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GAMMA-RAY-PRODUCTION CROSS SECTIONS OF TANTALUM AND CARBON FOR
INCIDENT NEUTRON ENERGIES BETWEEN 0.007 AND 20.0 MeV

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ABSTRACT

Cross sections for neutron induced gamma radiation from tantalum have been measured as a function of both neutron and gamma-ray energy. Neutron energies ranged from 0.007 to 20.0 MeV while gamma-ray energies from 1.0 to 10.5 MeV were measured. Data were taken at angles of 90° and 125° with respect to the incident neutrons. Similar measurements were made for natural carbon and these results demonstrate the efficacy of the data acquisition and reduction systems.

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I. INTRODUCTION

Tantalum metal has properties which make it useful in the construction of radiation shields and reactor components. In order to accurately calculate the radiation fields around and through components of tantalum, it is necessary to know the cross sections for neutron-induced gamma radiation. This report covers a measurement of the gamma-ray-production cross sections for gamma-ray energies between 1.0 and 10.5 MeV and incident neutron energies from 0.007 to 20.0 MeV.

Gamma-ray-production data for the 4.43 MeV level in carbon were also obtained in this experiment from threshold to 20.0 MeV. The carbon gamma-ray-production data were used for several purposes. Up to 4.8 MeV neutron energy, there are only very weak capture gamma rays from carbon, and the data were used to estimate the magnitude and energy distribution of the background in the tantalum data. Above 4.8 neutron energy, the gamma-ray spectra are dominated by the decay of the 4.43 MeV level, and the pulse-height spectra above the 4.43 MeV gamma ray were also used to estimate the background. The 4.43 MeV gamma-ray-production data could also be compared with some recent measurements¹ obtained by a totally different technique on a Van de Graaff, and this provided some additional checks on the experiment.

For neutron energies between 1.0 and 20.0 MeV, data were taken at angles of 90° and 125° with respect to the incident neutron beam. At lower neutron energies measurements were made only at 125° . A pulsed neutron source (ORELA) was used, thus allowing accurate determination of the incident neutron energies by time-of-flight techniques.

II. EXPERIMENTAL PROCEDURE

A general schematic of the experimental area is shown in Figure 1. The Oak Ridge Electron Linear Accelerator was used as the neutron source. Neutrons were produced by photonuclear processes due to bremsstrahlung from electron impact on a tantalum target.² The present experiment employed an electron energy of about 130 MeV with a repetition rate of 800 pulses per second and a pulse width of 20 nsec. Total electron beam power was about 21 kW.

Neutrons produced at the linac target traversed a 47 m flight path and were incident on the tantalum (or carbon) sample. About 40 m of the flight path was evacuated in order to increase the intensity at 47 m and to prevent energy structure in the neutron flux due to scattering resonances in air. Gamma rays produced in the sample were observed by means of a 12.7 x 12.7 cm NaI crystal located inside of a lead and lithiated paraffin shield. The NaI detector was shielded against neutrons scattered from the sample by a 25-cm-thick slab of lithium hydride placed over the front of the lead collimator. The neutron beam was stopped in a concrete catcher located about 5 m behind the sample.

A filter consisting of 1.9 cm of ^{10}B was located in the neutron beam 5 m from the linac target. This filter removed all neutrons of less than 1 keV energy thus preventing overlap between neutrons of adjacent accelerator pulses. Also located at 5 m was a 2.5-cm-thick filter of depleted uranium. This filter reduced the intensity of the gamma flash at 47 m.

The neutron flux in the region above 1 MeV was measured at 47 m by time-of-flight methods using a 5 cm x 5 cm calibrated NE-213 scintillation counter. The results of this measurement are shown in Fig. 2. The flux

Fig. 1. Experimental arrangement showing neutron source, flight path with collimators and filters, and NaI spectrometer.

measurement was performed using short linac pulses (≈ 5 nsec) and very low beam power (< 1 kW). A monitor counter³ located in the linac target vault was used to normalize the measured flux to the accelerator conditions used in the gamma-ray measurements. The flux below 1 MeV was not measured accurately. Measurements⁴ using a Li-glass detector indicated that the neutron flux per unit energy is approximately constant below 0.5 MeV. The gamma-ray measurements were normalized to absolute cross sections using the $\text{Ta}(n,\gamma)$ cross sections which have been extensively investigated. (See References 5 and 6 for bibliographies of these measurements.)

The samples consisted of 30 cm x 30 cm slabs. The tantalum slab was 0.7 cm thick while a thickness of 2 cm was used for the carbon sample. The diameter of the neutron beam was limited to 15 cm at the sample position by a collimator located 28 m from the linac target (see Fig. 1). Careful measurements were made of the profile of the neutron beam at 47 m using a 6 x 6 mm plastic scintillator. One such profile in the horizontal plane is shown in the inset of Fig. 2. A second determination of the effective beam area was made by comparing the neutron induced gamma-ray counting rate for a small (4 x 4 cm) iron slab located at the center of the beam to that from a slab of identical thickness and composition and large enough to cover the entire beam. Agreement between the two approaches was within 5%. These measurements, together with the flux measurement described above, were used to determine the number of neutrons per unit energy incident on the sample.

A diagram of the electronics used for the gamma-ray measurement is shown in Fig. 3. The anode of a phototube on the NaI crystal provided a fast signal which passed through a timing filter amplifier and a

Fig. 2. Measured neutron flux at 47.35 m. The inset shows the profile of the neutron beam at the sample position.

Fig. 3. Block diagram of the electronics used for the gamma-ray measurements.

constant-fraction discriminator. This output served as the stop signal for a time-to-amplitude converter which was started by a fiducial signal based on the linac gamma flash. The time resolution of the crystal and electronics system was under 5 nsec. Suitable coincidence gating was used to exclude the gamma flash scattered by the sample. Because of the uranium filter, the gamma flash seen by the spectrometer was quite small (only 20% of the linac pulses produced gamma-flash events in the NaI greater than 500 keV). A clipping time of 100 nsec in the main amplifier, used in conjunction with a linear gate and stretcher, insured that the gamma flash signal did not interfere with signals due to neutron-induced gamma rays from the sample. (A 20 MeV neutron requires 780 nsec to traverse 47 m compared to the 160 nsec needed by the gamma flash). The time-of-flight (TOF) and pulse height (PH) signals were digitized and presented to a PDP-9 computer which sorted the events and then sent the TOF-PH pairs to the ORELA SEL-810B computer for storage on magnetic disc in a 512 x 512 channel array (see Ref. 7 for a description of this data acquisition system). In addition, a 2048 channel spectrum of time-of-flight for all pulse heights above the fast discriminator was stored on disc. A 512 channel spectrum of pulse height for all time-of-flight within the coincidence period was also stored. The data on disc were written on magnetic tape to be reduced later on an IBM 360 system.

Because of the lead shield around the NaI detector, the background due to natural radioactivity was very small and contributed little to the counting rate during the coincidence period which lasted only a few microseconds after each accelerator pulse. The main source of background was neutron interactions in the NaI crystal. This neutron background was composed of two components. The relative magnitude of the two contributions

depended on the time after the accelerator pulse. One part of the total background counting rate was present with no sample in position. This component was due to neutrons scattered from the beam catcher and air scattering in the flight station. The second component arose from neutrons scattered into the spectrometer by the sample. The carbon sample was used to estimate this component (see Section III).

Data were accumulated in alternate 12 hour runs with the tantalum sample and either the carbon sample or no sample. Three series of measurements were made. In the first, time-of-flight was limited to 5 μ sec or less in order to get sufficient energy resolution in the region from 0.5 to 20.0 MeV. Two angles (90° and 125°) were measured in this time range. The second series of measurements were made only at 125° and covered flight times from 3.5 to 45 μ sec. This included neutron energies between 0.007 and 1.0 MeV. A third set of data was taken for the carbon sample at 90° and 125° using short accelerator pulses (~ 5 nsec, 6 kW) in order to get the best possible energy resolution. These data were compared to those of Reference 1 as a check on the performance of the system. Total data acquisition time was about 250 hours.

In order to unfold the pulse-height distributions to obtain gamma-ray energy spectra, the response of the spectrometer must be known. For the spectrometer used in the present work, response functions were measured over the gamma-ray energy range from 0.66 to 6.1 MeV using a series of calibrated sources located at the sample position. The measured responses thus included all the characteristics of the spectrometer. That is, in addition to the intrinsic response of the crystal itself - the effective solid angle, the gamma-ray attenuation and in-scattering in the LiH shield

and the effects of scattering in the lead collimator and shield were all included in the response function measurements. Sources used in this measurement include ^{137}Cs , ^{54}Mn , ^{22}Na , $\text{H}(\text{n},\gamma)$, ^{24}Na , $^{241}\text{Am-Be}$, $^{244}\text{Cm-}^{13}\text{C}$ (Reference 8). For energies above 6.13 MeV responses measured at the Tower Shielding Facility⁹ for a crystal of identical size were employed after taking into account the solid angle and LiH transmission as calculated from the dimensions of the spectrometer.

III. DATA ANALYSIS

In analyzing the present data only pulse heights greater than 1 MeV were considered. There were several reasons for this decision. First, in most practical applications, knowledge of the production of secondary gamma rays of energies less than 1 MeV is not critical to the problem of calculating radiation doses. Second, the 511 keV gamma ray due to pair production in the tantalum sample is very strong and obscures the true gamma-ray spectrum from about 550 keV down. Third, the available data on ^{181}Ta (Reference 10) show that several of the excited states below 1 MeV have appreciable lifetimes (e.g. the 615 keV level has $\tau \approx 20 \mu\text{sec}$). When the lifetime of the state is comparable to or longer than the flight time of the neutron exciting that state (either directly or by a cascade process), the information needed to determine the neutron time-of-flight and thus energy is lost. For this reason some fraction of the gamma-ray spectrum below 1 MeV could not be correlated with incident neutrons of a definite energy.

Frequent calibrations in both pulse height and time-of-flight had shown negligible variation during the course of the measurement. Therefore, the first step in the data reduction was to add together the TOF-PH arrays of all those 12-hour runs for a given sample, angle, and time range.

The next step in data reduction was to form pulse-height distributions for various neutron energy bins by integrating the pulse-height spectra over time-of-flight. The unfolding procedure works well only if the statistical uncertainties are small ($\leq 3\%$). This necessitated summing over a sufficient number of time-of-flight channels to get adequate statistics in the pulse-height spectrum. Figure 4 illustrates the integrated yield for the $\text{Ta}(n, x\gamma)$ reaction at 90° for neutron energies from 1 to 20 MeV. This curve was formed from a high resolution TOF spectrum taken during the course of the measurements (see Section II). Each time channel contains contributions from all pulse heights greater than 500 keV (the bias level of the fast discriminator). The curve is corrected for the incident neutron flux but not for the detector efficiency (which is somewhat dependent on gamma-ray energy). Normalization to an absolute cross section was made by normalizing at 7.5 MeV to the cross section obtained by integrating the unfolded gamma-ray distribution at this energy (see Section IV). This figure indicates that the cross section for gamma-ray production is a relatively smooth function of the incident energy. Based on the need for statistical accuracy and the smoothness of the yield curve, the decision was made to bin the data in neutron energy intervals of 1 MeV between 1 and 10 MeV and 5 MeV bins above 10 MeV. Below 1 MeV neutron energy, only radiative capture contributes to the pulse-height spectrum for events greater than 1 MeV. Previous data on the (n, γ) cross sections (see Refs. 5 and 6) show a smooth energy dependence. Neutron energy bin widths were chosen to give adequate statistics.

Before the binning was done, corrections were made for dead time of the counting system. This correction was less than 5% in all cases.

Fig. 4. Integrated yield for the $\text{Ta}(n,xy)$ reaction for pulse heights greater than 500 keV.

For each neutron energy bin the background correction was accomplished as follows: After normalizing to the same incident flux, the no-sample run and carbon-sample runs were compared. For neutron energy bins below 4 MeV, the pulse-height distributions for these two runs were identical in shape although different in magnitude (see Fig. 5). Above 4 MeV that part of the pulse-height distribution for the carbon sample at gamma-ray energies above 5 MeV was similar in shape to the same region in the no-sample run (see Fig. 6). Thus these comparisons indicated that the shape of the background distributions were the same for the sample-in and sample-out runs. This assumption was confirmed by measuring the pulse-height spectra for a beryllium sample (which produces no gamma rays above 1 MeV under neutron bombardment).

The difference in magnitude between the carbon sample and no-sample distributions was taken as an indication of the magnitude of the in-scattering component of the background for carbon. As usual this component of the background cannot be directly measured. The model used for estimating it assumes that fast neutrons may penetrate into the shield but once inside their "die away" time is rather long ($\sim 100 \mu\text{sec}$). Therefore at high energies, above 2 MeV, the in-scattering background component is proportional to the average scattering cross section in a given time bin. But at low energies, below 500 keV, it is proportional to the total number of neutrons scattered by the sample at earlier times during the linac burst. At intermediate energies it was found that the two procedures gave roughly the same results. The estimate for this correction was based on the available scattering angular distribution data¹¹ for carbon and tantalum.

Fig. 5. Comparison of pulse-height spectra for the carbon sample and no sample below the carbon inelastic threshold ($E_n = 1 - 2$ MeV).

Fig. 6. Comparison of pulse-height spectra for the carbon sample and no sample above the carbon inelastic threshold ($E_n = 7 - 8 \text{ MeV}$).

Below the carbon inelastic threshold the carbon-sample and no-sample runs were added together to improve statistics and the distributions then normalized to be equal to the sample-out plus estimated tantalum in-scattering contribution. The result was then subtracted from the pulse-height distribution for the tantalum sample. Above the carbon inelastic threshold, that part of the pulse-height distribution above 5 MeV in the carbon sample run was used to determine the carbon in-scattering and thus to estimate the tantalum in-scattering background. The sample-out run was then normalized up to include this contribution. The result was subtracted from the tantalum run. The procedure included an assigned error of 50% to the estimate of the tantalum in-scattering background and this error was propagated through the analysis.

Some results of the above procedure are shown in Figs. 7 - 9. Shown in each figure is the pulse-height distribution from the tantalum sample and the derived background pulse-height spectrum. The data at 0.007 to 0.020 MeV and 15.0 to 20.0 MeV represent worst cases. For the intermediate energies, as represented by the data for 1 - 2 MeV, the statistics are better and the foreground to background ratio more favorable.

The product of the above described process was a pulse-height distribution with estimated uncertainties for each of the selected neutron energy bins. The channels of these pulse-height distributions were then grouped together into a series of bins corresponding to the structure of a response matrix generated from the measured responses by an interpolation procedure. The response matrix was square using 108 bins to cover the gamma-ray energy and pulse-height ranges from 1.0 to 10.5 MeV. The bin widths were chosen so as to give about 2 to 3 bins per resolution width of the detector. (The

Fig. 7. Pulse-height spectrum from the Ta sample shown with the estimated background spectrum for neutron energies from 0.007 to 0.020 MeV.

Fig. 8. Pulse-height spectrum from the Ta sample with the estimated background for neutron energies between 1.0 and 2.0 MeV.

Fig. 9. Pulse-height spectrum from the Ta sample with the estimated background for neutron energies between 15 and 20 MeV.

number of pulse-height channels per bin varied from 2 to 8.) The binned data with errors and the response matrix were then used as input to the unfolding code FERD (see Refs. 12, 13, and 14 for a description of this code and its application to unfolding of NaI spectra). The unfolded spectrum consisted of 108 points covering the energy range 1.0 to 10.5 MeV. Units were the number of gamma rays per unit energy per unit solid angle emitted by the sample in the direction of the detector.

Because the gamma-ray attenuation in tantalum is large, it was necessary to correct the gamma-ray distributions for self-absorption. This was done using the total photon cross sections of Ref. 15. The corrections ranged in size from 41% at 1 MeV to 33% at 10 MeV. Included in this correction was the neutron self shielding of the sample as calculated using the total inelastic cross section (the magnitude of this part of the correction was generally less than 5%). The fractional uncertainty in the correction was estimated to be no more than 10%.

Above 1.0 MeV incident neutron energy, the data were then normalized to absolute cross sections using the measured neutron flux and sample thickness. Below 1.0 MeV the normalization was accomplished by use of the following formula

$$\int_{E_Y} \int_{\Omega} \frac{d^2\sigma}{dE_Y d\Omega} \cdot E_Y dE_Y d\Omega = \sigma_{n,\gamma} \times BE$$

where

BE = neutron binding energy = $Q_{n,\gamma}$ + neutron energy

$\sigma_{n,\gamma}$ = measured Ta(n, γ) cross section

$d^2\sigma/dE_\gamma d\Omega$ = gamma-ray-production cross section

E_γ = gamma-ray energy.

Assuming the gamma rays are emitted isotropically this reduces to

$$4\pi \int_{E_\gamma} \frac{d^2\sigma}{dE_\gamma d\Omega} \cdot E_\gamma \cdot dE_\gamma = \sigma_{n,\gamma} \cdot BE.$$

The integral could be evaluated from the data for gamma-ray energies above 1 MeV. An estimate of the contribution below this energy was added to give the total integral. The BE was calculated assuming a Q value of 5.98 MeV. The capture cross sections were taken from the curve presented in Ref. 5.

The carbon data taken with high energy resolution were analyzed in the region 4.0 to 20.0 MeV to determine cross sections for the C(n,n' γ) (4.43 MeV) reaction. For these data the pulse-height spectra were not unfolded. Instead the pulse-height distribution for each time channel was summed over the region of events from 3 to 4.75 MeV. That region of the pulse-height spectrum from 5 to 6.5 MeV was used to estimate the background (as indicated by the shape of the sample-out spectrum). This background was less than 10% for all time channels. The efficiency of the spectrometer was determined by integrating the measured response over pulse heights from 3 to 4.75 MeV. The pulse-height integral in each time channel was then normalized to a differential cross section using this efficiency along with the measured neutron flux. No corrections were made for self absorption in the sample as this effect was quite small (<2%).

IV. RESULTS

Figures 10 and 11 show the present results for the cross section of the $C(n,n'\gamma)$ (4.43 MeV) reaction as a function of neutron energy. Also shown are recent data of Dickens and Perey.¹ Agreement is generally good with the present results within about 10%. This discrepancy is within the uncertainties estimated for the overall normalization in the present experiment (estimated to be about 10%, due mainly to the uncertainty in the incident flux).

Figures 12 to 15 show the measured gamma-ray-production cross sections for tantalum at 90° and 125° respectively. The error bars shown do not include the uncertainty in normalization (10% above 1 MeV neutron energy, about 25% below this energy). It should be noted that some points are plotted even where the cross section must be zero; for example, at gamma-ray energies above the binding energy for neutron energies where only capture can occur. These points are shown only to indicate the quality of the data in this region with respect to background subtraction. As is clearly indicated by the error bars, the uncertainties are large, due mainly to counting statistics. The effect of the high energy region on the unfolded spectrum at the lower energies is negligible. Note also that the unfolded spectra still contain the effects of the finite intrinsic energy resolution of the NaI detector. This resolution varies from about 10% at 1 MeV to 5% at 6 MeV.

Figures 16 and 17 show the data at 90° for neutron energy bins from 5 to 6 and 7 to 8 MeV. Shown also are some representative points taken from the data of Perkin and Starfelt.¹⁶ These authors derived their absolute

Fig. 10. Cross section for the $C(n,n'\gamma) (4.43 \text{ MeV})$ reaction at 90° compared to the results in Ref. 1. Below 10 MeV the plotted points represent averages over 50 keV intervals, above 10 MeV the intervals are 500 keV. Error flags for the present results do not include any uncertainty in normalization.

Fig. 11. Cross section for the $C(n,n'\gamma) (4.43 \text{ MeV})$ reaction at 125° compared to the results of Ref. 1.

Fig. 12. Results of the present measurement for the $Ta(n,xy)$ reaction at 90° . Error bars with arrows indicate uncertainties greater than one decade.

Fig. 13. Present results for the $Ta(n,xy)$ reaction at 90° .

Fig. 14. Present results for the $\text{Ta}(n, x\gamma)$ reaction at 125° .

Fig. 15. Present results for the $\text{Ta}(n, x\gamma)$ reaction at 125° .

cross sections by comparison to the $C(n,n'\gamma)$ (4.43 MeV) cross section for which their quoted values are somewhat different from the present results shown in Figure 10. Therefore for purposes of comparison, the data of Ref. 15 as shown in Figs. 16 and 17 have been renormalized to the same $C(n,n'\gamma)$ cross section presented in Fig. 10. Agreement between the two sets of data is satisfactory.

The integrated yield, above 1 MeV gamma-ray energy, for the $Ta(n,x\gamma)$ reaction is shown in Fig. 18. The points were obtained by integration of the curves shown in Figs. 12 to 15 and represent the gamma-ray-production cross section for gamma-ray energies greater than 1.0 MeV. As can be seen in the figure, the values for 90° and 125° are nearly identical thus providing strong evidence that the gamma-ray angular distributions are isotropic. The solid curve in Fig. 16 was taken from Fig. 4. The decreases in yield at 8 and 15 MeV correspond to the opening of the $(n,2n)$ and $(n,3n)$ channels. Calculations of the total $(n,x\gamma)$ cross sections for lead by Fu and Perey¹⁷ have predicted such an effect. Numerical values of the data have been communicated to the National Neutron Cross Section Center at Brookhaven and are tabulated in the appendix.

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Fig. 16. Comparison of the present results with the data of Ref. 16 at $E_n = 5.5$ MeV.

Fig. 17. Comparison of the present results with the data of Ref. 16 at $E_n = 7.5$ MeV.

Fig. 18. Integrated yield, above 1 MeV gamma-ray energy, for $\text{Ta}(n, x\gamma)$ obtained by integrating the results shown in Figs. 12 to 15. The solid curve was taken from Fig. 4.

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APPENDIX

In this appendix we have tabulated the numerical values of the gamma-ray-production cross sections measured. The integrated yield for tantalum tabulated below is only for gamma-ray energies above 1 MeV.

TANTALUM GAMMA-RAY-PRODUCTION CROSS SECTIONS

Integrated Yields Above 1 MeV Gamma-Ray Energy

<u>ANG</u> <u>ADEG</u>	<u>E-MIN</u> <u>MeV</u>	<u>E-MAX</u> <u>MeV</u>	<u>DATA</u> <u>MB/SR</u>	<u>DATA/ERR</u> <u>MB/SR</u>
90	15.24	20.22	203.1	26.3
90	10.02	15.24	166.8	11.9
90	8.93	10.02	214.7	15.8
90	8.02	8.93	372.6	19.7
90	6.95	8.02	421.8	16.0
90	5.98	6.95	376.0	13.0
90	5.02	5.98	326.5	12.3
90	3.97	5.02	274.5	8.3
90	2.98	3.97	211.6	5.1
90	2.01	2.98	146.8	2.6
90	1.00	2.01	54.3	1.1
125	15.08	19.97	222.4	39.2
125	9.93	15.08	165.6	17.2
125	9.06	9.93	216.5	31.0
125	7.96	9.06	383.7	29.0
125	6.90	7.96	426.2	24.7
125	5.94	6.90	374.6	23.4
125	4.99	6.05	333.8	17.1
125	4.01	4.99	283.0	12.3
125	3.00	4.01	221.7	8.0
125	2.00	3.00	152.9	4.2
125	1.00	2.00	55.7	1.8

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.1524E 02 MEV

EN-MAX= 0.2022E 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
1.000E 00	1.20E-01	1.8E-02	2.750E 00	4.45E-02	4.5E-03	5.730E 00	3.33E-03	1.5E-03
1.040E 00	1.56E-01	1.9E-02	2.810E 00	4.84E-02	4.4E-03	5.830E 00	3.16E-03	1.4E-03
1.080E 00	1.71E-01	1.7E-02	2.870E 00	4.60E-02	4.2E-03	5.930E 00	2.40E-03	1.3E-03
1.120E 00	1.49E-01	1.7E-02	2.930E 00	4.12E-02	4.2E-03	6.030E 00	1.35E-03	1.3E-03
1.160E 00	1.61E-01	1.6E-02	2.990E 00	3.94E-02	4.2E-03	6.130E 00	4.61E-04	1.3E-03
1.200E 00	1.66E-01	1.6E-02	3.050E 00	3.63E-02	4.1E-03	6.230E 00	6.93E-05	1.3E-03
1.240E 00	1.53E-01	1.4E-02	3.110E 00	3.15E-02	4.3E-03	6.330E 00	1.71E-04	1.0E-03
1.280E 00	1.50E-01	1.6E-02	3.180E 00	2.80E-02	4.1E-03	6.440E 00	2.83E-04	9.6E-04
1.320E 00	1.45E-01	1.2E-02	3.260E 00	2.60E-02	3.8E-03	6.560E 00	3.80E-04	9.5E-04
1.360E 00	1.26E-01	1.2E-02	3.340E 00	2.28E-02	3.5E-03	6.680E 00	1.26E-04	7.7E-04
1.400E 00	1.13E-01	1.4E-02	3.420E 00	2.12E-02	3.6E-03	6.800E 00	1.45E-04	7.2E-04
1.440E 00	1.08E-01	1.3E-02	3.500E 00	2.09E-02	3.4E-03	6.920E 00	5.70E-04	7.4E-04
1.480E 00	1.01E-01	1.0E-02	3.580E 00	2.20E-02	3.4E-03	7.040E 00	1.01E-03	6.8E-04
1.520E 00	9.66E-02	9.7E-03	3.660E 00	2.36E-02	3.5E-03	7.160E 00	1.09E-03	5.6E-04
1.560E 00	9.72E-02	1.1E-02	3.740E 00	2.34E-02	3.3E-03	7.280E 00	6.54E-04	3.9E-04
1.600E 00	9.52E-02	1.0E-02	3.820E 00	2.10E-02	3.5E-03	7.400E 00	1.99E-04	3.4E-04
1.640E 00	8.61E-02	8.8E-03	3.900E 00	1.88E-02	3.4E-03	7.520E 00	-2.36E-05	3.7E-04
1.680E 00	7.79E-02	7.9E-03	3.980E 00	1.72E-02	3.2E-03	7.640E 00	-3.24E-05	3.2E-04
1.720E 00	7.84E-02	7.9E-03	4.060E 00	1.43E-02	2.9E-03	7.760E 00	5.20E-05	2.6E-04
1.760E 00	7.97E-02	7.8E-03	4.140E 00	1.15E-02	2.9E-03	7.890E 00	1.01E-04	2.7E-04
1.800E 00	7.53E-02	8.1E-03	4.220E 00	1.02E-02	2.9E-03	8.030E 00	1.13E-04	2.1E-04
1.850E 00	6.88E-02	7.0E-03	4.300E 00	1.00E-02	3.0E-03	8.170E 00	1.71E-04	1.8E-04
1.910E 00	6.92E-02	7.3E-03	4.380E 00	1.05E-02	2.7E-03	8.310E 00	1.75E-04	1.6E-04
1.970E 00	6.70E-02	6.9E-03	4.460E 00	1.05E-02	2.6E-03	8.450E 00	1.55E-04	1.5E-04
2.030E 00	6.73E-02	6.6E-03	4.540E 00	9.84E-03	2.7E-03	8.590E 00	1.21E-04	1.4E-04
2.090E 00	6.80E-02	6.6E-03	4.630E 00	8.57E-03	2.7E-03	8.730E 00	1.04E-04	1.2E-04
2.150E 00	6.10E-02	6.5E-03	4.730E 00	7.18E-03	2.5E-03	8.870E 00	9.69E-05	9.3E-05
2.210E 00	6.11E-02	6.3E-03	4.830E 00	4.86E-03	2.4E-03	9.010E 00	9.07E-05	8.3E-05
2.270E 00	6.99E-02	6.3E-03	4.930E 00	2.19E-03	2.6E-03	9.150E 00	5.35E-05	8.4E-05
2.330E 00	7.35E-02	5.6E-03	5.030E 00	1.88E-03	2.3E-03	9.300E 00	3.11E-05	6.2E-05
2.390E 00	6.58E-02	5.5E-03	5.130E 00	3.84E-03	1.9E-03	9.460E 00	7.13E-06	5.7E-05
2.450E 00	5.60E-02	5.5E-03	5.230E 00	5.06E-03	1.7E-03	9.620E 00	1.41E-05	5.7E-05
2.510E 00	5.34E-02	5.5E-03	5.330E 00	3.95E-03	1.5E-03	9.780E 00	4.32E-05	4.9E-05
2.570E 00	5.43E-02	5.1E-03	5.430E 00	2.32E-03	1.4E-03	9.940E 00	7.24E-05	3.7E-05
2.630E 00	5.14E-02	5.0E-03	5.530E 00	2.03E-03	1.7E-03	1.010E 01	3.19E-05	3.8E-05
2.690E 00	4.47E-02	4.6E-03	5.630E 00	2.85E-03	1.8E-03	1.026E 01	7.31E-05	3.8E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.1002E 02 MEV

