**The $\text{Ti}(n,x\gamma)$ Reaction Cross Section
for Incident Neutron Energies
Between 0.3 and 20.0 MeV**

G. L. Morgan
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MASTER

OAK RIDGE NATIONAL LABORATORY
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Neutron Physics Division

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ABSTRACT

Differential cross sections for the neutron-induced gamma-ray production from natural titanium have been measured for incident neutron energies between 0.3 and 20.0 MeV. The Oak Ridge Electron Linear Accelerator (ORELA) was used to provide the neutrons and a NaI spectrometer to detect the gamma rays at 125°. The data presented are the double differential cross section, $d^2\sigma/d\Omega dE$, for gamma-ray energies between 0.3 and 10.6 MeV for coarse intervals in incident neutron energy. The integrated yield of gamma rays of energies greater than 300 keV with higher resolution in the neutron energy is also presented. The experimental results are compared with the Evaluated Nuclear Data Files (ENDF).

INTRODUCTION

As part of a continuing program¹ for determining numerical values of gamma-ray-production cross sections for neutron-induced reactions, we have measured the absolute differential cross sections for gamma rays produced by neutron interactions with natural titanium. The data are presented in this report in tabular and graphical form and are compared to the current evaluated data file for titanium (MAT 1286 ENDF/B-IV).²

Two methods of data analysis were employed. The first gives the detailed gamma-ray spectra for a series of relatively coarse intervals in incident neutron energy while the second method uses integral quantities to illustrate the detailed behavior of the cross sections as a function of the incident neutron energy. The second approach is used to facilitate comparison of the experimental and evaluated data in the region of the thresholds for the (n,2n) and (n,3n) reactions.

EXPERIMENTAL PROCEDURE

Details of the experimental procedure are given elsewhere³ and only a brief description will be given here. Neutrons were produced by photonuclear processes due to bremsstrahlung from the impact on a tantalum target of electrons from the Oak Ridge Electron Linear Accelerator (ORELA). The present experiment employed an electron beam energy of 135 MeV with a repetition rate of 800 pulses per second and a pulse width of 30 ns. The total electron beam power was 40 kW.

Neutrons produced at the linac target traversed a 47.35-m flight path and were incident on a thin slab of natural titanium oriented 45°

with respect to the incident beam. The slab was 30 cm wide by 30 cm high with a thickness of 0.0294 atoms/barn. Gamma rays originating in the sample were detected by a heavily shielded 12.5-cm by 12.5-cm NaI detector at 125° with respect to the incident neutron beam. For each event in the detector, data were recorded in a two-parameter array containing gamma-ray pulse height as a function of time-of-flight for the incident neutron.

The neutron flux at the sample position was determined in a separate experiment using calibrated thick organic scintillators. During the course of the gamma-ray measurements the flux was monitored using a small plastic scintillator in the edge of the neutron beam 30 m from the source.

DATA REDUCTION

Two methods of data reduction were employed. In the first, the pulse-height spectra were integrated over intervals of neutron time-of-flight to form pulse-height spectra for specific incident neutron energy ranges. These intervals ranged in width from 0.5 MeV at energies below 5 MeV to 3 MeV in the range 14 to 20 MeV. The spectra so formed were then unfolded using the code FERN and measured response functions of the NaI detector. The results were the gamma-ray spectra defined by 176 points covering the gamma-ray energy range from 0.30 to 10.6 MeV. After correction for self-absorption and neutron self-shielding in the sample, these spectra were normalized to cross sections using the measured neutron flux and sample thickness. A further correction was then applied to the unfolded data. The contribution to the observed cross section at $E_\gamma = 0.511$ MeV due to pair production in the sample was analytically removed.

This was done by first calculating the pair production probability as a function of gamma-ray energy using a Monte Carlo technique. Implicit in the calculation are the assumptions of uniform gamma-ray production probability within the sample volume intercepted by the beam and the isotropy of emitted gamma rays. The total 0.511-MeV cross section within each neutron energy group was then calculated from the product of the observed gamma-ray cross section and the pair production probability. This cross section was then "smeared" with the detector resolution and subtracted from the original data. The magnitude of the correction ranged from on the order of 0.02 mb/sr for $E_n = 1.0-1.5$ MeV to 6 mb/sr for $E_n = 10-12$ MeV.

These results are presented in the first set of figures at the end of this report. Figure 1 is a three-dimensional representation of the data giving cross section versus gamma-ray and incident neutron energy. Figures 2-20 present the detailed gamma-ray spectra for each incident neutron energy interval. These are compared to cross sections generated from the evaluation (ENDF/B-IV MAT 1286) by averaging over the appropriate neutron energy interval.

The data described above provide detailed information about the secondary gamma-ray spectra, but because the unfolding technique requires good statistical accuracy the data must be binned over large neutron energy intervals. Therefore, a second type of data reduction, pulse-height weighting,^{4,5} was also used. This technique provided only integral information about the secondary gamma spectra (e.g., total yield and average photon energy), but because the demands on statistical accuracy are less it allowed better resolution in the incident neutron energy. In this work the pulse-height weighting analysis was applied to spectra

formed by integration over time-of-flight intervals corresponding to $\Delta E_n = 0.1$ MeV at $E_n = 1$ MeV increasing to $\Delta E_n = 1.0$ MeV at $E_n = 20$ MeV. The results of this analysis for the total yield and average secondary gamma-ray energy as a function of the incident neutron energy are presented in Figs. 21 and 22. A value of the lower cut-off in gamma-ray energy of 0.3 MeV was used. Comparisons are made for the same quantities calculated from the evaluated files.

The data shown in the graphs are given in the tables contained in the last section of this report. The values shown in the graphs and presented in the tables do not include an uncertainty of 10% in overall normalization due mainly to the determination of the incident neutron flux.

