GAMMA-RAY PRODUCTION DUE TO
NEUTRON INTERACTIONS WITH ALUMINUM FOR
INCIDENT NEUTRON ENERGIES BETWEEN
0.85 AND 20 MeV: TABULATED DIFFERENTIAL
CROSS SECTIONS

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MASTER

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Neutron Physics Division

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OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37830
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ABSTRACT

Numerical values of differential cross sections for gamma rays produced by neutron reactions with aluminum have been obtained for neutron energies between 0.85 and 20 MeV for $\theta_\gamma = 125$ and 90 deg. The $d^2\sigma/d\omega dE$ values were obtained using a NaI spectrometer. These data consist of neutron and gamma-ray production group cross-section values of $d^2\sigma/d\omega dE$ for $0.7 \leq E_\gamma \leq 10.5$ MeV, with gamma-ray intervals ranging from 20 keV for $E_\gamma \leq 1$ MeV to 160 keV for $E_\gamma \approx 9$ MeV. Neutron energy intervals varied from 0.2 MeV for $E_n = 0.85$ to 1.5 MeV to 3 MeV for $E_n = 14$ to 20 MeV.

INTRODUCTION

As part of a continuing program¹ for determining numerical values of gamma-ray production cross sections for neutron-induced reactions, we have measured the absolute differential cross sections for gamma rays produced by neutron interactions with aluminum. The data are presented in this report in tabular and graphical forms.

The sample consisted of two pieces of aluminum metal, each approximately 12 in. by 12 in. by 0.25 in., giving a sample of 0.0778 atoms/barn total thickness. The sample was hung at an angle of 45 deg with respect to the beam line for both θ_Y . Neutrons produced by the Oak Ridge Electron Linear Accelerator impinged on this sample, and the resulting gamma radiation was detected by a 5 in. by 5 in. NaI spectrometer. Details of the experimental procedure and a general explanation of the data reduction are given elsewhere.²

DATA REDUCTION

The data were obtained in two runs of about a week each; however, the $\theta_Y = 90$ deg data were obtained about six months after the $\theta_Y = 125$ deg data. There were, consequently, differences in the two runs that affected the data reduction. These included changes in beam conditions and filters requiring remeasuring the beam flux profile at our sample position and changes in available computer (disc storage) space allowing more neutron-energy resolution. As a consequence of these changes in conditions, there is an uncertainty of about 4% in the relative normalization between the two data sets.

For each θ_Y the data were first binned into 24 neutron energy groups, including one for $0.65 \leq E_n \leq 0.85$ MeV, i.e., below the threshold for

(n,n' γ) reactions. Each of the 24 spectra was grouped into E_γ bins corresponding to the NaI-detector response matrix and then unfolded using FERD. The results for the lowest E_n bin, i.e., 0.65 to 0.85 MeV, were very small (the total gamma-ray production was < 1 mb) and did not indicate any serious background problems; except for this conclusion the data were considered too unreliable for further use. Therefore, we report data for 23 neutron energy groups at each θ_γ .

In addition to the principle data reduction, two other data sets were obtained. These were:

1. After the unfolding process, the data were further binned into source gamma-ray energy groups of ~ 240 keV; this gamma-ray energy grouping is the same as that of Orphan et al.³ to facilitate easy comparison with their results.

2. The primary data were reanalyzed to try to obtain excitation functions for the strong gamma rays at $E_\gamma = 0.843, 1.013$ and 2.210 MeV. Because unfolding several hundred individual spectra was too large a task, the data analysis routine was changed as follows: a window was set about the peak corresponding to the full energy peak in the PH spectrum under consideration; a second window of the same size was set in the PH spectrum just above the peak of interest. Time-of-flight (TOF) data were then extracted for each of these windows by subtracting properly normalized background data from foreground data and then dividing by the beam flux for the neutron energy associated with the given time bin in the raw data.

The second TOF data set was subtracted from the first to provide a relative set of cross sections. These were integrated and then normalized

to production cross sections obtained as described earlier. The results for the 0.84-MeV gamma ray were strongly affected by those for the 1.013-MeV gamma ray and are not reported. The structure in the 1.013-MeV gamma ray cross section at $\theta_\gamma = 125$ deg agree reasonably well with the data of Voss et al.⁴; however our neutron energy resolution is not as good. Our beam burst width was 25-30 nsec, and we had varying time-interval widths during data accumulation. Consequently, our neutron energy resolution varied between 20 keV at $E_n = 1$ MeV to 150 keV at $E_n = 4$ MeV. The 5 nsec work of Reference 4 shows more detail than the present results indicate and should be the preferred data set for $\theta_\gamma = 125$ deg. However, our data do indicate an important result. To within the experimental uncertainties the $\theta_\gamma = 90$ deg cross sections are the same as those for $\theta_\gamma = 125$ deg; i.e., for $E_n \leq 4.5$ MeV and $E_\gamma = 1.013$ and 2.210 MeV; there are no marked anisotropies in the gamma-ray angular distribution.

DESCRIPTION OF THE GRAPHS AND TABLES

The first 46 graphs show the unfolded gamma-ray spectra obtained with the NaI spectrometer for the 23 neutron-energy bins at both θ_γ . Included on the graphs are comparison spectra obtained using the recent evaluation of Young and Foster⁵ (ENDF/B Material 4135) as the evaluated data set. The gamma-ray file of this data set consists of excitation functions for 41 discrete gamma rays, as well as several continuum files for $E_n > 5$ MeV. For each neutron-energy bin an average evaluated cross section was determined for each discrete gamma ray in the file. These cross sections were then folded (smeared) with the intrinsic gamma-ray energy dependent window function (a Gaussian distribution) for the NaI spectrometer. For each of the separate continuum files [i.e., (n,γ) , $(n,np\gamma)$, and $(n,n'\gamma)$] an average

evaluated cross section was determined for each neutron energy bin. The continuum spectrum for each reaction was interpolated from the appropriate continuum file, multiplied by the average continuum cross section and added to the results obtained from analysis of the discrete gamma rays, and the expected yield was calculated at each original mesh point to arrive at the expected comparison spectrum for each neutron-energy bin. The (n,γ) reaction is observed only in the lowest neutron energy bin. (The constant value for the evaluation in this neutron energy bin for $E_\gamma \approx 3$ MeV is likely an artifact of our calculation). The $(n,n'\gamma)$ continuum becomes important for $E_n \geq 6$ MeV, whereas the $(n,np\gamma)$ reactions contribute materially only to the two highest neutron energy bins.

The last four graphs show the excitation functions obtained for $E_\gamma = 1.013$ and 2.210 MeV at $\theta_\gamma = 125$ and 90 deg. The error bars in these four graphs are relative errors and include the statistical uncertainties.

The computer output tables which follow the graphs give the data obtained with the NaI spectrometer at the ORFIA Shield Test Station. The first set of tables contains data in coarse gamma-ray energy groups of ≈ 240 keV, corresponding to gamma-ray energy bins in the work of Orphan et al.³ The errors indicated in these tables represent half the area of the confidence interval given by the unfolding code FERD and are marked over-estimates since FERD output points were combined. The second set of tables gives values of $d^2\sigma/dE d\omega$ for the 125 mesh points of the response matrix used in FERD. The differential cross-section values given are the middle values of the confidence interval. The errors given do not include an absolute normalization error of about 10% for each θ_γ data set estimated for the neutron flux measurements, effective area of the beam and absolute efficiency of the

detector. The relative errors for cross sections corresponding to adjacent neutron energy groups for the same E_γ should be less than 5%. The neutron energy groups were selected so as to have enough counts in each pulse-height spectrum for the unfolding code FERD. The neutron group widths range from 0.2 MeV from 0.85 to 1.15 to 3 MeV from 14 to 20 MeV. The third set of tables contains data for the four excitation functions. The uncertainties are statistical only and do not include relative errors estimated to be 4 percent nor the absolute errors of $\pm 10\%$.

ACKNOWLEDGEMENTS

We express our appreciation to H. A. Todd and his group for excellent accelerator operation.

REFERENCES

1. J. K. Dickens, G. L. Morgan and F. G. Perey, Gamma-Ray Production to Neutron Interactions with Iron for Incident Neutron Energies Between 0.8 and 20 MeV: Tabulated Differential Cross Sections, ORNL-4798 (August 1972); J. K. Dickens, T. A. Love and G. L. Morgan, Gamma-Ray Production Due to Neutron Interactions with Tungsten for Incident Neutron Energies Between 1.0 and 20 MeV: Tabulated Differential Cross Sections, ORNL-4847 (January 1973); J. K. Dickens, T. A. Love and G. L. Morgan, Gamma-Ray Production Due to Neutron Interactions with Copper for Incident Neutron Energies Between 1.0 and 20 MeV: Tabulated Differential Cross Sections, ORNL-4846 (January 1973); J. K. Dickens, T. A. Love and G. L. Morgan, Gamma-Ray Production Due to Neutron Interactions with Nitrogen for Incident Neutron Energies Between 2.0 and 20 MeV: Tabulated Differential Cross Sections, ORNL-4864 (April 1973); G. L. Morgan, T. A. Love and F. G. Perey, Gamma-Ray Production Cross Sections of Tantalum and Carbon for Incident Neutron Energies Between 0.007 and 20.0 MeV, ORNL-TM-3702 (February 1972).
2. J. K. Dickens, G. L. Morgan and F. G. Perey, Nucl. Sci. Eng. 50, 311-336 (1973).
3. V. J. Orphan, C. G. Hoot and Joseph John, Gulf Radiation Technology Report RT-A10743 (June 1971P; V. J. Orphan, C. G. Hoot and Joseph John, Proceedings of the Third Conference on Neutron Cross Sections and Technology, Knoxville, Tennessee, March 15-17, 1971, CONF-710301, Vol. 1, p. 227, U. S. Atomic Energy Commission, National Technical Information Service (1971).
4. E. Voss, S. Cierjacks and L. Kropp, in Proc. 3rd Conf. Neutron Cross Sections and Technology, Knoxville, Tennessee, March 15-17, 1971, CONF-710301, Vol. 1, p. 218, U. S. Atomic Energy Commission, National Technical Information Service (1971).
5. P. G. Young and D. G. Foster, Jr., A Preliminary Evaluation of the Neutron and Gamma-Ray Production Cross Sections for Aluminum, Los Alamos Scientific Laboratory Report No. LA-4726 (ENDF-175) (December 1972).

NEUTRON GAMMA RAY PRODUCTION CROSS SECTIONS FROM ALUMINUM. TABULATED VALUES ARE DIFFERENTIAL CROSS SECTIONS AT 125 DEGREES IN MB/SR, FOR THE GAMMA-RAY ENERGY INTERVALS, IN KEV, SHOWN IN THE LEFTMOST COLUMN. THE ERRORS INDICATED ARE IN THE SAME UNITS AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR DUE TO THE ABSOLUTE FLUX MEASUREMENT. THE RELATIVE ERRORS FOR ADJACENT COLUMNS SHOULD BE LESS THAN 5 PERCENT. THE COLUMN HEADINGS ARE, IN MEV, THE LOWER LIMIT OF THE NEUTRON ENERGY INTERVAL FOR THAT COLUMN. THE UPPER LIMIT FOR THE LAST NEUTRON ENERGY INTERVAL IS 2.98 MEV

	0.85	1.06	1.25	1.50	2.00	2.50
707- 945	0.24 0.03	6.47 0.17	7.43 0.19	8.49 0.23	8.53 0.33	8.26 0.46
945-1184	0.02 0.01	5.13 0.09	6.49 0.10	10.60 0.12	13.80 0.21	14.00 0.36
1184-1423	-0.01 0.01	-0.00 0.00	0.02 0.01	0.05 0.02	0.06 0.05	0.05 0.04
1423-1662	0.01 0.00	0.00 0.01	0.01 0.01	0.03 0.01	0.02 0.03	0.10 0.01
1662-1901	-0.00 0.00	0.00 0.01	0.01 0.00	0.02 0.01	0.00 0.00	0.01 0.04
1901-2140	0.00 0.01	0.01 0.01	0.01 0.01	0.01 0.01	0.34 0.01	1.81 0.05
2140-2379	0.00 0.00	-0.00 0.01	0.00 0.00	0.01 0.01	1.01 0.03	7.68 0.13
2379-2618	0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.01	0.01 0.01	0.08 0.02
2618-2857	0.00 0.01	0.01 0.01	0.01 0.00	-0.00 0.00	0.01 0.01	0.07 0.02
2857-3096	-0.00 0.01	0.00 0.00	-0.00 0.01	-0.01 0.00	0.01 0.01	0.01 0.01
3096-3335	0.01 0.01	-0.01 0.01	-0.00 0.00	0.01 0.01	0.01 0.01	0.01 0.01
3335-3574	0.01 0.01	0.01 0.01	0.01 0.01	0.00 0.00	-0.01 0.01	0.01 0.01
3574-3813	0.00 0.01	0.01 0.01	0.00 0.01	-0.01 0.01	-0.00 0.01	-0.01 0.01
3813-4052	-0.00 0.01	-0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.01	-0.00 0.01
4052-4290	0.01 0.01	0.00 0.00	-0.01 0.00	0.00 0.01	0.00 0.00	0.02 0.01
4290-4529	0.00 0.01	0.00 0.00	0.00 0.01	0.00 0.01	-0.00 0.01	0.01 0.00
4529-4768	0.00 0.01	0.00 0.00	0.00 0.00	-0.00 0.00	0.00 0.01	-0.00 0.01
4768-5007	-0.00 0.00	0.00 0.01	0.00 0.01	-0.00 0.01	0.00 0.00	0.00 0.00
5007-5246	0.00 0.00	0.00 0.00	0.00 0.01	0.00 0.00	0.00 0.00	0.00 0.01
5246-5485	0.01 0.01	0.00 0.01	0.00 0.01	0.00 0.00	-0.01 0.01	-0.00 0.01
5485-5724	0.00 0.01	-0.00 0.01	0.00 0.00	0.01 0.00	0.01 0.01	-0.00 0.00
5724-5963	-0.00 0.00	-0.00 0.00	-0.00 0.00	0.00 0.00	0.01 0.01	-0.01 0.01
5963-6202	-0.00 0.00	-0.00 0.00	0.00 0.00	-0.00 0.00	0.00 0.00	0.01 0.01
6202-6441	0.00 0.00	0.01 0.00	-0.00 0.00	-0.00 0.00	-0.00 0.01	0.02 0.01
6441-6680	0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.00	-0.00 0.00	0.01 0.00
6680-6919	-0.00 0.00	-0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.00	-0.01 0.01
6919-7158	-0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.00	-0.00 0.00
7158-7397	0.00 0.00	0.01 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.00
7397-7636	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	-0.00 0.00	0.00 0.00
7636-7875	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	-0.00 0.00
7875-8500	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.00
8500-9000	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	-0.00 0.00
9000-9500	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	-0.00 0.00	0.00 0.00
9500-9998	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00

NEUTRON GAMMA RAY PRODUCTION CROSS SECTIONS FROM ALUMINUM. TABULATED VALUES ARE DIFFERENTIAL CROSS SECTIONS AT 125 DEGREES IN MB/SR, FOR THE GAMMA-RAY ENERGY INTERVALS, IN KEV, SHOWN IN THE LEFTMOST COLUMN. THE ERRORS INDICATED ARE IN THE SAME UNITS AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR DUE TO THE ABSOLUTE FLUX MEASUREMENT. THE RELATIVE ERRORS FOR ADJACENT COLUMNS SHOULD BE LESS THAN 5 PERCENT. THE COLUMN HEADINGS ARE, IN MEV. THE LOWER LIMIT OF THE NEUTRON ENERGY INTERVAL FOR THAT COLUMN. THE UPPER LIMIT FOR THE LAST NEUTRON ENERGY INTERVAL IS 6.07 MEV

	2.98	3.52	4.00	4.50	4.98	5.54
707-945	9.06 0.65	9.11 0.74	10.30 0.81	9.80 0.95	9.79 1.00	9.34 1.15
945-1184	17.40 0.57	13.60 0.52	14.80 0.76	15.10 0.66	16.00 0.97	16.40 1.10
1184-1423	-0.10 0.12	-0.40 0.46	-0.34 0.50	-0.34 0.60	0.02 0.12	-0.28 0.09
1423-1662	0.85 0.11	1.21 0.01	1.18 0.02	1.16 0.12	1.78 0.26	2.12 0.80
1662-1901	3.20 0.31	4.05 0.39	4.21 0.46	4.17 0.56	4.70 0.61	5.10 0.65
1901-2140	3.09 0.07	3.51 0.08	3.39 0.10	3.58 0.21	3.96 0.40	3.76 0.12
2140-2379	12.50 0.25	10.60 0.34	10.40 0.40	11.20 0.44	13.00 0.52	14.60 0.60
2379-2618	0.24 0.10	0.00 0.03	0.15 0.01	0.21 0.01	0.77 0.35	1.44 0.42
2618-2857	1.22 0.09	2.24 0.19	3.03 0.26	3.25 0.30	3.51 0.33	3.67 0.38
2857-3096	2.66 0.09	9.63 0.23	12.10 0.29	12.40 0.33	11.50 0.35	11.70 0.39
3096-3335	0.33 0.03	1.02 0.05	1.37 0.08	1.91 0.12	1.94 0.18	2.72 0.24
3335-3574	0.01 0.02	0.03 0.02	0.11 0.05	0.32 0.10	0.91 0.16	0.91 0.21
3574-3813	0.01 0.02	0.02 0.02	0.10 0.04	0.20 0.08	0.59 0.15	1.06 0.19
3813-4052	0.00 0.00	0.04 0.03	0.24 0.05	1.00 0.09	1.47 0.16	1.88 0.20
4052-4290	0.03 0.01	0.02 0.02	0.06 0.03	0.24 0.06	0.51 0.13	0.91 0.18
4290-4529	0.02 0.01	0.00 0.02	0.00 0.01	0.31 0.05	1.65 0.12	2.28 0.17
4529-4768	-0.02 0.01	0.00 0.01	0.01 0.02	0.11 0.04	1.51 0.09	2.14 0.13
4768-5007	-0.00 0.00	0.02 0.02	0.01 0.02	0.00 0.00	0.32 0.04	0.51 0.09
5007-5246	0.02 0.01	0.00 0.01	0.02 0.02	0.02 0.02	0.07 0.03	0.25 0.07
5246-5485	0.01 0.00	0.00 0.00	0.02 0.02	0.00 0.00	-0.00 0.01	0.29 0.06
5485-5724	-0.02 0.01	0.00 0.00	0.00 0.01	-0.00 0.01	-0.00 0.00	0.26 0.04
5724-5963	-0.01 0.01	0.01 0.01	-0.01 0.01	0.01 0.01	0.01 0.02	0.07 0.03
5963-6202	0.01 0.01	0.01 0.01	-0.01 0.01	-0.01 0.00	0.01 0.01	0.04 0.03
6202-6441	0.02 0.01	0.01 0.01	0.00 0.01	-0.03 0.01	-0.00 0.01	0.01 0.02
6441-6680	0.00 0.00	-0.01 0.00	0.01 0.01	0.02 0.01	0.02 0.01	-0.00 0.01
6680-6919	-0.01 0.01	-0.00 0.00	0.02 0.01	0.02 0.01	0.01 0.01	-0.00 0.01
6919-7158	-0.00 0.00	0.02 0.01	0.01 0.01	0.01 0.01	-0.00 0.01	0.00 0.01
7158-7397	-0.00 0.00	0.01 0.01	-0.00 0.00	-0.01 0.01	-0.00 0.01	0.01 0.01
7397-7636	0.00 0.00	0.00 0.00	-0.01 0.00	-0.00 0.00	-0.00 0.01	0.01 0.01
7636-7875	0.00 0.00	-0.00 0.00	-0.00 0.00	0.00 0.00	-0.00 0.00	0.01 0.01
7875-8500	0.00 0.01	0.01 0.00	0.01 0.01	0.00 0.01	0.00 0.01	0.00 0.00
8500-9000	0.01 0.00	0.00 0.00	0.00 0.00	0.00 0.01	0.01 0.00	0.01 0.01
9000-9500	-0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.01	0.00 0.00	0.00 0.00
9500-9998	0.00 0.00	0.00 0.00	0.01 0.00	0.00 0.00	0.00 0.00	0.00 0.00

NEUTRON GAMMA RAY PRODUCTION CROSS SECTIONS FROM ALUMINUM. TABULATED VALUES ARE DIFFERENTIAL CROSS SECTIONS AT 125 DEGREES IN MB/SR, FOR THE GAMMA-RAY ENERGY INTERVALS, IN KEV, SHOWN IN THE LEFTMOST COLUMN. THE ERRORS INDICATED ARE IN THE SAME UNITS AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR DUE TO THE ABSOLUTE FLUX MEASUREMENT. THE RELATIVE ERRORS FOR ADJACENT COLUMNS SHOULD BE LESS THAN 5 PERCENT. THE COLUMN HEADINGS ARE, IN MEV, THE LOWER LIMIT OF THE NEUTRON ENERGY INTERVAL FOR THAT COLUMN. THE UPPER LIMIT FOR THE LAST NEUTRON ENERGY INTERVAL IS 9.00 MEV

	6.07	6.50	7.00	7.56	8.02	8.52
707- 945	9.83 1.25	8.76 1.12	8.20 1.10	8.24 1.45	7.32 1.20	7.76 1.64
945-1184	17.00 0.59	18.40 1.38	17.00 1.45	16.60 1.58	16.40 1.67	15.10 1.76
1184-1423	0.14 0.37	-0.13 0.33	0.03 0.10	0.04 0.12	-0.43 0.59	-0.25 0.55
1423-1662	2.26 0.91	1.79 0.98	1.73 0.95	2.00 1.04	2.13 0.82	1.74 1.23
1662-1901	5.20 0.81	5.83 0.94	5.31 0.99	5.35 1.06	5.47 1.14	6.25 1.22
1901-2140	4.06 0.15	3.85 0.34	4.69 0.83	4.34 0.93	4.71 0.97	4.79 1.06
2140-2379	15.30 0.76	17.20 0.77	17.00 0.80	17.30 0.87	17.20 0.96	17.30 1.07
2379-2618	2.75 0.55	3.78 0.59	4.17 0.62	3.93 0.68	4.46 0.72	4.18 0.82
2618-2857	4.65 0.48	4.59 0.54	4.45 0.56	4.40 0.62	4.02 0.66	4.17 0.74
2857-3096	14.70 0.50	14.60 0.54	13.70 0.58	13.70 0.66	13.30 0.68	13.10 0.78
3096-3335	4.88 0.31	5.23 0.37	5.49 0.38	5.05 0.47	4.95 0.49	5.30 0.59
3335-3574	1.30 0.26	1.64 0.29	2.02 0.32	1.71 0.39	2.09 0.45	2.20 0.50
3574-3813	1.17 0.25	1.19 0.29	2.22 0.32	2.31 0.40	2.73 0.44	2.60 0.50
3813-4052	2.13 0.26	1.94 0.29	2.45 0.32	3.04 0.38	3.19 0.42	2.69 0.48
4052-4290	1.46 0.24	1.98 0.28	1.82 0.30	2.07 0.37	1.90 0.41	2.34 0.48
4290-4529	2.04 0.22	2.60 0.27	1.94 0.30	2.38 0.37	2.15 0.41	2.94 0.47
4529-4768	2.22 0.20	2.34 0.24	2.04 0.27	2.05 0.35	2.99 0.38	2.67 0.45
4768-5007	0.84 0.16	1.05 0.20	1.38 0.24	1.58 0.32	2.73 0.35	1.78 0.42
5007-5246	0.63 0.14	1.11 0.18	1.58 0.22	1.85 0.29	1.99 0.33	2.39 0.39
5246-5485	1.11 0.11	1.82 0.15	1.63 0.20	1.95 0.25	1.44 0.29	2.20 0.35
5485-5724	1.09 0.09	1.76 0.12	1.86 0.17	1.92 0.24	1.88 0.27	2.41 0.32
5724-5963	0.34 0.05	0.73 0.08	1.08 0.14	1.25 0.20	1.61 0.25	1.33 0.30
5963-6202	0.09 0.03	0.27 0.06	0.70 0.12	0.96 0.18	0.89 0.23	0.75 0.28
6202-6441	0.04 0.03	0.22 0.05	0.84 0.09	1.18 0.15	1.04 0.21	1.29 0.25
6441-6680	-0.00 0.01	0.15 0.04	0.73 0.07	1.22 0.12	1.63 0.17	1.74 0.22
6680-6919	-0.00 0.01	0.03 0.02	0.39 0.05	0.88 0.09	1.07 0.14	1.32 0.20
6919-7158	0.01 0.01	0.01 0.02	0.19 0.03	0.35 0.06	0.48 0.11	0.51 0.17
7158-7397	0.02 0.01	0.01 0.01	0.04 0.02	0.08 0.04	0.35 0.09	0.48 0.15
7397-7636	0.01 0.01	0.01 0.01	-0.00 0.00	0.05 0.03	0.40 0.08	0.80 0.12
7636-7875	0.00 0.01	0.01 0.01	0.01 0.01	0.05 0.02	0.21 0.05	0.62 0.09
7875-8500	0.01 0.01	0.01 0.00	0.02 0.02	0.02 0.02	0.20 0.07	0.57 0.13
8500-9000	0.00 0.01	0.01 0.01	0.01 0.01	0.03 0.02	0.02 0.01	0.08 0.05
9000-9500	0.00 0.00	0.00 0.01	0.01 0.01	0.00 0.00	-0.01 0.01	0.01 0.00
9500-9998	0.00 0.00	0.01 0.01	0.01 0.01	0.00 0.00	0.03 0.01	0.02 0.01

NEUTRON GAMMA RAY PRODUCTION CROSS SECTIONS FROM ALUMINUM. TABULATED VALUES ARE DIFFERENTIAL CROSS SECTIONS AT 125 DEGREES IN MB/SR, FOR THE GAMMA-RAY ENERGY INTERVALS, IN KEV, SHOWN IN THE LEFTMOST COLUMN. THE ERRORS INDICATED ARE IN THE SAME UNITS AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR DUE TO THE ABSOLUTE FLUX MEASUREMENT. THE RELATIVE ERRORS FOR ADJACENT COLUMNS SHOULD BE LESS THAN 5 PERCENT. THE COLUMN HEADINGS ARE, IN MEV, THE LOWER LIMIT OF THE NEUTRON ENERGY INTERVAL FOR THAT COLUMN. THE UPPER LIMIT FOR THE LAST NEUTRON ENERGY INTERVAL IS 20.05 MEV

	9.00	9.97	12.02	14.00	17.03
707- 945	7.42 0.95	8.12 1.74	6.90 1.56	3.66 1.74	2.68 1.74
945-1184	15.30 1.59	13.10 1.76	9.84 2.27	8.31 2.40	9.50 3.34
1184-1423	0.53 0.43	1.10 1.39	3.05 1.76	2.16 2.07	3.86 2.64
1423-1662	2.99 1.21	3.28 1.29	3.42 1.62	2.23 1.82	3.22 2.45
1662-1901	5.43 1.20	6.84 1.20	9.33 1.63	16.10 1.87	17.30 2.73
1901-2140	4.99 1.00	5.45 1.03	6.05 1.27	5.26 1.29	4.36 1.67
2140-2379	17.40 0.98	18.10 0.94	15.00 1.14	11.30 1.26	7.62 1.49
2379-2618	4.00 0.72	4.44 0.74	4.74 0.95	3.66 0.96	5.35 1.27
2618-2857	4.10 0.67	4.66 0.67	4.04 0.85	2.23 0.87	2.92 0.93
2857-3096	12.90 0.66	13.40 0.68	12.20 0.84	8.93 0.81	4.94 1.08
3096-3335	4.90 0.50	4.82 0.49	4.76 0.62	4.51 0.63	1.95 0.80
3335-3574	2.53 0.43	2.87 0.45	2.42 0.58	1.63 0.60	1.28 0.77
3574-3813	2.38 0.44	2.60 0.45	2.54 0.58	1.40 0.59	0.85 0.68
3813-4052	3.37 0.43	2.62 0.44	3.31 0.57	2.33 0.56	1.04 0.70
4052-4290	2.39 0.42	2.75 0.41	2.61 0.54	1.94 0.55	1.85 0.61
4290-4529	2.10 0.43	2.70 0.41	2.27 0.55	1.87 0.53	1.20 0.64
4529-4768	2.18 0.40	2.23 0.39	1.82 0.52	1.60 0.49	1.10 0.60
4768-5007	2.48 0.36	2.26 0.36	2.03 0.49	1.83 0.47	1.55 0.57
5007-5246	2.65 0.34	2.56 0.33	2.62 0.45	1.92 0.44	0.72 0.56
5246-5485	2.42 0.31	2.30 0.31	1.77 0.43	0.73 0.42	0.46 0.49
5485-5724	2.46 0.29	2.47 0.30	2.01 0.41	0.80 0.40	0.85 0.49
5724-5963	1.57 0.27	1.67 0.29	1.57 0.39	1.37 0.38	0.68 0.44
5963-6202	1.18 0.26	1.01 0.27	1.04 0.38	1.20 0.35	0.30 0.44
6202-6441	1.13 0.24	1.45 0.27	1.19 0.38	1.02 0.36	0.83 0.41
6441-6680	1.48 0.22	1.99 0.24	1.63 0.35	0.88 0.34	0.86 0.39
6680-6919	1.27 0.21	1.45 0.23	1.40 0.33	0.84 0.32	0.48 0.35
6919-7158	0.65 0.19	0.96 0.21	1.00 0.31	0.69 0.30	0.31 0.32
7158-7397	0.68 0.17	1.03 0.19	1.19 0.29	0.95 0.27	0.33 0.30
7397-7636	1.01 0.15	1.30 0.18	1.01 0.27	0.92 0.25	0.52 0.27
7636-7875	0.97 0.12	1.14 0.16	0.99 0.25	0.52 0.23	0.58 0.24
7875-8500	1.31 0.22	1.43 0.33	1.75 0.54	0.93 0.52	0.26 0.10
8500-9000	0.34 0.10	1.14 0.19	1.31 0.32	1.06 0.30	0.66 0.25
9000-9500	0.15 0.04	0.39 0.12	0.45 0.22	-0.03 0.08	-0.01 0.01
9500-9998	0.03 0.02	0.40 0.06	0.59 0.10	0.52 0.11	0.21 0.05

NEUTRON GAMMA RAY PRODUCTION CROSS SECTIONS FROM ALUMINUM. TABULATED VALUES ARE DIFFERENTIAL CROSS SECTIONS AT 90 DEGREES, IN MB/SR, FOR THE GAMMA-RAY ENERGY INTERVALS, IN KEV, SHOWN IN THE LEFTMOST COLUMN. THE ERRORS INDICATED ARE IN THE SAME UNITS AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR DUE TO THE ABSOLUTE FLUX MEASUREMENT. THE RELATIVE ERRORS FOR ADJACENT COLUMNS SHOULD BE LESS THAN 5 PERCENT. THE COLUMN HEADINGS ARE, IN MEV, THE LOWER LIMIT OF THE NEUTRON ENERGY INTERVAL FOR THAT COLUMN. THE UPPER LIMIT FOR THE LAST NEUTRON ENERGY INTERVAL IS 3.00 MEV

	0.85	1.04	1.25	1.50	2.00	2.50
707- 945	0.19 0.04	6.53 0.17	8.28 0.22	9.54 0.28	9.32 0.35	9.58 0.51
945-1184	0.00 0.00	4.42 0.07	7.05 0.10	11.10 0.13	14.10 0.21	15.30 0.40
1184-1423	-0.00 0.00	0.01 0.01	0.02 0.02	0.05 0.02	0.08 0.06	0.03 0.09
1423-1662	0.00 0.00	0.01 0.00	0.02 0.01	0.03 0.02	0.06 0.05	0.06 0.06
1662-1901	0.01 0.01	0.01 0.01	0.01 0.01	0.02 0.01	0.03 0.03	0.11 0.00
1901-2140	0.00 0.01	0.01 0.00	0.01 0.01	0.01 0.01	0.31 0.01	2.25 0.05
2140-2379	0.00 0.01	0.01 0.01	-0.00 0.01	0.01 0.01	0.95 0.03	8.11 0.14
2379-2618	0.00 0.01	0.01 0.01	-0.00 0.01	0.01 0.00	0.00 0.01	0.07 0.02
2618-2857	-0.00 0.00	-0.00 0.00	-0.00 0.01	0.00 0.00	0.01 0.01	0.06 0.02
2857-3096	-0.00 0.01	-0.00 0.01	0.01 0.01	0.01 0.01	0.01 0.01	0.02 0.02
3096-3335	0.00 0.00	0.01 0.01	-0.00 0.01	0.00 0.00	-0.00 0.01	0.01 0.01
3335-3574	0.00 0.00	0.00 0.00	-0.01 0.01	-0.01 0.01	0.00 0.00	0.01 0.01
3574-3813	-0.01 0.00	-0.01 0.01	0.00 0.01	0.00 0.00	0.00 0.00	0.02 0.01
3813-4052	0.00 0.00	0.01 0.01	0.01 0.01	0.01 0.01	0.01 0.01	-0.01 0.01
4052-4290	0.00 0.01	0.01 0.01	0.00 0.00	0.01 0.01	-0.00 0.01	-0.01 0.01
4290-4529	-0.00 0.00	-0.01 0.01	-0.00 0.01	0.00 0.01	0.00 0.00	0.00 0.01
4529-4768	0.00 0.01	-0.00 0.00	0.00 0.00	0.00 0.01	0.01 0.01	0.00 0.01
4768-5007	0.00 0.01	0.00 0.01	0.01 0.01	0.00 0.00	0.00 0.00	0.01 0.01
5007-5246	0.00 0.00	0.00 0.01	0.00 0.01	-0.00 0.01	0.00 0.00	0.00 0.01
5246-5485	0.01 0.01	0.00 0.01	-0.00 0.00	-0.00 0.00	0.00 0.00	-0.00 0.00
5485-5724	0.01 0.00	0.00 0.01	-0.00 0.00	0.00 0.00	0.01 0.01	-0.00 0.00
5724-5963	-0.01 0.00	0.00 0.00	0.01 0.01	0.00 0.01	-0.00 0.00	0.00 0.01
5963-6202	-0.00 0.00	0.00 0.00	0.00 0.01	0.00 0.00	-0.00 0.00	0.00 0.00
6202-6441	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	-0.00 0.00
6441-6680	-0.00 0.00	0.00 0.00	0.00 0.00	-0.00 0.00	-0.00 0.00	0.01 0.01
6680-6919	0.00 0.00	0.01 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.01
6919-7158	0.01 0.00	0.00 0.00	0.00 0.00	0.01 0.00	0.01 0.00	-0.00 0.00
7158-7397	0.00 0.00	-0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
7397-7636	0.00 0.00	0.00 0.00	-0.00 0.00	-0.00 0.00	-0.00 0.00	0.01 0.00
7636-7875	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	-0.00 0.00	0.00 0.00
7875-8500	0.00 0.00	-0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
8500-9000	0.00 0.00	0.01 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
9000-9500	0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.00	0.00 0.00	-0.00 0.00
9500-9998	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00

NEUTRON GAMMA RAY PRODUCTION CROSS SECTIONS FROM ALUMINUM. TABULATED VALUES ARE DIFFERENTIAL CROSS SECTIONS AT 90 DEGREES, IN MB/SR, FOR THE GAMMA-RAY ENERGY INTERVALS, IN KEV, SHOWN IN THE LEFTMOST COLUMN. THE ERRORS INDICATED ARE IN THE SAME UNITS AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR DUE TO THE ABSOLUTE FLUX MEASUREMENT. THE RELATIVE ERRORS FOR ADJACENT COLUMNS SHOULD BE LESS THAN 5 PERCENT. THE COLUMN HEADINGS ARE, IN MEV. THE LOWER LIMIT OF THE NEUTRON ENERGY INTERVAL FOR THAT COLUMN. THE UPPER LIMIT FOR THE LAST NEUTRON ENERGY INTERVAL IS 6.00 MEV.

	3.00	3.50	4.00	4.50	5.00	5.50
707-945	11.90 0.76	11.70 0.85	12.90 0.98	12.10 1.03	12.50 1.21	12.50 1.25
945-1184	17.50 0.64	13.90 0.53	15.80 0.68	16.60 0.93	17.80 1.12	17.00 1.17
1184-1423	0.03 0.00	-0.17 0.21	-0.16 0.28	0.15 0.12	0.01 0.03	-0.17 0.08
1423-1662	1.40 0.13	1.83 0.03	1.42 0.10	1.59 0.44	1.99 0.58	2.46 0.80
1662-1901	3.40 0.33	3.94 0.20	4.14 0.50	4.45 0.56	5.59 0.66	5.75 0.78
1901-2140	4.62 0.09	4.69 0.30	4.15 0.09	3.92 0.10	4.24 0.45	4.27 0.20
2140-2379	11.30 0.25	10.10 0.34	10.40 0.42	11.80 0.46	14.20 0.56	14.10 0.60
2379-2618	0.16 0.06	0.27 0.12	0.45 0.29	0.22 0.17	0.77 0.39	1.67 0.42
2618-2857	1.51 0.10	2.84 0.21	3.71 0.27	3.97 0.31	4.04 0.35	3.90 0.38
2857-3096	2.73 0.09	9.33 0.21	12.30 0.29	12.50 0.33	11.70 0.38	11.70 0.40
3096-3335	0.21 0.02	0.66 0.04	1.17 0.08	1.77 0.13	2.07 0.20	2.84 0.24
3335-3574	-0.01 0.01	0.01 0.03	0.07 0.06	0.30 0.11	0.88 0.18	1.32 0.22
3574-3813	0.02 0.02	0.04 0.03	0.10 0.05	0.33 0.09	0.67 0.17	1.09 0.21
3813-4052	0.03 0.02	0.02 0.02	0.33 0.05	1.20 0.10	1.51 0.18	1.76 0.21
4052-4290	-0.00 0.01	0.01 0.02	0.06 0.03	0.28 0.06	0.63 0.14	1.20 0.10
4290-4529	-0.01 0.01	0.00 0.02	0.00 0.00	0.34 0.06	2.23 0.13	2.45 0.17
4529-4768	-0.00 0.00	0.03 0.02	0.01 0.02	0.20 0.04	1.45 0.10	2.08 0.13
4768-5007	0.02 0.01	0.03 0.02	0.01 0.02	0.01 0.00	0.26 0.04	0.65 0.00
5007-5246	0.01 0.01	-0.01 0.01	0.02 0.02	-0.00 0.01	0.07 0.03	0.38 0.07
5246-5485	-0.01 0.01	-0.01 0.01	-0.00 0.01	0.00 0.02	0.02 0.02	0.40 0.05
5485-5724	-0.01 0.01	0.01 0.01	-0.00 0.00	0.02 0.02	0.02 0.02	0.24 0.04
5724-5963	0.01 0.01	0.01 0.01	0.01 0.01	0.01 0.02	0.02 0.02	0.03 0.03
5963-6202	0.00 0.01	-0.00 0.01	0.01 0.01	0.00 0.00	0.02 0.02	0.02 0.02
6202-6441	0.00 0.01	-0.01 0.01	-0.01 0.01	0.00 0.01	0.01 0.01	0.02 0.02
6441-6680	0.00 0.01	-0.00 0.01	-0.01 0.01	0.00 0.01	-0.01 0.01	-0.00 0.01
6680-6919	0.00 0.01	0.01 0.01	0.01 0.01	-0.00 0.01	-0.01 0.01	0.00 0.01
6919-7158	0.00 0.01	0.01 0.01	0.01 0.01	0.01 0.00	-0.00 0.00	0.01 0.01
7158-7397	0.01 0.01	0.00 0.00	0.00 0.01	0.01 0.01	-0.00 0.00	-0.00 0.00
7397-7636	0.00 0.00	-0.00 0.00	0.00 0.00	0.01 0.01	0.00 0.00	0.00 0.00
7636-7875	0.00 0.00	-0.00 0.00	-0.00 0.00	0.00 0.00	0.01 0.01	0.01 0.00
7875-8500	0.00 0.01	0.00 0.01	0.01 0.01	0.00 0.00	0.01 0.01	0.01 0.01
8500-9000	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.01	0.00 0.01	0.00 0.00
9000-9500	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.01	-0.00 0.00
9500-9998	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00

NEUTRON GAMMA RAY PRODUCTION CROSS SECTIONS FROM ALUMINUM. TABULATED VALUES ARE DIFFERENTIAL CROSS SECTIONS AT 90 DEGREES, IN MB/SR, FOR THE GAMMA-RAY ENERGY INTERVALS, IN KEV, SHOWN IN THE LEFTMOST COLUMN. THE ERRORS INDICATED ARE IN THE SAME UNITS AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR DUE TO THE ABSOLUTE FLUX MEASUREMENT. THE RELATIVE ERRORS FOR ADJACENT COLUMNS SHOULD BE LESS THAN 5 PERCENT. THE COLUMN HEADINGS ARE, IN MEV, THE LOWER LIMIT OF THE NEUTRON ENERGY INTERVAL FOR THAT COLUMN. THE UPPER LIMIT FOR THE LAST NEUTRON ENERGY INTERVAL IS 9.00 MEV

	6.00	6.50	7.00	7.50	8.00	8.50
707- 945	12.50 1.40	12.50 1.50	12.10 1.55	11.10 1.56	11.00 1.70	11.00 1.81
945-1184	18.00 1.33	19.20 1.45	17.20 1.49	17.10 1.49	15.90 1.62	15.90 1.73
1184-1423	0.50 0.67	-0.14 0.34	-0.04 0.03	-0.05 0.78	0.53 0.21	0.61 0.96
1423-1662	2.16 0.93	2.41 1.02	1.87 0.59	2.38 1.04	2.22 1.17	2.95 1.27
1662-1901	5.25 0.90	5.67 0.88	5.72 0.98	5.61 1.06	5.14 1.15	5.66 1.23
1901-2140	4.58 0.34	5.26 0.60	5.80 0.84	5.43 0.90	5.59 0.95	5.67 1.06
2140-2379	14.60 0.73	16.10 0.79	16.20 0.79	15.90 0.82	14.90 0.91	15.60 0.99
2379-2618	3.05 0.55	3.69 0.62	4.00 0.61	3.28 0.65	3.83 0.71	4.23 0.76
2618-2857	5.24 0.49	5.18 0.52	4.52 0.55	4.69 0.59	5.67 0.63	5.06 0.71
2857-3096	14.50 0.50	13.70 0.54	13.30 0.55	13.20 0.61	13.20 0.65	11.80 0.71
3096-3335	4.45 0.31	5.01 0.36	4.83 0.38	4.48 0.44	4.24 0.48	4.72 0.53
3335-3574	1.19 0.25	1.80 0.30	2.12 0.33	1.81 0.38	2.14 0.42	2.96 0.49
3574-3813	1.42 0.24	1.50 0.29	2.27 0.33	2.26 0.37	2.83 0.44	2.74 0.48
3813-4052	2.41 0.25	2.00 0.29	2.10 0.32	3.14 0.36	2.91 0.42	2.25 0.47
4052-4290	1.79 0.22	1.86 0.28	2.06 0.31	2.14 0.34	2.37 0.39	2.28 0.47
4290-4529	2.43 0.21	2.86 0.26	2.47 0.30	2.32 0.34	2.87 0.38	2.43 0.46
4529-4768	1.81 0.18	2.36 0.25	1.90 0.27	2.12 0.31	2.32 0.37	2.39 0.43
4768-5007	1.03 0.15	1.05 0.20	1.51 0.25	1.56 0.28	1.60 0.33	2.14 0.39
5007-5246	0.79 0.12	1.33 0.18	1.64 0.22	1.91 0.26	1.91 0.30	2.78 0.37
5246-5485	1.26 0.10	1.94 0.15	2.13 0.20	2.17 0.23	2.26 0.27	2.25 0.33
5485-5724	1.07 0.08	1.84 0.12	1.65 0.17	2.03 0.21	2.41 0.25	1.98 0.31
5724-5963	0.34 0.05	0.70 0.09	0.67 0.15	1.14 0.19	1.04 0.23	1.45 0.28
5963-6202	0.07 0.03	0.37 0.07	0.72 0.12	0.89 0.17	0.84 0.21	1.01 0.26
6202-6441	0.02 0.02	0.28 0.05	1.04 0.10	1.09 0.14	1.41 0.19	1.36 0.25
6441-6680	0.02 0.02	0.20 0.04	0.95 0.07	1.27 0.11	1.59 0.16	1.67 0.22
6680-6919	0.01 0.01	0.05 0.03	0.42 0.05	0.93 0.08	1.05 0.13	1.17 0.20
6919-7158	-0.01 0.01	0.02 0.02	0.11 0.02	0.34 0.05	0.46 0.11	0.39 0.17
7158-7397	0.00 0.00	0.02 0.01	0.04 0.01	0.12 0.03	0.42 0.08	0.50 0.14
7397-7636	0.01 0.01	0.01 0.01	0.00 0.00	0.05 0.02	0.52 0.07	0.82 0.12
7636-7875	0.00 0.00	0.01 0.01	-0.01 0.01	0.00 0.02	0.31 0.04	0.64 0.09
7875-8500	0.00 0.00	0.01 0.01	0.02 0.00	0.03 0.03	0.13 0.04	0.54 0.11
8500-9000	0.01 0.01	0.00 0.01	0.02 0.01	0.02 0.02	0.03 0.02	0.05 0.02
9000-9500	0.00 0.01	0.00 0.00	0.00 0.01	0.01 0.01	0.00 0.00	0.01 0.01
9500-9998	0.00 0.00	0.00 0.00	0.01 0.01	0.00 0.00	0.00 0.01	0.00 0.01