EN-MAX= 0.1524E 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
1.000E 00	1.58E-01	9.7E-03	2.750E 00	3.36E-02	1.9E-03	5.730E 00	1.05E-03	8.2E-04
1.040E 00	1.61E-01	9.8E-03	2.810E 00	3.18E-02	1.9E-03	5.830E 00	1.13E-03	7.6E-04
1.080E 00	1.61E-01	8.0E-03	2.870E 00	2.96E-02	1.9E-03	5.930E 00	1.32E-03	7.4E-04
1.120E 00	1.49E-01	7.1E-03	2.930E 00	2.65E-02	1.8E-03	6.030E 00	1.61E-03	7.3E-04
1.160E 00	1.44E-01	6.7E-03	2.990E 00	2.31E-02	1.9E-03	6.130E 00	1.62E-03	7.0E-04
1.200E 00	1.49E-01	6.3E-03	3.050E 00	2.11E-02	1.8E-03	6.230E 00	1.37E-03	6.6E-04
1.240E 00	1.40E-01	6.3E-03	3.110E 00	2.07E-02	1.7E-03	6.330E 00	9.13E-04	6.2E-04
1.280E 00	1.22E-01	6.6E-03	3.180E 00	1.98E-02	1.6E-03	6.440E 00	4.33E-04	5.5E-04
1.320E 00	1.14E-01	5.6E-03	3.260E 00	1.81E-02	1.7E-03	6.560E 00	8.76E-06	5.0E-04
1.360E 00	1.09E-01	5.2E-03	3.340E 00	1.77E-02	1.6E-03	6.680E 00	-2.15E-04	4.4E-04
1.400E 00	1.01E-01	6.2E-03	3.420E 00	1.83E-02	1.6E-03	6.800E 00	-1.65E-04	4.0E-04
1.440E 00	9.37E-02	5.8E-03	3.500E 00	1.69E-02	1.5E-03	6.920E 00	1.17E-04	3.3E-04
1.480E 00	8.88E-02	4.7E-03	3.580E 00	1.40E-02	1.5E-03	7.040E 00	4.56E-04	3.0E-04
1.520E 00	8.84E-02	5.6E-03	3.660E 00	1.34E-02	1.6E-03	7.160E 00	6.19E-04	2.4E-04
1.560E 00	8.67E-02	6.0E-03	3.740E 00	1.38E-02	1.5E-03	7.280E 00	5.22E-04	2.1E-04
1.600E 00	8.07E-02	5.0E-03	3.820E 00	1.19E-02	1.5E-03	7.400E 00	3.47E-04	2.1E-04
1.640E 00	7.53E-02	4.4E-03	3.900E 00	9.61E-03	1.4E-03	7.520E 00	2.71E-04	1.8E-04
1.680E 00	7.30E-02	4.0E-03	3.980E 00	9.06E-03	1.4E-03	7.640E 00	2.83E-04	1.5E-04
1.720E 00	7.29E-02	3.7E-03	4.060E 00	9.06E-03	1.4E-03	7.760E 00	3.14E-04	1.5E-04
1.760E 00	7.36E-02	3.5E-03	4.140E 00	8.14E-03	1.3E-03	7.890E 00	2.56E-04	1.4E-04
1.800E 00	7.20E-02	3.3E-03	4.220E 00	6.45E-03	1.3E-03	8.030E 00	1.80E-04	1.1E-04
1.850E 00	6.57E-02	3.2E-03	4.300E 00	5.56E-03	1.4E-03	8.170E 00	1.38E-04	1.1E-04
1.910E 00	6.35E-02	3.1E-03	4.380E 00	5.81E-03	1.3E-03	8.310E 00	1.43E-04	1.1E-04
1.970E 00	6.31E-02	3.0E-03	4.460E 00	6.18E-03	1.3E-03	8.450E 00	1.37E-04	9.1E-05
2.030E 00	5.77E-02	2.8E-03	4.540E 00	6.00E-03	1.2E-03	8.590E 00	9.48E-05	7.5E-05
2.090E 00	5.56E-02	2.8E-03	4.630E 00	5.33E-03	1.2E-03	8.730E 00	3.64E-05	7.8E-05
2.150E 00	5.62E-02	2.7E-03	4.730E 00	4.68E-03	1.2E-03	8.870E 00	-2.15E-05	7.8E-05
2.210E 00	5.49E-02	2.8E-03	4.830E 00	3.74E-03	1.0E-03	9.010E 00	-4.90E-05	7.3E-05
2.270E 00	5.00E-02	2.4E-03	4.930E 00	3.05E-03	1.1E-03	9.150E 00	-1.73E-05	6.1E-05
2.330E 00	4.56E-02	2.4E-03	5.030E 00	2.57E-03	1.1E-03	9.300E 00	6.80E-05	4.6E-05
2.390E 00	4.54E-02	2.2E-03	5.130E 00	2.27E-03	1.0E-03	9.460E 00	1.37E-04	4.4E-05
2.450E 00	4.46E-02	2.1E-03	5.230E 00	1.94E-03	1.0E-03	9.620E 00	1.40E-04	4.3E-05
2.510E 00	4.24E-02	2.2E-03	5.330E 00	1.39E-03	9.9E-04	9.780E 00	9.07E-05	2.8E-05
2.570E 00	3.95E-02	2.2E-03	5.430E 00	7.99E-04	9.1E-04	9.940E 00	4.10E-05	1.3E-05
2.630E 00	3.63E-02	2.1E-03	5.530E 00	6.16E-04	9.4E-04	1.010E 01	1.36E-05	4.7E-06
2.690E 00	3.46E-02	2.0E-03	5.630E 00	8.65E-04	9.1E-04	1.026E 01	3.46E-06	1.2E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.8940E 01 MEV

EN-MAX= 0.1002E 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
1.000E 00	1.21E-01	1.1E-02	2.750E 00	5.40E-02	2.9E-03	5.730E 00	2.85E-03	1.0E-03
1.040E 00	1.28E-01	1.1E-02	2.810E 00	5.15E-02	2.9E-03	5.830E 00	2.41E-03	9.7E-04
1.080E 00	1.28E-01	9.9E-03	2.870E 00	4.76E-02	2.8E-03	5.930E 00	2.11E-03	9.1E-04
1.120E 00	1.22E-01	8.5E-03	2.930E 00	4.36E-02	2.7E-03	6.030E 00	2.00E-03	8.5E-04
1.160E 00	1.41E-01	8.3E-03	2.990E 00	4.01E-02	2.7E-03	6.130E 00	2.00E-03	8.2E-04
1.200E 00	1.42E-01	7.8E-03	3.050E 00	3.79E-02	2.6E-03	6.230E 00	1.97E-03	8.3E-04
1.240E 00	1.28E-01	8.0E-03	3.110E 00	3.74E-02	2.5E-03	6.330E 00	1.52E-03	7.7E-04
1.280E 00	1.23E-01	7.9E-03	3.180E 00	3.57E-02	2.5E-03	6.440E 00	1.11E-03	6.7E-04
1.320E 00	1.25E-01	6.7E-03	3.260E 00	3.19E-02	2.5E-03	6.560E 00	7.80E-04	6.0E-04
1.360E 00	1.16E-01	6.8E-03	3.340E 00	2.83E-02	2.4E-03	6.680E 00	6.07E-04	5.8E-04
1.400E 00	1.11E-01	7.6E-03	3.420E 00	2.55E-02	2.3E-03	6.800E 00	4.71E-04	4.7E-04
1.440E 00	1.09E-01	7.3E-03	3.500E 00	2.77E-02	2.3E-03	6.920E 00	3.56E-04	3.8E-04
1.480E 00	9.63E-02	5.7E-03	3.580E 00	2.96E-02	2.3E-03	7.040E 00	3.31E-04	3.4E-04
1.520E 00	8.79E-02	6.1E-03	3.660E 00	2.65E-02	2.2E-03	7.160E 00	3.82E-04	3.1E-04
1.560E 00	9.03E-02	7.1E-03	3.740E 00	2.48E-02	2.1E-03	7.280E 00	5.07E-04	2.5E-04
1.600E 00	9.59E-02	6.4E-03	3.820E 00	2.60E-02	2.0E-03	7.400E 00	6.13E-04	2.1E-04
1.640E 00	9.93E-02	5.3E-03	3.900E 00	2.56E-02	2.0E-03	7.520E 00	5.67E-04	1.9E-04
1.680E 00	9.72E-02	4.8E-03	3.980E 00	2.24E-02	2.0E-03	7.640E 00	3.72E-04	1.8E-04
1.720E 00	9.20E-02	4.7E-03	4.060E 00	1.89E-02	1.9E-03	7.760E 00	1.49E-04	1.7E-04
1.760E 00	8.87E-02	4.6E-03	4.140E 00	1.66E-02	1.8E-03	7.890E 00	2.73E-05	1.5E-04
1.800E 00	8.57E-02	4.7E-03	4.220E 00	1.51E-02	1.7E-03	8.030E 00	1.03E-04	1.3E-04
1.850E 00	8.18E-02	4.5E-03	4.300E 00	1.42E-02	1.7E-03	8.170E 00	2.41E-04	1.1E-04
1.910E 00	8.40E-02	4.3E-03	4.380E 00	1.44E-02	1.7E-03	8.310E 00	2.87E-04	9.9E-05
1.970E 00	8.38E-02	4.2E-03	4.460E 00	1.49E-02	1.6E-03	8.450E 00	2.14E-04	9.8E-05
2.030E 00	7.64E-02	4.1E-03	4.540E 00	1.45E-02	1.6E-03	8.590E 00	1.16E-04	8.6E-05
2.090E 00	7.07E-02	3.9E-03	4.630E 00	1.26E-02	1.6E-03	8.730E 00	5.35E-05	6.0E-05
2.150E 00	7.25E-02	3.8E-03	4.730E 00	9.85E-03	1.5E-03	8.870E 00	6.49E-05	5.1E-05
2.210E 00	7.04E-02	3.8E-03	4.830E 00	7.97E-03	1.4E-03	9.010E 00	7.45E-05	4.6E-05
2.270E 00	6.90E-02	3.7E-03	4.930E 00	7.63E-03	1.4E-03	9.150E 00	6.73E-05	3.9E-05
2.330E 00	6.95E-02	3.6E-03	5.030E 00	7.81E-03	1.3E-03	9.300E 00	4.83E-05	3.4E-05
2.390E 00	6.54E-02	3.4E-03	5.130E 00	7.35E-03	1.2E-03	9.460E 00	3.37E-05	2.8E-05
2.450E 00	6.10E-02	3.3E-03	5.230E 00	6.49E-03	1.2E-03	9.620E 00	2.23E-05	2.9E-05
2.510E 00	5.89E-02	3.2E-03	5.330E 00	5.63E-03	1.1E-03	9.780E 00	2.13E-05	2.3E-05
2.570E 00	5.77E-02	3.1E-03	5.430E 00	4.79E-03	1.1E-03	9.940E 00	2.76E-05	1.5E-05
2.630E 00	5.69E-02	3.1E-03	5.530E 00	4.03E-03	1.1E-03	1.010E 01	2.96E-05	1.4E-05
2.690E 00	5.59E-02	3.0E-03	5.630E 00	3.37E-03	1.0E-03	1.026E 01	2.46E-05	1.5E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.8020E 01 MEV

EN-MAX= 0.8940E 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
1.000E 00	1.86E-01	1.3E-02	2.750E 00	9.07E-02	3.6E-03	5.730E 00	2.87E-03	1.3E-03
1.040E 00	1.80E-01	1.3E-02	2.810E 00	8.66E-02	3.5E-03	5.830E 00	2.21E-03	1.2E-03
1.080E 00	1.86E-01	1.2E-02	2.870E 00	8.33E-02	3.5E-03	5.930E 00	2.88E-03	1.1E-03
1.120E 00	2.12E-01	1.0E-02	2.930E 00	8.23E-02	3.3E-03	6.030E 00	3.66E-03	9.6E-04
1.160E 00	2.33E-01	1.1E-02	2.990E 00	8.13E-02	3.3E-03	6.130E 00	3.71E-03	9.4E-04
1.200E 00	2.37E-01	9.4E-03	3.050E 00	7.72E-02	3.3E-03	6.230E 00	3.30E-03	9.3E-04
1.240E 00	2.34E-01	1.0E-02	3.110E 00	7.06E-02	3.2E-03	6.330E 00	3.01E-03	8.5E-04
1.280E 00	2.06E-01	9.7E-03	3.180E 00	6.42E-02	3.2E-03	6.440E 00	2.69E-03	7.4E-04
1.320E 00	1.93E-01	8.0E-03	3.260E 00	6.12E-02	3.1E-03	6.560E 00	2.01E-03	7.1E-04
1.360E 00	1.90E-01	8.2E-03	3.340E 00	6.05E-02	3.0E-03	6.680E 00	1.22E-03	6.3E-04
1.400E 00	1.81E-01	9.9E-03	3.420E 00	5.95E-02	2.9E-03	6.800E 00	6.80E-04	5.5E-04
1.440E 00	1.81E-01	9.6E-03	3.500E 00	5.72E-02	2.8E-03	6.920E 00	3.80E-04	4.8E-04
1.480E 00	1.69E-01	7.1E-03	3.580E 00	5.44E-02	2.8E-03	7.040E 00	3.14E-04	4.1E-04
1.520E 00	1.56E-01	7.9E-03	3.660E 00	5.21E-02	2.8E-03	7.160E 00	4.80E-04	3.1E-04
1.560E 00	1.55E-01	9.7E-03	3.740E 00	4.92E-02	2.7E-03	7.280E 00	7.02E-04	2.5E-04
1.600E 00	1.50E-01	8.7E-03	3.820E 00	4.50E-02	2.6E-03	7.400E 00	7.40E-04	2.4E-04
1.640E 00	1.41E-01	6.8E-03	3.900E 00	4.11E-02	2.5E-03	7.520E 00	5.27E-04	1.9E-04
1.680E 00	1.40E-01	5.9E-03	3.980E 00	4.01E-02	2.4E-03	7.640E 00	2.53E-04	1.5E-04
1.720E 00	1.48E-01	5.7E-03	4.060E 00	3.98E-02	2.4E-03	7.760E 00	9.36E-05	1.4E-04
1.760E 00	1.51E-01	5.8E-03	4.140E 00	3.73E-02	2.4E-03	7.890E 00	6.15E-05	1.3E-04
1.800E 00	1.47E-01	5.9E-03	4.220E 00	3.48E-02	2.3E-03	8.030E 00	1.01E-04	1.1E-04
1.850E 00	1.39E-01	5.7E-03	4.300E 00	3.38E-02	2.2E-03	8.170E 00	1.41E-04	1.0E-04
1.910E 00	1.38E-01	5.3E-03	4.380E 00	3.20E-02	2.2E-03	8.310E 00	1.62E-04	9.1E-05
1.970E 00	1.40E-01	5.1E-03	4.460E 00	2.77E-02	2.1E-03	8.450E 00	1.62E-04	8.0E-05
2.030E 00	1.37E-01	5.1E-03	4.540E 00	2.21E-02	2.1E-03	8.590E 00	1.49E-04	7.2E-05
2.090E 00	1.30E-01	5.2E-03	4.630E 00	1.68E-02	2.1E-03	8.730E 00	1.21E-04	6.4E-05
2.150E 00	1.28E-01	4.9E-03	4.730E 00	1.42E-02	1.9E-03	8.870E 00	9.75E-05	5.6E-05
2.210E 00	1.30E-01	4.9E-03	4.830E 00	1.43E-02	1.8E-03	9.010E 00	7.37E-05	4.5E-05
2.270E 00	1.29E-01	4.6E-03	4.930E 00	1.48E-02	1.7E-03	9.150E 00	5.11E-05	4.1E-05
2.330E 00	1.22E-01	4.4E-03	5.030E 00	1.41E-02	1.6E-03	9.300E 00	2.93E-05	3.6E-05
2.390E 00	1.17E-01	4.2E-03	5.130E 00	1.32E-02	1.6E-03	9.460E 00	1.73E-05	2.9E-05
2.450E 00	1.12E-01	4.1E-03	5.230E 00	1.25E-02	1.5E-03	9.620E 00	1.97E-05	2.3E-05
2.510E 00	1.06E-01	4.0E-03	5.330E 00	1.13E-02	1.4E-03	9.780E 00	2.80E-05	1.9E-05
2.570E 00	1.02E-01	3.9E-03	5.430E 00	9.31E-03	1.3E-03	9.940E 00	2.96E-05	1.4E-05
2.630E 00	9.68E-02	3.8E-03	5.530E 00	7.10E-03	1.2E-03	1.010E 01	2.42E-05	1.3E-05
2.690E 00	9.31E-02	3.7E-03	5.630E 00	4.76E-03	1.3E-03	1.026E 01	1.70E-05	1.3E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.6950E 01 MEV

EN-MAX= 0.8020E 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
1.000E 00	2.24E-01	1.2E-02	2.750E 00	1.07E-01	3.0E-03	5.730E 00	5.88E-03	8.0E-04
1.040E 00	2.15E-01	1.1E-02	2.810E 00	1.04E-01	3.0E-03	5.830E 00	4.33E-03	7.6E-04
1.080E 00	2.22E-01	1.0E-02	2.870E 00	1.00E-01	3.0E-03	5.930E 00	2.97E-03	7.2E-04
1.120E 00	2.54E-01	8.7E-03	2.930E 00	9.47E-02	2.8E-03	6.030E 00	2.43E-03	6.9E-04
1.160E 00	2.69E-01	8.7E-03	2.990E 00	8.69E-02	2.8E-03	6.130E 00	2.56E-03	6.2E-04
1.200E 00	2.58E-01	7.9E-03	3.050E 00	8.20E-02	2.7E-03	6.230E 00	2.64E-03	5.5E-04
1.240E 00	2.55E-01	8.4E-03	3.110E 00	8.03E-02	2.6E-03	6.330E 00	2.63E-03	5.3E-04
1.280E 00	2.40E-01	8.3E-03	3.180E 00	7.45E-02	2.6E-03	6.440E 00	2.33E-03	4.7E-04
1.320E 00	2.21E-01	6.9E-03	3.260E 00	6.80E-02	2.5E-03	6.560E 00	1.75E-03	3.8E-04
1.360E 00	2.12E-01	6.9E-03	3.340E 00	6.64E-02	2.5E-03	6.680E 00	1.08E-03	3.5E-04
1.400E 00	2.02E-01	8.5E-03	3.420E 00	6.73E-02	2.5E-03	6.800E 00	7.81E-04	3.3E-04
1.440E 00	1.83E-01	8.3E-03	3.500E 00	6.99E-02	2.4E-03	6.920E 00	7.73E-04	2.7E-04
1.480E 00	1.66E-01	5.9E-03	3.580E 00	6.83E-02	2.3E-03	7.040E 00	7.53E-04	2.0E-04
1.520E 00	1.69E-01	6.7E-03	3.660E 00	6.28E-02	2.2E-03	7.160E 00	6.51E-04	1.7E-04
1.560E 00	1.71E-01	8.8E-03	3.740E 00	5.65E-02	2.1E-03	7.280E 00	4.92E-04	1.5E-04
1.600E 00	1.69E-01	7.7E-03	3.820E 00	5.01E-02	2.1E-03	7.400E 00	3.22E-04	1.2E-04
1.640E 00	1.71E-01	5.7E-03	3.900E 00	4.48E-02	2.1E-03	7.520E 00	1.86E-04	9.4E-05
1.680E 00	1.69E-01	4.8E-03	3.980E 00	4.10E-02	2.1E-03	7.640E 00	1.33E-04	8.9E-05
1.720E 00	1.67E-01	4.9E-03	4.060E 00	3.79E-02	1.9E-03	7.760E 00	1.44E-04	9.2E-05
1.760E 00	1.69E-01	4.9E-03	4.140E 00	3.47E-02	1.9E-03	7.890E 00	1.53E-04	8.5E-05
1.800E 00	1.69E-01	5.0E-03	4.220E 00	3.14E-02	1.8E-03	8.030E 00	1.09E-04	6.6E-05
1.850E 00	1.64E-01	4.9E-03	4.300E 00	2.94E-02	1.7E-03	8.170E 00	4.89E-05	6.1E-05
1.910E 00	1.64E-01	4.5E-03	4.380E 00	2.87E-02	1.7E-03	8.310E 00	-7.53E-06	5.8E-05
1.970E 00	1.67E-01	4.3E-03	4.460E 00	2.70E-02	1.6E-03	8.450E 00	-3.84E-05	5.5E-05
2.030E 00	1.60E-01	4.3E-03	4.540E 00	2.45E-02	1.5E-03	8.590E 00	-1.91E-05	4.8E-05
2.090E 00	1.55E-01	4.2E-03	4.630E 00	2.25E-02	1.5E-03	8.730E 00	3.91E-05	4.6E-05
2.150E 00	1.52E-01	4.1E-03	4.730E 00	2.10E-02	1.4E-03	8.870E 00	1.07E-04	3.9E-05
2.210E 00	1.45E-01	4.0E-03	4.830E 00	1.80E-02	1.3E-03	9.010E 00	1.42E-04	3.8E-05
2.270E 00	1.46E-01	3.9E-03	4.930E 00	1.42E-02	1.3E-03	9.150E 00	1.19E-04	3.6E-05
2.330E 00	1.44E-01	3.7E-03	5.030E 00	1.19E-02	1.2E-03	9.300E 00	6.81E-05	3.2E-05
2.390E 00	1.33E-01	3.5E-03	5.130E 00	1.06E-02	1.2E-03	9.460E 00	2.72E-05	2.3E-05
2.450E 00	1.28E-01	3.4E-03	5.230E 00	9.30E-03	1.1E-03	9.620E 00	1.73E-05	2.1E-05
2.510E 00	1.28E-01	3.4E-03	5.330E 00	8.21E-03	1.0E-03	9.780E 00	2.34E-05	1.8E-05
2.570E 00	1.23E-01	3.3E-03	5.430E 00	7.72E-03	9.4E-04	9.940E 00	2.59E-05	1.3E-05
2.630E 00	1.14E-01	3.2E-03	5.530E 00	7.29E-03	9.3E-04	1.010E 01	2.21E-05	1.1E-05
2.690E 00	1.09E-01	3.0E-03	5.630E 00	6.79E-03	8.9E-04	1.026E 01	1.51E-05	1.1E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.5970E 01 MEV EN-MAX= 0.6950E 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
1.000E 00	2.22E-01	1.0E-02	2.750E 00	9.74E-02	2.6E-03	5.730E 00	3.83E-03	4.8E-04
1.040E 00	2.30E-01	9.9E-03	2.810E 00	9.30E-02	2.5E-03	5.830E 00	3.13E-03	4.5E-04
1.080E 00	2.24E-01	8.8E-03	2.870E 00	8.81E-02	2.4E-03	5.930E 00	2.26E-03	4.2E-04
1.120E 00	2.31E-01	7.5E-03	2.930E 00	8.53E-02	2.3E-03	6.030E 00	1.45E-03	3.6E-04
1.160E 00	2.55E-01	7.6E-03	2.990E 00	8.24E-02	2.3E-03	6.130E 00	8.83E-04	3.0E-04
1.200E 00	2.57E-01	6.9E-03	3.050E 00	7.82E-02	2.2E-03	6.230E 00	5.85E-04	3.1E-04
1.240E 00	2.31E-01	7.4E-03	3.110E 00	7.31E-02	2.2E-03	6.330E 00	5.16E-04	3.0E-04
1.280E 00	2.12E-01	7.2E-03	3.180E 00	6.64E-02	2.1E-03	6.440E 00	6.23E-04	2.7E-04
1.320E 00	2.11E-01	5.9E-03	3.260E 00	6.14E-02	2.0E-03	6.560E 00	6.84E-04	2.1E-04
1.360E 00	2.02E-01	6.0E-03	3.340E 00	5.88E-02	2.0E-03	6.680E 00	5.67E-04	1.8E-04
1.400E 00	1.81E-01	7.4E-03	3.420E 00	5.50E-02	1.9E-03	6.800E 00	3.75E-04	1.8E-04
1.440E 00	1.60E-01	7.2E-03	3.500E 00	5.16E-02	1.9E-03	6.920E 00	2.30E-04	1.7E-04
1.480E 00	1.52E-01	5.1E-03	3.580E 00	4.88E-02	1.8E-03	7.040E 00	1.46E-04	1.3E-04
1.520E 00	1.46E-01	5.8E-03	3.660E 00	4.66E-02	1.8E-03	7.160E 00	1.02E-04	9.3E-05
1.560E 00	1.46E-01	7.7E-03	3.740E 00	4.53E-02	1.7E-03	7.280E 00	1.01E-04	7.9E-05
1.600E 00	1.51E-01	6.7E-03	3.820E 00	4.23E-02	1.6E-03	7.400E 00	1.05E-04	7.8E-05
1.640E 00	1.53E-01	4.9E-03	3.900E 00	3.80E-02	1.6E-03	7.520E 00	1.07E-04	6.9E-05
1.680E 00	1.51E-01	4.2E-03	3.980E 00	3.56E-02	1.5E-03	7.640E 00	1.06E-04	5.5E-05
1.720E 00	1.53E-01	4.2E-03	4.060E 00	3.35E-02	1.5E-03	7.760E 00	8.49E-05	4.4E-05
1.760E 00	1.57E-01	4.2E-03	4.140E 00	2.93E-02	1.4E-03	7.890E 00	5.46E-05	5.2E-05
1.800E 00	1.57E-01	4.3E-03	4.220E 00	2.43E-02	1.3E-03	8.030E 00	2.49E-05	4.3E-05
1.850E 00	1.52E-01	4.2E-03	4.300E 00	2.08E-02	1.3E-03	8.170E 00	8.49E-06	3.7E-05
1.910E 00	1.46E-01	3.9E-03	4.380E 00	1.93E-02	1.3E-03	8.310E 00	1.55E-05	3.4E-05
1.970E 00	1.47E-01	3.7E-03	4.460E 00	1.84E-02	1.2E-03	8.450E 00	1.82E-05	2.7E-05
2.030E 00	1.44E-01	3.6E-03	4.540E 00	1.68E-02	1.2E-03	8.590E 00	1.91E-05	3.1E-05
2.090E 00	1.38E-01	3.6E-03	4.630E 00	1.47E-02	1.1E-03	8.730E 00	2.45E-05	2.3E-05
2.150E 00	1.37E-01	3.4E-03	4.730E 00	1.33E-02	1.0E-03	8.870E 00	3.01E-05	2.2E-05
2.210E 00	1.37E-01	3.3E-03	4.830E 00	1.16E-02	9.1E-04	9.010E 00	3.49E-05	1.9E-05
2.270E 00	1.35E-01	3.3E-03	4.930E 00	9.34E-03	9.1E-04	9.150E 00	3.11E-05	2.0E-05
2.330E 00	1.37E-01	3.2E-03	5.030E 00	7.72E-03	8.7E-04	9.300E 00	1.92E-05	1.7E-05
2.390E 00	1.36E-01	3.0E-03	5.130E 00	7.13E-03	7.6E-04	9.460E 00	8.54E-06	1.3E-05
2.450E 00	1.27E-01	3.0E-03	5.230E 00	6.69E-03	7.0E-04	9.620E 00	7.05E-06	1.1E-05
2.510E 00	1.18E-01	2.9E-03	5.330E 00	5.90E-03	6.2E-04	9.780E 00	1.00E-05	9.7E-06
2.570E 00	1.07E-01	2.8E-03	5.430E 00	5.06E-03	5.8E-04	9.940E 00	1.29E-05	7.4E-06
2.630E 00	9.73E-02	2.7E-03	5.530E 00	4.47E-03	5.1E-04	1.010E 01	1.41E-05	6.5E-06
2.690E 00	9.69E-02	2.6E-03	5.630E 00	4.19E-03	4.7E-04	1.026E 01	1.26E-05	6.7E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.5020E 01 MEV

