV
98-Cf	N-III	9.118	98-Cs	N-VI	0.988	98-Ce	L-I	28.748	100-Fm	N-I	1.981
	N-II	6.394		N-V	0.887		K	138.180		N-V	4.948
	N-I	0.738		N-IV	1.801		O-V	0.142		N-IV	4.888
	L-III	19.938		N-III	1.387		O-IV	0.195		N-III	5.488
	L-II	25.185		N-II	1.088		O-III	0.288		N-II	6.810
98-Ce	L-I	28.831	98-Ce	N-I	1.081		O-II	0.383		N-I	7.220
	K	138.889		N-V	4.410		O-I	0.448		L-III	28.570
	O-V	0.138		N-IV	4.820		N-VII	8.599		L-II	27.510
	O-IV	0.148		N-III	5.280		N-VI	0.814		L-I	27.510
	O-III	0.270		N-II	8.280		N-V	0.952		K	141.880
98-Ce	O-II	0.378	98-Ce	N-I	8.990	100-Fm	N-IV	1.027	100-Fm	N-IV	1.370
	O-I	0.430		L-III	28.440		N-III	1.370		N-III	1.747
	N-VII	0.988		L-II	25.880		N-II	1.747		N-II	1.747

12/07/78

Photoelectric Absorption Edges - E Order

0.10 K₂

[illegible]

12/07/78

Photoelectric Absorption Edges - E Order

0.344 Kev

ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV
98-TH	N-VI	0.344	48-IN	N-V	0.443	24-CR	L-II	0.394	39-FU	N-V	0.891
26-CA	L-III	0.346	43-TC	N-III	0.445	44-RU	N-I	0.396	83-BI	N-III	0.893
88-SR	N-I	0.347	75-RE	N-III	0.445	74-W	N-I	0.397	87-FR	N-III	0.893
97-SK	O-II	0.347	100-FH	O-I	0.448	100-FH	N-VII	0.399	51-SB	N-III	0.892
87-MO	N-III	0.349	49-IN	N-IV	0.451	47-AO	N-III	0.399	93-AP	N-IV	0.898
26-CA	L-III	0.350	88-ER	N-I	0.451	87-FR	N-IV	0.393	52-TE	N-III	0.899
70-TB	N-III	0.351	95-AM	N-VII	0.454	81-TL	N-III	0.399	49-IN	N-I	0.899
94-PU	O-I	0.352	28-TI	L-III	0.456	78-PT	N-III	0.399	95-AM	N-V	0.899
78-AU	A-IV	0.353	44-RU	N-III	0.461	88-RA	N-V	0.400	57-LA	N-V	0.892
91-PA	N-VII	0.358	28-TI	L-III	0.462	100-FH	N-VI	0.404	81-TL	N-I	0.895
38-SR	N-I	0.358	83-BI	N-IV	0.464	48-CD	N-III	0.406	26-FE	L-I	0.897
86-MO	N-V	0.360	73-TA	N-III	0.465	53-I	N-V	0.409	57-LA	N-IV	0.898
41-MB	N-III	0.361	95-AM	N-VI	0.468	75-RE	N-I	0.409	94-PU	N-IV	0.899
83-EU	N-I	0.363	78-OS	N-III	0.468	45-WH	N-I	0.409	84-PO	N-III	0.891
96-CY	C-III	0.363	41-MB	N-I	0.469	23-V	L-I	0.409	98-CN	N-V	0.893
88-ER	N-III	0.365	88-TH	N-I	0.471	53-I	N-IV	0.413	88-RA	N-III	0.898
47-AO	N-V	0.367	84-PO	N-V	0.473	88-RA	N-IV	0.413	52-TE	N-III	0.870
71-LU	N-III	0.367	98-CN	N-VII	0.481	25-WH	L-III	0.410	10-NE	K	0.874
91-PA	N-VI	0.368	44-RU	N-III	0.483	82-PB	N-III	0.413	53-I	N-III	0.876
95-AM	O-I	0.369	50-SN	N-V	0.485	79-AU	N-III	0.414	97-SK	N-V	0.877
47-AO	N-IV	0.373	70-YB	N-I	0.486	88-AC	N-V	0.414	95-AM	N-IV	0.877
41-MB	N-III	0.377	74-W	N-III	0.486	25-WH	L-III	0.415	58-CE	N-V	0.883
19-K	L-I	0.378	50-SN	N-IV	0.493	48-CD	N-III	0.415	82-PB	N-I	0.881
99-ES	O-II	0.378	77-IR	N-III	0.493	78-OS	N-I	0.415	85-AT	N-III	0.888
84-CO	N-I	0.379	98-CN	N-VI	0.493	49-IN	N-III	0.415	28-NI	L-III	0.900