NEUTRON GAMMA RAY PRODUCTION CROSS SECTIONS FROM ALUMINUM. TABULATED VALUES ARE DIFFERENTIAL CROSS SECTIONS AT 90 DEGREES, IN MB/SR, FOR THE GAMMA-RAY ENERGY INTERVALS, IN KEV, SHOWN IN THE LEFTMOST COLUMN. THE ERRORS INDICATED ARE IN THE SAME UNITS AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR DUE TO THE ABSOLUTE FLUX MEASUREMENT. THE RELATIVE ERRORS FOR ADJACENT COLUMNS SHOULD BE LESS THAN 5 PERCENT. THE COLUMN HEADINGS ARE, IN MEV, THE LOWER LIMIT OF THE NEUTRON ENERGY INTERVAL FOR THAT COLUMN. THE UPPER LIMIT FOR THE LAST NEUTRON ENERGY INTERVAL IS 20.00 MEV

	9.00	10.00	12.00	14.00	17.00
707- 945	10.70 1.71	11.00 1.77	9.25 2.25	6.01 2.68	5.62 3.78
945-1184	14.70 1.59	12.70 1.73	10.80 2.25	10.30 2.45	10.20 3.40
1184-1423	0.99 1.22	2.24 1.36	2.75 1.74	2.49 1.95	2.95 2.65
1423-1662	3.17 1.18	3.95 1.23	4.19 1.59	3.36 1.83	3.53 2.58
1662-1901	5.16 1.14	6.42 1.17	9.98 1.60	16.40 1.97	19.50 2.59
1901-2140	6.48 0.95	6.59 0.97	6.04 1.20	5.45 1.26	5.00 1.69
2140-2379	15.30 0.86	14.60 0.89	13.30 1.06	10.60 1.13	7.46 1.45
2379-2618	3.54 0.69	4.54 0.67	4.83 0.86	3.45 1.01	5.11 1.27
2618-2857	4.87 0.60	4.59 0.61	4.48 0.81	3.19 0.79	2.65 1.04
2857-3096	12.30 0.61	11.60 0.61	10.50 0.82	7.76 0.80	5.93 1.03
3096-3335	4.11 0.47	4.36 0.46	3.85 0.62	3.18 0.63	2.38 0.78
3335-3574	2.42 0.41	2.72 0.41	1.97 0.58	1.93 0.57	1.34 0.75
3574-3813	2.78 0.41	2.61 0.41	2.07 0.54	1.70 0.57	1.67 0.68
3813-4052	2.60 0.41	3.10 0.39	2.75 0.54	2.25 0.55	1.50 0.65
4052-4290	2.22 0.39	2.59 0.38	2.94 0.51	1.86 0.51	0.77 0.66
4290-4529	2.32 0.40	2.14 0.37	2.47 0.51	2.13 0.51	1.65 0.61
4529-4768	2.35 0.37	2.13 0.36	1.86 0.47	1.19 0.49	0.79 0.58
4768-5007	2.34 0.35	2.92 0.33	1.99 0.45	1.55 0.46	0.66 0.55
5007-5246	2.43 0.32	2.50 0.31	1.87 0.41	1.68 0.42	1.38 0.50
5246-5485	2.80 0.29	1.62 0.29	2.01 0.39	1.23 0.39	0.91 0.47
5485-5724	2.25 0.27	2.30 0.27	2.00 0.38	1.37 0.36	0.67 0.44
5724-5963	1.51 0.25	1.88 0.26	1.20 0.36	1.11 0.35	0.89 0.41
5963-6202	1.15 0.23	0.87 0.25	1.15 0.34	0.93 0.34	0.46 0.40
6202-6441	0.92 0.23	1.77 0.24	1.75 0.34	0.99 0.34	0.48 0.39
6441-6680	1.50 0.21	2.12 0.22	1.56 0.32	0.97 0.32	0.58 0.37
6680-6919	1.36 0.20	1.05 0.21	0.92 0.31	0.85 0.31	0.41 0.35
6919-7158	0.66 0.18	1.00 0.20	1.15 0.28	0.91 0.29	0.59 0.32
7158-7397	0.74 0.16	1.37 0.18	1.16 0.27	0.63 0.26	0.55 0.31
7397-7636	1.07 0.14	1.02 0.16	0.86 0.25	0.34 0.24	0.45 0.27
7636-7875	0.92 0.12	0.72 0.15	0.88 0.22	0.75 0.23	0.23 0.25
7875-8500	1.02 0.22	1.70 0.31	1.83 0.50	1.09 0.48	0.70 0.53
8500-9000	0.52 0.10	0.86 0.18	0.85 0.30	0.59 0.29	0.31 0.32
9000-9500	0.14 0.04	0.56 0.12	0.75 0.22	0.44 0.20	0.14 0.20
9500-9998	0.03 0.02	0.25 0.07	0.19 0.14	0.20 0.12	0.15 0.10

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 0.85 MEV EN-MAX= 1.06 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	1.25E-04	1.9E-04	2.150E 00	2.35E-05	4.2E-05	5.230E 00	3.06E-05	2.7E-05
7.100E-01	1.12E-04	1.5E-04	2.210E 00	3.37E-05	3.9E-05	5.330E 00	4.04E-05	2.4E-05
7.300E-01	1.31E-04	1.4E-04	2.270E 00	1.46E-05	3.9E-05	5.430E 00	3.20E-05	2.5E-05
7.500E-01	2.43E-04	1.4E-04	2.330E 00	-6.36E-06	3.6E-05	5.530E 00	2.21E-05	2.2E-05
7.700E-01	5.50E-04	1.4E-04	2.390E 00	-1.07E-05	3.8E-05	5.630E 00	1.33E-05	2.2E-05
7.900E-01	1.16E-03	1.6E-04	2.450E 00	-1.09E-06	3.4E-05	5.730E 00	1.84E-06	2.0E-05
8.100E-01	1.91E-03	1.7E-04	2.510E 00	2.49E-05	3.4E-05	5.830E 00	-1.12E-05	1.9E-05
8.300E-01	2.36E-03	1.6E-04	2.570E 00	3.78E-05	3.4E-05	5.930E 00	-1.71E-05	1.7E-05
8.500E-01	2.23E-03	1.4E-04	2.630E 00	2.12E-05	3.4E-05	6.030E 00	-1.30E-05	1.7E-05
8.700E-01	1.64E-03	1.2E-04	2.690E 00	1.98E-06	3.3E-05	6.130E 00	-6.67E-06	1.7E-05
8.900E-01	9.74E-04	1.1E-04	2.750E 00	5.59E-06	3.3E-05	6.230E 00	3.00E-06	1.6E-05
9.100E-01	4.81E-04	1.1E-04	2.810E 00	1.27E-05	3.1E-05	6.330E 00	1.25E-05	1.5E-05
9.300E-01	2.16E-04	1.0E-04	2.870E 00	6.33E-06	3.5E-05	6.440E 00	2.24E-05	1.7E-05
9.500E-01	1.43E-04	9.5E-05	2.930E 00	-9.49E-06	3.4E-05	6.560E 00	2.55E-05	1.5E-05
9.700E-01	1.61E-04	9.5E-05	2.990E 00	-1.97E-05	3.4E-05	6.680E 00	8.02E-06	1.3E-05
1.000E 00	2.27E-04	8.7E-05	3.050E 00	-1.99E-05	3.6E-05	6.800E 00	-9.14E-06	1.4E-05
1.040E 00	1.73E-04	7.5E-05	3.110E 00	-1.46E-05	3.6E-05	6.920E 00	-2.04E-05	1.1E-05
1.080E 00	2.28E-05	5.6E-05	3.180E 00	4.65E-06	3.6E-05	7.040E 00	-1.59E-05	1.0E-05
1.120E 00	-3.29E-05	4.9E-05	3.260E 00	4.37E-05	4.0E-05	7.160E 00	-6.42E-06	9.1E-06
1.160E 00	-2.36E-05	5.8E-05	3.340E 00	6.66E-05	3.5E-05	7.280E 00	2.76E-06	7.7E-06
1.200E 00	-3.66E-05	4.7E-05	3.420E 00	5.94E-05	3.5E-05	7.400E 00	5.44E-06	6.7E-06
1.240E 00	-4.30E-05	5.5E-05	3.500E 00	2.82E-05	3.6E-05	7.520E 00	5.43E-06	6.0E-06
1.280E 00	-4.55E-05	4.8E-05	3.580E 00	6.13E-06	3.3E-05	7.640E 00	4.72E-06	5.8E-06
1.320E 00	-3.53E-05	5.3E-05	3.660E 00	4.93E-06	3.6E-05	7.760E 00	5.92E-06	6.5E-06
1.360E 00	-1.85E-05	4.3E-05	3.740E 00	7.63E-06	3.9E-05	7.890E 00	6.06E-06	6.0E-06
1.400E 00	2.72E-05	4.1E-05	3.820E 00	-7.99E-06	3.2E-05	8.030E 00	3.68E-06	5.4E-06
1.440E 00	6.95E-05	5.0E-05	3.900E 00	-2.28E-05	3.1E-05	8.170E 00	1.31E-06	5.4E-06
1.480E 00	6.90E-05	4.7E-05	3.980E 00	-1.90E-05	3.5E-05	8.310E 00	2.42E-06	4.8E-06
1.520E 00	4.36E-05	5.0E-05	4.060E 00	-6.74E-06	3.5E-05	8.450E 00	6.24E-06	4.1E-06
1.560E 00	1.41E-05	5.0E-05	4.140E 00	2.17E-05	3.7E-05	8.590E 00	9.68E-06	3.2E-06
1.600E 00	-7.01E-06	5.7E-05	4.220E 00	3.77E-05	3.7E-05	8.730E 00	9.98E-06	2.7E-06
1.640E 00	-1.32E-05	4.7E-05	4.300E 00	3.80E-05	3.5E-05	8.870E 00	7.02E-06	2.0E-06
1.680E 00	6.70E-06	5.0E-05	4.380E 00	1.85E-05	2.9E-05	9.010E 00	3.13E-06	1.3E-06
1.720E 00	9.81E-07	4.9E-05	4.460E 00	5.85E-06	2.9E-05	9.150E 00	7.17E-07	8.0E-07
1.760E 00	-1.66E-05	4.8E-05	4.540E 00	4.39E-06	3.5E-05	9.300E 00	-3.85E-08	5.9E-07
1.800E 00	-4.02E-05	4.2E-05	4.630E 00	5.12E-06	3.5E-05	9.460E 00	-6.24E-08	5.1E-07
1.850E 00	-2.94E-05	4.8E-05	4.730E 00	1.06E-05	3.3E-05	9.620E 00	8.33E-08	4.1E-07
1.910E 00	-1.08E-05	4.1E-05	4.830E 00	6.85E-06	3.2E-05	9.780E 00	1.98E-07	3.4E-07
1.970E 00	1.08E-05	4.5E-05	4.930E 00	-7.32E-06	2.8E-05	9.940E 00	2.53E-07	3.7E-07
2.030E 00	1.52E-05	4.4E-05	5.030E 00	-1.32E-05	2.9E-05	1.010E 01	2.48E-07	3.3E-07
2.090E 00	9.03E-06	4.0E-05	5.130E 00	5.31E-06	3.1E-05	1.026E 01	2.12E-07	2.7E-07
						1.042E 01	1.34E-07	2.9E-07
						1.058E 01	7.16E-08	2.8E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 1.06 MEV EN-MAX= 1.25 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	8.35E-04	1.2E-03	2.150E 00	3.99E-06	4.5E-05	5.230E 00	1.11E-05	2.8E-05
7.100E-01	1.95E-03	6.2E-04	2.210E 00	-5.42E-06	4.4E-05	5.330E 00	1.58E-05	2.9E-05
7.300E-01	3.29E-03	5.8E-04	2.270E 00	-1.14E-05	4.1E-05	5.430E 00	1.52E-05	2.5E-05
7.500E-01	5.81E-03	6.6E-04	2.330E 00	-2.06E-05	3.6E-05	5.530E 00	-1.88E-06	2.3E-05
7.700E-01	1.48E-02	7.1E-04	2.390E 00	-3.13E-05	3.4E-05	5.630E 00	-9.43E-06	2.7E-05
7.900E-01	3.30E-02	7.3E-04	2.450E 00	-3.41E-05	3.6E-05	5.730E 00	-1.44E-05	1.6E-05
8.100E-01	5.35E-02	7.7E-04	2.510E 00	-6.00E-06	4.0E-05	5.830E 00	-1.41E-05	1.6E-05
8.300E-01	6.31E-02	7.6E-04	2.570E 00	5.72E-05	4.0E-05	5.930E 00	-8.00E-06	2.3E-05
8.500E-01	5.59E-02	7.7E-04	2.630E 00	1.07E-04	4.0E-05	6.030E 00	-5.67E-06	2.5E-05
8.700E-01	3.79E-02	7.0E-04	2.690E 00	9.00E-05	3.8E-05	6.130E 00	-3.40E-06	1.6E-05
8.900E-01	2.08E-02	7.6E-04	2.750E 00	4.47E-05	3.7E-05	6.230E 00	1.69E-05	1.4E-05
9.100E-01	1.24E-02	6.9E-04	2.810E 00	1.77E-05	3.6E-05	6.330E 00	3.77E-05	1.4E-05
9.300E-01	1.48E-02	7.0E-04	2.870E 00	1.82E-05	4.0E-05	6.440E 00	2.83E-05	2.0E-05
9.500E-01	2.65E-02	7.7E-04	2.930E 00	2.57E-05	4.2E-05	6.560E 00	1.06E-06	1.7E-05
9.700E-01	4.22E-02	7.6E-04	2.990E 00	2.05E-05	4.2E-05	6.680E 00	-2.67E-05	1.2E-05
1.000E 00	5.44E-02	6.2E-04	3.050E 00	-1.11E-06	3.6E-05	6.800E 00	-2.14E-05	1.5E-05
1.040E 00	3.32E-02	4.2E-04	3.110E 00	-2.70E-05	3.4E-05	6.920E 00	5.91E-07	1.4E-05
1.080E 00	8.76E-03	2.6E-04	3.180E 00	-4.68E-05	3.7E-05	7.040E 00	2.16E-05	1.1E-05
1.120E 00	1.18E-03	1.1E-04	3.260E 00	-4.93E-05	3.0E-05	7.160E 00	2.89E-05	9.3E-06
1.160E 00	1.25E-04	6.7E-05	3.340E 00	-1.33E-05	3.0E-05	7.280E 00	2.27E-05	7.9E-06
1.200E 00	6.12E-06	7.2E-05	3.420E 00	3.84E-05	3.9E-05	7.400E 00	1.16E-05	8.0E-06
1.240E 00	-3.34E-05	5.8E-05	3.500E 00	6.19E-05	3.4E-05	7.520E 00	4.51E-06	8.0E-06
1.280E 00	-2.90E-05	6.4E-05	3.580E 00	6.94E-05	3.5E-05	7.640E 00	2.54E-06	7.0E-06
1.320E 00	-1.33E-05	5.4E-05	3.660E 00	6.90E-05	3.8E-05	7.760E 00	5.50E-06	6.2E-06
1.360E 00	6.89E-06	5.4E-05	3.740E 00	4.37E-05	2.7E-05	7.890E 00	1.01E-05	6.3E-06
1.400E 00	3.04E-05	5.2E-05	3.820E 00	1.92E-05	3.3E-05	8.030E 00	1.04E-05	5.6E-06
1.440E 00	3.40E-05	4.8E-05	3.900E 00	-4.58E-06	3.1E-05	8.170E 00	4.35E-06	5.6E-06
1.480E 00	1.37E-05	4.5E-05	3.980E 00	-2.19E-05	2.9E-05	8.310E 00	-9.55E-07	5.2E-06
1.520E 00	1.93E-06	4.3E-05	4.060E 00	-2.50E-05	2.8E-05	8.450E 00	-1.85E-06	5.2E-06
1.560E 00	6.02E-06	4.6E-05	4.140E 00	-1.05E-05	2.7E-05	8.590E 00	2.70E-06	4.8E-06
1.600E 00	1.57E-05	4.5E-05	4.220E 00	1.70E-05	2.4E-05	8.730E 00	7.46E-06	3.8E-06
1.640E 00	1.87E-05	4.6E-05	4.300E 00	2.11E-05	2.8E-05	8.870E 00	1.01E-05	3.3E-06
1.680E 00	1.58E-05	5.2E-05	4.380E 00	5.84E-06	2.7E-05	9.010E 00	8.90E-06	3.0E-06
1.720E 00	1.27E-05	5.3E-05	4.460E 00	-7.84E-06	2.8E-05	9.150E 00	5.72E-06	2.1E-06
1.760E 00	1.79E-05	5.2E-05	4.540E 00	-3.50E-06	2.6E-05	9.300E 00	2.45E-06	1.3E-06
1.800E 00	1.53E-05	5.0E-05	4.630E 00	1.36E-05	2.4E-05	9.460E 00	9.44E-07	8.5E-07
1.850E 00	5.00E-06	4.8E-05	4.730E 00	3.26E-05	2.4E-05	9.620E 00	5.17E-07	6.2E-07
1.910E 00	2.41E-05	4.3E-05	4.830E 00	2.87E-05	2.7E-05	9.780E 00	4.03E-07	5.5E-07
1.970E 00	6.65E-05	4.3E-05	4.930E 00	8.61E-06	2.5E-05	9.940E 00	2.68E-07	5.1E-07
2.030E 00	7.50E-05	4.6E-05	5.030E 00	-2.20E-06	2.6E-05	1.010E 01	1.93E-07	4.3E-07
2.090E 00	3.89E-05	4.1E-05	5.130E 00	3.28E-06	2.8E-05	1.026E 01	1.86E-07	3.1E-07
						1.042E 01	9.52E-08	3.4E-07
						1.058E 01	5.20E-08	3.4E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 1.25 MEV EN-MAX= 1.50 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	1.06E-03	1.4E-03	2.150E 00	2.15E-05	5.0E-05	5.230E 00	1.11E-05	2.4E-05
7.100E-01	2.24E-03	7.3E-04	2.210E 00	-1.95E-06	4.6E-05	5.330E 00	6.34E-06	2.1E-05
7.300E-01	4.80E-03	7.0E-04	2.270E 00	5.32E-06	3.9E-05	5.430E 00	3.39E-06	2.1E-05
7.500E-01	1.05E-02	7.8E-04	2.330E 00	2.61E-05	3.4E-05	5.530E 00	2.68E-06	2.2E-05
7.700E-01	2.35E-02	8.3E-04	2.390E 00	1.08E-05	2.8E-05	5.630E 00	1.19E-06	2.1E-05
7.900E-01	4.42E-02	8.2E-04	2.450E 00	-1.89E-05	3.0E-05	5.730E 00	-7.56E-06	1.8E-05
8.100E-01	6.26E-02	8.3E-04	2.510E 00	-4.70E-06	3.0E-05	5.830E 00	-4.80E-06	1.3E-05
8.300E-01	6.60E-02	7.8E-04	2.570E 00	5.87E-05	3.0E-05	5.930E 00	2.93E-06	1.8E-05
8.500E-01	5.28E-02	8.3E-04	2.630E 00	1.08E-04	2.9E-05	6.030E 00	8.86E-06	1.7E-05
8.700E-01	3.36E-02	7.9E-04	2.690E 00	8.38E-05	2.9E-05	6.130E 00	5.11E-06	1.7E-05
8.900E-01	1.98E-02	9.3E-04	2.750E 00	1.47E-05	2.4E-05	6.230E 00	-3.64E-06	1.2E-05
9.100E-01	1.64E-02	8.4E-04	2.810E 00	-2.04E-05	2.2E-05	6.330E 00	-4.04E-06	1.4E-05
9.300E-01	2.45E-02	9.0E-04	2.870E 00	-2.11E-05	3.2E-05	6.440E 00	-4.40E-06	1.3E-05
9.500E-01	4.16E-02	9.5E-04	2.930E 00	-1.56E-05	3.2E-05	6.560E 00	6.26E-06	1.6E-05
9.700E-01	6.04E-02	9.4E-04	2.990E 00	-1.67E-05	2.6E-05	6.680E 00	9.72E-06	1.4E-05
1.000E 00	6.92E-02	7.4E-04	3.050E 00	-1.22E-05	3.1E-05	6.800E 00	1.52E-05	1.3E-05
1.040E 00	3.73E-02	4.6E-04	3.110E 00	-1.43E-05	2.7E-05	6.920E 00	1.23E-05	1.2E-05
1.080E 00	8.85E-03	2.9E-04	3.180E 00	-1.42E-05	2.7E-05	7.040E 00	5.08E-06	1.2E-05
1.120E 00	1.23E-03	1.2E-04	3.260E 00	-6.08E-06	2.6E-05	7.160E 00	6.07E-07	1.1E-05
1.160E 00	1.75E-04	8.6E-05	3.340E 00	2.41E-05	3.0E-05	7.280E 00	-1.38E-07	8.3E-06
1.200E 00	5.53E-06	7.0E-05	3.420E 00	4.01E-05	3.0E-05	7.400E 00	1.16E-07	8.1E-06
1.240E 00	3.03E-05	6.2E-05	3.500E 00	1.50E-05	2.5E-05	7.520E 00	1.91E-06	7.8E-06
1.280E 00	1.16E-04	5.6E-05	3.580E 00	-3.10E-06	2.3E-05	7.640E 00	4.95E-06	6.6E-06
1.320E 00	1.67E-04	6.6E-05	3.660E 00	1.30E-05	3.3E-05	7.760E 00	6.78E-06	6.1E-06
1.360E 00	1.32E-04	6.1E-05	3.740E 00	3.18E-05	2.9E-05	7.890E 00	5.56E-06	5.9E-06
1.400E 00	6.16E-05	6.0E-05	3.820E 00	4.12E-05	2.9E-05	8.030E 00	4.29E-06	5.6E-06
1.440E 00	1.23E-05	4.6E-05	3.900E 00	2.10E-05	3.1E-05	8.170E 00	4.25E-06	5.5E-06
1.480E 00	1.85E-07	4.9E-05	3.980E 00	-1.16E-05	3.1E-05	8.310E 00	4.07E-06	5.7E-06
1.520E 00	6.24E-06	4.5E-05	4.060E 00	-4.50E-05	2.0E-05	8.450E 00	3.43E-06	5.5E-06
1.560E 00	2.38E-05	5.2E-05	4.140E 00	-5.28E-05	2.6E-05	8.590E 00	4.32E-06	4.8E-06
1.600E 00	4.96E-05	5.5E-05	4.220E 00	-3.38E-05	2.6E-05	8.730E 00	5.82E-06	4.3E-06
1.640E 00	8.60E-05	5.6E-05	4.300E 00	5.13E-07	2.3E-05	8.870E 00	6.10E-06	4.2E-06
1.680E 00	9.77E-05	5.3E-05	4.380E 00	1.63E-05	2.5E-05	9.010E 00	5.69E-06	3.6E-06
1.720E 00	7.01E-05	5.4E-05	4.460E 00	1.52E-05	3.0E-05	9.150E 00	5.43E-06	2.8E-06
1.760E 00	3.12E-05	5.4E-05	4.540E 00	-1.88E-06	2.0E-05	9.300E 00	5.15E-06	2.3E-06
1.800E 00	2.90E-07	5.0E-05	4.630E 00	9.33E-07	2.3E-05	9.460E 00	3.38E-06	1.7E-06
1.850E 00	-2.23E-05	4.5E-05	4.730E 00	9.82E-06	2.4E-05	9.620E 00	1.37E-06	1.3E-06
1.910E 00	-2.36E-05	3.5E-05	4.830E 00	1.32E-05	2.1E-05	9.780E 00	3.46E-07	8.7E-07
1.970E 00	1.98E-05	3.5E-05	4.930E 00	1.69E-05	2.9E-05	9.940E 00	3.48E-07	6.4E-07
2.030E 00	5.62E-05	4.5E-05	5.030E 00	1.28E-05	2.1E-05	1.010E 01	5.20E-07	4.8E-07
2.090E 00	4.86E-05	4.7E-05	5.130E 00	1.58E-05	2.1E-05	1.026E 01	4.74E-07	3.6E-07
						1.042E 01	3.23E-07	3.3E-07
						1.058E 01	2.12E-07	3.1E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 1.50 MEV EN-MAX= 2.00 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	7.30E-04	1.8E-03	2.150E 00	1.77E-05	3.8E-05	5.230E 00	5.37E-06	2.1E-05
7.100E-01	2.08E-03	9.1E-04	2.210E 00	1.93E-05	3.5E-05	5.330E 00	1.25E-05	1.9E-05
7.300E-01	5.00E-03	8.3E-04	2.270E 00	2.08E-05	3.5E-05	5.430E 00	2.82E-05	1.9E-05
7.500E-01	1.09E-02	9.2E-04	2.330E 00	3.34E-05	3.5E-05	5.530E 00	3.77E-05	2.0E-05
7.700E-01	2.48E-02	9.9E-04	2.390E 00	5.80E-05	3.6E-05	5.630E 00	3.44E-05	1.7E-05
7.900E-01	4.76E-02	9.6E-04	2.450E 00	7.04E-05	3.5E-05	5.730E 00	2.89E-05	1.6E-05
8.100E-01	6.87E-02	9.5E-04	2.510E 00	5.86E-05	3.4E-05	5.830E 00	1.85E-05	1.8E-05
8.300E-01	7.45E-02	9.5E-04	2.570E 00	3.45E-05	3.4E-05	5.930E 00	4.64E-06	1.8E-05
8.500E-01	6.23E-02	9.9E-04	2.630E 00	9.82E-06	2.8E-05	6.030E 00	-1.36E-05	1.5E-05
8.700E-01	4.09E-02	9.3E-04	2.690E 00	-7.45E-07	2.8E-05	6.130E 00	-2.73E-05	1.3E-05
8.900E-01	2.27E-02	1.1E-03	2.750E 00	-8.38E-06	2.5E-05	6.230E 00	-2.42E-05	1.2E-05
9.100E-01	1.77E-02	1.1E-03	2.810E 00	-2.32E-05	2.5E-05	6.330E 00	-1.63E-06	1.7E-05
9.300E-01	3.19E-02	1.2E-03	2.870E 00	-3.91E-05	2.9E-05	6.440E 00	2.10E-05	1.7E-05
9.500E-01	6.25E-02	1.2E-03	2.930E 00	-5.03E-05	2.2E-05	6.560E 00	3.21E-05	1.6E-05
9.700E-01	9.61E-02	1.2E-03	2.990E 00	-2.88E-05	2.7E-05	6.680E 00	2.77E-05	1.4E-05
1.000E 00	1.13E-01	9.1E-04	3.050E 00	2.41E-06	2.8E-05	6.800E 00	1.71E-05	1.3E-05
1.040E 00	6.24E-02	5.3E-04	3.110E 00	2.78E-05	2.4E-05	6.920E 00	7.35E-06	1.3E-05
1.080E 00	1.50E-02	3.4E-04	3.180E 00	3.08E-05	2.7E-05	7.040E 00	1.29E-06	1.2E-05
1.120E 00	1.92E-03	1.4E-04	3.260E 00	3.45E-05	2.6E-05	7.160E 00	7.12E-07	9.3E-06
1.160E 00	3.39E-04	1.1E-04	3.340E 00	4.00E-05	2.7E-05	7.280E 00	4.37E-06	7.8E-06
1.200E 00	1.70E-04	1.0E-04	3.420E 00	2.37E-05	2.3E-05	7.400E 00	7.63E-06	7.6E-06
1.240E 00	1.93E-04	9.6E-05	3.500E 00	-1.75E-05	2.5E-05	7.520E 00	7.11E-06	7.1E-06
1.280E 00	2.72E-04	8.1E-05	3.580E 00	-4.94E-05	1.9E-05	7.640E 00	3.52E-06	6.0E-06
1.320E 00	2.53E-04	7.8E-05	3.660E 00	-3.99E-05	2.5E-05	7.760E 00	-1.89E-07	5.6E-06
1.360E 00	1.79E-04	8.4E-05	3.740E 00	-2.65E-05	2.5E-05	7.890E 00	-3.16E-07	6.1E-06
1.400E 00	1.75E-04	8.0E-05	3.820E 00	-9.92E-06	2.5E-05	8.030E 00	1.89E-06	5.7E-06
1.440E 00	1.88E-04	6.6E-05	3.900E 00	6.50E-06	2.6E-05	8.170E 00	3.06E-06	5.2E-06
1.480E 00	1.65E-04	6.3E-05	3.980E 00	1.50E-05	2.7E-05	8.310E 00	2.47E-06	5.1E-06
1.520E 00	1.42E-04	5.8E-05	4.060E 00	2.10E-05	2.8E-05	8.450E 00	2.90E-06	4.9E-06
1.560E 00	1.24E-04	5.7E-05	4.140E 00	1.61E-05	2.4E-05	8.590E 00	3.77E-06	5.1E-06
1.600E 00	1.07E-04	5.6E-05	4.220E 00	1.00E-05	2.6E-05	8.730E 00	2.71E-06	4.8E-06
1.640E 00	9.57E-05	5.5E-05	4.300E 00	7.07E-06	2.6E-05	8.870E 00	1.86E-07	4.7E-06
1.680E 00	1.01E-04	5.4E-05	4.380E 00	3.26E-06	2.5E-05	9.010E 00	4.01E-07	4.7E-06
1.720E 00	9.31E-05	5.3E-05	4.460E 00	4.72E-06	2.7E-05	9.150E 00	4.60E-06	4.3E-06
1.760E 00	8.39E-05	5.3E-05	4.540E 00	5.92E-06	2.8E-05	9.300E 00	9.67E-06	3.6E-06
1.800E 00	1.02E-04	4.9E-05	4.630E 00	-4.05E-06	2.3E-05	9.460E 00	1.04E-05	3.2E-06
1.850E 00	1.13E-04	4.6E-05	4.730E 00	-1.41E-05	2.6E-05	9.620E 00	7.78E-06	2.3E-06
1.910E 00	6.67E-05	4.1E-05	4.830E 00	-2.21E-05	2.2E-05	9.780E 00	4.98E-06	1.6E-06
1.970E 00	1.56E-05	4.1E-05	4.930E 00	-1.33E-05	2.2E-05	9.940E 00	2.87E-06	1.2E-06
2.030E 00	1.31E-05	4.0E-05	5.030E 00	-2.12E-06	2.4E-05	1.010E 01	1.34E-06	8.0E-07
2.090E 00	1.75E-05	3.6E-05	5.130E 00	3.34E-06	2.2E-05	1.026E 01	4.93E-07	4.1E-07
						1.042E 01	1.27E-07	3.3E-07
						1.058E 01	3.90E-09	3.1E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 2.00 MEV EN-MAX= 2.50 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-3.76E-04	2.4E-03	2.150E 00	7.32E-03	2.3E-04	5.230E 00	-1.26E-05	3.1E-05
7.100E-01	2.02E-03	1.3E-03	2.210E 00	7.21E-03	2.0E-04	5.330E 00	-2.95E-05	2.8E-05
7.300E-01	4.67E-03	1.2E-03	2.270E 00	3.70E-03	1.3E-04	5.430E 00	-1.93E-05	2.9E-05
7.500E-01	8.15E-03	1.3E-03	2.330E 00	1.00E-03	7.8E-05	5.530E 00	7.78E-06	2.7E-05
7.700E-01	1.96E-02	1.3E-03	2.390E 00	1.39E-04	5.8E-05	5.630E 00	3.35E-05	2.6E-05
7.900E-01	4.19E-02	1.3E-03	2.450E 00	8.59E-06	5.0E-05	5.730E 00	4.66E-05	2.8E-05
8.100E-01	6.50E-02	1.3E-03	2.510E 00	5.56E-06	4.6E-05	5.830E 00	4.43E-05	2.8E-05
8.300E-01	7.50E-02	1.3E-03	2.570E 00	3.04E-05	4.7E-05	5.930E 00	2.84E-05	2.5E-05
8.500E-01	6.66E-02	1.3E-03	2.630E 00	5.97E-05	4.4E-05	6.030E 00	1.33E-05	2.3E-05
8.700E-01	4.60E-02	1.3E-03	2.690E 00	6.35E-05	4.5E-05	6.130E 00	-2.50E-06	2.5E-05
8.900E-01	2.60E-02	1.5E-03	2.750E 00	3.63E-05	4.1E-05	6.230E 00	-1.38E-05	2.4E-05
9.100E-01	1.95E-02	1.6E-03	2.810E 00	1.28E-05	3.7E-05	6.330E 00	-1.59E-05	2.4E-05
9.300E-01	3.46E-02	1.7E-03	2.870E 00	4.25E-06	4.1E-05	6.440E 00	-1.60E-05	2.1E-05
9.500E-01	7.08E-02	1.7E-03	2.930E 00	9.39E-06	3.7E-05	6.560E 00	-3.85E-06	2.0E-05
9.700E-01	1.15E-01	1.8E-03	2.990E 00	2.15E-05	4.1E-05	6.680E 00	7.91E-06	1.6E-05
1.000E 00	1.46E-01	1.5E-03	3.050E 00	4.96E-05	4.5E-05	6.800E 00	2.36E-05	1.8E-05
1.040E 00	8.79E-02	8.9E-04	3.110E 00	7.40E-05	4.3E-05	6.920E 00	3.26E-05	1.6E-05
1.080E 00	2.32E-02	6.2E-04	3.180E 00	8.20E-05	4.5E-05	7.040E 00	3.40E-05	1.4E-05
1.120E 00	3.50E-03	3.0E-04	3.260E 00	4.34E-05	3.8E-05	7.160E 00	2.01E-05	1.3E-05
1.160E 00	6.24E-04	2.8E-04	3.340E 00	-1.39E-05	3.9E-05	7.280E 00	-1.91E-06	1.2E-05
1.200E 00	1.54E-04	2.8E-04	3.420E 00	-5.29E-05	2.9E-05	7.400E 00	-1.09E-05	1.1E-05
1.240E 00	3.10E-06	2.4E-04	3.500E 00	-4.86E-05	4.1E-05	7.520E 00	-2.69E-06	1.0E-05
1.280E 00	1.48E-04	2.2E-04	3.580E 00	-4.27E-05	3.0E-05	7.640E 00	1.03E-05	9.0E-06
1.320E 00	5.61E-04	2.0E-04	3.660E 00	-2.41E-05	3.4E-05	7.760E 00	1.77E-05	8.7E-06
1.360E 00	5.04E-04	2.1E-04	3.740E 00	-1.32E-05	3.2E-05	7.890E 00	1.65E-05	8.1E-06
1.400E 00	1.19E-04	2.4E-04	3.820E 00	2.25E-06	3.7E-05	8.030E 00	9.32E-06	6.9E-06
1.440E 00	9.77E-05	2.1E-04	3.900E 00	3.03E-05	3.7E-05	8.170E 00	1.74E-06	6.7E-06
1.480E 00	1.47E-04	1.9E-04	3.980E 00	5.09E-05	4.0E-05	8.310E 00	-2.67E-06	6.5E-06
1.520E 00	4.44E-05	2.0E-04	4.060E 00	4.23E-05	3.0E-05	8.450E 00	-1.65E-06	6.1E-06
1.560E 00	6.99E-05	1.8E-04	4.140E 00	1.87E-05	2.7E-05	8.590E 00	3.63E-06	5.9E-06
1.600E 00	6.11E-05	1.8E-04	4.220E 00	-2.11E-05	2.9E-05	8.730E 00	1.09E-05	5.3E-06
1.640E 00	-5.69E-05	2.0E-04	4.300E 00	-3.61E-05	3.7E-05	8.870E 00	1.42E-05	5.0E-06
1.680E 00	1.34E-04	2.0E-04	4.380E 00	-3.41E-05	3.3E-05	9.010E 00	8.08E-06	5.9E-06
1.720E 00	3.46E-04	1.8E-04	4.460E 00	-1.29E-07	3.7E-05	9.150E 00	-2.48E-06	5.5E-06
1.760E 00	1.51E-04	1.7E-04	4.540E 00	2.81E-05	3.4E-05	9.300E 00	-8.10E-06	4.7E-06
1.800E 00	-1.43E-04	1.6E-04	4.630E 00	2.07E-05	2.6E-05	9.460E 00	-2.23E-06	4.4E-06
1.850E 00	-2.19E-04	1.7E-04	4.730E 00	3.48E-06	3.3E-05	9.620E 00	7.56E-06	3.8E-06
1.910E 00	-1.86E-04	1.5E-04	4.830E 00	-3.56E-06	2.9E-05	9.780E 00	1.26E-05	3.0E-06
1.970E 00	-2.53E-04	1.5E-04	4.930E 00	9.44E-06	3.0E-05	9.940E 00	1.10E-05	2.5E-06
2.030E 00	4.08E-04	1.5E-04	5.030E 00	2.19E-05	3.3E-05	1.010E 01	6.58E-06	1.8E-06
2.090E 00	3.47E-03	1.9E-04	5.130E 00	1.24E-05	3.4E-05	1.026E 01	2.87E-06	9.8E-07
						1.042E 01	8.24E-07	6.6E-07
						1.058E 01	1.07E-07	5.5E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 2.50 MEV EN-MAX= 2.98 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-4.96E-04	3.2E-03	2.150E 00	4.84E-02	9.7E-04	5.230E 00	2.29E-06	3.9E-05
7.100E-01	5.72E-04	1.9E-03	2.210E 00	5.49E-02	8.2E-04	5.330E 00	-1.48E-05	3.6E-05
7.300E-01	3.05E-03	1.6E-03	2.270E 00	3.06E-02	5.1E-04	5.430E 00	-4.36E-06	3.6E-05
7.500E-01	6.01E-03	1.8E-03	2.330E 00	9.02E-03	2.6E-04	5.530E 00	2.37E-06	3.6E-05
7.700E-01	1.32E-02	1.7E-03	2.390E 00	1.60E-03	1.2E-04	5.630E 00	-1.23E-05	3.5E-05
7.900E-01	3.16E-02	1.7E-03	2.450E 00	2.18E-04	9.8E-05	5.730E 00	-3.47E-05	3.6E-05
8.100E-01	5.78E-02	1.8E-03	2.510E 00	2.40E-05	9.6E-05	5.830E 00	-3.56E-05	3.5E-05
8.300E-01	7.52E-02	1.9E-03	2.570E 00	1.16E-04	9.5E-05	5.930E 00	-6.01E-06	3.5E-05
8.500E-01	7.28E-02	2.1E-03	2.630E 00	2.82E-04	8.8E-05	6.030E 00	3.41E-05	3.7E-05
8.700E-01	5.60E-02	2.0E-03	2.690E 00	3.46E-04	9.4E-05	6.130E 00	6.44E-05	3.9E-05
8.900E-01	3.65E-02	2.1E-03	2.750E 00	3.11E-04	9.5E-05	6.230E 00	7.29E-05	3.6E-05
9.100E-01	2.29E-02	2.1E-03	2.810E 00	2.54E-04	7.7E-05	6.330E 00	7.24E-05	3.8E-05
9.300E-01	2.49E-02	2.2E-03	2.870E 00	1.48E-04	6.8E-05	6.440E 00	7.14E-05	3.5E-05
9.500E-01	5.10E-02	2.5E-03	2.930E 00	1.67E-05	5.6E-05	6.560E 00	4.38E-05	3.5E-05
9.700E-01	9.52E-02	2.3E-03	2.990E 00	-2.24E-05	5.6E-05	6.680E 00	-2.00E-06	3.2E-05
1.000E 00	1.44E-01	2.4E-03	3.050E 00	1.32E-05	5.3E-05	6.800E 00	-4.15E-05	2.3E-05
1.040E 00	1.04E-01	1.7E-03	3.110E 00	7.06E-05	6.3E-05	6.920E 00	-3.76E-05	2.3E-05
1.080E 00	3.13E-02	1.2E-03	3.180E 00	7.41E-05	6.1E-05	7.040E 00	-4.76E-06	2.3E-05
1.120E 00	4.83E-03	8.7E-04	3.260E 00	5.47E-05	6.4E-05	7.160E 00	2.75E-05	2.0E-05
1.160E 00	1.80E-03	8.1E-04	3.340E 00	4.44E-05	6.1E-05	7.280E 00	3.30E-05	1.5E-05
1.200E 00	1.20E-03	8.0E-04	3.420E 00	4.34E-05	5.7E-05	7.400E 00	1.96E-05	1.5E-05
1.240E 00	5.32E-04	7.4E-04	3.500E 00	4.32E-05	5.1E-05	7.520E 00	2.27E-06	1.2E-05
1.280E 00	2.11E-04	7.4E-04	3.580E 00	2.07E-06	5.3E-05	7.640E 00	-4.93E-06	1.2E-05
1.320E 00	5.41E-04	7.2E-04	3.660E 00	-5.91E-05	4.4E-05	7.760E 00	-1.07E-06	9.9E-06
1.360E 00	-1.68E-04	7.9E-04	3.740E 00	-6.64E-05	4.6E-05	7.890E 00	6.77E-06	9.4E-06
1.400E 00	-9.46E-04	7.9E-04	3.820E 00	-3.86E-05	4.3E-05	8.030E 00	1.37E-05	8.0E-06
1.440E 00	-1.34E-05	7.7E-04	3.900E 00	-1.59E-05	4.9E-05	8.170E 00	1.48E-05	6.9E-06
1.480E 00	8.47E-04	7.1E-04	3.980E 00	-2.24E-05	4.8E-05	8.310E 00	1.03E-05	6.7E-06
1.520E 00	5.08E-04	7.1E-04	4.060E 00	-3.35E-07	4.9E-05	8.450E 00	2.77E-06	7.0E-06
1.560E 00	-2.30E-04	7.5E-04	4.140E 00	6.05E-05	5.0E-05	8.590E 00	-2.85E-06	6.0E-06
1.600E 00	-8.26E-05	7.2E-04	4.220E 00	1.06E-04	3.5E-05	8.730E 00	-3.54E-06	5.3E-06
1.640E 00	1.37E-03	8.2E-04	4.300E 00	9.53E-05	3.8E-05	8.870E 00	-6.14E-07	4.7E-06
1.680E 00	2.32E-03	8.6E-04	4.380E 00	3.11E-05	4.3E-05	9.010E 00	2.50E-06	4.3E-06
1.720E 00	1.43E-03	8.6E-04	4.460E 00	-1.04E-05	5.0E-05	9.150E 00	4.30E-06	3.8E-06
1.760E 00	-1.85E-04	8.0E-04	4.540E 00	-2.07E-05	4.1E-05	9.300E 00	4.85E-06	3.5E-06
1.800E 00	-7.29E-04	7.7E-04	4.630E 00	-9.63E-06	4.0E-05	9.460E 00	4.32E-06	3.9E-06
1.850E 00	-9.73E-04	6.5E-04	4.730E 00	-5.03E-06	3.5E-05	9.620E 00	4.57E-06	3.5E-06
1.910E 00	-2.22E-03	6.1E-04	4.830E 00	-2.72E-06	3.8E-05	9.780E 00	5.07E-06	3.0E-06
1.970E 00	-1.09E-03	5.4E-04	4.930E 00	1.16E-05	4.2E-05	9.940E 00	5.18E-06	2.7E-06
2.030E 00	1.04E-03	6.2E-04	5.030E 00	2.79E-05	3.7E-05	1.010E 01	3.94E-06	2.2E-06
2.090E 00	1.74E-02	8.0E-04	5.130E 00	2.23E-05	3.4E-05	1.026E 01	2.40E-06	1.5E-06
						1.042E 01	9.95E-07	1.2E-06
						1.058E 01	4.48E-07	1.0E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 2.98 MEV EN-MAX= 3.52 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-1.77E-03	4.7E-03	2.150E 00	7.76E-02	1.7E-03	5.230E 00	1.38E-04	4.8E-05
7.100E-01	2.79E-04	2.8E-03	2.210E 00	8.84E-02	1.4E-03	5.330E 00	8.48E-05	5.7E-05
7.300E-01	3.48E-03	2.4E-03	2.270E 00	5.04E-02	9.8E-04	5.430E 00	-2.73E-05	3.5E-05
7.500E-01	7.10E-03	2.6E-03	2.330E 00	1.54E-02	5.3E-04	5.530E 00	-6.53E-05	3.1E-05
7.700E-01	1.52E-02	2.5E-03	2.390E 00	2.69E-03	4.2E-04	5.630E 00	-7.93E-05	4.5E-05
7.900E-01	3.69E-02	2.5E-03	2.450E 00	4.46E-04	4.3E-04	5.730E 00	-7.93E-05	4.8E-05
8.100E-01	6.36E-02	2.6E-03	2.510E 00	3.76E-04	4.3E-04	5.830E 00	-6.56E-05	4.7E-05
8.300E-01	8.13E-02	2.6E-03	2.570E 00	7.64E-04	4.1E-04	5.930E 00	-3.96E-05	2.7E-05
8.500E-01	7.86E-02	2.8E-03	2.630E 00	3.02E-03	4.1E-04	6.030E 00	2.58E-05	4.2E-05
8.700E-01	5.92E-02	2.8E-03	2.690E 00	5.74E-03	4.0E-04	6.130E 00	7.06E-05	3.6E-05
8.900E-01	3.60E-02	2.9E-03	2.750E 00	5.51E-03	3.7E-04	6.230E 00	8.35E-05	3.4E-05
9.100E-01	2.27E-02	3.1E-03	2.810E 00	4.71E-03	3.7E-04	6.330E 00	7.17E-05	3.7E-05
9.300E-01	3.09E-02	3.0E-03	2.870E 00	7.93E-03	4.0E-04	6.440E 00	4.21E-05	3.7E-05
9.500E-01	6.61E-02	3.6E-03	2.930E 00	1.30E-02	4.2E-04	6.560E 00	-1.13E-05	2.7E-05
9.700E-01	1.20E-01	3.3E-03	2.990E 00	1.38E-02	4.2E-04	6.680E 00	-1.48E-05	3.0E-05
1.000E 00	1.79E-01	3.7E-03	3.050E 00	9.78E-03	3.2E-04	6.800E 00	-3.13E-05	3.2E-05
1.040E 00	1.31E-01	2.7E-03	3.110E 00	4.79E-03	2.2E-04	6.920E 00	-1.35E-05	2.6E-05
1.080E 00	3.71E-02	2.1E-03	3.180E 00	1.40E-03	1.4E-04	7.040E 00	-6.45E-06	1.6E-05
1.120E 00	5.80E-03	1.7E-03	3.260E 00	2.58E-04	1.0E-04	7.160E 00	-4.41E-07	2.2E-05
1.160E 00	1.06E-03	1.6E-03	3.340E 00	7.33E-05	9.0E-05	7.280E 00	-4.46E-06	2.0E-05
1.200E 00	-1.91E-03	1.6E-03	3.420E 00	5.50E-05	8.8E-05	7.400E 00	-5.36E-06	1.5E-05
1.240E 00	-8.07E-04	1.4E-03	3.500E 00	5.00E-05	8.3E-05	7.520E 00	5.28E-08	1.4E-05
1.280E 00	4.76E-05	1.5E-03	3.580E 00	2.73E-05	8.1E-05	7.640E 00	1.03E-05	1.3E-05
1.320E 00	-6.33E-04	1.4E-03	3.660E 00	3.74E-05	8.2E-05	7.760E 00	1.22E-05	1.2E-05
1.360E 00	-4.20E-04	1.5E-03	3.740E 00	6.48E-05	7.6E-05	7.890E 00	7.84E-06	1.0E-05
1.400E 00	9.09E-04	1.5E-03	3.820E 00	4.17E-05	6.2E-05	8.030E 00	5.47E-06	8.4E-06
1.440E 00	3.66E-04	1.5E-03	3.900E 00	2.07E-06	6.5E-05	8.170E 00	5.17E-06	8.9E-06
1.480E 00	-9.00E-04	1.4E-03	3.980E 00	-7.40E-06	6.1E-05	8.310E 00	5.51E-06	9.8E-06
1.520E 00	-2.56E-04	1.4E-03	4.060E 00	1.93E-05	5.8E-05	8.450E 00	8.35E-06	7.7E-06
1.560E 00	7.63E-04	1.4E-03	4.140E 00	8.74E-05	5.9E-05	8.590E 00	1.39E-05	6.7E-06
1.600E 00	3.83E-03	1.5E-03	4.220E 00	1.64E-04	5.9E-05	8.730E 00	1.56E-05	7.9E-06
1.640E 00	1.58E-02	1.7E-03	4.300E 00	1.88E-04	5.7E-05	8.870E 00	1.02E-05	6.5E-06
1.680E 00	3.00E-02	1.8E-03	4.380E 00	1.45E-04	6.1E-05	9.010E 00	3.42E-06	5.0E-06
1.720E 00	2.95E-02	1.7E-03	4.460E 00	3.25E-05	5.1E-05	9.150E 00	-7.74E-07	4.3E-06
1.760E 00	1.65E-02	1.5E-03	4.540E 00	-4.35E-05	4.4E-05	9.300E 00	-2.46E-06	4.0E-06
1.800E 00	6.24E-03	1.4E-03	4.630E 00	-7.73E-05	4.6E-05	9.460E 00	-1.98E-06	3.5E-06
1.850E 00	7.10E-04	1.2E-03	4.730E 00	-6.53E-05	4.9E-05	9.620E 00	8.90E-07	3.4E-06
1.910E 00	-2.86E-03	1.2E-03	4.830E 00	-4.34E-05	5.1E-05	9.780E 00	4.52E-06	3.6E-06
1.970E 00	-2.02E-03	9.8E-04	4.930E 00	2.75E-07	4.9E-05	9.940E 00	6.43E-06	3.5E-06
2.030E 00	2.78E-03	1.1E-03	5.030E 00	4.29E-05	3.8E-05	1.010E 01	5.69E-06	2.8E-06
2.090E 00	2.97E-02	1.3E-03	5.130E 00	1.14E-04	4.3E-05	1.026E 01	3.80E-06	1.9E-06
						1.042E 01	1.73E-06	1.6E-06
						1.058E 01	7.27E-07	1.3E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 3.52 MEV EN-MAX= 4.00 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-1.02E-03	5.4E-03	2.150E 00	7.35E-02	1.9E-03	5.230E 00	3.28E-05	6.6E-05
7.100E-01	2.59E-03	3.2E-03	2.210E 00	7.60E-02	1.8E-03	5.330E 00	1.95E-05	7.1E-05
7.300E-01	7.10E-03	2.9E-03	2.270E 00	4.05E-02	1.3E-03	5.430E 00	-6.00E-06	7.0E-05
7.500E-01	1.34E-02	3.0E-03	2.330E 00	1.15E-02	9.7E-04	5.530E 00	-6.73E-06	5.4E-05
7.700E-01	2.73E-02	3.0E-03	2.390E 00	5.01E-04	9.5E-04	5.630E 00	2.13E-05	5.2E-05
7.900E-01	5.07E-02	2.9E-03	2.450E 00	-8.27E-04	1.1E-03	5.730E 00	3.39E-05	5.3E-05
8.100E-01	7.26E-02	3.0E-03	2.510E 00	2.12E-05	9.6E-04	5.830E 00	2.70E-05	5.3E-05
8.300E-01	7.89E-02	3.0E-03	2.570E 00	-5.35E-05	8.6E-04	5.930E 00	2.68E-05	4.8E-05
8.500E-01	6.59E-02	3.0E-03	2.630E 00	3.07E-03	8.3E-04	6.030E 00	4.23E-05	4.5E-05
8.700E-01	4.34E-02	3.1E-03	2.690E 00	7.80E-03	7.7E-04	6.130E 00	4.64E-05	4.6E-05
8.900E-01	2.43E-02	3.1E-03	2.750E 00	8.42E-03	7.7E-04	6.230E 00	3.90E-05	4.8E-05
9.100E-01	1.88E-02	3.5E-03	2.810E 00	1.14E-02	8.8E-04	6.330E 00	2.71E-05	4.3E-05
9.300E-01	3.36E-02	3.5E-03	2.870E 00	2.84E-02	1.0E-03	6.440E 00	1.20E-05	5.0E-05
9.500E-01	6.92E-02	4.1E-03	2.930E 00	4.87E-02	1.1E-03	6.560E 00	-2.71E-05	4.8E-05
9.700E-01	1.13E-01	3.9E-03	2.990E 00	5.04E-02	1.0E-03	6.680E 00	-4.89E-05	3.3E-05
1.000E 00	1.47E-01	4.1E-03	3.050E 00	3.38E-02	7.6E-04	6.800E 00	-3.05E-05	3.5E-05
1.040E 00	9.05E-02	3.1E-03	3.110E 00	1.55E-02	4.5E-04	6.920E 00	3.31E-05	3.7E-05
1.080E 00	2.06E-02	2.4E-03	3.180E 00	4.04E-03	2.3E-04	7.040E 00	8.29E-05	2.8E-05
1.120E 00	9.40E-04	2.1E-03	3.260E 00	6.03E-04	1.5E-04	7.160E 00	9.10E-05	2.6E-05
1.160E 00	-2.24E-05	2.1E-03	3.340E 00	2.39E-04	1.3E-04	7.280E 00	6.10E-05	2.6E-05
1.200E 00	-1.32E-03	2.1E-03	3.420E 00	2.04E-04	1.3E-04	7.400E 00	3.02E-05	2.0E-05
1.240E 00	-1.76E-03	2.0E-03	3.500E 00	7.64E-05	1.2E-04	7.520E 00	8.09E-06	1.9E-05
1.280E 00	-5.93E-04	1.9E-03	3.580E 00	-2.91E-05	1.0E-04	7.640E 00	-6.56E-06	1.8E-05
1.320E 00	-1.93E-03	1.8E-03	3.660E 00	2.33E-05	9.4E-05	7.760E 00	-1.66E-05	1.5E-05
1.360E 00	-3.20E-03	2.0E-03	3.740E 00	1.24E-04	9.8E-05	7.890E 00	-1.61E-05	1.4E-05
1.400E 00	-9.36E-04	2.0E-03	3.820E 00	1.66E-04	9.9E-05	8.030E 00	-5.33E-06	1.3E-05
1.440E 00	5.34E-05	1.8E-03	3.900E 00	1.72E-04	1.1E-04	8.170E 00	1.24E-05	1.1E-05
1.480E 00	-1.81E-03	1.9E-03	3.980E 00	1.90E-04	1.1E-04	8.310E 00	2.42E-05	9.9E-06
1.520E 00	-2.07E-03	1.8E-03	4.060E 00	1.78E-04	9.3E-05	8.450E 00	2.19E-05	9.3E-06
1.560E 00	-2.96E-04	1.9E-03	4.140E 00	1.15E-04	8.7E-05	8.590E 00	1.35E-05	7.3E-06
1.600E 00	7.03E-03	1.8E-03	4.220E 00	3.93E-05	8.2E-05	8.730E 00	4.93E-06	4.8E-06
1.640E 00	2.49E-02	2.2E-03	4.300E 00	6.79E-06	8.2E-05	8.870E 00	8.55E-07	3.8E-06
1.680E 00	3.99E-02	2.2E-03	4.380E 00	7.42E-06	8.8E-05	9.010E 00	-2.93E-07	3.2E-06
1.720E 00	3.63E-02	2.1E-03	4.460E 00	2.71E-06	8.3E-05	9.150E 00	5.67E-08	2.7E-06
1.760E 00	1.97E-02	1.9E-03	4.540E 00	-1.31E-05	7.6E-05	9.300E 00	1.04E-06	2.5E-06
1.800E 00	7.33E-03	1.8E-03	4.630E 00	-1.38E-05	7.6E-05	9.460E 00	2.04E-06	2.7E-06
1.850E 00	1.35E-03	1.5E-03	4.730E 00	5.41E-05	7.2E-05	9.620E 00	3.15E-06	2.5E-06
1.910E 00	-1.43E-03	1.5E-03	4.830E 00	9.83E-05	8.0E-05	9.780E 00	4.13E-06	2.9E-06
1.970E 00	-1.39E-03	1.4E-03	4.930E 00	6.21E-05	7.7E-05	9.940E 00	4.99E-06	2.9E-06
2.030E 00	4.77E-03	1.4E-03	5.030E 00	-7.40E-06	6.0E-05	1.010E 01	4.33E-06	2.6E-06
2.090E 00	3.38E-02	1.7E-03	5.130E 00	9.85E-06	7.6E-05	1.026E 01	3.00E-06	2.1E-06
						1.042E 01	1.42E-06	2.0E-06
						1.058E 01	6.07E-07	2.0E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 4.00 MEV EN-MAX= 4.50 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-4.82E-03	6.3E-03	2.150E 00	7.21E-02	2.3E-03	5.230E 00	1.04E-04	7.6E-05
7.100E-01	-2.18E-03	3.8E-03	2.210E 00	7.50E-02	2.1E-03	5.330E 00	8.46E-05	7.6E-05
7.300E-01	4.51E-03	3.3E-03	2.270E 00	3.92E-02	1.6E-03	5.430E 00	6.69E-05	7.2E-05
7.500E-01	1.41E-02	3.6E-03	2.330E 00	1.03E-02	1.1E-03	5.530E 00	4.55E-05	6.9E-05
7.700E-01	3.02E-02	3.8E-03	2.390E 00	2.45E-03	1.2E-03	5.630E 00	1.13E-06	6.8E-05
7.900E-01	5.59E-02	3.7E-03	2.450E 00	1.10E-03	1.2E-03	5.730E 00	-3.68E-05	6.9E-05
8.100E-01	8.12E-02	3.6E-03	2.510E 00	-7.62E-04	1.3E-03	5.830E 00	-6.21E-05	6.3E-05
8.300E-01	9.00E-02	3.5E-03	2.570E 00	-3.67E-04	1.1E-03	5.930E 00	-6.91E-05	5.7E-05
8.500E-01	7.72E-02	3.6E-03	2.630E 00	4.43E-03	1.1E-03	6.030E 00	-5.93E-05	5.9E-05
8.700E-01	5.26E-02	3.6E-03	2.690E 00	9.21E-03	1.0E-03	6.130E 00	-4.05E-05	5.8E-05
8.900E-01	3.00E-02	3.6E-03	2.750E 00	1.06E-02	1.0E-03	6.230E 00	-1.67E-05	5.6E-05
9.100E-01	2.16E-02	4.0E-03	2.810E 00	1.75E-02	1.1E-03	6.330E 00	4.14E-06	5.7E-05
9.300E-01	3.71E-02	4.0E-03	2.870E 00	3.80E-02	1.3E-03	6.440E 00	3.26E-05	5.9E-05
9.500E-01	7.69E-02	4.6E-03	2.930E 00	6.02E-02	1.5E-03	6.560E 00	3.39E-05	6.2E-05
9.700E-01	1.25E-01	4.4E-03	2.990E 00	6.29E-02	1.3E-03	6.680E 00	6.34E-05	5.1E-05
1.000E 00	1.59E-01	4.6E-03	3.050E 00	4.31E-02	9.5E-04	6.800E 00	6.25E-05	4.1E-05
1.040E 00	9.78E-02	3.5E-03	3.110E 00	1.99E-02	5.8E-04	6.920E 00	8.28E-05	3.5E-05
1.080E 00	2.18E-02	2.8E-03	3.180E 00	5.58E-03	3.1E-04	7.040E 00	6.71E-05	3.8E-05
1.120E 00	8.10E-04	2.4E-03	3.260E 00	1.10E-03	2.3E-04	7.160E 00	2.30E-05	2.4E-05
1.160E 00	1.85E-03	2.3E-03	3.340E 00	4.22E-04	2.3E-04	7.280E 00	-1.56E-05	1.6E-05
1.200E 00	-5.55E-04	2.3E-03	3.420E 00	6.24E-04	2.1E-04	7.400E 00	-3.79E-05	1.6E-05
1.240E 00	-2.39E-03	2.3E-03	3.500E 00	4.17E-04	2.1E-04	7.520E 00	-3.44E-05	1.3E-05
1.280E 00	-2.16E-04	2.1E-03	3.580E 00	1.90E-04	1.9E-04	7.640E 00	-1.78E-05	1.5E-05
1.320E 00	-5.26E-04	2.1E-03	3.660E 00	3.40E-04	1.9E-04	7.760E 00	-4.36E-06	1.3E-05
1.360E 00	-2.77E-03	2.3E-03	3.740E 00	4.93E-04	1.8E-04	7.890E 00	9.70E-07	1.1E-05
1.400E 00	-1.39E-03	2.3E-03	3.820E 00	7.49E-04	2.0E-04	8.030E 00	1.65E-05	1.5E-05
1.440E 00	7.63E-04	2.0E-03	3.900E 00	1.10E-03	1.9E-04	8.170E 00	2.60E-05	1.3E-05
1.480E 00	-2.05E-04	2.2E-03	3.980E 00	1.09E-03	1.9E-04	8.310E 00	2.67E-05	1.2E-05
1.520E 00	-3.40E-03	2.3E-03	4.060E 00	6.88E-04	1.6E-04	8.450E 00	1.38E-05	1.2E-05
1.560E 00	-3.58E-03	2.2E-03	4.140E 00	3.04E-04	1.5E-04	8.590E 00	2.78E-06	1.3E-05
1.600E 00	6.95E-03	2.2E-03	4.220E 00	1.09E-04	1.3E-04	8.730E 00	-4.04E-07	9.9E-06
1.640E 00	2.60E-02	2.4E-03	4.300E 00	2.90E-05	1.2E-04	8.870E 00	3.90E-06	8.6E-06
1.680E 00	3.96E-02	2.6E-03	4.380E 00	-9.13E-06	1.1E-04	9.010E 00	5.36E-06	8.1E-06
1.720E 00	3.66E-02	2.4E-03	4.460E 00	-6.29E-06	9.9E-05	9.150E 00	2.74E-06	7.3E-06
1.760E 00	2.17E-02	2.3E-03	4.540E 00	2.90E-05	9.8E-05	9.300E 00	1.09E-07	7.1E-06
1.800E 00	8.97E-03	2.0E-03	4.630E 00	5.90E-05	9.7E-05	9.460E 00	5.54E-07	7.8E-06
1.850E 00	1.51E-03	1.8E-03	4.730E 00	3.24E-05	8.8E-05	9.620E 00	6.27E-06	6.9E-06
1.910E 00	-1.95E-03	1.8E-03	4.830E 00	7.97E-06	8.3E-05	9.780E 00	1.25E-05	6.6E-06
1.970E 00	-9.66E-04	1.5E-03	4.930E 00	3.35E-05	8.2E-05	9.940E 00	1.50E-05	6.9E-06
2.030E 00	4.74E-03	1.7E-03	5.030E 00	7.89E-05	8.3E-05	1.010E 01	1.12E-05	5.7E-06
2.090E 00	3.22E-02	2.0E-03	5.130E 00	1.06E-04	8.6E-05	1.026E 01	6.50E-06	3.6E-06
						1.042E 01	2.66E-06	3.1E-06
						1.058E 01	1.10E-06	2.6E-06