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Figure 1

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Figure 2

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Figure 3

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Figure 4

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Figure 5

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Figure 6

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Figure 7

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Figure 8

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Figure 9

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Figure 10

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Figure 11

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Figure 12

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Figure 13

11-SEP-77

Figure 14

12-SEP-77

Figure 15

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Figure 16

12-SEP-77

Figure 18

Figure 19

Figure 20

Figure 21

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 0.40 TO 0.71 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	5.915E-04	5.439E-04	1.555E 00	3.452E-04	1.925E-04	4.560E 00	-8.142E-07	9.082E-05
3.225E-01	7.127E-04	5.085E-04	1.585E 00	3.270E-04	1.949E-04	4.640E 00	-1.281E-06	9.339E-05
3.375E-01	6.424E-04	5.021E-04	1.615E 00	2.459E-04	1.932E-04	4.720E 00	1.915E-05	9.724E-05
3.525E-01	4.352E-04	4.947E-04	1.645E 00	1.784E-04	1.917E-04	4.800E 00	6.237E-05	9.738E-05
3.675E-01	1.571E-04	4.932E-04	1.680E 00	1.772E-04	1.896E-04	4.880E 00	1.093E-04	1.002E-04
3.825E-01	4.578E-05	4.865E-04	1.720E 00	2.555E-04	1.840E-04	4.960E 00	1.238E-04	1.011E-04
3.975E-01	1.213E-04	4.710E-04	1.760E 00	2.948E-04	1.771E-04	5.040E 00	9.188E-05	9.335E-05
4.125E-01	2.609E-04	4.779E-04	1.800E 00	2.506E-04	1.716E-04	5.120E 00	5.243E-05	9.421E-05
4.275E-01	2.762E-04	4.940E-04	1.840E 00	1.633E-04	1.665E-04	5.200E 00	2.205E-05	9.939E-05
4.425E-01	2.374E-04	5.204E-04	1.880E 00	6.538E-05	1.604E-04	5.280E 00	-4.194E-06	1.053E-04
4.575E-01	2.657E-04	5.357E-04	1.920E 00	6.226E-07	1.607E-04	5.360E 00	-3.100E-05	1.005E-04
4.725E-01	3.599E-04	5.385E-04	1.960E 00	-4.125E-06	1.616E-04	5.440E 00	-5.240E-05	9.654E-05
4.875E-01	4.241E-04	4.815E-04	2.000E 00	2.799E-05	1.554E-04	5.520E 00	-5.140E-05	9.260E-05
5.025E-01	4.080E-04	4.036E-04	2.040E 00	4.631E-05	1.502E-04	5.600E 00	-1.900E-05	9.112E-05
5.175E-01	3.012E-04	3.400E-04	2.080E 00	5.734E-05	1.494E-04	5.680E 00	2.608E-05	9.284E-05
5.325E-01	1.548E-04	2.979E-04	2.120E 00	9.791E-05	1.546E-04	5.760E 00	5.946E-05	9.804E-05
5.475E-01	2.058E-05	2.777E-04	2.160E 00	1.606E-04	1.626E-04	5.850E 00	6.072E-05	9.155E-05
5.625E-01	-8.032E-05	2.616E-04	2.200E 00	1.883E-04	1.637E-04	5.950E 00	3.570E-05	8.475E-05
5.775E-01	-1.351E-04	2.439E-04	2.240E 00	1.661E-04	1.586E-04	6.050E 00	2.482E-05	7.889E-05
5.925E-01	-1.487E-04	2.334E-04	2.280E 00	1.421E-04	1.473E-04	6.150E 00	3.694E-05	7.960E-05
6.100E-01	-1.192E-04	2.489E-04	2.320E 00	1.411E-04	1.356E-04	6.250E 00	4.082E-05	8.242E-05
6.300E-01	-8.020E-05	2.638E-04	2.360E 00	1.466E-04	1.285E-04	6.350E 00	2.725E-05	8.090E-05
6.500E-01	-7.197E-05	2.652E-04	2.400E 00	1.382E-04	1.217E-04	6.450E 00	3.638E-06	7.162E-05
6.700E-01	-8.075E-05	2.595E-04	2.440E 00	1.269E-04	1.179E-04	6.550E 00	-1.402E-05	6.057E-05
6.900E-01	-5.559E-05	2.546E-04	2.480E 00	1.236E-04	1.171E-04	6.650E 00	-2.621E-05	5.326E-05
7.100E-01	2.799E-05	2.421E-04	2.525E 00	1.188E-04	1.166E-04	6.750E 00	-1.422E-05	5.336E-05
7.300E-01	1.467E-04	2.248E-04	2.575E 00	9.515E-05	1.134E-04	6.850E 00	2.231E-05	4.927E-05
7.500E-01	2.266E-04	2.110E-04	2.625E 00	5.279E-05	1.120E-04	6.950E 00	5.845E-05	4.000E-05
7.700E-01	2.380E-04	2.064E-04	2.675E 00	1.947E-05	1.108E-04	7.050E 00	6.559E-05	2.817E-05
7.900E-01	1.997E-04	2.062E-04	2.725E 00	1.048E-05	1.114E-04	7.150E 00	5.814E-05	1.954E-05
8.100E-01	1.432E-04	2.122E-04	2.775E 00	2.634E-05	1.119E-04	7.250E 00	5.919E-05	1.471E-05
8.300E-01	8.889E-05	2.160E-04	2.825E 00	5.524E-05	1.110E-04	7.350E 00	6.458E-05	1.290E-05
8.500E-01	5.281E-05	2.127E-04	2.875E 00	8.217E-05	1.060E-04	7.450E 00	6.026E-05	1.194E-05
8.700E-01	4.654E-05	2.117E-04	2.925E 00	1.044E-04	1.028E-04	7.550E 00	4.804E-05	1.160E-05
8.900E-01	6.557E-05	2.111E-04	2.975E 00	1.183E-04	1.035E-04	7.650E 00	3.724E-05	1.080E-05
9.125E-01	1.212E-04	2.046E-04	3.030E 00	1.118E-04	1.058E-04	7.780E 00	2.976E-05	1.038E-05
9.375E-01	2.247E-04	1.978E-04	3.090E 00	6.747E-05	1.041E-04	7.900E 00	1.900E-05	1.023E-05
9.625E-01	3.260E-04	1.873E-04	3.150E 00	2.473E-05	1.017E-04	8.020E 00	7.133E-06	1.011E-05
9.875E-01	3.367E-04	1.856E-04	3.210E 00	1.466E-05	1.030E-04	8.140E 00	1.745E-06	9.677E-06
1.012E 00	2.093E-04	1.815E-04	3.270E 00	3.344E-05	1.031E-04	8.260E 00	3.628E-06	9.211E-06
1.037E 00	5.752E-05	1.819E-04	3.330E 00	4.653E-05	1.050E-04	8.380E 00	1.110E-05	8.852E-06
1.063E 00	-1.362E-05	1.804E-04	3.390E 00	3.711E-05	1.012E-04	8.500E 00	2.086E-05	8.316E-06
1.087E 00	3.645E-05	1.756E-04	3.450E 00	2.328E-05	1.007E-04	8.620E 00	2.786E-05	7.880E-06
1.112E 00	1.172E-04	1.720E-04	3.510E 00	3.043E-05	1.037E-04	8.740E 00	2.870E-05	7.307E-06
1.137E 00	1.420E-04	1.703E-04	3.570E 00	4.498E-05	1.001E-04	8.860E 00	2.430E 05	6.331E-06
1.162E 00	9.477E-06	1.707E-04	3.630E 00	4.823E-05	1.016E-04	8.980E 00	1.789E-05	6.622E-06
1.188E 00	3.307E-05	1.689E-04	3.690E 00	4.110E-05	1.024E-04	9.100E 00	1.155E-05	3.926E-06
1.212E 00	9.064E-06	1.641E-04	3.750E 00	3.384E-05	1.019E-04	9.220E 00	7.273E-06	5.489E-06
1.237E 00	4.517E-05	1.694E-04	3.810E 00	3.374E-05	1.029E-04	9.340E 00	4.966E-06	5.650E-06
1.262E 00	1.616E-04	1.856E-04	3.870E 00	2.703E-05	9.919E-05	9.470E 00	3.431E-06	5.996E-06
1.287E 00	2.961E-04	1.999E-04	3.930E 00	1.855E-05	9.936E-05	9.610E 00	3.106E-06	4.547E-06
1.315E 00	4.399E-04	2.113E-04	3.990E 00	2.502E-05	1.004E-04	9.750E 00	3.264E-06	4.548E-06
1.345E 00	5.191E-04	2.149E-04	4.050E 00	4.810E-05	9.814E-05	9.890E 00	4.032E-06	5.339E-06
1.375E 00	5.142E-04	2.181E-04	4.110E 00	7.883E-05	9.791E-05	1.003E 01	4.519E-06	5.575E-06
1.405E 00	4.313E-04	2.105E-04	4.170E 00	1.063E-04	9.884E-05	1.017E 01	4.117E-06	4.208E-06
1.435E 00	3.085E-04	1.995E-04	4.240E 00	1.140E-04	1.007E-04	1.031E 01	4.225E-06	3.582E-06
1.465E 00	2.126E-04	1.994E-04	4.320E 00	9.476E-05	9.774E-05	1.045E 01	4.134E-06	4.520E-06
1.495E 00	2.115E-04	1.924E-04	4.400E 00	5.031E-05	9.587E-05	1.059E 01	3.164E-06	3.575E-06
1.525E 00	2.835E-04	1.874E-04	4.480E 00	1.210E-05	9.413E-05			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	3.958E-05	5.018E-05
4.000E-01 - 5.000E-01	3.020E-05	5.021E-05
5.000E-01 - 6.000E-01	5.680E-06	2.879E-05
6.000E-01 - 7.000E-01	-8.061E-06	2.582E-05
7.000E-01 - 8.000E-01	1.675E-05	2.102E-05
8.000E-01 - 1.000E 00	3.290E-05	4.064E-05
1.000E 00 - 1.200E 00	1.707E-05	3.504E-05
1.200E 00 - 1.400E 00	6.150E-05	3.942E-05
1.400E 00 - 1.600E 00	5.890E-05	3.215E 05
1.600E 00 - 1.800E 00	4.717E-05	3.703E-05
1.800E 00 - 2.000E 00	1.407E-05	3.251E-05
2.000E 00 - 2.500E 00	6.195E-05	7.136E-05
2.500E 00 - 3.000E 00	3.414E-05	5.496E-05
3.000E 00 - 3.500E 00	2.204E-05	5.152E-05
3.500E 00 - 4.000E 00	1.709E-05	5.057E-05
4.000E 00 - 4.500E 00	3.621E-05	4.888E-05
4.500E 00 - 5.000E 00	2.498E-05	4.823E-05
5.000E 00 - 6.000E 00	1.730E-05	9.477E-05
6.000E 00 - 7.000E 00	1.598E-05	6.499E-05
7.000E 00 - 8.000E 00	4.619E-05	1.411E-05
8.000E 00 - 9.000E 00	1.617E-05	8.326E-06
9.000E 00 - 1.000E 01	5.621E-06	5.378E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 0.71 TO 1.00 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	8.372E-04	6.308E-04	1.555E 00	3.723E-04	1.309E-04	4.560E 00	2.869E-05	6.970E-05
3.225E-01	8.796E-04	5.740E-04	1.585E 00	3.930E-04	1.303E-04	4.640E 00	5.199E-05	7.246E-05
3.375E-01	5.360E-04	5.870E-04	1.615E 00	3.487E-04	1.299E-04	4.720E 00	5.281E-05	7.479E-05
3.525E-01	1.464E-04	6.023E-04	1.645E 00	2.667E-04	1.311E-04	4.800E 00	5.981E-05	7.649E-05
3.675E-01	1.552E-04	6.127E-04	1.680E 00	1.940E-04	1.312E-04	4.880E 00	8.173E-05	7.533E-05
3.825E-01	4.102E-04	5.903E-04	1.720E 00	2.037E-04	1.316E-04	4.960E 00	8.931E-05	7.342E-05
3.975E-01	4.911E-04	6.062E-04	1.760E 00	2.551E-04	1.272E-04	5.040E 00	7.040E-05	7.534E-05
4.125E-01	3.258E-04	6.420E-04	1.800E 00	2.580E-04	1.182E-04	5.120E 00	3.449E-05	7.925E-05
4.275E-01	1.673E-04	6.759E-04	1.840E 00	2.016E-04	1.114E-04	5.200E 00	1.884E-05	8.429E-05
4.425E-01	1.378E-04	6.969E-04	1.880E 00	2.589E-04	1.108E-04	5.280E 00	2.310E-05	8.742E-05
4.575E-01	2.707E-04	7.379E-04	1.920E 00	5.408E-05	1.112E-04	5.360E 00	3.998E-05	8.776E-05
4.725E-01	5.824E-04	7.292E-04	1.960E 00	1.693E-05	1.100E-04	5.440E 00	4.587E-05	8.785E-05
4.875E-01	9.764E-04	6.124E-04	2.000E 00	1.635E-05	1.074E-04	5.520E 00	3.888E-05	8.243E-05
5.025E-01	1.154E-03	4.556E-04	2.040E 00	3.248E-05	1.050E-04	5.600E 00	3.308E-05	7.801E-05
5.175E-01	9.873E-04	3.219E-04	2.080E 00	4.820E-05	1.045E-04	5.680E 00	3.411E-05	7.682E-05
5.325E-01	6.045E-04	2.425E-04	2.120E 00	6.705E-05	1.087E-04	5.760E 00	3.413E-05	7.606E-05
5.475E-01	2.373E-04	2.207E-04	2.160E 00	9.799E-05	1.140E-04	5.850E 00	2.305E-05	8.318E-05
5.625E-01	-8.542E-06	2.102E-04	2.200E 00	1.368E-04	1.146E-04	5.950E 00	-3.535E-07	7.592E-05
5.775E-01	-1.402E-04	2.040E-04	2.240E 00	1.657E-04	1.073E-04	6.050E 00	-2.537E-05	6.797E-05
5.925E-01	-1.593E-04	2.019E-04	2.280E 00	1.685E-04	1.001E-04	6.150E 00	-1.886E-05	6.107E-05
6.100E-01	-5.739E-05	2.136E-04	2.320E 00	1.481E-04	9.394E-05	6.250E 00	6.940E-06	5.953E-05
6.300E-01	1.279E-04	2.322E-04	2.360E 00	1.255E-04	8.983E-05	6.350E 00	3.429E-05	6.245E-05
6.500E-01	2.074E-04	2.211E-04	2.400E 00	1.218E-04	8.705E-05	6.450E 00	4.332E-05	5.554E-05
6.700E-01	1.523E-04	2.027E-04	2.440E 00	1.338E-04	8.617E-05	6.550E 00	3.813E-05	4.798E-05
6.900E-01	6.551E-05	1.932E-04	2.480E 00	1.377E-04	8.619E-05	6.650E 00	2.716E-05	4.096E-05
7.100E-01	4.340E-05	1.886E-04	2.525E 00	1.182E-04	8.422E-05	6.750E 00	1.968E-05	3.801E-05
7.300E-01	6.023E-05	1.722E-04	2.575E 00	9.186E-05	8.456E-05	6.850E 00	1.836E-05	3.586E-05
7.500E-01	2.386E-05	1.694E-04	2.625E 00	8.252E-05	8.252E-05	6.950E 00	2.310E-05	3.136E-05
7.700E-01	-6.676E-05	1.754E-04	2.675E 00	8.972E-05	8.196E-05	7.050E 00	2.901E-05	2.572E-05
7.900E-01	-1.956E-05	1.804E-04	2.725E 00	7.400E-05	7.859E-05	7.150E 00	4.055E-05	1.945E-05
8.100E-01	4.876E-04	1.792E-04	2.775E 00	5.053E-05	7.617E-05	7.250E 00	6.311E-05	1.571E-05
8.300E-01	1.658E-03	1.728E-04	2.825E 00	4.513E-05	7.544E-05	7.350E 00	9.089E-05	1.422E-05
8.500E-01	3.208E-03	1.627E-04	2.875E 00	5.236E-05	7.660E-05	7.450E 00	1.054E-04	1.335E-05
8.700E-01	4.398E-03	1.651E-04	2.925E 00	5.273E-05	7.452E-05	7.550E 00	9.545E-05	1.276E-05
8.900E-01	4.587E-03	1.602E-04	2.975E 00	4.549E-05	7.632E-05	7.660E 00	6.279E-05	1.228E-05
9.125E-01	3.628E-03	1.447E-04	3.030E 00	4.261E-05	7.751E-05	7.780E 00	2.599E-05	1.139E-05
9.375E-01	2.073E-03	1.380E-04	3.090E 00	3.899E-05	7.719E-05	7.900E 00	5.678E-06	1.069E-05
9.625E-01	9.840E-04	1.380E-04	3.150E 00	2.568E-05	7.492E-05	8.020E 00	3.370E-06	1.035E-05
9.875E-01	5.595E-04	1.302E-04	3.210E 00	1.856E-05	7.330E-05	8.140E 00	1.003E-05	1.018E-05
1.012E 00	4.097E-04	1.171E-04	3.270E 00	3.395E-05	7.207E-05	8.260E 00	1.631E-05	9.898E-06
1.037E 00	2.595E-04	1.207E-04	3.330E 00	6.308E-05	7.078E-05	8.380E 00	1.755E-05	9.235E-06
1.063E 00	1.255E-04	1.272E-04	3.390E 00	8.812E-05	6.952E-05	8.500E 00	1.326E-05	9.064E-06
1.087E 00	8.847E-05	1.247E-04	3.450E 00	9.135E-05	7.066E-05	8.620E 00	9.581E-06	8.794E-06
1.112E 00	1.255E-04	1.214E-04	3.510E 00	8.020E-05	7.420E-05	8.740E 00	1.443E-05	8.133E-06
1.137E 00	1.419E-04	1.199E-04	3.570E 00	7.211E-05	7.624E-05	8.860E 00	2.773E-05	7.276E-06
1.162E 00	1.249E-04	1.205E-04	3.630E 00	8.516E-05	7.589E-05	8.980E 00	3.941E-05	7.079E-06
1.188E 00	1.061E-04	1.146E-04	3.690E 00	1.138E-04	7.388E-05	9.100E 00	4.009E-05	6.612E-06
1.212E 00	1.075E-04	1.107E-04	3.750E 00	1.386E-04	7.282E-05	9.220E 00	3.100E-05	5.936E-06
1.237E 00	1.384E-04	1.171E-04	3.810E 00	1.449E-04	7.305E-05	9.340E 00	1.925E-05	5.160E-06
1.262E 00	2.251E-04	1.266E-04	3.870E 00	1.307E-04	7.373E-05	9.470E 00	8.776E-06	5.693E-06
1.287E 00	3.365E-04	1.342E-04	3.930E 00	1.052E-04	7.479E-05	9.610E 00	2.881E-06	4.797E-06
1.315E 00	4.765E-04	1.394E-04	3.990E 00	7.110E-05	7.587E-05	9.750E 00	1.100E-06	4.334E-06
1.345E 00	5.704E-04	1.438E-04	4.050E 00	3.931E-05	7.590E-05	9.890E 00	1.674E-06	5.098E-06
1.375E 00	5.561E-04	1.432E-04	4.110E 00	1.925E-05	7.475E-05	1.003E 01	3.398E-06	5.217E-06
1.405E 00	4.253E-04	1.376E-04	4.170E 00	1.785E-05	7.660E-05	1.017E 01	3.817E-06	4.223E-06
1.435E 00	2.687E-04	1.362E-04	4.240E 00	2.026E-05	7.550E-05	1.031E 01	4.807E-06	3.120E-06
1.465E 00	1.913E-04	1.327E-04	4.320E 00	3.267E-05	7.488E-05	1.045E 01	5.549E-06	3.276E-06
1.495E 00	2.157E-04	1.282E-04	4.400E 00	9.816E-06	7.046E-05	1.059E 01	4.981E-06	3.488E-06
1.525E 00	3.010E-04	1.282E-04	4.480E 00	3.967E-06	6.907E-05			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	4.932E-05	5.999E-05
4.000E-01 - 5.000E-01	4.459E-05	6.700E-05
5.000E-01 - 6.000E-01	3.432E-05	2.541E-05
6.000E-01 - 7.000E-01	1.003E-05	2.127E-05
7.000E-01 - 8.000E-01	1.610E-06	1.770E-05
8.000E-01 - 1.000E 00	4.677E-04	3.057E-05
1.000E 00 - 1.200E 00	3.457E-05	2.418E-05
1.200E 00 - 1.400E 00	7.282E-05	2.641E-05
1.400E 00 - 1.600E 00	6.026E-05	2.635E-05
1.600E 00 - 1.800E 00	4.985E-05	2.584E-05
1.800E 00 - 2.000E 00	2.114E-05	2.223E-05
2.000E 00 - 2.500E 00	5.567E-05	5.002E-05
2.500E 00 - 3.000E 00	3.527E-05	3.955E-05
3.000E 00 - 3.500E 00	2.587E-05	3.662E-05
3.500E 00 - 4.000E 00	5.356E-05	3.724E-05
4.000E 00 - 4.500E 00	1.178E-05	3.696E-05
4.500E 00 - 5.000E 00	2.930E-05	3.679E-05
5.000E 00 - 6.000E 00	3.200E-05	8.128E-05
6.000E 00 - 7.000E 00	1.683E-05	5.609E-05
7.000E 00 - 8.000E 00	5.389E-05	1.467E-05
8.000E 00 - 9.000E 00	1.646E-05	8.901E-06
9.000E 00 - 1.000E 01	1.458E-05	5.390E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 1.00 TO 1.50 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	1.412E-02	1.600E-03	1.555E 00	3.101E-04	1.160E-04	4.560E 00	1.722E-05	5.993E-05
3.225E-01	1.498E-02	1.480E-03	1.585E 00	3.407E-04	1.107E-04	4.640E 00	-3.680E-06	5.920E-05
3.375E-01	1.453E-02	1.421E-03	1.615E 00	3.038E-04	1.050E-04	4.720E 00	-2.439E-05	5.981E-05
3.525E-01	1.312E-02	1.459E-03	1.645E 00	2.348E-04	1.037E-04	4.800E 00	-2.266E-05	6.098E-05
3.675E-01	1.163E-02	1.428E-03	1.680E 00	1.887E-04	1.045E-04	4.880E 00	-2.078E-07	6.001E-05
3.825E-01	9.635E-03	1.432E-03	1.720E 00	1.984E-04	1.069E-04	4.960E 00	2.568E-05	6.228E-05
3.975E-01	7.938E-03	1.493E-03	1.760E 00	1.977E-04	1.062E-04	5.040E 00	3.604E-05	6.549E-05
4.125E-01	6.243E-03	1.596E-03	1.800E 00	1.522E-04	1.044E-04	5.120E 00	3.610E-05	6.576E-05
4.275E-01	5.938E-03	1.574E-03	1.840E 00	1.083E-04	9.994E-05	5.200E 00	3.675E-05	6.501E-05
4.425E-01	5.663E-03	1.637E-03	1.880E 00	9.989E-05	9.741E-05	5.280E 00	4.152E-05	6.697E-05
4.575E-01	5.339E-03	1.740E-03	1.920E 00	1.134E-04	9.503E-05	5.360E 00	3.909E-05	7.157E-05
4.725E-01	5.311E-03	1.697E-03	1.960E 00	1.316E-04	9.218E-05	5.440E 00	3.058E-05	7.207E-05
4.875E-01	5.310E-03	1.437E-03	2.000E 00	1.335E-04	9.954E-05	5.520E 00	2.786E-05	7.007E-05
5.025E-01	4.995E-03	1.064E-03	2.040E 00	1.165E-04	8.732E-05	5.600E 00	3.961E-05	6.598E-05
5.175E-01	4.364E-03	7.738E-04	2.080E 00	8.553E-05	8.795E-05	5.680E 00	6.502E-05	6.486E-05
5.325E-01	3.923E-03	6.209E-04	2.120E 00	5.394E-05	9.187E-05	5.760E 00	8.788E-05	6.471E-05
5.475E-01	3.686E-03	5.555E-04	2.160E 00	3.802E-05	9.454E-05	5.850E 00	8.980E-05	7.012E-05
5.625E-01	3.367E-03	5.359E-04	2.200E 00	4.217E-05	9.456E-05	5.950E 00	5.271E-05	6.492E-05
5.775E-01	2.974E-03	5.366E-04	2.240E 00	4.530E-05	8.909E-05	6.050E 00	-1.284E-07	5.576E-05
5.925E-01	2.726E-03	5.593E-04	2.280E 00	3.610E-05	8.395E-05	6.150E 00	-4.147E-05	5.257E-05
6.100E-01	2.491E-03	6.394E-04	2.320E 00	2.610E-05	8.007E-05	6.250E 00	-5.269E-05	4.881E-05
6.300E-01	1.935E-03	7.251E-04	2.360E 00	3.206E-05	7.708E-05	6.350E 00	-3.648E-05	5.074E-05
6.500E-01	1.319E-03	7.021E-04	2.400E 00	4.994E-05	7.472E-05	6.450E 00	1.561E-06	4.994E-05
6.700E-01	1.098E-03	6.383E-04	2.440E 00	5.787E-05	7.227E-05	6.550E 00	2.777E-05	3.867E-05
6.900E-01	1.409E-03	6.013E-04	2.480E 00	4.639E-05	7.212E-05	6.650E 00	3.990E-05	3.177E-05
7.100E-01	2.061E-03	5.837E-04	2.525E 00	2.382E-05	7.231E-05	6.750E 00	3.625E-05	2.891E-05
7.300E-01	2.225E-03	5.711E-04	2.575E 00	1.768E-05	7.096E-05	6.850E 00	2.716E-05	2.854E-05
7.500E-01	1.241E-03	5.739E-04	2.625E 00	4.402E-05	7.050E-05	6.950E 00	1.772E-05	2.835E-05
7.700E-01	-3.618E-05	5.910E-04	2.675E 00	8.381E-05	6.960E-05	7.050E 00	7.253E-06	2.262E-05
7.900E-01	-9.754E-05	6.069E-04	2.725E 00	1.082E-04	6.604E-05	7.150E 00	5.742E-07	1.822E-05
8.100E-01	2.529E-03	6.336E-04	2.775E 00	1.089E-04	6.610E-05	7.250E 00	2.368E-06	1.503E-05
8.300E-01	9.088E-03	6.382E-04	2.825E 00	9.205E-05	6.623E-05	7.350E 00	1.267E-05	1.331E-05
8.500E-01	1.865E-02	6.667E-04	2.875E 00	6.414E-05	6.505E-05	7.450E 00	2.685E-05	1.201E-05
8.700E-01	2.932E-02	6.708E-04	2.925E 00	4.365E-05	6.597E-05	7.550E 00	3.966E-05	1.119E-05
8.900E-01	4.408E-02	6.790E-04	2.975E 00	3.624E-05	6.684E-05	7.650E 00	4.921E-05	1.015E-05
9.125E-01	7.864E-02	7.202E-04	3.030E 00	3.595E-05	6.537E-05	7.750E 00	5.279E-05	9.564E-06
9.375E-01	1.491E-01	8.354E-04	3.090E 00	3.283E-05	6.481E-05	7.900E 00	4.893E-06	0.330E-06
9.625E-01	2.160E-01	9.312E-04	3.150E 00	3.591E-05	6.590E-05	8.020E 00	3.908E-05	7.851E-06
9.875E-01	2.178E-01	9.046E-04	3.210E 00	4.355E-05	6.428E-05	8.140E 00	2.431E-05	7.449E-06
1.012E 00	1.521E-01	6.411E-04	3.270E 00	3.489E-05	6.568E-05	8.260E 00	9.281E-06	7.035E-06
1.037E 00	7.990E-02	3.955E-04	3.330E 00	1.089E-05	6.566E-05	8.380E 00	4.562E-07	6.577E-06
1.063E 00	3.004E-02	2.833E-04	3.390E 00	-7.967E-06	6.535E-05	8.500E 00	8.489E-07	6.282E-06
1.087E 00	9.814E-03	2.099E-04	3.450E 00	-3.693E-06	6.568E-05	8.620E 00	6.985E-06	6.144E-06
1.112E 00	3.399E-03	1.561E-04	3.510E 00	2.079E-05	6.400E-05	8.740E 00	1.221E-05	5.936E-06
1.137E 00	1.306E-03	1.187E-04	3.570E 00	4.718E-05	6.376E-05	8.860E 00	1.404E-05	5.937E-06
1.162E 00	6.766E-04	1.097E-04	3.630E 00	5.966E-05	6.466E-05	8.980E 00	1.311E-05	5.879E-06
1.188E 00	3.828E-04	1.056E-04	3.690E 00	5.581E-05	6.460E-05	9.100E 00	1.103E-05	5.211E-06
1.212E 00	3.162E-04	9.941E-05	3.750E 00	4.639E-05	6.548E-05	9.220E 00	1.032E-05	4.712E-06
1.237E 00	3.433E-04	1.011E-04	3.810E 00	3.661E-05	6.288E-05	9.340E 00	1.064E-05	4.795E-06
1.262E 00	3.915E-04	1.060E-04	3.870E 00	3.417E-05	6.355E-05	9.470E 00	9.637E-06	4.895E-06
1.287E 00	4.228E-04	1.165E-04	3.930E 00	3.885E-05	6.416E-05	9.610E 00	6.012E-06	4.019E-06
1.315E 00	4.559E-04	1.278E-04	3.990E 00	4.409E-05	6.414E-05	9.750E 00	1.735E-06	3.448E-06
1.345E 00	4.766E-04	1.273E-04	4.050E 00	4.908E-05	6.356E-05	9.890E 00	3.510E-07	3.792E-06
1.375E 00	4.622E-04	1.275E-04	4.110E 00	5.969E-05	6.309E-05	1.003E 01	2.057E-06	3.707E-06
1.405E 00	3.943E-04	1.283E-04	4.170E 00	7.249E-05	6.371E-05	1.017E 01	3.588E-06	2.888E-06
1.435E 00	3.088E-04	1.186E-04	4.240E 00	7.250E-05	6.357E-05	1.031E 01	4.202E-06	2.180E-06
1.465E 00	2.434E-04	1.135E-04	4.320E 00	4.530E-05	5.924E-05	1.045E 01	4.290E-06	2.208E-06
1.495E 00	2.185E-04	1.140E-04	4.400E 00	2.922E-05	5.539E-05	1.059E 01	3.475E-06	2.309E-06
1.525E 00	2.492E-04	1.176E-04	4.480E 00	2.630E-05	5.608E-05			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.246E-03	1.473E-04
4.000E-01 - 5.000E-01	5.683E-04	1.586E-04
5.000E-01 - 6.000E-01	3.645E-04	6.405E-05
6.000E-01 - 7.000E-01	1.654E-04	6.611E-05
7.000E-01 - 8.000E-01	1.113E-04	5.857E-05
8.000E-01 - 1.000E 00	1.853E-02	1.501E-04
1.000E 00 - 1.200E 00	6.979E-03	5.064E-05
1.200E 00 - 1.400E 00	8.293E-05	2.334E-05
1.400E 00 - 1.600E 00	5.771E-05	2.327E-05
1.600E 00 - 1.800E 00	4.284E-05	2.107E-05
1.800E 00 - 2.000E 00	2.368E-05	1.924E-05
2.000E 00 - 2.500E 00	2.780E-05	4.198E-05
2.500E 00 - 3.000E 00	3.114E-05	3.397E-05
3.000E 00 - 3.500E 00	1.118E-05	3.262E-05
3.500E 00 - 4.000E 00	2.184E-05	3.207E-05
4.000E 00 - 4.500E 00	2.507E-05	3.030E-05
4.500E 00 - 5.000E 00	-1.904E-07	3.011E-05
5.000E 00 - 6.000E 00	4.934E-05	6.726E-05
6.000E 00 - 7.000E 00	2.055E-06	4.142E-05
7.000E 00 - 8.000E 00	2.873E-05	1.295E-05
8.000E 00 - 9.000E 00	1.224E-05	6.539E-06
9.000E 00 - 1.000E 01	6.882E-06	4.397E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 1.50 TO 2.01 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	2.865E-02	2.668E-03	1.555E 00	1.384E-02	3.186E-04	4.560E 00	4.343E-05	6.480E-05
3.225E-01	2.940E-02	2.475E-03	1.585E 00	1.177E-02	2.831E-04	4.640E 00	3.418E-05	6.489E-05
3.375E-01	2.687E-02	2.474E-03	1.615E 00	8.334E-03	2.237E-04	4.720E 00	2.369E-05	6.556E-05
3.525E-01	2.455E-02	2.467E-03	1.645E 00	5.150E-03	1.709E-04	4.800E 00	1.375E-05	6.575E-05
3.675E-01	2.260E-02	2.365E-03	1.680E 00	2.839E-03	1.438E-04	4.880E 00	2.673E-06	6.362E-05