EN-MAX= 0.5970E 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
1.000E 00	2.11E-01	1.0E-02	2.750E 00	8.21E-02	2.3E-03	5.730E 00	5.17E-04	3.3E-04
1.040E 00	2.16E-01	9.9E-03	2.810E 00	7.90E-02	2.3E-03	5.830E 00	5.16E-04	4.1E-04
1.080E 00	2.16E-01	8.8E-03	2.870E 00	7.31E-02	2.3E-03	5.930E 00	5.62E-04	3.8E-04
1.120E 00	2.34E-01	8.0E-03	2.930E 00	6.83E-02	2.1E-03	6.030E 00	4.88E-04	2.9E-04
1.160E 00	2.54E-01	7.5E-03	2.990E 00	6.48E-02	2.1E-03	6.130E 00	4.01E-04	2.8E-04
1.200E 00	2.47E-01	6.7E-03	3.050E 00	6.02E-02	2.0E-03	6.230E 00	3.48E-04	3.1E-04
1.240E 00	2.33E-01	7.6E-03	3.110E 00	5.58E-02	1.9E-03	6.330E 00	4.05E-04	3.1E-04
1.280E 00	2.09E-01	7.3E-03	3.180E 00	5.10E-02	1.8E-03	6.440E 00	4.60E-04	2.8E-04
1.320E 00	1.99E-01	5.9E-03	3.260E 00	4.55E-02	1.8E-03	6.560E 00	3.60E-04	2.3E-04
1.360E 00	1.84E-01	6.1E-03	3.340E 00	4.35E-02	1.7E-03	6.680E 00	1.37E-04	1.8E-04
1.400E 00	1.65E-01	7.4E-03	3.420E 00	4.14E-02	1.6E-03	6.800E 00	-8.24E-05	1.9E-04
1.440E 00	1.46E-01	7.4E-03	3.500E 00	3.81E-02	1.7E-03	6.920E 00	-1.60E-04	1.7E-04
1.480E 00	1.30E-01	5.4E-03	3.580E 00	3.50E-02	1.6E-03	7.040E 00	-9.55E-05	1.3E-04
1.520E 00	1.32E-01	6.0E-03	3.660E 00	3.23E-02	1.5E-03	7.160E 00	2.33E-05	9.2E-05
1.560E 00	1.40E-01	7.6E-03	3.740E 00	3.13E-02	1.4E-03	7.280E 00	1.33E-04	8.0E-05
1.600E 00	1.43E-01	6.7E-03	3.820E 00	3.02E-02	1.3E-03	7.400E 00	1.72E-04	6.8E-05
1.640E 00	1.47E-01	5.0E-03	3.900E 00	2.83E-02	1.4E-03	7.520E 00	1.42E-04	6.2E-05
1.680E 00	1.45E-01	4.2E-03	3.980E 00	2.65E-02	1.4E-03	7.640E 00	8.76E-05	6.5E-05
1.720E 00	1.38E-01	4.2E-03	4.060E 00	2.52E-02	1.3E-03	7.760E 00	2.85E-05	5.8E-05
1.760E 00	1.37E-01	4.2E-03	4.140E 00	2.31E-02	1.2E-03	7.890E 00	-1.72E-05	4.4E-05
1.800E 00	1.38E-01	4.3E-03	4.220E 00	2.04E-02	1.2E-03	8.030E 00	-2.12E-05	4.3E-05
1.850E 00	1.37E-01	4.3E-03	4.300E 00	1.81E-02	1.1E-03	8.170E 00	8.14E-06	4.0E-05
1.910E 00	1.36E-01	3.7E-03	4.380E 00	1.58E-02	1.2E-03	8.310E 00	5.09E-05	3.7E-05
1.970E 00	1.32E-01	3.7E-03	4.460E 00	1.33E-02	1.2E-03	8.450E 00	8.13E-05	3.2E-05
2.030E 00	1.24E-01	4.0E-03	4.540E 00	1.11E-02	1.0E-03	8.590E 00	7.90E-05	2.8E-05
2.090E 00	1.22E-01	3.8E-03	4.630E 00	9.69E-03	9.3E-04	8.730E 00	5.01E-05	2.8E-05
2.150E 00	1.24E-01	3.5E-03	4.730E 00	8.37E-03	9.0E-04	8.870E 00	1.74E-05	2.3E-05
2.210E 00	1.24E-01	3.4E-03	4.830E 00	6.56E-03	8.1E-04	9.010E 00	6.11E-07	1.8E-05
2.270E 00	1.20E-01	3.0E-03	4.930E 00	5.00E-03	8.7E-04	9.150E 00	5.65E-08	1.4E-05
2.330E 00	1.15E-01	3.0E-03	5.030E 00	4.46E-03	7.5E-04	9.300E 00	6.72E-06	1.3E-05
2.390E 00	1.12E-01	2.9E-03	5.130E 00	4.11E-03	5.5E-04	9.460E 00	1.47E-05	1.2E-05
2.450E 00	1.07E-01	2.8E-03	5.230E 00	3.11E-03	5.1E-04	9.620E 00	1.90E-05	1.2E-05
2.510E 00	1.02E-01	2.6E-03	5.330E 00	1.82E-03	5.5E-04	9.780E 00	2.15E-05	1.0E-05
2.570E 00	9.61E-02	2.7E-03	5.430E 00	9.56E-04	5.8E-04	9.940E 00	2.07E-05	7.7E-06
2.630E 00	8.91E-02	2.5E-03	5.530E 00	6.31E-04	5.0E-04	1.010E 01	1.65E-05	6.2E-06
2.690E 00	8.41E-02	2.4E-03	5.630E 00	5.57E-04	4.0E-04	1.026E 01	1.12E-05	5.6E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.3970E 01 MEV

EN-MAX= 0.5020E 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
1.000E 00	2.01E-01	7.6E-03	2.750E 00	6.03E-02	1.5E-03	5.730E 00	1.70E-04	3.3E-04
1.040E 00	1.97E-01	7.5E-03	2.810E 00	5.90E-02	1.5E-03	5.830E 00	8.46E-05	2.8E-04
1.080E 00	2.05E-01	6.5E-03	2.870E 00	5.71E-02	1.4E-03	5.930E 00	9.07E-05	2.7E-04
1.120E 00	2.14E-01	5.7E-03	2.930E 00	5.46E-02	1.4E-03	6.030E 00	1.51E-04	2.8E-04
1.160E 00	2.43E-01	5.8E-03	2.990E 00	5.14E-02	1.3E-03	6.130E 00	2.52E-04	2.8E-04
1.200E 00	2.51E-01	4.9E-03	3.050E 00	4.83E-02	1.3E-03	6.230E 00	3.17E-04	2.5E-04
1.240E 00	2.29E-01	5.6E-03	3.110E 00	4.51E-02	1.2E-03	6.330E 00	2.95E-04	2.2E-04
1.280E 00	2.05E-01	5.2E-03	3.180E 00	4.04E-02	1.2E-03	6.440E 00	1.94E-04	2.0E-04
1.320E 00	1.85E-01	4.2E-03	3.260E 00	3.48E-02	1.1E-03	6.560E 00	1.18E-04	1.9E-04
1.360E 00	1.78E-01	4.2E-03	3.340E 00	3.05E-02	1.0E-03	6.680E 00	6.45E-05	1.7E-04
1.400E 00	1.72E-01	5.3E-03	3.420E 00	2.94E-02	1.0E-03	6.800E 00	4.94E-05	1.5E-04
1.440E 00	1.49E-01	5.5E-03	3.500E 00	2.88E-02	9.4E-04	6.920E 00	5.70E-05	1.2E-04
1.480E 00	1.28E-01	3.5E-03	3.580E 00	2.71E-02	8.9E-04	7.040E 00	7.65E-05	9.3E-05
1.520E 00	1.21E-01	4.1E-03	3.660E 00	2.55E-02	8.7E-04	7.160E 00	7.97E-05	7.6E-05
1.560E 00	1.21E-01	5.6E-03	3.740E 00	2.44E-02	8.0E-04	7.280E 00	6.74E-05	7.2E-05
1.600E 00	1.22E-01	4.9E-03	3.820E 00	2.23E-02	7.6E-04	7.400E 00	6.36E-05	6.3E-05
1.640E 00	1.24E-01	3.5E-03	3.900E 00	1.85E-02	7.4E-04	7.520E 00	7.35E-05	5.0E-05
1.680E 00	1.24E-01	2.9E-03	3.980E 00	1.49E-02	6.8E-04	7.640E 00	7.74E-05	4.8E-05
1.720E 00	1.22E-01	2.9E-03	4.060E 00	1.25E-02	6.1E-04	7.760E 00	6.91E-05	5.2E-05
1.760E 00	1.19E-01	2.9E-03	4.140E 00	1.03E-02	6.3E-04	7.890E 00	5.04E-05	4.8E-05
1.800E 00	1.18E-01	2.9E-03	4.220E 00	8.16E-03	5.7E-04	8.030E 00	3.20E-05	3.5E-05
1.850E 00	1.20E-01	2.9E-03	4.300E 00	6.45E-03	4.8E-04	8.170E 00	1.97E-05	3.1E-05
1.910E 00	1.21E-01	2.5E-03	4.380E 00	5.16E-03	4.6E-04	8.310E 00	1.56E-05	2.9E-05
1.970E 00	1.19E-01	2.5E-03	4.460E 00	3.94E-03	4.5E-04	8.450E 00	1.81E-05	2.3E-05
2.030E 00	1.11E-01	2.5E-03	4.540E 00	2.69E-03	4.5E-04	8.590E 00	2.22E-05	1.9E-05
2.090E 00	1.07E-01	2.5E-03	4.630E 00	1.55E-03	4.7E-04	8.730E 00	1.84E-05	2.0E-05
2.150E 00	1.07E-01	2.3E-03	4.730E 00	9.25E-04	4.4E-04	8.870E 00	1.18E-05	1.9E-05
2.210E 00	1.02E-01	2.2E-03	4.830E 00	6.12E-04	3.6E-04	9.010E 00	8.94E-06	1.5E-05
2.270E 00	9.70E-02	2.1E-03	4.930E 00	4.11E-04	3.8E-04	9.150E 00	1.17E-05	1.2E-05
2.330E 00	9.56E-02	2.1E-03	5.030E 00	4.45E-04	3.6E-04	9.300E 00	1.46E-05	1.2E-05
2.390E 00	9.12E-02	1.9E-03	5.130E 00	7.07E-04	3.3E-04	9.460E 00	1.30E-05	1.1E-05
2.450E 00	8.49E-02	1.8E-03	5.230E 00	8.88E-04	3.7E-04	9.620E 00	9.40E-06	9.7E-06
2.510E 00	7.91E-02	1.8E-03	5.330E 00	8.73E-04	3.7E-04	9.780E 00	7.21E-06	7.1E-06
2.570E 00	7.24E-02	1.7E-03	5.430E 00	7.44E-04	3.5E-04	9.940E 00	7.43E-06	5.1E-06
2.630E 00	6.57E-02	1.6E-03	5.530E 00	5.41E-04	3.5E-04	1.010E 01	6.72E-06	5.1E-06
2.690E 00	6.18E-02	1.6E-03	5.630E 00	3.31E-04	3.5E-04	1.026E 01	5.26E-06	4.9E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.2980E 01 MEV

EN-MAX= 0.3970E 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
1.000E 00	1.84E-01	5.4E-03	2.750E 00	4.25E-02	8.5E-04	5.730E 00	2.37E-04	2.1E-04
1.040E 00	1.81E-01	5.1E-03	2.810E 00	3.97E-02	8.3E-04	5.830E 00	2.04E-04	1.9E-04
1.080E 00	1.96E-01	4.4E-03	2.870E 00	3.57E-02	7.7E-04	5.930E 00	2.12E-04	1.8E-04
1.120E 00	2.07E-01	3.8E-03	2.930E 00	3.14E-02	7.0E-04	6.030E 00	2.74E-04	1.7E-04
1.160E 00	2.18E-01	3.9E-03	2.990E 00	2.72E-02	6.6E-04	6.130E 00	3.29E-04	1.6E-04
1.200E 00	2.23E-01	3.4E-03	3.050E 00	2.35E-02	6.2E-04	6.230E 00	3.58E-04	1.2E-04
1.240E 00	2.11E-01	3.7E-03	3.110E 00	2.02E-02	5.8E-04	6.330E 00	2.75E-04	9.7E-05
1.280E 00	1.88E-01	3.6E-03	3.180E 00	1.66E-02	5.3E-04	6.440E 00	1.29E-04	9.8E-05
1.320E 00	1.69E-01	2.9E-03	3.260E 00	1.26E-02	5.0E-04	6.560E 00	-3.54E-05	8.8E-05
1.360E 00	1.58E-01	2.9E-03	3.340E 00	9.70E-03	4.4E-04	6.680E 00	-1.78E-04	4.8E-05
1.400E 00	1.45E-01	3.7E-03	3.420E 00	7.76E-03	4.0E-04	6.800E 00	-1.55E-04	7.2E-05
1.440E 00	1.28E-01	3.7E-03	3.500E 00	5.95E-03	3.9E-04	6.920E 00	-9.32E-05	6.4E-05
1.480E 00	1.10E-01	2.4E-03	3.580E 00	4.52E-03	3.8E-04	7.040E 00	-3.53E-05	5.7E-05
1.520E 00	9.83E-02	2.7E-03	3.660E 00	3.53E-03	3.6E-04	7.160E 00	6.19E-07	4.1E-05
1.560E 00	9.64E-02	3.9E-03	3.740E 00	2.64E-03	3.5E-04	7.280E 00	1.45E-05	4.9E-05
1.600E 00	9.89E-02	3.3E-03	3.820E 00	1.97E-03	3.4E-04	7.400E 00	3.72E-05	4.2E-05
1.640E 00	1.01E-01	2.3E-03	3.900E 00	1.75E-03	3.2E-04	7.520E 00	4.90E-05	3.5E-05
1.680E 00	1.01E-01	1.9E-03	3.980E 00	1.79E-03	3.2E-04	7.640E 00	3.80E-05	2.9E-05
1.720E 00	1.01E-01	1.9E-03	4.060E 00	1.66E-03	3.2E-04	7.760E 00	2.19E-05	2.6E-05
1.760E 00	1.01E-01	1.9E-03	4.140E 00	1.19E-03	3.2E-04	7.890E 00	9.37E-06	2.3E-05
1.800E 00	9.90E-02	2.0E-03	4.220E 00	7.45E-04	3.2E-04	8.030E 00	9.32E-06	2.0E-05
1.850E 00	9.66E-02	1.9E-03	4.300E 00	6.84E-04	3.3E-04	8.170E 00	1.81E-05	1.8E-05
1.910E 00	9.63E-02	1.7E-03	4.380E 00	9.01E-04	3.3E-04	8.310E 00	2.50E-05	1.5E-05
1.970E 00	9.59E-02	1.7E-03	4.460E 00	1.05E-03	3.0E-04	8.450E 00	2.41E-05	1.3E-05
2.030E 00	9.22E-02	1.6E-03	4.540E 00	1.09E-03	2.9E-04	8.590E 00	1.69E-05	1.0E-05
2.090E 00	8.55E-02	1.5E-03	4.630E 00	1.08E-03	2.9E-04	8.730E 00	8.03E-06	6.8E-06
2.150E 00	8.37E-02	1.5E-03	4.730E 00	8.60E-04	2.7E-04	8.870E 00	2.33E-06	5.7E-06
2.210E 00	8.56E-02	1.4E-03	4.830E 00	4.44E-04	2.9E-04	9.010E 00	-7.87E-07	5.7E-06
2.270E 00	8.35E-02	1.4E-03	4.930E 00	2.40E-04	2.8E-04	9.150E 00	-1.61E-06	5.8E-06
2.330E 00	8.26E-02	1.3E-03	5.030E 00	4.15E-04	2.6E-04	9.300E 00	-1.84E-07	4.2E-06
2.390E 00	8.15E-02	1.2E-03	5.130E 00	6.27E-04	2.5E-04	9.460E 00	1.51E-06	3.9E-06
2.450E 00	7.54E-02	1.2E-03	5.230E 00	5.82E-04	2.4E-04	9.620E 00	3.79E-06	4.0E-06
2.510E 00	6.75E-02	1.1E-03	5.330E 00	3.78E-04	2.4E-04	9.780E 00	4.39E-06	3.8E-06
2.570E 00	5.83E-02	1.0E-03	5.430E 00	2.23E-04	2.3E-04	9.940E 00	4.33E-06	2.8E-06
2.630E 00	4.96E-02	9.3E-04	5.530E 00	2.06E-04	2.2E-04	1.010E 01	3.23E-06	2.7E-06
2.690E 00	4.47E-02	8.7E-04	5.630E 00	2.48E-04	2.2E-04	1.026E 01	2.37E-06	2.8E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.2010E 01 MEV

EN-MAX= 0.2980E 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
1.000E 00	1.77E-01	3.0E-03	2.750E 00	6.25E-03	2.7E-04	5.730E 00	4.96E-04	1.2E-04
1.040E 00	1.83E-01	2.9E-03	2.810E 00	5.33E-03	2.6E-04	5.830E 00	4.28E-04	1.2E-04
1.080E 00	1.69E-01	2.5E-03	2.870E 00	4.71E-03	2.6E-04	5.930E 00	4.07E-04	1.2E-04
1.120E 00	1.71E-01	2.2E-03	2.930E 00	4.47E-03	2.5E-04	6.030E 00	3.70E-04	1.1E-04
1.160E 00	1.92E-01	2.2E-03	2.990E 00	4.37E-03	2.5E-04	6.130E 00	3.49E-04	1.1E-04
1.200E 00	2.13E-01	2.0E-03	3.050E 00	4.20E-03	2.5E-04	6.230E 00	3.57E-04	1.0E-04
1.240E 00	2.09E-01	2.1E-03	3.110E 00	3.99E-03	2.4E-04	6.330E 00	3.67E-04	1.0E-04
1.280E 00	1.84E-01	2.0E-03	3.180E 00	3.82E-03	2.3E-04	6.440E 00	3.27E-04	9.6E-05
1.320E 00	1.59E-01	1.6E-03	3.260E 00	3.74E-03	2.3E-04	6.560E 00	2.30E-04	8.3E-05
1.360E 00	1.44E-01	1.6E-03	3.340E 00	3.69E-03	2.3E-04	6.680E 00	1.22E-04	7.3E-05
1.400E 00	1.39E-01	2.1E-03	3.420E 00	3.22E-03	2.2E-04	6.800E 00	6.31E-05	6.7E-05
1.440E 00	1.31E-01	2.2E-03	3.500E 00	2.63E-03	2.2E-04	6.920E 00	6.20E-05	5.9E-05
1.480E 00	1.06E-01	1.3E-03	3.580E 00	2.63E-03	2.1E-04	7.040E 00	8.01E-05	4.7E-05
1.520E 00	7.86E-02	1.4E-03	3.660E 00	2.83E-03	2.1E-04	7.160E 00	8.54E-05	4.1E-05
1.560E 00	6.61E-02	2.2E-03	3.740E 00	2.89E-03	2.0E-04	7.280E 00	7.79E-05	3.3E-05
1.600E 00	6.75E-02	1.8E-03	3.820E 00	2.90E-03	2.0E-04	7.400E 00	6.49E-05	2.6E-05
1.640E 00	7.24E-02	1.2E-03	3.900E 00	2.75E-03	2.0E-04	7.520E 00	4.58E-05	2.1E-05
1.680E 00	7.57E-02	9.3E-04	3.980E 00	2.45E-03	2.0E-04	7.640E 00	2.64E-05	1.8E-05
1.720E 00	7.73E-02	9.3E-04	4.060E 00	2.22E-03	1.9E-04	7.760E 00	1.52E-05	1.5E-05
1.760E 00	7.79E-02	9.3E-04	4.140E 00	2.16E-03	1.9E-04	7.890E 00	1.64E-05	1.4E-05
1.800E 00	7.69E-02	9.5E-04	4.220E 00	2.07E-03	1.8E-04	8.030E 00	2.64E-05	1.0E-05
1.850E 00	7.29E-02	9.1E-04	4.300E 00	1.87E-03	1.8E-04	8.170E 00	2.92E-05	8.4E-06
1.910E 00	6.70E-02	7.7E-04	4.380E 00	1.75E-03	1.7E-04	8.310E 00	2.12E-05	7.5E-06
1.970E 00	6.12E-02	7.1E-04	4.460E 00	1.71E-03	1.7E-04	8.450E 00	9.19E-06	5.5E-06
2.030E 00	5.43E-02	6.6E-04	4.540E 00	1.66E-03	1.7E-04	8.590E 00	1.20E-06	4.4E-06
2.090E 00	4.72E-02	6.2E-04	4.630E 00	1.53E-03	1.7E-04	8.730E 00	-9.61E-07	4.1E-06
2.150E 00	4.20E-02	5.6E-04	4.730E 00	1.40E-03	1.6E-04	8.870E 00	-1.25E-06	3.0E-06
2.210E 00	3.81E-02	5.2E-04	4.830E 00	1.28E-03	1.6E-04	9.010E 00	-5.95E-07	2.3E-06
2.270E 00	3.34E-02	4.9E-04	4.930E 00	1.06E-03	1.5E-04	9.150E 00	-1.61E-07	2.0E-06
2.330E 00	2.85E-02	4.5E-04	5.030E 00	8.74E-04	1.5E-04	9.300E 00	3.37E-07	1.8E-06
2.390E 00	2.43E-02	4.1E-04	5.130E 00	8.59E-04	1.5E-04	9.460E 00	8.94E-07	1.7E-06
2.450E 00	2.08E-02	3.8E-04	5.230E 00	8.91E-04	1.4E-04	9.620E 00	7.91E-07	1.8E-06
2.510E 00	1.66E-02	3.6E-04	5.330E 00	8.45E-04	1.4E-04	9.780E 00	6.61E-07	1.6E-06
2.570E 00	1.24E-02	3.2E-04	5.430E 00	7.89E-04	1.3E-04	9.940E 00	4.94E-07	1.2E-06
2.630E 00	9.42E-03	3.0E-04	5.530E 00	7.44E-04	1.3E-04	1.010E 01	1.62E-07	1.1E-06
2.690E 00	7.53E-03	2.9E-04	5.630E 00	6.31E-04	1.3E-04	1.026E 01	1.06E-07	1.2E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.1000E 01 MEV