ALUMINJM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 4.50 MEV EN-MAX= 4.98 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-6.32E-05	6.6E-03	2.150E 00	7.73E-02	2.4E-03	5.230E 00	1.11E-04	7.8E-05
7.100E-01	1.65E-03	4.1E-03	2.210E 00	7.94E-02	2.2E-03	5.330E 00	3.07E-05	6.3E-05
7.300E-01	5.44E-03	3.6E-03	2.270E 00	4.21E-02	1.8E-03	5.430E 00	-4.30E-05	6.2E-05
7.500E-01	1.38E-02	3.9E-03	2.330E 00	1.27E-02	1.3E-03	5.530E 00	-3.28E-05	7.0E-05
7.700E-01	2.99E-02	3.9E-03	2.390E 00	2.74E-03	1.3E-03	5.630E 00	1.37E-05	7.6E-05
7.900E-01	5.42E-02	3.8E-03	2.450E 00	1.62E-03	1.4E-03	5.730E 00	2.87E-05	4.8E-05
8.100E-01	7.77E-02	3.9E-03	2.510E 00	-2.43E-04	1.4E-03	5.830E 00	2.07E-05	5.3E-05
8.300E-01	8.50E-02	3.8E-03	2.570E 00	-7.67E-04	1.3E-03	5.930E 00	2.94E-05	4.4E-05
8.500E-01	7.06E-02	4.0E-03	2.630E 00	5.68E-03	1.2E-03	6.030E 00	1.18E-05	4.8E-05
8.700E-01	4.61E-02	4.2E-03	2.690E 00	1.17E-02	1.2E-03	6.130E 00	-4.95E-05	6.7E-05
8.900E-01	2.71E-02	4.0E-03	2.750E 00	1.16E-02	1.2E-03	6.230E 00	-1.27E-04	4.2E-05
9.100E-01	2.22E-02	4.4E-03	2.810E 00	1.68E-02	1.4E-03	6.330E 00	-1.24E-04	4.0E-05
9.300E-01	3.76E-02	4.1E-03	2.870E 00	3.81E-02	1.5E-03	6.440E 00	-1.09E-05	6.5E-05
9.500E-01	7.61E-02	5.1E-03	2.930E 00	6.19E-02	1.6E-03	6.560E 00	7.32E-05	6.3E-05
9.700E-01	1.26E-01	5.0E-03	2.990E 00	6.37E-02	1.4E-03	6.680E 00	1.16E-04	5.3E-05
1.000E 00	1.65E-01	5.2E-03	3.050E 00	4.37E-02	1.1E-03	6.800E 00	8.65E-05	3.6E-05
1.040E 00	9.99E-02	4.0E-03	3.110E 00	2.17E-02	7.2E-04	6.920E 00	8.53E-05	5.0E-05
1.080E 00	2.48E-02	3.2E-03	3.180E 00	8.11E-03	5.2E-04	7.040E 00	4.27E-05	4.0E-05
1.120E 00	1.36E-04	2.8E-03	3.260E 00	3.45E-03	4.4E-04	7.160E 00	-1.48E-06	2.7E-05
1.160E 00	-2.40E-03	2.9E-03	3.340E 00	2.04E-03	4.3E-04	7.280E 00	-3.32E-05	3.1E-05
1.200E 00	-1.27E-03	2.8E-03	3.420E 00	1.53E-03	4.4E-04	7.400E 00	-1.72E-05	2.5E-05
1.240E 00	-2.29E-03	2.6E-03	3.500E 00	1.05E-03	3.8E-04	7.520E 00	-2.48E-06	2.1E-05
1.280E 00	-1.35E-03	2.4E-03	3.580E 00	6.35E-04	3.6E-04	7.640E 00	4.63E-06	2.0E-05
1.320E 00	-7.37E-04	2.3E-03	3.660E 00	4.42E-04	3.5E-04	7.760E 00	3.40E-06	1.6E-05
1.360E 00	-1.01E-03	2.4E-03	3.740E 00	8.64E-04	3.4E-04	7.890E 00	5.07E-06	1.3E-05
1.400E 00	-1.45E-03	2.5E-03	3.820E 00	2.47E-03	3.6E-04	8.030E 00	8.04E-06	1.3E-05
1.440E 00	-1.55E-03	2.3E-03	3.900E 00	4.55E-03	3.9E-04	8.170E 00	6.55E-06	1.2E-05
1.480E 00	-9.44E-04	2.3E-03	3.980E 00	4.89E-03	3.6E-04	8.310E 00	3.03E-06	1.2E-05
1.520E 00	-8.47E-04	2.3E-03	4.060E 00	2.91E-03	2.9E-04	8.450E 00	1.23E-06	1.2E-05
1.560E 00	-1.10E-03	2.4E-03	4.140E 00	8.28E-04	2.4E-04	8.590E 00	3.50E-06	1.2E-05
1.600E 00	5.76E-03	2.5E-03	4.220E 00	3.95E-04	2.2E-04	8.730E 00	7.16E-06	1.2E-05
1.640E 00	2.48E-02	2.8E-03	4.300E 00	1.05E-03	2.0E-04	8.870E 00	1.12E-05	1.2E-05
1.680E 00	4.06E-02	2.8E-03	4.380E 00	1.50E-03	1.9E-04	9.010E 00	1.27E-05	1.3E-05
1.720E 00	3.66E-02	2.7E-03	4.460E 00	1.33E-03	1.9E-04	9.150E 00	1.26E-05	1.3E-05
1.760E 00	1.98E-02	2.4E-03	4.540E 00	8.99E-04	1.9E-04	9.300E 00	7.89E-06	1.2E-05
1.800E 00	7.09E-03	2.3E-03	4.630E 00	5.00E-04	1.7E-04	9.460E 00	3.94E-06	1.1E-05
1.850E 00	2.15E-03	2.0E-03	4.730E 00	2.18E-04	1.4E-04	9.620E 00	3.87E-06	8.8E-06
1.910E 00	1.10E-04	1.8E-03	4.830E 00	3.08E-05	1.1E-04	9.780E 00	5.80E-06	7.7E-06
1.970E 00	-1.10E-03	1.9E-03	4.930E 00	-4.55E-05	9.2E-05	9.940E 00	6.82E-06	6.6E-06
2.030E 00	4.17E-03	1.9E-03	5.030E 00	2.51E-05	9.1E-05	1.010E 01	4.96E-06	5.6E-06
2.090E 00	3.36E-02	2.2E-03	5.130E 00	1.15E-04	8.8E-05	1.026E 01	3.28E-06	3.8E-06
						1.042E 01	1.55E-06	3.4E-06
						1.058E 01	5.99E-07	3.2E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 4.98 MEV EN-MAX= 5.54 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
5.900E-01	-1.34E-03	7.2E-03	2.150E 00	8.54E-02	2.8E-03	5.230E 00	1.19E-04	1.1E-04
7.100E-01	-6.12E-04	4.6E-03	2.210E 00	9.38E-02	2.7E-03	5.330E 00	-1.19E-05	9.4E-05
7.300E-01	3.77E-03	4.3E-03	2.270E 00	5.59E-02	2.0E-03	5.430E 00	-7.01E-05	8.3E-05
7.500E-01	1.46E-02	4.4E-03	2.330E 00	2.13E-02	1.6E-03	5.530E 00	-5.21E-05	7.2E-05
7.700E-01	3.24E-02	4.2E-03	2.390E 00	6.51E-03	1.5E-03	5.630E 00	1.21E-05	6.6E-05
7.900E-01	5.35E-02	4.2E-03	2.450E 00	2.48E-03	1.5E-03	5.730E 00	4.94E-05	7.1E-05
8.100E-01	7.11E-02	4.4E-03	2.510E 00	1.67E-03	1.5E-03	5.830E 00	5.61E-05	6.8E-05
8.300E-01	7.88E-02	4.6E-03	2.570E 00	3.00E-03	1.4E-03	5.930E 00	7.06E-05	6.4E-05
8.500E-01	7.22E-02	4.6E-03	2.630E 00	6.46E-03	1.4E-03	6.030E 00	7.29E-05	5.6E-05
8.700E-01	5.23E-02	4.6E-03	2.690E 00	1.07E-02	1.4E-03	6.130E 00	4.11E-05	6.2E-05
8.900E-01	2.98E-02	4.5E-03	2.750E 00	1.37E-02	1.3E-03	6.230E 00	-2.79E-06	7.8E-05
9.100E-01	2.15E-02	4.9E-03	2.810E 00	1.98E-02	1.5E-03	6.330E 00	-2.38E-05	7.8E-05
9.300E-01	3.95E-02	4.9E-03	2.870E 00	3.63E-02	1.6E-03	6.440E 00	2.86E-05	5.5E-05
9.500E-01	8.14E-02	5.8E-03	2.930E 00	5.57E-02	1.7E-03	6.560E 00	8.72E-05	5.0E-05
9.700E-01	1.30E-01	5.5E-03	2.990E 00	5.88E-02	1.5E-03	6.680E 00	8.78E-05	5.8E-05
1.000E 00	1.68E-01	5.7E-03	3.050E 00	4.24E-02	1.2E-03	6.800E 00	2.82E-05	5.6E-05
1.040E 00	1.09E-01	4.5E-03	3.110E 00	2.17E-02	8.6E-04	6.920E 00	-2.95E-06	4.3E-05
1.080E 00	2.55E-02	3.5E-03	3.180E 00	7.23E-03	7.4E-04	7.040E 00	-2.30E-05	3.4E-05
1.120E 00	3.58E-03	3.2E-03	3.260E 00	3.68E-03	7.1E-04	7.160E 00	-6.92E-06	4.2E-05
1.160E 00	7.43E-04	3.1E-03	3.340E 00	5.58E-03	6.9E-04	7.280E 00	-5.16E-06	3.6E-05
1.200E 00	-8.57E-04	3.5E-03	3.420E 00	5.30E-03	6.8E-04	7.400E 00	-1.31E-05	2.7E-05
1.240E 00	1.32E-03	2.8E-03	3.500E 00	2.41E-03	6.4E-04	7.520E 00	-2.19E-05	2.6E-05
1.280E 00	-2.80E-04	2.9E-03	3.580E 00	1.10E-03	6.0E-04	7.640E 00	-2.17E-05	2.1E-05
1.320E 00	-4.19E-04	2.8E-03	3.660E 00	1.77E-03	6.0E-04	7.760E 00	-1.01E-05	1.6E-05
1.360E 00	2.92E-05	2.8E-03	3.740E 00	2.99E-03	6.3E-04	7.890E 00	2.54E-06	1.5E-05
1.400E 00	-2.74E-04	3.1E-03	3.820E 00	5.10E-03	6.5E-04	8.030E 00	4.33E-06	1.3E-05
1.440E 00	1.34E-03	2.9E-03	3.900E 00	6.91E-03	6.6E-04	8.170E 00	2.23E-06	1.2E-05
1.480E 00	1.69E-03	2.8E-03	3.980E 00	6.42E-03	6.6E-04	8.310E 00	4.21E-06	1.1E-05
1.520E 00	-2.69E-04	2.9E-03	4.060E 00	3.90E-03	6.0E-04	8.450E 00	1.20E-05	1.1E-05
1.560E 00	-3.07E-04	2.8E-03	4.140E 00	1.46E-03	5.5E-04	8.590E 00	1.91E-05	1.0E-05
1.600E 00	9.54E-03	2.8E-03	4.220E 00	1.64E-03	5.3E-04	8.730E 00	1.92E-05	9.9E-06
1.640E 00	2.94E-02	3.1E-03	4.300E 00	4.23E-03	5.2E-04	8.870E 00	1.34E-05	8.7E-06
1.680E 00	4.34E-02	3.3E-03	4.380E 00	6.61E-03	5.2E-04	9.010E 00	7.77E-06	7.5E-06
1.720E 00	3.89E-02	3.2E-03	4.460E 00	7.98E-03	5.1E-04	9.150E 00	4.84E-06	5.9E-06
1.760E 00	2.44E-02	2.9E-03	4.540E 00	8.59E-03	4.8E-04	9.300E 00	3.93E-06	5.0E-06
1.800E 00	1.20E-02	2.7E-03	4.630E 00	7.24E-03	3.9E-04	9.460E 00	3.34E-06	4.7E-06
1.850E 00	2.20E-03	2.6E-03	4.730E 00	3.93E-03	2.6E-04	9.620E 00	3.60E-06	3.7E-06
1.910E 00	-1.99E-03	2.2E-03	4.830E 00	1.71E-03	2.1E-04	9.780E 00	4.03E-06	3.6E-06
1.970E 00	7.38E-04	2.0E-03	4.930E 00	8.58E-04	1.6E-04	9.940E 00	5.07E-06	3.9E-06
2.030E 00	5.45E-03	2.0E-03	5.030E 00	4.76E-04	1.5E-04	1.010E 01	4.15E-06	3.8E-06
2.090E 00	3.54E-02	2.5E-03	5.130E 00	2.76E-04	1.3E-04	1.026E 01	3.06E-06	2.8E-06
						1.042E 01	1.72E-06	2.4E-06
						1.058E 01	1.06E-06	2.7E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 5.54 MEV EN-MAX= 6.07 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-2.30E-03	7.8E-03	2.150E 00	8.26E-02	3.2E-03	5.230E 00	1.53E-03	2.9E-04
7.100E-01	1.02E-03	4.9E-03	2.210E 00	9.60E-02	3.1E-03	5.330E 00	1.62E-03	2.5E-04
7.300E-01	5.62E-03	4.5E-03	2.270E 00	6.17E-02	2.2E-03	5.430E 00	1.66E-03	2.2E-04
7.500E-01	1.16E-02	4.7E-03	2.330E 00	2.57E-02	1.9E-03	5.530E 00	1.46E-03	1.9E-04
7.700E-01	2.40E-02	4.6E-03	2.390E 00	1.17E-02	1.7E-03	5.630E 00	9.64E-04	1.6E-04
7.900E-01	4.60E-02	4.7E-03	2.450E 00	6.70E-03	1.8E-03	5.730E 00	4.85E-04	1.4E-04
8.100E-01	6.86E-02	4.8E-03	2.510E 00	2.92E-03	1.9E-03	5.830E 00	2.58E-04	1.3E-04
8.300E-01	7.70E-02	4.8E-03	2.570E 00	4.41E-03	1.7E-03	5.930E 00	2.16E-04	1.2E-04
8.500E-01	6.60E-02	4.7E-03	2.630E 00	9.14E-03	1.6E-03	6.030E 00	1.99E-04	1.0E-04
8.700E-01	4.57E-02	4.8E-03	2.690E 00	1.20E-02	1.6E-03	6.130E 00	1.50E-04	1.0E-04
8.900E-01	3.00E-02	4.8E-03	2.750E 00	1.36E-02	1.5E-03	6.230E 00	9.25E-05	1.0E-04
9.100E-01	2.72E-02	5.3E-03	2.810E 00	1.96E-02	1.5E-03	6.330E 00	5.58E-05	9.7E-05
9.300E-01	4.32E-02	5.1E-03	2.870E 00	3.65E-02	1.7E-03	6.440E 00	1.78E-05	8.0E-05
9.500E-01	8.14E-02	6.0E-03	2.930E 00	5.64E-02	1.8E-03	6.560E 00	-1.05E-05	6.7E-05
9.700E-01	1.31E-01	5.9E-03	2.990E 00	5.99E-02	1.7E-03	6.680E 00	-1.49E-05	6.3E-05
1.000E 00	1.74E-01	6.2E-03	3.050E 00	4.31E-02	1.4E-03	6.800E 00	-5.20E-06	5.7E-05
1.040E 00	1.11E-01	4.7E-03	3.110E 00	2.31E-02	1.1E-03	6.920E 00	5.15E-06	4.7E-05
1.080E 00	2.63E-02	4.2E-03	3.180E 00	1.16E-02	1.0E-03	7.040E 00	1.52E-05	4.3E-05
1.120E 00	3.56E-03	3.6E-03	3.260E 00	7.62E-03	9.5E-04	7.160E 00	3.59E-05	4.0E-05
1.160E 00	8.17E-04	3.6E-03	3.340E 00	5.24E-03	9.7E-04	7.280E 00	6.37E-05	3.7E-05
1.200E 00	1.30E-04	3.5E-03	3.420E 00	3.99E-03	8.9E-04	7.400E 00	7.14E-05	3.2E-05
1.240E 00	-1.31E-03	3.5E-03	3.500E 00	3.22E-03	8.2E-04	7.520E 00	6.34E-05	3.3E-05
1.280E 00	4.04E-04	3.4E-03	3.580E 00	3.37E-03	8.2E-04	7.640E 00	5.03E-05	2.9E-05
1.320E 00	-1.93E-03	3.1E-03	3.660E 00	4.07E-03	7.7E-04	7.760E 00	3.34E-05	2.0E-05
1.360E 00	-4.24E-03	3.4E-03	3.740E 00	4.58E-03	8.3E-04	7.890E 00	1.47E-05	1.9E-05
1.400E 00	6.13E-04	3.5E-03	3.820E 00	6.58E-03	8.2E-04	8.030E 00	-6.45E-06	1.9E-05
1.440E 00	2.29E-03	3.2E-03	3.900E 00	8.98E-03	8.6E-04	8.170E 00	-1.29E-05	1.9E-05
1.480E 00	1.56E-03	3.4E-03	3.980E 00	8.08E-03	8.6E-04	8.310E 00	3.32E-06	1.5E-05
1.520E 00	3.00E-03	3.3E-03	4.060E 00	4.79E-03	8.1E-04	8.450E 00	2.37E-05	1.4E-05
1.560E 00	2.85E-03	3.2E-03	4.140E 00	2.75E-03	7.5E-04	8.590E 00	3.34E-05	1.4E-05
1.600E 00	1.11E-02	3.2E-03	4.220E 00	3.76E-03	7.1E-04	8.730E 00	2.65E-05	1.4E-05
1.640E 00	2.98E-02	3.6E-03	4.300E 00	6.66E-03	7.1E-04	8.870E 00	1.47E-05	1.1E-05
1.680E 00	4.25E-02	3.6E-03	4.380E 00	9.01E-03	6.9E-04	9.010E 00	6.25E-06	7.4E-06
1.720E 00	4.05E-02	3.4E-03	4.460E 00	1.08E-02	7.1E-04	9.150E 00	3.43E-06	6.7E-06
1.760E 00	2.84E-02	3.0E-03	4.540E 00	1.20E-02	6.9E-04	9.300E 00	2.80E-06	6.5E-06
1.800E 00	1.46E-02	2.8E-03	4.630E 00	1.02E-02	5.8E-04	9.460E 00	4.28E-06	5.1E-06
1.850E 00	4.82E-03	2.8E-03	4.730E 00	5.57E-03	4.8E-04	9.620E 00	6.36E-06	4.9E-06
1.910E 00	-4.69E-04	2.5E-03	4.830E 00	2.46E-03	3.8E-04	9.780E 00	8.58E-06	5.7E-06
1.970E 00	-2.81E-03	2.6E-03	4.930E 00	1.50E-03	3.3E-04	9.940E 00	1.02E-05	5.5E-06
2.030E 00	5.71E-03	2.4E-03	5.030E 00	1.42E-03	3.1E-04	1.010E 01	9.30E-06	4.9E-06
2.090E 00	3.58E-02	2.8E-03	5.130E 00	1.46E-03	2.9E-04	1.026E 01	6.81E-06	3.9E-06
						1.042E 01	3.26E-06	3.6E-06
						1.058E 01	1.04E-06	3.5E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 6.07 MEV EN-MAX= 6.50 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-3.82E-03	9.5E-03	2.150E 00	8.48E-02	4.0E-03	5.230E 00	3.00E-03	5.3E-04
7.100E-01	-4.33E-03	6.3E-03	2.210E 00	9.70E-02	3.8E-03	5.330E 00	4.22E-03	4.7E-04
7.300E-01	5.83E-04	5.5E-03	2.270E 00	6.32E-02	3.0E-03	5.430E 00	5.51E-03	4.8E-04
7.500E-01	1.11E-02	5.6E-03	2.330E 00	3.10E-02	2.5E-03	5.530E 00	5.60E-03	4.2E-04
7.700E-01	2.64E-02	5.5E-03	2.390E 00	1.74E-02	2.3E-03	5.630E 00	4.37E-03	3.5E-04
7.900E-01	4.75E-02	5.5E-03	2.450E 00	1.40E-02	2.4E-03	5.730E 00	2.78E-03	2.7E-04
8.100E-01	7.11E-02	5.7E-03	2.510E 00	8.90E-03	2.3E-03	5.830E 00	1.46E-03	1.9E-04
8.300E-01	8.56E-02	5.5E-03	2.570E 00	7.62E-03	2.3E-03	5.930E 00	6.69E-04	1.7E-04
8.500E-01	7.97E-02	5.4E-03	2.630E 00	1.42E-02	2.1E-03	6.030E 00	3.78E-04	1.4E-04
8.700E-01	5.71E-02	5.6E-03	2.690E 00	1.78E-02	2.0E-03	6.130E 00	3.24E-04	1.3E-04
8.900E-01	3.32E-02	5.7E-03	2.750E 00	1.77E-02	1.9E-03	6.230E 00	2.67E-04	1.3E-04
9.100E-01	2.33E-02	6.3E-03	2.810E 00	2.15E-02	2.1E-03	6.330E 00	1.82E-04	1.2E-04
9.300E-01	3.81E-02	6.2E-03	2.870E 00	4.06E-02	2.2E-03	6.440E 00	6.47E-05	9.4E-05
9.500E-01	8.02E-02	7.2E-03	2.930E 00	6.85E-02	2.3E-03	6.560E 00	-2.13E-05	7.9E-05
9.700E-01	1.35E-01	6.9E-03	2.990E 00	7.65E-02	2.2E-03	6.680E 00	-3.02E-05	7.0E-05
1.000E 00	1.83E-01	7.2E-03	3.050E 00	5.77E-02	1.8E-03	6.800E 00	-8.08E-06	7.1E-05
1.040E 00	1.21E-01	6.0E-03	3.110E 00	3.50E-02	1.6E-03	6.920E 00	2.83E-05	6.1E-05
1.080E 00	3.02E-02	4.7E-03	3.180E 00	2.19E-02	1.4E-03	7.040E 00	3.63E-05	4.0E-05
1.120E 00	-1.67E-03	4.3E-03	3.260E 00	1.56E-02	1.2E-03	7.160E 00	5.03E-05	4.7E-05
1.160E 00	-2.48E-03	4.3E-03	3.340E 00	1.01E-02	1.1E-03	7.280E 00	6.92E-05	4.6E-05
1.200E 00	6.17E-04	4.2E-03	3.420E 00	6.03E-03	1.1E-03	7.400E 00	7.91E-05	4.1E-05
1.240E 00	1.73E-03	3.7E-03	3.500E 00	3.66E-03	1.1E-03	7.520E 00	6.60E-05	3.7E-05
1.280E 00	-1.95E-03	3.7E-03	3.580E 00	3.26E-03	1.0E-03	7.640E 00	3.06E-05	3.4E-05
1.320E 00	-2.80E-03	3.6E-03	3.660E 00	4.05E-03	1.0E-03	7.760E 00	6.91E-06	3.2E-05
1.360E 00	1.25E-03	3.8E-03	3.740E 00	5.62E-03	1.1E-03	7.890E 00	3.24E-06	3.1E-05
1.400E 00	3.63E-03	3.8E-03	3.820E 00	7.54E-03	1.1E-03	8.030E 00	1.31E-05	2.3E-05
1.440E 00	4.08E-03	3.8E-03	3.900E 00	9.44E-03	1.1E-03	8.170E 00	1.80E-05	2.1E-05
1.480E 00	4.64E-03	3.7E-03	3.980E 00	9.45E-03	1.1E-03	8.310E 00	7.81E-06	2.2E-05
1.520E 00	3.60E-03	3.8E-03	4.060E 00	6.90E-03	1.0E-03	8.450E 00	3.01E-06	1.6E-05
1.560E 00	3.46E-03	3.7E-03	4.140E 00	5.10E-03	1.0E-03	8.590E 00	2.12E-06	1.4E-05
1.600E 00	9.90E-03	3.6E-03	4.220E 00	6.53E-03	1.0E-03	8.730E 00	5.73E-06	1.5E-05
1.640E 00	2.79E-02	4.2E-03	4.300E 00	7.46E-03	9.7E-04	8.870E 00	9.47E-06	1.3E-05
1.680E 00	4.59E-02	4.3E-03	4.380E 00	7.31E-03	9.6E-04	9.010E 00	1.12E-05	1.2E-05
1.720E 00	4.24E-02	4.1E-03	4.460E 00	9.47E-03	9.2E-04	9.150E 00	1.04E-05	1.0E-05
1.760E 00	2.57E-02	3.9E-03	4.540E 00	1.18E-02	9.0E-04	9.300E 00	7.64E-06	8.6E-06
1.800E 00	1.38E-02	3.8E-03	4.630E 00	1.05E-02	8.5E-04	9.460E 00	5.06E-06	7.1E-06
1.850E 00	4.00E-03	3.3E-03	4.730E 00	6.37E-03	7.3E-04	9.620E 00	4.33E-06	6.7E-06
1.910E 00	-2.17E-03	3.2E-03	4.830E 00	3.77E-03	6.9E-04	9.780E 00	4.93E-06	6.1E-06
1.970E 00	-9.72E-06	3.0E-03	4.930E 00	3.03E-03	6.5E-04	9.940E 00	4.47E-06	5.4E-06
2.030E 00	6.99E-03	3.0E-03	5.030E 00	2.64E-03	6.3E-04	1.010E 01	3.84E-06	4.7E-06
2.090E 00	3.65E-02	3.4E-03	5.130E 00	2.48E-03	5.9E-04	1.026E 01	3.09E-06	3.8E-06
						1.042E 01	2.25E-06	4.3E-06
						1.058E 01	1.46E-06	4.1E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 6.50 MEV EN-MAX= 7.00 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-2.75E-03	9.7E-03	2.150E 00	8.91E-02	3.8E-03	5.230E 00	6.02E-03	6.8E-04
7.100E-01	-4.74E-03	6.5E-03	2.210E 00	1.08E-01	3.8E-03	5.330E 00	7.15E-03	6.5E-04
7.300E-01	-9.83E-04	5.8E-03	2.270E 00	7.52E-02	3.0E-03	5.430E 00	8.46E-03	5.8E-04
7.500E-01	7.91E-03	5.8E-03	2.330E 00	3.52E-02	2.7E-03	5.530E 00	8.66E-03	5.8E-04
7.700E-01	2.05E-02	6.0E-03	2.390E 00	1.89E-02	2.6E-03	5.630E 00	7.17E-03	4.9E-04
7.900E-01	3.99E-02	6.4E-03	2.450E 00	1.81E-02	2.5E-03	5.730E 00	5.08E-03	4.0E-04
8.100E-01	6.29E-02	6.5E-03	2.510E 00	1.54E-02	2.4E-03	5.830E 00	3.17E-03	3.6E-04
8.300E-01	7.70E-02	6.5E-03	2.570E 00	1.23E-02	2.4E-03	5.930E 00	1.83E-03	2.9E-04
8.500E-01	7.32E-02	6.5E-03	2.630E 00	1.55E-02	2.4E-03	6.030E 00	1.21E-03	2.6E-04
8.700E-01	5.52E-02	6.5E-03	2.690E 00	1.80E-02	2.3E-03	6.130E 00	9.80E-04	2.4E-04
8.900E-01	3.39E-02	6.6E-03	2.750E 00	1.66E-02	2.2E-03	6.230E 00	8.89E-04	2.2E-04
9.100E-01	2.18E-02	7.0E-03	2.810E 00	2.07E-02	2.2E-03	6.330E 00	9.37E-04	1.9E-04
9.300E-01	3.19E-02	7.2E-03	2.870E 00	3.99E-02	2.4E-03	6.440E 00	9.39E-04	1.6E-04
9.500E-01	7.11E-02	7.9E-03	2.930E 00	6.62E-02	2.4E-03	6.560E 00	6.60E-04	1.5E-04
9.700E-01	1.29E-01	7.4E-03	2.990E 00	7.51E-02	2.4E-03	6.680E 00	3.08E-04	1.3E-04
1.000E 00	1.89E-01	8.2E-03	3.050E 00	5.89E-02	2.0E-03	6.800E 00	9.19E-05	9.2E-05
1.040E 00	1.37E-01	6.4E-03	3.110E 00	3.69E-02	1.7E-03	6.920E 00	1.92E-05	8.6E-05
1.080E 00	3.86E-02	5.1E-03	3.180E 00	2.32E-02	1.7E-03	7.040E 00	1.99E-05	7.5E-05
1.120E 00	4.55E-03	4.4E-03	3.260E 00	1.68E-02	1.4E-03	7.160E 00	4.63E-05	6.6E-05
1.160E 00	2.27E-03	4.6E-03	3.340E 00	1.22E-02	1.3E-03	7.280E 00	5.66E-05	5.5E-05
1.200E 00	-5.92E-04	4.6E-03	3.420E 00	8.26E-03	1.2E-03	7.400E 00	5.85E-05	4.8E-05
1.240E 00	-1.63E-04	4.1E-03	3.500E 00	4.46E-03	1.2E-03	7.520E 00	5.69E-05	5.4E-05
1.280E 00	8.60E-04	4.0E-03	3.580E 00	3.36E-03	1.2E-03	7.640E 00	6.17E-05	5.7E-05
1.320E 00	-2.31E-03	3.9E-03	3.660E 00	4.11E-03	1.2E-03	7.760E 00	5.71E-05	4.2E-05
1.360E 00	-1.86E-03	4.0E-03	3.740E 00	5.76E-03	1.3E-03	7.890E 00	3.23E-05	3.6E-05
1.400E 00	6.75E-04	4.2E-03	3.820E 00	7.83E-03	1.2E-03	8.030E 00	-4.74E-06	4.4E-05
1.440E 00	1.55E-03	3.9E-03	3.900E 00	8.54E-03	1.3E-03	8.170E 00	-1.24E-05	3.1E-05
1.480E 00	1.65E-03	4.1E-03	3.980E 00	8.14E-03	1.2E-03	8.310E 00	1.59E-05	2.4E-05
1.520E 00	8.82E-04	4.0E-03	4.060E 00	6.91E-03	1.2E-03	8.450E 00	3.31E-05	2.4E-05
1.560E 00	1.22E-03	3.8E-03	4.140E 00	7.33E-03	1.2E-03	8.590E 00	2.72E-05	2.1E-05
1.600E 00	8.67E-03	4.0E-03	4.220E 00	9.42E-03	1.2E-03	8.730E 00	8.99E-06	1.7E-05
1.640E 00	2.76E-02	4.4E-03	4.300E 00	1.05E-02	1.2E-03	8.870E 00	3.72E-06	1.6E-05
1.680E 00	4.63E-02	4.6E-03	4.380E 00	1.06E-02	1.2E-03	9.010E 00	6.64E-06	1.5E-05
1.720E 00	4.62E-02	4.4E-03	4.460E 00	1.11E-02	1.1E-03	9.150E 00	7.88E-06	1.3E-05
1.760E 00	3.06E-02	4.2E-03	4.540E 00	1.19E-02	1.1E-03	9.300E 00	8.25E-06	1.2E-05
1.800E 00	1.54E-02	3.8E-03	4.630E 00	1.10E-02	1.0E-03	9.460E 00	9.18E-06	1.2E-05
1.850E 00	6.33E-03	3.4E-03	4.730E 00	7.10E-03	8.9E-04	9.620E 00	1.14E-05	1.2E-05
1.910E 00	2.28E-03	3.3E-03	4.830E 00	4.67E-03	8.5E-04	9.780E 00	1.55E-05	1.2E-05
1.970E 00	-1.71E-04	3.2E-03	4.930E 00	3.99E-03	8.3E-04	9.940E 00	1.57E-05	1.1E-05
2.030E 00	3.69E-03	3.1E-03	5.030E 00	3.49E-03	7.9E-04	1.010E 01	1.28E-05	9.4E-06
2.090E 00	3.34E-02	3.5E-03	5.130E 00	4.59E-03	7.5E-04	1.026E 01	8.40E-06	6.3E-06
						1.042E 01	3.55E-06	5.6E-06
						1.058E 01	1.23E-06	5.3E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 7.00 MEV EN-MAX= 7.56 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-1.71E-03	9.8E-03	2.150E 00	8.58E-02	4.0E-03	5.230E 00	5.30E-03	8.5E-04
7.100E-01	-4.89E-03	6.4E-03	2.210E 00	1.06E-01	4.1E-03	5.330E 00	5.41E-03	8.5E-04
7.300E-01	-4.08E-03	5.6E-03	2.270E 00	7.17E-02	3.1E-03	5.430E 00	8.47E-03	8.0E-04
7.500E-01	4.04E-03	6.0E-03	2.330E 00	3.83E-02	2.7E-03	5.530E 00	9.04E-03	7.5E-04
7.700E-01	1.80E-02	6.1E-03	2.390E 00	2.50E-02	2.5E-03	5.630E 00	7.45E-03	7.3E-04
7.900E-01	3.61E-02	6.0E-03	2.450E 00	1.99E-02	2.8E-03	5.730E 00	6.21E-03	6.2E-04
8.100E-01	5.61E-02	6.3E-03	2.510E 00	1.60E-02	2.6E-03	5.830E 00	4.78E-03	5.8E-04
8.300E-01	7.03E-02	6.1E-03	2.570E 00	1.30E-02	2.5E-03	5.930E 00	3.19E-03	5.6E-04
8.500E-01	6.89E-02	6.2E-03	2.630E 00	1.49E-02	2.5E-03	6.030E 00	2.65E-03	5.3E-04
8.700E-01	5.38E-02	6.3E-03	2.690E 00	1.75E-02	2.3E-03	6.130E 00	3.04E-03	4.9E-04
8.900E-01	3.64E-02	6.6E-03	2.750E 00	1.78E-02	2.2E-03	6.230E 00	3.40E-03	4.4E-04
9.100E-01	2.67E-02	7.1E-03	2.810E 00	1.96E-02	2.4E-03	6.330E 00	3.53E-03	3.8E-04
9.300E-01	3.18E-02	7.0E-03	2.870E 00	3.41E-02	2.5E-03	6.440E 00	3.62E-03	3.4E-04
9.500E-01	5.86E-02	7.8E-03	2.930E 00	5.93E-02	2.6E-03	6.560E 00	3.17E-03	2.9E-04
9.700E-01	1.05E-01	7.2E-03	2.990E 00	7.18E-02	2.6E-03	6.680E 00	2.21E-03	2.7E-04
1.000E 00	1.67E-01	7.7E-03	3.050E 00	5.92E-02	2.1E-03	6.800E 00	1.56E-03	2.0E-04
1.040E 00	1.33E-01	6.6E-03	3.110E 00	3.85E-02	1.9E-03	6.920E 00	1.20E-03	1.6E-04
1.080E 00	4.22E-02	5.5E-03	3.180E 00	2.53E-02	1.7E-03	7.040E 00	7.85E-04	1.3E-04
1.120E 00	7.64E-03	5.0E-03	3.260E 00	1.74E-02	1.5E-03	7.160E 00	3.89E-04	1.0E-04
1.160E 00	4.10E-03	4.6E-03	3.340E 00	1.12E-02	1.4E-03	7.280E 00	1.28E-04	9.4E-05
1.200E 00	4.98E-03	4.5E-03	3.420E 00	8.91E-03	1.4E-03	7.400E 00	8.83E-06	8.1E-05
1.240E 00	4.62E-04	4.1E-03	3.500E 00	7.48E-03	1.3E-03	7.520E 00	-1.20E-05	6.6E-05
1.280E 00	-3.31E-03	4.1E-03	3.580E 00	6.42E-03	1.3E-03	7.640E 00	2.07E-05	5.9E-05
1.320E 00	-5.52E-04	3.8E-03	3.660E 00	7.81E-03	1.3E-03	7.760E 00	5.28E-05	5.4E-05
1.360E 00	1.37E-04	4.1E-03	3.740E 00	1.11E-02	1.4E-03	7.890E 00	5.78E-05	5.0E-05
1.400E 00	-3.16E-04	4.4E-03	3.820E 00	1.22E-02	1.4E-03	8.030E 00	3.85E-05	4.3E-05
1.440E 00	2.30E-03	4.0E-03	3.900E 00	1.11E-02	1.4E-03	8.170E 00	2.67E-05	3.7E-05
1.480E 00	5.18E-03	4.1E-03	3.980E 00	9.21E-03	1.3E-03	8.310E 00	2.09E-05	3.4E-05
1.520E 00	3.18E-03	4.1E-03	4.060E 00	7.61E-03	1.3E-03	8.450E 00	1.78E-05	3.5E-05
1.560E 00	5.21E-04	4.2E-03	4.140E 00	7.70E-03	1.3E-03	8.590E 00	1.41E-05	3.0E-05
1.600E 00	6.78E-03	4.0E-03	4.220E 00	7.84E-03	1.3E-03	8.730E 00	1.67E-05	2.4E-05
1.640E 00	2.21E-02	4.4E-03	4.300E 00	6.67E-03	1.3E-03	8.870E 00	2.37E-05	2.1E-05
1.680E 00	3.96E-02	4.7E-03	4.380E 00	7.15E-03	1.3E-03	9.010E 00	2.19E-05	1.9E-05
1.720E 00	4.41E-02	4.6E-03	4.460E 00	9.29E-03	1.2E-03	9.150E 00	1.22E-05	1.8E-05
1.760E 00	2.87E-02	4.2E-03	4.540E 00	9.94E-03	1.3E-03	9.300E 00	6.90E-06	1.5E-05
1.800E 00	1.20E-02	4.1E-03	4.630E 00	8.67E-03	1.1E-03	9.460E 00	7.65E-06	1.5E-05
1.850E 00	6.26E-03	3.7E-03	4.730E 00	7.69E-03	1.1E-03	9.620E 00	1.16E-05	1.2E-05
1.910E 00	3.31E-03	3.6E-03	4.830E 00	6.40E-03	1.0E-03	9.780E 00	1.22E-05	1.1E-05
1.970E 00	4.53E-03	3.3E-03	4.930E 00	4.99E-03	9.9E-04	9.940E 00	1.11E-05	9.5E-06
2.030E 00	1.05E-02	3.3E-03	5.030E 00	6.29E-03	1.0E-03	1.010E 01	7.84E-06	7.2E-06
2.090E 00	3.55E-02	3.7E-03	5.130E 00	7.27E-03	9.1E-04	1.026E 01	5.03E-06	5.4E-06
						1.042E 01	1.90E-06	5.2E-06
						1.058E 01	1.04E-06	4.4E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 7.56 MEV EN-MAX= 8.02 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-9.23E-03	1.0E-02	2.150E 00	8.48E-02	4.3E-03	5.230E 00	8.66E-03	1.1E-03
7.100E-01	-6.04E-03	6.8E-03	2.210E 00	1.08E-01	4.0E-03	5.330E 00	8.28E-03	1.0E-03
7.300E-01	8.32E-05	6.1E-03	2.270E 00	7.60E-02	3.6E-03	5.430E 00	7.90E-03	1.0E-03
7.500E-01	6.50E-03	6.5E-03	2.330E 00	3.78E-02	3.1E-03	5.530E 00	8.40E-03	1.0E-03
7.700E-01	1.50E-02	6.1E-03	2.390E 00	2.04E-02	3.0E-03	5.630E 00	8.20E-03	1.0E-03
7.900E-01	3.07E-02	6.1E-03	2.450E 00	1.84E-02	2.8E-03	5.730E 00	6.61E-03	8.9E-04
8.100E-01	5.17E-02	6.5E-03	2.510E 00	1.65E-02	2.9E-03	5.830E 00	5.19E-03	8.5E-04
8.300E-01	6.74E-02	6.3E-03	2.570E 00	1.26E-02	2.8E-03	5.930E 00	4.53E-03	8.1E-04
8.500E-01	6.76E-02	6.7E-03	2.630E 00	1.50E-02	2.7E-03	6.030E 00	4.00E-03	7.7E-04
8.700E-01	5.49E-02	6.9E-03	2.690E 00	1.90E-02	2.6E-03	6.130E 00	3.86E-03	7.5E-04
8.900E-01	3.97E-02	6.6E-03	2.750E 00	1.66E-02	2.5E-03	6.230E 00	4.46E-03	7.1E-04
9.100E-01	3.08E-02	6.9E-03	2.810E 00	1.81E-02	2.6E-03	6.330E 00	5.08E-03	6.3E-04
9.300E-01	3.55E-02	7.2E-03	2.870E 00	3.45E-02	2.8E-03	6.440E 00	5.33E-03	5.6E-04
9.500E-01	5.96E-02	8.4E-03	2.930E 00	5.96E-02	2.9E-03	6.560E 00	5.22E-03	5.0E-04
9.700E-01	1.02E-01	7.9E-03	2.990E 00	7.12E-02	2.9E-03	6.680E 00	4.65E-03	4.5E-04
1.000E 00	1.58E-01	8.6E-03	3.050E 00	5.88E-02	2.5E-03	6.800E 00	3.75E-03	4.0E-04
1.040E 00	1.28E-01	7.2E-03	3.110E 00	3.74E-02	2.2E-03	6.920E 00	2.62E-03	3.1E-04
1.080E 00	4.02E-02	6.3E-03	3.180E 00	2.22E-02	2.1E-03	7.040E 00	1.42E-03	2.5E-04
1.120E 00	1.22E-02	5.1E-03	3.260E 00	1.59E-02	1.8E-03	7.160E 00	5.80E-04	1.9E-04
1.160E 00	6.59E-03	5.0E-03	3.340E 00	1.10E-02	1.8E-03	7.280E 00	2.83E-04	1.4E-04
1.200E 00	1.65E-03	5.2E-03	3.420E 00	8.00E-03	1.7E-03	7.400E 00	2.47E-04	1.4E-04
1.240E 00	1.63E-03	4.8E-03	3.500E 00	5.42E-03	1.6E-03	7.520E 00	2.37E-04	1.3E-04
1.280E 00	-5.53E-04	4.5E-03	3.580E 00	4.98E-03	1.6E-03	7.640E 00	2.31E-04	1.0E-04
1.320E 00	-2.42E-04	4.3E-03	3.660E 00	8.91E-03	1.6E-03	7.760E 00	2.21E-04	7.8E-05
1.360E 00	5.19E-04	4.5E-03	3.740E 00	1.15E-02	1.7E-03	7.890E 00	1.63E-04	8.0E-05
1.400E 00	-2.62E-03	5.0E-03	3.820E 00	1.25E-02	1.7E-03	8.030E 00	4.94E-05	7.0E-05
1.440E 00	2.45E-04	4.7E-03	3.900E 00	1.35E-02	1.6E-03	8.170E 00	-1.09E-05	5.1E-05
1.480E 00	4.97E-03	4.4E-03	3.980E 00	1.29E-02	1.6E-03	8.310E 00	6.80E-06	4.3E-05
1.520E 00	4.96E-03	4.5E-03	4.060E 00	9.76E-03	1.5E-03	8.450E 00	4.63E-05	4.1E-05
1.560E 00	5.29E-03	4.4E-03	4.140E 00	7.46E-03	1.6E-03	8.590E 00	6.75E-05	3.7E-05
1.600E 00	9.03E-03	4.2E-03	4.220E 00	8.93E-03	1.6E-03	8.730E 00	6.79E-05	3.1E-05
1.640E 00	2.25E-02	4.9E-03	4.300E 00	1.12E-02	1.6E-03	8.870E 00	5.48E-05	2.8E-05
1.680E 00	3.94E-02	4.8E-03	4.380E 00	1.09E-02	1.6E-03	9.010E 00	2.98E-05	2.2E-05
1.720E 00	4.09E-02	4.8E-03	4.460E 00	8.89E-03	1.5E-03	9.150E 00	6.72E-06	1.8E-05
1.760E 00	2.89E-02	4.5E-03	4.540E 00	8.18E-03	1.5E-03	9.300E 00	-5.97E-06	1.3E-05
1.800E 00	1.70E-02	4.6E-03	4.630E 00	9.10E-03	1.5E-03	9.450E 00	-3.88E-06	1.0E-05
1.850E 00	5.70E-03	3.9E-03	4.730E 00	8.01E-03	1.4E-03	9.620E 00	3.27E-06	8.8E-06
1.910E 00	4.29E-03	3.7E-03	4.830E 00	6.09E-03	1.3E-03	9.780E 00	9.40E-06	7.9E-06
1.970E 00	1.06E-02	3.7E-03	4.930E 00	6.66E-03	1.3E-03	9.940E 00	1.34E-05	7.6E-06
2.030E 00	5.39E-03	3.7E-03	5.030E 00	7.17E-03	1.3E-03	1.010E 01	1.44E-05	7.5E-06
2.090E 00	2.82E-02	4.2E-03	5.130E 00	7.67E-03	1.2E-03	1.026E 01	1.28E-05	6.3E-06
						1.042E 01	8.62E-06	7.2E-06
						1.058E 01	4.01E-06	6.9E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 8.02 MEV EN-MAX= 8.52 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-9.88E-03	1.1E-02	2.150E 00	8.40E-02	4.5E-03	5.230E 00	6.67E-03	1.3E-03
7.100E-01	-7.29E-03	7.3E-03	2.210E 00	1.01E-01	4.6E-03	5.330E 00	6.10E-03	1.2E-03
7.300E-01	-3.11E-03	6.5E-03	2.270E 00	7.54E-02	4.3E-03	5.430E 00	5.76E-03	1.2E-03
7.500E-01	3.47E-03	6.5E-03	2.330E 00	4.39E-02	3.2E-03	5.530E 00	6.79E-03	1.2E-03
7.700E-01	1.51E-02	6.6E-03	2.390E 00	2.52E-02	3.0E-03	5.630E 00	8.47E-03	1.2E-03
7.900E-01	2.89E-02	6.4E-03	2.450E 00	2.05E-02	3.1E-03	5.730E 00	8.44E-03	1.1E-03
8.100E-01	4.27E-02	6.5E-03	2.510E 00	1.81E-02	3.0E-03	5.830E 00	7.04E-03	1.1E-03
8.300E-01	5.79E-02	6.9E-03	2.570E 00	1.46E-02	3.0E-03	5.930E 00	5.31E-03	1.0E-03
8.500E-01	6.66E-02	6.9E-03	2.630E 00	1.55E-02	3.0E-03	6.030E 00	3.98E-03	1.0E-03
8.700E-01	5.72E-02	7.0E-03	2.690E 00	1.77E-02	2.7E-03	6.130E 00	3.30E-03	9.5E-04
8.900E-01	3.46E-02	7.5E-03	2.750E 00	1.46E-02	2.6E-03	6.230E 00	3.32E-03	9.2E-04
9.100E-01	2.02E-02	7.7E-03	2.810E 00	1.58E-02	2.8E-03	6.330E 00	4.26E-03	8.6E-04
9.300E-01	3.07E-02	7.6E-03	2.870E 00	3.17E-02	2.9E-03	6.440E 00	6.22E-03	7.9E-04
9.500E-01	6.47E-02	8.3E-03	2.930E 00	5.57E-02	3.0E-03	6.560E 00	7.28E-03	7.2E-04
9.700E-01	1.08E-01	8.0E-03	2.990E 00	6.94E-02	3.1E-03	6.680E 00	6.16E-03	6.5E-04
1.000E 00	1.52E-01	8.9E-03	3.050E 00	5.93E-02	2.5E-03	6.800E 00	4.40E-03	6.0E-04
1.040E 00	1.22E-01	7.8E-03	3.110E 00	3.74E-02	2.2E-03	6.920E 00	2.96E-03	5.3E-04
1.080E 00	4.30E-02	6.4E-03	3.180E 00	2.16E-02	2.1E-03	7.040E 00	1.90E-03	4.8E-04
1.120E 00	8.37E-03	5.4E-03	3.260E 00	1.52E-02	2.0E-03	7.160E 00	1.41E-03	4.0E-04
1.160E 00	8.25E-03	5.8E-03	3.340E 00	1.15E-02	1.9E-03	7.280E 00	1.43E-03	3.5E-04
1.200E 00	4.69E-03	5.1E-03	3.420E 00	9.16E-03	1.9E-03	7.400E 00	1.68E-03	3.4E-04
1.240E 00	-3.25E-03	5.2E-03	3.500E 00	7.48E-03	1.9E-03	7.520E 00	1.76E-03	3.2E-04
1.280E 00	-2.08E-03	4.9E-03	3.580E 00	7.86E-03	1.8E-03	7.640E 00	1.39E-03	2.7E-04
1.320E 00	2.38E-03	4.9E-03	3.660E 00	1.04E-02	1.8E-03	7.760E 00	8.32E-04	2.2E-04
1.360E 00	-1.84E-03	5.3E-03	3.740E 00	1.30E-02	1.9E-03	7.890E 00	4.65E-04	1.8E-04
1.400E 00	-8.93E-03	5.8E-03	3.820E 00	1.42E-02	1.8E-03	8.030E 00	3.96E-04	1.3E-04
1.440E 00	-1.52E-03	5.2E-03	3.900E 00	1.37E-02	1.7E-03	8.170E 00	3.69E-04	9.9E-05
1.480E 00	9.74E-03	4.6E-03	3.980E 00	1.31E-02	1.8E-03	8.310E 00	2.77E-04	9.4E-05
1.520E 00	7.10E-03	4.7E-03	4.060E 00	1.15E-02	1.6E-03	8.450E 00	1.67E-04	7.6E-05
1.560E 00	7.25E-04	4.8E-03	4.140E 00	7.89E-03	1.7E-03	8.590E 00	8.08E-05	5.0E-05
1.600E 00	6.76E-03	4.6E-03	4.220E 00	6.62E-03	1.7E-03	8.730E 00	2.57E-05	4.2E-05
1.640E 00	2.62E-02	4.8E-03	4.300E 00	7.94E-03	1.7E-03	8.870E 00	-1.41E-06	3.6E-05
1.680E 00	4.31E-02	4.8E-03	4.380E 00	8.76E-03	1.7E-03	9.010E 00	-2.03E-05	3.2E-05
1.720E 00	4.34E-02	5.0E-03	4.460E 00	9.17E-03	1.7E-03	9.150E 00	-2.92E-05	3.4E-05
1.760E 00	3.00E-02	5.0E-03	4.540E 00	1.15E-02	1.7E-03	9.300E 00	-1.85E-05	2.9E-05
1.800E 00	1.37E-02	4.9E-03	4.630E 00	1.35E-02	1.6E-03	9.460E 00	7.91E-06	2.6E-05
1.850E 00	4.59E-03	4.5E-03	4.730E 00	1.15E-02	1.6E-03	9.620E 00	4.07E-05	2.7E-05
1.910E 00	8.75E-03	4.3E-03	4.830E 00	1.10E-02	1.5E-03	9.780E 00	6.06E-05	2.3E-05
1.970E 00	7.88E-03	4.0E-03	4.930E 00	1.18E-02	1.5E-03	9.940E 00	6.20E-05	2.2E-05
2.030E 00	6.50E-03	4.0E-03	5.030E 00	1.05E-02	1.4E-03	1.010E 01	4.28E-05	2.1E-05
2.090E 00	3.38E-02	4.0E-03	5.130E 00	8.02E-03	1.4E-03	1.026E 01	2.29E-05	1.3E-05
						1.042E 01	7.42E-06	9.2E-06
						1.058E 01	9.08E-07	8.6E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 8.52 MEV EN-MAX= 9.00 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-9.39E-03	1.1E-02	2.150E 00	7.90E-02	4.8E-03	5.230E 00	9.67E-03	1.5E-03
7.100E-01	-3.14E-03	7.2E-03	2.210E 00	1.05E-01	5.0E-03	5.330E 00	9.68E-03	1.5E-03
7.300E-01	2.66E-03	6.7E-03	2.270E 00	7.73E-02	4.5E-03	5.430E 00	1.04E-02	1.4E-03
7.500E-01	6.92E-03	7.0E-03	2.330E 00	4.17E-02	4.0E-03	5.530E 00	1.05E-02	1.4E-03
7.700E-01	1.71E-02	7.0E-03	2.390E 00	2.50E-02	3.3E-03	5.630E 00	1.02E-02	1.3E-03
7.900E-01	3.27E-02	6.9E-03	2.450E 00	1.83E-02	3.5E-03	5.730E 00	8.83E-03	1.3E-03
8.100E-01	4.52E-02	7.4E-03	2.510E 00	1.65E-02	3.5E-03	5.830E 00	5.76E-03	1.2E-03
8.300E-01	5.25E-02	7.8E-03	2.570E 00	1.46E-02	3.3E-03	5.930E 00	3.46E-03	1.2E-03
8.500E-01	5.63E-02	7.8E-03	2.630E 00	1.30E-02	3.2E-03	6.030E 00	2.78E-03	1.2E-03
8.700E-01	5.25E-02	7.7E-03	2.690E 00	1.53E-02	3.0E-03	6.130E 00	3.23E-03	1.1E-03
8.900E-01	4.07E-02	7.9E-03	2.750E 00	1.76E-02	3.0E-03	6.230E 00	4.46E-03	1.1E-03
9.100E-01	3.07E-02	8.3E-03	2.810E 00	1.90E-02	3.2E-03	6.330E 00	5.56E-03	1.1E-03
9.300E-01	3.61E-02	8.1E-03	2.870E 00	3.20E-02	3.3E-03	6.430E 00	6.21E-03	1.0E-03
9.500E-01	6.11E-02	9.1E-03	2.930E 00	5.71E-02	3.4E-03	6.530E 00	7.50E-03	9.5E-04
9.700E-01	9.66E-02	8.7E-03	2.990E 00	6.88E-02	3.4E-03	6.630E 00	7.81E-03	9.0E-04
1.000E 00	1.37E-01	9.2E-03	3.050E 00	5.62E-02	3.0E-03	6.800E 00	5.49E-03	8.4E-04
1.040E 00	1.17E-01	8.3E-03	3.110E 00	3.80E-02	2.7E-03	6.920E 00	3.08E-03	7.9E-04
1.080E 00	4.22E-02	6.9E-03	3.180E 00	2.50E-02	2.4E-03	7.040E 00	2.05E-03	7.4E-04
1.120E 00	6.98E-03	5.7E-03	3.260E 00	1.58E-02	2.3E-03	7.160E 00	1.63E-03	6.7E-04
1.160E 00	6.24E-03	5.8E-03	3.340E 00	1.15E-02	2.2E-03	7.280E 00	1.86E-03	6.2E-04
1.200E 00	1.05E-03	5.8E-03	3.420E 00	1.00E-02	2.2E-03	7.400E 00	2.90E-03	5.7E-04
1.240E 00	-4.09E-03	5.4E-03	3.500E 00	8.50E-03	2.0E-03	7.520E 00	3.56E-03	5.3E-04
1.280E 00	-1.15E-05	5.3E-03	3.580E 00	9.02E-03	2.1E-03	7.640E 00	3.23E-03	4.4E-04
1.320E 00	8.67E-04	5.3E-03	3.660E 00	1.07E-02	2.1E-03	7.760E 00	2.60E-03	3.7E-04
1.360E 00	-2.93E-03	5.3E-03	3.740E 00	1.15E-02	2.1E-03	7.890E 00	2.03E-03	3.3E-04
1.400E 00	-3.19E-05	5.9E-03	3.820E 00	1.24E-02	2.0E-03	8.030E 00	1.37E-03	2.6E-04
1.440E 00	4.88E-03	5.1E-03	3.900E 00	1.17E-02	2.0E-03	8.170E 00	7.70E-04	1.9E-04
1.480E 00	4.74E-03	5.5E-03	3.980E 00	1.07E-02	2.1E-03	8.310E 00	4.54E-04	1.6E-04
1.520E 00	6.76E-03	5.4E-03	4.060E 00	1.00E-02	2.0E-03	8.450E 00	3.03E-04	1.5E-04
1.560E 00	7.71E-03	4.8E-03	4.140E 00	9.07E-03	2.0E-03	8.590E 00	1.98E-04	1.1E-04
1.600E 00	4.03E-03	5.2E-03	4.220E 00	1.01E-02	2.0E-03	8.730E 00	1.51E-04	8.6E-05
1.640E 00	1.44E-02	5.7E-03	4.300E 00	1.17E-02	2.0E-03	8.870E 00	1.39E-04	8.0E-05
1.680E 00	3.77E-02	5.6E-03	4.380E 00	1.19E-02	2.0E-03	9.010E 00	9.46E-05	7.7E-05
1.720E 00	4.53E-02	5.7E-03	4.460E 00	1.27E-02	1.9E-03	9.150E 00	2.89E-05	6.0E-05
1.760E 00	3.29E-02	5.3E-03	4.540E 00	1.35E-02	2.0E-03	9.300E 00	-1.59E-05	4.3E-05
1.800E 00	1.99E-02	5.0E-03	4.630E 00	1.20E-02	1.9E-03	9.460E 00	-1.30E-05	3.5E-05
1.850E 00	1.19E-02	4.5E-03	4.730E 00	8.83E-03	1.8E-03	9.620E 00	1.59E-05	3.1E-05
1.910E 00	1.04E-02	4.6E-03	4.830E 00	6.68E-03	1.7E-03	9.780E 00	4.45E-05	2.7E-05
1.970E 00	1.19E-02	4.6E-03	4.930E 00	7.46E-03	1.7E-03	9.940E 00	5.77E-05	2.5E-05
2.030E 00	9.15E-03	4.2E-03	5.030E 00	9.58E-03	1.7E-03	1.010E 01	4.94E-05	2.1E-05
2.090E 00	2.89E-02	4.4E-03	5.130E 00	1.04E-02	1.6E-03	1.026E 01	3.17E-05	1.5E-05
						1.042E 01	1.37E-05	1.1E-05
						1.058E 01	5.14E-06	9.6E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 9.00 MEV EN-MAX= 9.97 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-3.85E-03	1.1E-02	2.150E 00	7.89E-02	4.7E-03	5.230E 00	1.06E-02	1.3E-03
7.100E-01	-6.33E-03	8.0E-03	2.210E 00	1.04E-01	4.8E-03	5.330E 00	1.00E-02	1.3E-03
7.300E-01	-6.79E-03	6.9E-03	2.270E 00	8.02E-02	3.9E-03	5.430E 00	9.99E-03	1.3E-03
7.500E-01	-1.90E-03	6.9E-03	2.330E 00	4.32E-02	3.4E-03	5.530E 00	1.09E-02	1.2E-03
7.700E-01	1.04E-02	6.7E-03	2.390E 00	2.21E-02	3.1E-03	5.630E 00	1.06E-02	1.2E-03
7.900E-01	2.79E-02	6.6E-03	2.450E 00	1.61E-02	3.0E-03	5.730E 00	8.18E-03	1.1E-03
8.100E-01	4.50E-02	6.9E-03	2.510E 00	1.60E-02	3.1E-03	5.830E 00	6.39E-03	1.1E-03
8.300E-01	5.72E-02	6.7E-03	2.570E 00	1.57E-02	3.0E-03	5.930E 00	6.00E-03	1.1E-03
8.500E-01	6.08E-02	7.0E-03	2.630E 00	1.46E-02	2.9E-03	6.030E 00	5.47E-03	1.1E-03
8.700E-01	5.45E-02	7.0E-03	2.690E 00	1.55E-02	2.9E-03	6.130E 00	4.45E-03	1.1E-03
8.900E-01	4.15E-02	7.2E-03	2.750E 00	1.58E-02	2.7E-03	6.230E 00	4.03E-03	1.0E-03
9.100E-01	3.21E-02	7.5E-03	2.810E 00	1.82E-02	2.8E-03	6.330E 00	4.73E-03	1.0E-03
9.300E-01	3.81E-02	7.3E-03	2.870E 00	3.38E-02	2.8E-03	6.440E 00	5.77E-03	9.8E-04
9.500E-01	6.29E-02	8.0E-03	2.930E 00	5.71E-02	2.9E-03	6.560E 00	6.26E-03	9.4E-04
9.700E-01	9.70E-02	7.7E-03	2.990E 00	6.61E-02	2.9E-03	6.680E 00	6.34E-03	9.3E-04
1.000E 00	1.34E-01	8.5E-03	3.050E 00	5.47E-02	2.5E-03	6.800E 00	5.50E-03	8.8E-04
1.040E 00	1.11E-01	7.2E-03	3.110E 00	3.62E-02	2.3E-03	6.920E 00	3.76E-03	8.4E-04
1.080E 00	4.44E-02	5.9E-03	3.180E 00	2.14E-02	2.2E-03	7.040E 00	2.54E-03	7.9E-04
1.120E 00	1.36E-02	5.4E-03	3.260E 00	1.52E-02	2.0E-03	7.160E 00	2.33E-03	7.5E-04
1.160E 00	8.86E-03	5.6E-03	3.340E 00	1.20E-02	1.8E-03	7.280E 00	2.78E-03	7.0E-04
1.200E 00	4.00E-03	5.6E-03	3.420E 00	1.08E-02	1.8E-03	7.400E 00	3.64E-03	6.5E-04
1.240E 00	5.13E-03	5.5E-03	3.500E 00	1.06E-02	1.8E-03	7.520E 00	4.35E-03	6.1E-04
1.280E 00	5.51E-03	5.3E-03	3.580E 00	7.87E-03	1.8E-03	7.640E 00	4.44E-03	5.9E-04
1.320E 00	-5.62E-04	5.1E-03	3.660E 00	7.50E-03	1.8E-03	7.760E 00	4.09E-03	5.2E-04
1.360E 00	-2.91E-03	5.3E-03	3.740E 00	1.18E-02	1.9E-03	7.890E 00	3.49E-03	4.6E-04
1.400E 00	2.00E-03	5.5E-03	3.820E 00	1.50E-02	1.9E-03	8.030E 00	2.72E-03	4.1E-04
1.440E 00	8.40E-03	5.0E-03	3.900E 00	1.43E-02	1.8E-03	8.170E 00	2.16E-03	3.7E-04
1.480E 00	9.65E-03	5.1E-03	3.980E 00	1.38E-02	1.8E-03	8.310E 00	1.61E-03	3.2E-04
1.520E 00	9.59E-03	5.2E-03	4.060E 00	1.31E-02	1.8E-03	8.450E 00	9.20E-04	2.8E-04
1.560E 00	1.28E-02	5.3E-03	4.140E 00	1.05E-02	1.7E-03	8.590E 00	5.45E-04	2.2E-04
1.600E 00	1.37E-02	4.6E-03	4.220E 00	8.78E-03	1.7E-03	8.730E 00	6.49E-04	1.9E-04
1.640E 00	1.92E-02	5.0E-03	4.300E 00	8.30E-03	1.8E-03	8.870E 00	8.08E-04	1.7E-04
1.680E 00	3.55E-02	5.4E-03	4.380E 00	8.67E-03	1.8E-03	9.010E 00	7.00E-04	1.4E-04
1.720E 00	4.24E-02	5.3E-03	4.460E 00	9.23E-03	1.8E-03	9.150E 00	4.34E-04	1.0E-04
1.760E 00	3.00E-02	5.1E-03	4.540E 00	8.40E-03	1.8E-03	9.300E 00	1.84E-04	7.1E-05
1.800E 00	1.43E-02	5.4E-03	4.630E 00	8.39E-03	1.7E-03	9.460E 00	7.18E-05	5.3E-05
1.850E 00	7.33E-03	4.4E-03	4.730E 00	1.05E-02	1.6E-03	9.620E 00	5.94E-05	4.3E-05
1.910E 00	1.18E-02	4.6E-03	4.830E 00	1.02E-02	1.5E-03	9.780E 00	7.27E-05	3.0E-05
1.970E 00	1.24E-02	4.1E-03	4.930E 00	1.02E-02	1.6E-03	9.940E 00	6.72E-05	2.2E-05
2.030E 00	9.36E-03	4.0E-03	5.030E 00	1.14E-02	1.5E-03	1.010E 01	4.53E-05	1.8E-05
2.090E 00	3.07E-02	4.2E-03	5.130E 00	1.12E-02	1.4E-03	1.026E 01	2.25E-05	1.1E-05
						1.042E 01	7.34E-06	7.9E-06
						1.058E 01	1.69E-06	6.6E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 9.97 MEV EN-MAX= 12.02 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	1.88E-03	1.1E-02	2.150E 00	8.51E-02	4.4E-03	5.230E 00	1.02E-02	1.3E-03
7.100E-01	3.80E-03	7.3E-03	2.210E 00	1.03E-01	4.6E-03	5.330E 00	9.41E-03	1.3E-03
7.300E-01	7.88E-03	7.1E-03	2.270E 00	8.16E-02	3.9E-03	5.430E 00	9.54E-03	1.3E-03
7.500E-01	1.43E-02	7.5E-03	2.330E 00	4.83E-02	3.2E-03	5.530E 00	1.06E-02	1.3E-03
7.700E-01	2.30E-02	7.6E-03	2.390E 00	2.68E-02	3.2E-03	5.630E 00	1.06E-02	1.3E-03
7.900E-01	3.40E-02	7.1E-03	2.450E 00	2.01E-02	3.1E-03	5.730E 00	9.20E-03	1.2E-03
8.100E-01	4.43E-02	7.1E-03	2.510E 00	1.76E-02	3.2E-03	5.830E 00	7.29E-03	1.2E-03
8.300E-01	5.11E-02	7.1E-03	2.570E 00	1.45E-02	2.9E-03	5.930E 00	5.26E-03	1.2E-03
8.500E-01	5.19E-02	7.2E-03	2.630E 00	1.47E-02	3.0E-03	6.030E 00	4.07E-03	1.2E-03
8.700E-01	4.56E-02	7.2E-03	2.690E 00	1.85E-02	2.7E-03	6.130E 00	4.08E-03	1.1E-03
8.900E-01	3.52E-02	7.2E-03	2.750E 00	1.80E-02	2.6E-03	6.230E 00	4.72E-03	1.1E-03
9.100E-01	3.14E-02	7.6E-03	2.810E 00	2.08E-02	2.8E-03	6.330E 00	6.07E-03	1.1E-03
9.300E-01	4.50E-02	7.5E-03	2.870E 00	3.82E-02	3.0E-03	6.430E 00	8.22E-03	1.1E-03
9.500E-01	7.47E-02	8.4E-03	2.930E 00	6.09E-02	3.1E-03	6.530E 00	8.75E-03	1.0E-03
9.700E-01	1.04E-01	8.1E-03	2.990E 00	6.74E-02	2.9E-03	6.630E 00	7.32E-03	9.8E-04
1.000E 00	1.22E-01	9.0E-03	3.050E 00	5.45E-02	2.5E-03	6.730E 00	6.08E-03	1.0E-03
1.040E 00	9.05E-02	7.9E-03	3.110E 00	3.73E-02	2.3E-03	6.830E 00	6.08E-03	1.0E-03
1.080E 00	3.28E-02	6.7E-03	3.180E 00	2.25E-02	2.1E-03	6.930E 00	4.78E-03	9.2E-04
1.120E 00	1.07E-03	6.6E-03	3.260E 00	1.34E-02	2.0E-03	7.030E 00	3.87E-03	8.7E-04
1.160E 00	4.23E-03	6.0E-03	3.340E 00	1.07E-02	1.9E-03	7.130E 00	3.93E-03	8.5E-04
1.200E 00	4.78E-03	5.9E-03	3.420E 00	1.12E-02	2.0E-03	7.230E 00	4.27E-03	8.2E-04
1.240E 00	4.36E-03	5.8E-03	3.500E 00	1.35E-02	1.8E-03	7.330E 00	4.81E-03	7.7E-04
1.280E 00	5.33E-03	5.7E-03	3.580E 00	1.17E-02	1.8E-03	7.430E 00	4.81E-03	7.7E-04
1.320E 00	3.96E-03	5.8E-03	3.660E 00	9.95E-03	1.9E-03	7.530E 00	5.60E-03	7.4E-04
1.360E 00	3.10E-03	5.9E-03	3.740E 00	1.14E-02	1.9E-03	7.630E 00	5.67E-03	7.1E-04
1.400E 00	5.92E-03	5.9E-03	3.820E 00	1.13E-02	1.9E-03	7.730E 00	4.79E-03	6.7E-04
1.440E 00	1.16E-02	5.1E-03	3.900E 00	1.04E-02	1.9E-03	7.830E 00	3.71E-03	6.1E-04
1.480E 00	1.27E-02	5.8E-03	3.980E 00	1.11E-02	1.8E-03	7.930E 00	2.86E-03	5.7E-04
1.520E 00	8.66E-03	5.6E-03	4.060E 00	1.22E-02	1.8E-03	8.030E 00	2.02E-03	5.4E-04
1.560E 00	7.43E-03	5.5E-03	4.140E 00	1.18E-02	1.7E-03	8.130E 00	1.60E-03	5.0E-04
1.600E 00	1.24E-02	4.9E-03	4.220E 00	1.10E-02	1.8E-03	8.230E 00	1.82E-03	4.6E-04
1.640E 00	2.69E-02	5.3E-03	4.300E 00	1.14E-02	1.8E-03	8.330E 00	2.20E-03	4.4E-04
1.680E 00	4.43E-02	5.3E-03	4.380E 00	1.17E-02	1.7E-03	8.430E 00	2.42E-03	3.8E-04
1.720E 00	4.55E-02	5.5E-03	4.460E 00	1.10E-02	1.7E-03	8.530E 00	2.40E-03	3.4E-04
1.760E 00	3.18E-02	5.2E-03	4.540E 00	1.05E-02	1.7E-03	8.630E 00	1.81E-03	3.0E-04
1.800E 00	2.11E-02	5.1E-03	4.630E 00	9.96E-03	1.6E-03	8.730E 00	9.17E-04	2.7E-04
1.850E 00	1.66E-02	4.5E-03	4.730E 00	7.82E-03	1.6E-03	8.830E 00	3.88E-04	2.3E-04
1.910E 00	1.08E-02	4.6E-03	4.830E 00	7.66E-03	1.6E-03	8.930E 00	5.83E-04	1.8E-04
1.970E 00	1.10E-02	4.5E-03	4.930E 00	1.06E-02	1.5E-03	9.030E 00	9.31E-04	1.4E-04
2.030E 00	1.28E-02	3.8E-03	5.030E 00	1.14E-02	1.5E-03	9.130E 00	9.09E-04	1.0E-04
2.090E 00	3.50E-02	4.3E-03	5.130E 00	1.06E-02	1.4E-03	9.230E 00	5.60E-04	7.1E-05
						1.010E 01	2.40E-04	4.0E-05
						1.026E 01	7.01E-05	1.5E-05
						1.042E 01	1.20E-05	7.1E-06
						1.058E 01	-3.98E-07	5.7E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 12.02 MEV EN-MAX= 14.00 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-4.23E-03	1.4E-02	2.150E 00	7.20E-02	5.8E-03	5.230E 00	9.72E-03	1.8E-03
7.100E-01	-5.11E-03	1.0E-02	2.210E 00	8.72E-02	5.2E-03	5.330E 00	7.41E-03	1.8E-03
7.300E-01	-1.87E-03	9.8E-03	2.270E 00	6.38E-02	4.9E-03	5.430E 00	6.65E-03	1.8E-03
7.500E-01	9.72E-03	1.0E-02	2.330E 00	4.06E-02	4.0E-03	5.530E 00	7.78E-03	1.7E-03
7.700E-01	2.45E-02	8.8E-03	2.390E 00	2.76E-02	3.9E-03	5.630E 00	8.96E-03	1.7E-03
7.900E-01	3.40E-02	8.4E-03	2.450E 00	2.19E-02	4.0E-03	5.730E 00	8.43E-03	1.7E-03
8.100E-01	4.02E-02	9.0E-03	2.510E 00	1.93E-02	4.0E-03	5.830E 00	6.74E-03	1.6E-03
8.300E-01	4.77E-02	9.2E-03	2.570E 00	1.59E-02	3.9E-03	5.930E 00	5.27E-03	1.6E-03
8.500E-01	4.93E-02	8.7E-03	2.630E 00	1.16E-02	3.7E-03	6.030E 00	4.55E-03	1.6E-03
8.700E-01	3.85E-02	9.3E-03	2.690E 00	1.42E-02	3.6E-03	6.130E 00	4.10E-03	1.6E-03
8.900E-01	2.52E-02	9.9E-03	2.750E 00	1.78E-02	3.4E-03	6.230E 00	4.03E-03	1.6E-03
9.100E-01	2.45E-02	1.0E-02	2.810E 00	1.87E-02	3.6E-03	6.330E 00	4.99E-03	1.6E-03
9.300E-01	3.97E-02	9.6E-03	2.870E 00	3.29E-02	3.8E-03	6.440E 00	6.45E-03	1.5E-03
9.500E-01	6.30E-02	1.1E-02	2.930E 00	5.58E-02	3.7E-03	6.560E 00	7.06E-03	1.5E-03
9.700E-01	8.25E-02	1.1E-02	2.990E 00	6.24E-02	3.6E-03	6.680E 00	6.61E-03	1.4E-03
1.000E 00	8.86E-02	1.1E-02	3.050E 00	4.94E-02	3.3E-03	6.800E 00	5.92E-03	1.4E-03
1.040E 00	5.81E-02	1.0E-02	3.110E 00	3.30E-02	2.9E-03	6.920E 00	4.87E-03	1.4E-03
1.080E 00	2.08E-02	9.4E-03	3.180E 00	2.24E-02	2.7E-03	7.040E 00	3.98E-03	1.3E-03
1.120E 00	5.76E-03	8.5E-03	3.260E 00	1.51E-02	2.4E-03	7.160E 00	4.37E-03	1.3E-03
1.160E 00	7.25E-03	7.5E-03	3.340E 00	8.36E-03	2.5E-03	7.280E 00	5.16E-03	1.2E-03
1.200E 00	1.18E-02	8.2E-03	3.420E 00	9.01E-03	2.4E-03	7.400E 00	4.94E-03	1.2E-03
1.240E 00	1.13E-02	7.0E-03	3.500E 00	1.18E-02	2.4E-03	7.520E 00	4.13E-03	1.1E-03
1.280E 00	1.11E-02	7.3E-03	3.580E 00	1.02E-02	2.5E-03	7.640E 00	3.73E-03	1.1E-03
1.320E 00	2.01E-02	6.9E-03	3.660E 00	8.21E-03	2.5E-03	7.760E 00	4.13E-03	1.0E-03
1.360E 00	1.72E-02	7.0E-03	3.740E 00	1.19E-02	2.4E-03	7.890E 00	4.85E-03	1.0E-03
1.400E 00	5.55E-03	8.3E-03	3.820E 00	1.54E-02	2.3E-03	8.030E 00	4.66E-03	9.2E-04
1.440E 00	4.86E-03	7.3E-03	3.900E 00	1.46E-02	2.4E-03	8.170E 00	3.00E-03	8.7E-04
1.480E 00	1.38E-02	6.7E-03	3.980E 00	1.29E-02	2.4E-03	8.310E 00	1.21E-03	8.1E-04
1.520E 00	1.49E-02	6.7E-03	4.060E 00	1.19E-02	2.3E-03	8.450E 00	7.07E-04	7.6E-04
1.560E 00	7.95E-03	6.3E-03	4.140E 00	1.13E-02	2.3E-03	8.590E 00	1.61E-03	7.1E-04
1.600E 00	1.36E-02	6.5E-03	4.220E 00	1.05E-02	2.3E-03	8.730E 00	2.93E-03	6.6E-04
1.640E 00	2.75E-02	6.9E-03	4.300E 00	1.01E-02	2.3E-03	8.870E 00	3.40E-03	5.9E-04
1.680E 00	3.44E-02	7.3E-03	4.380E 00	1.04E-02	2.4E-03	9.010E 00	2.70E-03	5.3E-04
1.720E 00	4.22E-02	7.4E-03	4.460E 00	8.95E-03	2.3E-03	9.150E 00	1.41E-03	4.7E-04
1.760E 00	5.14E-02	6.9E-03	4.540E 00	7.10E-03	2.3E-03	9.300E 00	2.40E-04	4.2E-04
1.800E 00	4.84E-02	7.4E-03	4.630E 00	7.57E-03	2.2E-03	9.460E 00	1.02E-04	3.3E-04
1.850E 00	3.15E-02	6.1E-03	4.730E 00	7.96E-03	2.1E-03	9.620E 00	9.79E-04	2.5E-04
1.910E 00	2.25E-02	5.4E-03	4.830E 00	7.34E-03	2.0E-03	9.780E 00	1.57E-03	1.9E-04
1.970E 00	2.22E-02	4.9E-03	4.930E 00	8.90E-03	2.1E-03	9.940E 00	1.21E-03	1.3E-04
2.030E 00	1.46E-02	5.3E-03	5.030E 00	1.10E-02	2.0E-03	1.010E 01	5.75E-04	7.8E-05
2.090E 00	2.84E-02	5.6E-03	5.130E 00	1.14E-02	1.9E-03	1.026E 01	1.70E-04	3.0E-05
						1.042E 01	2.56E-05	1.5E-05
						1.058E 01	-3.71E-06	1.2E-05