3.825E-01	1.906E-02	2.434E-03	1.720E 00	1.752E-03	1.363E-04	4.960E 00	-8.263E-06	6.738E-05
3.975E-01	1.551E-02	2.591E-03	1.760E 00	1.350E-03	1.368E-04	5.040E 00	-8.075E-06	6.880E-05
4.125E-01	1.296E-02	2.669E-03	1.800E 00	1.060E-03	1.280E-04	5.120E 00	-3.504E-06	6.919E-05
4.275E-01	1.049E-02	2.776E-03	1.840E 00	7.733E-04	1.115E-04	5.200E 00	6.113E-06	7.176E-05
4.425E-01	8.834E-03	2.897E-03	1.880E 00	5.507E-04	1.002E-04	5.280E 00	1.286E-05	6.944E-05
4.575E-01	8.997E-03	2.968E-03	1.920E 00	3.935E-04	9.819E-05	5.360E 00	1.054E-05	7.095E-05
4.725E-01	1.013E-02	2.816E-03	1.960E 00	2.608E-04	9.851E-05	5.440E 00	2.597E-05	6.795E-05
4.875E-01	1.037E-02	2.419E-03	2.000E 00	1.523E-04	9.935E-05	5.520E 00	5.166E-05	6.716E-05
5.025E-01	9.346E-03	1.860E-03	2.040E 00	9.674E-05	9.812E-05	5.600E 00	8.389E-05	6.828E-05
5.175E-01	7.992E-03	1.400E-03	2.080E 00	8.366E-05	9.758E-05	5.680E 00	1.025E-04	7.354E-05
5.325E-01	7.119E-03	1.122E-03	2.120E 00	7.889E-05	9.680E-05	5.760E 00	8.733E-05	7.509E-05
5.475E-01	6.547E-03	1.022E-03	2.160E 00	6.436E-05	9.998E-05	5.850E 00	5.942E-05	7.348E-05
5.625E-01	5.823E-03	1.021E-03	2.200E 00	4.533E-05	9.997E-05	5.950E 00	3.180E-05	7.176E-05
5.775E-01	4.937E-03	1.041E-03	2.240E 00	3.238E-05	9.684E-05	6.050E 00	1.918E-05	5.890E-05
5.925E-01	4.306E-03	1.124E-03	2.280E 00	3.019E-05	9.225E-05	6.150E 00	5.899E-06	6.058E-05
6.100E-01	3.861E-03	1.313E-03	2.320E 00	3.694E-05	8.521E-05	6.250E 00	-4.796E-06	6.318E-05
6.300E-01	3.031E-03	1.466E-03	2.360E 00	4.563E-05	8.204E-05	6.350E 00	-1.475E-05	5.861E-05
6.500E-01	2.136E-03	1.389E-03	2.400E 00	4.476E-05	7.953E-05	6.450E 00	-7.491E-06	5.322E-05
6.700E-01	1.907E-03	1.251E-03	2.440E 00	3.472E-05	7.910E-05	6.550E 00	1.386E-05	4.965E-05
6.900E-01	2.465E-03	1.154E-03	2.480E 00	2.495E-05	7.725E-05	6.650E 00	2.729E-05	4.402E-05
7.100E-01	3.533E-03	1.167E-03	2.525E 00	2.752E-05	7.588E-05	6.750E 00	2.208E-05	3.967E-05
7.300E-01	3.681E-03	1.178E-03	2.575E 00	4.734E-05	7.594E-05	6.850E 00	1.191E-05	3.675E-05
7.500E-01	2.048E-03	1.165E-03	2.625E 00	6.590E-05	7.673E-05	6.950E 00	9.626E-06	3.209E-05
7.700E-01	2.249E-04	1.145E-03	2.675E 00	7.850E-05	7.573E-05	7.050E 00	1.608E-05	2.728E-05
7.900E-01	2.419E-04	1.133E-03	2.725E 00	8.841E-05	7.471E-05	7.150E 00	2.653E-05	2.342E-05
8.100E-01	4.335E-03	1.188E-03	2.775E 00	7.961E-05	7.090E-05	7.250E 00	3.209E-05	1.912E-05
8.300E-01	1.513E-02	1.223E-03	2.825E 00	5.161E-05	6.876E-05	7.350E 00	3.369E-05	1.707E-05
8.500E-01	3.129E-02	1.241E-03	2.875E 00	2.656E-05	7.045E-05	7.450E 00	3.053E-05	1.633E-05
8.700E-01	4.982E-02	1.215E-03	2.925E 00	1.782E-05	6.995E-05	7.550E 00	2.716E-05	1.533E-05
8.900E-01	7.730E-02	1.239E-03	2.975E 00	2.088E-05	7.112E-05	7.650E 00	2.583E-05	1.496E-05
9.125E-01	1.449E-01	1.392E-03	3.030E 00	2.237E-05	7.141E-05	7.780E 00	2.425E-05	1.358E-05
9.375E-01	2.829E-01	1.619E-03	3.090E 00	1.883E-05	6.864E-05	7.900E 00	1.991E-05	1.278E-05
9.625E-01	4.105E-01	1.860E-03	3.150E 00	1.427E-05	6.871E-05	8.020E 00	1.980E-05	1.248E-05
9.875E-01	4.097E-01	1.822E-03	3.210E 00	7.305E-06	7.165E-05	8.140E 00	2.659E-05	1.160E-05
1.012E 00	2.829E-01	1.318E-03	3.270E 00	1.233E-05	6.953E-05	8.260E 00	3.457E-05	1.070E-05
1.037E 00	1.485E-01	8.206E-04	3.330E 00	2.871E-05	6.933E-05	8.380E 00	3.641E-05	1.034E-05
1.063E 00	5.825E-02	6.813E-04	3.390E 00	4.089E-05	7.161E-05	8.500E 00	2.819E-05	1.011E-05
1.087E 00	2.216E-02	5.370E-04	3.450E 00	4.189E-05	7.186E-05	8.620E 00	1.421E-05	9.519E-06
1.112E 00	9.956E-03	3.848E-04	3.510E 00	4.565E-05	6.973E-05	8.740E 00	3.590E-06	8.823E-06
1.137E 00	4.799E-03	2.880E-04	3.570E 00	6.209E-05	6.656E-05	8.860E 00	2.824E-06	8.438E-06
1.162E 00	2.592E-03	2.700E-04	3.630E 00	7.124E-05	6.574E-05	8.980E 00	9.759E-06	8.642E-06
1.188E 00	1.766E-03	2.685E-04	3.690E 00	6.220E-05	6.968E-05	9.100E 00	1.566E-05	8.160E-06
1.212E 00	1.989E-03	2.842E-04	3.750E 00	3.834E-05	6.910E-05	9.220E 00	1.750E-05	7.248E-06
1.237E 00	2.659E-03	2.843E-04	3.810E 00	1.571E-05	6.933E-05	9.340E 00	1.613E-05	7.282E-06
1.262E 00	3.318E-03	3.024E-04	3.870E 00	-6.465E-06	7.454E-05	9.470E 00	1.144E-05	7.766E-06
1.287E 00	3.704E-03	3.003E-04	3.930E 00	-2.379E-05	7.772E-05	9.610E 00	5.011E-06	6.762E-06
1.315E 00	4.183E-03	3.156E-04	3.990E 00	-2.026E-05	7.615E-05	9.750E 00	-7.030E-07	5.793E-06
1.345E 00	4.701E-03	2.975E-04	4.050E 00	-1.664E-06	6.985E-05	9.890E 00	-1.990E-06	6.720E-06
1.375E 00	4.648E-03	2.733E-04	4.110E 00	3.052E-05	6.637E-05	1.003E 01	1.979E-06	6.978E-06
1.405E 00	4.079E-03	2.558E-04	4.170E 00	5.390E-05	6.711E-05	1.017E 01	5.829E-06	5.582E-06
1.435E 00	4.195E-03	2.584E-04	4.240E 00	6.637E-05	6.032E-05	1.031E 01	8.362E-06	4.097E-06
1.465E 00	6.253E-03	2.727E-04	4.320E 00	6.092E-05	6.697E-05	1.045E 01	9.256E-06	4.115E-06
1.495E 00	9.962E-03	2.977E-04	4.400E 00	5.234E-05	6.448E-05	1.059E 01	7.874E-06	4.353E-06
1.525E 00	1.318E-02	3.200E-04	4.480E 00	4.798E-05	6.536E-05			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	2.422E-03	2.492E-04
4.000E-01 - 5.000E-01	1.049E-03	2.712E-04
5.000E-01 - 6.000E-01	6.423E-04	1.191E-04
6.000E-01 - 7.000E-01	2.688E-04	1.315E-04
7.000E-01 - 8.000E-01	1.997E-04	1.159E-04
8.000E-01 - 1.000E 00	3.460E-02	2.886E-04
1.000E 00 - 1.200E 00	1.335E-02	1.144E-04
1.200E 00 - 1.400E 00	7.404E-04	5.841E-05
1.400E 00 - 1.600E 00	1.853E-03	5.757E-05
1.600E 00 - 1.800E 00	6.693E-04	3.118E-05
1.800E 00 - 2.000E 00	1.026E-04	2.081E-05
2.000E 00 - 2.500E 00	2.761E-05	4.537E-05
2.500E 00 - 3.000E 00	2.522E-05	3.651E-05
3.000E 00 - 3.500E 00	1.211E-05	3.516E-05
3.500E 00 - 4.000E 00	1.421E-05	3.539E-05
4.000E 00 - 4.500E 00	2.190E-05	3.357E-05
4.500E 00 - 5.000E 00	9.734E-06	3.264E-05
5.000E 00 - 6.000E 00	3.872E-05	6.975E-05
6.000E 00 - 7.000E 00	8.350E-06	4.968E-05
7.000E 00 - 8.000E 00	2.583E-05	1.734E-05
8.000E 00 - 9.000E 00	1.989E-05	1.002E-05
9.000E 00 - 1.000E 01	8.331E-06	7.108E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 2.01 TO 2.51 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	3.525E-02	3.795E-03	1.555E 00	3.963E-02	7.934E-04	4.560E 00	5.596E-05	8.744E-05
3.225E-01	3.794E-02	3.443E-03	1.585E 00	3.317E-02	6.884E-04	4.640E 00	5.935E-05	8.760E-05
3.375E-01	3.676E-02	3.376E-03	1.615E 00	2.293E-02	5.160E-04	4.720E 00	5.149E-05	8.279E-05
3.525E-01	3.438E-02	3.413E-03	1.645E 00	1.404E-02	3.697E-04	4.800E 00	4.158E-05	8.470E-05
3.675E-01	3.092E-02	3.374E-03	1.680E 00	8.507E-03	2.896E-04	4.880E 00	6.113E-05	8.359E-05
3.825E-01	2.599E-02	3.357E-03	1.720E 00	6.948E-03	2.780E-04	4.960E 00	8.029E-05	8.853E-05
3.975E-01	2.016E-02	3.421E-03	1.760E 00	6.658E-03	2.734E-04	5.040E 00	8.576E-05	8.982E-05
4.125E-01	1.611E-02	3.594E-03	1.800E 00	5.536E-03	2.420E-04	5.120E 00	7.295E-05	9.415E-05
4.275E-01	1.437E-02	3.718E-03	1.840E 00	3.463E-03	2.145E-04	5.200E 00	4.562E-05	9.400E-05
4.425E-01	1.337E-02	3.930E-03	1.880E 00	2.093E-03	1.912E-04	5.280E 00	3.651E-05	7.917E-05
4.575E-01	1.306E-02	4.049E-03	1.920E 00	1.407E-03	1.794E-04	5.360E 00	2.970E-05	7.738E-05
4.725E-01	1.305E-02	4.875E-03	1.960E 00	1.338E-03	1.760E-04	5.440E 00	2.136E-05	8.084E-05
4.875E-01	1.248E-02	3.482E-03	2.000E 00	1.313E-03	1.588E-04	5.520E 00	1.261E-05	8.496E-05
5.025E-01	1.167E-02	2.816E-03	2.040E 00	1.176E-03	1.508E-04	5.600E 00	-6.624E-06	8.874E-05
5.175E-01	1.057E-02	2.159E-03	2.080E 00	1.101E-03	1.525E-04	5.680E 00	-3.386E-05	8.232E-05
5.325E-01	8.965E-03	1.769E-03	2.120E 00	1.167E-03	1.522E-04	5.760E 00	-7.057E-05	7.479E-05
5.475E-01	7.816E-03	1.633E-03	2.160E 00	1.253E-03	1.493E-04	5.850E 00	-7.716E-05	7.095E-05
5.625E-01	7.291E-03	1.595E-03	2.200E 00	1.235E-03	1.494E-04	5.950E 00	-5.383E-05	7.261E-05
5.775E-01	6.244E-03	1.570E-03	2.240E 00	1.095E-03	1.494E-04	6.050E 00	-1.015E-05	7.319E-05
5.925E-01	4.736E-03	1.610E-03	2.280E 00	0.818E-04	1.439E-04	6.150E 00	4.507E-05	7.139E-05
6.100E-01	3.673E-03	1.814E-03	2.320E 00	6.608E-04	1.306E-04	6.250E 00	9.784E-05	6.809E-05
6.300E-01	3.286E-03	2.032E-03	2.360E 00	4.676E-04	1.152E-04	6.350E 00	1.416E-04	6.845E-05
6.500E-01	2.831E-03	2.016E-03	2.400E 00	3.253E-04	1.086E-04	6.450E 00	1.688E-04	6.803E-05
6.700E-01	2.708E-03	1.888E-03	2.440E 00	2.270E-04	1.072E-04	6.550E 00	1.594E-04	6.486E-05
6.900E-01	3.582E-03	1.681E-03	2.480E 00	1.642E-04	1.047E-04	6.650E 00	8.906E-05	5.116E-05
7.100E-01	5.137E-03	1.646E-03	2.525E 00	1.147E-04	1.037E-04	6.750E 00	9.885E-06	4.855E-05
7.300E-01	5.129E-03	1.669E-03	2.575E 00	6.958E-05	1.006E-04	6.850E 00	-4.302E-05	4.627E-05
7.500E-01	2.402E-03	1.689E-03	2.625E 00	3.438E-05	9.868E-05	6.950E 00	-5.559E-05	4.731E-05
7.700E-01	-4.789E-04	1.697E-03	2.675E 00	7.411E-06	9.825E-05	7.050E 00	-3.778E-05	3.794E-05
7.900E-01	-4.582E-04	1.664E-03	2.725E 00	-2.478E-05	9.369E-05	7.150E 00	-1.562E-05	2.825E-05
8.100E-01	5.353E-03	1.696E-03	2.775E 00	-5.157E-05	9.337E-05	7.250E 00	1.299E-06	2.558E-05
8.300E-01	1.977E-02	1.677E-03	2.825E 00	-5.711E-05	9.242E-05	7.350E 00	1.167E-05	2.456E-05
8.500E-01	4.078E-02	1.711E-03	2.875E 00	-2.668E-05	9.481E-05	7.450E 00	2.041E-05	2.417E-05
8.700E-01	6.471E-02	1.716E-03	2.925E 00	2.403E-05	9.143E-05	7.550E 00	2.343E-05	2.297E-05
8.900E-01	1.000E-01	1.764E-03	2.975E 00	7.913E-05	8.776E-05	7.650E 00	2.455E-05	2.129E-05
9.125E-01	1.864E-01	1.976E-03	3.030E 00	1.210E-04	8.409E-05	7.750E 00	2.951E-05	2.160E-05
9.375E-01	3.634E-01	2.341E-03	3.090E 00	1.103E-04	8.514E-05	7.850E 00	3.827E-05	2.171E-05
9.625E-01	5.309E-01	2.676E-03	3.150E 00	6.809E-05	8.389E-05	7.950E 00	4.198E-05	2.036E-05
9.875E-01	5.359E-01	2.693E-03	3.210E 00	5.099E-05	8.625E-05	8.050E 00	3.593E-05	1.868E-05
1.012E 00	3.749E-01	2.015E-03	3.270E 00	9.933E-05	8.515E-05	8.150E 00	2.509E-05	1.790E-05
1.037E 00	1.995E-01	1.362E-03	3.330E 00	1.673E-04	8.575E-05	8.250E 00	1.708E-05	1.780E-05
1.063E 00	7.992E-02	1.183E-03	3.390E 00	1.718E-04	8.917E-05	8.350E 00	1.282E-05	1.667E-05
1.087E 00	3.192E-02	9.753E-04	3.450E 00	9.096E-05	8.792E-05	8.450E 00	1.464E-05	1.501E-05
1.112E 00	1.556E-02	7.079E-04	3.510E 00	4.873E-06	9.107E-05	8.550E 00	2.159E-05	1.410E-05
1.137E 00	8.030E-03	5.816E-04	3.570E 00	-2.859E-05	1.001E-04	8.650E 00	3.068E-05	1.368E-05
1.162E 00	4.274E-03	5.907E-04	3.630E 00	-5.411E-05	8.763E-05	8.750E 00	3.564E-05	1.251E-05
1.188E 00	2.655E-03	5.904E-04	3.690E 00	-6.518E-05	8.176E-05	8.850E 00	3.411E-05	1.087E-05
1.212E 00	3.005E-03	6.225E-04	3.750E 00	-7.448E-05	7.659E-05	8.950E 00	2.587E-05	1.011E-05
1.237E 00	4.438E-03	6.436E-04	3.810E 00	-7.058E-05	8.360E-05	9.050E 00	1.427E-05	1.001E-05
1.262E 00	6.129E-03	6.465E-04	3.870E 00	-2.661E-05	8.954E-05	9.150E 00	3.899E-06	9.693E-06
1.287E 00	7.257E-03	6.303E-04	3.930E 00	5.620E-05	8.666E-05	9.250E 00	-1.196E-06	7.429E-06
1.315E 00	8.186E-03	6.762E-04	3.990E 00	1.135E-04	8.854E-05	9.350E 00	-8.808E-07	7.237E-06
1.345E 00	8.938E-03	6.302E-04	4.050E 00	1.271E-04	8.452E-05	9.450E 00	1.656E-06	7.909E-06
1.375E 00	9.173E-03	5.684E-04	4.110E 00	1.052E-04	8.340E-05	9.550E 00	5.346E-06	7.102E-06
1.405E 00	9.358E-03	5.377E-04	4.170E 00	4.795E-05	7.636E-05	9.650E 00	7.821E-06	5.629E-06
1.435E 00	1.148E-02	5.664E-04	4.240E 00	1.291E-06	7.445E-05	9.750E 00	1.026E-05	4.962E-06
1.465E 00	1.809E-02	5.932E-04	4.320E 00	-3.498E-06	8.083E-05	9.850E 00	1.146E-05	5.106E-06
1.495E 00	2.880E-02	6.748E-04	4.400E 00	4.849E-06	7.502E-05	9.950E 00	2.068E-06	5.170E-06
1.525E 00	3.799E-02	7.801E-04	4.480E 00	3.985E-06	0.540E-05			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	3.221E-03	3.459E-04
4.000E-01 - 5.000E-01	1.393E-03	3.718E-04
5.000E-01 - 6.000E-01	8.003E-04	1.825E-04
6.000E-01 - 7.000E-01	3.245E-04	1.888E-04
7.000E-01 - 8.000E-01	2.416E-04	1.675E-04
8.000E-01 - 1.000E 00	4.482E-02	4.122E-04
1.000E 00 - 1.200E 00	1.801E-02	2.005E-04
1.200E 00 - 1.400E 00	1.404E-03	1.252E-04
1.400E 00 - 1.600E 00	5.254E-03	1.336E-04
1.600E 00 - 1.800E 00	2.123E-03	6.542E-05
1.800E 00 - 2.000E 00	4.692E-04	3.843E-05
2.000E 00 - 2.500E 00	4.157E-04	6.771E-05
2.500E 00 - 3.000E 00	8.611E-06	4.773E-05
3.000E 00 - 3.500E 00	5.327E-05	4.279E-05
3.500E 00 - 4.000E 00	-1.140E-05	4.360E-05
4.000E 00 - 4.500E 00	2.165E-05	3.987E-05
4.500E 00 - 5.000E 00	2.885E-05	4.288E-05
5.000E 00 - 6.000E 00	2.164E-06	8.135E-05
6.000E 00 - 7.000E 00	6.020E-05	6.063E-05
7.000E 00 - 8.000E 00	1.301E-05	2.494E-05
8.000E 00 - 9.000E 00	2.509E-05	1.628E-05
9.000E 00 - 1.000E 01	1.101E-05	9.005E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 2.51 TO 2.98 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	I-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	I-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	I-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	4.964E-02	5.183E-03	1.555E 00	5.496E-02	1.330E-03	4.560E 00	4.765E-05	9.006E-05
3.225E-01	5.150E-02	4.896E-03	1.585E 00	4.532E-02	1.155E-03	4.640E 00	4.812E-05	1.027E-04
3.375E-01	4.870E-02	4.815E-03	1.615E 00	3.217E-02	8.634E-04	4.720E 00	6.594E-05	1.067E-04
3.525E-01	4.584E-02	4.735E-03	1.645E 00	2.017E-02	6.344E-04	4.800E 00	6.417E-05	1.042E-04
3.675E-01	4.161E-02	4.695E-03	1.680E 00	1.205E-02	5.516E-04	4.880E 00	2.051E-05	8.675E-05
3.825E-01	3.659E-02	4.716E-03	1.720E 00	9.563E-03	5.318E-04	4.960E 00	-1.979E-05	8.707E-05
3.975E-01	3.153E-02	4.615E-03	1.760E 00	9.325E-03	5.105E-04	5.040E 00	-2.114E-05	8.942E-05
4.125E-01	2.762E-02	4.697E-03	1.800E 00	7.762E-03	4.737E-04	5.120E 00	-1.113E-05	9.465E-05
4.275E-01	2.429E-02	4.549E-03	1.840E 00	5.098E-03	4.491E-04	5.200E 00	-9.887E-06	1.032E-04
4.425E-01	2.063E-02	4.908E-03	1.880E 00	3.020E-03	4.026E-04	5.280E 00	5.634E-07	1.073E-04
4.575E-01	1.902E-02	5.228E-03	1.920E 00	2.205E-03	3.761E-04	5.360E 00	1.482E-05	1.000E-04
4.725E-01	1.998E-02	5.232E-03	1.960E 00	2.259E-03	3.608E-04	5.440E 00	4.309E-05	9.275E-05
4.875E-01	2.007E-02	4.801E-03	2.000E 00	2.415E-03	3.442E-04	5.520E 00	1.259E-05	9.024E-05
5.025E-01	1.805E-02	3.992E-03	2.040E 00	2.519E-03	3.269E-04	5.600E 00	1.794E-05	9.241E-05
5.175E-01	1.544E-02	3.267E-03	2.080E 00	2.878E-03	3.292E-04	5.680E 00	1.617E-06	9.479E-05
5.325E-01	1.346E-02	2.818E-03	2.120E 00	3.580E-03	3.399E-04	5.760E 00	-3.394E-06	1.036E-04
5.475E-01	1.233E-02	2.596E-03	2.160E 00	4.476E-03	3.463E-04	5.850E 00	-1.153E-05	9.831E-05
5.625E-01	1.146E-02	2.468E-03	2.200E 00	5.385E-03	3.478E-04	5.950E 00	-1.374E-05	9.030E-05
5.775E-01	1.018E-02	2.362E-03	2.240E 00	5.993E-03	3.303E-04	6.050E 00	-3.182E-06	9.440E-05
5.925E-01	8.899E-03	2.354E-03	2.280E 00	6.078E-03	3.026E-04	6.150E 00	1.400E-05	9.078E-05
6.100E-01	8.167E-03	2.581E-03	2.320E 00	5.897E-03	2.879E-04	6.250E 00	3.334E-05	8.845E-05
6.300E-01	7.889E-03	2.829E-03	2.360E 00	5.837E-03	2.739E-04	6.350E 00	6.121E-05	8.600E-05
6.500E-01	6.770E-03	2.818E-03	2.400E 00	5.686E-03	2.615E-04	6.450E 00	8.060E-05	8.966E-05
6.700E-01	4.674E-03	2.637E-03	2.440E 00	5.025E-03	2.423E-04	6.550E 00	6.226E-05	8.119E-05
6.900E-01	4.081E-03	2.505E-03	2.480E 00	3.836E-03	2.168E-04	6.650E 00	1.174E-05	7.372E-05
7.100E-01	6.282E-03	2.520E-03	2.525E 00	2.457E-03	1.896E-04	6.750E 00	-4.137E-05	7.006E-05
7.300E-01	7.503E-03	2.406E-03	2.575E 00	1.434E-03	1.722E-04	6.850E 00	-7.188E-05	6.434E-05
7.500E-01	5.058E-03	2.385E-03	2.625E 00	8.870E-04	1.536E-04	6.950E 00	-5.758E-05	5.895E-05
7.700E-01	1.779E-03	2.412E-03	2.675E 00	5.543E-04	1.402E-04	7.050E 00	-5.068E-06	5.100E-05
7.900E-01	1.373E-03	2.472E-03	2.725E 00	3.712E-04	1.302E-04	7.150E 00	5.175E-05	4.463E-05
8.100E-01	6.473E-03	2.515E-03	2.775E 00	3.191E-04	1.294E-04	7.250E 00	8.060E-05	3.882E-05
8.300E-01	2.100E-02	2.481E-03	2.825E 00	3.047E-04	1.254E-04	7.350E 00	7.364E-05	3.178E-05
8.500E-01	4.424E-02	2.432E-03	2.875E 00	2.184E-04	1.258E-04	7.450E 00	5.070E-05	2.924E-05
8.700E-01	7.152E-02	2.466E-03	2.925E 00	7.011E-05	1.138E-04	7.550E 00	2.926E-05	2.866E-05
8.900E-01	1.090E-01	2.483E-03	2.975E 00	-4.603E-05	1.140E-04	7.660E 00	1.487E-05	2.948E-05
9.125E-01	1.976E-01	2.758E-03	3.030E 00	-8.429E-05	1.144E-04	7.780E 00	3.085E-06	2.729E-05
9.375E-01	3.884E-01	3.244E-03	3.090E 00	-3.800E-05	1.157E-04	7.900E 00	-7.609E-06	2.381E-05
9.625E-01	5.899E-01	3.769E-03	3.150E 00	3.101E-05	1.198E-04	8.020E 00	-8.057E-06	2.343E-05
9.875E-01	6.244E-01	4.081E-03	3.210E 00	5.823E-05	1.126E-04	8.140E 00	5.945E-06	2.335E-05
1.012E 00	4.576E-01	3.174E-03	3.270E 00	7.530E-05	1.154E-04	8.260E 00	2.502E-05	2.183E-05
1.037E 00	2.527E-01	2.402E-03	3.330E 00	1.100E-04	1.148E-04	8.380E 00	4.059E-05	1.931E-05
1.063E 00	1.043E-01	2.077E-03	3.390E 00	1.585E-04	1.144E-04	8.500E 00	4.648E-05	1.813E-05
1.087E 00	4.297E-02	1.822E-03	3.450E 00	1.878E-04	1.146E-04	8.620E 00	4.263E-05	1.850E-05
1.112E 00	2.301E-02	1.427E-03	3.510E 00	2.077E-04	1.122E-04	8.740E 00	3.281E-05	1.766E-05
1.137E 00	1.455E-02	1.222E-03	3.570E 00	2.141E-04	1.134E-04	8.860E 00	2.111E-05	1.287E-05
1.162E 00	9.636E-03	1.201E-03	3.630E 00	1.784E-04	1.192E-04	8.980E 00	1.659E-05	1.099E-05
1.188E 00	6.905E-03	1.309E-03	3.690E 00	9.401E-05	1.132E-04	9.100E 00	-1.723E-05	1.073E-05
1.212E 00	8.321E-03	1.372E-03	3.750E 00	2.698E-06	1.080E-04	9.220E 00	1.842E-05	1.011E-05
1.237E 00	1.330E-02	1.444E-03	3.810E 00	-7.237E-05	1.090E-04	9.340E 00	1.649E-05	9.343E-06
1.262E 00	2.083E-02	1.568E-03	3.870E 00	-1.273E-04	1.022E-04	9.470E 00	1.156E-05	8.037E-06
1.287E 00	2.770E-02	1.504E-03	3.930E 00	-1.450E-04	1.212E-04	9.610E 00	4.949E-06	7.220E-06
1.315E 00	3.473E-02	1.573E-03	3.990E 00	-1.376E-04	1.177E-04	9.750E 00	2.182E-07	7.146E-06
1.345E 00	4.535E-02	1.510E-03	4.050E 00	-1.003E-04	1.069E-04	9.890E 00	8.762E-07	7.609E-06
1.375E 00	6.423E-02	1.511E-03	4.110E 00	-4.802E-05	1.075E-04	1.003E 01	5.119E-06	7.148E-06
1.405E 00	8.313E-02	1.602E-03	4.170E 00	1.774E-06	1.077E-04	1.017E 01	7.687E-06	5.242E-06
1.435E 00	8.801E-02	1.694E-03	4.240E 00	4.791E-05	1.058E-04	1.031E 01	9.324E-06	4.695E-06
1.465E 00	7.920E-02	1.578E-03	4.320E 00	9.158E-05	9.911E-05	1.045E 01	1.015E-05	5.218E-06
1.495E 00	6.803E-02	1.354E-03	4.400E 00	1.128E-04	8.928E-05	1.059E 01	9.270E-06	5.602E-06
1.525E 00	6.087E-02	1.318E-03	4.480E 00	8.632E-05	8.888E-05			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	I-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	4.422E-03	4.825E-04
4.000E-01 - 5.000E-01	2.221E-03	4.851E-04
5.000E-01 - 6.000E-01	1.254E-03	2.772E-04
6.000E-01 - 7.000E-01	6.364E-04	2.675E-04
7.000E-01 - 8.000E-01	4.467E-04	2.437E-04
8.000E-01 - 1.000E 00	4.981E-04	5.904E-04
1.000E 00 - 1.200E 00	2.287E-02	3.663E-04
1.200E 00 - 1.400E 00	6.862E-03	3.006E-04
1.400E 00 - 1.600E 00	1.356E-02	2.851E-04
1.600E 00 - 1.800E 00	2.939E-03	1.186E-04
1.800E 00 - 2.000E 00	6.951E-04	7.985E-05
2.000E 00 - 2.500E 00	2.334E-03	1.510E-04
2.500E 00 - 3.000E 00	3.319E-04	6.978E-05
3.000E 00 - 3.500E 00	3.432E-05	5.755E-05
3.500E 00 - 4.000E 00	1.153E-05	5.690E-05
4.000E 00 - 4.500E 00	1.416E-05	5.049E-05
4.500E 00 - 5.000E 00	1.979E-05	4.798E-05
5.000E 00 - 6.000E 00	2.825E-06	9.642E-05
6.000E 00 - 7.000E 00	9.181E-06	7.966E-05
7.000E 00 - 8.000E 00	2.895E-05	3.306E-05
8.000E 00 - 9.000E 00	2.655E-05	1.856E-05
9.000E 00 - 1.000E 01	9.557E-06	8.590E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 2.98 TO 3.50 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	5.472E-02	6.480E-03	1.555E 00	5.279E-02	1.617E-03	4.560E 00	1.282E-04	1.119E-04
3.225E-01	5.991E-02	5.957E-03	1.585E 00	4.283E-02	1.450E-03	4.640E 00	1.363E-04	1.326E-04
3.375E-01	5.826E-02	5.877E-03	1.615E 00	3.101E-02	1.147E-03	4.720E 00	9.941E-05	1.296E-04
3.525E-01	5.476E-02	5.838E-03	1.645E 00	2.048E-02	9.433E-04	4.800E 00	7.437E-05	1.286E-04
3.675E-01	5.157E-02	5.965E-03	1.680E 00	1.348E-02	8.880E-04	4.880E 00	4.897E-05	1.171E-04
3.825E-01	4.672E-02	5.961E-03	1.720E 00	1.099E-02	8.925E-04	4.960E 00	1.942E-05	1.248E-04
3.975E-01	3.744E-02	6.076E-03	1.760E 00	9.554E-03	8.674E-04	5.040E 00	-8.250E-06	1.221E-04
4.125E-01	2.896E-02	6.121E-03	1.800E 00	7.165E-03	8.426E-04	5.120E 00	-2.944E-05	1.380E-04
4.275E-01	2.389E-02	6.375E-03	1.840E 00	4.822E-03	7.519E-04	5.200E 00	-4.788E-05	1.472E-04
4.425E-01	2.057E-02	6.611E-03	1.880E 00	4.174E-03	6.971E-04	5.280E 00	-8.347E-06	1.343E-04
4.575E-01	2.085E-02	6.729E-03	1.920E 00	6.315E-03	7.207E-04	5.360E 00	-8.981E-05	1.328E-04
4.725E-01	2.423E-02	6.610E-03	1.960E 00	1.042E-02	7.306E-04	5.440E 00	-5.791E-05	1.276E-04
4.875E-01	2.618E-02	5.809E-03	2.000E 00	1.328E-02	7.163E-04	5.520E 00	7.882E-07	1.240E-04
5.025E-01	2.474E-02	4.862E-03	2.040E 00	1.292E-02	6.977E-04	5.600E 00	5.020E-05	1.230E-04
5.175E-01	2.087E-02	4.055E-03	2.080E 00	1.068E-02	6.466E-04	5.680E 00	7.433E-05	1.386E-04
5.325E-01	1.655E-02	3.546E-03	2.120E 00	9.305E-03	5.840E-04	5.760E 00	1.045E-04	1.353E-04
5.475E-01	1.343E-02	3.288E-03	2.160E 00	9.862E-03	5.761E-04	5.850E 00	1.176E-04	1.249E-04
5.625E-01	1.177E-02	3.193E-03	2.200E 00	1.112E-02	5.801E-04	5.950E 00	1.098E-04	1.088E-04
5.775E-01	1.117E-02	3.151E-03	2.240E 00	1.153E-02	5.594E-04	6.050E 00	5.747E-05	1.122E-04