80-MO	N-IV	0.380	45-WH	N-III	0.498	48-PO	N-I	0.416	58-CE	N-IV	0.901
92-U	N-VII	0.381	84-PO	N-IV	0.498	54-XE	N-V	0.417	98-CY	N-V	0.902
89-TH	N-III	0.382	21-SC	L-I	0.501	88-AC	N-IV	0.417	88-AC	N-III	0.910
98-CN	O-I	0.382	42-MO	N-I	0.505	90-TH	N-V	0.417	96-CN	N-IV	0.912
72-IF	N-III	0.384	95-AT	N-V	0.508	83-BI	N-III	0.417	27-CO	L-I	0.926
81-TL	N-V	0.386	97-SK	N-VII	0.509	80-MO	N-III	0.418	99-ES	N-V	0.927
42-NO	M-III	0.388	23-V	L-III	0.513	54-XE	N-IV	0.418	53-I	N-III	0.931
92-U	N-VI	0.388	71-LU	N-I	0.515	77-IR	N-I	0.418	58-PH	N-V	0.931
100-FH	O-II	0.393	75-RE	N-III	0.516	24-CR	L-I	0.419	54-XE	N-III	0.936
38-Y	N-I	0.394	78-PT	N-III	0.519	9-F	K	0.700	83-BI	N-I	0.939
85-TB	N-I	0.397	83-V	L-III	0.521	49-IN	N-III	0.702	97-SK	N-IV	0.943
70-YB	N-III	0.397	45-WH	N-III	0.521	84-PO	N-III	0.707	51-SB	N-I	0.944
97-SK	O-I	0.398	87-SK	N-VI	0.521	26-FE	L-III	0.708	88-PH	N-III	0.948
21-SC	L-III	0.401	51-SB	N-V	0.529	91-PA	N-V	0.708	59-PH	N-IV	0.951
7-N	K	0.402	48-PO	M-III	0.532	50-TH	N-IV	0.713	100-FH	N-V	0.952
48-CD	N-V	0.404	8-O	K	0.533	50-SN	N-III	0.714	90-TH	N-III	0.968
73-TA	N-III	0.404	85-AT	N-IV	0.533	47-AO	N-I	0.718	98-CY	N-IV	0.973
93-AP	N-VII	0.404	51-SB	N-IV	0.537	26-FE	L-III	0.721	84-PO	N-I	0.980
21-SC	L-III	0.408	98-CY	N-VII	0.539	81-TL	N-III	0.723	54-XE	N-III	0.987
81-TL	N-IV	0.407	72-IF	N-V	0.539	78-PT	N-I	0.724	87-FR	N-III	0.999
42-MO	N-III	0.410	88-PH	N-V	0.541	55-CS	N-V	0.726	29-CU	L-III	1.000
48-CD	N-IV	0.410	43-TC	N-I	0.545	85-AT	N-III	0.740	50-SN	N-I	1.000
82-PB	N-V	0.413	78-OS	N-III	0.546	82-U	N-IV	0.740	80-MO	N-V	1.000
98-CY	O-I	0.413	78-AU	N-III	0.546	92-U	N-V	0.740	99-ES	N-IV	1.001
93-AP	N-VI	0.415	98-CY	N-VI	0.551	91-PA	N-IV	0.746	55-CS	N-III	1.002
88-ER	N-I	0.416	48-PO	N-III	0.559	50-SN	N-III	0.758	80-MO	N-IV	1.004
71-LU	N-III	0.420	28-TI	L-I	0.564	79-AU	N-I	0.762	52-TE	N-I	1.006
74-W	N-III	0.424	73-TA	N-I	0.568	82-PB	N-III	0.764	91-PA	N-III	1.007
43-TC	N-III	0.426	88-PH	N-IV	0.568	51-SB	N-III	0.768	28-NI	L-I	1.012
94-PU	N-VII	0.428	98-CS	N-VII	0.568	25-WH	L-I	0.770	30-ZN	L-III	1.021
98-ES	O-I	0.430	47-AO	N-III	0.571	48-CD	N-I	0.771	100-FH	N-IV	1.027
48-ER	N-I	0.431	52-TE	N-V	0.572	88-PH	N-III	0.772	81-PH	N-V	1.030
87-MO	N-I	0.433	80-MO	N-III	0.574	92-AP	N-V	0.772	85-AT	N-I	1.042
82-PB	N-IV	0.435	24-CR	L-III	0.575	28-BA	N-V	0.780	30-ZN	L-III	1.044
26-CA	L-I	0.438	87-FR	N-V	0.576	82-U	N-IV	0.780	92-U	N-III	1.045
78-PT	N-III	0.438	77-IR	N-III	0.577	28-BA	N-IV	0.784	88-RA	N-III	1.052
83-BI	N-V	0.440	99-ES	N-VI	0.586	27-CO	L-III	0.880	81-PH	N-IV	1.058
94-PU	N-VI	0.440	52-TE	N-IV	0.587	80-MO	N-I	0.891	98-BA	N-III	1.061