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 14.00 MEV EN-MAX= 17.03 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-3.88E-03	1.5E-02	2.150E 00	5.06E-02	5.8E-03	5.230E 00	5.06E-03	1.7E-03
7.100E-01	-5.99E-03	1.2E-02	2.210E 00	6.42E-02	5.8E-03	5.330E 00	2.95E-03	1.8E-03
7.300E-01	-1.37E-03	1.2E-02	2.270E 00	5.12E-02	4.9E-03	5.430E 00	2.57E-03	1.7E-03
7.500E-01	4.52E-03	1.2E-02	2.330E 00	3.06E-02	5.0E-03	5.530E 00	2.43E-03	1.8E-03
7.700E-01	7.83E-03	1.2E-02	2.390E 00	1.96E-02	4.2E-03	5.630E 00	3.50E-03	1.6E-03
7.900E-01	1.33E-02	1.1E-02	2.450E 00	1.71E-02	4.2E-03	5.730E 00	5.08E-03	1.6E-03
8.100E-01	2.22E-02	1.1E-02	2.510E 00	1.59E-02	4.1E-03	5.830E 00	5.82E-03	1.6E-03
8.300E-01	2.76E-02	1.0E-02	2.570E 00	1.23E-02	3.7E-03	5.930E 00	5.89E-03	1.6E-03
8.500E-01	2.38E-02	9.6E-03	2.630E 00	7.89E-03	3.7E-03	6.030E 00	5.33E-03	1.5E-03
8.700E-01	1.60E-02	1.0E-02	2.690E 00	6.81E-03	3.6E-03	6.130E 00	4.64E-03	1.4E-03
8.900E-01	1.34E-02	1.0E-02	2.750E 00	7.34E-03	3.6E-03	6.230E 00	4.54E-03	1.5E-03
9.100E-01	1.85E-02	1.0E-02	2.810E 00	1.13E-02	3.7E-03	6.330E 00	4.31E-03	1.5E-03
9.300E-01	2.86E-02	9.7E-03	2.870E 00	2.53E-02	3.7E-03	6.440E 00	3.65E-03	1.5E-03
9.500E-01	4.35E-02	1.0E-02	2.930E 00	4.05E-02	3.5E-03	6.550E 00	3.62E-03	1.4E-03
9.700E-01	5.92E-02	1.1E-02	2.990E 00	4.37E-02	3.5E-03	6.680E 00	3.89E-03	1.4E-03
1.000E 00	6.63E-02	1.2E-02	3.050E 00	3.69E-02	3.1E-03	6.800E 00	3.54E-03	1.4E-03
1.040E 00	4.06E-02	1.1E-02	3.110E 00	2.82E-02	2.8E-03	6.920E 00	2.99E-03	1.3E-03
1.080E 00	2.16E-02	9.7E-03	3.180E 00	2.14E-02	2.8E-03	7.040E 00	2.79E-03	1.3E-03
1.120E 00	1.89E-02	8.9E-03	3.260E 00	1.56E-02	2.5E-03	7.160E 00	3.23E-03	1.2E-03
1.160E 00	1.34E-02	8.8E-03	3.340E 00	8.43E-03	2.5E-03	7.280E 00	4.08E-03	1.1E-03
1.200E 00	6.74E-03	9.2E-03	3.420E 00	5.73E-03	2.7E-03	7.400E 00	4.48E-03	1.1E-03
1.240E 00	1.21E-02	8.4E-03	3.500E 00	6.98E-03	2.4E-03	7.520E 00	3.95E-03	1.1E-03
1.280E 00	1.69E-02	8.2E-03	3.580E 00	7.83E-03	2.5E-03	7.640E 00	2.97E-03	1.0E-03
1.320E 00	1.19E-02	8.1E-03	3.660E 00	6.21E-03	2.4E-03	7.760E 00	2.13E-03	9.8E-04
1.360E 00	4.30E-03	8.9E-03	3.740E 00	4.39E-03	2.5E-03	7.890E 00	1.34E-03	9.5E-04
1.400E 00	2.08E-03	9.5E-03	3.820E 00	7.17E-03	2.4E-03	8.030E 00	6.36E-04	8.9E-04
1.440E 00	8.43E-03	8.3E-03	3.900E 00	1.12E-02	2.3E-03	8.170E 00	7.74E-04	8.3E-04
1.480E 00	1.43E-02	7.9E-03	3.980E 00	9.93E-03	2.4E-03	8.310E 00	1.88E-03	7.9E-04
1.520E 00	1.13E-02	7.3E-03	4.060E 00	7.18E-03	2.2E-03	8.450E 00	3.05E-03	7.5E-04
1.560E 00	3.38E-03	7.7E-03	4.140E 00	8.02E-03	2.3E-03	8.590E 00	3.28E-03	6.7E-04
1.600E 00	2.07E-03	6.8E-03	4.220E 00	8.77E-03	2.3E-03	8.730E 00	2.45E-03	6.0E-04
1.640E 00	1.46E-02	7.8E-03	4.300E 00	7.61E-03	2.3E-03	8.870E 00	1.25E-03	5.6E-04
1.680E 00	3.34E-02	7.8E-03	4.380E 00	7.44E-03	2.2E-03	9.010E 00	2.74E-04	5.0E-04
1.720E 00	5.41E-02	9.3E-03	4.460E 00	8.23E-03	2.2E-03	9.150E 00	-2.92E-04	4.4E-04
1.760E 00	7.95E-02	8.4E-03	4.540E 00	7.97E-03	2.1E-03	9.300E 00	-2.73E-04	4.2E-04
1.800E 00	9.73E-02	8.5E-03	4.630E 00	6.56E-03	2.0E-03	9.460E 00	4.23E-04	3.3E-04
1.850E 00	7.71E-02	6.4E-03	4.730E 00	6.15E-03	2.0E-03	9.620E 00	1.13E-03	2.6E-04
1.910E 00	2.87E-02	6.2E-03	4.830E 00	7.14E-03	2.1E-03	9.780E 00	1.26E-03	2.0E-04
1.970E 00	1.96E-02	5.2E-03	4.930E 00	8.03E-03	1.9E-03	9.940E 00	8.34E-04	1.5E-04
2.030E 00	1.36E-02	5.5E-03	5.030E 00	9.21E-03	2.0E-03	1.010E 01	3.73E-04	9.2E-05
2.090E 00	2.19E-02	5.1E-03	5.130E 00	8.69E-03	1.8E-03	1.026E 01	1.11E-04	3.7E-05
						1.042E 01	1.87E-05	1.9E-05
						1.058E 01	-9.80E-07	1.6E-05