5.925E-01	1.098E-02	3.198E-03	2.280E 00	1.105E-02	5.262E-04	6.150E 00	-2.008E-05	1.144E-04
6.075E-01	1.044E-02	3.575E-03	2.320E 00	1.060E-02	4.915E-04	6.250E 00	-9.398E-05	1.102E-04
6.300E-01	1.006E-02	3.857E-03	2.360E 00	1.049E-02	4.587E-04	6.350E 00	-1.164E-04	1.013E-04
6.500E-01	9.804E-03	3.594E-03	2.400E 00	1.005E-02	4.377E-04	6.450E 00	-9.897E-05	9.315E-05
6.700E-01	8.572E-03	3.313E-03	2.440E 00	8.663E-03	4.010E-04	6.550E 00	-6.179E-05	8.234E-05
6.900E-01	7.777E-03	3.090E-03	2.480E 00	6.551E-03	3.682E-04	6.650E 00	-1.779E-05	7.561E-05
7.100E-01	8.058E-03	3.141E-03	2.525E 00	4.328E-03	3.541E-04	6.750E 00	1.594E-05	7.339E-05
7.300E-01	7.480E-03	3.262E-03	2.575E 00	2.860E-03	3.396E-04	6.850E 00	3.899E-05	7.065E-05
7.500E-01	5.310E-03	3.223E-03	2.625E 00	2.309E-03	3.106E-04	6.950E 00	6.092E-05	6.405E-05
7.700E-01	3.011E-03	3.112E-03	2.675E 00	2.364E-03	2.849E-04	7.050E 00	7.110E-05	5.683E-05
7.900E-01	2.667E-03	3.069E-03	2.725E 00	2.684E-03	2.536E-04	7.150E 00	6.999E-05	5.258E-05
8.100E-01	8.092E-03	3.134E-03	2.775E 00	2.680E-03	2.440E-04	7.250E 00	5.457E-05	4.750E-05
8.300E-01	2.417E-02	3.150E-03	2.825E 00	2.106E-03	2.408E-04	7.350E 00	3.745E-05	4.254E-05
8.500E-01	5.004E-02	3.291E-03	2.875E 00	1.364E-03	2.191E-04	7.450E 00	3.468E-05	4.173E-05
8.700E-01	8.085E-02	3.186E-03	2.925E 00	8.593E-04	1.989E-04	7.550E 00	4.028E-05	3.752E-05
8.900E-01	1.236E-01	3.181E-03	2.975E 00	6.223E-04	1.841E-04	7.650E 00	5.046E-05	3.375E-05
9.125E-01	2.234E-01	3.472E-03	3.030E 00	5.158E-04	1.768E-04	7.780E 00	5.541E-05	3.047E-05
9.375E-01	4.302E-01	3.965E-03	3.080E 00	4.706E-04	1.714E-04	7.900E 00	4.694E-05	2.849E-05
9.625E-01	6.336E-01	4.733E-03	3.150E 00	4.229E-04	1.635E-04	8.020E 00	2.581E-05	2.346E-05
9.875E-01	6.498E-01	5.047E-03	3.210E 00	3.447E-04	1.590E-04	8.140E 00	9.950E-06	1.993E-05
1.012E 00	4.628E-01	3.883E-03	3.270E 00	3.001E-04	1.552E-04	8.260E 00	4.153E-06	1.832E-05
1.037E 00	2.512E-01	2.973E-03	3.330E 00	2.880E-04	1.510E-04	8.380E 00	7.007E-06	1.789E-05
1.063E 00	1.058E-01	2.846E-03	3.390E 00	2.354E-04	1.435E-04	8.500E 00	1.149E-06	1.615E-05
1.087E 00	4.932E-02	2.530E-03	3.450E 00	1.610E-04	1.453E-04	8.620E 00	1.215E-05	1.439E-05
1.112E 00	3.137E-02	2.042E-03	3.510E 00	1.319E-04	1.395E-04	8.740E 00	6.100E-06	1.407E-05
1.137E 00	2.245E-02	1.730E-03	3.570E 00	1.354E-04	1.412E-04	8.860E 00	-8.311E-07	1.468E-05
1.162E 00	1.434E-02	1.687E-03	3.630E 00	1.266E-04	1.433E-04	8.980E 00	-2.046E-06	1.469E-05
1.188E 00	1.304E-02	1.816E-03	3.690E 00	9.591E-05	1.420E-04	9.100E 00	6.298E-06	1.402E-05
1.212E 00	1.752E-02	1.969E-03	3.750E 00	5.120E-05	1.450E-04	9.220E 00	1.945E-05	1.315E-05
1.237E 00	3.110E-02	2.178E-03	3.810E 00	9.344E-06	1.508E-04	9.340E 00	2.754E-05	1.313E-05
1.262E 00	5.067E-02	2.366E-03	3.870E 00	-4.590E-05	1.500E-04	9.470E 00	2.784E-05	1.477E-05
1.287E 00	6.485E-02	2.328E-03	3.930E 00	-7.371E-05	1.706E-04	9.610E 00	2.244E-05	1.293E-05
1.315E 00	7.266E-02	2.579E-03	3.990E 00	-1.150E-04	1.531E-04	9.750E 00	1.823E-05	1.169E-05
1.345E 00	8.038E-02	2.434E-03	4.050E 00	-1.085E-04	1.366E-04	9.890E 00	1.544E-05	1.258E-05
1.375E 00	9.868E-02	2.321E-03	4.110E 00	-8.536E-05	1.355E-04	1.003E 01	1.342E-05	1.176E-05
1.405E 00	1.176E-01	2.366E-03	4.170E 00	-5.715E-05	1.317E-04	1.017E 01	9.744E-06	8.760E-06
1.435E 00	1.180E-01	2.377E-03	4.240E 00	-2.541E-05	1.263E-04	1.031E 01	6.397E-06	7.262E-06
1.465E 00	9.975E-02	2.162E-03	4.320E 00	-1.042E-05	1.269E-04	1.045E 01	4.603E-06	7.633E-06
1.495E 00	7.781E-02	1.723E-03	4.400E 00	4.046E-06	1.310E-04	1.059E 01	3.014E-06	7.453E-06
1.525E 00	6.267E-02	1.741E-03	4.480E 00	1.061E-04	1.319E-04			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	5.268E-03	6.023E-04
4.000E-01 - 5.000E-01	2.475E-03	6.300E-04
5.000E-01 - 6.000E-01	1.514E-03	3.544E-04
6.000E-01 - 7.000E-01	9.344E-04	3.487E-04
7.000E-01 - 8.000E-01	5.386E-04	3.164E-04
8.000E-01 - 1.000E 00	5.391E-02	7.466E-04
1.000E 00 - 1.200E 00	2.392E-02	4.884E-04
1.200E 00 - 1.400E 00	1.278E-02	4.643E-04
1.400E 00 - 1.600E 00	1.597E-02	3.741E-04
1.600E 00 - 1.800E 00	3.075E-03	1.859E-04
1.800E 00 - 2.000E 00	1.418E-03	1.468E-04
2.000E 00 - 2.500E 00	5.174E-03	2.674E-04
2.500E 00 - 3.000E 00	1.114E-03	1.315E-04
3.000E 00 - 3.500E 00	1.677E-04	7.877E-05
3.500E 00 - 4.000E 00	1.876E-05	7.446E-05
4.000E 00 - 4.500E 00	-1.102E-05	6.593E-05
4.500E 00 - 5.000E 00	4.282E-05	6.215E-05
5.000E 00 - 6.000E 00	1.557E-05	1.294E-04
6.000E 00 - 7.000E 00	-2.347E-05	8.973E-05
7.000E 00 - 8.000E 00	5.036E-05	4.002E-05
8.000E 00 - 9.000E 00	7.750E-06	1.687E-05
9.000E 00 - 1.000E 01	1.871E-05	1.315E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 3.50 TO 4.01 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	6.668E-02	8.266E-03	1.555E 00	5.245E-02	2.311E-03	4.560E 00	-5.006E-05	1.418E-04
3.225E-01	6.876E-02	7.673E-03	1.585E 00	4.064E-02	2.092E-03	4.640E 00	-2.527E-05	1.379E-04
3.375E-01	6.908E-02	7.401E-03	1.615E 00	2.821E-02	1.814E-03	4.720E 00	-1.701E-05	1.412E-04
3.525E-01	6.750E-02	7.140E-03	1.645E 00	1.881E-02	1.640E-03	4.800E 00	1.950E-05	1.468E-04
3.675E-01	6.313E-02	7.475E-03	1.680E 00	1.361E-02	1.578E-03	4.880E 00	6.009E-05	1.579E-04
3.825E-01	5.539E-02	7.417E-03	1.720E 00	1.176E-02	1.580E-03	4.960E 00	6.250E-05	1.675E-04
3.975E-01	4.891E-02	7.687E-03	1.760E 00	1.047E-02	1.530E-03	5.040E 00	4.162E-05	1.546E-04
4.125E-01	3.758E-02	7.922E-03	1.800E 00	8.845E-03	1.451E-03	5.120E 00	3.778E-05	1.470E-04
4.275E-01	3.278E-02	8.269E-03	1.840E 00	7.368E-03	1.383E-03	5.200E 00	2.578E-05	1.458E-04
4.425E-01	2.713E-02	8.387E-03	1.880E 00	6.415E-03	1.380E-03	5.280E 00	-7.394E-06	1.601E-04
4.575E-01	2.408E-02	8.126E-03	1.920E 00	1.409E-02	1.471E-03	5.360E 00	-4.919E-05	1.577E-04
4.725E-01	2.229E-02	7.839E-03	1.960E 00	2.241E-02	1.496E-03	5.440E 00	-5.347E-05	1.528E-04
4.875E-01	3.270E-02	6.886E-03	2.000E 00	2.699E-02	1.428E-03	5.520E 00	-3.632E-05	1.520E-04
5.025E-01	3.418E-02	5.758E-03	2.040E 00	2.409E-02	1.297E-03	5.600E 00	-5.533E-06	1.512E-04
5.175E-01	2.961E-02	4.939E-03	2.080E 00	1.778E-02	1.211E-03	5.680E 00	-2.843E-05	1.473E-04
5.325E-01	2.311E-02	4.530E-03	2.120E 00	1.502E-02	1.181E-03	5.760E 00	-5.772E-06	1.369E-04
5.475E-01	1.830E-02	4.233E-03	2.160E 00	1.795E-02	1.185E-03	5.850E 00	1.147E-05	1.305E-04
5.625E-01	1.471E-02	4.049E-03	2.200E 00	2.402E-02	1.210E-03	5.950E 00	3.049E-05	1.347E-04
5.775E-01	1.180E-02	3.981E-03	2.240E 00	3.162E-02	1.254E-03	6.050E 00	6.012E-05	1.422E-04
5.925E-01	1.083E-02	4.063E-03	2.280E 00	4.100E-02	1.295E-03	6.150E 00	8.941E-05	1.417E-04
6.100E-01	1.125E-02	4.476E-03	2.320E 00	4.948E-02	1.326E-03	6.250E 00	1.033E-04	1.158E-04
6.300E-01	1.024E-02	4.854E-03	2.360E 00	5.132E-02	1.301E-03	6.350E 00	1.134E-04	1.136E-04
6.500E-01	6.927E-03	4.763E-03	2.400E 00	4.352E-02	1.128E-03	6.450E 00	8.615E-05	1.214E-04
6.700E-01	4.027E-03	4.561E-03	2.440E 00	3.021E-02	8.678E-04	6.550E 00	1.354E-05	1.129E-04
6.900E-01	5.170E-03	4.271E-03	2.480E 00	1.837E-02	6.977E-04	6.650E 00	-4.194E-05	1.097E-04
7.100E-01	9.330E-03	4.167E-03	2.525E 00	1.150E-02	6.590E-04	6.750E 00	-5.543E-05	9.230E-05
7.300E-01	1.060E-02	4.092E-03	2.575E 00	1.021E-02	6.893E-04	6.850E 00	-3.363E-05	8.839E-05
7.500E-01	6.866E-03	4.128E-03	2.625E 00	1.051E-02	6.541E-04	6.950E 00	-6.163E-06	8.160E-05
7.700E-01	2.599E-03	4.141E-03	2.675E 00	9.569E-03	5.685E-04	7.050E 00	3.009E-05	7.571E-05
7.900E-01	3.122E-03	3.943E-03	2.725E 00	7.656E-03	5.068E-04	7.150E 00	6.847E-05	6.542E-05
8.100E-01	1.272E-02	3.920E-03	2.775E 00	5.682E-03	4.486E-04	7.250E 00	9.526E-05	5.475E-05
8.300E-01	3.411E-02	3.857E-03	2.825E 00	4.169E-03	4.247E-04	7.350E 00	9.627E-05	4.824E-05
8.500E-01	6.355E-02	3.869E-03	2.875E 00	3.262E-03	3.965E-04	7.450E 00	7.382E-05	4.538E-05
8.700E-01	9.878E-02	3.925E-03	2.925E 00	2.735E-03	3.473E-04	7.550E 00	4.229E-05	4.510E-05
8.900E-01	1.541E-01	4.047E-03	2.975E 00	2.309E-03	3.400E-04	7.660E 00	1.326E-05	4.209E-05
9.125E-01	2.797E-01	4.388E-03	3.030E 00	2.120E-03	3.516E-04	7.780E 00	-8.410E-06	3.723E-05
9.375E-01	5.152E-01	5.076E-03	3.090E 00	2.293E-03	3.460E-04	7.900E 00	-1.841E-05	3.226E-05
9.625E-01	7.243E-01	5.753E-03	3.150E 00	2.586E-03	3.409E-04	8.020E 00	-9.007E-06	3.065E-05
9.875E-01	7.148E-01	5.962E-03	3.210E 00	3.033E-03	3.385E-04	8.140E 00	1.941E-05	3.233E-05
1.012E 00	4.931E-01	4.836E-03	3.270E 00	3.613E-03	3.325E-04	8.260E 00	4.585E-05	2.696E-05
1.037E 00	2.639E-01	3.833E-03	3.330E 00	3.622E-03	3.145E-04	8.380E 00	5.265E-05	2.277E-05
1.063E 00	1.152E-01	3.774E-03	3.390E 00	2.801E-03	3.073E-04	8.500E 00	4.693E-05	2.451E-05
1.087E 00	5.958E-02	3.576E-03	3.450E 00	1.855E-03	2.799E-04	8.620E 00	3.225E-05	2.201E-05
1.112E 00	4.109E-02	2.996E-03	3.510E 00	1.620E-03	2.585E-04	8.740E 00	1.935E-05	1.955E-05
1.137E 00	2.964E-02	2.499E-03	3.570E 00	2.194E-03	2.609E-04	8.860E 00	1.255E-05	1.379E-05
1.162E 00	2.127E-02	2.411E-03	3.630E 00	2.963E-03	2.714E-04	8.980E 00	4.910E-06	1.694E-05
1.188E 00	1.825E-02	2.541E-03	3.690E 00	3.138E-03	2.785E-04	9.100E 00	1.074E-07	1.604E-05
1.212E 00	2.679E-02	2.754E-03	3.750E 00	2.501E-03	2.605E-04	9.220E 00	1.917E-07	1.597E-05
1.237E 00	4.661E-02	3.022E-03	3.810E 00	1.535E-03	2.347E-04	9.340E 00	1.401E-06	9.841E-06
1.262E 00	7.324E-02	3.295E-03	3.870E 00	7.572E-04	2.190E-04	9.470E 00	8.429E-06	9.952E-06
1.287E 00	9.221E-02	3.261E-03	3.930E 00	3.346E-04	2.178E-04	9.610E 00	1.006E-05	9.444E-06
1.315E 00	1.010E-01	3.532E-03	3.990E 00	1.522E-04	1.791E-04	9.750E 00	6.293E-06	1.185E-05
1.345E 00	1.025E-01	3.250E-03	4.050E 00	9.544E-05	1.611E-04	9.890E 00	8.892E-06	9.860E-06
1.375E 00	1.095E-01	3.031E-03	4.110E 00	8.363E-05	1.584E-04	1.003E 01	1.274E-05	9.578E-06
1.405E 00	1.183E-01	2.999E-03	4.170E 00	5.683E-05	1.501E-04	1.017E 01	1.503E-05	8.180E-06
1.435E 00	1.145E-01	2.938E-03	4.240E 00	-5.872E-06	1.497E-04	1.031E 01	1.699E-05	8.740E-06
1.465E 00	9.709E-02	2.661E-03	4.320E 00	-9.391E-05	1.713E-04	1.045E 01	1.581E-05	7.924E-06
1.495E 00	7.755E-02	2.308E-03	4.400E 00	-1.292E-04	1.779E-04	1.059E 01	1.373E-05	8.594E-06
1.525E 00	6.334E-02	2.335E-03	4.480E 00	-1.028E-04	1.539E-04			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	6.311E-03	7.580E-04
4.000E-01 - 5.000E-01	3.109E-03	7.807E-04
5.000E-01 - 6.000E-01	1.963E-03	4.437E-04
6.000E-01 - 7.000E-01	7.549E-04	4.585E-04
7.000E-01 - 8.000E-01	6.602E-04	4.097E-04
8.000E-01 - 1.000E 00	6.284E-04	9.196E-04
1.000E 00 - 1.200E 00	2.621E-02	6.620E-04
1.200E 00 - 1.400E 00	1.651E-02	6.322E-04
1.400E 00 - 1.600E 00	1.572E-02	4.993E-04
1.600E 00 - 1.800E 00	3.044E-03	3.208E-04
1.800E 00 - 2.000E 00	2.786E-03	2.868E-04
2.000E 00 - 2.500E 00	1.510E-02	5.862E-04
2.500E 00 - 3.000E 00	3.407E-03	2.521E-04
3.000E 00 - 3.500E 00	1.351E-03	1.619E-04
3.500E 00 - 4.000E 00	8.788E-04	1.223E-04
4.000E 00 - 4.500E 00	-7.629E-06	8.107E-05
4.500E 00 - 5.000E 00	2.150E-06	7.434E-05
5.000E 00 - 6.000E 00	-1.978E-06	1.470E-04
6.000E 00 - 7.000E 00	3.298E-05	1.120E-04
7.000E 00 - 8.000E 00	3.847E-05	4.811E-05
8.000E 00 - 9.000E 00	2.749E-05	2.321E-05
9.000E 00 - 1.000E 01	5.493E-06	1.188E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 4.01 TO 4.50 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	7.635E-02	1.003E-02	1.555E 00	6.911E-02	3.096E-03	4.560E 00	-1.301E-04	1.628E-04
3.225E-01	8.466E-02	9.464E-03	1.585E 00	5.791E-02	2.826E-03	4.640E 00	-2.140E-04	1.922E-04
3.375E-01	7.960E-02	8.734E-03	1.615E 00	4.230E-02	2.456E-03	4.720E 00	-2.080E-04	1.698E-04
3.525E-01	7.324E-02	9.005E-03	1.645E 00	2.741E-02	2.219E-03	4.800E 00	-9.943E-05	1.691E-04
3.675E-01	7.339E-02	8.998E-03	1.680E 00	1.655E-02	2.131E-03	4.880E 00	5.192E-05	1.792E-04
3.825E-01	7.295E-02	8.884E-03	1.720E 00	1.196E-02	2.185E-03	4.960E 00	1.272E-04	1.629E-04
3.975E-01	6.988E-02	9.262E-03	1.760E 00	1.030E-02	2.222E-03	5.040E 00	1.308E-04	1.626E-04
4.125E-01	6.406E-02	9.224E-03	1.800E 00	8.364E-03	2.147E-03	5.120E 00	1.085E-04	1.602E-04
4.275E-01	5.379E-02	9.525E-03	1.840E 00	6.298E-03	2.110E-03	5.200E 00	8.638E-05	1.562E-04
4.425E-01	4.159E-02	9.833E-03	1.880E 00	6.733E-03	2.122E-03	5.280E 00	5.846E-05	1.620E-04
4.575E-01	3.480E-02	9.896E-03	1.920E 00	1.157E-02	2.081E-03	5.360E 00	7.277E-05	1.650E-04
4.725E-01	3.301E-02	9.714E-03	1.960E 00	1.881E-02	2.040E-03	5.440E 00	5.423E-05	1.638E-04
4.875E-01	3.452E-02	8.862E-03	2.000E 00	2.312E-02	2.044E-03	5.520E 00	5.303E-06	1.720E-04
5.025E-01	3.761E-02	7.517E-03	2.040E 00	2.183E-02	2.039E-03	5.600E 00	-3.580E-05	1.648E-04
5.175E-01	3.776E-02	6.372E-03	2.080E 00	1.827E-02	1.962E-03	5.680E 00	-4.145E-05	1.544E-04
5.325E-01	3.309E-02	5.700E-03	2.120E 00	1.883E-02	1.858E-03	5.760E 00	-1.721E-05	1.592E-04
5.475E-01	2.552E-02	5.347E-03	2.160E 00	2.572E-02	1.831E-03	5.850E 00	-1.330E-05	1.472E-04
5.625E-01	1.764E-02	5.062E-03	2.200E 00	3.541E-02	1.873E-03	5.950E 00	-9.313E-06	1.474E-04
5.775E-01	1.236E-02	4.978E-03	2.240E 00	4.628E-02	2.017E-03	6.050E 00	-1.368E-05	1.566E-04
5.925E-01	1.179E-02	5.053E-03	2.280E 00	5.984E-02	2.077E-03	6.150E 00	-3.018E-05	1.409E-04
6.100E-01	1.379E-02	5.434E-03	2.320E 00	7.195E-02	2.082E-03	6.250E 00	-1.146E-05	1.300E-04
6.300E-01	1.261E-02	6.096E-03	2.360E 00	7.347E-02	1.990E-03	6.350E 00	2.729E-05	1.298E-04
6.500E-01	9.176E-03	6.067E-03	2.400E 00	6.109E-02	1.697E-03	6.450E 00	7.720E-05	1.315E-04
6.700E-01	8.350E-03	5.667E-03	2.440E 00	4.235E-02	1.328E-03	6.550E 00	9.265E-05	1.349E-04
6.900E-01	8.896E-03	5.181E-03	2.480E 00	2.785E-02	1.173E-03	6.650E 00	8.023E-05	1.125E-04
7.100E-01	1.106E-02	5.092E-03	2.525E 00	2.273E-02	1.184E-03	6.750E 00	4.195E-05	1.038E-04
7.300E-01	1.361E-02	4.919E-03	2.575E 00	2.665E-02	1.242E-03	6.850E 00	5.049E-06	9.815E-05
7.500E-01	1.311E-02	4.824E-03	2.625E 00	3.034E-02	1.231E-03	6.950E 00	1.397E-05	1.044E-04
7.700E-01	1.214E-02	4.924E-03	2.675E 00	2.856E-02	1.145E-03	7.050E 00	6.263E-05	9.449E-05
7.900E-01	1.484E-02	4.883E-03	2.725E 00	2.380E-02	9.428E-04	7.150E 00	1.219E-04	8.082E-05
8.100E-01	2.284E-02	4.819E-03	2.775E 00	1.984E-02	8.571E-04	7.250E 00	1.442E-04	6.702E-05
8.300E-01	3.961E-02	4.667E-03	2.825E 00	1.680E-02	8.326E-04	7.350E 00	1.167E-04	5.495E-05
8.500E-01	6.717E-02	4.769E-03	2.875E 00	1.315E-02	7.634E-04	7.450E 00	7.895E-05	5.235E-05
8.700E-01	1.073E-01	4.799E-03	2.925E 00	9.171E-03	6.934E-04	7.550E 00	4.196E-05	4.888E-05
8.900E-01	1.733E-01	4.927E-03	2.975E 00	6.377E-03	6.459E-04	7.650E 00	9.057E-06	4.336E-05
9.125E-01	3.086E-01	5.327E-03	3.030E 00	5.369E-03	6.180E-04	7.780E 00	-1.846E-05	3.644E-05
9.375E-01	5.528E-01	6.044E-03	3.090E 00	5.615E-03	6.111E-04	7.900E 00	-3.375E-05	2.811E-05
9.625E-01	7.660E-01	6.872E-03	3.150E 00	5.765E-03	6.245E-04	8.020E 00	-2.270E-05	2.432E-05
9.875E-01	7.525E-01	7.460E-03	3.210E 00	5.543E-03	6.367E-04	8.140E 00	-1.053E-06	2.636E-05
1.012E 00	5.210E-01	5.982E-03	3.270E 00	5.477E-03	6.236E-04	8.260E 00	1.644E-05	2.405E-05
1.037E 00	2.836E-01	4.946E-03	3.330E 00	5.381E-03	5.603E-04	8.380E 00	1.612E-05	2.070E-05
1.063E 00	1.302E-01	4.661E-03	3.390E 00	4.563E-03	5.044E-04	8.500E 00	7.746E-06	1.902E-05
1.087E 00	7.316E-02	4.200E-03	3.450E 00	3.591E-03	4.686E-04	8.620E 00	4.615E-06	2.227E-05
1.112E 00	5.424E-02	3.659E-03	3.510E 00	4.351E-03	4.663E-04	8.740E 00	8.505E-06	2.176E-05
1.137E 00	4.216E-02	2.191E-03	3.570E 00	7.884E-03	5.042E-04	8.860E 00	1.710E-05	2.011E-05
1.162E 00	3.223E-02	3.139E-03	3.630E 00	1.237E-02	5.488E-04	8.980E 00	2.308E-05	1.698E-05
1.188E 00	2.464E-02	3.367E-03	3.690E 00	1.418E-02	5.633E-04	9.100E 00	2.201E-05	1.727E-05
1.212E 00	3.558E-02	3.645E-03	3.750E 00	1.184E-02	5.125E-04	9.220E 00	1.859E-05	1.687E-05
1.237E 00	6.156E-02	3.943E-03	3.810E 00	7.489E-03	3.977E-04	9.340E 00	1.516E-05	1.619E-05
1.262E 00	9.778E-02	4.102E-03	3.870E 00	3.893E-03	3.140E-04	9.470E 00	8.341E-06	1.328E-05
1.287E 00	1.209E-01	4.115E-03	3.930E 00	2.010E-03	3.082E-04	9.610E 00	-7.708E-08	1.247E-05
1.315E 00	1.237E-01	4.604E-03	3.990E 00	1.241E-03	2.888E-04	9.750E 00	-6.335E-06	1.275E-05
1.345E 00	1.118E-01	4.272E-03	4.050E 00	8.338E-04	2.502E-04	9.890E 00	-1.828E-06	9.848E-06
1.375E 00	1.092E-01	3.849E-03	4.110E 00	5.149E-04	2.277E-04	1.003E 01	7.839E-06	7.237E-06
1.405E 00	1.160E-01	3.663E-03	4.170E 00	3.114E-04	2.151E-04	1.017E 01	1.473E-05	6.045E-06
1.435E 00	1.140E-01	3.590E-03	4.240E 00	2.207E-04	2.138E-04	1.031E 01	1.881E-05	6.248E-06
1.465E 00	1.007E-01	3.450E-03	4.320E 00	1.828E-04	2.010E-04	1.045E 01	1.784E-05	7.355E-06
1.495E 00	8.550E-02	3.121E-03	4.400E 00	9.684E-05	1.917E-04	1.059E 01	1.505E-05	7.095E-06
1.525E 00	7.638E-02	3.094E-03	4.480E 00	-2.046E-05	1.658E-04			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	7.598E-03	9.200E-04
4.000E-01 - 5.000E-01	4.463E-03	9.415E-04
5.000E-01 - 6.000E-01	2.451E-03	5.616E-04
6.000E-01 - 7.000E-01	1.055E-03	5.697E-04
7.000E-01 - 8.000E-01	1.304E-03	4.928E-04
8.000E-01 - 1.000E 00	6.739E-02	1.118E-03
1.000E 00 - 1.200E 00	2.925E-02	8.321E-04
1.200E 00 - 1.400E 00	1.937E-02	8.135E-04
1.400E 00 - 1.600E 00	1.740E-02	6.483E-04
1.600E 00 - 1.800E 00	3.841E-03	4.456E-04
1.800E 00 - 2.000E 00	2.343E-03	4.182E-04
2.000E 00 - 2.500E 00	2.057E-02	9.179E-04
2.500E 00 - 3.000E 00	9.904E-03	4.770E-04
3.000E 00 - 3.500E 00	2.570E-03	2.882E-04
3.500E 00 - 4.000E 00	3.818E-03	2.194E-04
4.000E 00 - 4.500E 00	1.626E-04	1.063E-04
4.500E 00 - 5.000E 00	-3.891E-05	8.654E-05
5.000E 00 - 6.000E 00	3.136E-05	1.591E-04
6.000E 00 - 7.000E 00	2.832E-05	1.241E-04
7.000E 00 - 8.000E 00	5.047E-05	5.385E-05
8.000E 00 - 9.000E 00	8.544E-06	2.190E-05
9.000E 00 - 1.000E 01	7.807E-06	1.383E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 4.50 TO 4.99 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	9.078E-02	1.093E-02	1.555E 00	7.617E-02	3.765E-03	4.560E 00	4.090E-04	2.228E-04
3.225E-01	9.349E-02	1.037E-02	1.585E 00	6.406E-02	3.548E-03	4.640E 00	2.566E-04	2.171E-04
3.375E-01	9.984E-02	1.034E-02	1.615E 00	4.725E-02	3.103E-03	4.720E 00	2.473E-04	2.531E-04
3.525E-01	1.015E-01	9.810E-03	1.645E 00	3.137E-02	2.746E-03	4.800E 00	2.711E-04	2.329E-04
3.675E-01	9.211E-02	9.976E-03	1.680E 00	1.975E-02	2.634E-03	4.880E 00	3.309E-04	1.958E-04
3.825E-01	8.101E-02	9.772E-03	1.720E 00	1.573E-02	2.627E-03	4.960E 00	3.263E-04	2.184E-04
3.975E-01	7.755E-02	9.967E-03	1.760E 00	1.551E-02	2.509E-03	5.040E 00	1.799E-04	2.215E-04
4.125E-01	7.981E-02	9.615E-03	1.800E 00	1.378E-02	2.390E-03	5.120E 00	5.982E-05	1.994E-04
4.275E-01	7.379E-02	9.681E-03	1.840E 00	1.150E-02	2.303E-03	5.200E 00	-2.448E-06	1.460E-04
4.425E-01	5.866E-02	9.965E-03	1.880E 00	1.175E-02	2.282E-03	5.280E 00	-2.287E-05	1.322E-04
4.575E-01	4.589E-02	1.041E-02	1.920E 00	1.569E-02	2.389E-03	5.360E 00	-4.848E-05	1.416E-04
4.725E-01	4.301E-02	1.017E-02	1.960E 00	2.335E-02	2.477E-03	5.440E 00	-5.716E-05	1.535E-04
4.875E-01	4.534E-02	9.425E-03	2.000E 00	3.010E-02	2.444E-03	5.520E 00	-4.323E-05	1.926E-04
5.025E-01	4.566E-02	8.295E-03	2.040E 00	3.052E-02	2.384E-03	5.600E 00	6.535E-06	1.624E-04
5.175E-01	4.128E-02	7.191E-03	2.080E 00	2.689E-02	2.300E-03	5.680E 00	3.502E-05	1.332E-04
5.325E-01	3.592E-02	6.389E-03	2.120E 00	2.674E-02	2.210E-03	5.760E 00	9.139E-05	1.330E-04
5.475E-01	3.139E-02	5.805E-03	2.160E 00	3.291E-02	2.235E-03	5.850E 00	1.537E-04	1.320E-04
5.625E-01	2.704E-02	5.638E-03	2.200E 00	4.280E-02	2.271E-03	5.950E 00	1.640E-04	1.439E-04
5.775E-01	2.250E-02	5.534E-03	2.240E 00	5.381E-02	2.254E-03	6.050E 00	1.413E-04	1.722E-04
5.925E-01	1.819E-02	5.501E-03	2.280E 00	6.450E-02	2.294E-03	6.150E 00	5.239E-05	1.493E-04
6.100E-01	1.434E-02	5.899E-03	2.320E 00	7.166E-02	2.353E-03	6.250E 00	-2.147E-05	1.368E-04
6.300E-01	1.229E-02	6.259E-03	2.360E 00	6.991E-02	2.280E-03	6.350E 00	-4.622E-05	1.336E-04
6.500E-01	1.147E-02	6.206E-03	2.400E 00	5.727E-02	1.987E-03	6.450E 00	-5.142E-05	1.277E-04
6.700E-01	1.078E-02	5.844E-03	2.440E 00	3.999E-02	1.630E-03	6.550E 00	-7.546E-05	1.387E-04
6.900E-01	1.123E-02	5.491E-03	2.480E 00	2.735E-02	1.442E-03	6.650E 00	-8.903E-05	1.281E-04
7.100E-01	1.153E-02	5.395E-03	2.525E 00	2.431E-02	1.429E-03	6.750E 00	-7.763E-05	1.132E-04
7.300E-01	8.930E-03	5.481E-03	2.575E 00	3.005E-02	1.516E-03	6.850E 00	-5.742E-05	9.212E-05
7.500E-01	6.887E-03	5.615E-03	2.625E 00	3.478E-02	1.548E-03	6.950E 00	1.272E-06	9.743E-05
7.700E-01	1.057E-02	5.366E-03	2.675E 00	3.395E-02	1.436E-03	7.050E 00	4.102E-05	9.368E-05
7.900E-01	1.988E-02	5.341E-03	2.725E 00	3.033E-02	1.208E-03	7.150E 00	5.189E-05	7.595E-05
8.100E-01	3.291E-02	5.279E-03	2.775E 00	2.667E-02	1.124E-03	7.250E 00	2.588E-05	6.708E-05
8.300E-01	5.168E-02	5.132E-03	2.825E 00	2.278E-02	1.131E-03	7.350E 00	-1.004E-05	5.720E-05
8.500E-01	7.749E-02	5.166E-03	2.875E 00	1.783E-02	1.052E-03	7.450E 00	-2.304E-05	5.051E-05
8.700E-01	1.144E-01	5.088E-03	2.925E 00	1.246E-02	9.114E-04	7.550E 00	-1.920E-06	4.826E-05
8.900E-01	1.772E-01	5.249E-03	2.975E 00	8.548E-03	8.654E-04	7.650E 00	2.894E-05	4.685E-05