519

1.061 Kev

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Photoelectric Absorption Edges - E Order

1.071 KeV

ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV
55-CS	M-II	1.071	34-SE	L-III	1.438	75-RE	M-IV	1.949	85-AT	M-V	2.788
11-NA	K	1.072	95-AH	M-II	1.439	76-YB	M-III	1.951	76-OS	M-V	2.788
53-I	M-I	1.072	82-U	M-I	1.441	78-OS	M-V	1.980	43-TC	L-II	2.793
82-SH	M-V	1.087	88-ER	M-IV	1.455	180-FH	M-I	1.981	84-PO	M-IV	2.799
53-HP	M-III	1.087	89-TH	M-I	1.471	85-YB	M-I	1.987	74-M	M-I	2.818
98-RH	M-I	1.088	81-PH	M-II	1.472	88-ER	M-II	2.006	71-CL	K	2.822
29-CU	L-I	1.100	34-SE	L-II	1.477	88-SH	L-III	2.007	44-RU	L-III	2.838
82-SH	M-IV	1.100	83-EU	M-III	1.481	71-LU	M-III	2.026	88-HO	M-III	2.847
88-AC	M-II	1.119	98-CH	M-II	1.488	78-OS	M-IV	2.031	42-HO	L-I	2.866
31-OA	L-III	1.115	93-HP	M-I	1.501	77-IR	M-V	2.041	88-RH	M-V	2.888
57-LA	M-III	1.125	98-PP	M-I	1.508	86-OY	M-I	2.046	77-IR	M-II	2.909
63-EU	M-V	1.128	88-TH	M-IV	1.515	37-FB	L-I	2.085	85-AT	M-IV	2.910
94-PU	M-III	1.130	78-YB	M-V	1.528	39-Y	L-III	2.080	75-RE	M-I	2.931
98-SA	M-II	1.131	33-AS	L-I	1.530	89-TH	M-II	2.093	81-TL	M-III	2.938
31-OA	L-II	1.142	82-SH	M-II	1.542	72-4F	M-III	2.110	44-RU	L-II	2.967
94-NE	M-I	1.143	84-OD	M-III	1.544	77-IR	M-IV	2.116	87-FR	M-V	3.002
87-FR	M-I	1.150	35-OR	L-III	1.550	78-PT	M-V	2.122	45-RH	L-III	3.003
83-EU	M-IV	1.158	97-OK	M-II	1.555	87-HO	M-I	2.127	88-RH	M-IV	3.014
80-TH	M-II	1.180	13-AL	K	1.580	15-P	K	2.149	78-PT	M-II	3.028
95-AH	M-III	1.170	94-PU	N-I	1.582	39-Y	L-II	2.158	43-TC	M-I	3.043
84-OD	M-V	1.181	80-HO	M-I	1.575	70-YB	M-II	2.171	78-OS	M-I	3.050
98-CE	M-III	1.188	70-YB	M-IV	1.578	73-TA	M-III	2.194	82-PB	M-III	3.088
30-ZN	L-I	1.188	71-LU	M-V	1.589	78-PT	M-IV	2.202	88-RA	M-V	3.110
57-LA	M-II	1.205	35-OR	L-II	1.598	79-AU	M-V	2.208	87-FR	M-IV	3.137
98-CH	M-III	1.207	85-TB	M-III	1.611	88-ER	M-I	2.212	45-RH	L-II	3.148
88-RA	M-I	1.208	83-EU	M-II	1.613	38-SH	L-I	2.216	78-AU	M-II	3.149
32-OC	L-III	1.218	98-CF	M-II	1.616	40-ZR	L-III	2.223	77-IR	M-I	3.172
95-CS	M-I	1.218	95-AH	M-I	1.625	71-LU	M-III	2.265	48-PO	L-III	3.173
84-OD	M-IV	1.221	71-LU	M-IV	1.639	74-M	M-III	2.281	83-BI	M-III	3.177
91-PA	M-II	1.224	81-PH	M-I	1.651	79-AU	M-IV	2.291	18-AR	K	3.202
98-PP	M-III	1.237	34-SE	L-I	1.653	88-HO	M-V	2.295	89-AC	M-V	3.220
85-TB	M-V	1.240	72-4F	M-V	1.682	40-ZR	L-II	2.307	44-RU	L-I	3.224
97-OK	M-III	1.245	38-KR	L-III	1.675	89-TH	M-I	2.307	88-RA	M-IV	3.234
32-OC	L-II	1.249	86-OY	M-III	1.677	72-4F	M-II	2.384	80-HO	M-II	3.260
88-AC	M-I	1.269	98-CS	M-II	1.680	75-RE	M-III	2.387	84-PO	M-III	3.266
82-U	N-II	1.273	88-CH	M-I	1.688	41-NB	L-III	2.371	78-PT	M-I	3.287
98-CE	M-II	1.278	84-OD	M-II	1.690	39-Y	L-I	2.373	48-PO	L-I	3.330
85-TB	M-IV	1.280	72-4F	M-IV	1.718	80-HO	M-IV	2.385	90-TH	M-V	3.332
98-CF	M-III	1.285	38-KR	L-II	1.726	81-TL	M-V	2.389	47-AG	L-III	3.351
98-SA	M-I	1.293	82-SH	M-I	1.729	70-YB	M-I	2.398	89-AC	M-IV	3.372
88-HO	M-III	1.294	73-TA	M-V	1.735	78-OS	M-III	2.457	45-RH	L-I	3.412
88-OY	M-V	1.295	67-HO	M-III	1.739	41-NB	L-II	2.485	81-TL	M-II	3.416
31-OA	L-I	1.302	100-FH	M-II	1.747	73-TA	M-II	2.489	85-AT	M-III	3.417
12-HO	K	1.305	97-OK	M-I	1.755	18-S	K	2.472	79-AU	M-I	3.425
33-AS	L-III	1.325	85-TB	M-II	1.768	82-PB	M-V	2.484	91-PA	M-V	3.443
98-CS	M-III	1.327	35-OR	L-I	1.788	81-TL	M-IV	2.485	90-TH	M-IV	3.451
53-HP	M-I	1.328	73-TA	M-IV	1.793	71-LU	M-I	2.492	47-AG	L-II	3.524
80-TH	M-I	1.330	83-EU	M-I	1.800	42-HO	L-III	2.520	86-RH	M-III	3.534
88-OY	M-IV	1.335	37-FB	L-III	1.805	40-ZR	L-I	2.532	48-PO	L-III	3.537
98-PP	M-II	1.337	74-M	M-V	1.809	77-IR	M-III	2.550	92-U	M-V	3.552
67-HO	M-V	1.345	86-ER	M-III	1.811	74-M	M-II	2.575	82-PB	M-II	3.554
61-PH	M-III	1.357	98-CF	M-I	1.822	83-BI	M-V	2.579	80-HO	M-I	3.562
33-AS	L-II	1.388	14-SI	K	1.839	82-PB	M-IV	2.588	48-PO	L-I	3.605
57-LA	M-I	1.383	86-OY	M-II	1.843	72-4F	M-I	2.602	19-K	K	3.607
108-FH	M-III	1.378	37-FB	L-II	1.883	42-HO	L-II	2.625	91-PA	M-IV	3.610
94-PU	M-II	1.383	74-M	M-IV	1.871	78-PT	M-III	2.645	87-FR	M-III	3.685
91-PA	M-I	1.395	84-OD	M-I	1.882	43-TC	L-III	2.677	93-HP	M-V	3.685
87-HO	M-IV	1.398	75-RE	M-V	1.883	75-RE	M-II	2.691	83-BI	M-II	3.698
88-TH	M-II	1.404	88-TH	M-III	1.888	84-PO	M-V	2.694	81-TL	M-I	3.780
98-CH	M-V	1.418	98-CS	M-I	1.891	83-BI	M-IV	2.687	48-PO	L-II	3.787
32-OC	L-I	1.414	38-KR	L-I	1.896	41-NB	L-I	2.688	92-U	M-IV	3.788
82-SH	M-III	1.421	87-HO	M-II	1.892	73-TA	M-I	2.703	49-IN	L-III	3.738
98-CE	M-I	1.424	38-SH	L-III	1.948	79-AU	M-III	2.743	94-PU	M-V	3.774