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 17.03 MEV EN-MAX= 20.05 MEV THETA=125. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	-8.60E-03	2.3E-02	2.150E 00	4.10E-02	6.3E-03	5.230E 00	1.30E-03	2.2E-03
7.100E-01	-1.37E-02	1.8E-02	2.210E 00	4.41E-02	6.5E-03	5.330E 00	1.20E-03	2.0E-03
7.300E-01	-1.07E-02	1.7E-02	2.270E 00	2.92E-02	6.3E-03	5.430E 00	2.74E-03	2.1E-03
7.500E-01	-9.43E-05	1.6E-02	2.330E 00	2.02E-02	6.0E-03	5.530E 00	3.58E-03	2.2E-03
7.700E-01	1.04E-02	1.5E-02	2.390E 00	1.85E-02	5.5E-03	5.630E 00	3.62E-03	2.0E-03
7.900E-01	1.66E-02	1.4E-02	2.450E 00	2.26E-02	5.9E-03	5.730E 00	3.52E-03	2.0E-03
8.100E-01	1.89E-02	1.5E-02	2.510E 00	2.64E-02	5.6E-03	5.830E 00	3.14E-03	1.8E-03
8.300E-01	2.00E-02	1.4E-02	2.570E 00	2.19E-02	4.6E-03	5.930E 00	1.99E-03	1.9E-03
8.500E-01	1.96E-02	1.3E-02	2.630E 00	1.56E-02	4.3E-03	6.030E 00	1.03E-03	1.9E-03
8.700E-01	1.62E-02	1.3E-02	2.690E 00	1.32E-02	4.1E-03	6.130E 00	1.14E-03	1.8E-03
8.900E-01	1.22E-02	1.3E-02	2.750E 00	1.20E-02	3.6E-03	6.230E 00	2.53E-03	1.8E-03
9.100E-01	1.25E-02	1.3E-02	2.810E 00	1.00E-02	3.6E-03	6.330E 00	3.76E-03	1.7E-03
9.300E-01	1.90E-02	1.4E-02	2.870E 00	1.08E-02	4.3E-03	6.440E 00	4.07E-03	1.8E-03
9.500E-01	3.09E-02	1.4E-02	2.930E 00	1.82E-02	5.0E-03	6.560E 00	3.69E-03	1.6E-03
9.700E-01	4.51E-02	1.4E-02	2.990E 00	2.60E-02	5.0E-03	6.680E 00	2.94E-03	1.5E-03
1.000E 00	5.54E-02	1.4E-02	3.050E 00	2.47E-02	4.0E-03	6.800E 00	1.93E-03	1.5E-03
1.040E 00	4.48E-02	1.5E-02	3.110E 00	1.66E-02	3.4E-03	6.920E 00	1.34E-03	1.4E-03
1.080E 00	3.35E-02	1.4E-02	3.180E 00	8.69E-03	3.6E-03	7.040E 00	1.27E-03	1.3E-03
1.120E 00	3.61E-02	1.5E-02	3.260E 00	4.98E-03	3.1E-03	7.160E 00	1.27E-03	1.3E-03
1.160E 00	3.04E-02	1.2E-02	3.340E 00	4.57E-03	3.1E-03	7.280E 00	1.34E-03	1.2E-03
1.200E 00	2.07E-02	1.3E-02	3.420E 00	6.40E-03	2.9E-03	7.400E 00	1.73E-03	1.2E-03
1.240E 00	1.66E-02	1.0E-02	3.500E 00	5.54E-03	3.1E-03	7.520E 00	2.23E-03	1.2E-03
1.280E 00	1.31E-02	1.2E-02	3.580E 00	1.89E-03	2.9E-03	7.640E 00	2.56E-03	1.1E-03
1.320E 00	1.53E-02	1.2E-02	3.660E 00	2.37E-03	2.9E-03	7.760E 00	2.54E-03	1.0E-03
1.360E 00	1.71E-02	1.0E-02	3.740E 00	5.08E-03	2.8E-03	7.890E 00	2.00E-03	1.0E-03
1.400E 00	1.40E-02	1.1E-02	3.820E 00	4.63E-03	3.1E-03	8.030E 00	8.55E-04	8.9E-04
1.440E 00	1.56E-02	1.0E-02	3.900E 00	2.80E-03	2.9E-03	8.170E 00	-1.94E-04	7.2E-04
1.480E 00	1.71E-02	1.0E-02	3.980E 00	4.80E-03	3.0E-03	8.310E 00	-2.77E-04	7.4E-04
1.520E 00	1.33E-02	1.1E-02	4.060E 00	8.17E-03	2.5E-03	8.450E 00	4.40E-04	6.7E-04
1.560E 00	9.54E-03	1.1E-02	4.140E 00	8.39E-03	2.5E-03	8.590E 00	1.28E-03	5.9E-04
1.600E 00	8.61E-03	9.6E-03	4.220E 00	7.23E-03	2.6E-03	8.730E 00	1.65E-03	5.2E-04
1.640E 00	1.49E-02	9.6E-03	4.300E 00	6.85E-03	2.6E-03	8.870E 00	1.37E-03	4.2E-04
1.680E 00	3.48E-02	1.1E-02	4.380E 00	5.73E-03	2.6E-03	9.010E 00	6.61E-04	3.2E-04
1.720E 00	6.34E-02	1.2E-02	4.460E 00	3.93E-03	2.8E-03	9.150E 00	4.55E-05	3.1E-04
1.760E 00	8.85E-02	1.4E-02	4.540E 00	3.17E-03	2.7E-03	9.300E 00	-2.86E-04	3.0E-04
1.800E 00	9.77E-02	1.4E-02	4.630E 00	4.14E-03	2.5E-03	9.460E 00	-7.49E-05	2.5E-04
1.850E 00	8.12E-02	1.0E-02	4.730E 00	5.95E-03	2.4E-03	9.620E 00	2.95E-04	1.4E-04
1.910E 00	3.91E-02	7.0E-03	4.830E 00	7.22E-03	2.4E-03	9.780E 00	5.72E-04	1.5E-04
1.970E 00	1.28E-02	7.3E-03	4.930E 00	6.37E-03	2.4E-03	9.940E 00	4.80E-04	1.5E-04
2.030E 00	7.45E-03	6.8E-03	5.030E 00	4.62E-03	2.3E-03	1.010E 01	2.65E-04	9.5E-05
2.090E 00	1.81E-02	6.9E-03	5.130E 00	2.98E-03	2.4E-03	1.026E 01	1.13E-04	4.6E-05
						1.042E 01	2.98E-05	3.4E-05
						1.058E 01	4.04E-06	2.8E-05

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 0.85 MEV EN-MAX= 1.04 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	7.27E-05	2.4E-04	2.150E 00	1.02E-05	4.9E-05	5.230E 00	1.44E-05	2.6E-05
7.100E-01	8.12E-05	1.8E-04	2.210E 00	9.77E-06	5.7E-05	5.330E 00	3.59E-05	2.6E-05
7.300E-01	1.02E-04	1.7E-04	2.270E 00	7.84E-06	4.6E-05	5.430E 00	5.41E-05	2.5E-05
7.500E-01	2.23E-04	1.7E-04	2.330E 00	1.42E-05	3.9E-05	5.530E 00	5.39E-05	2.6E-05
7.700E-01	6.57E-04	1.8E-04	2.390E 00	2.05E-05	3.7E-05	5.630E 00	2.60E-05	2.4E-05
7.900E-01	1.39E-03	1.9E-04	2.450E 00	2.29E-05	3.4E-05	5.730E 00	-1.58E-05	1.9E-05
8.100E-01	1.97E-03	1.8E-04	2.510E 00	2.23E-05	3.3E-05	5.830E 00	-4.18E-05	1.7E-05
8.300E-01	1.97E-03	1.6E-04	2.570E 00	8.73E-06	3.3E-05	5.930E 00	-4.14E-05	1.6E-05
8.500E-01	1.44E-03	1.4E-04	2.630E 00	-2.06E-05	3.0E-05	6.030E 00	-1.46E-05	1.4E-05
8.700E-01	8.16E-04	1.3E-04	2.690E 00	-2.90E-05	2.9E-05	6.130E 00	1.11E-05	1.5E-05
8.900E-01	3.93E-04	1.1E-04	2.750E 00	-7.77E-06	3.5E-05	6.230E 00	2.02E-05	1.3E-05
9.100E-01	2.09E-04	1.0E-04	2.810E 00	1.02E-05	3.5E-05	6.330E 00	1.35E-05	1.2E-05
9.300E-01	1.61E-04	9.6E-05	2.870E 00	1.10E-05	3.5E-05	6.440E 00	-4.19E-06	1.0E-05
9.500E-01	1.46E-04	9.0E-05	2.930E 00	-4.94E-06	3.1E-05	6.560E 00	-1.09E-05	1.4E-05
9.700E-01	1.32E-04	8.7E-05	2.990E 00	-1.43E-05	3.2E-05	6.680E 00	-6.46E-06	1.2E-05
1.000E 00	8.95E-05	7.8E-05	3.050E 00	-1.31E-05	3.2E-05	6.800E 00	1.16E-05	1.1E-05
1.040E 00	2.59E-05	7.0E-05	3.110E 00	-7.69E-07	3.2E-05	6.920E 00	2.50E-05	9.3E-06
1.080E 00	-4.04E-05	5.3E-05	3.180E 00	9.24E-06	3.5E-05	7.040E 00	2.42E-05	8.4E-06
1.120E 00	-6.33E-05	4.9E-05	3.260E 00	3.72E-06	3.0E-05	7.160E 00	1.39E-05	9.0E-06
1.160E 00	-3.51E-05	5.1E-05	3.340E 00	-8.94E-06	2.8E-05	7.280E 00	3.86E-06	7.6E-06
1.200E 00	4.49E-06	4.7E-05	3.420E 00	-4.41E-06	2.9E-05	7.400E 00	7.63E-07	6.2E-06
1.240E 00	2.43E-05	5.5E-05	3.500E 00	1.35E-05	2.6E-05	7.520E 00	3.11E-06	6.2E-06
1.280E 00	8.64E-06	4.8E-05	3.580E 00	1.38E-05	3.0E-05	7.640E 00	5.78E-06	6.0E-06
1.320E 00	-6.68E-06	5.5E-05	3.660E 00	-2.09E-05	3.1E-05	7.760E 00	5.86E-06	5.2E-06
1.360E 00	-1.81E-05	4.7E-05	3.740E 00	-5.72E-05	2.0E-05	7.890E 00	4.02E-06	4.5E-06
1.400E 00	-2.99E-05	5.7E-05	3.820E 00	-3.64E-05	2.7E-05	8.030E 00	1.77E-06	4.3E-06
1.440E 00	-4.12E-05	4.6E-05	3.900E 00	-5.94E-06	2.7E-05	8.170E 00	2.19E-07	4.4E-06
1.480E 00	-1.26E-05	5.5E-05	3.980E 00	2.83E-05	2.8E-05	8.310E 00	2.42E-06	3.8E-06
1.520E 00	3.21E-05	5.1E-05	4.060E 00	4.21E-05	3.1E-05	8.450E 00	7.68E-06	3.5E-06
1.560E 00	5.32E-05	5.7E-05	4.140E 00	3.07E-05	3.0E-05	8.590E 00	1.13E-05	3.3E-06
1.600E 00	2.67E-05	4.8E-05	4.220E 00	6.49E-06	2.0E-05	8.730E 00	9.59E-06	2.6E-06
1.640E 00	1.18E-05	5.0E-05	4.300E 00	-1.42E-05	2.2E-05	8.870E 00	5.30E-06	1.8E-06
1.680E 00	2.86E-05	4.8E-05	4.380E 00	-1.69E-05	2.4E-05	9.010E 00	1.86E-06	1.5E-06
1.720E 00	5.93E-05	5.6E-05	4.460E 00	-3.67E-06	2.7E-05	9.150E 00	3.72E-07	1.1E-06
1.760E 00	5.07E-05	5.1E-05	4.540E 00	1.93E-06	2.8E-05	9.300E 00	-1.90E-07	6.8E-07
1.800E 00	3.18E-05	4.5E-05	4.630E 00	5.85E-06	3.0E-05	9.460E 00	-2.64E-07	5.4E-07
1.850E 00	9.14E-06	5.4E-05	4.730E 00	9.03E-06	2.1E-05	9.620E 00	-1.56E-07	4.3E-07
1.910E 00	-5.16E-06	4.2E-05	4.830E 00	1.81E-05	2.2E-05	9.780E 00	2.91E-08	3.7E-07
1.970E 00	3.43E-06	5.3E-05	4.930E 00	1.36E-05	2.9E-05	9.940E 00	2.54E-07	3.6E-07
2.030E 00	9.44E-06	4.6E-05	5.030E 00	-3.82E-06	2.8E-05	1.010E 01	3.51E-07	3.5E-07
2.090E 00	1.01E-05	5.2E-05	5.130E 00	-2.82E-06	2.9E-05	1.026E 01	4.14E-07	2.9E-07
						1.042E 01	3.37E-07	2.6E-07
						1.058E 01	2.58E-07	2.9E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 1.04 MEV EN-MAX= 1.25 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SP/MEV	DATA-ERR B/SR/MEV
6.900E-01	7.69E-03	8.7E-04	2.150E 00	2.12E-05	5.8E-05	5.230E 00	9.08E-06	2.5E-05
7.100E-01	4.12E-03	6.5E-04	2.210E 00	2.30E-05	5.6E-05	5.330E 00	9.66E-06	2.6E-05
7.300E-01	4.20E-03	6.5E-04	2.270E 00	5.35E-05	5.2E-05	5.430E 00	1.02E-05	2.3E-05
7.500E-01	1.07E-02	7.1E-04	2.330E 00	6.40E-05	4.6E-05	5.530E 00	8.34E-06	2.2E-05
7.700E-01	2.61E-02	7.3E-04	2.390E 00	5.07E-05	3.8E-05	5.630E 00	9.55E-06	2.3E-05
7.900E-01	4.68E-02	7.4E-04	2.450E 00	3.97E-05	4.0E-05	5.730E 00	5.96E-06	2.3E-05
8.100E-01	5.98E-02	7.5E-04	2.510E 00	4.99E-05	3.9E-05	5.830E 00	2.07E-07	2.2E-05
8.300E-01	5.61E-02	7.4E-04	2.570E 00	8.17E-05	3.8E-05	5.930E 00	-1.87E-06	2.0E-05
8.500E-01	4.05E-02	7.4E-04	2.630E 00	8.43E-05	3.6E-05	6.030E 00	7.81E-06	1.9E-05
8.700E-01	2.43E-02	6.2E-04	2.690E 00	2.45E-05	3.0E-05	6.130E 00	1.65E-05	1.9E-05
8.900E-01	1.42E-02	8.3E-04	2.750E 00	-3.61E-05	3.1E-05	6.230E 00	1.36E-05	1.9E-05
9.100E-01	1.26E-02	7.1E-04	2.810E 00	-4.74E-05	3.0E-05	6.330E 00	3.12E-06	1.9E-05
9.300E-01	1.99E-02	6.1E-04	2.870E 00	-1.32E-05	3.1E-05	6.440E 00	-3.68E-06	1.8E-05
9.500E-01	3.34E-02	6.3E-04	2.930E 00	-2.93E-06	2.9E-05	6.560E 00	4.10E-06	1.7E-05
9.700E-01	4.58E-02	6.6E-04	2.990E 00	-1.90E-05	3.2E-05	6.680E 00	1.88E-05	1.6E-05
1.000E 00	4.70E-02	5.6E-04	3.050E 00	-3.91E-05	2.7E-05	6.800E 00	2.81E-05	1.5E-05
1.040E 00	2.25E-02	3.5E-04	3.110E 00	-2.55E-05	2.6E-05	6.920E 00	2.24E-05	1.5E-05
1.080E 00	4.90E-03	1.7E-04	3.180E 00	2.47E-05	3.3E-05	7.040E 00	7.87E-06	1.3E-05
1.120E 00	5.45E-04	1.0E-04	3.260E 00	6.08E-05	3.3E-05	7.160E 00	-4.81E-06	1.1E-05
1.160E 00	7.94E-05	7.6E-05	3.340E 00	5.12E-05	3.3E-05	7.280E 00	-6.31E-06	9.0E-06
1.200E 00	7.04E-05	6.5E-05	3.420E 00	2.28E-05	3.6E-05	7.400E 00	1.85E-06	8.5E-06
1.240E 00	4.51E-05	6.4E-05	3.500E 00	-1.39E-05	3.0E-05	7.520E 00	1.20E-05	8.5E-06
1.280E 00	6.83E-06	6.7E-05	3.580E 00	-3.44E-05	2.8E-05	7.640E 00	1.75E-05	7.3E-06
1.320E 00	-7.73E-06	6.7E-05	3.660E 00	-3.86E-05	2.9E-05	7.760E 00	1.53E-05	6.7E-06
1.360E 00	2.10E-05	6.8E-05	3.740E 00	-2.18E-05	3.3E-05	7.890E 00	6.71E-06	7.0E-06
1.400E 00	7.71E-05	6.0E-05	3.820E 00	6.06E-06	3.3E-05	8.030E 00	-5.13E-07	7.1E-06
1.440E 00	7.09E-05	6.1E-05	3.900E 00	4.18E-05	3.2E-05	8.170E 00	-3.58E-06	5.8E-06
1.480E 00	-6.42E-06	4.7E-05	3.980E 00	6.95E-05	2.7E-05	8.310E 00	-3.84E-06	6.1E-06
1.520E 00	-3.74E-05	4.7E-05	4.060E 00	7.34E-05	2.7E-05	8.450E 00	-1.55E-06	5.6E-06
1.560E 00	3.86E-06	4.4E-05	4.140E 00	5.52E-05	3.0E-05	8.590E 00	5.41E-06	4.6E-06
1.600E 00	5.78E-05	5.2E-05	4.220E 00	1.56E-05	3.0E-05	8.730E 00	1.42E-05	4.1E-06
1.640E 00	5.03E-05	5.0E-05	4.300E 00	-2.03E-05	2.7E-05	8.870E 00	1.69E-05	3.5E-06
1.680E 00	1.89E-05	5.3E-05	4.380E 00	-4.74E-05	2.2E-05	9.010E 00	1.23E-05	2.9E-06
1.720E 00	2.43E-05	5.5E-05	4.460E 00	-5.07E-05	2.1E-05	9.150E 00	5.54E-06	2.0E-06
1.760E 00	5.97E-05	5.0E-05	4.540E 00	-3.27E-05	2.6E-05	9.300E 00	1.31E-06	1.2E-06
1.800E 00	6.95E-05	5.1E-05	4.630E 00	-3.56E-06	2.5E-05	9.460E 00	1.52E-07	6.7E-07
1.850E 00	1.73E-05	4.4E-05	4.730E 00	2.12E-05	2.5E-05	9.620E 00	2.92E-07	5.3E-07
1.910E 00	-3.35E-05	4.5E-05	4.830E 00	2.66E-05	2.5E-05	9.780E 00	3.78E-07	4.7E-07
1.970E 00	-4.89E-06	4.3E-05	4.930E 00	1.64E-05	2.0E-05	9.940E 00	3.46E-07	4.3E-07
2.030E 00	5.90E-05	4.9E-05	5.030E 00	1.13E-05	2.4E-05	1.010E 01	3.62E-07	3.6E-07
2.090E 00	6.07E-05	5.4E-05	5.130E 00	6.97E-06	2.4E-05	1.026E 01	3.88E-07	2.9E-07
						1.042E 01	3.44E-07	3.6E-07
						1.058E 01	2.37E-07	3.4E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 1.25 MEV EN-MAX= 1.50 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	1.21E-02	1.1E-03	2.150E 00	-2.64E-06	3.8E-05	5.230E 00	1.98E-06	2.6E-05
7.100E-01	6.20E-03	8.4E-04	2.210E 00	-2.31E-05	4.1E-05	5.330E 00	-1.34E-05	2.8E-05
7.300E-01	4.66E-03	8.8E-04	2.270E 00	-1.33E-05	3.2E-05	5.430E 00	-2.33E-05	2.5E-05
7.500E-01	1.10E-02	9.3E-04	2.330E 00	-5.28E-06	3.5E-05	5.530E 00	-1.61E-05	2.6E-05
7.700E-01	2.88E-02	9.8E-04	2.390E 00	-1.99E-05	3.2E-05	5.630E 00	3.25E-06	2.7E-05
7.900E-01	5.43E-02	9.8E-04	2.450E 00	-2.89E-05	3.0E-05	5.730E 00	2.21E-05	2.7E-05
8.100E-01	7.26E-02	9.7E-04	2.510E 00	-1.39E-05	3.8E-05	5.830E 00	2.95E-05	2.5E-05
8.300E-01	7.15E-02	9.6E-04	2.570E 00	-9.50E-06	3.4E-05	5.930E 00	2.51E-05	2.2E-05
8.500E-01	5.41E-02	1.0E-03	2.630E 00	-1.41E-05	3.1E-05	6.030E 00	1.64E-05	2.2E-05
8.700E-01	3.35E-02	8.7E-04	2.690E 00	-1.68E-05	3.2E-05	6.130E 00	8.60E-06	2.3E-05
8.900E-01	2.01E-02	1.1E-03	2.750E 00	-1.95E-05	3.4E-05	6.230E 00	4.74E-06	2.3E-05
9.100E-01	1.81E-02	9.4E-04	2.810E 00	-2.21E-05	2.9E-05	6.330E 00	-2.66E-07	1.8E-05
9.300E-01	2.87E-02	8.6E-04	2.870E 00	-5.57E-06	3.3E-05	6.440E 00	8.63E-06	1.9E-05
9.500E-01	4.93E-02	8.9E-04	2.930E 00	2.49E-05	3.5E-05	6.560E 00	1.23E-05	1.9E-05
9.700E-01	6.94E-02	9.4E-04	2.990E 00	4.50E-05	3.4E-05	6.680E 00	1.02E-05	1.8E-05
1.000E 00	7.43E-02	7.5E-04	3.050E 00	3.63E-05	3.5E-05	6.800E 00	2.76E-06	1.2E-05
1.040E 00	3.79E-02	4.7E-04	3.110E 00	8.53E-06	3.3E-05	6.920E 00	1.09E-05	1.6E-05
1.080E 00	9.30E-03	2.2E-04	3.180E 00	-1.67E-05	3.5E-05	7.040E 00	1.66E-05	1.3E-05
1.120E 00	1.35E-03	1.1E-04	3.260E 00	-2.46E-05	3.2E-05	7.160E 00	1.33E-05	1.1E-05
1.160E 00	1.25E-04	8.9E-05	3.340E 00	-1.94E-05	3.5E-05	7.280E 00	1.60E-06	9.0E-06
1.200E 00	4.66E-05	8.9E-05	3.420E 00	-2.71E-05	3.4E-05	7.400E 00	-6.10E-06	8.5E-06
1.240E 00	9.72E-05	8.4E-05	3.500E 00	-2.85E-05	3.6E-05	7.520E 00	-4.10E-06	7.8E-06
1.280E 00	8.54E-05	8.0E-05	3.580E 00	-5.56E-06	3.5E-05	7.640E 00	5.20E-06	7.2E-06
1.320E 00	6.97E-05	7.9E-05	3.660E 00	1.59E-05	3.3E-05	7.760E 00	1.43E-05	6.4E-06
1.360E 00	1.18E-04	7.3E-05	3.740E 00	1.17E-05	3.0E-05	7.890E 00	1.71E-05	6.6E-06
1.400E 00	1.45E-04	7.1E-05	3.820E 00	1.53E-05	3.1E-05	8.030E 00	1.12E-05	6.7E-06
1.440E 00	8.13E-05	5.9E-05	3.900E 00	5.65E-05	3.0E-05	8.170E 00	3.47E-07	6.3E-06
1.480E 00	6.56E-06	5.8E-05	3.980E 00	8.62E-05	3.0E-05	8.310E 00	-6.26E-06	5.8E-06
1.520E 00	8.22E-06	5.6E-05	4.060E 00	6.22E-05	2.5E-05	8.450E 00	-3.96E-06	5.7E-06
1.560E 00	7.88E-05	5.2E-05	4.140E 00	1.99E-05	2.6E-05	8.590E 00	4.62E-06	5.3E-06
1.600E 00	1.26E-04	5.9E-05	4.220E 00	-1.10E-05	2.6E-05	8.730E 00	1.11E-05	4.4E-06
1.640E 00	9.77E-05	5.6E-05	4.300E 00	-1.57E-05	2.8E-05	8.870E 00	1.19E-05	3.9E-06
1.680E 00	4.34E-05	5.8E-05	4.380E 00	-1.71E-05	2.6E-05	9.010E 00	9.72E-06	3.3E-06
1.720E 00	2.52E-05	5.6E-05	4.460E 00	-1.78E-05	2.6E-05	9.150E 00	6.69E-06	2.7E-06
1.760E 00	4.37E-05	5.5E-05	4.540E 00	-1.54E-05	2.5E-05	9.300E 00	3.84E-06	2.0E-06
1.800E 00	6.98E-05	5.3E-05	4.630E 00	-3.08E-06	2.5E-05	9.460E 00	1.44E-06	1.2E-06
1.850E 00	7.39E-05	5.4E-05	4.730E 00	1.80E-05	2.5E-05	9.620E 00	4.63E-07	7.2E-07
1.910E 00	4.63E-05	5.1E-05	4.830E 00	3.02E-05	2.6E-05	9.780E 00	2.49E-07	6.1E-07
1.970E 00	4.40E-05	4.9E-05	4.930E 00	3.63E-05	2.5E-05	9.940E 00	3.54E-07	4.6E-07
2.030E 00	6.14E-05	4.3E-05	5.030E 00	3.30E-05	2.5E-05	1.010E 01	3.29E-07	3.8E-07
2.090E 00	4.40E-05	4.8E-05	5.130E 00	2.04E-05	2.6E-05	1.026E 01	3.13E-07	3.0E-07
						1.042E 01	2.07E-07	3.0E-07
						1.058E 01	1.63E-07	3.1E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 1.50 MEV EN-MAX= 1.99 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	1.62E-02	1.4E-03	2.150E 00	9.99E-06	4.7E-05	5.230E 00	-8.57E-06	2.0E-05
7.100E-01	7.15E-03	1.1E-03	2.210E 00	3.56E-05	4.6E-05	5.330E 00	-7.10E-06	2.1E-05
7.300E-01	5.93E-03	1.1E-03	2.270E 00	4.11E-05	4.3E-05	5.430E 00	-8.57E-07	2.2E-05
7.500E-01	1.32E-02	1.1E-03	2.330E 00	5.85E-06	3.6E-05	5.530E 00	1.16E-05	2.2E-05
7.700E-01	3.09E-02	1.2E-03	2.390E 00	-1.72E-05	3.3E-05	5.630E 00	2.36E-05	2.2E-05
7.900E-01	5.80E-02	1.2E-03	2.450E 00	-4.45E-06	3.4E-05	5.730E 00	2.30E-05	2.2E-05
8.100E-01	7.94E-02	1.2E-03	2.510E 00	3.13E-05	3.3E-05	5.830E 00	1.24E-05	2.3E-05
8.300E-01	7.98E-02	1.1E-03	2.570E 00	5.53E-05	3.5E-05	5.930E 00	4.19E-06	2.2E-05
8.500E-01	6.13E-02	1.2E-03	2.630E 00	3.89E-05	3.3E-05	6.030E 00	7.78E-06	2.0E-05
8.700E-01	3.84E-02	1.0E-03	2.690E 00	6.04E-06	3.4E-05	6.130E 00	1.14E-05	2.0E-05
8.900E-01	2.36E-02	1.4E-03	2.750E 00	-1.50E-05	2.3E-05	6.230E 00	1.08E-05	2.0E-05
9.100E-01	2.31E-02	1.2E-03	2.810E 00	-8.12E-06	2.6E-05	6.330E 00	5.23E-09	1.7E-05
9.300E-01	4.04E-02	1.1E-03	2.870E 00	8.32E-06	2.3E-05	6.440E 00	-1.23E-05	1.6E-05
9.500E-01	7.27E-02	1.1E-03	2.930E 00	2.43E-05	3.1E-05	6.560E 00	-1.57E-05	1.6E-05
9.700E-01	1.06E-01	1.2E-03	2.990E 00	3.09E-05	3.2E-05	6.680E 00	-2.39E-06	1.6E-05
1.000E 00	1.18E-01	1.0E-03	3.050E 00	3.62E-05	3.1E-05	6.800E 00	1.99E-05	1.5E-05
1.040E 00	6.21E-02	6.3E-04	3.110E 00	3.17E-05	3.2E-05	6.920E 00	3.22E-05	1.3E-05
1.080E 00	1.53E-02	2.9E-04	3.180E 00	1.36E-05	2.9E-05	7.040E 00	2.60E-05	1.2E-05
1.120E 00	2.37E-03	1.6E-04	3.260E 00	-2.99E-06	2.7E-05	7.160E 00	1.20E-05	1.0E-05
1.160E 00	4.19E-04	1.3E-04	3.340E 00	-1.14E-05	2.6E-05	7.280E 00	-9.31E-07	8.7E-06
1.200E 00	2.78E-04	1.1E-04	3.420E 00	-1.93E-05	3.1E-05	7.400E 00	-6.85E-06	8.4E-06
1.240E 00	2.62E-04	1.0E-04	3.500E 00	-2.84E-05	2.6E-05	7.520E 00	-5.35E-06	7.1E-06
1.280E 00	2.01E-04	1.0E-04	3.580E 00	-2.40E-05	2.6E-05	7.640E 00	2.59E-06	6.5E-06
1.320E 00	1.92E-04	9.5E-05	3.660E 00	-2.18E-06	3.1E-05	7.760E 00	1.07E-05	6.3E-06
1.360E 00	2.09E-04	9.4E-05	3.740E 00	1.60E-05	2.6E-05	7.890E 00	1.32E-05	6.7E-06
1.400E 00	1.80E-04	9.1E-05	3.820E 00	2.24E-05	2.7E-05	8.030E 00	7.30E-06	6.3E-06
1.440E 00	1.42E-04	8.7E-05	3.900E 00	2.04E-05	2.9E-05	8.170E 00	-1.64E-06	6.0E-06
1.480E 00	1.31E-04	7.7E-05	3.980E 00	1.85E-05	2.5E-05	8.310E 00	-5.53E-06	6.2E-06
1.520E 00	1.34E-04	7.3E-05	4.060E 00	3.05E-05	2.4E-05	8.450E 00	-4.09E-06	5.4E-06
1.560E 00	1.32E-04	6.9E-05	4.140E 00	3.51E-05	2.9E-05	8.590E 00	-8.85E-07	5.0E-06
1.600E 00	1.23E-04	6.4E-05	4.220E 00	2.23E-05	2.8E-05	8.730E 00	2.03E-06	4.7E-06
1.640E 00	9.17E-05	6.1E-05	4.300E 00	7.87E-06	2.8E-05	8.870E 00	6.00E-06	4.3E-06
1.680E 00	5.51E-05	5.3E-05	4.380E 00	7.02E-07	2.4E-05	9.010E 00	1.09E-05	3.9E-06
1.720E 00	5.56E-05	4.8E-05	4.460E 00	1.62E-06	2.3E-05	9.150E 00	1.34E-05	4.1E-06
1.760E 00	7.73E-05	5.1E-05	4.540E 00	2.10E-06	2.4E-05	9.300E 00	1.20E-05	3.5E-06
1.800E 00	9.76E-05	4.4E-05	4.630E 00	4.86E-06	2.5E-05	9.460E 00	7.98E-06	3.0E-06
1.850E 00	7.56E-05	4.8E-05	4.730E 00	1.41E-05	2.2E-05	9.620E 00	4.39E-06	2.4E-06
1.910E 00	2.81E-05	4.4E-05	4.830E 00	1.62E-05	2.2E-05	9.780E 00	2.88E-06	1.9E-06
1.970E 00	3.54E-05	4.6E-05	4.930E 00	7.24E-06	2.1E-05	9.940E 00	1.81E-06	1.3E-06
2.030E 00	4.50E-05	4.4E-05	5.030E 00	-2.12E-06	2.3E-05	1.010E 01	9.93E-07	8.0E-07
2.090E 00	1.92E-05	4.4E-05	5.130E 00	-6.77E-06	2.3E-05	1.026E 01	4.23E-07	4.2E-07
						1.042E 01	1.03E-07	4.1E-07
						1.058E 01	-5.32E-09	3.7E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 1.99 MEV EN-MAX= 2.49 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	1.50E-02	2.8E-03	2.150E 00	6.30E-03	2.3E-04	5.230E 00	-7.66E-06	2.7E-05
7.100E-01	7.12E-03	1.5E-03	2.210E 00	6.88E-03	1.9E-04	5.330E 00	-7.72E-06	1.8E-05
7.300E-01	5.19E-03	1.3E-03	2.270E 00	3.67E-03	1.3E-04	5.430E 00	1.63E-05	2.1E-05
7.500E-01	1.21E-02	1.4E-03	2.330E 00	9.62E-04	7.5E-05	5.530E 00	3.22E-05	2.2E-05
7.700E-01	2.85E-02	1.4E-03	2.390E 00	1.33E-04	5.2E-05	5.630E 00	2.78E-05	2.3E-05
7.900E-01	5.25E-02	1.4E-03	2.450E 00	-9.13E-06	3.8E-05	5.730E 00	9.08E-06	2.4E-05
8.100E-01	7.26E-02	1.4E-03	2.510E 00	-2.58E-05	3.8E-05	5.830E 00	-1.10E-05	1.5E-05
8.300E-01	7.54E-02	1.4E-03	2.570E 00	-2.77E-06	3.7E-05	5.930E 00	-1.82E-05	1.4E-05
8.500E-01	6.00E-02	1.5E-03	2.630E 00	3.43E-05	4.2E-05	6.030E 00	-1.04E-05	1.9E-05
8.700E-01	3.87E-02	1.5E-03	2.690E 00	5.26E-05	4.1E-05	6.130E 00	-1.42E-06	1.8E-05
8.900E-01	2.47E-02	1.6E-03	2.750E 00	5.62E-05	4.2E-05	6.230E 00	3.23E-06	1.6E-05
9.100E-01	2.53E-02	1.6E-03	2.810E 00	4.55E-05	4.4E-05	6.330E 00	6.22E-06	1.6E-05
9.300E-01	4.53E-02	1.7E-03	2.870E 00	3.27E-05	4.4E-05	6.440E 00	-4.64E-07	1.6E-05
9.500E-01	8.40E-02	1.8E-03	2.930E 00	3.79E-05	4.4E-05	6.560E 00	-8.87E-06	1.5E-05
9.700E-01	1.27E-01	1.8E-03	2.990E 00	6.02E-05	4.2E-05	6.680E 00	1.90E-06	1.8E-05
1.000E 00	1.50E-01	1.5E-03	3.050E 00	6.07E-05	4.1E-05	6.800E 00	1.72E-05	1.6E-05
1.040E 00	8.26E-02	9.3E-04	3.110E 00	2.30E-05	3.6E-05	6.920E 00	2.79E-05	1.5E-05
1.080E 00	2.08E-02	6.5E-04	3.180E 00	-1.59E-05	3.4E-05	7.040E 00	2.71E-05	1.4E-05
1.120E 00	3.38E-03	3.2E-04	3.260E 00	-2.53E-05	3.9E-05	7.160E 00	2.05E-05	1.3E-05
1.160E 00	6.62E-04	3.0E-04	3.340E 00	-1.53E-05	3.6E-05	7.280E 00	1.44E-05	1.1E-05
1.200E 00	2.29E-04	2.9E-04	3.420E 00	1.47E-05	3.7E-05	7.400E 00	5.22E-06	8.9E-06
1.240E 00	2.13E-04	2.5E-04	3.500E 00	2.98E-05	3.7E-05	7.520E 00	-2.01E-06	9.1E-06
1.280E 00	4.17E-04	2.4E-04	3.580E 00	-8.57E-08	2.9E-05	7.640E 00	-4.76E-06	7.0E-06
1.320E 00	5.47E-04	2.2E-04	3.660E 00	-3.90E-06	2.7E-05	7.760E 00	-6.38E-07	5.7E-06
1.360E 00	4.09E-04	2.4E-04	3.740E 00	2.48E-05	3.0E-05	7.890E 00	4.28E-06	5.1E-06
1.400E 00	1.41E-04	2.5E-04	3.820E 00	6.38E-05	3.2E-05	8.030E 00	4.99E-06	4.7E-06
1.440E 00	1.07E-04	2.4E-04	3.900E 00	4.58E-05	3.6E-05	8.170E 00	3.87E-06	4.2E-06
1.480E 00	2.98E-04	2.2E-04	3.980E 00	1.34E-06	2.9E-05	8.310E 00	4.57E-06	4.4E-06
1.520E 00	3.22E-04	2.0E-04	4.060E 00	-9.73E-06	2.3E-05	8.450E 00	6.00E-06	4.6E-06
1.560E 00	1.42E-04	2.0E-04	4.140E 00	-1.77E-05	2.3E-05	8.590E 00	4.20E-06	4.3E-06
1.600E 00	1.48E-04	1.9E-04	4.220E 00	-2.02E-05	3.0E-05	8.730E 00	5.42E-07	5.3E-06
1.640E 00	3.78E-04	2.0E-04	4.300E 00	-2.62E-05	2.6E-05	8.870E 00	-1.92E-06	5.0E-06
1.680E 00	3.99E-04	2.1E-04	4.380E 00	-7.73E-06	3.0E-05	9.010E 00	-4.92E-07	5.2E-06
1.720E 00	1.44E-04	2.1E-04	4.460E 00	2.08E-05	3.0E-05	9.150E 00	2.39E-06	5.9E-06
1.760E 00	-2.21E-06	2.0E-04	4.540E 00	3.46E-05	2.1E-05	9.300E 00	5.86E-06	5.6E-06
1.800E 00	1.12E-04	2.0E-04	4.630E 00	3.93E-05	2.5E-05	9.460E 00	8.81E-06	5.6E-06
1.850E 00	1.49E-04	1.8E-04	4.730E 00	1.51E-05	3.0E-05	9.620E 00	1.10E-05	4.7E-06
1.910E 00	-2.00E-04	1.7E-04	4.830E 00	-2.54E-06	2.5E-05	9.780E 00	9.90E-06	4.4E-06
1.970E 00	-1.41E-04	1.6E-04	4.930E 00	-1.81E-06	2.9E-05	9.940E 00	7.49E-06	3.7E-06
2.030E 00	6.32E-04	1.5E-04	5.030E 00	1.06E-05	2.4E-05	1.010E 01	5.27E-06	2.6E-06
2.090E 00	2.84E-03	2.0E-04	5.130E 00	3.26E-06	2.7E-05	1.026E 01	3.50E-06	1.9E-06
						1.042E 01	2.29E-06	1.2E-06
						1.058E 01	1.05E-06	9.8E-07