9.125E-01	3.130E-01	5.795E-03	3.030E 00	7.460E-03	8.651E-04	7.750E 00	4.822E-05	4.082E-05
9.375E-01	5.588E-01	6.704E-03	3.090E 00	8.235E-03	8.177E-04	7.850E 00	4.282E-05	3.362E-05
9.625E-01	7.786E-01	7.709E-03	3.150E 00	8.339E-03	8.294E-04	7.950E 00	2.513E-05	3.356E-05
9.875E-01	7.756E-01	8.272E-03	3.210E 00	8.348E-03	8.009E-04	8.140E 00	1.562E-05	3.540E-05
1.012E 00	5.505E-01	6.589E-03	3.270E 00	9.351E-03	7.996E-04	8.260E 00	1.389E-05	3.032E-05
1.037E 00	3.113E-01	5.362E-03	3.330E 00	1.007E-02	7.935E-04	8.380E 00	2.092E-05	2.566E-05
1.063E 00	1.508E-01	5.272E-03	3.390E 00	9.203E-03	6.970E-04	8.500E 00	2.497E-05	2.711E-05
1.087E 00	8.634E-02	4.941E-03	3.450E 00	7.589E-03	6.019E-04	8.620E 00	2.080E-05	2.537E-05
1.112E 00	6.233E-02	4.189E-03	3.510E 00	7.738E-03	5.690E-04	8.740E 00	5.777E-06	2.344E-05
1.137E 00	4.633E-02	3.720E-03	3.570E 00	1.120E-02	6.089E-04	8.860E 00	-8.742E-07	2.011E-05
1.162E 00	3.394E-02	3.662E-03	3.630E 00	1.622E-02	6.765E-04	8.980E 00	6.651E-06	1.816E-05
1.188E 00	2.818E-02	3.877E-03	3.690E 00	1.861E-02	6.750E-04	9.100E 00	2.250E-05	1.693E-05
1.212E 00	4.021E-02	4.184E-03	3.750E 00	1.610E-02	6.178E-04	9.220E 00	3.104E-05	1.510E-05
1.237E 00	7.160E-02	4.551E-03	3.810E 00	1.071E-02	5.132E-04	9.340E 00	2.613E-05	1.279E-05
1.262E 00	1.149E-01	4.776E-03	3.870E 00	5.964E-03	4.282E-04	9.470E 00	1.450E-05	9.751E-06
1.287E 00	1.435E-01	4.913E-03	3.930E 00	3.443E-03	4.030E-04	9.610E 00	4.366E-06	5.446E-06
1.315E 00	1.491E-01	5.555E-03	3.990E 00	2.493E-03	3.794E-04	9.750E 00	1.374E-06	3.358E-06
1.345E 00	1.339E-01	4.958E-03	4.050E 00	2.165E-03	3.400E-04	9.890E 00	1.772E-06	2.548E-06
1.375E 00	1.220E-01	4.104E-03	4.110E 00	2.283E-03	3.324E-04	1.003E 01	2.432E-06	2.101E-06
1.405E 00	1.222E-01	3.682E-03	4.170E 00	2.842E-03	3.118E-04	1.017E 01	3.093E-06	2.151E-06
1.435E 00	1.173E-01	3.645E-03	4.240E 00	3.424E-03	3.617E-04	1.031E 01	3.986E-06	2.507E-06
1.465E 00	1.033E-01	3.641E-03	4.320E 00	3.000E-03	3.349E-04	1.045E 01	4.600E-06	2.944E-06
1.495E 00	8.998E-02	3.502E-03	4.400E 00	1.905E-03	2.684E-04	1.059E 01	4.476E-06	2.962E-06
1.525E 00	8.288E-02	3.614E-03	4.480E 00	8.776E-04	2.525E-04			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	9.141E-03	1.013E-03
4.000E-01 - 5.000E-01	5.807E-03	9.814E-04
5.000E-01 - 6.000E-01	3.094E-03	6.228E-04
6.000E-01 - 7.000E-01	1.206E-03	5.940E-04
7.000E-01 - 8.000E-01	1.162E-03	5.439E-04
8.000E-01 - 1.000E 00	6.942E-02	1.226E-03
1.000E 00 - 1.200E 00	3.190E-02	9.415E-04
1.200E 00 - 1.400E 00	2.265E-02	9.365E-04
1.400E 00 - 1.600E 00	1.844E-02	7.247E-04
1.600E 00 - 1.800E 00	4.708E-03	5.348E-04
1.800E 00 - 2.000E 00	3.335E-03	4.745E-04
2.000E 00 - 2.500E 00	2.238E-02	1.074E-03
2.500E 00 - 3.000E 00	1.212E-02	6.113E-04
3.000E 00 - 3.500E 00	4.283E-03	3.836E-04
3.500E 00 - 4.000E 00	5.357E-03	2.735E-04
4.000E 00 - 4.500E 00	1.213E-03	1.598E-04
4.500E 00 - 5.000E 00	1.620E-04	1.118E-04
5.000E 00 - 6.000E 00	4.791E-05	1.570E-04
6.000E 00 - 7.000E 00	-2.269E-05	1.284E-04
7.000E 00 - 8.000E 00	2.384E-05	5.510E-05
8.000E 00 - 9.000E 00	1.444E-05	2.669E-05
9.000E 00 - 1.000E 01	1.320E-05	9.137E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 4.99 TO 6.01 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	9.269E-02	1.169E-02	1.555E 00	9.721E-02	4.121E-03	4.560E 00	1.571E-03	2.794E-04
3.225E-01	1.042E-01	1.092E-02	1.585E 00	8.199E-02	3.906E-03	4.640E 00	1.544E-03	2.630E-04
3.375E-01	1.118E-01	1.041E-02	1.615E 00	6.007E-02	3.464E-03	4.720E 00	1.516E-03	2.549E-04
3.525E-01	1.062E-01	1.025E-02	1.645E 00	4.083E-02	3.079E-03	4.800E 00	1.329E-03	2.502E-04
3.675E-01	9.611E-02	1.071E-02	1.680E 00	2.875E-02	2.898E-03	4.880E 00	1.056E-03	2.301E-04
3.825E-01	9.428E-02	1.041E-02	1.720E 00	2.424E-02	2.891E-03	4.960E 00	7.895E-04	2.294E-04
3.975E-01	9.513E-02	1.035E-02	1.760E 00	2.183E-02	2.825E-03	5.040E 00	6.337E-04	2.262E-04
4.125E-01	9.084E-02	1.056E-02	1.800E 00	1.828E-02	2.659E-03	5.120E 00	6.436E-04	2.413E-04
4.275E-01	8.235E-02	1.063E-02	1.840E 00	1.456E-02	2.696E-03	5.200E 00	7.409E-04	2.477E-04
4.425E-01	7.270E-02	1.100E-02	1.880E 00	1.375E-02	2.807E-03	5.280E 00	7.298E-04	2.259E-04
4.575E-01	6.531E-02	1.114E-02	1.920E 00	1.750E-02	2.690E-03	5.360E 00	6.108E-04	2.026E-04
4.725E-01	6.249E-02	1.086E-02	1.960E 00	2.450E-02	2.356E-03	5.440E 00	5.137E-04	1.862E-04
4.875E-01	6.381E-02	1.028E-02	2.000E 00	3.026E-02	2.552E-03	5.520E 00	4.511E-04	1.894E-04
5.025E-01	6.468E-02	9.043E-03	2.040E 00	3.212E-02	2.610E-03	5.600E 00	3.766E-04	1.939E-04
5.175E-01	5.966E-02	7.815E-03	2.080E 00	3.214E-02	2.561E-03	5.680E 00	2.484E-04	1.939E-04
5.325E-01	5.957E-02	6.821E-03	2.120E 00	3.432E-02	2.499E-03	5.760E 00	1.220E-04	1.894E-04
5.475E-01	4.010E-02	6.235E-03	2.160E 00	4.063E-02	2.496E-03	5.850E 00	4.687E-05	1.687E-04
5.625E-01	3.334E-02	5.885E-03	2.200E 00	4.965E-02	2.479E-03	5.950E 00	1.895E-06	1.583E-04
5.775E-01	2.765E-02	5.627E-03	2.240E 00	5.992E-02	2.468E-03	6.050E 00	-1.086E-05	1.553E-04
5.925E-01	2.268E-02	5.730E-03	2.280E 00	7.147E-02	2.519E-03	6.150E 00	5.525E-06	1.422E-04
6.100E-01	1.894E-02	6.335E-03	2.320E 00	8.062E-02	2.540E-03	6.250E 00	5.410E-05	1.404E-04
6.300E-01	1.825E-02	7.087E-03	2.360E 00	7.992E-02	2.451E-03	6.350E 00	9.268E-05	1.313E-04
6.500E-01	1.833E-02	6.869E-03	2.400E 00	6.663E-02	2.145E-03	6.450E 00	9.651E-05	1.309E-04
6.700E-01	1.681E-02	6.297E-03	2.440E 00	4.788E-02	1.761E-03	6.550E 00	6.728E-05	1.182E-04
6.900E-01	1.674E-02	5.868E-03	2.480E 00	3.422E-02	1.548E-03	6.650E 00	4.861E-05	1.028E-04
7.100E-01	1.935E-02	5.604E-03	2.520E 00	3.070E-02	1.492E-03	6.750E 00	5.638E-05	9.546E-05
7.300E-01	2.013E-02	5.549E-03	2.575E 00	3.580E-02	1.586E-03	6.850E 00	8.001E-05	9.139E-05
7.500E-01	1.830E-02	5.480E-03	2.625E 00	3.996E-02	1.680E-03	6.950E 00	8.997E-05	9.245E-05
7.700E-01	1.900E-02	5.438E-03	2.675E 00	3.867E-02	1.550E-03	7.050E 00	6.487E-05	7.589E-05
7.900E-01	2.420E-02	5.495E-03	2.725E 00	3.429E-02	1.349E-03	7.150E 00	2.561E-05	6.224E-05
8.100E-01	3.409E-02	5.566E-03	2.775E 00	3.052E-02	1.255E-03	7.250E 00	-6.481E-07	5.183E-05
8.300E-01	5.294E-02	5.383E-03	2.825E 00	2.758E-02	1.195E-03	7.350E 00	-1.800E-05	4.741E-05
8.500E-01	8.100E-02	5.236E-03	2.875E 00	2.329E-02	1.063E-03	7.450E 00	-2.406E-05	4.600E-05
8.700E-01	1.178E-01	5.252E-03	2.925E 00	1.768E-02	9.489E-04	7.550E 00	-2.813E-05	3.697E-05
8.900E-01	1.781E-01	5.473E-03	2.975E 00	1.350E-02	9.118E-04	7.650E 00	-1.246E-05	3.165E-05
9.125E-01	3.118E-01	5.747E-03	3.030E 00	1.191E-02	9.370E-04	7.750E 00	1.713E-05	2.828E-05
9.375E-01	5.586E-01	6.211E-03	3.090E 00	1.148E-02	9.354E-04	7.850E 00	3.610E-05	2.813E-05
9.625E-01	7.877E-01	7.285E-03	3.150E 00	1.137E-02	9.063E-04	7.950E 00	2.984E-05	2.588E-05
9.875E-01	8.013E-01	8.037E-03	3.210E 00	1.250E-02	8.817E-04	8.050E 00	9.588E-06	2.216E-05
1.012E 00	5.839E-01	6.786E-03	3.270E 00	1.465E-02	8.943E-04	8.150E 00	-4.783E-06	2.099E-05
1.037E 00	3.382E-01	5.774E-03	3.330E 00	1.584E-02	8.527E-04	8.250E 00	-4.297E-06	2.151E-05
1.063E 00	1.666E-01	5.793E-03	3.390E 00	1.422E-02	7.708E-04	8.350E 00	8.639E-06	2.177E-05
1.087E 00	9.763E-02	5.550E-03	3.450E 00	1.140E-02	7.010E-04	8.450E 00	2.676E-05	2.291E-05
1.112E 00	7.430E-02	4.519E-03	3.510E 00	1.131E-02	6.464E-04	8.550E 00	3.268E-05	2.115E-05
1.137E 00	6.040E-02	3.907E-03	3.570E 00	1.541E-02	6.321E-04	8.650E 00	2.040E-05	1.881E-05
1.162E 00	4.931E-02	3.871E-03	3.630E 00	2.100E-02	7.045E-04	8.750E 00	1.844E-05	1.611E-05
1.188E 00	4.398E-02	4.247E-03	3.690E 00	2.373E-02	7.556E-04	8.850E 00	7.945E-06	1.691E-05
1.212E 00	5.659E-02	4.623E-03	3.750E 00	2.137E-02	6.806E-04	8.950E 00	3.661E-06	1.633E-05
1.237E 00	9.136E-02	5.183E-03	3.810E 00	1.575E-02	5.748E-04	9.050E 00	3.509E-06	1.409E-05
1.262E 00	4.148E-01	5.563E-03	3.870E 00	1.023E-02	5.071E-04	9.150E 00	7.719E-06	1.169E-05
1.287E 00	1.763E-01	5.506E-03	3.930E 00	6.562E-03	4.989E-04	9.250E 00	1.219E-05	1.131E-05
1.315E 00	1.820E-01	5.884E-03	3.990E 00	4.544E-03	4.656E-04	9.350E 00	1.339E-05	1.059E-05
1.345E 00	1.563E-01	5.434E-03	4.050E 00	3.610E-03	4.031E-04	9.450E 00	1.106E-05	8.971E-06
1.375E 00	1.308E-01	4.614E-03	4.110E 00	3.692E-03	3.740E-04	1.003E 01	8.929E-06	6.537E-06
1.405E 00	1.219E-01	4.187E-03	4.170E 00	4.802E-03	3.728E-04	1.017E 01	6.340E-06	4.695E-06
1.435E 00	1.188E-01	4.202E-03	4.240E 00	6.288E-03	3.720E-04	1.031E 01	4.870E-06	4.966E-06
1.465E 00	1.121E-01	4.074E-03	4.320E 00	6.090E-03	3.570E-04	1.045E 01	1.907E-06	6.591E-06
1.495E 00	1.058E-01	3.831E-03	4.400E 00	4.035E-03	3.216E-04	1.059E 01	5.957E-07	6.579E-06
1.525E 00	1.030E-01	4.012E-03	4.480E 00	2.770E-03	2.762E-04			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.003E-02	1.070E-03
4.000E-01 - 5.000E-01	7.354E-03	1.066E-03
5.000E-01 - 6.000E-01	4.138E-03	6.610E-04
6.000E-01 - 7.000E-01	1.791E-03	6.492E-04
7.000E-01 - 8.000E-01	2.026E-03	5.517E-04
8.000E-01 - 1.000E 00	7.046E-02	1.217E-03
1.000E 00 - 1.200E 00	3.550E-02	1.012E-03
1.200E 00 - 1.400E 00	2.695E-02	1.043E-03
1.400E 00 - 1.600E 00	2.099E-02	8.080E-04
1.600E 00 - 1.800E 00	6.429E-03	5.952E-04
1.800E 00 - 2.000E 00	3.746E-03	5.343E-04
2.000E 00 - 2.500E 00	2.579E-02	1.174E-03
2.500E 00 - 3.000E 00	1.463E-02	6.520E-04
3.000E 00 - 3.500E 00	6.440E-03	4.258E-04
3.500E 00 - 4.000E 00	7.498E-03	3.056E-04
4.000E 00 - 4.500E 00	2.262E-03	1.799E-04
4.500E 00 - 5.000E 00	6.666E-04	1.263E-04
5.000E 00 - 6.000E 00	4.113E-04	2.005E-04
6.000E 00 - 7.000E 00	5.787E-05	1.198E-04
7.000E 00 - 8.000E 00	8.095E-06	4.371E-05
8.000E 00 - 9.000E 00	1.541E-05	2.126E-05
9.000E 00 - 1.000E 01	9.043E-06	1.259E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 6.01 TO 7.02 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	1.123E-01	1.278E-02	1.555E 00	1.022E-01	4.886E-03	4.560E 00	6.497E-03	5.537E-04
3.225E-01	1.232E-01	1.159E-02	1.585E 00	8.761E-02	4.580E-03	4.640E 00	5.889E-03	5.422E-04
3.375E-01	1.264E-01	1.148E-02	1.615E 00	6.902E-02	4.086E-03	4.720E 00	4.708E-03	4.997E-04
3.525E-01	1.175E-01	1.189E-02	1.645E 00	5.337E-02	3.723E-03	4.800E 00	4.203E-03	4.965E-04
3.675E-01	1.052E-01	1.157E-02	1.680E 00	4.298E-02	3.529E-03	4.880E 00	4.392E-03	4.679E-04
3.825E-01	1.005E-01	1.162E-02	1.720E 00	3.746E-02	3.438E-03	4.960E 00	4.540E-03	4.356E-04
3.975E-01	1.023E-01	1.166E-02	1.760E 00	3.347E-02	3.333E-03	5.040E 00	4.678E-03	4.474E-04
4.125E-01	1.039E-01	1.150E-02	1.800E 00	2.973E-02	3.240E-03	5.120E 00	4.757E-03	4.334E-04
4.275E-01	9.822E-02	1.126E-02	1.840E 00	2.655E-02	3.261E-03	5.200E 00	4.558E-03	4.325E-04
4.425E-01	8.242E-02	1.176E-02	1.880E 00	2.397E-02	3.349E-03	5.280E 00	4.110E-03	4.248E-04
4.575E-01	6.737E-02	1.238E-02	1.920E 00	2.363E-02	3.359E-03	5.360E 00	3.672E-03	3.957E-04
4.725E-01	6.605E-02	1.229E-02	1.960E 00	2.852E-02	3.224E-03	5.440E 00	3.400E-03	3.553E-04
4.875E-01	7.383E-02	1.140E-02	2.000E 00	3.609E-02	3.056E-03	5.520E 00	3.393E-03	3.488E-04
5.025E-01	7.839E-02	1.062E-02	2.040E 00	4.126E-02	3.006E-03	5.600E 00	3.372E-03	3.524E-04
5.175E-01	7.287E-02	9.515E-03	2.080E 00	4.285E-02	3.041E-03	5.680E 00	2.987E-03	3.207E-04
5.325E-01	5.767E-02	8.212E-03	2.120E 00	4.386E-02	3.045E-03	5.760E 00	2.343E-03	3.099E-04
5.475E-01	4.093E-02	7.314E-03	2.160E 00	4.842E-02	3.052E-03	5.850E 00	1.706E-03	2.822E-04
5.625E-01	3.035E-02	6.653E-03	2.200E 00	5.717E-02	2.976E-03	5.950E 00	1.306E-03	2.648E-04
5.775E-01	2.490E-02	6.365E-03	2.240E 00	6.714E-02	2.929E-03	6.050E 00	1.075E-03	2.407E-04
5.925E-01	2.207E-02	6.478E-03	2.280E 00	7.711E-02	2.982E-03	6.150E 00	8.889E-04	2.242E-04
6.100E-01	2.173E-02	7.180E-03	2.320E 00	8.555E-02	2.971E-03	6.250E 00	8.645E-04	2.083E-04
6.300E-01	2.165E-02	7.882E-03	2.360E 00	8.633E-02	2.833E-03	6.350E 00	9.954E-04	2.221E-04
6.500E-01	2.029E-02	7.740E-03	2.400E 00	7.846E-02	2.506E-03	6.450E 00	1.034E-03	2.179E-04
6.700E-01	2.091E-02	7.015E-03	2.440E 00	5.658E-02	2.150E-03	6.550E 00	7.604E-04	1.733E-04
6.900E-01	2.088E-02	6.544E-03	2.480E 00	4.197E-02	2.007E-03	6.650E 00	3.174E-04	1.594E-04
7.100E-01	1.963E-02	6.450E-03	2.525E 00	3.639E-02	1.995E-03	6.750E 00	-4.158E-05	1.513E-04
7.300E-01	1.950E-02	6.410E-03	2.575E 00	3.935E-02	2.054E-03	6.850E 00	-2.106E-04	1.648E-04
7.500E-01	2.036E-02	6.516E-03	2.625E 00	4.264E-02	2.047E-03	6.950E 00	-2.265E-04	1.408E-04
7.700E-01	2.350E-02	6.345E-03	2.675E 00	4.111E-02	1.850E-03	7.050E 00	-1.398E-04	1.146E-04
7.900E-01	3.090E-02	6.170E-03	2.725E 00	3.768E-02	1.652E-03	7.150E 00	-4.176E-05	7.754E-05
8.100E-01	4.178E-02	6.211E-03	2.775E 00	3.637E-02	1.556E-03	7.250E 00	5.738E-05	6.266E-05
8.300E-01	5.797E-02	6.026E-03	2.825E 00	3.462E-02	1.505E-03	7.350E 00	1.126E-04	5.519E-05
8.500E-01	8.278E-02	6.035E-03	2.875E 00	2.934E-02	1.419E-03	7.450E 00	1.148E-04	4.953E-05
8.700E-01	1.204E-01	6.083E-03	2.925E 00	2.315E-02	1.308E-03	7.550E 00	8.171E-05	4.200E-05
8.900E-01	1.849E-01	6.192E-03	2.975E 00	1.935E-02	1.221E-03	7.650E 00	3.727E-05	3.960E-05
9.125E-01	3.229E-01	6.424E-03	3.030E 00	1.786E-02	1.218E-03	7.750E 00	1.199E-05	3.326E-05
9.375E-01	5.712E-01	7.172E-03	3.090E 00	1.719E-02	1.205E-03	7.850E 00	-2.014E-06	3.169E-05
9.625E-01	8.044E-01	8.396E-03	3.150E 00	1.688E-02	1.150E-03	8.020E 00	-4.043E-06	2.633E-05
9.875E-01	8.297E-01	9.244E-03	3.210E 00	1.747E-02	1.121E-03	8.140E 00	-4.275E-06	2.265E-05
1.012E 00	6.218E-01	7.655E-03	3.270E 00	1.900E-02	1.110E-03	8.260E 00	-5.811E-06	2.017E-05
1.037E 00	3.745E-01	6.522E-03	3.330E 00	1.964E-02	1.048E-03	8.380E 00	-1.465E-06	2.063E-05
1.063E 00	1.945E-01	6.811E-03	3.390E 00	1.770E-02	9.847E-04	8.500E 00	1.722E-06	1.983E-05
1.087E 00	1.179E-01	6.496E-03	3.450E 00	1.493E-02	9.296E-04	8.620E 00	4.825E-06	1.891E-05
1.112E 00	9.005E-02	5.335E-03	3.510E 00	1.454E-02	8.971E-04	8.740E 00	3.642E-06	1.996E-05
1.137E 00	7.261E-02	4.694E-03	3.570E 00	1.741E-02	8.828E-04	8.860E 00	3.687E-06	1.985E-05
1.162E 00	5.908E-02	4.704E-03	3.630E 00	2.141E-02	9.072E-04	8.980E 00	1.149E-05	1.988E-05
1.188E 00	5.403E-02	5.100E-03	3.690E 00	2.317E-02	9.408E-04	9.100E 00	2.054E-05	1.775E-05
1.212E 00	7.089E-02	5.517E-03	3.750E 00	2.117E-02	9.137E-04	9.220E 00	2.967E-05	1.992E-05
1.237E 00	1.118E-01	6.156E-03	3.810E 00	1.709E-02	8.425E-04	9.340E 00	2.984E-05	1.993E-05
1.262E 00	1.697E-01	6.672E-03	3.870E 00	1.328E-02	7.715E-04	9.470E 00	2.143E-05	2.083E-05
1.287E 00	2.103E-01	6.581E-03	3.930E 00	1.041E-02	7.394E-04	9.610E 00	1.181E-05	1.701E-05
1.315E 00	2.184E-01	6.927E-03	3.990E 00	8.063E-03	7.136E-04	9.750E 00	4.451E-06	1.669E-05
1.345E 00	1.866E-01	6.278E-03	4.050E 00	6.358E-03	6.600E-04	9.890E 00	2.085E-06	1.688E-05
1.375E 00	1.495E-01	5.246E-03	4.110E 00	5.908E-03	6.563E-04	1.003E 01	6.520E-06	1.576E-05
1.405E 00	1.317E-01	4.808E-03	4.170E 00	6.901E-03	6.438E-04	1.017E 01	8.565E-06	1.180E-05
1.435E 00	1.264E-01	4.882E-03	4.240E 00	8.526E-03	6.515E-04	1.031E 01	1.208E-05	9.831E-06
1.465E 00	1.211E-01	4.789E-03	4.320E 00	8.861E-03	6.441E-04	1.045E 01	1.207E-05	1.124E-05
1.495E 00	1.150E-01	4.566E-03	4.400E 00	7.637E-03	5.735E-04	1.059E 01	9.450E-06	1.093E-05
1.525E 00	1.101E-01	4.811E-03	4.480E 00	6.661E-03	5.476E-04			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.129E-02	1.181E-03
4.000E-01 - 5.000E-01	8.277E-03	1.171E-03
5.000E-01 - 6.000E-01	4.514E-03	7.736E-04
6.000E-01 - 7.000E-01	2.109E-03	7.272E-04
7.000E-01 - 8.000E-01	2.287E-03	6.380E-04
8.000E-01 - 1.000E 00	7.266E-02	1.388E-03
1.000E 00 - 1.200E 00	3.975E-02	1.184E-03
1.200E 00 - 1.400E 00	3.205E-02	1.226E-03
1.400E 00 - 1.600E 00	2.248E-02	9.517E-04
1.600E 00 - 1.800E 00	8.861E-03	7.121E-04
1.800E 00 - 2.000E 00	5.379E-03	6.545E-04
2.000E 00 - 2.500E 00	2.966E-02	1.401E-03
2.500E 00 - 3.000E 00	1.703E-02	8.309E-04
3.000E 00 - 3.500E 00	8.742E-03	5.441E-04
3.500E 00 - 4.000E 00	8.359E-03	4.242E-04
4.000E 00 - 4.500E 00	3.703E-03	3.140E-04
4.500E 00 - 5.000E 00	2.553E-03	2.509E-04
5.000E 00 - 6.000E 00	3.283E-03	3.601E-04
6.000E 00 - 7.000E 00	5.463E-04	1.905E-04
7.000E 00 - 8.000E 00	2.376E-05	5.374E-05
8.000E 00 - 9.000E 00	7.783E-07	2.066E-05
9.000E 00 - 1.000E 01	1.598E-05	1.833E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY-DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 7.02 TO 7.99 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	1.028E-01	1.507E-02	1.555E 00	1.064E-01	5.493E-03	4.560E 00	1.022E-02	8.741E-04
3.225E-01	1.111E-01	1.400E-02	1.585E 00	9.328E-02	5.184E-03	4.640E 00	8.310E-03	8.750E-04
3.375E-01	1.127E-01	1.317E-02	1.615E 00	7.461E-02	4.691E-03	4.720E 00	6.838E-03	8.302E-04
3.525E-01	1.199E-01	1.290E-02	1.645E 00	5.742E-02	4.377E-03	4.800E 00	6.894E-03	8.105E-04
3.675E-01	1.249E-01	1.287E-02	1.680E 00	4.596E-02	4.284E-03	4.880E 00	7.122E-03	7.798E-04
3.825E-01	1.209E-01	1.293E-02	1.720E 00	4.224E-02	4.304E-03	4.960E 00	7.198E-03	7.950E-04
3.975E-01	1.128E-01	1.310E-02	1.760E 00	3.994E-02	4.227E-03	5.040E 00	7.802E-03	7.918E-04
4.125E-01	1.061E-01	1.306E-02	1.800E 00	3.502E-02	4.078E-03	5.120E 00	8.426E-03	7.831E-04
4.275E-01	9.840E-02	1.302E-02	1.840E 00	3.089E-02	3.998E-03	5.200E 00	8.230E-03	7.970E-04
4.425E-01	8.588E-02	1.330E-02	1.880E 00	3.071E-02	3.827E-03	5.280E 00	7.519E-03	7.575E-04
4.575E-01	7.615E-02	1.321E-02	1.920E 00	3.280E-02	3.675E-03	5.360E 00	7.130E-03	7.123E-04
4.725E-01	7.025E-02	1.321E-02	1.960E 00	3.625E-02	3.643E-03	5.440E 00	7.162E-03	6.939E-04
4.875E-01	6.661E-02	1.263E-02	2.000E 00	4.128E-02	3.680E-03	5.520E 00	6.970E-03	6.648E-04
5.025E-01	9.141E-02	1.173E-02	2.040E 00	4.529E-02	3.722E-03	5.600E 00	6.369E-03	6.531E-04
5.175E-01	8.648E-02	1.081E-02	2.080E 00	4.689E-02	3.719E-03	5.680E 00	5.702E-03	6.250E-04
5.325E-01	7.068E-02	9.736E-03	2.120E 00	4.965E-02	3.638E-03	5.760E 00	5.252E-03	5.857E-04
5.475E-01	5.154E-02	8.589E-03	2.160E 00	5.613E-02	3.525E-03	5.850E 00	5.004E-03	5.443E-04
5.625E-01	3.848E-02	7.831E-03	2.200E 00	6.420E-02	3.482E-03	5.950E 00	4.869E-03	5.091E-04
5.775E-01	3.242E-02	7.392E-03	2.240E 00	7.187E-02	3.518E-03	6.050E 00	4.523E-03	4.842E-04
5.925E-01	2.883E-02	7.433E-03	2.280E 00	8.003E-02	3.579E-03	6.150E 00	4.035E-03	4.385E-04
6.100E-01	2.446E-02	8.322E-03	2.320E 00	8.768E-02	3.591E-03	6.250E 00	3.680E-03	3.960E-04
6.300E-01	1.992E-02	9.221E-03	2.360E 00	8.855E-02	3.398E-03	6.350E 00	3.318E-03	3.620E-04
6.500E-01	1.572E-02	8.817E-03	2.400E 00	7.787E-02	3.018E-03	6.450E 00	2.840E-03	3.350E-04
6.700E-01	1.287E-02	8.057E-03	2.440E 00	6.089E-02	2.688E-03	6.550E 00	2.437E-03	3.111E-04
6.900E-01	1.375E-02	7.541E-03	2.480E 00	4.747E-02	2.571E-03	6.650E 00	2.019E-03	2.809E-04
7.100E-01	1.845E-02	7.358E-03	2.525E 00	4.200E-02	2.525E-03	6.750E 00	1.591E-03	2.503E-04
7.300E-01	2.005E-02	7.404E-03	2.575E 00	4.329E-02	2.562E-03	6.850E 00	1.340E-03	2.258E-04
7.500E-01	1.770E-02	7.513E-03	2.625E 00	4.497E-02	2.539E-03	6.950E 00	1.293E-03	1.948E-04
7.700E-01	1.956E-02	7.263E-03	2.675E 00	4.398E-02	2.318E-03	7.050E 00	1.218E-03	1.671E-04
7.900E-01	2.734E-02	6.874E-03	2.725E 00	4.192E-02	2.065E-03	7.150E 00	9.987E-04	1.417E-04
8.100E-01	3.861E-02	6.772E-03	2.775E 00	4.108E-02	2.046E-03	7.250E 00	6.986E-04	1.203E-04
8.300E-01	5.575E-02	6.696E-03	2.825E 00	4.002E-02	2.082E-03	7.350E 00	4.371E-04	9.935E-05
8.500E-01	8.086E-02	6.602E-03	2.875E 00	3.580E-02	1.923E-03	7.450E 00	2.645E-04	9.182E-05
8.700E-01	1.198E-01	6.672E-03	2.925E 00	2.985E-02	1.782E-03	7.550E 00	1.712E-04	8.095E-05
8.900E-01	1.879E-01	6.945E-03	2.975E 00	2.606E-02	1.649E-03	7.660E 00	1.203E-04	6.849E-05
9.125E-01	3.295E-01	7.448E-03	3.030E 00	2.529E-02	1.625E-03	7.780E 00	8.516E-05	5.255E-05
9.375E-01	5.821E-01	8.170E-03	3.090E 00	2.477E-02	1.624E-03	7.900E 00	6.212E-05	4.428E-05
9.625E-01	8.166E-01	9.381E-03	3.150E 00	2.278E-02	1.530E-03	8.020E 00	4.985E-05	4.428E-05
9.875E-01	8.337E-01	1.049E-02	3.210E 00	2.164E-02	1.503E-03	8.140E 00	3.175E-05	4.442E-05
1.012E 00	6.202E-01	8.818E-03	3.270E 00	2.247E-02	1.490E-03	8.260E 00	1.131E-05	3.049E-05
1.037E 00	3.762E-01	7.836E-03	3.330E 00	2.371E-02	1.453E-03	8.380E 00	-4.019E-06	3.338E-05
1.063E 00	2.010E-01	8.073E-03	3.390E 00	2.353E-02	1.417E-03	8.500E 00	-4.629E-06	3.100E-05
1.087E 00	1.260E-01	7.610E-03	3.450E 00	2.210E-02	1.217E-03	8.620E 00	4.557E-06	3.157E-05
1.112E 00	9.437E-02	6.307E-03	3.510E 00	2.143E-02	1.218E-03	8.740E 00	1.827E-05	2.908E-05
1.137E 00	8.089E-02	5.504E-03	3.570E 00	2.264E-02	1.224E-03	8.860E 00	3.128E-05	2.942E-05
1.162E 00	6.647E-02	5.500E-03	3.630E 00	2.521E-02	1.230E-03	8.980E 00	3.644E-05	2.804E-05
1.188E 00	6.065E-02	5.444E-03	3.690E 00	2.636E-02	1.227E-03	9.100E 00	2.584E-05	2.733E-05
1.212E 00	7.974E-02	6.444E-03	3.750E 00	2.400E-02	1.183E-03	9.220E 00	9.226E-06	2.731E-05
1.237E 00	1.265E-01	7.056E-03	3.810E 00	1.912E-02	1.109E-03	9.340E 00	-3.455E-06	2.756E-05
1.262E 00	1.907E-01	7.532E-03	3.870E 00	1.429E-02	1.076E-03	9.470E 00	-3.822E-06	2.564E-05
1.287E 00	2.332E-01	7.524E-03	3.930E 00	1.115E-02	1.092E-03	9.610E 00	9.408E-06	2.404E-05
1.315E 00	2.388E-01	8.225E-03	3.990E 00	9.499E-03	1.105E-03	9.750E 00	1.762E-05	2.571E-05