520

3.774 KeV

12/07'78

Photoelectric Absorption Edges - E Order

3.792 KeV

ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV
88-Ra	M-III	3.788	88-Th	M-I	3.182	88-Oy	L-II	8.981	83-Bi	L-II	15.788
87-Ao	L-I	3.688	83-I	L-I	3.189	88-Th	L-III	8.948	82-Pb	L-I	15.889
86-Rn	M-I	3.688	86-Ba	L-III	3.247	85-Yb	L-I	8.788	80-Ac	L-III	15.871
84-Po	M-II	3.688	86-Cs	M-III	3.286	87-Ho	L-I	8.919	78-Sr	K	16.195
83-Mp	M-IV	3.681	83-Mp	M-II	3.337	78-Yb	L-III	8.943	84-Po	L-II	16.245
85-Am	M-V	3.686	85-Cs	L-II	3.398	89-Cu	K	8.979	88-Th	L-III	16.386
86-Ac	M-III	3.619	81-Pa	M-I	3.385	88-Oy	L-I	8.947	83-Bi	L-I	16.385
88-Pa	L-III	3.389	104-Fm	M-III	3.488	71-Lu	L-III	8.244	91-Pa	L-III	16.734
88-In	L-II	3.338	84-Xe	L-I	3.492	88-Cr	L-II	8.285	86-At	L-I	16.788
84-Pu	M-IV	3.388	83-V	K	3.485	87-Ho	L-I	8.385	84-Po	L-I	16.837
83-Bi	M-I	3.688	87-La	L-III	3.483	78-Mp	L-III	8.981	78-Y	K	17.080
85-At	M-II	4.087	84-Pu	M-II	3.540	88-Th	L-I	8.618	82-U	L-III	17.167
86-Cm	M-V	4.013	82-U	M-I	3.548	88-Zn	K	8.899	86-Pm	L-I	17.334
86-Cl	L-I	4.010	88-Oa	L-II	3.824	88-Cr	L-I	8.752	85-At	L-I	17.488
80-Ca	K	4.038	85-Cs	L-I	3.713	73-Ta	L-III	9.081	83-Mp	L-III	17.623
88-Th	M-III	4.048	88-Ce	L-III	3.724	70-Yb	L-II	8.978	87-Fr	L-I	17.925
85-Am	M-IV	4.101	83-Mp	M-I	3.738	88-Th	L-I	10.116	40-Zr	K	17.988
51-Sb	L-III	4.132	85-Am	M-II	3.748	74-W	L-III	10.204	84-Pu	L-III	18.053
87-Bk	M-V	4.133	87-La	L-II	3.881	71-Lu	L-II	10.111	86-Pm	L-I	18.095
88-Sm	L-I	4.198	84-Pu	M-I	3.914	31-Oa	K	10.387	88-Ra	L-I	18.485
84-Po	M-I	4.157	88-Cm	M-II	3.948	70-Yb	L-I	10.488	85-Am	L-III	18.530
86-Fm	F-II	4.198	78-Fr	L-III	3.983	75-Re	L-III	10.534	87-Fr	L-I	18.985
81-Pa	M-IV	4.175	88-Ba	L-I	3.987	72-Hf	L-II	10.739	86-Cm	L-III	18.983
88-Cm	F-IV	4.231	74-Cr	K	3.989	71-Lu	L-I	10.870	41-Nb	K	18.988
85-In	L-I	4.238	83-Am	M-II	8.123	78-Os	L-III	10.871	89-Ac	L-II	19.084
86-Ct	M-V	4.233	87-Bk	M-II	8.148	82-Oe	K	11.104	88-Ra	L-I	19.238
82-U	M-III	4.384	88-Ce	L-II	8.185	73-Ta	L-II	11.138	87-Bk	L-III	19.453
85-At	M-I	4.318	80-Ho	L-III	8.208	77-Ir	L-III	11.218	80-Th	L-I	19.688
87-Fr	M-II	4.326	87-La	L-I	8.287	72-Hf	L-I	11.272	89-Ac	L-I	19.848
82-Te	L-III	4.341	88-Cm	M-I	8.323	74-W	L-III	11.342	88-Ct	L-III	19.830
51-Sb	L-I	4.381	88-Ct	M-II	8.334	78-Pt	L-III	11.584	42-Mo	K	19.888
88-Ce	M-V	4.410	78-Fr	L-II	8.441	73-Ta	L-I	11.680	91-Pa	L-III	20.315
83-Mp	M-III	4.438	81-Pm	L-III	8.460	33-As	K	11.888	89-Es	L-III	20.440
80-Sm	L-I	4.485	87-Bk	M-I	8.527	78-Au	L-III	11.918	80-Th	L-I	20.470
86-Pm	M-I	4.478	83-Tm	K	8.540	75-Re	L-II	11.957	100-Fm	L-III	20.930
88-Ra	M-II	4.491	88-Ce	L-I	8.548	74-W	L-I	12.098	82-U	L-II	20.947
21-Sr	K	4.493	89-Es	M-II	8.580	80-Ho	L-III	12.284	43-Tc	K	21.045
88-Ct	M-IV	4.503	82-Sm	L-III	8.717	78-Os	L-II	12.384	91-Pa	L-I	21.108
100-Fm	M-V	4.540	80-Ho	L-I	8.722	75-Re	L-I	12.525	83-Mp	L-II	21.610
84-Pu	M-III	4.555	88-Ct	M-I	8.738	81-Tl	L-III	12.857	82-U	L-I	21.798
53-I	L-III	4.557	100-Fm	M-II	8.810	34-Ge	K	12.898	44-Ru	K	22.117
82-Te	L-I	4.618	78-Fr	L-I	8.835	77-Ir	L-I	12.984	84-Pu	L-II	22.263
87-Bk	M-IV	4.635	83-Cu	L-III	8.877	78-Os	L-I	12.984	83-Mp	L-I	22.440
88-Es	M-I	4.650	89-Es	M-I	8.880	82-Pb	L-III	13.035	85-Am	L-III	22.970
87-Fr	M-I	4.653	81-Pm	L-II	7.013	78-Pt	L-II	13.273	84-Pu	L-I	23.095
86-Ac	M-II	4.658	78-Fr	K	7.112	83-Bi	L-III	13.418	45-Mn	K	23.220
51-Sb	L-I	4.688	80-Ho	L-I	7.128	77-Ir	L-I	13.424	86-Cm	L-III	23.684
85-Am	M-III	4.704	100-Fm	M-I	7.220	35-Sr	K	13.474	85-Am	L-I	23.820
84-Xe	L-III	4.781	84-Oo	L-III	7.243	78-Au	L-II	13.733	46-Po	K	24.350
100-Fm	M-IV	4.880	82-Sm	L-II	7.312	84-Po	L-III	13.815	87-Bk	L-II	24.336
88-Ra	M-I	4.825	81-Pm	L-I	7.428	78-Pt	L-I	13.888	86-Cm	L-I	24.538
80-Th	M-II	4.831	85-Tb	L-III	7.515	80-Ho	L-II	14.209	88-Ct	L-III	25.128
88-Cm	M-III	4.840	83-Cu	L-II	7.618	85-At	L-III	14.215	87-Bk	L-I	25.278
53-I	L-I	4.852	27-Co	K	7.708	36-Kr	K	14.322	47-Ag	K	25.514
82-Te	L-I	4.839	82-Sm	L-I	7.737	78-Au	L-I	14.353	89-Es	L-II	25.820
87-Bk	K	4.885	88-Oy	L-III	7.780	88-Pm	L-III	14.512	88-Ct	L-I	26.031
86-Ac	M-I	4.878	84-Oo	L-II	7.831	81-Tl	L-I	14.888	100-Fm	L-III	26.270
88-Pa	M-I	5.063	83-Cu	L-I	8.852	80-Ho	L-I	14.896	48-Cd	K	26.711
91-Pa	M-II	5.094	87-Ho	L-III	8.871	87-Fr	L-III	15.031	89-Es	L-I	26.740
95-Cs	L-III	5.012	85-Tb	L-II	8.252	82-Pb	L-I	15.188	100-Fm	L-I	27.240
84-Xe	L-II	5.188	78-Ni	K	8.333	37-Rb	K	15.280	49-In	K	27.940
88-Ct	M-III	5.118	88-Cr	L-III	8.398	81-Tl	L-I	15.344	50-Sn	K	28.200
82-U	M-II	5.181	84-Bi	L-I	8.378	88-Ra	L-III	15.447	51-Sb	K	28.491