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 2.49 MEV EN-MAX= 3.00 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	1.61E-02	4.0E-03	2.150E 00	5.30E-02	1.1E-03	5.230E 00	2.98E-06	3.7E-05
7.100E-01	8.52E-03	2.2E-03	2.210E 00	5.80E-02	8.4E-04	5.330E 00	-1.31E-05	2.9E-05
7.300E-01	6.53E-03	1.9E-03	2.270E 00	3.19E-02	4.8E-04	5.430E 00	-6.59E-06	3.1E-05
7.500E-01	1.01E-02	2.0E-03	2.330E 00	8.98E-03	2.4E-04	5.530E 00	-1.04E-05	3.3E-05
7.700E-01	2.17E-02	2.0E-03	2.390E 00	1.34E-03	1.3E-04	5.630E 00	-1.09E-05	2.5E-05
7.900E-01	4.55E-02	2.0E-03	2.450E 00	1.31E-04	9.6E-05	5.730E 00	9.64E-06	2.8E-05
8.100E-01	7.19E-02	2.1E-03	2.510E 00	1.25E-05	9.9E-05	5.830E 00	1.81E-05	2.8E-05
8.300E-01	8.36E-02	2.1E-03	2.570E 00	1.21E-04	1.0E-04	5.930E 00	3.09E-05	2.7E-05
8.500E-01	7.35E-02	2.1E-03	2.630E 00	3.48E-04	1.0E-04	6.030E 00	1.95E-05	2.7E-05
8.700E-01	5.10E-02	2.2E-03	2.690E 00	4.27E-04	9.9E-05	6.130E 00	-5.30E-06	2.8E-05
8.900E-01	3.13E-02	2.2E-03	2.750E 00	2.75E-04	9.0E-05	6.230E 00	-9.74E-06	3.3E-05
9.100E-01	2.44E-02	2.4E-03	2.810E 00	9.99E-05	8.0E-05	6.330E 00	-8.80E-06	3.0E-05
9.300E-01	3.66E-02	2.5E-03	2.870E 00	3.56E-05	6.8E-05	6.440E 00	8.03E-06	2.9E-05
9.500E-01	7.08E-02	2.7E-03	2.930E 00	5.00E-05	6.8E-05	6.560E 00	2.42E-05	2.8E-05
9.700E-01	1.18E-01	2.6E-03	2.990E 00	8.30E-05	6.4E-05	6.680E 00	2.81E-05	2.6E-05
1.000E 00	1.60E-01	2.5E-03	3.050E 00	1.03E-04	6.0E-05	6.800E 00	2.31E-05	2.5E-05
1.040E 00	1.03E-01	1.9E-03	3.110E 00	9.45E-05	5.9E-05	6.920E 00	1.01E-05	2.3E-05
1.080E 00	2.94E-02	1.3E-03	3.180E 00	4.49E-05	5.4E-05	7.040E 00	-2.25E-06	2.1E-05
1.120E 00	5.46E-03	9.5E-04	3.260E 00	7.12E-06	5.1E-05	7.160E 00	-4.05E-06	2.0E-05
1.160E 00	1.46E-03	8.5E-04	3.340E 00	6.33E-06	5.7E-05	7.280E 00	7.76E-06	1.8E-05
1.200E 00	9.21E-04	8.7E-04	3.420E 00	1.62E-05	5.8E-05	7.400E 00	2.54E-05	1.6E-05
1.240E 00	1.13E-04	8.5E-04	3.500E 00	4.20E-05	4.9E-05	7.520E 00	3.21E-05	1.5E-05
1.280E 00	-7.72E-04	8.3E-04	3.580E 00	7.65E-05	5.2E-05	7.640E 00	2.24E-05	1.3E-05
1.320E 00	-1.19E-04	8.1E-04	3.660E 00	9.63E-05	5.8E-05	7.760E 00	7.74E-06	1.2E-05
1.360E 00	5.61E-04	8.4E-04	3.740E 00	5.32E-05	4.5E-05	7.890E 00	-2.41E-07	1.0E-05
1.400E 00	8.65E-05	9.0E-04	3.820E 00	-8.11E-06	4.6E-05	8.030E 00	3.00E-07	9.4E-06
1.440E 00	8.68E-05	8.1E-04	3.900E 00	-4.45E-05	5.5E-05	8.170E 00	2.28E-06	8.6E-06
1.480E 00	7.05E-04	8.1E-04	3.980E 00	-6.53E-05	3.6E-05	8.310E 00	2.85E-06	7.7E-06
1.520E 00	6.58E-04	7.5E-04	4.060E 00	-4.19E-05	4.7E-05	8.450E 00	5.68E-06	6.8E-06
1.560E 00	-1.19E-04	7.9E-04	4.140E 00	-4.05E-05	5.1E-05	8.590E 00	9.78E-06	7.1E-06
1.600E 00	-7.59E-04	7.7E-04	4.220E 00	-3.48E-05	4.3E-05	8.730E 00	1.26E-05	6.8E-06
1.640E 00	7.30E-04	8.7E-04	4.300E 00	-6.28E-06	4.1E-05	8.870E 00	8.85E-06	5.6E-06
1.680E 00	3.51E-03	9.1E-04	4.380E 00	1.42E-05	4.5E-05	9.010E 00	3.63E-06	5.0E-06
1.720E 00	3.12E-03	8.6E-04	4.460E 00	2.33E-05	4.2E-05	9.150E 00	-1.27E-06	4.0E-06
1.760E 00	1.25E-04	8.6E-04	4.540E 00	9.00E-06	4.4E-05	9.300E 00	-1.72E-06	3.3E-06
1.800E 00	-1.13E-03	8.5E-04	4.630E 00	9.50E-06	4.2E-05	9.460E 00	-7.78E-07	2.8E-06
1.850E 00	-1.16E-03	6.9E-04	4.730E 00	2.96E-05	4.4E-05	9.620E 00	6.37E-07	2.4E-06
1.910E 00	-1.84E-03	6.9E-04	4.830E 00	4.58E-05	3.6E-05	9.780E 00	2.78E-06	2.1E-06
1.970E 00	-1.35E-03	5.7E-04	4.930E 00	4.84E-05	4.2E-05	9.940E 00	5.37E-06	2.1E-06
2.030E 00	2.18E-03	6.8E-04	5.030E 00	3.67E-05	3.9E-05	1.010E 01	6.82E-06	2.1E-06
2.090E 00	2.20E-02	8.3E-04	5.130E 00	1.92E-05	3.6E-05	1.026E 01	6.22E-06	2.1E-06
						1.042E 01	4.34E-06	1.8E-06
						1.058E 01	1.87E-06	1.5E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 3.00 MEV EN-MAX= 3.49 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	2.49E-02	6.1E-03	2.150E 00	8.80E-02	1.8E-03	5.230E 00	-2.73E-05	4.1E-05
7.100E-01	1.30E-02	3.3E-03	2.210E 00	8.27E-02	1.5E-03	5.330E 00	-6.01E-05	4.4E-05
7.300E-01	1.15E-02	2.9E-03	2.270E 00	3.90E-02	9.0E-04	5.430E 00	-6.07E-05	4.6E-05
7.500E-01	2.24E-02	3.0E-03	2.330E 00	9.15E-03	5.5E-04	5.530E 00	-3.96E-05	4.2E-05
7.700E-01	4.37E-02	3.1E-03	2.390E 00	1.17E-03	4.7E-04	5.630E 00	-1.59E-05	3.5E-05
7.900E-01	7.02E-02	2.9E-03	2.450E 00	1.15E-04	4.6E-04	5.730E 00	7.17E-06	3.9E-05
8.100E-01	8.70E-02	3.0E-03	2.510E 00	-8.46E-05	4.5E-04	5.830E 00	2.47E-05	3.9E-05
8.300E-01	8.36E-02	3.0E-03	2.570E 00	1.01E-03	4.6E-04	5.930E 00	2.89E-05	4.1E-05
8.500E-01	6.38E-02	3.1E-03	2.630E 00	3.94E-03	4.6E-04	6.030E 00	2.22E-05	3.9E-05
8.700E-01	4.09E-02	3.3E-03	2.690E 00	6.51E-03	4.4E-04	6.130E 00	1.77E-05	4.1E-05
8.900E-01	2.77E-02	3.2E-03	2.750E 00	6.43E-03	4.0E-04	6.230E 00	1.64E-05	4.1E-05
9.100E-01	3.47E-02	3.7E-03	2.810E 00	6.53E-03	4.1E-04	6.330E 00	1.58E-05	4.2E-05
9.300E-01	6.78E-02	3.6E-03	2.870E 00	1.05E-02	4.4E-04	6.440E 00	9.31E-06	3.5E-05
9.500E-01	1.21E-01	4.0E-03	2.930E 00	1.48E-02	4.7E-04	6.560E 00	2.53E-06	3.3E-05
9.700E-01	1.72E-01	3.8E-03	2.990E 00	1.36E-02	4.0E-04	6.680E 00	6.53E-06	3.2E-05
1.000E 00	1.87E-01	4.0E-03	3.050E 00	8.10E-03	2.9E-04	6.800E 00	3.88E-06	3.0E-05
1.040E 00	9.40E-02	2.7E-03	3.110E 00	3.25E-03	2.0E-04	6.920E 00	1.59E-06	2.7E-05
1.080E 00	1.90E-02	2.2E-03	3.180E 00	8.02E-04	1.1E-04	7.040E 00	6.19E-06	2.5E-05
1.120E 00	2.25E-03	1.9E-03	3.260E 00	1.55E-04	8.2E-05	7.160E 00	1.93E-05	2.3E-05
1.160E 00	2.37E-03	1.8E-03	3.340E 00	-3.31E-06	7.0E-05	7.280E 00	3.09E-05	2.1E-05
1.200E 00	1.23E-03	1.8E-03	3.420E 00	-5.97E-05	6.9E-05	7.400E 00	2.92E-05	1.9E-05
1.240E 00	-4.31E-04	1.7E-03	3.500E 00	-2.73E-05	7.0E-05	7.520E 00	1.96E-05	1.8E-05
1.280E 00	-3.70E-04	1.6E-03	3.580E 00	3.92E-05	6.9E-05	7.640E 00	1.02E-05	1.5E-05
1.320E 00	-3.53E-04	1.5E-03	3.660E 00	8.25E-05	7.0E-05	7.760E 00	4.99E-06	1.1E-05
1.360E 00	3.59E-04	1.6E-03	3.740E 00	7.59E-05	7.7E-05	7.890E 00	2.63E-06	9.7E-06
1.400E 00	6.76E-04	1.7E-03	3.820E 00	7.74E-05	6.9E-05	8.030E 00	8.42E-07	8.9E-06
1.440E 00	1.45E-04	1.7E-03	3.900E 00	1.22E-04	6.6E-05	8.170E 00	1.19E-06	7.6E-06
1.480E 00	-1.08E-04	1.5E-03	3.980E 00	1.22E-04	6.8E-05	8.310E 00	4.84E-06	7.1E-06
1.520E 00	-6.71E-04	1.7E-03	4.060E 00	4.88E-05	6.2E-05	8.450E 00	8.77E-06	7.5E-06
1.560E 00	3.38E-04	1.7E-03	4.140E 00	-1.04E-05	5.5E-05	8.590E 00	9.85E-06	7.9E-06
1.600E 00	8.58E-03	1.7E-03	4.220E 00	-2.78E-05	5.8E-05	8.730E 00	8.64E-06	6.8E-06
1.640E 00	2.41E-02	1.9E-03	4.300E 00	-2.90E-05	6.3E-05	8.870E 00	5.51E-06	6.0E-06
1.680E 00	3.46E-02	2.0E-03	4.380E 00	-2.73E-05	6.0E-05	9.010E 00	2.56E-06	6.9E-06
1.720E 00	2.94E-02	1.8E-03	4.460E 00	-3.64E-05	5.9E-05	9.150E 00	2.82E-07	5.7E-06
1.760E 00	1.60E-02	1.7E-03	4.540E 00	-3.41E-05	6.1E-05	9.300E 00	9.75E-07	4.0E-06
1.800E 00	6.76E-03	1.4E-03	4.630E 00	-3.68E-05	4.8E-05	9.460E 00	3.11E-06	5.0E-06
1.850E 00	1.12E-03	1.2E-03	4.730E 00	1.16E-05	4.8E-05	9.620E 00	4.16E-06	4.6E-06
1.910E 00	-1.96E-03	1.2E-03	4.830E 00	7.87E-05	5.6E-05	9.780E 00	4.27E-06	3.1E-06
1.970E 00	-2.89E-04	1.1E-03	4.930E 00	1.23E-04	5.5E-05	9.940E 00	4.57E-06	3.5E-06
2.030E 00	8.12E-03	1.2E-03	5.030E 00	1.11E-04	5.7E-05	1.010E 01	5.09E-06	3.5E-06
2.090E 00	4.33E-02	1.5E-03	5.130E 00	5.22E-05	5.5E-05	1.026E 01	5.15E-06	2.7E-06
						1.042E 01	4.06E-06	1.9E-06
						1.058E 01	2.58E-06	2.0E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 3.49 MEV EN-MAX= 4.00 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	2.48E-02	7.0E-03	2.150E 00	8.24E-02	2.1E-03	5.230E 00	-9.68E-05	5.5E-05
7.100E-01	1.54E-02	4.0E-03	2.210E 00	7.40E-02	1.8E-03	5.330E 00	-6.82E-05	3.4E-05
7.300E-01	1.63E-02	3.4E-03	2.270E 00	3.28E-02	1.2E-03	5.430E 00	-1.50E-05	5.7E-05
7.500E-01	3.08E-02	3.5E-03	2.330E 00	7.64E-03	1.0E-03	5.530E 00	2.12E-05	5.3E-05
7.700E-01	5.42E-02	3.6E-03	2.390E 00	1.74E-03	9.9E-04	5.630E 00	4.31E-05	6.2E-05
7.900E-01	7.79E-02	3.4E-03	2.450E 00	8.10E-04	9.8E-04	5.730E 00	5.04E-05	3.7E-05
8.100E-01	8.83E-02	3.3E-03	2.510E 00	-2.28E-04	1.0E-03	5.830E 00	4.50E-05	3.3E-05
8.300E-01	7.90E-02	3.3E-03	2.570E 00	1.39E-03	9.1E-04	5.930E 00	4.47E-05	5.9E-05
8.500E-01	5.66E-02	3.4E-03	2.630E 00	5.81E-03	8.8E-04	6.030E 00	-1.58E-06	6.1E-05
8.700E-01	3.35E-02	3.6E-03	2.690E 00	8.71E-03	8.1E-04	6.130E 00	-4.29E-05	4.5E-05
8.900E-01	2.05E-02	3.7E-03	2.750E 00	9.40E-03	8.1E-04	6.230E 00	-3.93E-05	4.5E-05
9.100E-01	2.83E-02	4.1E-03	2.810E 00	1.61E-02	9.5E-04	6.330E 00	-3.68E-05	5.4E-05
9.300E-01	6.13E-02	3.9E-03	2.870E 00	3.50E-02	1.1E-03	6.440E 00	-2.66E-05	5.3E-05
9.500E-01	1.10E-01	4.3E-03	2.930E 00	5.13E-02	1.1E-03	6.560E 00	-9.24E-06	4.2E-05
9.700E-01	1.49E-01	4.1E-03	2.990E 00	4.66E-02	9.4E-04	6.680E 00	7.60E-06	3.8E-05
1.000E 00	1.49E-01	4.1E-03	3.050E 00	2.72E-02	6.6E-04	6.800E 00	4.19E-05	3.9E-05
1.040E 00	6.84E-02	3.0E-03	3.110E 00	1.06E-02	3.7E-04	6.920E 00	5.53E-05	3.4E-05
1.080E 00	1.36E-02	2.6E-03	3.180E 00	2.38E-03	1.9E-04	7.040E 00	4.25E-05	2.6E-05
1.120E 00	5.87E-04	2.3E-03	3.260E 00	3.93E-04	1.3E-04	7.160E 00	2.13E-05	2.8E-05
1.160E 00	-5.25E-04	2.2E-03	3.340E 00	4.17E-05	1.3E-04	7.280E 00	1.35E-06	2.4E-05
1.200E 00	-4.16E-05	2.2E-03	3.420E 00	1.18E-05	1.2E-04	7.400E 00	-1.39E-05	1.6E-05
1.240E 00	-5.71E-04	2.0E-03	3.500E 00	6.70E-05	1.2E-04	7.520E 00	-1.67E-05	1.6E-05
1.280E 00	4.21E-05	2.1E-03	3.580E 00	1.22E-04	1.2E-04	7.640E 00	-1.43E-05	1.3E-05
1.320E 00	9.99E-04	2.0E-03	3.660E 00	1.68E-04	1.0E-04	7.760E 00	-4.45E-06	1.3E-05
1.360E 00	-1.68E-03	2.1E-03	3.740E 00	1.67E-04	1.1E-04	7.890E 00	4.60E-06	1.1E-05
1.400E 00	-2.65E-03	2.2E-03	3.820E 00	1.04E-04	9.9E-05	8.030E 00	7.90E-06	9.4E-06
1.440E 00	-4.02E-04	2.0E-03	3.900E 00	6.70E-05	9.6E-05	8.170E 00	7.38E-06	8.3E-06
1.480E 00	-6.59E-04	1.9E-03	3.980E 00	8.37E-05	9.7E-05	8.310E 00	6.11E-06	9.3E-06
1.520E 00	-2.57E-03	2.0E-03	4.060E 00	9.68E-05	1.0E-04	8.450E 00	3.95E-06	8.6E-06
1.560E 00	2.42E-04	2.0E-03	4.140E 00	5.86E-05	1.0E-04	8.590E 00	2.48E-06	8.6E-06
1.600E 00	1.30E-02	2.0E-03	4.220E 00	1.86E-05	9.8E-05	8.730E 00	3.40E-06	7.6E-06
1.640E 00	3.28E-02	2.3E-03	4.300E 00	1.24E-05	8.6E-05	8.870E 00	6.00E-06	7.4E-06
1.680E 00	4.33E-02	2.4E-03	4.380E 00	2.91E-06	7.4E-05	9.010E 00	1.07E-05	7.4E-06
1.720E 00	3.50E-02	2.2E-03	4.460E 00	4.25E-06	7.4E-05	9.150E 00	1.14E-05	7.3E-06
1.760E 00	1.85E-02	2.0E-03	4.540E 00	2.57E-05	7.8E-05	9.300E 00	8.26E-06	6.8E-06
1.800E 00	6.36E-03	1.9E-03	4.630E 00	8.91E-05	7.9E-05	9.460E 00	2.61E-06	6.3E-06
1.850E 00	-1.88E-04	1.7E-03	4.730E 00	1.72E-04	7.7E-05	9.620E 00	2.78E-07	4.7E-06
1.910E 00	-1.27E-03	1.6E-03	4.830E 00	1.72E-04	6.5E-05	9.780E 00	7.29E-07	4.1E-06
1.970E 00	1.01E-03	1.4E-03	4.930E 00	1.08E-04	6.2E-05	9.940E 00	2.30E-06	3.7E-06
2.030E 00	9.76E-03	1.6E-03	5.030E 00	1.60E-05	5.5E-05	1.010E 01	3.03E-06	3.7E-06
2.090E 00	4.27E-02	1.9E-03	5.130E 00	-5.16E-05	6.6E-05	1.026E 01	3.73E-06	3.0E-06
						1.042E 01	3.74E-06	2.5E-06
						1.058E 01	2.97E-06	2.7E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 4.00 MEV EN-MAX= 4.49 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	1.63E-02	8.1E-03	2.150E 00	7.97E-02	2.4E-03	5.230E 00	4.67E-05	8.1E-05
7.100E-01	1.01E-02	4.5E-03	2.210E 00	7.67E-02	2.2E-03	5.330E 00	-1.86E-05	6.2E-05
7.300E-01	1.67E-02	3.8E-03	2.270E 00	3.58E-02	1.6E-03	5.430E 00	-2.60E-05	7.0E-05
7.500E-01	3.05E-02	4.0E-03	2.330E 00	7.53E-03	1.3E-03	5.530E 00	-2.01E-05	6.2E-05
7.700E-01	5.05E-02	4.1E-03	2.390E 00	1.45E-03	1.2E-03	5.630E 00	5.09E-06	6.0E-05
7.900E-01	7.91E-02	3.8E-03	2.450E 00	1.59E-03	1.3E-03	5.730E 00	2.26E-05	7.1E-05
8.100E-01	1.01E-01	3.9E-03	2.510E 00	9.12E-04	1.3E-03	5.830E 00	2.80E-05	5.9E-05
8.300E-01	9.88E-02	3.9E-03	2.570E 00	2.30E-03	1.2E-03	5.930E 00	4.19E-05	6.1E-05
8.500E-01	7.30E-02	3.9E-03	2.630E 00	6.50E-03	1.1E-03	6.030E 00	4.56E-05	4.7E-05
8.700E-01	4.36E-02	4.2E-03	2.690E 00	1.09E-02	1.1E-03	6.130E 00	3.28E-05	5.7E-05
8.900E-01	2.75E-02	4.3E-03	2.750E 00	1.33E-02	1.1E-03	6.230E 00	-2.02E-05	5.9E-05
9.100E-01	3.18E-02	4.7E-03	2.810E 00	2.16E-02	1.2E-03	6.330E 00	-5.27E-05	5.6E-05
9.300E-01	5.83E-02	4.5E-03	2.870E 00	4.36E-02	1.4E-03	6.440E 00	-7.14E-05	4.6E-05
9.500E-01	1.04E-01	4.9E-03	2.930E 00	6.48E-02	1.5E-03	6.560E 00	-5.01E-05	4.5E-05
9.700E-01	1.52E-01	4.8E-03	2.990E 00	6.22E-02	1.3E-03	6.680E 00	4.35E-06	4.3E-05
1.000E 00	1.72E-01	5.1E-03	3.050E 00	3.91E-02	9.1E-04	6.800E 00	5.14E-05	4.0E-05
1.040E 00	8.94E-02	3.9E-03	3.110E 00	1.68E-02	5.6E-04	6.920E 00	5.33E-05	3.3E-05
1.080E 00	2.03E-02	3.2E-03	3.180E 00	4.48E-03	3.1E-04	7.040E 00	2.47E-05	3.1E-05
1.120E 00	8.58E-04	2.8E-03	3.260E 00	1.20E-03	2.6E-04	7.160E 00	2.89E-06	3.5E-05
1.160E 00	-7.18E-04	2.6E-03	3.340E 00	4.91E-04	2.3E-04	7.280E 00	1.34E-05	2.7E-05
1.200E 00	1.81E-03	2.7E-03	3.420E 00	2.17E-04	2.4E-04	7.400E 00	2.79E-05	2.4E-05
1.240E 00	-9.63E-04	2.4E-03	3.500E 00	3.12E-04	2.3E-04	7.520E 00	2.16E-05	2.3E-05
1.280E 00	-2.63E-03	2.4E-03	3.580E 00	3.63E-04	2.2E-04	7.640E 00	-4.82E-06	1.7E-05
1.320E 00	5.69E-04	2.3E-03	3.660E 00	2.72E-04	2.1E-04	7.760E 00	-1.99E-05	2.0E-05
1.360E 00	-4.12E-04	2.3E-03	3.740E 00	4.30E-04	1.9E-04	7.890E 00	-1.32E-05	1.7E-05
1.400E 00	-1.75E-03	2.6E-03	3.820E 00	1.08E-03	2.0E-04	8.030E 00	7.64E-06	1.5E-05
1.440E 00	-6.44E-05	2.1E-03	3.900E 00	1.61E-03	2.0E-04	8.170E 00	2.20E-05	1.4E-05
1.480E 00	4.02E-04	2.3E-03	3.980E 00	1.44E-03	1.9E-04	8.310E 00	2.25E-05	1.1E-05
1.520E 00	-9.33E-04	2.3E-03	4.060E 00	8.32E-04	1.6E-04	8.450E 00	1.38E-05	1.1E-05
1.560E 00	-1.18E-03	2.3E-03	4.140E 00	3.13E-04	1.2E-04	8.590E 00	7.67E-06	1.1E-05
1.600E 00	7.34E-03	2.3E-03	4.220E 00	2.85E-05	1.2E-04	8.730E 00	6.66E-06	8.7E-06
1.640E 00	2.70E-02	2.7E-03	4.300E 00	-8.40E-05	8.0E-05	8.870E 00	1.08E-05	7.9E-06
1.680E 00	4.17E-02	2.8E-03	4.380E 00	-1.91E-05	1.0E-04	9.010E 00	1.03E-05	8.1E-06
1.720E 00	3.70E-02	2.7E-03	4.460E 00	5.04E-05	1.0E-04	9.150E 00	6.77E-06	6.0E-06
1.760E 00	2.06E-02	2.3E-03	4.540E 00	8.21E-05	9.6E-05	9.300E 00	2.72E-06	4.9E-06
1.800E 00	7.28E-03	2.3E-03	4.630E 00	5.25E-05	1.1E-04	9.460E 00	2.46E-06	4.3E-06
1.850E 00	6.81E-04	2.0E-03	4.730E 00	3.38E-06	9.8E-05	9.620E 00	2.96E-06	4.0E-06
1.910E 00	-1.74E-03	1.9E-03	4.830E 00	2.10E-06	7.9E-05	9.780E 00	2.37E-06	3.6E-06
1.970E 00	-8.41E-05	1.8E-03	4.930E 00	2.87E-05	8.0E-05	9.940E 00	2.72E-06	3.3E-06
2.030E 00	8.55E-03	1.7E-03	5.030E 00	8.98E-05	6.9E-05	1.010E 01	3.55E-06	3.0E-06
2.090E 00	3.76E-02	2.1E-03	5.130E 00	1.04E-04	8.1E-05	1.026E 01	4.43E-06	2.7E-06
						1.042E 01	3.74E-06	2.6E-06
						1.058E 01	2.59E-06	2.5E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 4.49 MEV EN-MAX= 4.98 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	2.85E-02	8.0E-03	2.150E 00	8.07E-02	2.5E-03	5.230E 00	9.50E-06	8.5E-05
7.100E-01	1.05E-02	4.9E-03	2.210E 00	8.46E-02	2.3E-03	5.330E 00	2.77E-06	7.6E-05
7.300E-01	7.96E-03	4.1E-03	2.270E 00	4.45E-02	1.7E-03	5.430E 00	9.74E-06	7.4E-05
7.500E-01	2.30E-02	4.2E-03	2.330E 00	1.20E-02	1.5E-03	5.530E 00	3.99E-05	7.8E-05
7.700E-01	4.70E-02	4.2E-03	2.390E 00	2.00E-03	1.4E-03	5.630E 00	8.56E-05	8.3E-05
7.900E-01	7.40E-02	3.9E-03	2.450E 00	2.41E-05	1.4E-03	5.730E 00	9.87E-05	7.4E-05
8.100E-01	9.34E-02	4.2E-03	2.510E 00	-3.50E-04	1.5E-03	5.830E 00	6.28E-05	6.9E-05
8.300E-01	9.50E-02	4.2E-03	2.570E 00	1.34E-03	1.4E-03	5.930E 00	1.13E-05	6.4E-05
8.500E-01	7.72E-02	4.2E-03	2.630E 00	6.14E-03	1.3E-03	6.030E 00	-3.28E-06	6.8E-05
8.700E-01	5.06E-02	4.4E-03	2.690E 00	1.23E-02	1.2E-03	6.130E 00	3.35E-06	6.3E-05
8.900E-01	3.93E-02	4.3E-03	2.750E 00	1.58E-02	1.2E-03	6.230E 00	2.40E-05	6.4E-05
9.100E-01	2.31E-02	4.7E-03	2.810E 00	2.24E-02	1.4E-03	6.330E 00	2.02E-05	5.8E-05
9.300E-01	5.02E-02	4.7E-03	2.870E 00	4.22E-02	1.6E-03	6.440E 00	8.05E-06	4.9E-05
9.500E-01	9.44E-02	5.4E-03	2.930E 00	6.42E-02	1.6E-03	6.560E 00	3.87E-06	4.3E-05
9.700E-01	1.44E-01	5.2E-03	2.990E 00	6.37E-02	1.4E-03	6.680E 00	-1.34E-05	4.6E-05
1.000E 00	1.75E-01	5.6E-03	3.050E 00	4.18E-02	1.1E-03	6.800E 00	-2.08E-05	4.1E-05
1.040E 00	1.04E-01	4.3E-03	3.110E 00	1.98E-02	7.3E-04	6.920E 00	-2.28E-06	3.6E-05
1.080E 00	2.47E-02	3.4E-03	3.180E 00	7.56E-03	5.5E-04	7.040E 00	3.54E-05	3.3E-05
1.120E 00	3.36E-03	2.9E-03	3.260E 00	3.41E-03	4.7E-04	7.160E 00	5.79E-05	3.0E-05
1.160E 00	1.15E-03	2.8E-03	3.340E 00	1.70E-03	4.6E-04	7.280E 00	6.18E-05	2.5E-05
1.200E 00	-6.90E-04	3.0E-03	3.420E 00	1.53E-03	4.8E-04	7.400E 00	4.90E-05	2.4E-05
1.240E 00	5.16E-04	2.8E-03	3.500E 00	1.06E-03	4.2E-04	7.520E 00	4.05E-05	2.3E-05
1.280E 00	-6.81E-04	2.6E-03	3.580E 00	3.21E-04	3.9E-04	7.640E 00	2.58E-05	1.9E-05
1.320E 00	-3.74E-04	2.5E-03	3.660E 00	6.89E-04	4.0E-04	7.760E 00	8.76E-06	1.6E-05
1.360E 00	2.25E-03	2.6E-03	3.740E 00	1.77E-03	3.7E-04	7.890E 00	-1.20E-06	1.6E-05
1.400E 00	2.06E-03	2.6E-03	3.820E 00	4.02E-03	4.2E-04	8.030E 00	-5.10E-06	1.6E-05
1.440E 00	1.96E-04	2.6E-03	3.900E 00	5.96E-03	4.2E-04	8.170E 00	-1.44E-06	1.4E-05
1.480E 00	1.10E-03	2.5E-03	3.980E 00	5.07E-03	3.9E-04	8.310E 00	4.92E-06	1.2E-05
1.520E 00	1.03E-03	2.5E-03	4.060E 00	2.79E-03	3.1E-04	8.450E 00	9.03E-06	1.3E-05
1.560E 00	-8.11E-04	2.6E-03	4.140E 00	1.18E-03	2.6E-04	8.590E 00	9.97E-06	1.3E-05
1.600E 00	7.35E-03	2.6E-03	4.220E 00	6.08E-04	2.5E-04	8.730E 00	8.37E-06	1.1E-05
1.640E 00	2.78E-02	2.9E-03	4.300E 00	8.89E-04	2.6E-04	8.870E 00	6.67E-06	1.1E-05
1.680E 00	4.30E-02	3.0E-03	4.380E 00	1.45E-03	2.4E-04	9.010E 00	5.36E-06	1.2E-05
1.720E 00	3.95E-02	3.0E-03	4.460E 00	1.68E-03	2.3E-04	9.150E 00	5.13E-06	8.8E-06
1.760E 00	2.25E-02	2.7E-03	4.540E 00	1.46E-03	2.0E-04	9.300E 00	5.76E-06	8.2E-06
1.800E 00	7.46E-03	2.6E-03	4.630E 00	9.23E-04	1.7E-04	9.460E 00	7.72E-06	7.4E-06
1.850E 00	1.67E-03	2.2E-03	4.730E 00	3.61E-04	1.5E-04	9.620E 00	1.97E-06	6.9E-06
1.910E 00	-9.23E-04	2.1E-03	4.830E 00	6.68E-05	1.1E-04	9.780E 00	1.72E-06	6.0E-06
1.970E 00	-2.32E-03	2.0E-03	4.930E 00	-1.80E-05	8.7E-05	9.940E 00	3.88E-06	5.9E-06
2.030E 00	6.72E-03	2.0E-03	5.030E 00	-2.90E-05	9.2E-05	1.010E 01	9.52E-06	6.7E-06
2.090E 00	3.75E-02	2.2E-03	5.130E 00	-6.64E-06	9.1E-05	1.026E 01	8.07E-06	4.7E-06
						1.042E 01	5.59E-06	3.6E-06
						1.058E 01	2.02E-06	4.0E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 4.98 MEV EN-MAX= 5.48 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SP/MEV	DATA-ERR B/SR/MEV
6.900E-01	3.66E-02	9.1E-03	2.150E 00	9.11E-02	2.9E-03	5.230E 00	1.21E-04	1.2E-04
7.100E-01	1.76E-02	5.2E-03	2.210E 00	9.74E-02	2.8E-03	5.330E 00	7.68E-05	1.0E-04
7.300E-01	1.21E-02	4.7E-03	2.270E 00	5.51E-02	2.2E-03	5.430E 00	7.60E-05	8.9E-05
7.500E-01	2.32E-02	4.9E-03	2.330E 00	2.08E-02	1.8E-03	5.530E 00	8.52E-05	8.9E-05
7.700E-01	4.39E-02	4.9E-03	2.390E 00	5.24E-03	1.6E-03	5.630E 00	9.46E-05	8.8E-05
7.900E-01	7.00E-02	4.7E-03	2.450E 00	1.58E-03	1.7E-03	5.730E 00	8.67E-05	8.2E-05
8.100E-01	9.18E-02	5.0E-03	2.510E 00	2.41E-03	1.6E-03	5.830E 00	6.78E-05	7.6E-05
8.300E-01	9.61E-02	4.9E-03	2.570E 00	3.42E-03	1.6E-03	5.930E 00	6.83E-05	7.0E-05
8.500E-01	7.92E-02	4.9E-03	2.630E 00	8.53E-03	1.5E-03	6.030E 00	9.43E-05	6.8E-05
8.700E-01	5.23E-02	5.1E-03	2.690E 00	1.25E-02	1.4E-03	6.130E 00	1.09E-04	6.8E-05
8.900E-01	3.21E-02	5.2E-03	2.750E 00	1.46E-02	1.4E-03	6.230E 00	8.45E-05	6.2E-05
9.100E-01	3.13E-02	5.8E-03	2.810E 00	2.30E-02	1.5E-03	6.330E 00	3.79E-05	5.2E-05
9.300E-01	5.67E-02	5.6E-03	2.870E 00	4.20E-02	1.7E-03	6.440E 00	-3.35E-06	4.9E-05
9.500E-01	1.06E-01	6.3E-03	2.930E 00	6.05E-02	1.9E-03	6.560E 00	-2.59E-05	4.1E-05
9.700E-01	1.59E-01	6.1E-03	2.990E 00	5.87E-02	1.7E-03	6.680E 00	-3.11E-05	3.2E-05
1.000E 00	1.85E-01	6.4E-03	3.050E 00	3.81E-02	1.3E-03	6.800E 00	-5.52E-05	3.5E-05
1.040E 00	1.05E-01	5.2E-03	3.110E 00	1.83E-02	9.7E-04	6.920E 00	-4.14E-05	3.3E-05
1.080E 00	3.17E-02	3.9E-03	3.180E 00	8.08E-03	8.2E-04	7.040E 00	-1.68E-05	2.5E-05
1.120E 00	4.87E-03	3.3E-03	3.260E 00	5.79E-03	7.7E-04	7.160E 00	3.97E-07	2.5E-05
1.160E 00	1.13E-03	3.7E-03	3.340E 00	5.33E-03	8.2E-04	7.280E 00	-9.97E-06	2.2E-05
1.200E 00	9.50E-04	3.5E-03	3.420E 00	4.55E-03	8.1E-04	7.400E 00	-1.24E-05	2.3E-05
1.240E 00	-2.04E-04	3.3E-03	3.500E 00	2.83E-03	7.0E-04	7.520E 00	4.03E-06	2.1E-05
1.280E 00	-6.66E-04	3.3E-03	3.580E 00	1.51E-03	6.7E-04	7.640E 00	2.97E-05	2.1E-05
1.320E 00	-2.00E-03	3.1E-03	3.660E 00	1.82E-03	7.0E-04	7.760E 00	3.86E-05	2.2E-05
1.360E 00	8.91E-04	3.2E-03	3.740E 00	3.52E-03	7.3E-04	7.890E 00	3.03E-05	1.9E-05
1.400E 00	1.37E-03	3.3E-03	3.820E 00	5.52E-03	7.5E-04	8.030E 00	1.60E-05	1.8E-05
1.440E 00	-1.26E-03	3.1E-03	3.900E 00	7.08E-03	7.7E-04	8.170E 00	1.18E-05	1.9E-05
1.480E 00	9.78E-04	3.0E-03	3.980E 00	6.62E-03	7.3E-04	8.310E 00	1.24E-05	1.5E-05
1.520E 00	3.37E-03	2.9E-03	4.060E 00	3.63E-03	6.4E-04	8.450E 00	1.17E-05	1.4E-05
1.560E 00	2.57E-03	3.2E-03	4.140E 00	1.29E-03	5.1E-04	8.590E 00	6.53E-06	1.5E-05
1.600E 00	8.97E-03	3.0E-03	4.220E 00	2.65E-03	5.9E-04	8.730E 00	3.65E-06	1.3E-05
1.640E 00	3.14E-02	3.4E-03	4.300E 00	6.47E-03	5.1E-04	8.870E 00	3.20E-06	1.3E-05
1.680E 00	5.20E-02	3.5E-03	4.380E 00	9.44E-03	5.7E-04	9.010E 00	8.41E-06	1.3E-05
1.720E 00	4.68E-02	3.5E-03	4.460E 00	1.04E-02	5.4E-04	9.150E 00	1.11E-05	1.2E-05
1.760E 00	2.57E-02	3.2E-03	4.540E 00	9.66E-03	5.0E-04	9.300E 00	1.06E-05	1.0E-05
1.800E 00	1.20E-02	3.1E-03	4.630E 00	6.82E-03	4.3E-04	9.460E 00	7.18E-06	9.4E-06
1.850E 00	4.72E-03	2.6E-03	4.730E 00	3.14E-03	3.1E-04	9.620E 00	2.78E-06	9.0E-06
1.910E 00	-1.42E-03	2.5E-03	4.830E 00	1.29E-03	2.1E-04	9.780E 00	9.87E-07	8.6E-06
1.970E 00	8.94E-04	2.2E-03	4.930E 00	7.88E-04	1.7E-04	9.940E 00	4.13E-07	7.0E-06
2.030E 00	5.64E-03	2.4E-03	5.030E 00	5.11E-04	1.4E-04	1.010E 01	2.42E-06	5.5E-06
2.090E 00	3.76E-02	2.8E-03	5.130E 00	2.50E-04	1.2E-04	1.026E 01	4.63E-06	4.0E-06
						1.042E 01	4.59E-06	3.6E-06
						1.058E 01	3.60E-06	3.3E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 5.48 MEV EN-MAX= 6.00 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	2.62E-02	1.0E-02	2.150E 00	8.69E-02	3.0E-03	5.230E 00	1.54E-03	2.7E-04
7.100E-01	1.40E-02	6.1E-03	2.210E 00	9.21E-02	3.0E-03	5.330E 00	1.68E-03	2.3E-04
7.300E-01	1.33E-02	5.0E-03	2.270E 00	5.79E-02	2.5E-03	5.430E 00	1.74E-03	2.1E-04
7.500E-01	2.34E-02	4.9E-03	2.330E 00	2.32E-02	2.0E-03	5.530E 00	1.45E-03	1.9E-04
7.700E-01	4.29E-02	4.9E-03	2.390E 00	9.06E-03	1.8E-03	5.630E 00	8.89E-04	1.6E-04
7.900E-01	7.08E-02	4.8E-03	2.450E 00	7.47E-03	1.8E-03	5.730E 00	3.50E-04	1.3E-04
8.100E-01	9.10E-02	4.9E-03	2.510E 00	5.52E-03	1.8E-03	5.830E 00	7.40E-05	1.2E-04
8.300E-01	8.91E-02	5.1E-03	2.570E 00	5.87E-03	1.9E-03	5.930E 00	3.42E-05	1.0E-04
8.500E-01	6.88E-02	5.2E-03	2.630E 00	1.06E-02	1.7E-03	6.030E 00	9.15E-05	9.8E-05
8.700E-01	4.61E-02	5.3E-03	2.690E 00	1.23E-02	1.5E-03	6.130E 00	1.25E-04	8.6E-05
8.900E-01	3.41E-02	5.4E-03	2.750E 00	1.25E-02	1.5E-03	6.230E 00	1.16E-04	7.8E-05
9.100E-01	3.97E-02	5.7E-03	2.810E 00	2.20E-02	1.7E-03	6.330E 00	8.87E-05	6.9E-05
9.300E-01	6.65E-02	5.8E-03	2.870E 00	4.17E-02	1.8E-03	6.440E 00	3.29E-05	6.7E-05
9.500E-01	1.12E-01	6.5E-03	2.930E 00	5.88E-02	1.9E-03	6.560E 00	-2.46E-05	5.4E-05
9.700E-01	1.58E-01	6.2E-03	2.990E 00	5.81E-02	1.8E-03	6.680E 00	-4.56E-05	5.0E-05
1.000E 00	1.81E-01	6.6E-03	3.050E 00	4.03E-02	1.4E-03	6.800E 00	9.61E-07	4.9E-05
1.040E 00	1.00E-01	5.1E-03	3.110E 00	2.19E-02	1.2E-03	6.920E 00	5.35E-05	4.5E-05
1.080E 00	2.21E-02	4.4E-03	3.180E 00	1.19E-02	1.1E-03	7.040E 00	6.71E-05	3.6E-05
1.120E 00	1.29E-03	3.7E-03	3.260E 00	8.74E-03	9.1E-04	7.160E 00	2.49E-05	3.0E-05
1.160E 00	7.32E-04	3.8E-03	3.340E 00	7.14E-03	9.7E-04	7.280E 00	-7.39E-06	3.0E-05
1.200E 00	2.24E-04	3.7E-03	3.420E 00	6.12E-03	9.3E-04	7.400E 00	-1.17E-05	2.6E-05
1.240E 00	-1.34E-03	3.5E-03	3.500E 00	5.00E-03	8.6E-04	7.520E 00	1.17E-05	2.5E-05
1.280E 00	1.59E-04	3.4E-03	3.580E 00	3.10E-03	8.5E-04	7.640E 00	2.81E-05	2.2E-05
1.320E 00	-1.38E-03	3.2E-03	3.660E 00	2.88E-03	8.7E-04	7.760E 00	2.29E-05	1.7E-05
1.360E 00	-2.94E-03	3.3E-03	3.740E 00	5.83E-03	8.9E-04	7.890E 00	8.76E-06	1.6E-05
1.400E 00	1.47E-03	3.4E-03	3.820E 00	8.02E-03	9.3E-04	8.030E 00	2.40E-06	1.8E-05
1.440E 00	4.13E-03	3.1E-03	3.900E 00	7.97E-03	9.3E-04	8.170E 00	6.08E-06	1.4E-05
1.480E 00	4.08E-03	3.2E-03	3.980E 00	6.94E-03	8.9E-04	8.310E 00	1.30E-05	1.2E-05
1.520E 00	2.64E-03	3.2E-03	4.060E 00	5.45E-03	8.3E-04	8.450E 00	1.67E-05	1.1E-05
1.560E 00	2.47E-03	3.5E-03	4.140E 00	4.44E-03	7.8E-04	8.590E 00	1.40E-05	9.1E-06
1.600E 00	1.26E-02	3.3E-03	4.220E 00	5.03E-03	7.7E-04	8.730E 00	7.64E-06	6.9E-06
1.640E 00	3.24E-02	3.6E-03	4.300E 00	7.02E-03	7.8E-04	8.870E 00	3.80E-06	6.4E-06
1.680E 00	4.93E-02	3.7E-03	4.380E 00	9.65E-03	7.3E-04	9.010E 00	1.61E-06	6.5E-06
1.720E 00	4.92E-02	3.6E-03	4.460E 00	1.18E-02	6.9E-04	9.150E 00	-4.10E-07	6.2E-06
1.760E 00	3.11E-02	3.4E-03	4.540E 00	1.21E-02	6.7E-04	9.300E 00	-1.56E-06	5.2E-06
1.800E 00	1.16E-02	3.2E-03	4.630E 00	9.59E-03	5.9E-04	9.460E 00	-2.07E-06	5.2E-06
1.850E 00	3.79E-03	2.9E-03	4.730E 00	5.81E-03	4.6E-04	9.620E 00	1.73E-07	5.6E-06
1.910E 00	2.10E-03	2.7E-03	4.830E 00	3.25E-03	3.8E-04	9.780E 00	2.64E-06	5.0E-06
1.970E 00	-2.36E-03	2.6E-03	4.930E 00	2.06E-03	3.4E-04	9.940E 00	4.96E-06	5.3E-06
2.030E 00	5.54E-03	2.7E-03	5.030E 00	1.73E-03	3.3E-04	1.010E 01	6.87E-06	5.4E-06
2.090E 00	4.09E-02	2.8E-03	5.130E 00	1.58E-03	2.8E-04	1.026E 01	7.77E-06	4.4E-06
						1.042E 01	6.63E-06	4.1E-06
						1.058E 01	4.01E-06	4.1E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 6.00 MEV EN-MAX= 6.51 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	3.07E-02	1.1E-02	2.150E 00	9.01E-02	4.0E-03	5.230E 00	3.82E-03	4.5E-04
7.100E-01	1.27E-02	6.2E-03	2.210E 00	9.61E-02	3.6E-03	5.330E 00	4.82E-03	4.4E-04
7.300E-01	1.17E-02	5.5E-03	2.270E 00	5.55E-02	2.9E-03	5.430E 00	6.07E-03	4.2E-04
7.500E-01	2.76E-02	5.6E-03	2.330E 00	2.51E-02	2.4E-03	5.530E 00	5.85E-03	3.5E-04
7.700E-01	4.89E-02	5.5E-03	2.390E 00	1.64E-02	2.3E-03	5.630E 00	4.09E-03	3.1E-04
7.900E-01	7.17E-02	5.5E-03	2.450E 00	1.39E-02	2.4E-03	5.730E 00	2.39E-03	2.4E-04
8.100E-01	8.81E-02	5.5E-03	2.510E 00	1.17E-02	2.3E-03	5.830E 00	1.44E-03	1.9E-04
8.300E-01	8.69E-02	5.7E-03	2.570E 00	1.04E-02	2.2E-03	5.930E 00	8.57E-04	1.6E-04
8.500E-01	6.70E-02	5.8E-03	2.630E 00	1.45E-02	2.1E-03	6.030E 00	4.00E-04	1.5E-04
8.700E-01	4.38E-02	6.1E-03	2.690E 00	1.89E-02	2.0E-03	6.130E 00	1.30E-04	1.4E-04
8.900E-01	3.37E-02	5.9E-03	2.750E 00	1.86E-02	2.0E-03	6.230E 00	5.97E-05	1.2E-04
9.100E-01	4.21E-02	6.6E-03	2.810E 00	2.64E-02	2.1E-03	6.330E 00	7.75E-05	9.1E-05
9.300E-01	6.89E-02	6.6E-03	2.870E 00	5.07E-02	2.3E-03	6.440E 00	1.06E-04	8.6E-05
9.500E-01	1.13E-01	7.6E-03	2.930E 00	7.36E-02	2.4E-03	6.560E 00	1.12E-04	8.3E-05
9.700E-01	1.62E-01	7.2E-03	2.990E 00	7.13E-02	2.1E-03	6.680E 00	7.54E-05	7.2E-05
1.000E 00	1.92E-01	7.4E-03	3.050E 00	4.91E-02	1.8E-03	6.800E 00	3.70E-05	6.3E-05
1.040E 00	1.03E-01	5.6E-03	3.110E 00	2.99E-02	1.5E-03	6.920E 00	-8.42E-06	5.6E-05
1.080E 00	2.03E-02	5.2E-03	3.180E 00	2.09E-02	1.4E-03	7.040E 00	-3.10E-05	5.4E-05
1.120E 00	7.13E-03	4.2E-03	3.260E 00	1.45E-02	1.2E-03	7.160E 00	-1.86E-05	4.5E-05
1.160E 00	3.98E-03	4.3E-03	3.340E 00	8.39E-03	1.1E-03	7.280E 00	1.86E-05	3.3E-05
1.200E 00	2.76E-03	4.0E-03	3.420E 00	5.94E-03	1.0E-03	7.400E 00	4.48E-05	3.0E-05
1.240E 00	3.61E-03	3.8E-03	3.500E 00	3.40E-03	1.1E-03	7.520E 00	3.81E-05	3.1E-05
1.280E 00	1.74E-03	3.8E-03	3.580E 00	2.40E-03	9.9E-04	7.640E 00	1.87E-05	2.5E-05
1.320E 00	-7.20E-04	3.8E-03	3.660E 00	4.45E-03	9.9E-04	7.760E 00	2.81E-06	2.1E-05
1.360E 00	1.87E-03	4.1E-03	3.740E 00	7.65E-03	1.1E-03	7.890E 00	-2.79E-06	2.0E-05
1.400E 00	2.94E-03	4.2E-03	3.820E 00	1.02E-02	1.0E-03	8.030E 00	-2.45E-06	1.9E-05
1.440E 00	5.97E-04	3.8E-03	3.900E 00	1.11E-02	1.0E-03	8.170E 00	1.84E-06	1.8E-05
1.480E 00	4.77E-04	4.1E-03	3.980E 00	9.71E-03	1.0E-03	8.310E 00	8.94E-06	1.6E-05
1.520E 00	1.11E-03	3.8E-03	4.060E 00	7.46E-03	9.8E-04	8.450E 00	1.86E-05	1.5E-05
1.560E 00	3.50E-03	3.7E-03	4.140E 00	7.01E-03	9.3E-04	8.590E 00	2.48E-05	1.5E-05
1.600E 00	1.36E-02	3.7E-03	4.220E 00	7.82E-03	9.4E-04	8.730E 00	2.36E-05	1.6E-05
1.640E 00	3.11E-02	4.2E-03	4.300E 00	8.48E-03	9.2E-04	8.870E 00	1.83E-05	1.5E-05
1.680E 00	4.49E-02	4.4E-03	4.380E 00	9.92E-03	9.1E-04	9.010E 00	1.40E-05	1.6E-05
1.720E 00	4.18E-02	4.2E-03	4.460E 00	1.11E-02	8.8E-04	9.150E 00	1.02E-05	1.4E-05
1.760E 00	2.74E-02	3.9E-03	4.540E 00	1.01E-02	8.5E-04	9.300E 00	7.08E-06	1.3E-05
1.800E 00	1.46E-02	3.6E-03	4.630E 00	7.61E-03	7.9E-04	9.460E 00	5.34E-06	1.2E-05
1.850E 00	3.98E-03	3.4E-03	4.730E 00	6.21E-03	6.7E-04	9.620E 00	3.79E-06	1.1E-05
1.910E 00	1.31E-04	3.2E-03	4.830E 00	5.31E-03	6.4E-04	9.780E 00	5.43E-06	8.2E-06
1.970E 00	-8.72E-04	3.1E-03	4.930E 00	3.56E-03	6.0E-04	9.940E 00	5.80E-06	9.4E-06
2.030E 00	7.01E-03	3.1E-03	5.030E 00	2.87E-03	5.7E-04	1.010E 01	7.21E-06	9.7E-06
2.090E 00	4.29E-02	3.3E-03	5.130E 00	3.32E-03	5.1E-04	1.026E 01	6.24E-06	7.4E-06
						1.042E 01	6.44E-06	5.5E-06
						1.058E 01	5.27E-06	6.2E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 6.51 MEV EN-MAX= 7.00 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	3.42E-02	1.1E-02	2.150E 00	9.38E-02	3.9E-03	5.230E 00	6.31E-03	7.1E-04
7.100E-01	1.42E-02	7.1E-03	2.210E 00	1.03E-01	3.9E-03	5.330E 00	7.51E-03	6.6E-04
7.300E-01	1.29E-02	5.9E-03	2.270E 00	6.39E-02	3.1E-03	5.430E 00	9.20E-03	6.2E-04
7.500E-01	2.61E-02	6.0E-03	2.330E 00	3.17E-02	2.7E-03	5.530E 00	9.41E-03	5.9E-04
7.700E-01	4.36E-02	6.1E-03	2.390E 00	2.08E-02	2.5E-03	5.630E 00	7.40E-03	4.9E-04
7.900E-01	6.60E-02	6.0E-03	2.450E 00	1.52E-02	2.8E-03	5.730E 00	4.60E-03	4.1E-04
8.100E-01	8.56E-02	6.2E-03	2.510E 00	1.26E-02	2.6E-03	5.830E 00	2.84E-03	3.6E-04
8.300E-01	8.70E-02	6.1E-03	2.570E 00	1.48E-02	2.5E-03	5.930E 00	2.20E-03	3.4E-04
8.500E-01	6.81E-02	6.1E-03	2.630E 00	1.87E-02	2.3E-03	6.030E 00	1.78E-03	3.0E-04
8.700E-01	4.42E-02	6.4E-03	2.690E 00	2.04E-02	2.1E-03	6.130E 00	1.34E-03	2.7E-04
8.900E-01	3.30E-02	6.5E-03	2.750E 00	1.83E-02	2.0E-03	6.230E 00	1.14E-03	2.4E-04
9.100E-01	4.30E-02	6.8E-03	2.810E 00	2.32E-02	2.2E-03	6.330E 00	1.18E-03	2.2E-04
9.300E-01	7.49E-02	6.7E-03	2.870E 00	4.43E-02	2.4E-03	6.440E 00	1.19E-03	1.9E-04
9.500E-01	1.24E-01	7.3E-03	2.930E 00	6.69E-02	2.5E-03	6.560E 00	8.79E-04	1.7E-04
9.700E-01	1.74E-01	7.1E-03	2.990E 00	6.82E-02	2.4E-03	6.680E 00	4.43E-04	1.3E-04
1.000E 00	1.98E-01	8.2E-03	3.050E 00	5.01E-02	1.9E-03	6.800E 00	1.67E-04	1.1E-04
1.040E 00	1.15E-01	6.2E-03	3.110E 00	3.22E-02	1.7E-03	6.920E 00	9.30E-05	9.3E-05
1.080E 00	2.64E-02	5.6E-03	3.180E 00	2.25E-02	1.6E-03	7.040E 00	9.57E-05	7.4E-05
1.120E 00	2.61E-03	5.1E-03	3.260E 00	1.73E-02	1.4E-03	7.160E 00	8.94E-05	6.1E-05
1.160E 00	4.59E-03	4.7E-03	3.340E 00	1.16E-02	1.3E-03	7.280E 00	6.23E-05	5.9E-05
1.200E 00	1.07E-03	4.8E-03	3.420E 00	7.51E-03	1.3E-03	7.400E 00	5.08E-05	5.6E-05
1.240E 00	6.04E-04	4.2E-03	3.500E 00	6.58E-03	1.2E-03	7.520E 00	5.63E-05	4.9E-05
1.280E 00	1.12E-03	4.4E-03	3.580E 00	5.34E-03	1.2E-03	7.640E 00	6.50E-05	4.4E-05
1.320E 00	-3.88E-03	4.1E-03	3.660E 00	4.69E-03	1.2E-03	7.760E 00	5.55E-05	3.6E-05
1.360E 00	-3.95E-03	4.4E-03	3.740E 00	7.33E-03	1.3E-03	7.890E 00	3.32E-05	3.3E-05
1.400E 00	1.74E-03	4.6E-03	3.820E 00	9.64E-03	1.2E-03	8.030E 00	1.59E-05	3.1E-05
1.440E 00	2.21E-03	4.2E-03	3.900E 00	9.12E-03	1.2E-03	8.170E 00	1.05E-05	2.3E-05
1.480E 00	1.81E-03	4.2E-03	3.980E 00	7.55E-03	1.2E-03	8.310E 00	1.06E-05	1.7E-05
1.520E 00	3.20E-03	4.1E-03	4.060E 00	6.59E-03	1.2E-03	8.450E 00	9.26E-06	1.6E-05
1.560E 00	3.30E-03	4.2E-03	4.140E 00	6.96E-03	1.2E-03	8.590E 00	5.23E-06	1.3E-05
1.600E 00	1.16E-02	4.2E-03	4.220E 00	8.67E-03	1.2E-03	8.730E 00	3.74E-06	1.0E-05
1.640E 00	3.51E-02	4.6E-03	4.300E 00	9.90E-03	1.2E-03	8.870E 00	5.06E-06	8.7E-06
1.680E 00	5.37E-02	4.7E-03	4.380E 00	1.12E-02	1.1E-03	9.010E 00	5.19E-06	8.0E-06
1.720E 00	4.72E-02	4.5E-03	4.460E 00	1.34E-02	1.1E-03	9.150E 00	2.80E-06	7.0E-06
1.760E 00	2.77E-02	4.3E-03	4.540E 00	1.33E-02	1.1E-03	9.300E 00	2.23E-07	6.6E-06
1.800E 00	1.33E-02	4.1E-03	4.630E 00	1.03E-02	1.1E-03	9.460E 00	2.16E-07	7.4E-06
1.850E 00	2.99E-03	3.6E-03	4.730E 00	7.64E-03	9.6E-04	9.620E 00	3.34E-06	7.5E-06
1.910E 00	-1.54E-03	3.7E-03	4.830E 00	5.07E-03	8.7E-04	9.780E 00	6.24E-06	7.5E-06
1.970E 00	5.08E-03	3.3E-03	4.930E 00	3.41E-03	8.3E-04	9.940E 00	1.01E-05	9.1E-06
2.030E 00	1.21E-02	3.0E-03	5.030E 00	4.33E-03	8.1E-04	1.010E 01	1.24E-05	9.4E-06
2.090E 00	4.26E-02	3.7E-03	5.130E 00	5.78E-03	7.4E-04	1.026E 01	1.39E-05	8.5E-06
						1.042E 01	1.15E-05	6.5E-06
						1.058E 01	6.71E-06	6.3E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 7.00 MEV EN-MAX= 7.51 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	2.27E-02	1.2E-02	2.150E 00	8.97E-02	4.1E-03	5.230E 00	8.28E-03	8.6E-04
7.100E-01	9.75E-03	7.4E-03	2.210E 00	1.03E-01	3.7E-03	5.330E 00	8.46E-03	8.5E-04
7.300E-01	1.40E-02	6.2E-03	2.270E 00	6.69E-02	3.2E-03	5.430E 00	9.44E-03	8.3E-04
7.500E-01	2.68E-02	6.3E-03	2.330E 00	3.17E-02	2.7E-03	5.530E 00	9.10E-03	7.7E-04
7.700E-01	4.26E-02	6.4E-03	2.390E 00	2.01E-02	2.6E-03	5.630E 00	6.32E-03	7.0E-04
7.900E-01	6.50E-02	6.1E-03	2.450E 00	1.84E-02	2.6E-03	5.730E 00	3.79E-03	6.6E-04
8.100E-01	8.28E-02	6.1E-03	2.510E 00	1.49E-02	2.6E-03	5.830E 00	2.74E-03	6.1E-04
8.300E-01	8.31E-02	6.1E-03	2.570E 00	1.46E-02	2.5E-03	5.930E 00	2.36E-03	5.9E-04
8.500E-01	6.75E-02	6.4E-03	2.630E 00	1.78E-02	2.3E-03	6.030E 00	2.58E-03	5.3E-04
8.700E-01	4.79E-02	6.8E-03	2.690E 00	1.77E-02	2.3E-03	6.130E 00	3.33E-03	5.0E-04
8.900E-01	3.50E-02	6.6E-03	2.750E 00	1.47E-02	2.2E-03	6.230E 00	3.97E-03	4.6E-04
9.100E-01	3.84E-02	7.1E-03	2.810E 00	2.02E-02	2.3E-03	6.330E 00	4.42E-03	4.2E-04
9.300E-01	6.54E-02	6.9E-03	2.870E 00	4.07E-02	2.5E-03	6.440E 00	4.66E-03	3.6E-04
9.500E-01	1.13E-01	8.0E-03	2.930E 00	6.33E-02	2.5E-03	6.560E 00	4.14E-03	3.1E-04
9.700E-01	1.60E-01	7.7E-03	2.990E 00	6.71E-02	2.4E-03	6.680E 00	2.89E-03	2.4E-04
1.000E 00	1.77E-01	8.2E-03	3.050E 00	5.05E-02	2.0E-03	6.800E 00	1.65E-03	2.0E-04
1.040E 00	9.53E-02	6.5E-03	3.110E 00	3.14E-02	1.8E-03	6.920E 00	8.42E-04	1.3E-04
1.080E 00	2.63E-02	5.8E-03	3.180E 00	2.12E-02	1.7E-03	7.040E 00	4.01E-04	9.7E-05
1.120E 00	7.55E-03	5.0E-03	3.260E 00	1.66E-02	1.5E-03	7.160E 00	2.13E-04	7.3E-05
1.160E 00	2.63E-03	4.7E-03	3.340E 00	1.21E-02	1.5E-03	7.280E 00	1.45E-04	5.6E-05
1.200E 00	2.37E-03	4.5E-03	3.420E 00	9.93E-03	1.4E-03	7.400E 00	7.92E-05	3.5E-05
1.240E 00	5.95E-04	4.2E-03	3.500E 00	7.42E-03	1.3E-03	7.520E 00	1.47E-05	3.0E-05
1.280E 00	-1.85E-03	4.4E-03	3.580E 00	6.09E-03	1.4E-03	7.640E 00	-3.17E-05	2.9E-05
1.320E 00	-1.80E-03	4.3E-03	3.660E 00	8.51E-03	1.4E-03	7.760E 00	-4.65E-05	2.9E-05
1.360E 00	-1.45E-03	4.4E-03	3.740E 00	1.13E-02	1.4E-03	7.890E 00	-3.41E-05	2.5E-05
1.400E 00	1.70E-03	4.8E-03	3.820E 00	1.15E-02	1.4E-03	8.030E 00	-1.97E-06	2.3E-05
1.440E 00	1.13E-04	4.2E-03	3.900E 00	9.58E-03	1.4E-03	8.170E 00	3.54E-05	2.4E-05
1.480E 00	-1.42E-03	4.4E-03	3.980E 00	7.30E-03	1.3E-03	8.310E 00	6.73E-05	2.5E-05
1.520E 00	3.54E-03	4.3E-03	4.060E 00	7.17E-03	1.3E-03	8.450E 00	6.20E-05	2.4E-05
1.560E 00	4.18E-03	4.0E-03	4.140E 00	8.72E-03	1.3E-03	8.590E 00	4.59E-05	2.4E-05
1.600E 00	9.09E-03	4.4E-03	4.220E 00	9.12E-03	1.3E-03	8.730E 00	3.20E-05	2.0E-05
1.640E 00	2.91E-02	4.6E-03	4.300E 00	8.82E-03	1.3E-03	8.870E 00	2.24E-05	2.1E-05
1.680E 00	4.61E-02	4.6E-03	4.380E 00	9.87E-03	1.3E-03	9.010E 00	1.41E-05	1.9E-05
1.720E 00	4.27E-02	4.5E-03	4.460E 00	1.14E-02	1.2E-03	9.150E 00	6.51E-06	1.6E-05
1.760E 00	2.64E-02	4.3E-03	4.540E 00	1.08E-02	1.2E-03	9.300E 00	5.63E-06	1.4E-05
1.800E 00	1.37E-02	4.0E-03	4.630E 00	7.82E-03	1.2E-03	9.460E 00	1.11E-05	1.2E-05
1.850E 00	8.85E-03	3.7E-03	4.730E 00	6.73E-03	1.1E-03	9.620E 00	1.41E-05	1.1E-05
1.910E 00	8.39E-03	3.5E-03	4.830E 00	7.54E-03	1.0E-03	9.780E 00	1.27E-05	9.7E-06
1.970E 00	9.31E-03	3.2E-03	4.930E 00	5.72E-03	1.0E-03	9.940E 00	9.06E-06	9.1E-06
2.030E 00	1.50E-02	3.3E-03	5.030E 00	4.93E-03	1.0E-03	1.010E 01	6.46E-06	6.9E-06
2.090E 00	4.01E-02	3.9E-03	5.130E 00	7.10E-03	9.2E-04	1.026E 01	5.60E-06	5.2E-06
						1.042E 01	3.65E-06	5.2E-06
						1.058E 01	2.93E-06	4.4E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 7.51 MEV EN-MAX= 8.02 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	3.21E-02	1.2E-02	2.150E 00	8.65E-02	4.1E-03	5.230E 00	8.72E-03	1.0E-03
7.100E-01	2.17E-02	6.9E-03	2.210E 00	9.89E-02	4.2E-03	5.330E 00	9.11E-03	9.8E-04
7.300E-01	1.75E-02	6.0E-03	2.270E 00	6.73E-02	3.1E-03	5.430E 00	9.14E-03	9.6E-04
7.500E-01	1.94E-02	6.3E-03	2.330E 00	3.40E-02	2.8E-03	5.530E 00	9.13E-03	9.3E-04
7.700E-01	3.01E-02	6.3E-03	2.390E 00	1.93E-02	2.8E-03	5.630E 00	8.56E-03	8.7E-04
7.900E-01	5.23E-02	6.2E-03	2.450E 00	1.57E-02	2.8E-03	5.730E 00	6.60E-03	8.3E-04
8.100E-01	7.27E-02	6.4E-03	2.510E 00	1.21E-02	2.7E-03	5.830E 00	4.65E-03	8.1E-04
8.300E-01	7.70E-02	6.2E-03	2.570E 00	1.04E-02	2.7E-03	5.930E 00	4.02E-03	7.8E-04
8.500E-01	6.64E-02	6.4E-03	2.630E 00	1.28E-02	2.6E-03	6.030E 00	3.83E-03	7.3E-04
8.700E-01	5.01E-02	6.8E-03	2.690E 00	1.65E-02	2.4E-03	6.130E 00	3.58E-03	6.7E-04
8.900E-01	3.63E-02	6.9E-03	2.750E 00	1.80E-02	2.3E-03	6.230E 00	3.90E-03	6.5E-04
9.100E-01	3.54E-02	7.3E-03	2.810E 00	2.34E-02	2.6E-03	6.330E 00	4.66E-03	6.1E-04
9.300E-01	5.86E-02	7.1E-03	2.870E 00	4.23E-02	2.7E-03	6.440E 00	5.31E-03	5.3E-04
9.500E-01	1.04E-01	7.7E-03	2.930E 00	6.46E-02	2.8E-03	6.560E 00	5.48E-03	4.5E-04
9.700E-01	1.50E-01	7.2E-03	2.990E 00	6.62E-02	2.6E-03	6.680E 00	4.98E-03	3.9E-04
1.000E 00	1.68E-01	8.0E-03	3.050E 00	4.77E-02	2.3E-03	6.800E 00	3.97E-03	3.3E-04
1.040E 00	1.02E-01	6.4E-03	3.110E 00	3.10E-02	2.1E-03	6.920E 00	2.58E-03	2.8E-04
1.080E 00	3.28E-02	5.5E-03	3.180E 00	2.19E-02	1.9E-03	7.040E 00	1.30E-03	2.1E-04
1.120E 00	6.05E-03	5.3E-03	3.260E 00	1.34E-02	1.7E-03	7.160E 00	6.38E-04	1.6E-04
1.160E 00	5.81E-03	5.1E-03	3.340E 00	8.68E-03	1.7E-03	7.280E 00	4.83E-04	1.4E-04
1.200E 00	2.54E-03	4.8E-03	3.420E 00	8.02E-03	1.7E-03	7.400E 00	3.83E-04	1.1E-04
1.240E 00	-1.36E-03	4.7E-03	3.500E 00	6.88E-03	1.5E-03	7.520E 00	1.98E-04	9.3E-05
1.280E 00	-8.45E-04	4.4E-03	3.580E 00	6.85E-03	1.5E-03	7.640E 00	4.48E-05	7.8E-05
1.320E 00	-1.38E-04	4.4E-03	3.660E 00	8.21E-03	1.5E-03	7.760E 00	3.05E-07	7.1E-05
1.360E 00	-1.22E-03	4.4E-03	3.740E 00	1.05E-02	1.6E-03	7.890E 00	3.33E-05	6.5E-05
1.400E 00	-1.20E-05	4.7E-03	3.820E 00	1.38E-02	1.6E-03	8.030E 00	7.00E-05	5.7E-05
1.440E 00	6.51E-03	4.3E-03	3.900E 00	1.49E-02	1.5E-03	8.170E 00	6.21E-05	5.8E-05
1.480E 00	7.75E-03	4.3E-03	3.980E 00	1.23E-02	1.5E-03	8.310E 00	3.96E-05	5.4E-05
1.520E 00	4.37E-03	4.5E-03	4.060E 00	8.62E-03	1.5E-03	8.450E 00	2.94E-05	4.2E-05
1.560E 00	3.62E-03	4.3E-03	4.140E 00	8.29E-03	1.4E-03	8.590E 00	3.45E-05	4.0E-05
1.600E 00	8.92E-03	4.4E-03	4.220E 00	9.84E-03	1.5E-03	8.730E 00	3.37E-05	3.8E-05
1.640E 00	2.61E-02	4.9E-03	4.300E 00	9.06E-03	1.5E-03	8.870E 00	3.04E-05	3.4E-05
1.680E 00	4.33E-02	4.9E-03	4.380E 00	8.44E-03	1.4E-03	9.010E 00	3.63E-05	3.1E-05
1.720E 00	4.06E-02	4.7E-03	4.460E 00	1.08E-02	1.4E-03	9.150E 00	4.04E-05	2.7E-05
1.760E 00	2.63E-02	4.5E-03	4.540E 00	1.19E-02	1.4E-03	9.300E 00	2.67E-05	2.5E-05
1.800E 00	1.58E-02	4.4E-03	4.630E 00	9.13E-03	1.3E-03	9.460E 00	6.88E-06	2.3E-05
1.850E 00	9.00E-03	4.0E-03	4.730E 00	7.06E-03	1.2E-03	9.620E 00	-2.02E-06	1.9E-05
1.910E 00	7.32E-03	4.0E-03	4.830E 00	6.58E-03	1.2E-03	9.780E 00	3.26E-06	1.4E-05
1.970E 00	8.35E-03	3.8E-03	4.930E 00	6.37E-03	1.1E-03	9.940E 00	1.17E-05	1.3E-05
2.030E 00	1.26E-02	3.4E-03	5.030E 00	7.15E-03	1.1E-03	1.010E 01	1.51E-05	1.1E-05
2.090E 00	3.89E-02	3.8E-03	5.130E 00	8.04E-03	1.1E-03	1.026E 01	1.42E-05	8.3E-06
						1.042E 01	1.04E-05	7.0E-06
						1.058E 01	6.89E-06	7.0E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 8.02 MEV EN-MAX= 8.52 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	2.90E-02	1.2E-02	2.150E 00	8.28E-02	4.5E-03	5.230E 00	7.98E-03	1.2E-03
7.100E-01	1.26E-02	7.2E-03	2.210E 00	9.56E-02	4.4E-03	5.330E 00	8.41E-03	1.1E-03
7.300E-01	1.36E-02	6.7E-03	2.270E 00	6.12E-02	3.7E-03	5.430E 00	1.07E-02	1.1E-03
7.500E-01	2.68E-02	7.2E-03	2.330E 00	2.83E-02	3.2E-03	5.530E 00	1.17E-02	1.1E-03
7.700E-01	3.91E-02	7.2E-03	2.390E 00	1.82E-02	3.1E-03	5.630E 00	9.95E-03	1.1E-03
7.900E-01	5.33E-02	6.9E-03	2.450E 00	1.69E-02	3.1E-03	5.730E 00	6.88E-03	1.0E-03
8.100E-01	6.97E-02	6.8E-03	2.510E 00	1.56E-02	2.9E-03	5.830E 00	4.24E-03	9.9E-04
8.300E-01	7.63E-02	6.6E-03	2.570E 00	1.43E-02	2.9E-03	5.930E 00	3.16E-03	9.6E-04
8.500E-01	6.53E-02	6.8E-03	2.630E 00	1.65E-02	2.8E-03	6.030E 00	3.28E-03	9.2E-04
8.700E-01	4.66E-02	7.3E-03	2.690E 00	2.04E-02	2.6E-03	6.130E 00	3.66E-03	8.6E-04
8.900E-01	3.46E-02	7.2E-03	2.750E 00	2.30E-02	2.5E-03	6.230E 00	4.66E-03	8.2E-04
9.100E-01	3.70E-02	7.8E-03	2.810E 00	2.80E-02	2.6E-03	6.330E 00	6.15E-03	8.0E-04
9.300E-01	5.74E-02	7.5E-03	2.870E 00	4.19E-02	2.8E-03	6.440E 00	7.05E-03	7.6E-04
9.500E-01	9.57E-02	8.6E-03	2.930E 00	6.18E-02	2.9E-03	6.560E 00	6.82E-03	6.9E-04
9.700E-01	1.38E-01	8.0E-03	2.990E 00	6.74E-02	2.9E-03	6.680E 00	5.79E-03	6.1E-04
1.000E 00	1.61E-01	8.5E-03	3.050E 00	4.97E-02	2.4E-03	6.800E 00	4.37E-03	5.5E-04
1.040E 00	9.43E-02	6.8E-03	3.110E 00	2.94E-02	2.3E-03	6.920E 00	2.97E-03	5.2E-04
1.080E 00	2.74E-02	6.4E-03	3.180E 00	1.92E-02	2.1E-03	7.040E 00	1.81E-03	4.7E-04
1.120E 00	4.05E-03	5.8E-03	3.260E 00	1.36E-02	1.9E-03	7.160E 00	1.37E-03	4.0E-04
1.160E 00	6.05E-03	5.5E-03	3.340E 00	9.32E-03	1.8E-03	7.280E 00	1.73E-03	3.5E-04
1.200E 00	7.61E-03	5.1E-03	3.420E 00	8.46E-03	1.8E-03	7.400E 00	2.23E-03	3.3E-04
1.240E 00	-1.88E-04	5.1E-03	3.500E 00	9.22E-03	1.8E-03	7.520E 00	2.26E-03	2.8E-04
1.280E 00	1.56E-03	5.0E-03	3.580E 00	9.11E-03	1.8E-03	7.640E 00	1.85E-03	2.3E-04
1.320E 00	4.13E-03	4.7E-03	3.660E 00	9.92E-03	1.8E-03	7.760E 00	1.30E-03	1.8E-04
1.360E 00	-2.61E-04	5.1E-03	3.740E 00	1.37E-02	1.9E-03	7.890E 00	7.79E-04	1.2E-04
1.400E 00	3.03E-03	5.4E-03	3.820E 00	1.62E-02	1.8E-03	8.030E 00	3.66E-04	9.9E-05
1.440E 00	5.20E-03	4.9E-03	3.900E 00	1.40E-02	1.7E-03	8.170E 00	1.04E-04	7.2E-05
1.480E 00	2.33E-03	4.9E-03	3.980E 00	9.59E-03	1.8E-03	8.310E 00	4.61E-06	4.4E-05
1.520E 00	6.74E-03	4.7E-03	4.060E 00	8.87E-03	1.7E-03	8.450E 00	1.88E-05	3.9E-05
1.560E 00	7.79E-03	4.6E-03	4.140E 00	1.04E-02	1.6E-03	8.590E 00	5.55E-05	3.7E-05
1.600E 00	7.68E-03	4.8E-03	4.220E 00	1.00E-02	1.7E-03	8.730E 00	6.97E-05	3.2E-05
1.640E 00	2.51E-02	5.2E-03	4.300E 00	9.89E-03	1.6E-03	8.870E 00	5.45E-05	2.9E-05
1.680E 00	4.31E-02	5.1E-03	4.380E 00	1.20E-02	1.6E-03	9.010E 00	2.64E-05	2.5E-05
1.720E 00	3.89E-02	4.9E-03	4.460E 00	1.31E-02	1.6E-03	9.150E 00	3.71E-06	2.0E-05
1.760E 00	2.43E-02	5.0E-03	4.540E 00	1.16E-02	1.6E-03	9.300E 00	-3.62E-06	1.7E-05
1.800E 00	1.34E-02	4.8E-03	4.630E 00	9.47E-03	1.6E-03	9.460E 00	-3.52E-07	1.5E-05
1.850E 00	6.23E-03	4.6E-03	4.730E 00	9.19E-03	1.5E-03	9.620E 00	4.71E-06	1.3E-05
1.910E 00	6.45E-03	4.4E-03	4.830E 00	7.99E-03	1.4E-03	9.780E 00	8.43E-06	1.3E-05
1.970E 00	9.59E-03	3.9E-03	4.930E 00	5.42E-03	1.4E-03	9.940E 00	1.30E-05	1.3E-05
2.030E 00	1.45E-02	3.7E-03	5.030E 00	6.60E-03	1.3E-03	1.010E 01	1.85E-05	1.1E-05
2.090E 00	3.97E-02	4.1E-03	5.130E 00	8.62E-03	1.3E-03	1.026E 01	2.08E-05	7.9E-06
						1.042E 01	1.66E-05	7.8E-06
						1.058E 01	1.16E-05	6.6E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 8.52 MEV EN-MAX= 9.01 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	4.15E-02	1.3E-02	2.150E 00	8.65E-02	5.0E-03	5.230E 00	1.17E-02	1.5E-03
7.100E-01	1.53E-02	8.2E-03	2.210E 00	9.63E-02	4.7E-03	5.330E 00	9.64E-03	1.4E-03
7.300E-01	7.73E-03	7.4E-03	2.270E 00	6.54E-02	4.0E-03	5.430E 00	8.51E-03	1.4E-03
7.500E-01	2.12E-02	7.6E-03	2.330E 00	3.27E-02	3.4E-03	5.530E 00	8.50E-03	1.3E-03
7.700E-01	3.99E-02	7.2E-03	2.390E 00	1.94E-02	3.2E-03	5.630E 00	8.42E-03	1.3E-03
7.900E-01	5.66E-02	7.0E-03	2.450E 00	1.79E-02	3.4E-03	5.730E 00	7.31E-03	1.2E-03
8.100E-01	6.71E-02	7.4E-03	2.510E 00	1.72E-02	3.2E-03	5.830E 00	6.15E-03	1.2E-03
8.300E-01	6.80E-02	7.3E-03	2.570E 00	1.66E-02	3.1E-03	5.930E 00	5.25E-03	1.2E-03
8.500E-01	5.99E-02	7.3E-03	2.630E 00	1.99E-02	3.0E-03	6.030E 00	4.29E-03	1.1E-03
8.700E-01	4.77E-02	7.6E-03	2.690E 00	2.18E-02	2.9E-03	6.130E 00	3.91E-03	1.1E-03
8.900E-01	3.92E-02	7.7E-03	2.750E 00	1.84E-02	2.9E-03	6.230E 00	4.69E-03	1.1E-03
9.100E-01	4.29E-02	8.3E-03	2.810E 00	2.04E-02	3.2E-03	6.330E 00	5.84E-03	1.0E-03
9.300E-01	6.38E-02	8.2E-03	2.870E 00	3.80E-02	3.2E-03	6.440E 00	6.73E-03	9.8E-04
9.500E-01	9.87E-02	9.4E-03	2.930E 00	5.72E-02	3.2E-03	6.560E 00	7.23E-03	9.2E-04
9.700E-01	1.34E-01	8.6E-03	2.990E 00	5.78E-02	3.0E-03	6.680E 00	6.70E-03	9.1E-04
1.000E 00	1.54E-01	9.3E-03	3.050E 00	4.36E-02	2.6E-03	6.800E 00	4.96E-03	8.4E-04
1.040E 00	9.88E-02	7.2E-03	3.110E 00	2.97E-02	2.4E-03	6.920E 00	2.80E-03	7.9E-04
1.080E 00	2.89E-02	6.4E-03	3.180E 00	2.10E-02	2.3E-03	7.040E 00	1.40E-03	7.3E-04
1.120E 00	5.43E-03	6.2E-03	3.260E 00	1.62E-02	2.1E-03	7.160E 00	1.30E-03	6.7E-04
1.160E 00	6.50E-03	6.0E-03	3.340E 00	1.28E-02	2.1E-03	7.280E 00	2.06E-03	6.0E-04
1.200E 00	7.63E-03	6.0E-03	3.420E 00	1.26E-02	2.1E-03	7.400E 00	3.00E-03	5.7E-04
1.240E 00	2.22E-03	5.6E-03	3.500E 00	1.29E-02	2.0E-03	7.520E 00	3.58E-03	5.3E-04
1.280E 00	-3.03E-03	5.7E-03	3.580E 00	9.43E-03	2.0E-03	7.640E 00	3.38E-03	4.4E-04
1.320E 00	1.17E-03	5.5E-03	3.660E 00	1.00E-02	1.9E-03	7.760E 00	2.66E-03	3.5E-04
1.360E 00	3.94E-03	5.6E-03	3.740E 00	1.35E-02	2.1E-03	7.890E 00	1.95E-03	2.8E-04
1.400E 00	3.51E-03	5.9E-03	3.820E 00	1.24E-02	2.1E-03	8.030E 00	1.38E-03	2.3E-04
1.440E 00	7.41E-03	5.2E-03	3.900E 00	9.20E-03	2.0E-03	8.170E 00	8.14E-04	1.6E-04
1.480E 00	9.12E-03	5.3E-03	3.980E 00	8.36E-03	1.9E-03	8.310E 00	3.70E-04	1.2E-04
1.520E 00	6.23E-03	5.3E-03	4.060E 00	9.78E-03	2.0E-03	8.450E 00	1.88E-04	8.9E-05
1.560E 00	3.43E-03	5.1E-03	4.140E 00	1.03E-02	1.9E-03	8.590E 00	1.42E-04	5.4E-05
1.600E 00	1.18E-02	5.3E-03	4.220E 00	8.99E-03	2.0E-03	8.730E 00	1.06E-04	3.7E-05
1.640E 00	3.32E-02	5.6E-03	4.300E 00	8.41E-03	2.0E-03	8.870E 00	4.97E-05	3.4E-05
1.680E 00	4.49E-02	5.9E-03	4.380E 00	9.55E-03	2.0E-03	9.010E 00	2.34E-05	2.3E-05
1.720E 00	3.74E-02	5.5E-03	4.460E 00	1.11E-02	1.9E-03	9.150E 00	1.12E-05	1.6E-05
1.760E 00	2.67E-02	5.2E-03	4.540E 00	1.24E-02	1.9E-03	9.300E 00	8.73E-06	1.6E-05
1.800E 00	1.82E-02	5.0E-03	4.630E 00	1.07E-02	1.8E-03	9.460E 00	5.84E-06	1.3E-05
1.850E 00	9.12E-03	4.7E-03	4.730E 00	7.62E-03	1.8E-03	9.620E 00	5.18E-06	1.1E-05
1.910E 00	9.66E-03	4.6E-03	4.830E 00	8.48E-03	1.7E-03	9.780E 00	6.15E-06	1.0E-05
1.970E 00	9.90E-03	4.3E-03	4.930E 00	9.32E-03	1.6E-03	9.940E 00	9.87E-06	1.0E-05
2.030E 00	1.25E-02	4.1E-03	5.030E 00	1.04E-02	1.6E-03	1.010E 01	1.40E-05	1.2E-05
2.090E 00	4.00E-02	4.6E-03	5.130E 00	1.22E-02	1.5E-03	1.026E 01	1.94E-05	1.1E-05
						1.042E 01	2.07E-05	9.0E-06
						1.058E 01	1.69E-05	9.9E-06