EN-MAX= 0.2010E 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
1.000E 00	7.41E-02	1.1E-03	2.750E 00	7.17E-03	1.8E-04	5.730E 00	8.18E-04	7.8E-05
1.040E 00	6.41E-02	1.0E-03	2.810E 00	7.04E-03	1.8E-04	5.830E 00	6.94E-04	7.9E-05
1.080E 00	6.17E-02	8.6E-04	2.870E 00	7.00E-03	1.8E-04	5.930E 00	6.02E-04	7.1E-05
1.120E 00	7.36E-02	7.7E-04	2.930E 00	6.76E-03	1.7E-04	6.030E 00	5.29E-04	6.5E-05
1.160E 00	8.67E-02	7.7E-04	2.990E 00	6.49E-03	1.7E-04	6.130E 00	4.64E-04	6.2E-05
1.200E 00	8.60E-02	6.9E-04	3.050E 00	6.39E-03	1.7E-04	6.230E 00	4.10E-04	5.8E-05
1.240E 00	7.54E-02	7.1E-04	3.110E 00	6.32E-03	1.6E-04	6.330E 00	3.70E-04	5.5E-05
1.280E 00	6.26E-02	6.6E-04	3.180E 00	5.95E-03	1.6E-04	6.440E 00	3.32E-04	5.0E-05
1.320E 00	5.19E-02	5.3E-04	3.260E 00	5.36E-03	1.6E-04	6.560E 00	2.93E-04	4.4E-05
1.360E 00	4.72E-02	5.2E-04	3.340E 00	5.20E-03	1.6E-04	6.680E 00	2.56E-04	3.7E-05
1.400E 00	4.35E-02	6.4E-04	3.420E 00	5.13E-03	1.5E-04	6.800E 00	2.15E-04	3.2E-05
1.440E 00	3.61E-02	6.6E-04	3.500E 00	4.93E-03	1.5E-04	6.920E 00	1.65E-04	2.9E-05
1.480E 00	2.71E-02	3.9E-04	3.580E 00	4.75E-03	1.5E-04	7.040E 00	1.21E-04	2.3E-05
1.520E 00	2.03E-02	4.3E-04	3.660E 00	4.74E-03	1.4E-04	7.160E 00	9.49E-05	1.7E-05
1.560E 00	1.71E-02	6.5E-04	3.740E 00	4.72E-03	1.4E-04	7.280E 00	7.97E-05	1.3E-05
1.600E 00	1.60E-02	5.5E-04	3.820E 00	4.37E-03	1.4E-04	7.400E 00	6.44E-05	1.1E-05
1.640E 00	1.58E-02	3.6E-04	3.900E 00	3.92E-03	1.4E-04	7.520E 00	4.63E-05	9.3E-06
1.680E 00	1.57E-02	2.9E-04	3.980E 00	3.66E-03	1.4E-04	7.640E 00	2.93E-05	7.4E-06
1.720E 00	1.53E-02	2.9E-04	4.060E 00	3.54E-03	1.3E-04	7.760E 00	1.85E-05	6.1E-06
1.760E 00	1.45E-02	2.9E-04	4.140E 00	3.34E-03	1.3E-04	7.890E 00	1.37E-05	5.2E-06
1.800E 00	1.34E-02	2.9E-04	4.220E 00	3.06E-03	1.2E-04	8.030E 00	1.08E-05	4.2E-06
1.850E 00	1.21E-02	2.8E-04	4.300E 00	2.81E-03	1.2E-04	8.170E 00	7.39E-06	3.2E-06
1.910E 00	1.09E-02	2.5E-04	4.380E 00	2.62E-03	1.2E-04	8.310E 00	3.43E-06	2.8E-06
1.970E 00	1.02E-02	2.4E-04	4.460E 00	2.48E-03	1.1E-04	8.450E 00	1.53E-06	2.3E-06
2.030E 00	9.95E-03	2.4E-04	4.540E 00	2.39E-03	1.1E-04	8.590E 00	9.92E-07	1.6E-06
2.090E 00	9.53E-03	2.4E-04	4.630E 00	2.30E-03	1.1E-04	8.730E 00	1.50E-06	1.4E-06
2.150E 00	9.20E-03	2.3E-04	4.730E 00	2.11E-03	1.1E-04	8.870E 00	1.58E-06	1.2E-06
2.210E 00	9.08E-03	2.2E-04	4.830E 00	1.95E-03	1.0E-04	9.010E 00	1.00E-06	1.1E-06
2.270E 00	8.96E-03	2.1E-04	4.930E 00	1.83E-03	9.7E-05	9.150E 00	7.83E-07	8.0E-07
2.330E 00	8.70E-03	2.1E-04	5.030E 00	1.60E-03	9.4E-05	9.300E 00	6.72E-07	7.5E-07
2.390E 00	8.20E-03	2.0E-04	5.130E 00	1.38E-03	9.2E-05	9.460E 00	8.62E-07	8.8E-07
2.450E 00	8.06E-03	2.0E-04	5.230E 00	1.29E-03	9.0E-05	9.620E 00	8.50E-07	8.1E-07
2.510E 00	8.10E-03	2.0E-04	5.330E 00	1.23E-03	8.9E-05	9.780E 00	6.57E-07	6.5E-07
2.570E 00	7.90E-03	1.9E-04	5.430E 00	1.14E-03	8.4E-05	9.940E 00	5.44E-07	4.7E-07
2.630E 00	7.66E-03	1.9E-04	5.530E 00	1.04E-03	8.0E-05	1.010E 01	4.27E-07	5.0E-07
2.690E 00	7.45E-03	1.8E-04	5.630E 00	9.45E-04	7.8E-05	1.026E 01	3.24E-07	4.6E-07

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.7000E 00 MEV

EN-MAX= 0.1000E 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
1.000E 00	1.24E-02	7.8E-04	2.750E 00	7.23E-03	2.1E-04	5.730E 00	7.13E-04	8.0E-05
1.040E 00	1.30E-02	7.5E-04	2.810E 00	6.87E-03	2.1E-04	5.830E 00	6.71E-04	7.8E-05
1.080E 00	1.17E-02	6.5E-04	2.870E 00	6.73E-03	2.1E-04	5.930E 00	5.96E-04	7.5E-05
1.120E 00	1.17E-02	5.6E-04	2.930E 00	6.63E-03	2.0E-04	6.030E 00	4.93E-04	7.2E-05
1.160E 00	1.20E-02	5.6E-04	2.990E 00	6.50E-03	2.0E-04	6.130E 00	4.03E-04	6.5E-05
1.200E 00	1.16E-02	5.0E-04	3.050E 00	6.35E-03	2.0E-04	6.230E 00	3.39E-04	6.0E-05
1.240E 00	1.21E-02	5.6E-04	3.110E 00	6.13E-03	2.0E-04	6.330E 00	3.09E-04	5.8E-05
1.280E 00	1.25E-02	5.6E-04	3.180E 00	5.76E-03	2.0E-04	6.440E 00	3.10E-04	5.3E-05
1.320E 00	1.32E-02	4.6E-04	3.260E 00	5.56E-03	1.9E-04	6.560E 00	3.21E-04	4.6E-05
1.360E 00	1.37E-02	4.8E-04	3.340E 00	5.48E-03	1.9E-04	6.680E 00	2.87E-04	3.7E-05
1.400E 00	1.36E-02	5.9E-04	3.420E 00	5.12E-03	1.8E-04	6.800E 00	2.06E-04	3.2E-05
1.440E 00	1.31E-02	5.8E-04	3.500E 00	4.92E-03	1.8E-04	6.920E 00	1.23E-04	2.8E-05
1.480E 00	1.27E-02	4.1E-04	3.580E 00	4.83E-03	1.7E-04	7.040E 00	6.97E-05	2.1E-05
1.520E 00	1.24E-02	4.7E-04	3.660E 00	4.67E-03	1.7E-04	7.160E 00	4.32E-05	1.4E-05
1.560E 00	1.20E-02	6.1E-04	3.740E 00	4.44E-03	1.7E-04	7.280E 00	2.97E-05	9.2E-06
1.600E 00	1.16E-02	5.2E-04	3.820E 00	4.15E-03	1.6E-04	7.400E 00	1.96E-05	7.3E-06
1.640E 00	1.16E-02	3.9E-04	3.900E 00	3.88E-03	1.7E-04	7.520E 00	9.75E-06	5.4E-06
1.680E 00	1.17E-02	3.4E-04	3.980E 00	3.62E-03	1.6E-04	7.640E 00	1.98E-06	4.3E-06
1.720E 00	1.16E-02	3.4E-04	4.060E 00	3.47E-03	1.5E-04	7.760E 00	-1.94E-06	3.5E-06
1.760E 00	1.11E-02	3.4E-04	4.140E 00	3.35E-03	1.5E-04	7.890E 00	-2.18E-06	3.0E-06
1.800E 00	1.10E-02	3.4E-04	4.220E 00	3.18E-03	1.5E-04	8.030E 00	1.45E-07	2.5E-06
1.850E 00	1.11E-02	3.3E-04	4.300E 00	2.93E-03	1.4E-04	8.170E 00	2.80E-06	2.2E-06
1.910E 00	1.07E-02	3.0E-04	4.380E 00	2.69E-03	1.4E-04	8.310E 00	4.83E-06	1.6E-06
1.970E 00	9.87E-03	2.9E-04	4.460E 00	2.56E-03	1.3E-04	8.450E 00	4.41E-06	1.2E-06
2.030E 00	9.44E-03	2.9E-04	4.540E 00	2.42E-03	1.3E-04	8.590E 00	3.42E-06	1.2E-06
2.090E 00	9.31E-03	2.9E-04	4.630E 00	2.14E-03	1.3E-04	8.730E 00	2.05E-06	1.3E-06
2.150E 00	9.16E-03	2.8E-04	4.730E 00	1.92E-03	1.2E-04	8.870E 00	7.92E-07	8.1E-07
2.210E 00	9.12E-03	2.8E-04	4.830E 00	1.81E-03	1.2E-04	9.010E 00	1.18E-07	4.8E-07
2.270E 00	9.12E-03	2.6E-04	4.930E 00	1.68E-03	1.1E-04	9.150E 00	-2.83E-07	3.4E-07
2.330E 00	9.26E-03	2.6E-04	5.030E 00	1.51E-03	1.1E-04	9.300E 00	-7.43E-07	3.7E-07
2.390E 00	9.02E-03	2.5E-04	5.130E 00	1.38E-03	1.0E-04	9.460E 00	-7.66E-07	2.8E-07
2.450E 00	8.70E-03	2.4E-04	5.230E 00	1.29E-03	9.7E-05	9.620E 00	-5.71E-07	1.9E-07
2.510E 00	8.68E-03	2.4E-04	5.330E 00	1.14E-03	9.4E-05	9.780E 00	-3.09E-07	9.6E-08
2.570E 00	8.40E-03	2.3E-04	5.430E 00	9.45E-04	9.2E-05	9.940E 00	-1.24E-07	3.7E-08
2.630E 00	8.00E-03	2.3E-04	5.530E 00	8.15E-04	9.1E-05	1.010E 01	-3.82E-08	1.1E-08
2.690E 00	7.66E-03	2.2E-04	5.630E 00	7.56E-04	8.6E-05	1.026E 01	-9.22E-09	2.6E-09

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.5010E 00 MEV

EN-MAX= 0.7000E 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
1.000E 00	1.52E-02	1.0E-03	2.750E 00	8.90E-03	2.8E-04	5.730E 00	6.89E-04	1.1E-04
1.040E 00	1.40E-02	9.8E-04	2.810E 00	8.68E-03	2.8E-04	5.830E 00	6.60E-04	1.1E-04
1.080E 00	1.32E-02	9.1E-04	2.870E 00	8.50E-03	2.8E-04	5.930E 00	6.35E-04	1.0E-04
1.120E 00	1.26E-02	7.7E-04	2.930E 00	8.28E-03	2.7E-04	6.030E 00	6.50E-04	9.4E-05
1.160E 00	1.43E-02	7.5E-04	2.990E 00	8.10E-03	2.6E-04	6.130E 00	6.71E-04	9.0E-05
1.200E 00	1.42E-02	7.0E-04	3.050E 00	7.88E-03	2.7E-04	6.230E 00	6.23E-04	8.3E-05
1.240E 00	1.35E-02	7.3E-04	3.110E 00	7.35E-03	2.6E-04	6.330E 00	5.03E-04	7.6E-05
1.280E 00	1.43E-02	7.3E-04	3.180E 00	6.79E-03	2.6E-04	6.440E 00	3.35E-04	6.6E-05
1.320E 00	1.48E-02	6.1E-04	3.260E 00	6.72E-03	2.5E-04	6.560E 00	1.90E-04	5.7E-05
1.360E 00	1.55E-02	6.2E-04	3.340E 00	6.61E-03	2.5E-04	6.680E 00	1.22E-04	4.9E-05
1.400E 00	1.55E-02	7.7E-04	3.420E 00	6.20E-03	2.4E-04	6.800E 00	1.13E-04	4.1E-05
1.440E 00	1.47E-02	7.4E-04	3.500E 00	5.75E-03	2.3E-04	6.920E 00	1.14E-04	3.3E-05
1.480E 00	1.44E-02	5.4E-04	3.580E 00	5.54E-03	2.2E-04	7.040E 00	9.54E-05	2.4E-05
1.520E 00	1.42E-02	6.1E-04	3.660E 00	5.45E-03	2.3E-04	7.160E 00	6.09E-05	1.6E-05
1.560E 00	1.36E-02	7.8E-04	3.740E 00	5.24E-03	2.2E-04	7.280E 00	2.99E-05	1.0E-05
1.600E 00	1.34E-02	6.9E-04	3.820E 00	4.97E-03	2.2E-04	7.400E 00	1.04E-05	6.7E-06
1.640E 00	1.37E-02	5.2E-04	3.900E 00	4.70E-03	2.2E-04	7.520E 00	2.62E-06	5.2E-06
1.680E 00	1.42E-02	4.5E-04	3.980E 00	4.38E-03	2.1E-04	7.640E 00	1.48E-06	3.9E-06
1.720E 00	1.43E-02	4.5E-04	4.060E 00	4.00E-03	2.0E-04	7.760E 00	3.96E-06	3.1E-06
1.760E 00	1.37E-02	4.5E-04	4.140E 00	3.73E-03	2.0E-04	7.890E 00	7.32E-06	2.4E-06
1.800E 00	1.32E-02	4.6E-04	4.220E 00	3.60E-03	2.0E-04	8.030E 00	8.33E-06	2.0E-06
1.850E 00	1.34E-02	4.5E-04	4.300E 00	3.46E-03	1.9E-04	8.170E 00	6.55E-06	1.4E-06
1.910E 00	1.32E-02	4.1E-04	4.380E 00	3.30E-03	1.9E-04	8.310E 00	2.23E-06	9.0E-07
1.970E 00	1.21E-02	3.9E-04	4.460E 00	3.12E-03	1.8E-04	8.450E 00	-6.10E-07	8.2E-07
2.030E 00	1.17E-02	3.9E-04	4.540E 00	2.91E-03	1.7E-04	8.590E 00	-2.96E-06	1.1E-06
2.090E 00	1.11E-02	3.9E-04	4.630E 00	2.66E-03	1.7E-04	8.730E 00	-3.55E-06	9.8E-07
2.150E 00	1.07E-02	3.9E-04	4.730E 00	2.44E-03	1.7E-04	8.870E 00	-2.65E-06	4.6E-07
2.210E 00	1.10E-02	3.8E-04	4.830E 00	2.20E-03	1.6E-04	9.010E 00	-8.36E-07	1.0E-06
2.270E 00	1.10E-02	3.6E-04	4.930E 00	1.93E-03	1.5E-04	9.150E 00	1.53E-07	9.1E-07
2.330E 00	1.04E-02	3.4E-04	5.030E 00	1.77E-03	1.4E-04	9.300E 00	7.86E-07	7.6E-07
2.390E 00	1.02E-02	3.3E-04	5.130E 00	1.65E-03	1.4E-04	9.460E 00	7.77E-07	6.6E-07
2.450E 00	9.88E-03	3.1E-04	5.230E 00	1.40E-03	1.3E-04	9.620E 00	4.59E-07	7.1E-07
2.510E 00	9.53E-03	3.1E-04	5.330E 00	1.16E-03	1.3E-04	9.780E 00	2.41E-07	4.3E-07
2.570E 00	9.48E-03	3.0E-04	5.430E 00	1.01E-03	1.2E-04	9.940E 00	9.47E-08	1.9E-07
2.630E 00	9.45E-03	3.0E-04	5.530E 00	8.60E-04	1.2E-04	1.010E 01	2.88E-08	6.3E-08
2.690E 00	9.20E-03	2.9E-04	5.630E 00	7.39E-04	1.1E-04	1.026E 01	6.91E-09	1.6E-08

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.4000E 00 MEV EN-MAX= 0.5010E 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
1.000E 00	1.70E-02	1.8E-03	2.750E 00	1.03E-02	5.1E-04	5.730E 00	9.31E-04	2.1E-04
1.040E 00	1.58E-02	1.7E-03	2.810E 00	1.01E-02	5.0E-04	5.830E 00	6.08E-04	1.9E-04
1.080E 00	1.41E-02	1.5E-03	2.870E 00	9.29E-03	4.9E-04	5.930E 00	4.14E-04	1.9E-04
1.120E 00	1.53E-02	1.4E-03	2.930E 00	8.69E-03	4.7E-04	6.030E 00	4.33E-04	1.8E-04
1.160E 00	1.77E-02	1.3E-03	2.990E 00	8.27E-03	4.7E-04	6.130E 00	5.43E-04	1.6E-04
1.200E 00	1.74E-02	1.2E-03	3.050E 00	7.93E-03	4.7E-04	6.230E 00	6.17E-04	1.4E-04
1.240E 00	1.58E-02	1.2E-03	3.110E 00	7.67E-03	4.6E-04	6.330E 00	5.88E-04	1.3E-04
1.280E 00	1.71E-02	1.2E-03	3.180E 00	7.41E-03	4.5E-04	6.440E 00	4.39E-04	1.1E-04
1.320E 00	1.89E-02	1.1E-03	3.260E 00	7.43E-03	4.4E-04	6.560E 00	2.20E-04	9.0E-05
1.360E 00	1.97E-02	1.1E-03	3.340E 00	7.47E-03	4.3E-04	6.680E 00	6.19E-05	7.2E-05
1.400E 00	1.91E-02	1.3E-03	3.420E 00	7.24E-03	4.3E-04	6.800E 00	4.97E-06	6.4E-05
1.440E 00	1.84E-02	1.2E-03	3.500E 00	6.97E-03	4.2E-04	6.920E 00	1.91E-05	5.3E-05
1.480E 00	1.80E-02	9.8E-04	3.580E 00	6.74E-03	4.1E-04	7.040E 00	5.05E-05	3.4E-05
1.520E 00	1.76E-02	1.1E-03	3.660E 00	6.52E-03	4.1E-04	7.160E 00	5.66E-05	2.2E-05
1.560E 00	1.65E-02	1.2E-03	3.740E 00	6.23E-03	3.9E-04	7.280E 00	3.52E-05	1.4E-05
1.600E 00	1.53E-02	1.1E-03	3.820E 00	6.09E-03	3.9E-04	7.400E 00	8.15E-06	7.8E-06
1.640E 00	1.52E-02	8.8E-04	3.900E 00	6.04E-03	3.9E-04	7.520E 00	-6.40E-06	6.4E-06
1.680E 00	1.57E-02	8.1E-04	3.980E 00	5.50E-03	3.8E-04	7.640E 00	-1.19E-05	4.3E-06
1.720E 00	1.59E-02	7.9E-04	4.060E 00	4.73E-03	3.8E-04	7.760E 00	-1.13E-05	4.3E-06
1.760E 00	1.55E-02	8.0E-04	4.140E 00	4.29E-03	3.6E-04	7.890E 00	-9.93E-06	2.7E-06
1.800E 00	1.49E-02	7.9E-04	4.220E 00	4.05E-03	3.5E-04	8.030E 00	-6.82E-06	2.3E-06
1.850E 00	1.46E-02	7.6E-04	4.300E 00	3.62E-03	3.4E-04	8.170E 00	-3.01E-06	2.4E-06
1.910E 00	1.48E-02	7.1E-04	4.380E 00	3.05E-03	3.3E-04	8.310E 00	-5.00E-07	2.7E-06
1.970E 00	1.43E-02	7.0E-04	4.460E 00	2.75E-03	3.3E-04	8.450E 00	2.93E-07	2.0E-06
2.030E 00	1.34E-02	6.8E-04	4.540E 00	2.93E-03	3.2E-04	8.590E 00	1.76E-06	2.9E-06
2.090E 00	1.30E-02	6.9E-04	4.630E 00	3.22E-03	3.1E-04	8.730E 00	2.42E-06	2.2E-06
2.150E 00	1.27E-02	6.8E-04	4.730E 00	3.06E-03	3.0E-04	8.870E 00	2.59E-06	1.9E-06
2.210E 00	1.20E-02	6.6E-04	4.830E 00	2.52E-03	2.9E-04	9.010E 00	1.23E-06	1.9E-06
2.270E 00	1.13E-02	6.0E-04	4.930E 00	2.06E-03	2.8E-04	9.150E 00	-1.35E-06	2.6E-06
2.330E 00	1.20E-02	5.8E-04	5.030E 00	1.84E-03	2.6E-04	9.300E 00	-3.53E-06	1.4E-06
2.390E 00	1.27E-02	5.8E-04	5.130E 00	1.63E-03	2.6E-04	9.460E 00	-2.84E-06	1.6E-06
2.450E 00	1.23E-02	5.6E-04	5.230E 00	1.34E-03	2.5E-04	9.620E 00	-7.57E-07	2.0E-06
2.510E 00	1.14E-02	5.4E-04	5.330E 00	1.10E-03	2.4E-04	9.780E 00	1.15E-06	1.4E-06
2.570E 00	1.10E-02	5.2E-04	5.430E 00	9.73E-04	2.4E-04	9.940E 00	1.44E-06	2.8E-07
2.630E 00	1.06E-02	5.3E-04	5.530E 00	1.01E-03	2.3E-04	1.010E 01	1.63E-06	1.0E-06
2.690E 00	1.02E-02	5.1E-04	5.630E 00	1.08E-03	2.2E-04	1.026E 01	1.54E-06	1.3E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.1508E 02 MEV

EN-MAX= 0.1997E 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
1.000E 00	2.07E-01	3.1E-02	2.750E 00	5.38E-02	7.5E-03	5.730E 00	-1.69E-03	1.8E-03
1.040E 00	2.26E-01	3.0E-02	2.810E 00	5.05E-02	7.1E-03	5.830E 00	-3.14E-03	1.9E-03
1.080E 00	1.68E-01	2.8E-02	2.870E 00	4.00E-02	6.7E-03	5.930E 00	-2.34E-03	1.7E-03
1.120E 00	1.74E-01	2.5E-02	2.930E 00	3.65E-02	6.9E-03	6.030E 00	-4.40E-04	1.4E-03
1.160E 00	1.81E-01	2.4E-02	2.990E 00	4.02E-02	6.7E-03	6.130E 00	1.41E-03	1.3E-03
1.200E 00	1.62E-01	2.2E-02	3.050E 00	4.16E-02	6.4E-03	6.230E 00	2.86E-03	1.3E-03
1.240E 00	1.36E-01	2.2E-02	3.110E 00	3.83E-02	6.4E-03	6.330E 00	3.38E-03	1.2E-03
1.280E 00	1.22E-01	2.1E-02	3.180E 00	3.17E-02	6.3E-03	6.440E 00	2.89E-03	1.2E-03
1.320E 00	1.29E-01	1.9E-02	3.260E 00	2.62E-02	6.8E-03	6.560E 00	1.58E-03	1.2E-03
1.360E 00	1.24E-01	1.9E-02	3.340E 00	2.77E-02	6.2E-03	6.680E 00	1.92E-04	1.0E-03
1.400E 00	9.59E-02	2.0E-02	3.420E 00	2.82E-02	6.2E-03	6.800E 00	-2.56E-04	9.8E-04
1.440E 00	9.34E-02	1.7E-02	3.500E 00	2.12E-02	6.6E-03	6.920E 00	1.20E-05	9.3E-04
1.480E 00	1.06E-01	1.5E-02	3.580E 00	1.65E-02	6.3E-03	7.040E 00	4.65E-04	8.6E-04
1.520E 00	9.71E-02	1.5E-02	3.660E 00	1.82E-02	5.3E-03	7.160E 00	8.01E-04	7.4E-04
1.560E 00	8.72E-02	1.7E-02	3.740E 00	2.20E-02	5.4E-03	7.280E 00	8.32E-04	6.5E-04
1.600E 00	9.40E-02	1.5E-02	3.820E 00	2.34E-02	5.7E-03	7.400E 00	6.36E-04	5.7E-04
1.640E 00	1.07E-01	1.4E-02	3.900E 00	2.29E-02	5.3E-03	7.520E 00	4.54E-04	4.8E-04
1.680E 00	1.19E-01	1.4E-02	3.980E 00	2.19E-02	4.8E-03	7.640E 00	3.22E-04	4.1E-04
1.720E 00	1.23E-01	1.3E-02	4.060E 00	1.99E-02	4.4E-03	7.760E 00	2.15E-04	3.9E-04
1.760E 00	1.15E-01	1.2E-02	4.140E 00	1.76E-02	4.1E-03	7.890E 00	1.39E-04	3.5E-04
1.800E 00	1.06E-01	1.2E-02	4.220E 00	1.48E-02	4.2E-03	8.030E 00	1.43E-04	3.4E-04
1.850E 00	1.10E-01	1.2E-02	4.300E 00	1.07E-02	4.9E-03	8.170E 00	2.55E-04	3.1E-04
1.910E 00	1.10E-01	1.2E-02	4.380E 00	7.31E-03	4.6E-03	8.310E 00	3.46E-04	2.8E-04
1.970E 00	8.68E-02	1.2E-02	4.460E 00	6.65E-03	4.0E-03	8.450E 00	3.27E-04	2.7E-04
2.030E 00	8.58E-02	1.0E-02	4.540E 00	7.37E-03	3.6E-03	8.590E 00	2.24E-04	2.6E-04
2.090E 00	8.42E-02	1.0E-02	4.630E 00	7.25E-03	3.5E-03	8.730E 00	1.48E-04	2.4E-04
2.150E 00	6.29E-02	9.6E-03	4.730E 00	6.02E-03	3.6E-03	8.870E 00	8.52E-05	2.0E-04
2.210E 00	5.20E-02	9.5E-03	4.830E 00	5.14E-03	3.7E-03	9.010E 00	4.67E-05	1.7E-04
2.270E 00	5.28E-02	9.1E-03	4.930E 00	4.65E-03	3.3E-03	9.150E 00	4.54E-05	1.6E-04
2.330E 00	5.92E-02	9.8E-03	5.030E 00	4.89E-03	3.3E-03	9.300E 00	4.93E-05	1.7E-04
2.390E 00	6.43E-02	8.9E-03	5.130E 00	5.37E-03	3.2E-03	9.460E 00	1.02E-04	1.4E-04
2.450E 00	7.04E-02	9.0E-03	5.230E 00	4.88E-03	2.9E-03	9.620E 00	1.09E-04	1.4E-04
2.510E 00	7.04E-02	9.0E-03	5.330E 00	4.67E-03	2.8E-03	9.780E 00	1.21E-04	1.4E-04
2.570E 00	5.40E-02	8.4E-03	5.430E 00	4.93E-03	2.4E-03	9.940E 00	9.40E-05	9.9E-05
2.630E 00	4.10E-02	7.9E-03	5.530E 00	4.09E-03	2.0E-03	1.010E 01	5.35E-05	9.2E-05
2.690E 00	4.60E-02	7.7E-03	5.630E 00	1.40E-03	1.8E-03	1.026E 01	2.81E-05	9.1E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.9930E 01 MEV