12/07/78

Photoelectric Absorption Edges - E Order

31.813 Kev

ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV	ELEMENT	EDGE	ENERGY KEV
52-TE	K	31.813	66-TB	K	51.888	78-PT	K	78.385	91-PA	K	112.818
53-I	K	33.188	66-DY	K	53.788	78-AU	K	88.723	92-U	K	115.888
54-XE	K	34.588	67-MO	K	55.618	80-MO	K	83.103	93-AP	K	118.888
55-CS	K	36.588	68-ER	K	57.488	81-TL	K	85.528	94-PJ	K	121.788
56-BA	K	37.441	69-TM	K	59.388	82-PB	K	88.808	95-AH	K	125.188
57-LA	K	38.523	70-YB	K	61.332	83-BI	K	90.327	96-CH	K	128.288
58-CE	K	40.444	71-LU	K	63.314	84-PO	K	93.106	97-BK	K	131.888
59-FR	K	41.581	72-HF	K	65.351	85-AI	K	95.731	98-CF	K	135.888
60-MD	K	43.588	73-TA	K	67.414	86-RN	K	98.417	99-CS	K	138.188
61-PH	K	45.188	74-M	K	69.384	87-FR	K	101.150	100-FM	K	141.888
62-SH	K	46.833	75-RE	K	71.578	88-RA	K	103.830			
63-EU	K	48.520	76-OS	K	73.872	89-AC	K	106.780			
64-GD	K	50.248	77-IR	K	76.112	90-TM	K	109.820			