1.345E 00	2.034E-01	7.197E-03	4.050E 00	8.402E-03	1.044E-03	9.890E 00	2.195E-05	2.785E-05
1.375E 00	1.619E-01	5.824E-03	4.110E 00	9.454E-03	9.990E-04	1.003E 01	2.287E-05	2.637E-05
1.405E 00	1.377E-01	5.387E-03	4.170E 00	1.080E-02	9.493E-04	1.017E 01	2.328E-05	2.101E-05
1.435E 00	1.266E-01	5.617E-03	4.240E 00	1.214E-02	9.694E-04	1.031E 01	2.719E-05	1.696E-05
1.465E 00	1.196E-01	5.582E-03	4.320E 00	1.231E-02	9.505E-04	1.045E 01	2.271E-05	1.862E-05
1.495E 00	1.152E-01	5.271E-03	4.400E 00	1.141E-02	9.211E-04	1.059E 01	1.676E-05	1.906E-05
1.525E 00	1.124E-01	5.144E-03	4.480E 00	1.081E-02	9.012E-04			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.151E-02	1.346E-03
4.000E-01 - 5.000E-01	8.978E-03	1.302E-03
5.000E-01 - 6.000E-01	5.537E-03	8.940E-04
6.000E-01 - 7.000E-01	1.743E-03	8.392E-04
7.000E-01 - 8.000E-01	2.066E-03	7.288E-04
8.000E-01 - 1.000E 00	7.341E-02	1.556E-03
1.000E 00 - 1.200E 00	4.090E-02	1.391E-03
1.200E 00 - 1.400E 00	3.530E-02	1.406E-03
1.400E 00 - 1.600E 00	2.291E-02	1.083E-03
1.600E 00 - 1.800E 00	9.834E-03	8.674E-04
1.800E 00 - 2.000E 00	6.715E-03	7.603E-04
2.000E 00 - 2.500E 00	3.190E-02	1.692E-03
2.500E 00 - 3.000E 00	1.948E-02	1.075E-03
3.000E 00 - 3.500E 00	1.162E-02	7.404E-04
3.500E 00 - 4.000E 00	9.809E-03	5.814E-04
4.000E 00 - 4.500E 00	5.454E-03	4.827E-04
4.500E 00 - 5.000E 00	3.943E-03	4.150E-04
5.000E 00 - 6.000E 00	6.632E-03	6.704E-04
6.000E 00 - 7.000E 00	2.707E-03	3.278E-04
7.000E 00 - 8.000E 00	4.131E-04	9.183E-05
8.000E 00 - 9.000E 00	1.736E-05	3.447E-05
9.000E 00 - 1.000E 01	1.239E-05	2.650E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 7.99 TO 8.97 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	1.158E-01	1.703E-02	1.555E 00	1.090E-01	6.170E-03	4.560E 00	1.085E-02	1.279E-03
3.225E-01	1.242E-01	1.572E-02	1.585E 00	9.261E-02	5.846E-03	4.640E 00	9.725E-03	1.237E-03
3.375E-01	1.252E-01	1.562E-02	1.615E 00	7.135E-02	5.429E-03	4.720E 00	9.367E-03	1.185E-03
3.525E-01	1.295E-01	1.520E-02	1.645E 00	5.460E-02	5.155E-03	4.800E 00	9.386E-03	1.186E-03
3.675E-01	1.248E-01	1.510E-02	1.680E 00	4.570E-02	5.017E-03	4.880E 00	9.981E-03	1.131E-03
3.825E-01	1.169E-01	1.560E-02	1.720E 00	4.340E-02	4.940E-03	4.960E 00	1.102E-02	1.175E-03
3.975E-01	1.155E-01	1.473E-02	1.760E 00	4.212E-02	4.632E-03	5.040E 00	1.203E-02	1.180E-03
4.125E-01	1.122E-01	1.434E-02	1.800E 00	3.943E-02	4.366E-03	5.120E 00	1.248E-02	1.185E-03
4.275E-01	1.021E-01	1.450E-02	1.840E 00	3.632E-02	4.398E-03	5.200E 00	1.205E-02	1.190E-03
4.425E-01	9.086E-02	1.452E-02	1.880E 00	3.513E-02	4.527E-03	5.280E 00	1.109E-02	1.162E-03
4.575E-01	8.317E-02	1.467E-02	1.920E 00	3.659E-02	4.504E-03	5.360E 00	1.023E-02	1.122E-03
4.725E-01	8.349E-02	1.559E-02	1.960E 00	4.022E-02	4.355E-03	5.440E 00	9.646E-03	1.115E-03
4.875E-01	9.340E-02	1.569E-02	2.000E 00	4.346E-02	4.159E-03	5.520E 00	9.309E-03	1.078E-03
5.025E-01	1.018E-01	1.445E-02	2.040E 00	4.561E-02	4.218E-03	5.600E 00	9.249E-03	1.084E-03
5.175E-01	9.600E-02	1.301E-02	2.080E 00	4.860E-02	4.256E-03	5.680E 00	9.089E-03	1.041E-03
5.325E-01	7.701E-02	1.152E-02	2.120E 00	5.280E-02	4.091E-03	5.760E 00	8.561E-03	1.013E-03
5.475E-01	5.462E-02	9.971E-03	2.160E 00	5.804E-02	3.954E-03	5.850E 00	7.661E-03	9.758E-04
5.625E-01	3.510E-02	8.930E-03	2.200E 00	6.527E-02	3.978E-03	5.950E 00	6.966E-03	9.203E-04
5.775E-01	2.299E-02	8.729E-03	2.240E 00	7.461E-02	4.079E-03	6.050E 00	6.615E-03	8.837E-04
5.925E-01	2.026E-02	8.853E-03	2.280E 00	8.538E-02	4.191E-03	6.150E 00	6.193E-03	8.089E-04
6.100E-01	2.104E-02	9.104E-03	2.320E 00	9.445E-02	4.224E-03	6.250E 00	5.962E-03	7.604E-04
6.300E-01	1.850E-02	9.803E-03	2.360E 00	9.518E-02	4.050E-03	6.350E 00	6.447E-03	7.371E-04
6.500E-01	1.808E-02	9.329E-03	2.400E 00	8.392E-02	3.615E-03	6.450E 00	7.122E-03	6.789E-04
6.700E-01	2.218E-02	8.784E-03	2.440E 00	6.694E-02	3.249E-03	6.550E 00	6.880E-03	6.381E-04
6.900E-01	2.502E-02	8.476E-03	2.480E 00	5.352E-02	3.109E-03	6.650E 00	5.537E-03	5.789E-04
7.100E-01	2.791E-02	8.562E-03	2.525E 00	4.718E-02	2.994E-03	6.750E 00	4.106E-03	5.204E-04
7.300E-01	2.978E-02	8.328E-03	2.575E 00	4.749E-02	3.009E-03	6.850E 00	3.549E-03	4.876E-04
7.500E-01	2.834E-02	8.192E-03	2.625E 00	4.831E-02	3.116E-03	6.950E 00	3.788E-03	4.501E-04
7.700E-01	2.718E-02	7.926E-03	2.675E 00	4.624E-02	2.876E-03	7.050E 00	4.024E-03	3.992E-04
7.900E-01	2.970E-02	7.727E-03	2.725E 00	4.564E-02	2.622E-03	7.150E 00	3.681E-03	3.595E-04
8.100E-01	3.794E-02	7.847E-03	2.775E 00	4.838E-02	2.563E-03	7.250E 00	2.949E-03	3.063E-04
8.300E-01	5.670E-02	7.773E-03	2.825E 00	4.893E-02	2.497E-03	7.350E 00	2.279E-03	2.686E-04
8.500E-01	8.732E-02	7.753E-03	2.875E 00	4.401E-02	2.331E-03	7.450E 00	1.729E-03	2.401E-04
8.700E-01	1.306E-01	7.787E-03	2.925E 00	3.720E-02	2.186E-03	7.550E 00	1.210E-03	2.064E-04
8.900E-01	1.989E-01	7.919E-03	2.975E 00	3.283E-02	2.133E-03	7.650E 00	7.624E-04	1.775E-04
9.125E-01	3.432E-01	8.308E-03	3.030E 00	3.180E-02	2.174E-03	7.750E 00	5.690E-04	1.609E-04
9.375E-01	6.067E-01	9.205E-03	3.090E 00	3.199E-02	2.110E-03	7.850E 00	5.755E-04	1.343E-04
9.625E-01	8.488E-01	1.089E-02	3.150E 00	3.121E-02	2.009E-03	7.950E 00	5.712E-04	1.182E-04
9.875E-01	6.859E-01	1.236E-02	3.210E 00	3.051E-02	1.907E-03	8.050E 00	4.619E-04	1.013E-04
1.012E 00	6.485E-01	1.024E-02	3.270E 00	3.063E-02	1.890E-03	8.150E 00	3.012E-04	8.060E-05
1.037E 00	3.982E-01	8.902E-03	3.330E 00	2.956E-02	1.866E-03	8.250E 00	1.878E-04	6.865E-05
1.063E 00	2.177E-01	9.009E-03	3.390E 00	2.678E-02	1.790E-03	8.350E 00	1.350E-04	6.352E-05
1.087E 00	1.430E-01	8.450E-03	3.450E 00	2.529E-02	1.715E-03	8.450E 00	1.032E-04	5.473E-05
1.112E 00	1.168E-01	6.921E-03	3.510E 00	2.621E-02	1.704E-03	8.550E 00	6.219E-05	4.581E-05
1.137E 00	9.771E-02	6.121E-03	3.570E 00	2.793E-02	1.689E-03	8.650E 00	2.282E-05	3.437E-05
1.162E 00	8.027E-02	6.147E-03	3.630E 00	2.962E-02	1.679E-03	8.750E 00	9.574E-06	3.110E-05
1.188E 00	7.235E-02	6.698E-03	3.690E 00	2.990E-02	1.633E-03	8.850E 00	1.978E-05	3.221E-05
1.212E 00	9.146E-02	7.292E-03	3.750E 00	2.674E-02	1.590E-03	8.950E 00	3.427E-05	2.880E-05
1.237E 00	1.406E-01	8.073E-03	3.810E 00	2.143E-02	1.542E-03	9.050E 00	3.922E-05	2.552E-05
1.262E 00	2.103E-01	8.781E-03	3.870E 00	1.742E-02	1.505E-03	9.150E 00	3.286E-05	2.355E-05
1.287E 00	2.578E-01	8.726E-03	3.930E 00	1.563E-02	1.507E-03	9.250E 00	1.478E-05	2.411E-05
1.312E 00	2.631E-01	9.250E-03	3.990E 00	1.463E-02	1.510E-03	9.350E 00	-7.886E-07	2.329E-05
1.345E 00	2.178E-01	8.233E-03	4.050E 00	1.472E-02	1.467E-03	9.450E 00	-1.771E-06	1.981E-05
1.375E 00	1.645E-01	6.801E-03	4.110E 00	1.472E-02	1.448E-03	9.550E 00	7.615E-06	1.589E-05
1.405E 00	1.356E-01	6.254E-03	4.170E 00	1.576E-02	1.388E-03	9.650E 00	1.017E-05	1.267E-05
1.435E 00	1.265E-01	6.356E-03	4.240E 00	1.577E-02	1.415E-03	9.750E 00	1.031E-05	1.170E-05
1.465E 00	1.223E-01	6.193E-03	4.320E 00	1.711E-02	1.353E-03	9.850E 00	2.286E-05	1.221E-05
1.495E 00	1.189E-01	5.849E-03	4.400E 00	1.584E-02	1.295E-03	9.950E 00	1.059E-05	1.251E-05
1.525E 00	1.162E-01	6.010E-03	4.480E 00	1.321E-02	1.297E-03			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.219E-02	1.564E-03
4.000E-01 - 5.000E-01	9.587E-03	1.487E-03
5.000E-01 - 6.000E-01	5.605E-03	1.058E-03
6.000E-01 - 7.000E-01	2.094E-03	9.113E-04
7.000E-01 - 8.000E-01	2.866E-03	8.146E-04
8.000E-01 - 1.000E 00	7.655E-02	1.795E-03
1.000E 00 - 1.200E 00	4.452E-02	1.564E-03
1.200E 00 - 1.400E 00	3.829E-02	1.614E-03
1.400E 00 - 1.600E 00	2.323E-02	1.218E-03
1.600E 00 - 1.800E 00	9.855E-03	9.898E-04
1.800E 00 - 2.000E 00	7.563E-03	8.830E-04
2.000E 00 - 2.500E 00	3.384E-02	1.964E-03
2.500E 00 - 3.000E 00	2.234E-02	1.317E-03
3.000E 00 - 3.500E 00	1.479E-02	9.615E-04
3.500E 00 - 4.000E 00	1.176E-02	7.972E-04
4.000E 00 - 4.500E 00	7.754E-03	6.908E-04
4.500E 00 - 5.000E 00	5.081E-03	6.009E-04
5.000E 00 - 6.000E 00	9.760E-03	1.086E-03
6.000E 00 - 7.000E 00	5.618E-03	6.540E-04
7.000E 00 - 8.000E 00	1.837E-03	2.400E-04
8.000E 00 - 9.000E 00	1.986E-04	6.567E-05
9.000E 00 - 1.000E 01	1.825E-05	2.500E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 8.97 TO 10.00 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	1.266E-01	1.800E-02	1.555E 00	1.062E-01	6.540E-03	4.560E 00	1.571E-02	1.563E-03
3.225E-01	1.294E-01	1.666E-02	1.585E 00	9.299E-02	6.195E-03	4.640E 00	1.435E-02	1.582E-03
3.375E-01	1.243E-01	1.597E-02	1.615E 00	7.582E-02	5.511E-03	4.720E 00	1.279E-02	1.553E-03
3.525E-01	1.256E-01	1.597E-02	1.645E 00	6.203E-02	4.968E-03	4.800E 00	1.123E-02	1.563E-03
3.675E-01	1.271E-01	1.619E-02	1.680E 00	5.288E-02	4.836E-03	4.880E 00	1.128E-02	1.518E-03
3.825E-01	1.185E-01	1.608E-02	1.720E 00	4.790E-02	5.104E-03	4.960E 00	1.275E-02	1.474E-03
3.975E-01	1.105E-01	1.636E-02	1.760E 00	4.397E-02	5.206E-03	5.040E 00	1.409E-02	1.470E-03
4.125E-01	1.073E-01	1.584E-02	1.800E 00	3.869E-02	5.081E-03	5.120E 00	1.446E-02	1.450E-03
4.275E-01	9.989E-02	1.553E-02	1.840E 00	3.383E-02	4.813E-03	5.200E 00	1.427E-02	1.496E-03
4.425E-01	8.480E-02	1.570E-02	1.880E 00	3.250E-02	4.714E-03	5.280E 00	1.392E-02	1.417E-03
4.575E-01	7.823E-02	1.545E-02	1.920E 00	3.427E-02	4.627E-03	5.360E 00	1.342E-02	1.447E-03
4.725E-01	6.973E-02	1.441E-02	1.960E 00	3.785E-02	4.563E-03	5.440E 00	1.270E-02	1.449E-03
4.875E-01	6.254E-02	1.674E-02	2.000E 00	4.241E-02	4.488E-03	5.520E 00	1.206E-02	1.413E-03
5.025E-01	9.101E-02	1.620E-02	2.040E 00	4.663E-02	4.519E-03	5.600E 00	1.175E-02	1.382E-03
5.175E-01	8.630E-02	1.475E-02	2.080E 00	4.983E-02	4.438E-03	5.680E 00	1.167E-02	1.403E-03
5.325E-01	7.341E-02	1.245E-02	2.120E 00	5.306E-02	4.297E-03	5.760E 00	1.118E-02	1.398E-03
5.475E-01	5.776E-02	1.059E-02	2.160E 00	5.784E-02	4.329E-03	5.850E 00	9.761E-03	1.387E-03
5.625E-01	4.192E-02	9.470E-03	2.200E 00	6.366E-02	4.279E-03	5.950E 00	8.372E-03	1.318E-03
5.775E-01	3.097E-02	9.125E-03	2.240E 00	6.964E-02	4.386E-03	6.050E 00	8.314E-03	1.258E-03
5.925E-01	2.806E-02	9.018E-03	2.280E 00	7.678E-02	4.570E-03	6.150E 00	8.252E-03	1.208E-03
6.100E-01	2.897E-02	9.382E-03	2.320E 00	8.325E-02	4.542E-03	6.250E 00	7.311E-03	1.180E-03
6.300E-01	2.859E-02	1.026E-02	2.360E 00	8.386E-02	4.242E-03	6.350E 00	6.871E-03	1.135E-03
6.500E-01	2.698E-02	1.035E-02	2.400E 00	7.541E-02	3.821E-03	6.450E 00	7.162E-03	1.055E-03
6.700E-01	2.411E-02	9.748E-03	2.440E 00	6.235E-02	3.498E-03	6.550E 00	7.138E-03	9.917E-04
6.900E-01	2.199E-02	9.092E-03	2.480E 00	5.089E-02	3.404E-03	6.650E 00	6.661E-03	9.390E-04
7.100E-01	2.332E-02	9.045E-03	2.525E 00	4.444E-02	3.381E-03	6.750E 00	6.437E-03	8.863E-04
7.300E-01	2.545E-02	9.215E-03	2.575E 00	4.453E-02	3.437E-03	6.850E 00	6.596E-03	8.210E-04
7.500E-01	2.723E-02	8.986E-03	2.625E 00	4.611E-02	3.342E-03	6.950E 00	6.506E-03	7.892E-04
7.700E-01	2.861E-02	8.563E-03	2.675E 00	4.568E-02	3.155E-03	7.050E 00	5.787E-03	7.162E-04
7.900E-01	3.002E-02	8.433E-03	2.725E 00	4.495E-02	2.857E-03	7.150E 00	4.742E-03	6.900E-04
8.100E-01	3.698E-02	8.510E-03	2.775E 00	4.465E-02	2.868E-03	7.250E 00	3.976E-03	6.427E-04
8.300E-01	5.478E-02	8.176E-03	2.825E 00	4.331E-02	2.903E-03	7.350E 00	3.595E-03	5.422E-04
8.500E-01	8.242E-02	8.230E-03	2.875E 00	3.950E-02	2.691E-03	7.450E 00	3.325E-03	5.042E-04
8.700E-01	1.227E-01	8.336E-03	2.925E 00	3.450E-02	2.521E-03	7.550E 00	3.110E-03	4.789E-04
8.900E-01	1.888E-01	8.364E-03	2.975E 00	3.139E-02	2.428E-03	7.650E 00	2.936E-03	4.196E-04
9.125E-01	3.271E-01	8.721E-03	3.030E 00	3.099E-02	2.564E-03	7.780E 00	2.597E-03	3.738E-04
9.375E-01	5.775E-01	9.335E-03	3.090E 00	3.092E-02	2.661E-03	7.900E 00	2.047E-03	3.244E-04
9.625E-01	8.083E-01	1.102E-02	3.150E 00	2.923E-02	2.477E-03	8.020E 00	1.629E-03	2.954E-04
9.875E-01	8.273E-01	1.253E-02	3.210E 00	2.723E-02	2.343E-03	8.140E 00	1.395E-03	2.649E-04
1.012E 00	6.234E-01	1.035E-02	3.270E 00	2.647E-02	2.288E-03	8.260E 00	1.233E-03	2.228E-04
1.037E 00	3.870E-01	9.006E-03	3.330E 00	2.682E-02	2.209E-03	8.380E 00	1.090E-03	1.866E-04
1.063E 00	2.157E-01	9.264E-03	3.390E 00	2.798E-02	2.137E-03	8.500E 00	9.631E-04	1.663E-04
1.087E 00	1.405E-01	8.758E-03	3.450E 00	2.899E-02	2.006E-03	8.620E 00	8.113E-04	1.432E-04
1.112E 00	1.042E-01	7.471E-03	3.510E 00	2.915E-02	2.000E-03	8.740E 00	6.038E-04	1.190E-04
1.137E 00	8.716E-02	6.458E-03	3.570E 00	3.013E-02	2.012E-03	8.860E 00	4.029E-04	1.045E-04
1.162E 00	6.905E-02	6.277E-03	3.630E 00	3.232E-02	2.022E-03	8.980E 00	2.413E-04	1.030E-04
1.188E 00	6.086E-02	6.800E-03	3.690E 00	3.268E-02	2.021E-03	9.100E 00	1.524E-04	9.095E-05
1.212E 00	8.319E-02	7.541E-03	3.750E 00	2.951E-02	2.003E-03	9.220E 00	1.144E-04	7.537E-05
1.237E 00	1.386E-01	8.239E-03	3.810E 00	2.476E-02	1.994E-03	9.340E 00	1.035E-04	6.918E-05
1.262E 00	2.133E-01	8.891E-03	3.870E 00	2.071E-02	1.960E-03	9.470E 00	8.113E-05	7.110E-05
1.287E 00	2.603E-01	8.912E-03	3.930E 00	1.808E-02	1.938E-03	9.610E 00	3.944E-05	5.931E-05
1.315E 00	2.615E-01	9.742E-03	3.990E 00	1.672E-02	1.894E-03	9.750E 00	-7.250E-06	5.697E-05
1.345E 00	2.123E-01	8.700E-03	4.050E 00	1.667E-02	1.791E-03	9.890E 00	-2.341E-05	6.330E-05
1.375E 00	1.573E-01	7.295E-03	4.110E 00	1.736E-02	1.789E-03	1.003E 01	4.516E-06	6.109E-05
1.405E 00	1.264E-01	6.575E-03	4.170E 00	1.829E-02	1.739E-03	1.017E 01	4.568E-05	4.548E-05
1.435E 00	1.142E-01	6.445E-03	4.240E 00	1.898E-02	1.740E-03	1.031E 01	7.439E-05	3.813E-05
1.465E 00	1.088E-01	6.281E-03	4.320E 00	1.934E-02	1.736E-03	1.045E 01	7.790E-05	3.944E-05
1.495E 00	1.082E-01	6.074E-03	4.400E 00	1.916E-02	1.629E-03	1.059E 01	6.119E-05	3.940E-05
1.525E 00	1.102E-01	6.379E-03	4.480E 00	1.767E-02	1.593E-03			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.238E-02	1.647E-03
4.000E-01 - 5.000E-01	8.700E-03	1.605E-03
5.000E-01 - 6.000E-01	5.683E-03	1.142E-03
6.000E-01 - 7.000E-01	2.615E-03	9.780E-04
7.000E-01 - 8.000E-01	2.703E-03	8.854E-04
8.000E-01 - 1.000E 00	7.294E-02	1.866E-03
1.000E 00 - 1.200E 00	4.248E-02	1.611E-03
1.200E 00 - 1.400E 00	3.765E-02	1.678E-03
1.400E 00 - 1.600E 00	2.170E-02	1.267E-03
1.600E 00 - 1.800E 00	1.074E-02	1.023E-03
1.800E 00 - 2.000E 00	7.125E-03	9.398E-04
2.000E 00 - 2.500E 00	3.179E-02	2.103E-03
2.500E 00 - 3.000E 00	2.098E-02	1.480E-03
3.000E 00 - 3.500E 00	1.431E-02	1.162E-03
3.500E 00 - 4.000E 00	1.313E-02	9.931E-04
4.000E 00 - 4.500E 00	9.141E-03	8.607E-04
4.500E 00 - 5.000E 00	6.594E-03	7.724E-04
5.000E 00 - 6.000E 00	1.218E-02	1.424E-03
6.000E 00 - 7.000E 00	7.124E-03	1.026E-03
7.000E 00 - 8.000E 00	3.434E-03	5.044E-04
8.000E 00 - 9.000E 00	9.286E-04	1.765E-04
9.000E 00 - 1.000E 01	6.570E-05	6.970E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 10.00 TO 11.97 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	1.216E-01	1.927E-02	1.555E 00	1.037E-01	6.732E-03	4.560E 00	1.980E-02	1.885E-03
3.225E-01	1.267E-01	1.810E-02	1.585E 00	8.937E-02	6.468E-03	4.640E 00	1.951E-02	1.938E-03
3.375E-01	1.328E-01	1.773E-02	1.615E 00	7.148E-02	5.789E-03	4.720E 00	1.686E-02	1.915E-03
3.525E-01	1.360E-01	1.744E-02	1.645E 00	5.828E-02	5.254E-03	4.800E 00	1.473E-02	1.898E-03
3.675E-01	1.337E-01	1.779E-02	1.680E 00	5.161E-02	5.230E-03	4.880E 00	1.514E-02	1.885E-03
3.825E-01	1.321E-01	1.779E-02	1.720E 00	4.897E-02	5.370E-03	4.960E 00	1.639E-02	1.868E-03
3.975E-01	1.321E-01	1.750E-02	1.760E 00	4.536E-02	5.430E-03	5.040E 00	1.746E-02	1.822E-03
4.125E-01	1.282E-01	1.759E-02	1.800E 00	3.914E-02	5.300E-03	5.120E 00	1.841E-02	1.862E-03
4.275E-01	1.110E-01	1.788E-02	1.840E 00	3.327E-02	5.047E-03	5.200E 00	1.879E-02	1.940E-03
4.425E-01	8.601E-02	1.833E-02	1.880E 00	3.198E-02	5.002E-03	5.280E 00	1.790E-02	1.889E-03
4.575E-01	7.438E-02	1.869E-02	1.920E 00	3.325E-02	4.912E-03	5.360E 00	1.630E-02	1.812E-03
4.725E-01	9.097E-02	1.883E-02	1.960E 00	3.506E-02	4.931E-03	5.440E 00	1.517E-02	1.784E-03
4.875E-01	1.231E-01	1.870E-02	2.000E 00	3.939E-02	4.860E-03	5.520E 00	1.447E-02	1.746E-03
5.025E-01	1.386E-01	1.779E-02	2.040E 00	4.546E-02	4.759E-03	5.600E 00	1.331E-02	1.737E-03
5.175E-01	1.246E-01	1.608E-02	2.080E 00	4.922E-02	4.769E-03	5.680E 00	1.210E-02	1.750E-03
5.325E-01	9.371E-02	1.369E-02	2.120E 00	5.235E-02	4.820E-03	5.760E 00	1.198E-02	1.720E-03
5.475E-01	6.262E-02	1.169E-02	2.160E 00	5.883E-02	4.734E-03	5.850E 00	1.268E-02	1.659E-03
5.625E-01	4.070E-02	1.075E-02	2.200E 00	6.655E-02	4.448E-03	5.950E 00	1.294E-02	1.591E-03
5.775E-01	2.887E-02	1.026E-02	2.240E 00	7.277E-02	4.457E-03	6.050E 00	1.307E-02	1.537E-03
5.925E-01	2.222E-02	1.004E-02	2.280E 00	7.908E-02	4.625E-03	6.150E 00	1.365E-02	1.491E-03
6.100E-01	1.688E-02	1.111E-02	2.320E 00	8.467E-02	4.658E-03	6.250E 00	1.334E-02	1.417E-03
6.300E-01	1.481E-02	1.235E-02	2.360E 00	8.465E-02	4.433E-03	6.350E 00	1.153E-02	1.363E-03
6.500E-01	1.547E-02	1.225E-02	2.400E 00	7.566E-02	4.052E-03	6.450E 00	1.005E-02	1.306E-03
6.700E-01	1.870E-02	1.096E-02	2.440E 00	6.184E-02	3.733E-03	6.550E 00	9.436E-03	1.250E-03
6.900E-01	2.232E-02	9.898E-03	2.480E 00	5.032E-02	3.559E-03	6.650E 00	8.586E-03	1.238E-03
7.100E-01	2.275E-02	9.873E-03	2.525E 00	4.534E-02	3.482E-03	6.750E 00	7.708E-03	1.106E-03
7.300E-01	2.102E-02	9.913E-03	2.575E 00	4.680E-02	3.555E-03	6.850E 00	7.601E-03	1.093E-03
7.500E-01	2.267E-02	9.825E-03	2.625E 00	4.687E-02	3.635E-03	6.950E 00	7.831E-03	1.053E-03
7.700E-01	2.963E-02	9.392E-03	2.675E 00	4.398E-02	3.475E-03	7.050E 00	7.726E-03	9.827E-04
7.900E-01	3.589E-02	8.879E-03	2.725E 00	4.344E-02	3.123E-03	7.150E 00	7.010E-03	9.621E-04
8.100E-01	4.032E-02	8.890E-03	2.775E 00	4.536E-02	3.046E-03	7.250E 00	5.935E-03	9.081E-04
8.300E-01	5.364E-02	8.770E-03	2.825E 00	4.501E-02	3.097E-03	7.350E 00	5.174E-03	8.091E-04
8.500E-01	8.142E-02	8.719E-03	2.875E 00	4.077E-02	2.980E-03	7.450E 00	5.119E-03	7.559E-04
8.700E-01	1.233E-01	8.572E-03	2.925E 00	3.578E-02	2.789E-03	7.550E 00	5.465E-03	7.052E-04
8.900E-01	1.914E-01	8.930E-03	2.975E 00	3.346E-02	2.696E-03	7.650E 00	5.579E-03	6.798E-04
9.125E-01	3.344E-01	9.397E-03	3.030E 00	3.350E-02	2.711E-03	7.780E 00	5.072E-03	6.320E-04
9.375E-01	5.852E-01	1.021E-02	3.090E 00	3.318E-02	2.667E-03	7.900E 00	4.005E-03	5.615E-04
9.625E-01	8.128E-01	1.210E-02	3.150E 00	3.255E-02	2.668E-03	8.020E 00	2.742E-03	5.302E-04
9.875E-01	8.354E-01	1.322E-02	3.210E 00	3.176E-02	2.538E-03	8.140E 00	1.933E-03	4.906E-04
1.012E 00	6.377E-01	1.093E-02	3.270E 00	3.067E-02	2.577E-03	8.260E 00	1.775E-03	4.593E-04
1.037E 00	4.035E-01	9.752E-03	3.330E 00	2.986E-02	2.525E-03	8.380E 00	1.952E-03	4.192E-04
1.063E 00	2.298E-01	1.012E-02	3.390E 00	2.900E-02	2.395E-03	8.500E 00	2.262E-03	3.904E-04
1.087E 00	1.506E-01	9.575E-03	3.450E 00	2.800E-02	2.346E-03	8.620E 00	2.521E-03	3.644E-04
1.112E 00	1.178E-01	8.181E-03	3.510E 00	2.754E-02	2.344E-03	8.740E 00	2.529E-03	3.318E-04
1.137E 00	9.696E-02	7.166E-03	3.570E 00	2.785E-02	2.332E-03	8.860E 00	2.207E-03	3.176E-04
1.162E 00	8.241E-02	7.017E-03	3.630E 00	2.838E-02	2.305E-03	8.980E 00	1.651E-03	3.101E-04
1.188E 00	7.861E-02	7.446E-03	3.690E 00	2.835E-02	2.286E-03	9.100E 00	1.092E-03	2.890E-04
1.212E 00	1.015E-01	8.136E-03	3.750E 00	2.723E-02	2.252E-03	9.220E 00	7.235E-04	2.557E-04
1.237E 00	1.543E-01	8.887E-03	3.810E 00	2.520E-02	2.184E-03	9.340E 00	5.782E-04	2.298E-04
1.262E 00	2.273E-01	1.003E-02	3.870E 00	2.315E-02	2.193E-03	9.470E 00	5.322E-04	2.618E-04
1.287E 00	2.753E-01	9.928E-03	3.930E 00	2.173E-02	2.214E-03	9.610E 00	5.708E-04	2.279E-04
1.315E 00	2.779E-01	1.004E-02	3.990E 00	2.052E-02	2.197E-03	9.750E 00	5.568E-04	1.780E-04
1.345E 00	2.278E-01	8.789E-03	4.050E 00	1.948E-02	2.074E-03	9.890E 00	4.437E-04	1.993E-04
1.375E 00	1.683E-01	7.191E-03	4.110E 00	1.929E-02	2.077E-03	1.003E 01	3.283E-04	2.723E-04
1.405E 00	1.305E-01	6.654E-03	4.170E 00	2.064E-02	2.056E-03	1.017E 01	2.147E-04	1.760E-04
1.435E 00	1.146E-01	6.816E-03	4.240E 00	2.275E-02	2.075E-03	1.031E 01	2.103E-04	1.169E-04
1.465E 00	1.095E-01	6.683E-03	4.320E 00	2.321E-02	1.990E-03	1.045E 01	1.853E-04	1.211E-04
1.495E 00	1.089E-01	6.436E-03	4.400E 00	2.139E-02	1.949E-03	1.059E 01	1.342E-04	1.194E-04
1.525E 00	1.091E-01	6.676E-03	4.480E 00	1.966E-02	1.912E-03			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.305E-02	1.798E-03
4.000E-01 - 5.000E-01	1.053E-02	1.828E-03
5.000E-01 - 6.000E-01	6.965E-03	1.265E-03
6.000E-01 - 7.000E-01	1.768E-03	1.132E-03
7.000E-01 - 8.000E-01	2.637E-03	9.583E-04
8.000E-01 - 1.000E 00	7.371E-02	1.995E-03
1.000E 00 - 1.200E 00	4.508E-02	1.757E-03
1.200E 00 - 1.400E 00	4.057E-02	1.772E-03
1.400E 00 - 1.600E 00	2.161E-02	1.327E-03
1.600E 00 - 1.800E 00	1.056E-02	1.080E-03
1.800E 00 - 2.000E 00	6.871E-03	1.002E-03
2.000E 00 - 2.500E 00	3.206E-02	2.218E-03
2.500E 00 - 3.000E 00	2.137E-02	1.594E-03
3.000E 00 - 3.500E 00	1.546E-02	1.272E-03
3.500E 00 - 4.000E 00	1.284E-02	1.128E-03
4.000E 00 - 4.500E 00	1.054E-02	1.012E-03
4.500E 00 - 5.000E 00	8.597E-03	9.494E-04
5.000E 00 - 6.000E 00	1.503E-02	1.770E-03
6.000E 00 - 7.000E 00	1.028E-02	1.293E-03
7.000E 00 - 8.000E 00	5.523E-03	7.594E-04
8.000E 00 - 9.000E 00	2.169E-03	3.997E-04
9.000E 00 - 1.000E 01	6.570E-04	2.346E-04