EN-MAX= 0.1508E 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
1.000E 00	1.57E-01	1.5E-02	2.750E 00	2.80E-02	3.2E-03	5.730E 00	1.66E-03	1.1E-03
1.040E 00	1.72E-01	1.3E-02	2.810E 00	2.78E-02	3.2E-03	5.830E 00	2.24E-03	9.4E-04
1.080E 00	1.67E-01	1.2E-02	2.870E 00	2.69E-02	3.1E-03	5.930E 00	2.37E-03	9.7E-04
1.120E 00	1.33E-01	1.1E-02	2.930E 00	2.34E-02	3.0E-03	6.030E 00	2.25E-03	1.1E-03
1.160E 00	1.45E-01	1.1E-02	2.990E 00	2.19E-02	2.9E-03	6.130E 00	1.51E-03	9.9E-04
1.200E 00	1.50E-01	1.0E-02	3.050E 00	2.40E-02	2.6E-03	6.230E 00	5.89E-04	8.3E-04
1.240E 00	1.33E-01	1.1E-02	3.110E 00	2.53E-02	2.5E-03	6.330E 00	-3.79E-04	8.7E-04
1.280E 00	1.28E-01	9.9E-03	3.180E 00	2.27E-02	2.5E-03	6.440E 00	-1.16E-03	7.6E-04
1.320E 00	1.19E-01	8.4E-03	3.260E 00	1.95E-02	2.6E-03	6.560E 00	-1.28E-03	7.1E-04
1.360E 00	1.05E-01	8.6E-03	3.340E 00	1.85E-02	2.5E-03	6.680E 00	-5.62E-04	6.2E-04
1.400E 00	9.61E-02	8.9E-03	3.420E 00	1.74E-02	2.5E-03	6.800E 00	4.48E-04	5.8E-04
1.440E 00	9.11E-02	8.6E-03	3.500E 00	1.51E-02	2.8E-03	6.920E 00	1.16E-03	4.9E-04
1.480E 00	8.23E-02	7.1E-03	3.580E 00	1.33E-02	2.5E-03	7.040E 00	1.20E-03	3.7E-04
1.520E 00	7.61E-02	7.1E-03	3.660E 00	1.23E-02	2.6E-03	7.160E 00	9.66E-04	4.1E-04
1.560E 00	8.15E-02	7.8E-03	3.740E 00	1.09E-02	2.5E-03	7.280E 00	6.55E-04	3.4E-04
1.600E 00	8.82E-02	6.9E-03	3.820E 00	9.41E-03	2.5E-03	7.400E 00	3.85E-04	3.0E-04
1.640E 00	8.94E-02	5.8E-03	3.900E 00	8.97E-03	2.3E-03	7.520E 00	1.53E-04	2.6E-04
1.680E 00	8.60E-02	5.5E-03	3.980E 00	1.00E-02	2.4E-03	7.640E 00	6.75E-06	2.3E-04
1.720E 00	7.90E-02	5.5E-03	4.060E 00	1.03E-02	2.2E-03	7.760E 00	3.45E-05	1.9E-04
1.760E 00	7.40E-02	5.6E-03	4.140E 00	8.66E-03	2.2E-03	7.890E 00	1.02E-04	1.8E-04
1.800E 00	7.08E-02	5.7E-03	4.220E 00	7.02E-03	2.3E-03	8.030E 00	1.30E-04	1.5E-04
1.850E 00	6.37E-02	5.4E-03	4.300E 00	6.41E-03	2.2E-03	8.170E 00	8.44E-05	1.3E-04
1.910E 00	6.22E-02	5.1E-03	4.380E 00	6.07E-03	2.0E-03	8.310E 00	3.12E-05	9.4E-05
1.970E 00	6.53E-02	4.8E-03	4.460E 00	5.08E-03	1.9E-03	8.450E 00	1.74E-05	7.6E-05
2.030E 00	5.83E-02	4.6E-03	4.540E 00	3.80E-03	1.8E-03	8.590E 00	3.85E-05	7.3E-05
2.090E 00	5.28E-02	5.0E-03	4.630E 00	2.83E-03	1.9E-03	8.730E 00	6.49E-05	6.5E-05
2.150E 00	5.59E-02	4.6E-03	4.730E 00	2.41E-03	1.9E-03	8.870E 00	8.79E-05	5.9E-05
2.210E 00	5.47E-02	4.3E-03	4.830E 00	3.12E-03	1.6E-03	9.010E 00	9.67E-05	5.3E-05
2.270E 00	5.13E-02	4.1E-03	4.930E 00	5.03E-03	1.8E-03	9.150E 00	8.76E-05	4.6E-05
2.330E 00	5.17E-02	4.0E-03	5.030E 00	6.58E-03	1.7E-03	9.300E 00	5.64E-05	4.6E-05
2.390E 00	4.83E-02	3.7E-03	5.130E 00	5.65E-03	1.5E-03	9.460E 00	2.58E-05	3.8E-05
2.450E 00	4.26E-02	3.6E-03	5.230E 00	2.51E-03	1.5E-03	9.620E 00	8.11E-06	3.0E-05
2.510E 00	3.82E-02	3.4E-03	5.330E 00	-7.51E-04	1.3E-03	9.780E 00	8.02E-06	2.8E-05
2.570E 00	3.56E-02	3.5E-03	5.430E 00	-1.88E-03	1.1E-03	9.940E 00	1.53E-05	2.3E-05
2.630E 00	3.43E-02	3.7E-03	5.530E 00	-1.22E-03	1.3E-03	1.010E 01	2.16E-05	2.5E-05
2.690E 00	3.12E-02	3.4E-03	5.630E 00	2.34E-04	1.2E-03	1.026E 01	2.25E-05	2.4E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.9060E 01 MEV

EN-MAX= 0.9930E 01 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
1.000E 00	1.26E-01	2.1E-02	2.750E 00	4.49E-02	5.7E-03	5.730E 00	4.92E-03	1.8E-03
1.040E 00	1.46E-01	2.1E-02	2.810E 00	4.61E-02	5.2E-03	5.830E 00	4.87E-03	1.7E-03
1.080E 00	1.45E-01	1.9E-02	2.870E 00	4.46E-02	5.4E-03	5.930E 00	3.56E-03	1.7E-03
1.120E 00	1.53E-01	1.8E-02	2.930E 00	4.05E-02	5.4E-03	6.030E 00	2.21E-03	1.6E-03
1.160E 00	1.76E-01	1.6E-02	2.990E 00	3.77E-02	5.4E-03	6.130E 00	1.40E-03	1.5E-03
1.200E 00	1.84E-01	1.7E-02	3.050E 00	3.69E-02	5.7E-03	6.230E 00	9.02E-04	1.3E-03
1.240E 00	1.49E-01	1.5E-02	3.110E 00	3.46E-02	5.5E-03	6.330E 00	8.53E-04	1.1E-03
1.280E 00	1.24E-01	1.4E-02	3.180E 00	2.84E-02	5.1E-03	6.440E 00	1.39E-03	1.1E-03
1.320E 00	1.35E-01	1.4E-02	3.260E 00	2.65E-02	5.1E-03	6.560E 00	1.98E-03	1.0E-03
1.360E 00	1.29E-01	1.2E-02	3.340E 00	3.14E-02	4.6E-03	6.680E 00	1.94E-03	7.3E-04
1.400E 00	1.14E-01	1.4E-02	3.420E 00	3.30E-02	4.6E-03	6.800E 00	1.31E-03	6.0E-04
1.440E 00	1.03E-01	1.3E-02	3.500E 00	3.04E-02	4.8E-03	6.920E 00	5.49E-04	6.4E-04
1.480E 00	9.88E-02	1.1E-02	3.580E 00	2.83E-02	4.5E-03	7.040E 00	7.37E-05	5.8E-04
1.520E 00	1.01E-01	1.2E-02	3.660E 00	2.62E-02	4.6E-03	7.160E 00	-1.63E-04	4.4E-04
1.560E 00	9.50E-02	1.3E-02	3.740E 00	2.23E-02	4.2E-03	7.280E 00	-1.23E-04	3.0E-04
1.600E 00	8.85E-02	1.2E-02	3.820E 00	1.88E-02	4.4E-03	7.400E 00	1.46E-04	2.4E-04
1.640E 00	9.47E-02	1.0E-02	3.900E 00	1.90E-02	4.4E-03	7.520E 00	4.39E-04	2.3E-04
1.680E 00	1.03E-01	9.3E-03	3.980E 00	2.15E-02	4.2E-03	7.640E 00	5.72E-04	2.0E-04
1.720E 00	9.89E-02	9.3E-03	4.060E 00	2.22E-02	3.9E-03	7.760E 00	4.91E-04	1.8E-04
1.760E 00	8.55E-02	9.5E-03	4.140E 00	2.09E-02	4.0E-03	7.890E 00	2.89E-04	1.7E-04
1.800E 00	7.53E-02	9.7E-03	4.220E 00	1.94E-02	4.2E-03	8.030E 00	9.11E-05	1.4E-04
1.850E 00	7.52E-02	8.8E-03	4.300E 00	1.63E-02	4.1E-03	8.170E 00	-2.52E-07	1.2E-04
1.910E 00	8.04E-02	8.3E-03	4.380E 00	1.25E-02	4.0E-03	8.310E 00	-2.33E-05	1.0E-04
1.970E 00	7.80E-02	8.0E-03	4.460E 00	1.09E-02	3.6E-03	8.450E 00	-5.74E-06	8.4E-05
2.030E 00	7.00E-02	8.1E-03	4.540E 00	1.13E-02	3.5E-03	8.590E 00	2.75E-05	7.3E-05
2.090E 00	6.23E-02	8.1E-03	4.630E 00	1.09E-02	3.5E-03	8.730E 00	5.90E-05	7.6E-05
2.150E 00	6.28E-02	7.3E-03	4.730E 00	9.39E-03	3.4E-03	8.870E 00	9.32E-05	8.0E-05
2.210E 00	6.31E-02	7.3E-03	4.830E 00	8.81E-03	2.8E-03	9.010E 00	1.19E-04	7.4E-05
2.270E 00	6.41E-02	6.9E-03	4.930E 00	7.72E-03	2.9E-03	9.150E 00	1.29E-04	7.4E-05
2.330E 00	7.17E-02	7.2E-03	5.030E 00	5.45E-03	3.1E-03	9.300E 00	1.15E-04	7.3E-05
2.390E 00	7.08E-02	6.7E-03	5.130E 00	4.17E-03	3.1E-03	9.460E 00	8.34E-05	6.6E-05
2.450E 00	6.75E-02	6.1E-03	5.230E 00	4.34E-03	2.6E-03	9.620E 00	5.15E-05	6.5E-05
2.510E 00	6.75E-02	6.1E-03	5.330E 00	4.03E-03	2.0E-03	9.780E 00	3.02E-05	6.1E-05
2.570E 00	6.11E-02	5.9E-03	5.430E 00	2.49E-03	2.2E-03	9.940E 00	1.63E-05	4.9E-05
2.630E 00	5.07E-02	6.2E-03	5.530E 00	2.03E-03	2.3E-03	1.010E 01	3.45E-06	5.1E-05
2.690E 00	4.50E-02	6.3E-03	5.630E 00	3.43E-03	2.2E-03	1.026E 01	-3.49E-07	5.2E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.7960E 01 MEV

EN-MAX= 0.9060E 01 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
1.000E 00	2.12E-01	2.1E-02	2.750E 00	8.28E-02	5.6E-03	5.730E 00	3.00E-03	2.1E-03
1.040E 00	2.10E-01	1.9E-02	2.810E 00	8.63E-02	5.5E-03	5.830E 00	2.38E-03	1.9E-03
1.080E 00	2.28E-01	1.8E-02	2.870E 00	8.90E-02	5.1E-03	5.930E 00	2.16E-03	1.6E-03
1.120E 00	2.47E-01	1.6E-02	2.930E 00	8.55E-02	5.1E-03	6.030E 00	2.39E-03	1.6E-03
1.160E 00	2.79E-01	1.6E-02	2.990E 00	7.99E-02	5.1E-03	6.130E 00	2.73E-03	1.6E-03
1.200E 00	2.73E-01	1.5E-02	3.050E 00	7.45E-02	5.0E-03	6.230E 00	2.94E-03	1.2E-03
1.240E 00	2.44E-01	1.5E-02	3.110E 00	6.83E-02	4.8E-03	6.330E 00	2.70E-03	1.0E-03
1.280E 00	2.11E-01	1.5E-02	3.180E 00	6.18E-02	4.6E-03	6.440E 00	2.56E-03	1.0E-03
1.320E 00	2.08E-01	1.2E-02	3.260E 00	6.09E-02	4.6E-03	6.560E 00	2.69E-03	9.7E-04
1.360E 00	2.07E-01	1.3E-02	3.340E 00	6.07E-02	4.4E-03	6.680E 00	2.37E-03	7.8E-04
1.400E 00	1.95E-01	1.4E-02	3.420E 00	5.67E-02	4.5E-03	6.800E 00	1.41E-03	5.3E-04
1.440E 00	1.75E-01	1.4E-02	3.500E 00	5.44E-02	4.3E-03	6.920E 00	6.04E-04	3.8E-04
1.480E 00	1.61E-01	1.1E-02	3.580E 00	5.45E-02	4.0E-03	7.040E 00	4.25E-04	4.0E-04
1.520E 00	1.59E-01	1.2E-02	3.660E 00	5.44E-02	4.0E-03	7.160E 00	5.25E-04	3.8E-04
1.560E 00	1.47E-01	1.3E-02	3.740E 00	5.01E-02	3.9E-03	7.280E 00	6.55E-04	3.1E-04
1.600E 00	1.43E-01	1.2E-02	3.820E 00	4.40E-02	3.8E-03	7.400E 00	7.86E-04	2.6E-04
1.640E 00	1.54E-01	9.7E-03	3.900E 00	4.07E-02	3.9E-03	7.520E 00	8.28E-04	2.3E-04
1.680E 00	1.56E-01	8.7E-03	3.980E 00	3.93E-02	3.7E-03	7.640E 00	6.53E-04	2.0E-04
1.720E 00	1.51E-01	8.7E-03	4.060E 00	3.68E-02	3.5E-03	7.760E 00	3.52E-04	1.7E-04
1.760E 00	1.50E-01	8.5E-03	4.140E 00	3.43E-02	3.5E-03	7.890E 00	9.62E-05	1.4E-04
1.800E 00	1.48E-01	8.5E-03	4.220E 00	3.20E-02	3.4E-03	8.030E 00	-3.25E-05	9.3E-05
1.850E 00	1.48E-01	8.7E-03	4.300E 00	2.85E-02	3.3E-03	8.170E 00	-2.71E-05	6.7E-05
1.910E 00	1.47E-01	7.8E-03	4.380E 00	2.68E-02	3.3E-03	8.310E 00	1.27E-05	5.9E-05
1.970E 00	1.36E-01	7.6E-03	4.460E 00	2.70E-02	3.1E-03	8.450E 00	4.05E-05	4.8E-05
2.030E 00	1.29E-01	7.5E-03	4.540E 00	2.47E-02	2.8E-03	8.590E 00	3.95E-05	4.2E-05
2.090E 00	1.32E-01	7.5E-03	4.630E 00	1.95E-02	2.7E-03	8.730E 00	2.37E-05	4.2E-05
2.150E 00	1.37E-01	7.3E-03	4.730E 00	1.63E-02	2.8E-03	8.870E 00	1.05E-05	4.2E-05
2.210E 00	1.31E-01	7.1E-03	4.830E 00	1.37E-02	2.8E-03	9.010E 00	8.89E-06	4.1E-05
2.270E 00	1.26E-01	6.9E-03	4.930E 00	1.03E-02	2.7E-03	9.150E 00	1.56E-05	4.1E-05
2.330E 00	1.29E-01	6.6E-03	5.030E 00	1.00E-02	2.4E-03	9.300E 00	2.03E-05	3.8E-05
2.390E 00	1.26E-01	6.3E-03	5.130E 00	1.34E-02	2.4E-03	9.460E 00	1.86E-05	3.9E-05
2.450E 00	1.17E-01	6.0E-03	5.230E 00	1.57E-02	2.4E-03	9.620E 00	2.29E-05	3.7E-05
2.510E 00	1.12E-01	5.8E-03	5.330E 00	1.47E-02	2.3E-03	9.780E 00	3.07E-05	3.4E-05
2.570E 00	1.06E-01	5.7E-03	5.430E 00	1.16E-02	2.1E-03	9.940E 00	4.03E-05	2.8E-05
2.630E 00	9.52E-02	5.5E-03	5.530E 00	7.76E-03	2.1E-03	1.010E 01	3.74E-05	2.7E-05
2.690E 00	8.59E-02	5.4E-03	5.630E 00	4.62E-03	2.2E-03	1.026E 01	2.90E-05	2.7E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.6900E 01 MEV

EN-MAX= 0.7960E 01 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
1.000E 00	2.34E-01	1.9E-02	2.750E 00	1.13E-01	4.8E-03	5.730E 00	4.74E-03	1.3E-03
1.040E 00	2.38E-01	1.8E-02	2.810E 00	1.08E-01	4.8E-03	5.830E 00	5.40E-03	1.2E-03
1.080E 00	2.58E-01	1.6E-02	2.870E 00	1.01E-01	4.6E-03	5.930E 00	5.24E-03	1.1E-03
1.120E 00	2.56E-01	1.4E-02	2.930E 00	9.54E-02	4.5E-03	6.030E 00	4.53E-03	9.3E-04
1.160E 00	2.89E-01	1.4E-02	2.990E 00	9.13E-02	4.4E-03	6.130E 00	3.23E-03	8.6E-04
1.200E 00	2.91E-01	1.3E-02	3.050E 00	8.69E-02	4.3E-03	6.230E 00	1.82E-03	7.8E-04
1.240E 00	2.44E-01	1.3E-02	3.110E 00	8.22E-02	4.3E-03	6.330E 00	8.79E-04	6.8E-04
1.280E 00	2.19E-01	1.3E-02	3.180E 00	7.61E-02	4.2E-03	6.440E 00	7.79E-04	6.0E-04
1.320E 00	2.26E-01	1.1E-02	3.260E 00	6.65E-02	4.0E-03	6.560E 00	1.20E-03	4.7E-04
1.360E 00	2.23E-01	1.1E-02	3.340E 00	6.10E-02	3.7E-03	6.680E 00	1.57E-03	4.6E-04
1.400E 00	2.04E-01	1.3E-02	3.420E 00	6.35E-02	3.7E-03	6.800E 00	1.56E-03	4.1E-04
1.440E 00	1.78E-01	1.2E-02	3.500E 00	6.26E-02	3.7E-03	6.920E 00	1.20E-03	3.2E-04
1.480E 00	1.73E-01	9.3E-03	3.580E 00	6.02E-02	3.5E-03	7.040E 00	8.21E-04	2.3E-04
1.520E 00	1.79E-01	1.0E-02	3.660E 00	6.18E-02	3.5E-03	7.160E 00	5.64E-04	1.7E-04
1.560E 00	1.67E-01	1.2E-02	3.740E 00	5.95E-02	3.3E-03	7.280E 00	4.41E-04	1.8E-04
1.600E 00	1.59E-01	1.1E-02	3.820E 00	5.34E-02	3.2E-03	7.400E 00	3.20E-04	1.6E-04
1.640E 00	1.69E-01	8.7E-03	3.900E 00	4.89E-02	3.2E-03	7.520E 00	1.86E-04	1.2E-04
1.680E 00	1.77E-01	7.8E-03	3.980E 00	4.30E-02	3.0E-03	7.640E 00	1.01E-04	8.1E-05
1.720E 00	1.75E-01	7.7E-03	4.060E 00	3.64E-02	3.0E-03	7.760E 00	7.75E-05	7.3E-05
1.760E 00	1.71E-01	7.7E-03	4.140E 00	3.40E-02	2.9E-03	7.890E 00	7.48E-05	7.0E-05
1.800E 00	1.77E-01	7.9E-03	4.220E 00	3.36E-02	2.7E-03	8.030E 00	7.13E-05	5.5E-05
1.850E 00	1.83E-01	7.8E-03	4.300E 00	3.14E-02	2.6E-03	8.170E 00	6.05E-05	4.4E-05
1.910E 00	1.65E-01	7.0E-03	4.380E 00	2.86E-02	2.5E-03	8.310E 00	4.35E-05	3.9E-05
1.970E 00	1.57E-01	6.8E-03	4.460E 00	2.64E-02	2.3E-03	8.450E 00	1.55E-05	3.3E-05
2.030E 00	1.58E-01	6.8E-03	4.540E 00	2.43E-02	2.4E-03	8.590E 00	-1.32E-05	3.0E-05
2.090E 00	1.47E-01	6.6E-03	4.630E 00	2.10E-02	2.3E-03	8.730E 00	-2.36E-05	3.1E-05
2.150E 00	1.41E-01	6.4E-03	4.730E 00	1.67E-02	2.1E-03	8.870E 00	-1.14E-05	2.8E-05
2.210E 00	1.38E-01	6.2E-03	4.830E 00	1.42E-02	2.0E-03	9.010E 00	1.90E-05	2.5E-05
2.270E 00	1.38E-01	6.0E-03	4.930E 00	1.38E-02	1.9E-03	9.150E 00	4.44E-05	2.2E-05
2.330E 00	1.43E-01	5.9E-03	5.030E 00	1.34E-02	1.9E-03	9.300E 00	5.35E-05	2.1E-05
2.390E 00	1.46E-01	5.7E-03	5.130E 00	1.11E-02	1.8E-03	9.460E 00	4.30E-05	1.8E-05
2.450E 00	1.44E-01	5.5E-03	5.230E 00	8.92E-03	1.7E-03	9.620E 00	2.42E-05	1.1E-05
2.510E 00	1.34E-01	5.3E-03	5.330E 00	7.38E-03	1.6E-03	9.780E 00	9.85E-06	4.7E-06
2.570E 00	1.21E-01	5.2E-03	5.430E 00	5.24E-03	1.6E-03	9.940E 00	3.02E-06	1.5E-06
2.630E 00	1.15E-01	5.1E-03	5.530E 00	3.40E-03	1.5E-03	1.010E 01	7.12E-07	3.7E-07
2.690E 00	1.15E-01	4.9E-03	5.630E 00	3.54E-03	1.4E-03	1.026E 01	1.33E-07	7.3E-08

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.5940E 01 MEV

EN-MAX= 0.6900E 01 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
1.000E 00	2.26E-01	1.8E-02	2.750E 00	9.19E-02	4.4E-03	5.730E 00	3.02E-03	6.4E-04
1.040E 00	2.46E-01	1.7E-02	2.810E 00	9.12E-02	4.5E-03	5.830E 00	2.02E-03	8.1E-04
1.080E 00	2.55E-01	1.5E-02	2.870E 00	9.05E-02	4.4E-03	5.930E 00	1.54E-03	7.9E-04
1.120E 00	2.73E-01	1.4E-02	2.930E 00	8.62E-02	4.0E-03	6.030E 00	1.20E-03	5.6E-04
1.160E 00	2.84E-01	1.4E-02	2.990E 00	7.93E-02	4.1E-03	6.130E 00	6.75E-04	4.9E-04
1.200E 00	2.74E-01	1.4E-02	3.050E 00	7.68E-02	4.0E-03	6.230E 00	3.04E-04	5.9E-04
1.240E 00	2.53E-01	1.4E-02	3.110E 00	7.58E-02	3.9E-03	6.330E 00	2.67E-04	5.8E-04
1.280E 00	2.42E-01	1.3E-02	3.180E 00	6.85E-02	3.9E-03	6.440E 00	5.95E-04	3.4E-04
1.320E 00	2.14E-01	1.1E-02	3.260E 00	5.93E-02	3.6E-03	6.560E 00	8.39E-04	3.3E-04
1.360E 00	1.94E-01	1.2E-02	3.340E 00	5.41E-02	3.6E-03	6.680E 00	7.01E-04	3.6E-04
1.400E 00	1.83E-01	1.3E-02	3.420E 00	4.97E-02	3.5E-03	6.800E 00	3.82E-04	2.5E-04
1.440E 00	1.59E-01	1.3E-02	3.500E 00	4.57E-02	3.5E-03	6.920E 00	1.19E-04	1.3E-04
1.480E 00	1.55E-01	9.6E-03	3.580E 00	4.21E-02	3.2E-03	7.040E 00	2.72E-05	9.3E-05
1.520E 00	1.59E-01	1.1E-02	3.660E 00	3.96E-02	3.2E-03	7.160E 00	4.78E-05	9.3E-05
1.560E 00	1.53E-01	1.3E-02	3.740E 00	3.97E-02	3.1E-03	7.280E 00	7.56E-05	8.4E-05
1.600E 00	1.54E-01	1.1E-02	3.820E 00	3.99E-02	2.9E-03	7.400E 00	6.49E-05	7.4E-05
1.640E 00	1.56E-01	9.1E-03	3.900E 00	3.75E-02	2.9E-03	7.520E 00	3.25E-05	6.4E-05
1.680E 00	1.51E-01	8.0E-03	3.980E 00	3.44E-02	3.0E-03	7.640E 00	1.56E-05	5.0E-05
1.720E 00	1.49E-01	7.5E-03	4.060E 00	3.22E-02	2.9E-03	7.760E 00	2.93E-05	4.5E-05
1.760E 00	1.52E-01	7.4E-03	4.140E 00	2.90E-02	3.0E-03	7.890E 00	5.42E-05	4.2E-05
1.800E 00	1.58E-01	7.3E-03	4.220E 00	2.36E-02	2.7E-03	8.030E 00	5.59E-05	3.6E-05
1.850E 00	1.63E-01	7.0E-03	4.300E 00	1.89E-02	2.6E-03	8.170E 00	2.85E-05	3.7E-05
1.910E 00	1.54E-01	6.8E-03	4.380E 00	1.64E-02	2.5E-03	8.310E 00	2.80E-06	3.7E-05
1.970E 00	1.50E-01	6.8E-03	4.460E 00	1.39E-02	2.2E-03	8.450E 00	-2.93E-06	3.4E-05
2.030E 00	1.39E-01	7.0E-03	4.540E 00	1.07E-02	2.3E-03	8.590E 00	1.52E-05	3.6E-05
2.090E 00	1.29E-01	7.4E-03	4.630E 00	9.44E-03	2.4E-03	8.730E 00	3.35E-05	3.3E-05
2.150E 00	1.40E-01	6.3E-03	4.730E 00	1.12E-02	1.8E-03	8.870E 00	4.44E-05	3.0E-05
2.210E 00	1.37E-01	6.1E-03	4.830E 00	1.22E-02	1.6E-03	9.010E 00	4.96E-05	2.9E-05
2.270E 00	1.28E-01	6.0E-03	4.930E 00	1.08E-02	1.4E-03	9.150E 00	4.68E-05	3.0E-05
2.330E 00	1.27E-01	5.8E-03	5.030E 00	8.41E-03	1.3E-03	9.300E 00	3.37E-05	2.8E-05
2.390E 00	1.23E-01	5.6E-03	5.130E 00	6.32E-03	1.4E-03	9.460E 00	1.73E-05	2.5E-05
2.450E 00	1.17E-01	4.9E-03	5.230E 00	4.83E-03	1.2E-03	9.620E 00	4.27E-06	2.5E-05
2.510E 00	1.12E-01	4.8E-03	5.330E 00	4.17E-03	1.3E-03	9.780E 00	5.50E-06	2.3E-05
2.570E 00	1.01E-01	4.8E-03	5.430E 00	4.35E-03	1.2E-03	9.940E 00	1.39E-05	1.6E-05
2.630E 00	8.97E-02	4.9E-03	5.530E 00	4.60E-03	9.3E-04	1.010E 01	2.14E-05	1.3E-05
2.690E 00	8.97E-02	4.6E-03	5.630E 00	4.11E-03	7.2E-04	1.026E 01	2.18E-05	1.4E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.4990E 01 MEV