522

141.660 Kev

12/07/78

Vacancy Probability: $E > K$

4-Be

12/07/78

Vacancy Probability: E>K

4-Bs

ELEMENT	K	L	H	OTHER	ELEMENT	K	L	H	OTHER
4-BC	0.93982				52-TE	0.83883	0.12807	0.03677	0.00233
5-B	0.93324				53-I	0.83773	0.12748	0.02977	0.00582
6-C	0.94831				54-XE	0.83940	0.12881	0.03195	0.00304
7-N	0.94321				55-CS	0.83188	0.13197	0.03248	0.00367
8-O	0.93357				56-BA	0.82795	0.13522	0.03238	0.00479
9-F	0.93005				57-LA	0.83480	0.12802	0.03186	0.00532
10-HE	0.92887				58-CC	0.83046	0.13182	0.03286	0.00527
11-HA	0.91485				59-PR	0.82818	0.13294	0.03471	0.00429
12-HG	0.91357				60-ND	0.83291	0.12888	0.03470	0.00371
13-AL	0.91843				61-PH	0.83078	0.13089	0.03390	0.00443
14-SI	0.90407				62-SH	0.82723	0.13333	0.03499	0.00445
15-P	0.88638	0.02462			63-EU	0.82436	0.13616	0.03517	0.00431
16-S	0.90313	0.02098			64-OD	0.82861	0.13412	0.03475	0.00453
17-CL	0.88453	0.02844			65-TB	0.81895	0.14022	0.03639	0.00444
18-AR	0.88800	0.02444			66-DY	0.81789	0.14174	0.03624	0.00433
19-K	0.88895	0.10884			67-HO	0.81230	0.14759	0.03593	0.00418
20-CA	0.88019	0.09870			68-ER	0.81820	0.14385	0.03386	0.00410
21-SC	0.88337	3.10503			69-TM	0.81280	0.14367	0.03706	0.00447
22-TI	0.88771	3.10506			70-YB	0.80738	0.14883	0.04043	0.00336
23-V	0.88900	3.10089			71-LU	0.80850	0.14879	0.03935	0.00337
24-CR	0.88604	0.10204			72-WF	0.81845	0.13707	0.04078	0.00572
25-HN	0.88382	0.10320			73-TA	0.80072	0.15239	0.04092	0.00596
26-FE	0.87829	0.10724			74-W	0.80495	0.14978	0.03908	0.00660
27-CO	0.88036	0.10607			75-RE	0.79120	0.16104	0.04089	0.00686
28-NI	0.87285	0.11284			76-OS	0.80254	0.14972	0.04031	0.00743
29-CU	0.87429	0.11286			77-IR	0.80678	0.14371	0.04275	0.00676
30-ZN	0.88940	0.11739			78-PT	0.80487	0.14979	0.03945	0.00589
31-GA	0.88482	0.12055			79-AU	0.79857	0.15240	0.04286	0.00617
32-GE	0.88157	0.12353			80-HD	0.80095	0.14833	0.04283	0.00609
33-AS	0.88038	0.12153			81-TL	0.79569	0.15473	0.04189	0.00628
34-SE	0.87408	0.12387			82-PB	0.79121	0.15702	0.04323	0.00624
35-BR	0.85934	0.12424			83-BI	0.78845	0.15823	0.04579	0.00624
36-KR	0.83803	0.12109			84-PO	0.79021	0.15848	0.04202	0.00628
37-RB	0.83465	0.12477	0.01985		85-AT	0.78811	0.15875	0.04271	0.00643
38-SR	0.82827	0.11950	0.02057		86-RN	0.78816	0.15857	0.04480	0.01048
39-Y	0.82410	0.12375	0.02028		87-FR	0.78498	0.16116	0.04410	0.00976
40-ZR	0.82184	0.12534	0.02072		88-RA	0.78301	0.16228	0.04474	0.00997
41-MB	0.82583	0.11759	0.02038		89-AC	0.78200	0.16295	0.04503	0.01002
42-HG	0.82551	0.11957	0.02126		90-TM	0.77228	0.16940	0.04480	0.01352
43-TC	0.82593	0.12199	0.02208		91-PA	0.77872	0.16424	0.04456	0.01047
44-RU	0.82212	0.12149	0.02306		92-V	0.77322	0.16806	0.04738	0.01274
45-RH	0.84885	0.12795	0.02173		93-MP	0.77500	0.16810	0.04805	0.01084
46-PD	0.82588	0.11834	0.02287		94-PJ	0.77909	0.16890	0.04595	0.01406
47-AO	0.84886	0.12307	0.02410		95-AH	0.77229	0.16767	0.04893	0.01111
48-CD	0.84629	0.12474	0.02450		96-CH	0.77081	0.16829	0.04962	0.01128
49-IN	0.84420	0.12976	0.02624		97-SK	0.76923	0.16885	0.05034	0.01157
50-SH	0.84748	0.12361	0.02600		98-CT	0.76755	0.16931	0.05140	0.01174
51-SB	0.84261	0.12459	0.02884						