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 9.01 MEV EN-MAX= 9.97 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	3.73E-02	1.2E-02	2.150E 00	8.59E-02	4.3E-03	5.230E 00	1.05E-02	1.2E-03
7.100E-01	1.85E-02	7.7E-03	2.210E 00	9.71E-02	4.0E-03	5.330E 00	1.21E-02	1.2E-03
7.300E-01	1.21E-02	6.7E-03	2.270E 00	6.32E-02	3.5E-03	5.430E 00	1.18E-02	1.2E-03
7.500E-01	2.17E-02	6.8E-03	2.330E 00	2.98E-02	3.0E-03	5.530E 00	1.03E-02	1.2E-03
7.700E-01	3.87E-02	7.0E-03	2.390E 00	1.79E-02	3.0E-03	5.630E 00	9.09E-03	1.1E-03
7.900E-01	5.58E-02	6.7E-03	2.450E 00	1.45E-02	3.1E-03	5.730E 00	7.80E-03	1.1E-03
8.100E-01	6.62E-02	6.8E-03	2.510E 00	1.35E-02	2.9E-03	5.830E 00	6.30E-03	1.0E-03
8.300E-01	6.75E-02	6.6E-03	2.570E 00	1.43E-02	2.7E-03	5.930E 00	5.49E-03	1.0E-03
8.500E-01	5.98E-02	6.9E-03	2.630E 00	1.62E-02	2.5E-03	6.030E 00	5.33E-03	9.8E-04
8.700E-01	4.52E-02	7.3E-03	2.690E 00	1.76E-02	2.5E-03	6.130E 00	4.50E-03	9.7E-04
8.900E-01	3.24E-02	7.6E-03	2.750E 00	1.75E-02	2.4E-03	6.230E 00	3.38E-03	9.6E-04
9.100E-01	3.56E-02	8.3E-03	2.810E 00	2.40E-02	2.6E-03	6.330E 00	3.67E-03	9.5E-04
9.300E-01	6.18E-02	7.9E-03	2.870E 00	4.11E-02	2.8E-03	6.440E 00	5.22E-03	9.2E-04
9.500E-01	1.01E-01	8.2E-03	2.930E 00	5.88E-02	2.8E-03	6.560E 00	6.49E-03	8.9E-04
9.700E-01	1.32E-01	7.5E-03	2.990E 00	6.08E-02	2.6E-03	6.680E 00	6.79E-03	8.5E-04
1.000E 00	1.39E-01	8.4E-03	3.050E 00	4.51E-02	2.2E-03	6.800E 00	5.94E-03	8.6E-04
1.040E 00	8.24E-02	6.5E-03	3.110E 00	2.80E-02	2.0E-03	6.920E 00	4.00E-03	8.3E-04
1.080E 00	2.28E-02	6.2E-03	3.180E 00	1.81E-02	2.1E-03	7.040E 00	2.54E-03	7.4E-04
1.120E 00	8.92E-03	5.8E-03	3.260E 00	1.35E-02	1.9E-03	7.160E 00	2.53E-03	7.1E-04
1.160E 00	9.58E-03	5.8E-03	3.340E 00	1.06E-02	1.8E-03	7.280E 00	3.06E-03	6.7E-04
1.200E 00	4.47E-03	5.5E-03	3.420E 00	9.89E-03	1.7E-03	7.400E 00	3.75E-03	6.3E-04
1.240E 00	3.13E-03	5.3E-03	3.500E 00	1.01E-02	1.7E-03	7.520E 00	4.62E-03	5.7E-04
1.280E 00	6.32E-03	5.0E-03	3.580E 00	1.03E-02	1.7E-03	7.640E 00	4.79E-03	5.5E-04
1.320E 00	8.04E-03	4.9E-03	3.660E 00	1.08E-02	1.7E-03	7.760E 00	3.92E-03	4.8E-04
1.360E 00	2.79E-03	4.7E-03	3.740E 00	1.27E-02	1.7E-03	7.890E 00	2.74E-03	4.5E-04
1.400E 00	4.01E-04	5.3E-03	3.820E 00	1.29E-02	1.7E-03	8.030E 00	1.97E-03	3.9E-04
1.440E 00	7.62E-03	4.8E-03	3.900E 00	1.09E-02	1.8E-03	8.170E 00	1.46E-03	3.5E-04
1.480E 00	1.41E-02	5.0E-03	3.980E 00	1.03E-02	1.7E-03	8.310E 00	1.19E-03	3.1E-04
1.520E 00	1.13E-02	4.9E-03	4.060E 00	9.49E-03	1.6E-03	8.450E 00	1.27E-03	2.7E-04
1.560E 00	5.49E-03	5.0E-03	4.140E 00	8.71E-03	1.6E-03	8.590E 00	1.30E-03	2.4E-04
1.600E 00	1.03E-02	4.8E-03	4.220E 00	9.76E-03	1.7E-03	8.730E 00	1.10E-03	2.0E-04
1.640E 00	2.78E-02	5.0E-03	4.300E 00	9.90E-03	1.7E-03	8.870E 00	8.68E-04	1.5E-04
1.680E 00	4.28E-02	5.1E-03	4.380E 00	8.82E-03	1.7E-03	9.010E 00	6.52E-04	1.2E-04
1.720E 00	3.88E-02	5.2E-03	4.460E 00	9.93E-03	1.7E-03	9.150E 00	4.10E-04	1.0E-04
1.760E 00	2.06E-02	4.7E-03	4.540E 00	1.22E-02	1.6E-03	9.300E 00	1.76E-04	7.7E-05
1.800E 00	8.63E-03	4.7E-03	4.630E 00	1.07E-02	1.6E-03	9.460E 00	4.85E-05	6.1E-05
1.850E 00	1.00E-02	4.3E-03	4.730E 00	7.30E-03	1.5E-03	9.620E 00	3.72E-05	4.8E-05
1.910E 00	1.16E-02	4.4E-03	4.830E 00	8.70E-03	1.5E-03	9.780E 00	6.09E-05	3.7E-05
1.970E 00	1.08E-02	3.9E-03	4.930E 00	1.08E-02	1.4E-03	9.940E 00	6.53E-05	3.4E-05
2.030E 00	1.90E-02	3.7E-03	5.030E 00	1.08E-02	1.5E-03	1.010E 01	4.72E-05	2.8E-05
2.090E 00	4.46E-02	4.0E-03	5.130E 00	9.79E-03	1.3E-03	1.026E 01	2.65E-05	1.7E-05
						1.042E 01	1.61E-05	1.1E-05
						1.058E 01	8.82E-06	1.0E-05