EN-MAX= 0.6050E 01 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
1.000E 00	2.48E-01	1.5E-02	2.750E 00	7.85E-02	3.4E-03	5.730E 00	4.50E-04	3.6E-04
1.040E 00	2.17E-01	1.4E-02	2.810E 00	7.15E-02	3.3E-03	5.830E 00	3.00E-04	3.3E-04
1.080E 00	2.40E-01	1.3E-02	2.870E 00	6.79E-02	3.1E-03	5.930E 00	1.82E-04	3.5E-04
1.120E 00	2.59E-01	1.2E-02	2.930E 00	6.85E-02	3.0E-03	6.030E 00	2.01E-04	3.8E-04
1.160E 00	2.63E-01	1.1E-02	2.990E 00	6.60E-02	2.9E-03	6.130E 00	3.44E-04	2.7E-04
1.200E 00	2.70E-01	1.0E-02	3.050E 00	6.06E-02	2.8E-03	6.230E 00	4.49E-04	2.5E-04
1.240E 00	2.44E-01	1.1E-02	3.110E 00	5.67E-02	2.7E-03	6.330E 00	5.09E-04	2.7E-04
1.280E 00	2.12E-01	1.0E-02	3.180E 00	5.37E-02	2.7E-03	6.440E 00	4.65E-04	3.0E-04
1.320E 00	2.05E-01	8.6E-03	3.260E 00	4.73E-02	2.7E-03	6.560E 00	3.77E-04	2.0E-04
1.360E 00	1.87E-01	8.7E-03	3.340E 00	4.10E-02	2.5E-03	6.680E 00	3.42E-04	2.1E-04
1.400E 00	1.73E-01	1.0E-02	3.420E 00	4.14E-02	2.4E-03	6.800E 00	2.76E-04	1.8E-04
1.440E 00	1.67E-01	9.5E-03	3.500E 00	4.11E-02	2.3E-03	6.920E 00	1.96E-04	1.3E-04
1.480E 00	1.50E-01	7.6E-03	3.580E 00	3.61E-02	2.3E-03	7.040E 00	1.50E-04	1.2E-04
1.520E 00	1.41E-01	8.1E-03	3.660E 00	3.21E-02	2.2E-03	7.160E 00	1.32E-04	9.8E-05
1.560E 00	1.38E-01	9.9E-03	3.740E 00	3.06E-02	2.1E-03	7.280E 00	1.39E-04	8.8E-05
1.600E 00	1.39E-01	8.8E-03	3.820E 00	2.90E-02	2.1E-03	7.400E 00	1.20E-04	8.9E-05
1.640E 00	1.47E-01	7.0E-03	3.900E 00	2.66E-02	1.9E-03	7.520E 00	7.69E-05	8.6E-05
1.680E 00	1.54E-01	6.1E-03	3.980E 00	2.40E-02	1.8E-03	7.640E 00	3.13E-05	7.8E-05
1.720E 00	1.52E-01	5.9E-03	4.060E 00	2.22E-02	1.8E-03	7.760E 00	1.39E-05	6.6E-05
1.760E 00	1.48E-01	5.9E-03	4.140E 00	2.10E-02	1.7E-03	7.890E 00	4.91E-05	5.9E-05
1.800E 00	1.48E-01	6.0E-03	4.220E 00	1.93E-02	1.5E-03	8.030E 00	8.73E-05	5.6E-05
1.850E 00	1.48E-01	5.9E-03	4.300E 00	1.74E-02	1.4E-03	8.170E 00	9.41E-05	4.7E-05
1.910E 00	1.45E-01	5.4E-03	4.380E 00	1.59E-02	1.5E-03	8.310E 00	7.49E-05	3.8E-05
1.970E 00	1.37E-01	5.5E-03	4.460E 00	1.38E-02	1.3E-03	8.450E 00	4.67E-05	3.4E-05
2.030E 00	1.25E-01	5.4E-03	4.540E 00	1.14E-02	1.2E-03	8.590E 00	2.23E-05	3.2E-05
2.090E 00	1.19E-01	5.2E-03	4.630E 00	9.33E-03	1.1E-03	8.730E 00	8.79E-06	2.7E-05
2.150E 00	1.24E-01	5.0E-03	4.730E 00	7.18E-03	8.8E-04	8.870E 00	2.07E-06	2.4E-05
2.210E 00	1.22E-01	4.7E-03	4.830E 00	5.03E-03	1.0E-03	9.010E 00	4.39E-06	2.3E-05
2.270E 00	1.18E-01	4.5E-03	4.930E 00	3.66E-03	9.6E-04	9.150E 00	8.17E-06	2.2E-05
2.330E 00	1.20E-01	4.3E-03	5.030E 00	2.88E-03	8.1E-04	9.300E 00	1.39E-05	2.1E-05
2.390E 00	1.16E-01	4.1E-03	5.130E 00	2.21E-03	7.1E-04	9.460E 00	2.00E-05	2.0E-05
2.450E 00	1.05E-01	3.9E-03	5.230E 00	1.73E-03	5.6E-04	9.620E 00	2.27E-05	2.2E-05
2.510E 00	9.76E-02	3.7E-03	5.330E 00	1.51E-03	5.4E-04	9.780E 00	2.15E-05	2.0E-05
2.570E 00	9.41E-02	3.6E-03	5.430E 00	1.24E-03	5.4E-04	9.940E 00	1.68E-05	1.4E-05
2.630E 00	8.87E-02	3.6E-03	5.530E 00	8.37E-04	4.8E-04	1.010E 01	1.11E-05	1.3E-05
2.690E 00	8.31E-02	3.4E-03	5.630E 00	6.14E-04	4.2E-04	1.026E 01	6.15E-06	1.4E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.4010E 01 MEV

EN-MAX= 0.4990E 01 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
1.000E 00	2.01E-01	1.2E-02	2.750E 00	6.50E-02	2.5E-03	5.730E 00	3.89E-04	3.5E-04
1.040E 00	2.23E-01	1.2E-02	2.810E 00	5.92E-02	2.4E-03	5.830E 00	6.21E-04	3.3E-04
1.080E 00	2.09E-01	1.1E-02	2.870E 00	5.40E-02	2.3E-03	5.930E 00	6.57E-04	3.1E-04
1.120E 00	2.21E-01	9.0E-03	2.930E 00	5.24E-02	2.2E-03	6.030E 00	5.93E-04	2.8E-04
1.160E 00	2.68E-01	9.1E-03	2.990E 00	5.22E-02	2.2E-03	6.130E 00	4.72E-04	2.8E-04
1.200E 00	2.71E-01	8.6E-03	3.050E 00	5.08E-02	2.2E-03	6.230E 00	3.64E-04	3.2E-04
1.240E 00	2.39E-01	8.8E-03	3.110E 00	4.61E-02	2.1E-03	6.330E 00	1.50E-04	2.7E-04
1.280E 00	2.20E-01	8.2E-03	3.180E 00	3.78E-02	2.0E-03	6.440E 00	-1.77E-05	2.4E-04
1.320E 00	2.03E-01	6.8E-03	3.260E 00	3.21E-02	1.8E-03	6.560E 00	-9.70E-05	2.1E-04
1.360E 00	1.88E-01	6.9E-03	3.340E 00	3.01E-02	1.7E-03	6.680E 00	-9.28E-05	2.1E-04
1.400E 00	1.66E-01	8.0E-03	3.420E 00	2.79E-02	1.6E-03	6.800E 00	-1.34E-05	1.8E-04
1.440E 00	1.49E-01	7.7E-03	3.500E 00	2.67E-02	1.6E-03	6.920E 00	6.19E-05	1.5E-04
1.480E 00	1.41E-01	5.8E-03	3.580E 00	2.64E-02	1.4E-03	7.040E 00	1.30E-04	1.1E-04
1.520E 00	1.30E-01	6.4E-03	3.660E 00	2.55E-02	1.3E-03	7.160E 00	1.94E-04	1.1E-04
1.560E 00	1.27E-01	7.8E-03	3.740E 00	2.35E-02	1.3E-03	7.280E 00	2.21E-04	1.1E-04
1.600E 00	1.34E-01	6.8E-03	3.820E 00	2.13E-02	1.2E-03	7.400E 00	1.90E-04	9.2E-05
1.640E 00	1.31E-01	5.3E-03	3.900E 00	1.83E-02	1.1E-03	7.520E 00	1.19E-04	6.3E-05
1.680E 00	1.25E-01	4.6E-03	3.980E 00	1.42E-02	1.0E-03	7.640E 00	6.43E-05	7.3E-05
1.720E 00	1.29E-01	4.6E-03	4.060E 00	1.05E-02	9.7E-04	7.760E 00	4.02E-05	7.3E-05
1.760E 00	1.35E-01	4.7E-03	4.140E 00	8.52E-03	8.9E-04	7.890E 00	2.40E-05	6.1E-05
1.800E 00	1.34E-01	4.8E-03	4.220E 00	7.71E-03	8.3E-04	8.030E 00	1.15E-05	4.1E-05
1.850E 00	1.27E-01	4.6E-03	4.300E 00	6.58E-03	7.9E-04	8.170E 00	1.50E-05	3.5E-05
1.910E 00	1.25E-01	4.1E-03	4.380E 00	4.97E-03	7.4E-04	8.310E 00	2.54E-05	3.3E-05
1.970E 00	1.24E-01	4.1E-03	4.460E 00	3.60E-03	6.9E-04	8.450E 00	3.11E-05	3.0E-05
2.030E 00	1.08E-01	4.0E-03	4.540E 00	2.70E-03	5.7E-04	8.590E 00	3.07E-05	2.8E-05
2.090E 00	1.05E-01	3.9E-03	4.630E 00	1.98E-03	5.3E-04	8.730E 00	2.59E-05	2.5E-05
2.150E 00	1.07E-01	3.7E-03	4.730E 00	1.41E-03	5.8E-04	8.870E 00	1.82E-05	2.1E-05
2.210E 00	9.99E-02	3.4E-03	4.830E 00	1.22E-03	6.0E-04	9.010E 00	1.10E-05	1.9E-05
2.270E 00	9.47E-02	3.3E-03	4.930E 00	1.22E-03	5.8E-04	9.150E 00	4.29E-06	1.9E-05
2.330E 00	9.42E-02	3.3E-03	5.030E 00	1.14E-03	5.4E-04	9.300E 00	3.15E-06	1.7E-05
2.390E 00	9.23E-02	3.1E-03	5.130E 00	7.72E-04	5.1E-04	9.460E 00	7.37E-06	1.5E-05
2.450E 00	8.93E-02	3.0E-03	5.230E 00	2.38E-04	5.1E-04	9.620E 00	1.19E-05	1.6E-05
2.510E 00	8.21E-02	2.9E-03	5.330E 00	-2.45E-04	5.1E-04	9.780E 00	1.41E-05	1.3E-05
2.570E 00	6.99E-02	2.8E-03	5.430E 00	-5.50E-04	4.2E-04	9.940E 00	1.39E-05	1.0E-05
2.630E 00	6.30E-02	2.7E-03	5.530E 00	-4.39E-04	3.6E-04	1.010E 01	1.11E-05	1.0E-05
2.690E 00	6.50E-02	2.6E-03	5.630E 00	-3.61E-05	3.5E-04	1.026E 01	7.96E-06	1.1E-05

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.3000E 01 MEV

EN-MAX= 0.4010E 01 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
1.000E 00	2.02E-01	8.6E-03	2.750E 00	4.18E-02	1.3E-03	5.730E 00	4.46E-04	2.7E-04
1.040E 00	2.14E-01	8.5E-03	2.810E 00	3.95E-02	1.3E-03	5.830E 00	5.44E-04	2.8E-04
1.080E 00	2.06E-01	7.3E-03	2.870E 00	3.56E-02	1.2E-03	5.930E 00	4.79E-04	2.4E-04
1.120E 00	2.17E-01	6.4E-03	2.930E 00	3.23E-02	1.1E-03	6.030E 00	3.21E-04	2.0E-04
1.160E 00	2.39E-01	6.4E-03	2.990E 00	3.03E-02	1.0E-03	6.130E 00	1.95E-04	1.9E-04
1.200E 00	2.34E-01	5.7E-03	3.050E 00	2.71E-02	9.7E-04	6.230E 00	1.60E-04	1.9E-04
1.240E 00	2.18E-01	6.0E-03	3.110E 00	2.23E-02	8.9E-04	6.330E 00	1.51E-04	1.8E-04
1.280E 00	2.00E-01	5.8E-03	3.180E 00	1.73E-02	8.2E-04	6.440E 00	1.26E-04	1.5E-04
1.320E 00	1.78E-01	4.7E-03	3.260E 00	1.35E-02	7.2E-04	6.560E 00	9.21E-05	1.4E-04
1.360E 00	1.63E-01	4.8E-03	3.340E 00	1.08E-02	6.8E-04	6.680E 00	1.05E-04	1.3E-04
1.400E 00	1.55E-01	5.7E-03	3.420E 00	7.85E-03	5.9E-04	6.800E 00	1.06E-04	1.2E-04
1.440E 00	1.39E-01	5.5E-03	3.500E 00	5.56E-03	5.4E-04	6.920E 00	7.42E-05	1.1E-04
1.480E 00	1.16E-01	3.9E-03	3.580E 00	4.35E-03	5.3E-04	7.040E 00	5.13E-05	8.8E-05
1.520E 00	1.00E-01	4.2E-03	3.660E 00	3.47E-03	5.0E-04	7.160E 00	8.25E-05	7.8E-05
1.560E 00	9.65E-02	5.5E-03	3.740E 00	2.50E-03	4.7E-04	7.280E 00	1.46E-04	7.3E-05
1.600E 00	1.01E-01	4.8E-03	3.820E 00	1.66E-03	4.5E-04	7.400E 00	1.90E-04	5.4E-05
1.640E 00	1.04E-01	3.6E-03	3.900E 00	1.38E-03	4.4E-04	7.520E 00	1.63E-04	3.9E-05
1.680E 00	1.05E-01	3.2E-03	3.980E 00	1.59E-03	4.6E-04	7.640E 00	9.05E-05	2.8E-05
1.720E 00	1.06E-01	3.1E-03	4.060E 00	1.93E-03	4.8E-04	7.760E 00	2.41E-05	2.5E-05
1.760E 00	1.03E-01	3.1E-03	4.140E 00	2.00E-03	4.4E-04	7.890E 00	-1.96E-05	1.2E-05
1.800E 00	9.81E-02	3.1E-03	4.220E 00	1.79E-03	4.3E-04	8.030E 00	-2.34E-05	7.6E-06
1.850E 00	9.56E-02	3.0E-03	4.300E 00	1.63E-03	4.3E-04	8.170E 00	-9.50E-06	6.4E-06
1.910E 00	9.67E-02	2.7E-03	4.380E 00	1.67E-03	4.1E-04	8.310E 00	1.21E-06	8.7E-06
1.970E 00	9.75E-02	2.7E-03	4.460E 00	1.46E-03	4.3E-04	8.450E 00	1.47E-05	4.6E-06
2.030E 00	9.29E-02	2.5E-03	4.540E 00	1.02E-03	4.2E-04	8.590E 00	2.14E-05	4.1E-06
2.090E 00	9.34E-02	2.5E-03	4.630E 00	6.96E-04	4.0E-04	8.730E 00	2.90E-05	1.0E-05
2.150E 00	9.34E-02	2.4E-03	4.730E 00	7.74E-04	3.8E-04	8.870E 00	2.42E-05	1.0E-05
2.210E 00	9.03E-02	2.3E-03	4.830E 00	8.40E-04	3.7E-04	9.010E 00	1.52E-05	9.7E-06
2.270E 00	8.61E-02	2.2E-03	4.930E 00	7.53E-04	3.6E-04	9.150E 00	6.47E-06	7.7E-06
2.330E 00	8.30E-02	2.1E-03	5.030E 00	6.41E-04	3.5E-04	9.300E 00	-1.10E-06	7.7E-06
2.390E 00	8.19E-02	2.0E-03	5.130E 00	4.99E-04	3.1E-04	9.460E 00	-2.39E-06	8.3E-06
2.450E 00	7.73E-02	1.9E-03	5.230E 00	3.66E-04	3.3E-04	9.620E 00	-1.33E-07	8.6E-06
2.510E 00	6.79E-02	1.7E-03	5.330E 00	4.03E-04	3.2E-04	9.780E 00	2.32E-06	7.1E-06
2.570E 00	5.80E-02	1.6E-03	5.430E 00	5.03E-04	3.0E-04	9.940E 00	4.84E-06	6.1E-06
2.630E 00	5.01E-02	1.5E-03	5.530E 00	4.91E-04	2.9E-04	1.010E 01	5.02E-06	6.0E-06
2.690E 00	4.47E-02	1.4E-03	5.630E 00	4.05E-04	2.8E-04	1.026E 01	4.49E-06	6.1E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.2000E 01 MEV

EN-MAX= 0.3000E 01 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
1.000E 00	1.70E-01	4.8E-03	2.750E 00	6.99E-03	4.4E-04	5.730E 00	5.46E-04	2.0E-04
1.040E 00	1.90E-01	4.8E-03	2.810E 00	5.94E-03	4.3E-04	5.830E 00	3.76E-04	1.8E-04
1.080E 00	1.80E-01	4.1E-03	2.870E 00	5.01E-03	4.1E-04	5.930E 00	2.78E-04	1.7E-04
1.120E 00	1.69E-01	3.5E-03	2.930E 00	4.67E-03	3.9E-04	6.030E 00	3.18E-04	1.6E-04
1.160E 00	1.90E-01	3.5E-03	2.990E 00	4.41E-03	3.8E-04	6.130E 00	4.45E-04	1.6E-04
1.200E 00	2.11E-01	3.2E-03	3.050E 00	4.03E-03	3.7E-04	6.230E 00	5.34E-04	1.5E-04
1.240E 00	2.17E-01	3.4E-03	3.110E 00	3.91E-03	3.8E-04	6.330E 00	5.07E-04	1.4E-04
1.280E 00	2.05E-01	3.3E-03	3.180E 00	3.99E-03	3.7E-04	6.440E 00	3.67E-04	1.3E-04
1.320E 00	1.80E-01	2.6E-03	3.260E 00	3.81E-03	3.6E-04	6.560E 00	1.90E-04	1.2E-04
1.360E 00	1.59E-01	2.6E-03	3.340E 00	3.55E-03	3.6E-04	6.680E 00	7.12E-05	1.1E-04
1.400E 00	1.48E-01	3.2E-03	3.420E 00	3.40E-03	3.5E-04	6.800E 00	3.19E-05	8.9E-05
1.440E 00	1.41E-01	3.3E-03	3.500E 00	3.24E-03	3.4E-04	6.920E 00	5.43E-05	8.5E-05
1.480E 00	1.20E-01	2.1E-03	3.580E 00	3.13E-03	3.3E-04	7.040E 00	1.02E-04	7.4E-05
1.520E 00	8.90E-02	2.2E-03	3.660E 00	3.14E-03	3.4E-04	7.160E 00	1.43E-04	5.3E-05
1.560E 00	7.03E-02	3.1E-03	3.740E 00	3.05E-03	3.2E-04	7.280E 00	1.61E-04	4.6E-05
1.600E 00	6.66E-02	2.6E-03	3.820E 00	2.70E-03	3.2E-04	7.400E 00	1.45E-04	4.4E-05
1.640E 00	6.90E-02	1.8E-03	3.900E 00	2.27E-03	3.2E-04	7.520E 00	9.91E-05	3.8E-05
1.680E 00	7.42E-02	1.5E-03	3.980E 00	2.05E-03	3.1E-04	7.640E 00	4.21E-05	2.8E-05
1.720E 00	7.80E-02	1.5E-03	4.060E 00	1.92E-03	3.1E-04	7.760E 00	2.30E-06	2.4E-05
1.760E 00	7.90E-02	1.5E-03	4.140E 00	1.61E-03	3.1E-04	7.890E 00	-6.73E-06	2.3E-05
1.800E 00	7.77E-02	1.5E-03	4.220E 00	1.49E-03	2.9E-04	8.030E 00	1.15E-05	1.9E-05
1.850E 00	7.26E-02	1.4E-03	4.300E 00	1.86E-03	2.9E-04	8.170E 00	3.36E-05	1.5E-05
1.910E 00	6.70E-02	1.2E-03	4.380E 00	2.21E-03	3.0E-04	8.310E 00	3.87E-05	1.2E-05
1.970E 00	6.31E-02	1.1E-03	4.460E 00	2.07E-03	2.8E-04	8.450E 00	2.81E-05	9.7E-06
2.030E 00	5.61E-02	1.1E-03	4.540E 00	1.74E-03	2.8E-04	8.590E 00	1.33E-05	6.8E-06
2.090E 00	4.87E-02	1.0E-03	4.630E 00	1.63E-03	2.8E-04	8.730E 00	3.34E-06	5.6E-06
2.150E 00	4.43E-02	9.1E-04	4.730E 00	1.62E-03	2.7E-04	8.870E 00	3.74E-08	4.9E-06
2.210E 00	4.02E-02	8.6E-04	4.830E 00	1.53E-03	2.6E-04	9.010E 00	1.54E-07	4.2E-06
2.270E 00	3.54E-02	8.0E-04	4.930E 00	1.43E-03	2.4E-04	9.150E 00	8.99E-07	3.6E-06
2.330E 00	3.00E-02	7.4E-04	5.030E 00	1.27E-03	2.4E-04	9.300E 00	9.38E-07	3.6E-06
2.390E 00	2.48E-02	6.6E-04	5.130E 00	9.75E-04	2.3E-04	9.460E 00	1.14E-06	3.3E-06
2.450E 00	2.12E-02	6.1E-04	5.230E 00	7.98E-04	2.4E-04	9.620E 00	1.47E-06	3.3E-06
2.510E 00	1.78E-02	5.7E-04	5.330E 00	7.66E-04	2.2E-04	9.780E 00	2.50E-06	3.2E-06
2.570E 00	1.37E-02	5.1E-04	5.430E 00	7.04E-04	2.1E-04	9.940E 00	3.19E-06	2.4E-06
2.630E 00	9.95E-03	4.7E-04	5.530E 00	6.64E-04	2.1E-04	1.010E 01	3.26E-06	1.9E-06
2.690E 00	7.92E-03	4.4E-04	5.630E 00	6.46E-04	2.0E-04	1.026E 01	2.67E-06	2.0E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.1000E 01 MEV