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 11.97 TO 13.94 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	1.299E-01	2.366E-02	1.555E 00	9.486E-02	7.412E-03	4.560E 00	1.928E-02	2.496E-03
3.225E-01	1.376E-01	2.173E-02	1.585E 00	8.090E-02	6.984E-03	4.640E 00	2.294E-02	2.568E-03
3.375E-01	1.357E-01	2.119E-02	1.615E 00	6.295E-02	6.526E-03	4.720E 00	2.440E-02	2.515E-03
3.525E-01	1.319E-01	2.134E-02	1.645E 00	4.914E-02	6.267E-03	4.800E 00	2.277E-02	2.470E-03
3.675E-01	1.234E-01	2.265E-02	1.680E 00	4.327E-02	6.296E-03	4.880E 00	1.966E-02	2.485E-03
3.825E-01	1.157E-01	2.323E-02	1.720E 00	4.445E-02	6.499E-03	4.960E 00	1.713E-02	2.577E-03
3.975E-01	1.073E-01	2.435E-02	1.760E 00	4.403E-02	6.422E-03	5.040E 00	1.510E-02	2.598E-03
4.125E-01	9.539E-02	2.386E-02	1.800E 00	3.895E-02	5.927E-03	5.120E 00	1.336E-02	2.539E-03
4.275E-01	8.434E-02	2.354E-02	1.840E 00	3.787E-02	5.822E-03	5.200E 00	1.308E-02	2.567E-03
4.425E-01	7.133E-02	2.307E-02	1.880E 00	2.922E-02	5.993E-03	5.280E 00	1.447E-02	2.568E-03
4.575E-01	6.513E-02	2.283E-02	1.920E 00	2.985E-02	5.841E-03	5.360E 00	1.630E-02	2.485E-03
4.725E-01	8.560E-02	2.271E-02	1.960E 00	3.322E-02	5.582E-03	5.440E 00	1.730E-02	2.537E-03
4.875E-01	1.186E-01	2.216E-02	2.000E 00	3.609E-02	5.555E-03	5.520E 00	1.716E-02	2.513E-03
5.025E-01	1.309E-01	2.126E-02	2.040E 00	3.650E-02	5.543E-03	5.600E 00	1.599E-02	2.448E-03
5.175E-01	1.157E-01	1.946E-02	2.080E 00	3.788E-02	5.478E-03	5.680E 00	1.433E-02	2.445E-03
5.325E-01	8.824E-02	1.697E-02	2.120E 00	4.172E-02	5.301E-03	5.760E 00	1.317E-02	2.461E-03
5.475E-01	6.411E-02	1.479E-02	2.160E 00	4.653E-02	5.157E-03	5.850E 00	1.301E-02	2.395E-03
5.625E-01	4.935E-02	1.337E-02	2.200E 00	5.138E-02	5.090E-03	5.950E 00	1.350E-02	2.303E-03
5.775E-01	3.883E-02	1.293E-02	2.240E 00	5.798E-02	5.108E-03	6.050E 00	1.345E-02	2.202E-03
5.925E-01	2.856E-02	1.311E-02	2.280E 00	6.753E-02	5.138E-03	6.150E 00	1.336E-02	2.195E-03
6.100E-01	2.084E-02	1.420E-02	2.320E 00	7.564E-02	5.173E-03	6.250E 00	1.360E-02	2.199E-03
6.300E-01	2.092E-02	1.576E-02	2.360E 00	7.572E-02	5.041E-03	6.350E 00	1.281E-02	2.147E-03
6.500E-01	1.878E-02	1.533E-02	2.400E 00	6.585E-02	4.676E-03	6.450E 00	1.273E-02	2.029E-03
6.700E-01	1.260E-02	1.416E-02	2.440E 00	5.280E-02	4.366E-03	6.550E 00	1.317E-02	1.983E-03
6.900E-01	1.147E-02	1.262E-02	2.480E 00	4.376E-02	4.302E-03	6.650E 00	1.235E-02	1.921E-03
7.100E-01	1.079E-02	1.211E-02	2.525E 00	4.103E-02	4.149E-03	6.750E 00	1.084E-02	1.896E-03
7.300E-01	2.665E-02	1.241E-02	2.575E 00	4.109E-02	4.099E-03	6.850E 00	1.043E-02	1.805E-03
7.500E-01	2.947E-02	1.209E-02	2.625E 00	3.988E-02	4.300E-03	6.950E 00	9.849E-03	1.725E-03
7.700E-01	2.857E-02	1.151E-02	2.675E 00	3.735E-02	4.228E-03	7.050E 00	8.321E-03	1.590E-03
7.900E-01	2.630E-02	1.146E-02	2.725E 00	3.958E-02	3.809E-03	7.150E 00	7.188E-03	1.572E-03
8.100E-01	2.817E-02	1.129E-02	2.775E 00	4.306E-02	3.679E-03	7.250E 00	6.930E-03	1.591E-03
8.300E-01	4.432E-02	1.089E-02	2.825E 00	4.241E-02	3.816E-03	7.350E 00	7.050E-03	1.416E-03
8.500E-01	7.535E-02	1.049E-02	2.875E 00	3.853E-02	3.856E-03	7.450E 00	7.171E-03	1.318E-03
8.700E-01	1.195E-01	1.042E-02	2.925E 00	3.482E-02	3.528E-03	7.550E 00	7.224E-03	1.256E-03
8.900E-01	1.869E-01	1.060E-02	2.975E 00	3.324E-02	3.273E-03	7.650E 00	7.058E-03	1.150E-03
9.125E-01	3.176E-01	1.097E-02	3.030E 00	3.375E-02	3.241E-03	7.780E 00	6.333E-03	1.106E-03
9.375E-01	5.402E-01	1.217E-02	3.090E 00	3.421E-02	3.226E-03	7.900E 00	5.279E-03	1.003E-03
9.625E-01	7.472E-01	1.415E-02	3.150E 00	3.191E-02	3.176E-03	8.020E 00	4.404E-03	8.839E-04
9.875E-01	7.783E-01	1.531E-02	3.210E 00	2.762E-02	3.202E-03	8.140E 00	3.601E-03	9.296E-04
1.012E 00	6.106E-01	1.275E-02	3.270E 00	2.556E-02	3.292E-03	8.260E 00	2.908E-03	8.683E-04
1.037E 00	4.034E-01	1.113E-02	3.330E 00	2.642E-02	3.284E-03	8.380E 00	2.570E-03	8.569E-04
1.063E 00	2.416E-01	1.132E-02	3.390E 00	2.710E-02	3.230E-03	8.500E 00	2.607E-03	8.538E-04
1.087E 00	1.589E-01	1.083E-02	3.450E 00	2.622E-02	2.984E-03	8.620E 00	2.751E-03	8.306E-04
1.112E 00	1.193E-01	9.130E-03	3.510E 00	2.537E-02	2.919E-03	8.740E 00	2.602E-03	7.700E-04
1.137E 00	9.303E-02	8.359E-03	3.570E 00	2.617E-02	2.958E-03	8.860E 00	2.029E-03	7.841E-04
1.162E 00	7.579E-02	8.332E-03	3.630E 00	2.842E-02	2.906E-03	8.980E 00	1.514E-03	8.487E-04
1.188E 00	7.278E-02	8.777E-03	3.690E 00	3.013E-02	2.789E-03	9.100E 00	1.500E-03	8.033E-04
1.212E 00	9.788E-02	9.451E-03	3.750E 00	2.986E-02	2.777E-03	9.220E 00	1.948E-03	7.152E-04
1.237E 00	1.533E-01	1.034E-02	3.810E 00	2.872E-02	2.841E-03	9.340E 00	2.325E-03	6.966E-04
1.262E 00	2.259E-01	1.164E-02	3.870E 00	2.776E-02	2.908E-03	9.470E 00	2.047E-03	8.484E-04
1.287E 00	2.701E-01	1.149E-02	3.930E 00	2.634E-02	2.925E-03	9.610E 00	1.193E-03	7.749E-04
1.315E 00	2.682E-01	1.152E-02	3.990E 00	2.350E-02	2.923E-03	9.750E 00	4.498E-04	6.124E-04
1.345E 00	2.179E-01	1.022E-02	4.050E 00	2.009E-02	2.757E-03	9.890E 00	3.058E-04	7.412E-04
1.375E 00	1.586E-01	8.395E-03	4.110E 00	1.694E-02	2.734E-03	1.003E 01	7.381E-04	8.404E-04
1.405E 00	1.175E-01	7.612E-03	4.170E 00	1.517E-02	2.663E-03	1.017E 01	1.035E-03	7.030E-04
1.435E 00	1.004E-01	7.815E-03	4.240E 00	1.494E-02	2.633E-03	1.031E 01	1.105E-03	4.770E-04
1.465E 00	9.898E-02	7.434E-03	4.320E 00	1.526E-02	2.534E-03	1.045E 01	1.045E-03	4.798E-04
1.495E 00	1.015E-01	7.034E-03	4.400E 00	1.486E-02	2.568E-03	1.059E 01	7.459E-04	5.170E-04
1.525E 00	1.012E-01	7.397E-03	4.480E 00	1.585E-02	2.563E-03			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
4.000E-01 - 4.000E-01	1.266E-02	2.250E-03
4.000E-01 - 5.000E-01	8.962E-03	2.301E-03
5.000E-01 - 6.000E-01	7.067E-03	1.571E-03
6.000E-01 - 7.000E-01	1.719E-03	1.443E-03
7.000E-01 - 8.000E-01	2.601E-03	1.193E-03
8.000E-01 - 1.000E 00	6.842E-02	2.383E-03
1.000E 00 - 1.200E 00	4.450E-02	2.018E-03
1.200E 00 - 1.400E 00	3.929E-02	2.054E-03
1.400E 00 - 1.600E 00	1.962E-02	1.476E-03
1.600E 00 - 1.800E 00	9.457E-03	1.274E-03
1.800E 00 - 2.000E 00	6.455E-03	1.159E-03
2.000E 00 - 2.500E 00	2.685E-02	2.525E-03
2.500E 00 - 3.000E 00	1.961E-02	1.937E-03
3.000E 00 - 3.500E 00	1.449E-02	1.598E-03
3.500E 00 - 4.000E 00	1.381E-02	1.440E-03
4.000E 00 - 4.500E 00	8.135E-03	1.320E-03
4.500E 00 - 5.000E 00	1.043E-02	1.260E-03
5.000E 00 - 6.000E 00	1.467E-02	2.480E-03
6.000E 00 - 7.000E 00	1.223E-02	2.006E-03
7.000E 00 - 8.000E 00	6.818E-03	1.306E-03
8.000E 00 - 9.000E 00	2.759E-03	8.525E-04
9.000E 00 - 1.000E 01	1.337E-03	7.462E-04