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 10.00 MEV EN-MAX= 12.00 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	3.58E-02	1.4E-02	2.150E 00	8.42E-02	4.4E-03	5.230E 00	7.62E-03	1.3E-03
7.100E-01	1.68E-02	8.3E-03	2.210E 00	8.86E-02	4.3E-03	5.330E 00	6.30E-03	1.2E-03
7.300E-01	1.54E-02	7.6E-03	2.270E 00	6.09E-02	3.5E-03	5.430E 00	6.88E-03	1.2E-03
7.500E-01	2.96E-02	7.6E-03	2.330E 00	3.07E-02	3.1E-03	5.530E 00	8.80E-03	1.1E-03
7.700E-01	4.36E-02	7.3E-03	2.390E 00	1.89E-02	3.0E-03	5.630E 00	1.02E-02	1.1E-03
7.900E-01	5.50E-02	7.1E-03	2.450E 00	1.95E-02	3.0E-03	5.730E 00	1.01E-02	1.1E-03
8.100E-01	6.32E-02	6.8E-03	2.510E 00	2.00E-02	2.7E-03	5.830E 00	8.46E-03	1.1E-03
8.300E-01	6.27E-02	6.9E-03	2.570E 00	1.82E-02	2.6E-03	5.930E 00	5.70E-03	1.1E-03
8.500E-01	5.21E-02	7.4E-03	2.630E 00	1.65E-02	2.6E-03	6.030E 00	3.38E-03	1.0E-03
8.700E-01	4.02E-02	7.6E-03	2.690E 00	1.72E-02	2.5E-03	6.130E 00	3.21E-03	1.0E-03
8.900E-01	3.66E-02	7.5E-03	2.750E 00	1.62E-02	2.5E-03	6.230E 00	5.12E-03	1.0E-03
9.100E-01	4.61E-02	7.8E-03	2.810E 00	2.12E-02	2.6E-03	6.330E 00	7.75E-03	1.0E-03
9.300E-01	6.88E-02	7.6E-03	2.870E 00	4.08E-02	2.8E-03	6.440E 00	9.84E-03	9.8E-04
9.500E-01	9.92E-02	8.8E-03	2.930E 00	5.92E-02	2.8E-03	6.560E 00	9.42E-03	9.3E-04
9.700E-01	1.23E-01	8.1E-03	2.990E 00	5.66E-02	2.6E-03	6.680E 00	6.51E-03	9.1E-04
1.000E 00	1.21E-01	8.7E-03	3.050E 00	3.91E-02	2.3E-03	6.800E 00	4.00E-03	9.0E-04
1.040E 00	6.14E-02	7.2E-03	3.110E 00	2.50E-02	2.0E-03	6.920E 00	3.33E-03	8.7E-04
1.080E 00	1.55E-02	6.6E-03	3.180E 00	1.97E-02	2.0E-03	7.040E 00	4.09E-03	8.4E-04
1.120E 00	9.28E-03	6.5E-03	3.260E 00	1.58E-02	1.8E-03	7.160E 00	5.44E-03	7.8E-04
1.160E 00	9.98E-03	6.4E-03	3.340E 00	1.15E-02	1.9E-03	7.280E 00	5.99E-03	7.5E-04
1.200E 00	7.15E-03	6.4E-03	3.420E 00	1.14E-02	1.7E-03	7.400E 00	5.32E-03	7.3E-04
1.240E 00	1.02E-02	5.7E-03	3.500E 00	1.14E-02	1.7E-03	7.520E 00	4.22E-03	6.8E-04
1.280E 00	1.10E-02	5.6E-03	3.580E 00	1.08E-02	1.7E-03	7.640E 00	3.31E-03	6.7E-04
1.320E 00	1.07E-02	5.3E-03	3.660E 00	1.02E-02	1.7E-03	7.760E 00	2.89E-03	6.1E-04
1.360E 00	9.03E-03	5.5E-03	3.740E 00	1.10E-02	1.8E-03	7.890E 00	3.21E-03	5.8E-04
1.400E 00	6.87E-03	5.8E-03	3.820E 00	1.37E-02	1.7E-03	8.030E 00	3.70E-03	5.3E-04
1.440E 00	1.33E-02	5.4E-03	3.900E 00	1.43E-02	1.6E-03	8.170E 00	3.23E-03	5.1E-04
1.480E 00	1.63E-02	5.1E-03	3.980E 00	1.19E-02	1.6E-03	8.310E 00	2.08E-03	4.6E-04
1.520E 00	1.06E-02	5.1E-03	4.060E 00	1.08E-02	1.5E-03	8.450E 00	1.32E-03	4.4E-04
1.560E 00	1.11E-02	5.2E-03	4.140E 00	1.10E-02	1.6E-03	8.590E 00	1.40E-03	3.9E-04
1.600E 00	1.77E-02	4.8E-03	4.220E 00	1.10E-02	1.6E-03	8.730E 00	1.85E-03	3.6E-04
1.640E 00	2.72E-02	5.3E-03	4.300E 00	1.01E-02	1.6E-03	8.870E 00	1.96E-03	3.3E-04
1.680E 00	3.99E-02	5.4E-03	4.380E 00	8.69E-03	1.6E-03	9.010E 00	1.62E-03	2.9E-04
1.720E 00	4.13E-02	5.2E-03	4.460E 00	8.63E-03	1.5E-03	9.150E 00	1.28E-03	2.6E-04
1.760E 00	2.97E-02	5.1E-03	4.540E 00	9.28E-03	1.5E-03	9.300E 00	1.04E-03	2.2E-04
1.800E 00	2.05E-02	5.3E-03	4.630E 00	8.85E-03	1.5E-03	9.460E 00	7.44E-04	1.9E-04
1.850E 00	1.62E-02	4.2E-03	4.730E 00	8.69E-03	1.5E-03	9.620E 00	5.17E-04	1.7E-04
1.910E 00	1.31E-02	4.4E-03	4.830E 00	1.07E-02	1.4E-03	9.780E 00	4.74E-04	1.3E-04
1.970E 00	1.33E-02	4.0E-03	4.930E 00	1.36E-02	1.4E-03	9.940E 00	4.88E-04	9.3E-05
2.030E 00	1.72E-02	3.8E-03	5.030E 00	1.35E-02	1.3E-03	1.010E 01	4.27E-04	6.8E-05
2.090E 00	4.51E-02	4.2E-03	5.130E 00	1.03E-02	1.3E-03	1.026E 01	2.74E-04	4.9E-05
						1.042E 01	1.31E-04	2.8E-05
						1.058E 01	4.17E-05	1.3E-05

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 12.00 MEV EN-MAX= 14.00 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	3.93E-02	1.6E-02	2.150E 00	7.05E-02	5.2E-03	5.230E 00	7.77E-03	1.6E-03
7.100E-01	1.92E-02	1.1E-02	2.210E 00	8.15E-02	4.9E-03	5.330E 00	8.51E-03	1.6E-03
7.300E-01	1.25E-02	9.2E-03	2.270E 00	5.69E-02	4.3E-03	5.430E 00	8.53E-03	1.6E-03
7.500E-01	2.14E-02	9.4E-03	2.330E 00	2.88E-02	3.9E-03	5.530E 00	8.78E-03	1.6E-03
7.700E-01	3.50E-02	9.0E-03	2.390E 00	2.03E-02	3.8E-03	5.630E 00	8.50E-03	1.6E-03
7.900E-01	4.75E-02	8.6E-03	2.450E 00	2.36E-02	3.6E-03	5.730E 00	6.90E-03	1.6E-03
8.100E-01	5.41E-02	8.2E-03	2.510E 00	2.13E-02	3.5E-03	5.830E 00	5.08E-03	1.5E-03
8.300E-01	5.22E-02	8.4E-03	2.570E 00	1.65E-02	3.6E-03	5.930E 00	3.86E-03	1.5E-03
8.500E-01	4.40E-02	9.0E-03	2.630E 00	1.60E-02	3.5E-03	6.030E 00	3.95E-03	1.4E-03
8.700E-01	3.59E-02	9.9E-03	2.690E 00	1.70E-02	3.4E-03	6.130E 00	5.36E-03	1.4E-03
8.900E-01	3.36E-02	1.0E-02	2.750E 00	1.66E-02	3.4E-03	6.230E 00	6.76E-03	1.4E-03
9.100E-01	3.97E-02	1.1E-02	2.810E 00	2.05E-02	3.2E-03	6.330E 00	7.42E-03	1.4E-03
9.300E-01	5.51E-02	1.0E-02	2.870E 00	3.60E-02	3.5E-03	6.440E 00	7.90E-03	1.4E-03
9.500E-01	7.75E-02	1.1E-02	2.930E 00	5.23E-02	3.8E-03	6.560E 00	6.86E-03	1.3E-03
9.700E-01	9.54E-02	1.0E-02	2.990E 00	5.10E-02	3.6E-03	6.680E 00	4.33E-03	1.3E-03
1.000E 00	9.36E-02	1.0E-02	3.050E 00	3.69E-02	3.1E-03	6.800E 00	3.54E-03	1.3E-03
1.040E 00	5.17E-02	1.0E-02	3.110E 00	2.55E-02	2.9E-03	6.920E 00	4.30E-03	1.3E-03
1.080E 00	1.76E-02	9.1E-03	3.180E 00	1.82E-02	2.6E-03	7.040E 00	4.91E-03	1.2E-03
1.120E 00	1.12E-02	8.4E-03	3.260E 00	1.21E-02	2.5E-03	7.160E 00	5.05E-03	1.1E-03
1.160E 00	1.88E-02	8.3E-03	3.340E 00	8.88E-03	2.6E-03	7.280E 00	4.92E-03	1.1E-03
1.200E 00	8.70E-03	7.6E-03	3.420E 00	8.83E-03	2.5E-03	7.400E 00	4.41E-03	1.1E-03
1.240E 00	5.17E-03	7.4E-03	3.500E 00	7.90E-03	2.4E-03	7.520E 00	3.51E-03	1.0E-03
1.280E 00	1.48E-02	7.3E-03	3.580E 00	6.47E-03	2.2E-03	7.640E 00	3.14E-03	9.8E-04
1.320E 00	1.53E-02	6.8E-03	3.660E 00	7.65E-03	2.3E-03	7.760E 00	3.69E-03	9.5E-04
1.360E 00	1.25E-02	7.3E-03	3.740E 00	9.76E-03	2.2E-03	7.890E 00	4.21E-03	8.9E-04
1.400E 00	1.30E-02	7.3E-03	3.820E 00	1.14E-02	2.3E-03	8.030E 00	3.98E-03	8.6E-04
1.440E 00	1.61E-02	6.9E-03	3.900E 00	1.16E-02	2.3E-03	8.170E 00	3.29E-03	8.1E-04
1.480E 00	1.94E-02	6.9E-03	3.980E 00	1.13E-02	2.3E-03	8.310E 00	2.22E-03	7.6E-04
1.520E 00	1.57E-02	6.5E-03	4.060E 00	1.18E-02	2.2E-03	8.450E 00	1.22E-03	7.0E-04
1.560E 00	1.07E-02	6.6E-03	4.140E 00	1.25E-02	2.2E-03	8.590E 00	1.09E-03	6.6E-04
1.500E 00	1.43E-02	6.4E-03	4.220E 00	1.26E-02	2.1E-03	8.730E 00	1.62E-03	6.1E-04
1.640E 00	2.65E-02	6.5E-03	4.300E 00	1.17E-02	2.2E-03	8.870E 00	2.17E-03	5.7E-04
1.680E 00	4.21E-02	6.9E-03	4.380E 00	1.05E-02	2.1E-03	9.010E 00	2.34E-03	5.1E-04
1.720E 00	5.35E-02	7.4E-03	4.460E 00	9.83E-03	2.1E-03	9.150E 00	2.03E-03	4.5E-04
1.760E 00	5.53E-02	7.4E-03	4.540E 00	9.39E-03	2.1E-03	9.300E 00	1.29E-03	4.2E-04
1.800E 00	4.63E-02	7.2E-03	4.630E 00	8.11E-03	2.0E-03	9.460E 00	5.72E-04	3.9E-04
1.850E 00	3.01E-02	5.6E-03	4.730E 00	6.47E-03	1.9E-03	9.620E 00	1.84E-04	3.2E-04
1.910E 00	1.56E-02	5.7E-03	4.830E 00	7.24E-03	1.8E-03	9.780E 00	2.76E-04	2.7E-04
1.970E 00	1.37E-02	5.3E-03	4.930E 00	9.33E-03	1.9E-03	9.940E 00	7.05E-04	2.0E-04
2.030E 00	1.93E-02	4.5E-03	5.030E 00	8.92E-03	1.8E-03	1.010E 01	9.86E-04	1.5E-04
2.090E 00	3.61E-02	4.9E-03	5.130E 00	7.37E-03	1.7E-03	1.026E 01	7.75E-04	1.1E-04
						1.042E 01	3.96E-04	6.3E-05
						1.058E 01	1.26E-04	3.0E-05

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 14.00 MEV EN-MAX= 17.00 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	4.05E-02	1.9E-02	2.150E 00	5.76E-02	5.2E-03	5.230E 00	6.05E-03	1.7E-03
7.100E-01	1.44E-02	1.4E-02	2.210E 00	6.23E-02	5.3E-03	5.330E 00	4.91E-03	1.6E-03
7.300E-01	1.73E-03	1.3E-02	2.270E 00	4.38E-02	4.7E-03	5.430E 00	5.07E-03	1.6E-03
7.500E-01	8.33E-03	1.2E-02	2.330E 00	2.69E-02	4.1E-03	5.530E 00	5.71E-03	1.6E-03
7.700E-01	1.97E-02	1.2E-02	2.390E 00	1.58E-02	4.3E-03	5.630E 00	5.94E-03	1.5E-03
7.900E-01	2.95E-02	1.1E-02	2.450E 00	1.46E-02	4.3E-03	5.730E 00	5.25E-03	1.5E-03
8.100E-01	3.76E-02	1.0E-02	2.510E 00	1.75E-02	4.4E-03	5.830E 00	4.69E-03	1.5E-03
8.300E-01	3.97E-02	1.1E-02	2.570E 00	1.25E-02	4.1E-03	5.930E 00	4.25E-03	1.4E-03
8.500E-01	3.17E-02	1.1E-02	2.630E 00	6.74E-03	3.7E-03	6.030E 00	3.77E-03	1.5E-03
8.700E-01	2.01E-02	1.1E-02	2.690E 00	9.88E-03	3.4E-03	6.130E 00	3.88E-03	1.4E-03
8.900E-01	1.80E-02	1.0E-02	2.750E 00	1.53E-02	3.1E-03	6.230E 00	4.40E-03	1.4E-03
9.100E-01	2.83E-02	1.1E-02	2.810E 00	1.67E-02	3.2E-03	6.330E 00	4.20E-03	1.4E-03
9.300E-01	4.31E-02	1.0E-02	2.870E 00	2.30E-02	3.4E-03	6.440E 00	3.69E-03	1.4E-03
9.500E-01	5.64E-02	1.2E-02	2.930E 00	3.59E-02	3.7E-03	6.560E 00	4.22E-03	1.4E-03
9.700E-01	6.54E-02	1.1E-02	2.990E 00	3.89E-02	3.4E-03	6.680E 00	4.22E-03	1.3E-03
1.000E 00	6.90E-02	1.1E-02	3.050E 00	3.03E-02	3.0E-03	6.800E 00	3.29E-03	1.3E-03
1.040E 00	5.49E-02	1.0E-02	3.110E 00	2.17E-02	2.7E-03	6.920E 00	3.38E-03	1.3E-03
1.080E 00	3.39E-02	9.4E-03	3.180E 00	1.40E-02	2.5E-03	7.040E 00	3.96E-03	1.2E-03
1.120E 00	2.45E-02	9.3E-03	3.260E 00	9.50E-03	2.8E-03	7.160E 00	3.69E-03	1.1E-03
1.160E 00	2.21E-02	1.0E-02	3.340E 00	1.17E-02	2.4E-03	7.280E 00	2.67E-03	1.1E-03
1.200E 00	1.09E-02	8.5E-03	3.420E 00	9.70E-03	2.4E-03	7.400E 00	1.47E-03	1.1E-03
1.240E 00	3.05E-03	8.3E-03	3.500E 00	5.32E-03	2.4E-03	7.520E 00	1.15E-03	1.0E-03
1.280E 00	1.02E-02	8.1E-03	3.580E 00	6.99E-03	2.4E-03	7.640E 00	2.25E-03	9.8E-04
1.320E 00	1.39E-02	7.5E-03	3.660E 00	8.87E-03	2.3E-03	7.760E 00	3.42E-03	9.6E-04
1.360E 00	1.35E-02	8.1E-03	3.740E 00	5.75E-03	2.5E-03	7.890E 00	3.27E-03	9.0E-04
1.400E 00	1.23E-02	8.3E-03	3.820E 00	5.84E-03	2.4E-03	8.030E 00	2.32E-03	7.9E-04
1.440E 00	1.19E-02	7.9E-03	3.900E 00	1.05E-02	2.3E-03	8.170E 00	1.69E-03	8.0E-04
1.480E 00	1.46E-02	8.1E-03	3.980E 00	1.06E-02	2.3E-03	8.310E 00	1.12E-03	7.4E-04
1.520E 00	1.22E-02	7.5E-03	4.060E 00	6.70E-03	2.2E-03	8.450E 00	8.91E-04	6.6E-04
1.560E 00	6.32E-03	8.0E-03	4.140E 00	6.12E-03	2.2E-03	8.590E 00	1.14E-03	6.3E-04
1.600E 00	1.06E-02	7.0E-03	4.220E 00	9.24E-03	2.1E-03	8.730E 00	1.23E-03	6.1E-04
1.640E 00	2.59E-02	7.4E-03	4.300E 00	1.10E-02	2.2E-03	8.870E 00	1.17E-03	5.5E-04
1.680E 00	4.26E-02	7.8E-03	4.380E 00	9.84E-03	2.1E-03	9.010E 00	1.26E-03	5.0E-04
1.720E 00	6.32E-02	8.6E-03	4.460E 00	7.77E-03	2.2E-03	9.150E 00	1.24E-03	4.6E-04
1.760E 00	8.78E-02	8.9E-03	4.540E 00	5.83E-03	2.1E-03	9.300E 00	7.78E-04	3.9E-04
1.800E 00	9.62E-02	9.6E-03	4.630E 00	4.45E-03	2.0E-03	9.460E 00	2.92E-04	3.2E-04
1.850E 00	6.87E-02	7.5E-03	4.730E 00	5.33E-03	2.0E-03	9.620E 00	2.40E-04	2.8E-04
1.910E 00	2.84E-02	6.3E-03	4.830E 00	6.64E-03	2.0E-03	9.780E 00	4.24E-04	2.4E-04
1.970E 00	1.43E-02	5.5E-03	4.930E 00	6.48E-03	1.9E-03	9.940E 00	5.93E-04	1.6E-04
2.030E 00	1.30E-02	4.7E-03	5.030E 00	7.13E-03	1.8E-03	1.010E 01	6.08E-04	1.2E-04
2.090E 00	2.93E-02	5.0E-03	5.130E 00	7.38E-03	1.8E-03	1.026E 01	4.46E-04	1.1E-04
						1.042E 01	2.24E-04	6.9E-05
						1.058E 01	7.01E-05	3.6E-05

ALUMINUM GAMMA-RAY PRODUCTION CROSS SECTIONS

EN-MIN= 17.00 MEV EN-MAX= 20.00 MEV THETA= 90. DEG

E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV	E-GAMMA MEV	DATA B/SR/MEV	DATA-ERR B/SR/MEV
6.900E-01	3.43E-02	3.0E-02	2.150E 00	3.92E-02	6.7E-03	5.230E 00	5.96E-03	2.0E-03
7.100E-01	1.92E-02	2.0E-02	2.210E 00	3.73E-02	6.3E-03	5.330E 00	3.55E-03	2.0E-03
7.300E-01	4.18E-03	1.8E-02	2.270E 00	3.14E-02	6.4E-03	5.430E 00	3.35E-03	1.9E-03
7.500E-01	3.13E-03	1.7E-02	2.330E 00	2.27E-02	5.2E-03	5.530E 00	3.34E-03	1.9E-03
7.700E-01	1.70E-02	1.7E-02	2.390E 00	2.29E-02	5.5E-03	5.630E 00	2.50E-03	1.8E-03
7.900E-01	3.38E-02	1.6E-02	2.450E 00	2.87E-02	5.3E-03	5.730E 00	2.72E-03	1.7E-03
8.100E-01	4.00E-02	1.6E-02	2.510E 00	2.44E-02	5.6E-03	5.830E 00	3.95E-03	1.7E-03
8.300E-01	3.47E-02	1.5E-02	2.570E 00	1.31E-02	5.1E-03	5.930E 00	3.93E-03	1.8E-03
8.500E-01	2.87E-02	1.6E-02	2.630E 00	8.42E-03	4.8E-03	6.030E 00	2.49E-03	1.7E-03
8.700E-01	2.62E-02	1.6E-02	2.690E 00	9.67E-03	4.4E-03	6.130E 00	1.18E-03	1.6E-03
8.900E-01	2.38E-02	1.4E-02	2.750E 00	9.74E-03	4.1E-03	6.230E 00	1.20E-03	1.6E-03
9.100E-01	2.25E-02	1.4E-02	2.810E 00	1.28E-02	4.3E-03	6.330E 00	2.12E-03	1.7E-03
9.300E-01	2.64E-02	1.4E-02	2.870E 00	2.24E-02	4.6E-03	6.440E 00	2.76E-03	1.6E-03
9.500E-01	4.08E-02	1.6E-02	2.930E 00	2.81E-02	4.4E-03	6.540E 00	2.49E-03	1.6E-03
9.700E-01	5.84E-02	1.5E-02	2.990E 00	2.64E-02	4.3E-03	6.680E 00	1.81E-03	1.5E-03
1.000E 00	5.93E-02	1.5E-02	3.050E 00	2.26E-02	4.2E-03	6.800E 00	1.56E-03	1.5E-03
1.040E 00	3.46E-02	1.6E-02	3.110E 00	1.81E-02	3.7E-03	6.920E 00	1.99E-03	1.4E-03
1.080E 00	3.92E-02	1.3E-02	3.180E 00	1.19E-02	3.2E-03	7.040E 00	2.55E-03	1.4E-03
1.120E 00	4.21E-02	1.4E-02	3.260E 00	6.40E-03	3.2E-03	7.160E 00	2.63E-03	1.3E-03
1.160E 00	3.12E-02	1.2E-02	3.340E 00	3.79E-03	3.1E-03	7.280E 00	2.31E-03	1.3E-03
1.200E 00	2.00E-02	1.2E-02	3.420E 00	4.97E-03	3.2E-03	7.400E 00	2.08E-03	1.2E-03
1.240E 00	6.72E-03	1.1E-02	3.500E 00	6.53E-03	3.1E-03	7.520E 00	1.92E-03	1.1E-03
1.280E 00	1.04E-02	1.1E-02	3.580E 00	6.98E-03	3.2E-03	7.640E 00	1.44E-03	1.1E-03
1.320E 00	2.17E-02	1.0E-02	3.660E 00	6.52E-03	2.8E-03	7.760E 00	8.70E-04	1.0E-03
1.360E 00	1.41E-02	1.1E-02	3.740E 00	6.78E-03	2.7E-03	7.880E 00	7.58E-04	9.4E-04
1.400E 00	4.40E-03	1.1E-02	3.820E 00	9.55E-03	3.0E-03	8.030E 00	1.16E-03	9.0E-04
1.440E 00	8.96E-03	1.1E-02	3.900E 00	8.60E-03	2.6E-03	8.170E 00	1.35E-03	8.6E-04
1.480E 00	1.60E-02	1.2E-02	3.980E 00	3.69E-03	2.7E-03	8.310E 00	1.18E-03	8.0E-04
1.520E 00	1.53E-02	1.1E-02	4.060E 00	2.09E-03	2.8E-03	8.450E 00	9.40E-04	7.3E-04
1.560E 00	1.13E-02	1.1E-02	4.140E 00	3.67E-03	2.8E-03	8.590E 00	7.09E-04	7.0E-04
1.600E 00	1.31E-02	1.0E-02	4.220E 00	3.30E-03	2.7E-03	8.730E 00	5.55E-04	6.7E-04
1.640E 00	2.09E-02	1.0E-02	4.300E 00	3.17E-03	2.7E-03	8.870E 00	5.67E-04	5.8E-04
1.680E 00	3.73E-02	1.1E-02	4.380E 00	6.48E-03	2.6E-03	9.010E 00	5.97E-04	5.1E-04
1.720E 00	6.85E-02	1.2E-02	4.460E 00	9.03E-03	2.5E-03	9.150E 00	4.51E-04	4.6E-04
1.760E 00	1.05E-01	1.2E-02	4.540E 00	6.59E-03	2.5E-03	9.300E 00	1.60E-04	3.8E-04
1.800E 00	1.18E-01	1.2E-02	4.630E 00	2.61E-03	2.4E-03	9.460E 00	2.01E-05	3.0E-04
1.850E 00	8.78E-02	9.8E-03	4.730E 00	2.72E-03	2.4E-03	9.620E 00	1.63E-04	2.4E-04
1.910E 00	4.18E-02	7.5E-03	4.830E 00	3.33E-03	2.3E-03	9.780E 00	3.80E-04	1.9E-04
1.970E 00	1.38E-02	7.1E-03	4.930E 00	2.22E-03	2.3E-03	9.940E 00	4.55E-04	1.7E-04
2.030E 00	7.52E-03	7.1E-03	5.030E 00	3.68E-03	2.2E-03	1.010E 01	3.63E-04	1.3E-04
2.090E 00	2.56E-02	6.8E-03	5.130E 00	6.67E-03	2.1E-03	1.026E 01	2.06E-04	9.4E-05
						1.042E 01	9.38E-05	6.0E-05
						1.058E 01	2.78E-05	4.9E-05

EXCITATION FUNCTION AT 125 DEG FOR THE 1.013-MEV GAMMA RAY IN ALUMINUM. TABULATED VALUES ARE INCIDENT NEUTRON ENERGIES, IN MEV, AND DIFFERENTIAL CROSS SECTIONS AND ASSOCIATED STATISTICAL UNCERTAINTIES, IN MB/SR. THE UNCERTAINTIES DO NOT INCLUDE RELATIVE ERRORS, ESTIMATED TO BE 4 PERCENT, NOR ABSOLUTE ERRORS, ESTIMATED TO BE 10 PERCENT

EN	DATA	ERROR	EN	DATA	ERROR	EN	DATA	ERROR
1.047	0.146	0.024	1.502	8.327	0.156	2.285	14.572	0.244
1.067	0.773	0.038	1.519	8.693	0.162	2.318	14.144	0.243
1.083	0.996	0.058	1.537	9.652	0.172	2.351	12.572	0.232
1.093	1.324	0.068	1.555	12.830	0.196	2.385	10.372	0.217
1.104	1.886	0.079	1.573	13.815	0.204	2.420	10.585	0.226
1.115	2.756	0.095	1.592	10.132	0.179	2.456	14.317	0.257
1.126	3.417	0.105	1.611	9.123	0.168	2.492	17.507	0.297
1.137	5.181	0.128	1.630	9.485	0.170	2.530	16.470	0.296
1.149	10.087	0.180	1.650	10.742	0.185	2.568	13.587	0.273
1.160	11.274	0.189	1.670	13.796	0.210	2.607	13.667	0.277
1.172	6.832	0.148	1.690	16.514	0.229	2.647	13.236	0.279
1.184	5.550	0.130	1.711	15.757	0.227	2.688	12.256	0.283
1.196	6.972	0.147	1.732	14.815	0.223	2.729	13.395	0.295
1.209	7.659	0.151	1.754	11.862	0.197	2.772	13.224	0.299
1.221	7.160	0.148	1.776	10.426	0.188	2.816	10.314	0.267
1.234	8.193	0.156	1.798	9.895	0.180	2.860	11.046	0.276
1.247	8.856	0.161	1.821	9.162	0.174	2.906	14.214	0.323
1.260	8.942	0.166	1.844	9.341	0.177	2.953	14.570	0.333
1.273	11.237	0.184	1.868	10.797	0.192	3.001	13.553	0.320
1.287	10.057	0.174	1.892	13.678	0.221	3.051	14.327	0.333
1.301	7.080	0.147	1.916	16.627	0.241	3.101	16.823	0.369
1.315	4.250	0.116	1.941	15.530	0.233	3.153	19.519	0.393
1.329	4.648	0.120	1.967	13.626	0.219	3.206	19.709	0.404
1.343	6.212	0.137	1.993	14.740	0.229	3.261	17.680	0.392
1.358	8.328	0.158	2.020	15.873	0.239	3.317	15.573	0.384
1.373	6.074	0.136	2.047	16.901	0.249	3.374	15.447	0.387
1.388	4.970	0.124	2.074	17.285	0.255	3.433	15.278	0.379
1.404	4.778	0.122	2.103	14.040	0.227	3.493	12.288	0.354
1.419	5.718	0.131	2.132	12.541	0.218	3.555	12.722	0.367
1.435	8.289	0.158	2.161	13.773	0.230	3.619	12.398	0.369
1.451	9.429	0.165	2.191	14.717	0.240	3.684	14.720	0.393
1.468	10.466	0.175	2.222	15.645	0.249	3.752	15.663	0.415
1.485	9.427	0.167	2.253	15.827	0.250	3.821	14.847	0.397
1.502	8.327	0.156	2.285	14.572	0.244	3.892	13.589	0.380

EXCITATION FUNCTION AT 125 DEG FOR THE 2.210-MEV GAMMA RAY IN ALUMINUM. TABULATED VALUES ARE INCIDENT NEUTRON ENERGIES, IN MEV, AND DIFFERENTIAL CROSS SECTIONS AND ASSOCIATED STATISTICAL UNCERTAINTIES, IN MB/SR. THE UNCERTAINTIES DO NOT INCLUDE RELATIVE ERRORS, ESTIMATED TO BE 4 PERCENT, NOR ABSOLUTE ERRORS, ESTIMATED TO BE 10 PERCENT

EN	DATA	ERROR	EN	DATA	ERROR	EN	DATA	ERROR
2.253	0.041	0.040	2.772	10.332	0.364	3.493	14.700	0.543
2.285	0.280	0.072	2.816	9.011	0.352	3.555	12.408	0.553
2.318	1.916	0.138	2.860	7.300	0.318	3.619	13.687	0.584
2.351	3.160	0.174	2.906	12.450	0.413	3.684	15.677	0.606
2.385	3.254	0.180	2.953	14.525	0.462	3.752	15.540	0.625
2.420	4.905	0.214	3.001	14.092	0.451	3.821	13.503	0.590
2.456	4.460	0.211	3.051	14.127	0.465	3.892	12.996	0.587
2.492	7.399	0.281	3.101	16.878	0.502	3.965	14.476	0.612
2.530	9.017	0.308	3.153	16.036	0.509	4.040	13.667	0.634
2.568	8.862	0.309	3.206	14.302	0.483	4.117	13.834	0.643
2.607	9.725	0.317	3.261	15.377	0.514	4.197	12.214	0.609
2.647	10.166	0.329	3.317	17.573	0.582	4.278	13.779	0.624
2.688	12.103	0.378	3.374	16.058	0.582	4.363	14.293	0.642
2.729	10.385	0.360	3.433	16.855	0.550	4.449	14.010	0.639

EXCITATION FUNCTION AT 90 DEG FOR THE 1.013-MEV GAMMA RAY IN ALUMINUM. TABULATED VALUES ARE INCIDENT NEUTRON ENERGIES, IN MEV, AND DIFFERENTIAL CROSS SECTIONS AND ASSOCIATED STATISTICAL UNCERTAINTIES, IN MB/SR. THE UNCERTAINTIES DO NOT INCLUDE RELATIVE ERRORS, ESTIMATED TO BE 4 PERCENT, NOR ABSOLUTE ERRORS, ESTIMATED TO BE 10 PERCENT

EN	DATA	ERROR	EN	DATA	ERROR	EN	DATA	ERROR
1.052	0.455	0.036	1.832	9.722	0.196	2.827	11.002	0.415
1.072	0.931	0.043	1.856	10.891	0.207	2.849	12.287	0.443
1.093	1.295	0.051	1.880	13.990	0.236	2.872	14.726	0.494
1.115	3.344	0.081	1.904	17.692	0.266	2.895	16.314	0.522
1.137	7.685	0.118	1.929	17.603	0.267	2.918	16.549	0.538
1.161	11.825	0.147	1.954	15.304	0.248	2.941	16.826	0.553
1.184	6.616	0.109	1.980	14.493	0.242	2.965	14.852	0.525
1.209	8.155	0.120	2.006	16.498	0.261	2.989	15.585	0.529
1.234	8.890	0.123	2.033	18.057	0.274	3.014	16.143	0.526
1.260	10.646	0.135	2.061	18.704	0.282	3.038	16.215	0.540
1.287	10.385	0.134	2.089	16.340	0.264	3.063	15.989	0.552
1.315	5.171	0.098	2.117	13.303	0.240	3.088	17.767	0.589
1.336	5.777	0.146	2.146	14.391	0.249	3.114	20.851	0.625
1.351	9.414	0.182	2.176	15.086	0.261	3.140	21.830	0.634
1.365	7.931	0.167	2.206	16.278	0.271	3.166	21.935	0.634
1.381	4.986	0.134	2.237	16.292	0.275	3.193	22.253	0.653
1.396	5.041	0.135	2.269	15.453	0.271	3.220	20.864	0.655
1.411	5.414	0.139	2.301	14.967	0.267	3.247	21.981	0.663
1.427	8.059	0.169	2.334	13.510	0.258	3.274	18.455	0.635
1.443	9.592	0.182	2.368	11.213	0.240	3.302	17.881	0.633
1.460	10.889	0.191	2.403	10.299	0.237	3.331	16.957	0.634
1.476	10.939	0.192	2.438	13.107	0.266	3.359	17.781	0.625
1.493	8.805	0.173	2.474	17.533	0.315	3.388	16.926	0.636
1.511	8.534	0.169	2.502	19.725	0.486	3.418	17.366	0.611
1.528	9.682	0.184	2.520	18.165	0.472	3.448	14.346	0.586
1.546	12.177	0.205	2.539	14.760	0.443	3.478	13.660	0.590
1.564	15.018	0.227	2.558	14.752	0.435	3.508	14.429	0.585
1.582	11.548	0.204	2.577	13.963	0.424	3.539	15.263	0.595
1.601	9.163	0.181	2.597	14.595	0.439	3.571	14.207	0.594
1.620	9.802	0.190	2.617	14.894	0.442	3.603	14.097	0.619
1.640	10.708	0.197	2.636	14.295	0.448	3.635	14.384	0.601
1.660	13.832	0.226	2.657	15.011	0.455	3.668	15.331	0.630
1.680	16.485	0.244	2.677	12.774	0.436	3.701	16.020	0.639
1.700	17.581	0.253	2.698	12.593	0.438	3.734	16.703	0.685
1.721	16.858	0.251	2.719	14.412	0.473	3.769	18.372	0.683
1.743	14.057	0.232	2.740	14.778	0.477	3.803	16.162	0.644
1.765	12.080	0.218	2.761	14.637	0.488	3.838	14.160	0.617
1.787	11.514	0.210	2.783	13.645	0.463	3.874	16.034	0.626
1.809	9.937	0.198	2.805	11.818	0.420	3.910	15.316	0.640
1.832	9.722	0.196	2.827	11.002	0.415	3.946	14.724	0.642

EXCITATION FUNCTION AT 90 DEG FOR THE 2.210-MEV GAMMA RAY IN ALUMINUM. TABULATED VALUES ARE INCIDENT NEUTRON ENERGIES, IN MEV, AND DIFFERENTIAL CROSS SECTIONS AND ASSOCIATED STATISTICAL UNCERTAINTIES, IN MB/SR. THE UNCERTAINTIES DO NOT INCLUDE RELATIVE ERRORS, ESTIMATED TO BE 4 PERCENT, NOR ABSOLUTE ERRORS, ESTIMATED TO BE 10 PERCENT

EN	DATA	ERROR	EN	DATA	ERROR	EN	DATA	ERROR
2.206	0.059	0.037	2.849	7.382	0.384	3.539	12.369	0.697
2.237	0.071	0.041	2.872	10.133	0.461	3.571	14.625	0.730
2.269	0.218	0.052	2.895	13.063	0.529	3.603	15.089	0.748
2.301	1.947	0.119	2.918	15.833	0.578	3.635	16.759	0.775
2.334	2.937	0.147	2.941	15.155	0.570	3.668	17.065	0.767
2.368	2.714	0.145	2.965	14.603	0.546	3.701	15.269	0.776
2.403	3.815	0.173	2.989	14.333	0.564	3.734	16.383	0.797
2.438	4.025	0.178	3.014	14.200	0.560	3.769	14.556	0.776
2.474	6.251	0.230	3.038	15.026	0.570	3.803	12.116	0.760
2.502	8.747	0.388	3.063	17.032	0.607	3.838	11.826	0.743
2.520	9.180	0.382	3.088	17.097	0.631	3.874	12.552	0.752
2.539	8.511	0.390	3.114	17.850	0.640	3.910	15.141	0.769
2.558	8.263	0.376	3.140	16.637	0.608	3.946	13.955	0.790
2.577	7.764	0.391	3.166	14.556	0.594	3.983	13.628	0.790
2.597	8.680	0.399	3.193	14.607	0.601	4.021	14.612	0.806
2.617	10.214	0.410	3.220	14.701	0.604	4.059	13.924	0.809
2.636	10.267	0.438	3.247	17.266	0.656	4.097	12.105	0.802
2.657	11.375	0.477	3.274	16.831	0.692	4.136	12.696	0.812
2.677	11.451	0.460	3.302	18.620	0.748	4.176	12.165	0.812
2.698	10.672	0.451	3.331	17.878	0.749	4.217	14.211	0.796
2.719	10.002	0.459	3.359	18.887	0.731	4.257	13.183	0.813
2.740	9.719	0.449	3.388	16.927	0.597	4.299	13.955	0.823
2.761	11.037	0.474	3.418	15.838	0.673	4.341	15.486	0.857
2.783	10.835	0.478	3.448	16.015	0.670	4.384	14.485	0.824
2.805	9.064	0.438	3.478	13.870	0.684	4.427	13.695	0.822
2.827	6.885	0.399	3.508	13.026	0.692	4.471	13.120	0.838

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