12/07/78

Vacancy Probability: K>E>L

15-P

12/07/78

Vacancy Probability: K>E>L

15-P

ELEMENT	L	M	OTHER	ELEMENT	L	M	OTHER	ELEMENT	L	M	OTHER
15-P	0.94933			43-TC	0.86947	0.15018		71-LU	0.78830	0.20947	0.28802
16-S	0.93894			44-RJ	0.82137	0.12985		72-HF	0.74878	0.28298	0.03118
17-CL	0.91445			45-RM	0.83941	0.14185		73-TA	0.78474	0.28334	0.02883
18-AR	0.93385			46-PO	0.81888	0.19428		74-W	0.78831	0.18884	0.03375
19-K	0.94742			47-AD	0.81800	0.15880		75-RC	0.77130	0.18882	0.03688
20-CA	0.88883			48-CO	0.81195	0.15941		76-OS	0.75888	0.20413	0.03781
21-SC	0.94752			49-IN	0.81188	0.18423		77-IR	0.74374	0.28127	0.03498
22-TI	0.88273			50-SN	0.78881	0.18825		78-PT	0.78785	0.20218	0.03017
23-V	0.88423			51-SB	0.78156	0.17943		79-AJ	0.74914	0.21088	0.04018
24-CR	0.88241			52-TE	0.78485	0.18088	0.01447	80-HO	0.74520	0.21417	0.04063
25-PN	0.88833			53-I	0.78258	0.18348	0.03095	81-TL	0.75512	0.20445	0.04043
26-FE	0.88112			54-XE	0.78743	0.18411	0.01847	82-PB	0.75202	0.20707	0.04091
27-CO	0.88834			55-CS	0.78458	0.18328	0.02181	83-BI	0.75848	0.21844	0.04508
28-HI	0.88448			56-BA	0.78448	0.18775	0.02777	84-PO	0.75547	0.20030	0.04423
29-CU	0.88778			57-LA	0.77486	0.18683	0.03221	85-AT	0.75382	0.21388	0.04451
30-ZN	0.88800			58-CE	0.77631	0.18683	0.03108	86-RN	0.73907	0.21147	0.04446
31-GA	0.88178			59-FR	0.77302	0.20201	0.02497	87-FR	0.74950	0.20509	0.04541
32-GE	0.88438			60-HO	0.77012	0.20789	0.02219	88-RA	0.74786	0.20821	0.04593
33-AS	0.87418			61-PH	0.77348	0.20033	0.02819	89-AC	0.74747	0.20856	0.04597
34-SE	0.88825			62-SH	0.77172	0.20250	0.02578	90-TH	0.74390	0.19872	0.05038
35-BR	0.88824			63-CU	0.77523	0.20023	0.02454	91-PA	0.74284	0.21043	0.04733
36-KR	0.85288			64-OD	0.77350	0.20040	0.02810	92-U	0.73223	0.21158	0.05819
37-RB	0.85493	0.13802		65-TB	0.77450	0.20088	0.02452	93-MP	0.73823	0.21357	0.04819
38-SR	0.84313	0.14314		66-OR	0.77748	0.19879	0.02575	94-PU	0.72834	0.20800	0.08388
39-Y	0.84818	0.13888		67-HO	0.78829	0.19145	0.02226	95-AH	0.73635	0.21488	0.04878
40-ZN	0.84783	0.13883		68-CA	0.78123	0.18823	0.02234	96-CH	0.73427	0.21851	0.04822
41-HB	0.83788	0.14518		69-TM	0.77814	0.18788	0.02388	97-SK	0.73170	0.21818	0.05014
42-HO	0.83331	0.14818		70-YB	0.78228	0.20590	0.02781	98-CF	0.72837	0.22114	0.05049

12/07/78

Fluorescence Probability

11-Na

527

Atomic Number

100-Fa

12/07/78

Fluorescence Probability

11-Na

ELEMENT	E _K	K _{REL}	E _K	E _M	ELEMENT	E _K	K _{REL}	E _K	E _M
	K	L	L	M		K	L	L	M
11-Na	0.01980				56-Sa	0.90100	0.12880	0.11200	
12-Mg	0.02950				57-La	0.90800	0.13980	0.12000	
13-Al	0.03570				58-Ce	0.91100	0.14300	0.13000	
14-Si	0.04700				59-Pr	0.91500	0.15000	0.13700	
15-P	0.06040				60-Nd	0.92000	0.16000	0.14500	
16-S	0.07818				61-Pm	0.92400	0.16800	0.15500	
17-Cl	0.09428				62-Sm	0.92800	0.17600	0.16400	
18-Arg	0.11500				63-Eu	0.93100	0.18000	0.17200	
19-K	0.13800				64-Gd	0.93400	0.18600	0.18200	
20-Ca	0.16300				65-Tb	0.93700	0.20700	0.19100	
21-Sc	0.19000				66-Dy	0.94000	0.21700	0.20200	
22-Ti	0.21900				67-Ho	0.94300	0.22600	0.21300	0.00050
23-V	0.25000				68-Er	0.94500	0.23600	0.22300	0.00080
24-Cr	0.28290				69-Th	0.94800	0.24900	0.23300	0.00120
25-Mn	0.31400	0.00300			70-Yb	0.95000	0.26000	0.24400	0.00180
26-Fe	0.34700	0.00350			71-Lu	0.95200	0.27300	0.25400	0.00280
27-Co	0.38100	0.00380			72-Hf	0.95400	0.28400	0.26500	0.00400
28-Ni	0.41400	0.00420			73-Ta	0.95600	0.29500	0.28000	0.00580
29-Cu	0.44500	0.00470			74-W	0.95700	0.30800	0.29200	0.00780
30-Zn	0.47800	0.00510	0.00500		75-Re	0.95900	0.32000	0.30700	0.01000
31-Ga	0.51000	0.00520	0.00500		76-O	0.96100	0.33500	0.32300	0.01200
32-Ge	0.54000	0.00700	0.00600		77-Br	0.96200	0.34800	0.33300	0.01500
33-As	0.56700	0.01000	0.00850		78-Pt	0.96300	0.36200	0.34700	0.01800
34-Se	0.59800	0.01200	0.00700		79-Au	0.96400	0.37500	0.36000	0.02100
35-Br	0.62200	0.01500	0.00750		80-Hg	0.96600	0.38600	0.37300	0.02400
36-Kr	0.64800	0.01700	0.01000		81-Tl	0.96700	0.40200	0.38600	0.02700
37-Rb	0.66900	0.02000	0.01200		82-Pb	0.96800	0.41700	0.40000	0.03000
38-Sr	0.69100	0.02300	0.01500		83-Bi	0.96900	0.43200	0.41300	0.03400
39-Y	0.71100	0.02500	0.01750		84-Po	0.96900	0.44700	0.43000	0.03700
40-Zr	0.73000	0.03000	0.02150		85-At	0.97000	0.46300	0.44300	0.04000
41-Nb	0.74800	0.03400	0.02500		86-Rn	0.97000	0.47700	0.45600	0.04400
42-Mo	0.76400	0.03800	0.02750		87-Fr	0.97100	0.49300	0.47500	0.04750
43-Tc	0.77800	0.04300	0.03200		88-Ra	0.97100	0.50800	0.49500	0.05000
44-Ru	0.79300	0.04700	0.03700		89-Ac	0.97200	0.52300	0.50700	0.05300
45-Rh	0.80700	0.05300	0.04200		90-Th	0.97200	0.53300	0.52300	0.05600
46-Pd	0.81800	0.05700	0.04800		91-Pa	0.97200	0.54400	0.53000	0.06000
47-Ag	0.83000	0.06500	0.05200		92-U	0.97200	0.55400	0.53800	0.06300
48-Cd	0.84000	0.07000	0.05700		93-Np	0.97300	0.56100	0.54200	0.06600
49-In	0.85000	0.07600	0.06300		94-Pu	0.97300	0.56700	0.54900	0.06900
50-Sn	0.85900	0.08300	0.07000		95-Am	0.97300	0.57400	0.55500	0.07200
51-Sb	0.86700	0.09000	0.07500		96-Cm	0.97300	0.58100	0.56200	0.07500
52-Te	0.87500	0.09700	0.08000		97-Bk	0.97400	0.58800	0.56900	0.07700
53-I	0.88200	0.10400	0.08600		98-Cf	0.97400	0.59400	0.56400	0.07900
54-Xe	0.88900	0.11100	0.09700		99-Es	0.97400	0.59700	0.56600	0.08200
55-Cs	0.89500	0.11800	0.10500		100-Fm	0.97400	0.60000	0.56700	0.08400