EN-MAX= 0.2000E 01 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
1.000E 00	7.18E-02	1.7E-03	2.750E 00	7.06E-03	2.8E-04	5.730E 00	9.99E-04	1.2E-04
1.040E 00	6.64E-02	1.6E-03	2.810E 00	7.32E-03	2.8E-04	5.830E 00	8.44E-04	1.2E-04
1.080E 00	6.12E-02	1.4E-03	2.870E 00	7.31E-03	2.8E-04	5.930E 00	6.63E-04	1.1E-04
1.120E 00	6.58E-02	1.2E-03	2.930E 00	6.93E-03	2.6E-04	6.030E 00	4.71E-04	1.1E-04
1.160E 00	7.93E-02	1.2E-03	2.990E 00	6.60E-03	2.6E-04	6.130E 00	3.09E-04	1.0E-04
1.200E 00	8.49E-02	1.1E-03	3.050E 00	6.25E-03	2.6E-04	6.230E 00	2.34E-04	9.4E-05
1.240E 00	8.06E-02	1.2E-03	3.110E 00	5.95E-03	2.6E-04	6.330E 00	2.49E-04	9.0E-05
1.280E 00	7.15E-02	1.1E-03	3.180E 00	5.80E-03	2.6E-04	6.440E 00	2.90E-04	8.5E-05
1.320E 00	5.97E-02	8.5E-04	3.260E 00	5.63E-03	2.5E-04	6.560E 00	2.88E-04	7.6E-05
1.360E 00	5.10E-02	8.4E-04	3.340E 00	5.19E-03	2.4E-04	6.680E 00	2.50E-04	6.4E-05
1.400E 00	4.67E-02	1.0E-03	3.420E 00	4.80E-03	2.4E-04	6.800E 00	2.03E-04	5.5E-05
1.440E 00	4.18E-02	1.0E-03	3.500E 00	4.66E-03	2.4E-04	6.920E 00	1.48E-04	5.0E-05
1.480E 00	3.43E-02	6.6E-04	3.580E 00	4.52E-03	2.3E-04	7.040E 00	9.37E-05	4.3E-05
1.520E 00	2.57E-02	7.0E-04	3.660E 00	4.59E-03	2.3E-04	7.160E 00	6.13E-05	3.2E-05
1.560E 00	1.92E-02	9.5E-04	3.740E 00	4.69E-03	2.3E-04	7.280E 00	4.98E-05	2.4E-05
1.600E 00	1.66E-02	8.1E-04	3.820E 00	4.39E-03	2.2E-04	7.400E 00	4.54E-05	2.0E-05
1.640E 00	1.60E-02	5.6E-04	3.900E 00	3.96E-03	2.2E-04	7.520E 00	3.95E-05	1.7E-05
1.680E 00	1.64E-02	4.6E-04	3.980E 00	3.71E-03	2.1E-04	7.640E 00	3.59E-05	1.2E-05
1.720E 00	1.64E-02	4.6E-04	4.060E 00	3.57E-03	2.0E-04	7.760E 00	3.23E-05	8.0E-06
1.760E 00	1.51E-02	4.5E-04	4.140E 00	3.44E-03	2.0E-04	7.890E 00	2.52E-05	6.8E-06
1.800E 00	1.37E-02	4.4E-04	4.220E 00	3.28E-03	2.0E-04	8.030E 00	1.50E-05	5.7E-06
1.850E 00	1.24E-02	4.4E-04	4.300E 00	3.10E-03	1.9E-04	8.170E 00	6.31E-06	3.7E-06
1.910E 00	1.11E-02	4.0E-04	4.380E 00	2.88E-03	1.8E-04	8.310E 00	1.69E-06	2.1E-06
1.970E 00	1.04E-02	3.8E-04	4.460E 00	2.70E-03	1.8E-04	8.450E 00	2.66E-07	2.1E-06
2.030E 00	9.86E-03	3.7E-04	4.540E 00	2.53E-03	1.8E-04	8.590E 00	2.44E-07	1.8E-06
2.090E 00	9.52E-03	3.6E-04	4.630E 00	2.17E-03	1.7E-04	8.730E 00	6.71E-07	1.4E-06
2.150E 00	9.00E-03	3.5E-04	4.730E 00	1.73E-03	1.7E-04	8.870E 00	8.35E-07	1.3E-06
2.210E 00	8.32E-03	3.5E-04	4.830E 00	1.60E-03	1.6E-04	9.010E 00	8.74E-07	1.3E-06
2.270E 00	8.53E-03	3.3E-04	4.930E 00	1.57E-03	1.5E-04	9.150E 00	4.39E-07	1.4E-06
2.330E 00	8.66E-03	3.3E-04	5.030E 00	1.43E-03	1.5E-04	9.300E 00	-4.92E-08	1.3E-06
2.390E 00	8.45E-03	3.2E-04	5.130E 00	1.35E-03	1.4E-04	9.460E 00	-3.49E-07	1.2E-06
2.450E 00	8.16E-03	3.1E-04	5.230E 00	1.34E-03	1.4E-04	9.620E 00	-1.37E-07	1.3E-06
2.510E 00	7.73E-03	3.0E-04	5.330E 00	1.25E-03	1.4E-04	9.780E 00	2.77E-07	1.1E-06
2.570E 00	7.74E-03	3.0E-04	5.430E 00	1.16E-03	1.3E-04	9.940E 00	8.19E-07	8.5E-07
2.630E 00	7.77E-03	2.9E-04	5.530E 00	1.13E-03	1.3E-04	1.010E 01	1.06E-06	8.3E-07
2.690E 00	7.30E-03	2.8E-04	5.630E 00	1.10E-03	1.2E-04	1.026E 01	1.04E-06	8.4E-07

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.7000E 00 MEV

EN-MAX= 0.1000E 01 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
1.000E 00	1.28E-02	1.2E-03	2.750E 00	6.85E-03	3.4E-04	5.730E 00	5.69E-04	1.3E-04
1.040E 00	1.50E-02	1.2E-03	2.810E 00	6.83E-03	3.4E-04	5.830E 00	6.08E-04	1.4E-04
1.080E 00	1.27E-02	1.0E-03	2.870E 00	6.79E-03	3.4E-04	5.930E 00	6.03E-04	1.3E-04
1.120E 00	1.17E-02	9.1E-04	2.930E 00	6.77E-03	3.2E-04	6.030E 00	5.35E-04	1.2E-04
1.160E 00	1.21E-02	8.9E-04	2.990E 00	6.65E-03	3.2E-04	6.130E 00	4.60E-04	1.1E-04
1.200E 00	1.26E-02	8.3E-04	3.050E 00	6.55E-03	3.3E-04	6.230E 00	4.24E-04	1.1E-04
1.240E 00	1.33E-02	8.7E-04	3.110E 00	6.47E-03	3.2E-04	6.330E 00	4.01E-04	1.1E-04
1.280E 00	1.38E-02	8.6E-04	3.180E 00	6.12E-03	3.1E-04	6.440E 00	3.26E-04	9.2E-05
1.320E 00	1.45E-02	7.4E-04	3.260E 00	5.67E-03	3.0E-04	6.560E 00	2.00E-04	7.7E-05
1.360E 00	1.38E-02	7.5E-04	3.340E 00	5.66E-03	2.9E-04	6.680E 00	1.07E-04	6.8E-05
1.400E 00	1.36E-02	8.9E-04	3.420E 00	5.53E-03	2.9E-04	6.800E 00	8.32E-05	6.0E-05
1.440E 00	1.37E-02	8.5E-04	3.500E 00	5.03E-03	2.8E-04	6.920E 00	9.30E-05	4.7E-05
1.480E 00	1.32E-02	7.0E-04	3.580E 00	4.65E-03	2.8E-04	7.040E 00	9.43E-05	3.7E-05
1.520E 00	1.31E-02	7.2E-04	3.660E 00	4.28E-03	2.8E-04	7.160E 00	7.48E-05	2.6E-05
1.560E 00	1.33E-02	8.6E-04	3.740E 00	3.95E-03	2.7E-04	7.280E 00	4.55E-05	1.6E-05
1.600E 00	1.28E-02	7.5E-04	3.820E 00	3.73E-03	2.6E-04	7.400E 00	2.19E-05	9.1E-06
1.640E 00	1.22E-02	6.1E-04	3.900E 00	3.53E-03	2.6E-04	7.520E 00	9.20E-06	5.3E-06
1.680E 00	1.22E-02	5.5E-04	3.980E 00	3.53E-03	2.5E-04	7.640E 00	4.58E-06	3.8E-06
1.720E 00	1.21E-02	5.3E-04	4.060E 00	3.67E-03	2.5E-04	7.760E 00	3.22E-06	3.4E-06
1.760E 00	1.18E-02	5.2E-04	4.140E 00	3.63E-03	2.4E-04	7.890E 00	2.79E-06	2.8E-06
1.800E 00	1.12E-02	5.3E-04	4.220E 00	3.35E-03	2.4E-04	8.030E 00	2.45E-06	2.5E-06
1.850E 00	1.07E-02	5.1E-04	4.300E 00	3.03E-03	2.3E-04	8.170E 00	2.57E-06	2.4E-06
1.910E 00	1.05E-02	4.7E-04	4.380E 00	2.85E-03	2.2E-04	8.310E 00	2.02E-06	2.3E-06
1.970E 00	9.82E-03	4.7E-04	4.460E 00	2.58E-03	2.2E-04	8.450E 00	1.28E-06	2.4E-06
2.030E 00	9.79E-03	4.5E-04	4.540E 00	2.13E-03	2.1E-04	8.590E 00	1.20E-08	2.1E-06
2.090E 00	1.01E-02	4.6E-04	4.630E 00	1.74E-03	2.0E-04	8.730E 00	-1.14E-06	2.1E-06
2.150E 00	9.61E-03	4.5E-04	4.730E 00	1.64E-03	1.9E-04	8.870E 00	-1.46E-06	2.0E-06
2.210E 00	9.43E-03	4.3E-04	4.830E 00	1.60E-03	1.9E-04	9.010E 00	-1.30E-06	2.0E-06
2.270E 00	9.27E-03	4.1E-04	4.930E 00	1.58E-03	1.8E-04	9.150E 00	-9.29E-07	1.9E-06
2.330E 00	8.85E-03	4.0E-04	5.030E 00	1.61E-03	1.7E-04	9.300E 00	-8.63E-07	1.9E-06
2.390E 00	9.10E-03	3.9E-04	5.130E 00	1.55E-03	1.7E-04	9.460E 00	-3.01E-07	1.8E-06
2.450E 00	8.64E-03	3.8E-04	5.230E 00	1.31E-03	1.6E-04	9.620E 00	5.82E-07	1.7E-06
2.510E 00	7.77E-03	3.7E-04	5.330E 00	1.05E-03	1.5E-04	9.780E 00	1.93E-06	1.7E-06
2.570E 00	7.66E-03	3.6E-04	5.430E 00	8.81E-04	1.5E-04	9.940E 00	2.75E-06	1.3E-06
2.630E 00	7.49E-03	3.6E-04	5.530E 00	7.27E-04	1.4E-04	1.010E 01	2.69E-06	1.1E-06
2.690E 00	7.00E-03	3.5E-04	5.630E 00	6.00E-04	1.4E-04	1.026E 01	2.16E-06	1.1E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.5000E 00 MEV

EN-MAX= 0.7000E 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
1.000E 00	1.57E-02	1.6E-03	2.750E 00	9.05E-03	4.5E-04	5.730E 00	9.84E-04	1.8E-04
1.040E 00	1.54E-02	1.5E-03	2.810E 00	8.79E-03	4.5E-04	5.830E 00	9.30E-04	1.7E-04
1.080E 00	1.47E-02	1.3E-03	2.870E 00	8.70E-03	4.4E-04	5.930E 00	7.77E-04	1.7E-04
1.120E 00	1.58E-02	1.2E-03	2.930E 00	8.41E-03	4.3E-04	6.030E 00	5.82E-04	1.5E-04
1.160E 00	1.49E-02	1.2E-03	2.990E 00	8.13E-03	4.2E-04	6.130E 00	4.12E-04	1.4E-04
1.200E 00	1.36E-02	1.1E-03	3.050E 00	7.70E-03	4.2E-04	6.230E 00	2.81E-04	1.3E-04
1.240E 00	1.35E-02	1.1E-03	3.110E 00	6.89E-03	4.1E-04	6.330E 00	1.79E-04	1.3E-04
1.280E 00	1.42E-02	1.1E-03	3.180E 00	6.10E-03	4.0E-04	6.440E 00	1.15E-04	1.1E-04
1.320E 00	1.49E-02	9.2E-04	3.260E 00	6.01E-03	3.9E-04	6.560E 00	1.37E-04	9.7E-05
1.360E 00	1.54E-02	9.5E-04	3.340E 00	6.29E-03	3.8E-04	6.680E 00	2.14E-04	7.6E-05
1.400E 00	1.55E-02	1.1E-03	3.420E 00	6.25E-03	3.7E-04	6.800E 00	2.54E-04	6.8E-05
1.440E 00	1.65E-02	1.1E-03	3.500E 00	5.72E-03	3.7E-04	6.920E 00	2.16E-04	5.7E-05
1.480E 00	1.69E-02	8.4E-04	3.580E 00	5.47E-03	3.5E-04	7.040E 00	1.34E-04	4.3E-05
1.520E 00	1.50E-02	9.2E-04	3.660E 00	5.68E-03	3.5E-04	7.160E 00	6.84E-05	3.0E-05
1.560E 00	1.41E-02	1.1E-03	3.740E 00	5.68E-03	3.5E-04	7.280E 00	2.96E-05	1.8E-05
1.600E 00	1.43E-02	9.7E-04	3.820E 00	5.18E-03	3.4E-04	7.400E 00	1.17E-05	8.7E-06
1.640E 00	1.35E-02	7.6E-04	3.900E 00	4.68E-03	3.3E-04	7.520E 00	2.99E-06	6.4E-06
1.680E 00	1.32E-02	6.9E-04	3.980E 00	4.38E-03	3.3E-04	7.640E 00	4.11E-07	5.4E-06
1.720E 00	1.38E-02	6.9E-04	4.060E 00	4.02E-03	3.2E-04	7.760E 00	-8.81E-07	4.8E-06
1.760E 00	1.37E-02	6.8E-04	4.140E 00	3.62E-03	3.1E-04	7.890E 00	-8.37E-07	3.9E-06
1.800E 00	1.29E-02	6.8E-04	4.220E 00	3.41E-03	3.1E-04	8.030E 00	-4.17E-07	3.1E-06
1.850E 00	1.20E-02	6.6E-04	4.300E 00	3.35E-03	2.9E-04	8.170E 00	-7.65E-08	2.5E-06
1.910E 00	1.26E-02	6.2E-04	4.380E 00	3.23E-03	2.8E-04	8.310E 00	1.34E-07	2.3E-06
1.970E 00	1.27E-02	6.1E-04	4.460E 00	2.95E-03	2.7E-04	8.450E 00	2.03E-07	2.0E-06
2.030E 00	1.17E-02	5.9E-04	4.540E 00	2.71E-03	2.7E-04	8.590E 00	6.45E-07	2.0E-06
2.090E 00	1.09E-02	5.9E-04	4.630E 00	2.57E-03	2.6E-04	8.730E 00	1.32E-06	2.3E-06
2.150E 00	1.11E-02	5.6E-04	4.730E 00	2.41E-03	2.5E-04	8.870E 00	1.85E-06	2.5E-06
2.210E 00	1.10E-02	5.7E-04	4.830E 00	2.23E-03	2.4E-04	9.010E 00	2.09E-06	2.4E-06
2.270E 00	1.06E-02	5.4E-04	4.930E 00	2.00E-03	2.2E-04	9.150E 00	1.85E-06	2.5E-06
2.330E 00	1.04E-02	5.2E-04	5.030E 00	1.78E-03	2.2E-04	9.300E 00	1.59E-06	2.4E-06
2.390E 00	9.90E-03	5.0E-04	5.130E 00	1.56E-03	2.1E-04	9.460E 00	1.26E-06	2.5E-06
2.450E 00	9.70E-03	4.9E-04	5.230E 00	1.28E-03	2.0E-04	9.620E 00	1.25E-06	2.6E-06
2.510E 00	9.44E-03	4.8E-04	5.330E 00	1.05E-03	2.0E-04	9.780E 00	5.69E-07	2.5E-06
2.570E 00	9.47E-03	4.6E-04	5.430E 00	9.42E-04	2.0E-04	9.940E 00	3.30E-07	1.9E-06
2.630E 00	9.91E-03	4.7E-04	5.530E 00	9.20E-04	1.9E-04	1.010E 01	1.63E-08	1.7E-06
2.690E 00	9.69E-03	4.6E-04	5.630E 00	9.50E-04	1.8E-04	1.026E 01	8.11E-08	2.0E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.2930E 00 MEV EN-MAX= 0.5040E 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
1.000E 00	1.55E-02	2.6E-03	2.750E 00	1.05E-02	5.4E-04	5.730E 00	8.91E-04	3.0E-04
1.040E 00	1.54E-02	2.5E-03	2.810E 00	1.03E-02	5.3E-04	5.830E 00	8.08E-04	2.8E-04
1.080E 00	1.57E-02	2.5E-03	2.870E 00	9.93E-03	5.4E-04	5.930E 00	7.68E-04	2.8E-04
1.120E 00	1.56E-02	2.2E-03	2.930E 00	9.53E-03	5.4E-04	6.030E 00	7.33E-04	2.4E-04
1.160E 00	1.52E-02	2.1E-03	2.990E 00	9.19E-03	5.4E-04	6.130E 00	6.93E-04	2.3E-04
1.200E 00	1.65E-02	1.8E-03	3.050E 00	9.07E-03	5.2E-04	6.230E 00	6.43E-04	2.2E-04
1.240E 00	1.72E-02	1.7E-03	3.110E 00	8.89E-03	5.1E-04	6.330E 00	5.49E-04	2.0E-04
1.280E 00	1.76E-02	1.8E-03	3.180E 00	8.22E-03	5.2E-04	6.440E 00	3.79E-04	1.6E-04
1.320E 00	1.85E-02	1.5E-03	3.260E 00	7.71E-03	5.3E-04	6.560E 00	1.84E-04	1.3E-04
1.360E 00	1.91E-02	1.5E-03	3.340E 00	7.75E-03	5.1E-04	6.680E 00	5.24E-05	1.0E-04
1.400E 00	1.88E-02	1.6E-03	3.420E 00	7.64E-03	5.3E-04	6.800E 00	-4.30E-06	8.5E-05
1.440E 00	1.81E-02	1.7E-03	3.500E 00	7.12E-03	5.3E-04	6.920E 00	-3.09E-06	6.5E-05
1.480E 00	1.76E-02	1.3E-03	3.580E 00	6.45E-03	5.3E-04	7.040E 00	6.30E-06	4.7E-05
1.520E 00	1.68E-02	1.3E-03	3.660E 00	6.08E-03	5.4E-04	7.160E 00	1.45E-05	2.8E-05
1.560E 00	1.63E-02	1.5E-03	3.740E 00	5.93E-03	5.6E-04	7.280E 00	1.87E-05	1.2E-05
1.600E 00	1.69E-02	1.3E-03	3.820E 00	5.63E-03	5.4E-04	7.400E 00	2.09E-05	1.0E-05
1.640E 00	1.76E-02	1.1E-03	3.900E 00	5.30E-03	5.6E-04	7.520E 00	1.90E-05	9.3E-06
1.680E 00	1.70E-02	9.4E-04	3.980E 00	5.13E-03	6.0E-04	7.640E 00	9.51E-06	7.3E-06
1.720E 00	1.62E-02	1.1E-03	4.060E 00	4.94E-03	5.5E-04	7.760E 00	4.43E-06	5.8E-06
1.760E 00	1.62E-02	9.5E-04	4.140E 00	4.68E-03	5.6E-04	7.890E 00	9.99E-07	5.5E-06
1.800E 00	1.59E-02	9.5E-04	4.220E 00	4.46E-03	6.0E-04	8.030E 00	1.96E-06	5.8E-06
1.850E 00	1.53E-02	9.1E-04	4.300E 00	4.23E-03	5.8E-04	8.170E 00	1.02E-06	4.3E-06
1.910E 00	1.54E-02	7.7E-04	4.380E 00	4.04E-03	5.4E-04	8.310E 00	3.54E-07	2.9E-06
1.970E 00	1.52E-02	8.2E-04	4.460E 00	3.86E-03	5.5E-04	8.450E 00	1.51E-06	2.6E-06
2.030E 00	1.42E-02	8.2E-04	4.540E 00	3.53E-03	5.5E-04	8.590E 00	2.13E-06	2.6E-06
2.090E 00	1.32E-02	1.0E-03	4.630E 00	3.02E-03	5.3E-04	8.730E 00	2.02E-06	2.1E-06
2.150E 00	1.27E-02	1.1E-03	4.730E 00	2.52E-03	4.7E-04	8.870E 00	8.56E-07	1.8E-06
2.210E 00	1.32E-02	1.0E-03	4.830E 00	2.52E-03	4.7E-04	9.010E 00	-4.18E-07	1.6E-06
2.270E 00	1.33E-02	8.2E-04	4.930E 00	2.29E-03	4.4E-04	9.150E 00	-1.48E-06	1.4E-06
2.330E 00	1.26E-02	5.8E-04	5.030E 00	1.69E-03	4.5E-04	9.300E 00	-9.33E-07	1.4E-06
2.390E 00	1.23E-02	6.4E-04	5.130E 00	1.40E-03	4.2E-04	9.460E 00	-1.03E-07	1.3E-06
2.450E 00	1.17E-02	5.6E-04	5.230E 00	1.53E-03	3.9E-04	9.620E 00	6.21E-07	9.8E-07
2.510E 00	1.15E-02	5.4E-04	5.330E 00	1.55E-03	3.4E-04	9.780E 00	8.28E-07	1.1E-06
2.570E 00	1.22E-02	5.4E-04	5.430E 00	1.37E-03	3.7E-04	9.940E 00	1.26E-06	1.1E-06
2.630E 00	1.17E-02	5.5E-04	5.530E 00	1.18E-03	3.2E-04	1.010E 01	1.94E-06	1.4E-06
2.690E 00	1.09E-02	5.5E-04	5.630E 00	1.01E-03	3.2E-04	1.026E 01	1.49E-06	9.6E-07

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.1000E 00 MEV

EN-MAX= 0.2930E 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
1.000E 00	1.98E-02	6.1E-03	2.750E 00	1.33E-02	1.3E-03	5.730E 00	6.84E-04	7.5E-04
1.040E 00	2.00E-02	5.6E-03	2.810E 00	1.28E-02	1.2E-03	5.830E 00	7.44E-04	6.9E-04
1.080E 00	1.79E-02	5.7E-03	2.870E 00	1.22E-02	1.2E-03	5.930E 00	9.04E-04	6.4E-04
1.120E 00	1.82E-02	5.0E-03	2.930E 00	1.16E-02	1.2E-03	6.030E 00	1.04E-03	5.9E-04
1.160E 00	1.79E-02	4.5E-03	2.990E 00	1.12E-02	1.3E-03	6.130E 00	1.06E-03	5.1E-04
1.200E 00	1.98E-02	4.5E-03	3.050E 00	1.09E-02	1.3E-03	6.230E 00	8.83E-04	4.8E-04
1.240E 00	2.18E-02	4.0E-03	3.110E 00	1.09E-02	1.5E-03	6.330E 00	5.27E-04	4.3E-04
1.280E 00	2.16E-02	4.0E-03	3.180E 00	1.08E-02	1.4E-03	6.440E 00	1.09E-04	3.6E-04
1.320E 00	2.37E-02	3.4E-03	3.260E 00	1.04E-02	1.3E-03	6.560E 00	-2.11E-04	2.6E-04
1.360E 00	2.38E-02	3.5E-03	3.340E 00	9.96E-03	1.3E-03	6.680E 00	-2.91E-04	2.2E-04
1.400E 00	2.15E-02	3.7E-03	3.420E 00	8.96E-03	1.4E-03	6.800E 00	-1.36E-04	1.9E-04
1.440E 00	2.22E-02	3.2E-03	3.500E 00	7.79E-03	1.4E-03	6.920E 00	6.79E-05	1.4E-04
1.480E 00	2.32E-02	2.7E-03	3.580E 00	7.25E-03	1.3E-03	7.040E 00	1.80E-04	9.9E-05
1.520E 00	2.22E-02	2.7E-03	3.660E 00	7.02E-03	1.4E-03	7.160E 00	1.56E-04	4.8E-05
1.560E 00	2.11E-02	2.8E-03	3.740E 00	6.84E-03	1.3E-03	7.280E 00	7.32E-05	2.1E-05
1.600E 00	2.01E-02	2.5E-03	3.820E 00	6.66E-03	1.4E-03	7.400E 00	1.03E-05	1.8E-05
1.640E 00	1.99E-02	2.4E-03	3.900E 00	6.39E-03	1.4E-03	7.520E 00	-1.75E-05	2.0E-05
1.680E 00	2.03E-02	2.3E-03	3.980E 00	6.44E-03	1.4E-03	7.640E 00	-2.27E-05	1.8E-05
1.720E 00	2.01E-02	2.3E-03	4.060E 00	6.77E-03	1.4E-03	7.760E 00	-1.38E-05	1.4E-05
1.760E 00	1.95E-02	2.2E-03	4.140E 00	6.54E-03	1.4E-03	7.890E 00	-8.19E-06	1.2E-05
1.800E 00	1.92E-02	2.1E-03	4.220E 00	5.74E-03	1.4E-03	8.030E 00	3.23E-06	1.1E-05
1.850E 00	1.93E-02	1.9E-03	4.300E 00	5.00E-03	1.4E-03	8.170E 00	1.30E-05	1.1E-05
1.910E 00	1.92E-02	1.7E-03	4.380E 00	4.69E-03	1.4E-03	8.310E 00	1.67E-05	9.4E-06
1.970E 00	1.82E-02	1.9E-03	4.460E 00	4.35E-03	1.3E-03	8.450E 00	1.02E-05	6.3E-06
2.030E 00	1.70E-02	1.9E-03	4.540E 00	3.69E-03	1.4E-03	8.590E 00	1.18E-06	5.4E-06
2.090E 00	1.60E-02	2.0E-03	4.630E 00	3.17E-03	1.3E-03	8.730E 00	-4.50E-06	5.5E-06
2.150E 00	1.63E-02	2.1E-03	4.730E 00	3.08E-03	1.2E-03	8.870E 00	-3.85E-06	4.8E-06
2.210E 00	1.63E-02	2.1E-03	4.830E 00	2.88E-03	1.1E-03	9.010E 00	-3.88E-07	4.2E-06
2.270E 00	1.68E-02	1.9E-03	4.930E 00	2.26E-03	1.1E-03	9.150E 00	3.66E-06	3.8E-06
2.330E 00	1.73E-02	1.4E-03	5.030E 00	2.06E-03	1.1E-03	9.300E 00	6.04E-06	3.8E-06
2.390E 00	1.58E-02	1.4E-03	5.130E 00	2.10E-03	9.7E-04	9.460E 00	6.56E-06	4.2E-06
2.450E 00	1.50E-02	1.4E-03	5.230E 00	2.08E-03	9.9E-04	9.620E 00	5.23E-06	3.4E-06
2.510E 00	1.52E-02	1.3E-03	5.330E 00	1.92E-03	9.2E-04	9.780E 00	2.83E-06	3.3E-06
2.570E 00	1.43E-02	1.3E-03	5.430E 00	1.64E-03	8.9E-04	9.940E 00	1.68E-07	3.9E-06
2.630E 00	1.31E-02	1.4E-03	5.530E 00	1.21E-03	8.6E-04	1.010E 01	-1.36E-06	3.9E-06
2.690E 00	1.31E-02	1.3E-03	5.630E 00	8.14E-04	8.0E-04	1.026E 01	-1.17E-06	2.9E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.5000E-01 MEV