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Transition Probability

11-Na

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Transition Probability

11-Na

ELEMENT	L-III=K	L-II=K	M-III=K	ELEMENT	L-III=K	L-II=K	M-III=K	ELEMENT	L-III=K	L-II=K	M-III=K
11-Na	0.83482	0.31748	0.04782	41-Mg	0.95295	0.28809	0.13888	71-Lu	0.50363	0.28857	0.20880
12-Mg	0.88086	0.38303	0.08881	42-ND	0.95074	0.28748	0.18178	72-Hf	0.50548	0.28887	0.21073
13-Al	0.88488	0.38234	0.08887	43-TC	0.94838	0.28708	0.18458	73-Ta	0.50117	0.28717	0.21187
14-Si	0.88332	0.38188	0.08882	44-RU	0.94588	0.28685	0.18738	74-W	0.49884	0.28748	0.21280
15-P	0.88880	0.38030	0.08810	45-RH	0.94405	0.28617	0.18978	75-Re	0.49881	0.28787	0.21322
16-S	0.88781	0.38085	0.18314	46-PD	0.94212	0.28570	0.17219	76-OS	0.48788	0.28888	0.21384
17-Cl	0.88857	0.28888	0.18515	47-AG	0.94024	0.28552	0.17424	77-IR	0.48887	0.28857	0.21478
18-AR	0.88854	0.28788	0.18714	48-CO	0.93838	0.28534	0.17628	78-Pt	0.48948	0.28885	0.21589
19-K	0.88853	0.28715	0.11032	49-IN	0.93853	0.28516	0.17831	79-AU	0.48428	0.28841	0.21630
20-CA	0.88884	0.28888	0.11348	50-SM	0.93488	0.28488	0.18033	80-HO	0.48313	0.28888	0.21891
21-SC	0.88834	0.28823	0.11544	51-MB	0.93285	0.28481	0.18234	81-TL	0.48812	0.28835	0.21753
22-TI	0.88884	0.28777	0.11738	52-TE	0.93103	0.28483	0.18434	82-PB	0.48112	0.28874	0.21814
23-V	0.88885	0.28888	0.11738	53-I	0.92943	0.28457	0.18650	83-BI	0.48887	0.28128	0.21875
24-CR	0.88885	0.28818	0.11738	54-XE	0.92784	0.28451	0.18785	84-PO	0.48882	0.28182	0.21836
25-MN	0.88881	0.28842	0.11778	55-CS	0.92628	0.28444	0.18930	85-AT	0.48787	0.28238	0.21987
26-FC	0.88818	0.28888	0.11817	56-SA	0.92488	0.28438	0.19094	86-RN	0.48853	0.28289	0.22058
27-CO	0.88471	0.28874	0.11895	57-LA	0.92312	0.28431	0.19257	87-FR	0.48539	0.28342	0.22118
28-NI	0.88488	0.28880	0.11884	58-CE	0.92195	0.28425	0.19420	88-Ra	0.48428	0.28395	0.22179
29-CU	0.88387	0.28719	0.11884	59-FR	0.92000	0.28418	0.19582	89-AC	0.48313	0.28447	0.22240
30-ZN	0.88348	0.28738	0.11884	60-HO	0.91845	0.28411	0.19743	90-TM	0.48201	0.28499	0.22300
31-GA	0.87878	0.28827	0.12388	61-PH	0.91698	0.28433	0.19872	91-PA	0.48108	0.28582	0.22330
32-GE	0.87811	0.28487	0.12688	62-SH	0.91548	0.28454	0.20000	92-U	0.48015	0.28625	0.22380
33-AS	0.87383	0.28487	0.13270	63-EU	0.91414	0.28458	0.20128	93-NP	0.47903	0.28678	0.22420
34-SE	0.87038	0.28318	0.13844	64-GD	0.91283	0.28462	0.20295	94-PU	0.47782	0.28727	0.22481
35-BR	0.86795	0.28289	0.14015	65-TB	0.91158	0.28484	0.20350	95-AM	0.47682	0.28777	0.22541
36-KR	0.86475	0.28141	0.14384	66-TY	0.91029	0.28525	0.20448	96-CM	0.47572	0.28828	0.22601
37-RB	0.86221	0.28088	0.14712	67-IB	0.90883	0.28545	0.20572	97-BK	0.47462	0.28877	0.22660
38-SR	0.85970	0.28082	0.15038	68-ER	0.90737	0.28585	0.20698	98-CF	0.47353	0.28927	0.22720
39-Y	0.85743	0.28031	0.15328	69-TM	0.90612	0.28598	0.20792	99-ES	0.47244	0.28978	0.22780
40-ZR	0.85519	0.28070	0.15612	70-YB	0.90488	0.28628	0.20886	100-FM	0.47135	0.30025	0.22840