EN-MAX= 0.1000E 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
1.000E 00	2.86E-02	1.4E-02	2.750E 00	1.80E-02	3.8E-03	5.730E 00	7.26E-04	1.8E-03
1.040E 00	2.85E-02	1.4E-02	2.810E 00	1.66E-02	3.6E-03	5.830E 00	1.28E-03	1.7E-03
1.080E 00	2.92E-02	1.4E-02	2.870E 00	1.58E-02	3.6E-03	5.930E 00	2.04E-03	1.6E-03
1.120E 00	2.99E-02	1.4E-02	2.930E 00	1.56E-02	3.5E-03	6.030E 00	2.64E-03	1.4E-03
1.160E 00	2.47E-02	1.3E-02	2.990E 00	1.53E-02	3.6E-03	6.130E 00	2.43E-03	1.3E-03
1.200E 00	2.39E-02	1.3E-02	3.050E 00	1.44E-02	3.7E-03	6.230E 00	1.48E-03	1.1E-03
1.240E 00	2.74E-02	1.1E-02	3.110E 00	1.40E-02	3.7E-03	6.330E 00	2.56E-04	1.1E-03
1.280E 00	3.10E-02	1.1E-02	3.180E 00	1.32E-02	3.5E-03	6.440E 00	-7.77E-04	8.4E-04
1.320E 00	3.42E-02	1.0E-02	3.260E 00	1.23E-02	3.9E-03	6.560E 00	-1.15E-03	6.6E-04
1.360E 00	3.26E-02	9.8E-03	3.340E 00	1.28E-02	3.5E-03	6.680E 00	-8.08E-04	6.3E-04
1.400E 00	3.10E-02	9.9E-03	3.420E 00	1.26E-02	3.6E-03	6.800E 00	-1.04E-04	4.6E-04
1.440E 00	3.42E-02	8.9E-03	3.500E 00	1.17E-02	3.7E-03	6.920E 00	4.83E-04	3.3E-04
1.480E 00	3.41E-02	7.4E-03	3.580E 00	1.12E-02	3.5E-03	7.040E 00	5.94E-04	2.3E-04
1.520E 00	2.91E-02	7.4E-03	3.660E 00	1.09E-02	4.1E-03	7.160E 00	3.50E-04	1.1E-04
1.560E 00	2.66E-02	7.1E-03	3.740E 00	9.76E-03	3.9E-03	7.280E 00	1.30E-04	4.8E-05
1.600E 00	2.66E-02	6.7E-03	3.820E 00	8.21E-03	3.7E-03	7.400E 00	3.53E-05	3.6E-05
1.640E 00	2.48E-02	6.7E-03	3.900E 00	8.22E-03	4.0E-03	7.520E 00	1.35E-05	3.3E-05
1.680E 00	2.39E-02	6.4E-03	3.980E 00	9.52E-03	4.0E-03	7.640E 00	5.33E-06	3.0E-05
1.720E 00	2.58E-02	6.2E-03	4.060E 00	9.44E-03	3.7E-03	7.760E 00	-2.59E-06	2.5E-05
1.760E 00	2.76E-02	5.7E-03	4.140E 00	8.20E-03	4.1E-03	7.890E 00	-5.41E-06	2.3E-05
1.800E 00	2.70E-02	5.3E-03	4.220E 00	7.21E-03	4.0E-03	8.030E 00	2.54E-05	2.5E-05
1.850E 00	2.51E-02	5.5E-03	4.300E 00	6.93E-03	3.9E-03	8.170E 00	1.83E-05	2.7E-05
1.910E 00	2.66E-02	4.5E-03	4.380E 00	6.81E-03	3.8E-03	8.310E 00	1.33E-05	2.5E-05
1.970E 00	2.59E-02	4.8E-03	4.460E 00	6.37E-03	3.6E-03	8.450E 00	-5.61E-06	2.4E-05
2.030E 00	2.20E-02	4.5E-03	4.540E 00	5.21E-03	3.5E-03	8.590E 00	3.37E-06	1.7E-05
2.090E 00	2.34E-02	4.6E-03	4.630E 00	3.50E-03	3.4E-03	8.730E 00	9.68E-06	1.8E-05
2.150E 00	2.36E-02	4.4E-03	4.730E 00	2.45E-03	3.2E-03	8.870E 00	1.64E-05	1.7E-05
2.210E 00	2.20E-02	4.8E-03	4.830E 00	2.66E-03	3.1E-03	9.010E 00	1.69E-05	1.6E-05
2.270E 00	2.24E-02	4.4E-03	4.930E 00	3.29E-03	2.8E-03	9.150E 00	1.18E-05	1.4E-05
2.330E 00	2.23E-02	4.1E-03	5.030E 00	3.85E-03	2.6E-03	9.300E 00	2.91E-06	1.3E-05
2.390E 00	2.06E-02	3.9E-03	5.130E 00	4.00E-03	2.6E-03	9.460E 00	-4.38E-06	1.5E-05
2.450E 00	1.98E-02	3.8E-03	5.230E 00	3.13E-03	2.5E-03	9.620E 00	-6.63E-06	1.5E-05
2.510E 00	2.08E-02	3.7E-03	5.330E 00	1.65E-03	2.3E-03	9.780E 00	-4.17E-06	1.2E-05
2.570E 00	2.00E-02	3.5E-03	5.430E 00	4.07E-04	2.2E-03	9.940E 00	-1.73E-06	5.9E-06
2.630E 00	1.84E-02	3.6E-03	5.530E 00	3.20E-05	2.0E-03	1.010E 01	-5.31E-07	1.9E-06
2.690E 00	1.83E-02	3.6E-03	5.630E 00	2.77E-04	1.9E-03	1.026E 01	-1.13E-07	4.4E-07

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.2010E-01 MEV

EN-MAX= 0.5000E-01 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
1.000E 00	4.44E-02	3.8E-02	2.750E 00	3.36E-02	8.0E-03	5.730E 00	8.10E-04	3.8E-03
1.040E 00	5.14E-02	3.8E-02	2.810E 00	3.19E-02	8.5E-03	5.830E 00	1.99E-03	3.7E-03
1.080E 00	5.65E-02	3.4E-02	2.870E 00	2.97E-02	8.4E-03	5.930E 00	3.19E-03	3.5E-03
1.120E 00	5.94E-02	3.3E-02	2.930E 00	2.89E-02	8.5E-03	6.030E 00	3.99E-03	3.0E-03
1.160E 00	6.09E-02	3.2E-02	2.990E 00	2.99E-02	8.2E-03	6.130E 00	3.93E-03	2.8E-03
1.200E 00	5.29E-02	3.0E-02	3.050E 00	2.90E-02	7.3E-03	6.230E 00	3.19E-03	2.5E-03
1.240E 00	4.79E-02	2.9E-02	3.110E 00	2.71E-02	7.9E-03	6.330E 00	1.85E-03	2.2E-03
1.280E 00	5.46E-02	2.8E-02	3.180E 00	2.57E-02	7.8E-03	6.440E 00	-5.35E-04	1.8E-03
1.320E 00	6.11E-02	2.5E-02	3.260E 00	2.63E-02	8.1E-03	6.560E 00	-2.24E-03	1.4E-03
1.360E 00	6.34E-02	2.5E-02	3.340E 00	2.45E-02	8.3E-03	6.680E 00	-2.51E-03	1.2E-03
1.400E 00	6.17E-02	2.5E-02	3.420E 00	2.16E-02	8.0E-03	6.800E 00	-9.87E-04	1.0E-03
1.440E 00	6.05E-02	2.1E-02	3.500E 00	2.11E-02	7.9E-03	6.920E 00	4.15E-04	7.4E-04
1.480E 00	6.21E-02	1.9E-02	3.580E 00	2.19E-02	7.9E-03	7.040E 00	9.33E-04	5.4E-04
1.520E 00	5.95E-02	1.7E-02	3.660E 00	2.15E-02	8.4E-03	7.160E 00	4.86E-04	2.6E-04
1.560E 00	5.38E-02	1.7E-02	3.740E 00	1.82E-02	8.7E-03	7.280E 00	8.10E-05	1.9E-04
1.600E 00	5.28E-02	1.5E-02	3.820E 00	1.42E-02	8.8E-03	7.400E 00	4.86E-06	1.4E-04
1.640E 00	5.00E-02	1.4E-02	3.900E 00	1.33E-02	8.6E-03	7.520E 00	7.26E-05	1.2E-04
1.680E 00	4.70E-02	1.4E-02	3.980E 00	1.58E-02	8.6E-03	7.640E 00	1.06E-04	1.0E-04
1.720E 00	4.78E-02	1.3E-02	4.060E 00	1.63E-02	8.3E-03	7.760E 00	8.59E-05	1.0E-04
1.760E 00	5.19E-02	1.2E-02	4.140E 00	1.41E-02	8.6E-03	7.890E 00	5.07E-05	9.2E-05
1.800E 00	5.53E-02	1.2E-02	4.220E 00	1.23E-02	8.6E-03	8.030E 00	3.06E-05	7.1E-05
1.850E 00	5.34E-02	1.1E-02	4.300E 00	1.28E-02	8.3E-03	8.170E 00	8.53E-06	5.3E-05
1.910E 00	4.69E-02	1.0E-02	4.380E 00	1.35E-02	8.2E-03	8.310E 00	-1.10E-05	4.9E-05
1.970E 00	4.95E-02	1.1E-02	4.460E 00	1.23E-02	7.7E-03	8.450E 00	-2.35E-05	5.1E-05
2.030E 00	4.95E-02	9.5E-03	4.540E 00	1.05E-02	7.6E-03	8.590E 00	-2.49E-05	4.6E-05
2.090E 00	3.85E-02	1.1E-02	4.630E 00	8.63E-03	7.2E-03	8.730E 00	-1.71E-05	4.2E-05
2.150E 00	3.80E-02	1.1E-02	4.730E 00	6.41E-03	6.8E-03	8.870E 00	-4.43E-06	4.7E-05
2.210E 00	4.45E-02	9.9E-03	4.830E 00	5.30E-03	6.8E-03	9.010E 00	1.19E-05	5.5E-05
2.270E 00	4.37E-02	9.2E-03	4.930E 00	5.63E-03	6.3E-03	9.150E 00	2.10E-05	5.8E-05
2.330E 00	3.93E-02	9.0E-03	5.030E 00	5.02E-03	5.5E-03	9.300E 00	1.99E-05	5.0E-05
2.390E 00	3.71E-02	9.2E-03	5.130E 00	4.23E-03	5.3E-03	9.460E 00	2.54E-05	5.6E-05
2.450E 00	3.61E-02	8.7E-03	5.230E 00	4.19E-03	5.1E-03	9.620E 00	1.00E-05	5.4E-05
2.510E 00	3.79E-02	9.0E-03	5.330E 00	4.20E-03	5.0E-03	9.780E 00	1.14E-05	4.6E-05
2.570E 00	3.73E-02	8.3E-03	5.430E 00	3.35E-03	4.7E-03	9.940E 00	7.09E-06	2.4E-05
2.630E 00	3.51E-02	8.6E-03	5.530E 00	1.77E-03	4.2E-03	1.010E 01	1.67E-06	9.0E-06
2.690E 00	3.43E-02	8.0E-03	5.630E 00	6.78E-04	3.9E-03	1.026E 01	3.63E-07	2.1E-06

TANTALUM GAMMA RAY PRODUCTION CROSS SECTION

EN-MIN= 0.6550E-02 MEV

EN-MAX= 0.2010E-01 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
1.000E 00	9.96E-02	8.4E-02	2.750E 00	7.17E-02	1.2E-02	5.730E 00	6.97E-03	5.5E-03
1.040E 00	9.84E-02	8.5E-02	2.810E 00	6.47E-02	1.2E-02	5.830E 00	4.23E-03	5.1E-03
1.080E 00	1.02E-01	8.4E-02	2.870E 00	6.01E-02	1.2E-02	5.930E 00	3.46E-03	4.8E-03
1.120E 00	8.28E-02	7.8E-02	2.930E 00	5.84E-02	1.2E-02	6.030E 00	3.77E-03	4.4E-03
1.160E 00	7.76E-02	7.4E-02	2.990E 00	5.82E-02	1.2E-02	6.130E 00	4.22E-03	3.8E-03
1.200E 00	1.04E-01	6.6E-02	3.050E 00	6.06E-02	1.1E-02	6.230E 00	3.11E-03	3.5E-03
1.240E 00	1.19E-01	5.8E-02	3.110E 00	6.27E-02	1.2E-02	6.330E 00	1.61E-03	2.8E-03
1.280E 00	1.24E-01	5.8E-02	3.180E 00	5.62E-02	1.1E-02	6.440E 00	-8.86E-04	2.5E-03
1.320E 00	1.30E-01	5.2E-02	3.260E 00	4.71E-02	1.2E-02	6.560E 00	-1.61E-03	2.3E-03
1.360E 00	1.33E-01	5.0E-02	3.340E 00	4.69E-02	1.1E-02	6.680E 00	-1.41E-03	1.5E-03
1.400E 00	1.26E-01	4.8E-02	3.420E 00	4.73E-02	1.1E-02	6.800E 00	4.60E-04	1.5E-03
1.440E 00	1.21E-01	4.3E-02	3.500E 00	4.59E-02	1.2E-02	6.920E 00	1.17E-03	1.4E-03
1.480E 00	1.25E-01	3.6E-02	3.580E 00	4.57E-02	1.1E-02	7.040E 00	9.85E-04	9.1E-04
1.520E 00	1.30E-01	3.3E-02	3.660E 00	4.31E-02	1.1E-02	7.160E 00	2.06E-04	6.4E-04
1.560E 00	1.24E-01	3.1E-02	3.740E 00	3.84E-02	1.2E-02	7.280E 00	9.62E-05	5.5E-04
1.600E 00	1.09E-01	2.9E-02	3.820E 00	3.69E-02	1.2E-02	7.400E 00	2.51E-04	4.8E-04
1.640E 00	9.54E-02	2.9E-02	3.900E 00	3.79E-02	1.2E-02	7.520E 00	4.40E-04	3.3E-04
1.680E 00	1.03E-01	2.6E-02	3.980E 00	3.51E-02	1.3E-02	7.640E 00	4.28E-04	2.9E-04
1.720E 00	1.12E-01	2.4E-02	4.060E 00	3.28E-02	1.3E-02	7.760E 00	2.91E-04	3.1E-04
1.760E 00	1.03E-01	2.1E-02	4.140E 00	3.45E-02	1.2E-02	7.890E 00	1.07E-04	2.3E-04
1.800E 00	9.80E-02	2.1E-02	4.220E 00	3.41E-02	1.3E-02	8.030E 00	-2.74E-05	1.9E-04
1.850E 00	1.05E-01	1.9E-02	4.300E 00	2.68E-02	1.3E-02	8.170E 00	-1.16E-04	1.9E-04
1.910E 00	1.03E-01	1.6E-02	4.380E 00	2.25E-02	1.2E-02	8.310E 00	-1.95E-04	1.5E-04
1.970E 00	1.07E-01	1.6E-02	4.460E 00	2.27E-02	1.2E-02	8.450E 00	-1.66E-04	1.3E-04
2.030E 00	9.79E-02	1.6E-02	4.540E 00	2.04E-02	1.2E-02	8.590E 00	-1.48E-04	1.4E-04
2.090E 00	8.21E-02	1.8E-02	4.630E 00	1.54E-02	1.1E-02	8.730E 00	5.29E-06	1.1E-04
2.150E 00	9.06E-02	1.5E-02	4.730E 00	1.26E-02	1.1E-02	8.870E 00	1.71E-04	1.1E-04
2.210E 00	1.01E-01	1.4E-02	4.830E 00	1.16E-02	9.8E-03	9.010E 00	3.60E-04	1.5E-04
2.270E 00	9.38E-02	1.4E-02	4.930E 00	9.22E-03	9.4E-03	9.150E 00	3.26E-04	1.0E-04
2.330E 00	7.81E-02	1.4E-02	5.030E 00	8.10E-03	8.9E-03	9.300E 00	1.24E-04	4.1E-05
2.390E 00	7.71E-02	1.4E-02	5.130E 00	8.29E-03	8.2E-03	9.460E 00	-1.51E-04	1.1E-04
2.450E 00	7.57E-02	1.3E-02	5.230E 00	8.91E-03	7.6E-03	9.620E 00	-2.15E-04	9.5E-05
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2.570E 00	7.32E-02	1.3E-02	5.430E 00	1.07E-02	6.8E-03	9.940E 00	-6.37E-05	1.7E-05
2.630E 00	7.64E-02	1.3E-02	5.530E 00	1.12E-02	6.6E-03	1.010E 01	-1.97E-05	5.1E-06
2.690E 00	7.55E-02	1.3E-02	5.630E 00	9.61E-03	6.1E-03	1.026E 01	-4.30E-06	1.1E-06

CARBON 4.43 MEV GAMMA RAY PRODUCTION CROSS SECTION THETA= 90. DEGREES

EN MEV	EN-RSL MEV	DATA MB/SR	ERR MB/SR	EN MEV	EN-RSL MEV	DATA MB/SR	ERR MB/SR	EN MEV	EN-RSL MEV	DATA MB/SR	ERR MB/SR
4.782	0.044	0.14	0.07	6.836	0.038	11.37	0.51	8.932	0.057	12.46	0.62
4.826	0.045	0.17	0.08	6.875	0.038	11.46	0.51	8.989	0.057	12.55	0.63
4.883	0.069	0.23	0.07	6.932	0.078	11.59	0.36	9.046	0.058	12.81	0.63
4.941	0.047	1.53	0.15	6.991	0.039	10.70	0.50	9.105	0.058	11.83	0.61
4.988	0.047	1.16	0.13	7.030	0.040	10.79	0.50	9.163	0.059	11.72	0.63
5.035	0.048	0.81	0.11	7.070	0.040	10.34	0.49	9.223	0.060	12.50	0.63
5.084	0.049	0.90	0.11	7.131	0.081	10.14	0.34	9.283	0.060	11.74	0.64
5.133	0.049	0.99	0.13	7.192	0.041	10.65	0.50	9.343	0.061	12.39	0.64
5.182	0.050	1.21	0.14	7.233	0.041	10.77	0.52	9.404	0.061	12.35	0.65
5.233	0.051	1.50	0.15	7.274	0.042	12.23	0.54	9.466	0.062	13.77	0.68
5.284	0.052	1.89	0.16	7.337	0.085	15.46	0.44	9.528	0.063	13.06	0.70
5.336	0.052	2.19	0.16	7.401	0.043	15.36	0.63	9.591	0.063	14.33	0.73
5.389	0.053	3.41	0.20	7.444	0.043	16.61	0.65	9.655	0.064	13.42	0.70
5.442	0.054	3.17	0.20	7.487	0.044	17.36	0.64	9.719	0.065	14.46	0.72
5.483	0.027	3.00	0.28	7.531	0.044	17.74	0.66	9.784	0.065	15.55	0.76
5.524	0.055	3.09	0.20	7.575	0.044	18.14	0.69	9.850	0.066	13.05	0.70
5.580	0.056	3.73	0.22	7.620	0.045	16.71	0.65	9.916	0.067	12.35	0.69
5.636	0.057	4.39	0.23	7.665	0.045	17.77	0.69	9.983	0.067	13.22	0.72
5.693	0.058	4.30	0.23	7.733	0.091	23.36	0.56	10.022	0.541	13.19	0.26
5.737	0.029	5.06	0.35	7.802	0.046	28.07	0.84	10.050	0.068	12.75	0.75
5.781	0.059	5.07	0.25	7.849	0.047	28.14	0.88	10.510	0.436	14.18	0.32
5.840	0.060	5.89	0.26	7.896	0.047	26.77	0.83	11.000	0.544	11.64	0.30
5.885	0.030	6.91	0.41	7.943	0.048	25.16	0.84	11.522	0.500	11.68	0.34
5.931	0.061	6.95	0.29	7.991	0.048	26.00	0.83	11.994	0.443	11.11	0.38
5.993	0.062	7.77	0.30	8.039	0.048	25.94	0.85	12.499	0.566	10.33	0.37
6.040	0.032	9.46	0.47	8.088	0.049	25.77	0.83	13.033	0.502	10.05	0.41
6.088	0.064	8.75	0.32	8.137	0.049	27.27	0.89	13.496	0.424	9.56	0.48
6.136	0.032	10.06	0.49	8.187	0.050	24.58	0.81	13.987	0.559	9.71	0.46
6.185	0.065	11.33	0.36	8.237	0.050	21.55	0.80	14.502	0.472	8.19	0.52
6.234	0.033	12.34	0.54	8.287	0.051	17.67	0.69	14.987	0.496	8.73	0.51
6.284	0.067	14.00	0.40	8.338	0.051	15.40	0.66	15.496	0.522	7.68	0.49
6.334	0.034	20.12	0.68	8.390	0.052	15.60	0.67	16.032	0.550	6.36	0.50
6.385	0.069	21.61	0.50	8.442	0.052	14.23	0.63	16.522	0.431	5.63	0.52
6.437	0.035	17.15	0.64	8.494	0.053	13.29	0.63	16.962	0.449	6.07	0.58
6.489	0.070	15.83	0.42	8.547	0.053	12.47	0.61	17.501	0.628	5.83	0.51
6.542	0.036	17.45	0.63	8.600	0.054	12.14	0.61	18.061	0.494	6.46	0.58
6.578	0.036	18.15	0.64	8.654	0.054	12.25	0.61	18.565	0.515	6.07	0.64
6.632	0.073	16.56	0.43	8.709	0.055	12.21	0.61	19.001	0.355	4.24	0.86
6.687	0.037	12.98	0.54	8.764	0.055	12.22	0.61	19.454	0.553	5.76	0.65
6.724	0.037	13.32	0.55	8.819	0.056	12.48	0.64	0.0	0.0	0.0	0.0
6.780	0.075	11.89	0.36	8.875	0.056	12.71	0.61	0.0	0.0	0.0	0.0

CARBON 4.43 MEV GAMMA RAY PRODUCTION CROSS SECTION THETA=125. DEGREES

EN MEV	EN-RSL MEV	DATA MB/SR	ERR MB/SR	EN MEV	EN-RSL MEV	DATA MB/SR	ERR MB/SR	EN MEV	EN-RSL MEV	DATA MB/SR	ERR MB/SR
4.857	0.051	1.06	0.13	6.954	0.052	12.03	0.47	9.057	0.052	19.91	0.87
4.908	0.051	2.51	0.19	7.006	0.053	13.16	0.48	9.109	0.052	21.18	0.89
4.958	0.047	5.35	0.27	7.059	0.053	13.34	0.49	9.161	0.053	21.16	0.87
5.007	0.053	4.99	0.25	7.109	0.045	13.57	0.54	9.207	0.040	20.49	1.01
5.058	0.048	4.50	0.25	7.158	0.054	15.75	0.54	9.254	0.053	21.09	0.89
5.107	0.049	4.79	0.27	7.208	0.046	16.40	0.60	9.307	0.054	20.97	0.88
5.156	0.050	5.99	0.29	7.254	0.046	17.19	0.64	9.362	0.054	20.23	0.88
5.207	0.051	7.18	0.32	7.306	0.056	21.43	0.63	9.409	0.041	23.13	1.11
5.258	0.051	7.92	0.33	7.357	0.047	24.69	0.75	9.457	0.055	20.58	0.90
5.306	0.046	8.12	0.36	7.405	0.048	27.89	0.80	9.506	0.042	21.11	1.06
5.356	0.053	9.78	0.36	7.458	0.058	27.74	0.73	9.555	0.056	22.95	0.98
5.406	0.048	10.94	0.40	7.511	0.049	26.99	0.79	9.604	0.042	23.66	1.16
5.457	0.054	10.67	0.38	7.560	0.049	26.33	0.77	9.654	0.057	25.40	1.05
5.509	0.049	12.13	0.42	7.609	0.050	25.41	0.76	9.704	0.043	26.07	1.27
5.558	0.050	12.98	0.43	7.659	0.050	22.75	0.74	9.754	0.058	28.13	1.12
5.608	0.050	13.29	0.44	7.710	0.051	22.50	0.72	9.805	0.044	25.81	1.26
5.658	0.051	14.58	0.46	7.761	0.051	24.42	0.76	9.856	0.059	27.19	1.11
5.706	0.045	15.65	0.50	7.807	0.041	25.80	0.87	9.908	0.044	26.05	1.32
5.755	0.052	16.21	0.48	7.854	0.052	24.29	0.77	9.952	0.045	26.18	1.25
5.808	0.053	17.43	0.49	7.906	0.053	24.89	0.78	10.005	0.060	23.22	1.06
5.858	0.047	16.50	0.51	7.959	0.053	25.41	0.77	10.057	0.045	25.05	1.24
5.905	0.048	18.64	0.55	8.007	0.043	28.08	0.90	10.077	0.501	23.78	0.37
5.956	0.055	19.37	0.52	8.056	0.054	30.06	0.86	10.581	0.507	22.21	0.39
6.008	0.049	21.38	0.58	8.105	0.044	32.46	0.99	11.080	0.491	24.47	0.46
6.057	0.049	22.06	0.58	8.154	0.055	36.45	0.94	11.578	0.505	22.00	0.48
6.107	0.050	20.73	0.57	8.204	0.045	35.46	1.05	12.080	0.499	17.97	0.48
6.157	0.051	21.58	0.58	8.255	0.056	30.18	0.87	12.584	0.510	17.12	0.51
6.208	0.051	22.25	0.59	8.305	0.045	24.67	0.90	13.087	0.496	16.90	0.57
6.260	0.052	21.94	0.58	8.357	0.057	22.47	0.77	13.585	0.500	14.85	0.58
6.308	0.045	22.77	0.64	8.409	0.046	22.38	0.89	14.087	0.504	14.40	0.60
6.357	0.053	24.38	0.61	8.455	0.047	22.61	0.87	14.591	0.504	13.53	0.62
6.407	0.046	23.58	0.64	8.508	0.059	20.70	0.75	15.095	0.503	11.96	0.61
6.457	0.054	20.46	0.56	8.561	0.048	23.39	0.88	15.596	0.499	10.69	0.64
6.508	0.047	17.10	0.56	8.609	0.048	21.98	0.87	16.092	0.493	9.72	0.65
6.555	0.048	17.83	0.56	8.657	0.048	20.07	0.85	16.580	0.483	8.14	0.63
6.607	0.056	17.84	0.52	8.705	0.049	20.44	0.86	17.074	0.505	8.31	0.66
6.660	0.049	14.78	0.51	8.754	0.049	19.59	0.83	17.573	0.492	8.69	0.68
6.709	0.049	13.42	0.49	8.804	0.050	19.57	0.87	18.076	0.514	7.14	0.65
6.759	0.050	12.33	0.48	8.853	0.050	19.91	0.84	18.582	0.498	8.23	0.75
6.809	0.050	11.33	0.46	8.903	0.050	19.96	0.85	19.090	0.518	5.94	0.72
6.859	0.051	11.93	0.47	8.954	0.051	20.10	0.86	0.0	0.0	0.0	0.0
6.906	0.043	12.59	0.52	9.005	0.051	20.68	0.88	0.0	0.0	0.0	0.0

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