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 13.94 TO 16.94 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	1.127E-01	2.396E-02	1.555E 00	5.788E-02	7.765E-03	4.560E 00	1.362E-02	2.440E-03
3.225E-01	1.097E-01	2.247E-02	1.585E 00	5.469E-02	7.265E-03	4.640E 00	1.257E-02	2.516E-03
3.375E-01	1.042E-01	2.241E-02	1.615E 00	4.819E-02	6.706E-03	4.720E 00	1.263E-02	2.500E-03
3.525E-01	9.553E-02	2.253E-02	1.645E 00	4.317E-02	6.386E-03	4.800E 00	1.406E-02	2.466E-03
3.675E-01	8.579E-02	2.417E-02	1.680E 00	4.123E-02	6.176E-03	4.880E 00	1.406E-02	2.413E-03
3.825E-01	8.107E-02	2.539E-02	1.720E 00	4.088E-02	6.356E-03	4.960E 00	1.236E-02	2.504E-03
3.975E-01	7.988E-02	2.566E-02	1.760E 00	3.855E-02	6.341E-03	5.040E 00	1.083E-02	2.499E-03
4.125E-01	7.092E-02	2.737E-02	1.800E 00	3.329E-02	5.970E-03	5.120E 00	9.974E-03	2.446E-03
4.275E-01	5.076E-02	2.848E-02	1.840E 00	2.798E-02	5.734E-03	5.200E 00	9.628E-03	2.471E-03
4.425E-01	3.266E-02	2.868E-02	1.880E 00	2.657E-02	5.816E-03	5.280E 00	9.636E-03	2.417E-03
4.575E-01	3.095E-02	2.771E-02	1.920E 00	2.631E-02	5.758E-03	5.360E 00	9.472E-03	2.400E-03
4.725E-01	4.685E-02	2.640E-02	1.960E 00	2.467E-02	5.758E-03	5.440E 00	8.590E-03	2.469E-03
4.875E-01	6.870E-02	2.461E-02	2.000E 00	2.374E-02	5.619E-03	5.520E 00	7.540E-03	2.452E-03
5.025E-01	8.480E-02	2.374E-02	2.040E 00	2.610E-02	5.386E-03	5.600E 00	7.324E-03	2.391E-03
5.175E-01	8.928E-02	2.046E-02	2.080E 00	3.046E-02	5.090E-03	5.680E 00	8.233E-03	2.312E-03
5.325E-01	7.884E-02	1.697E-02	2.120E 00	3.348E-02	4.846E-03	5.760E 00	9.589E-03	2.299E-03
5.475E-01	5.880E-02	1.508E-02	2.160E 00	3.315E-02	4.846E-03	5.850E 00	1.046E-02	2.306E-03
5.625E-01	4.206E-02	1.424E-02	2.200E 00	3.178E-02	5.207E-03	5.950E 00	1.069E-02	2.269E-03
5.775E-01	3.360E-02	1.338E-02	2.240E 00	3.441E-02	5.485E-03	6.050E 00	1.017E-02	2.196E-03
5.925E-01	2.767E-02	1.351E-02	2.280E 00	4.207E-02	5.253E-03	6.150E 00	8.269E-03	2.145E-03
6.100E-01	1.820E-02	1.557E-02	2.320E 00	4.920E-02	4.801E-03	6.250E 00	6.116E-03	2.108E-03
6.300E-01	8.642E-03	1.706E-02	2.360E 00	4.937E-02	4.436E-03	6.350E 00	5.392E-03	2.037E-03
6.500E-01	5.918E-03	1.639E-02	2.400E 00	4.152E-02	4.313E-03	6.450E 00	6.086E-03	1.955E-03
6.700E-01	8.673E-03	1.519E-02	2.440E 00	3.190E-02	4.242E-03	6.550E 00	6.829E-03	1.916E-03
6.900E-01	9.118E-03	1.379E-02	2.480E 00	2.564E-02	4.130E-03	6.650E 00	6.926E-03	1.871E-03
7.100E-01	6.237E-03	1.346E-02	2.525E 00	2.276E-02	3.929E-03	6.750E 00	6.565E-03	1.814E-03
7.300E-01	5.938E-03	1.331E-02	2.575E 00	2.226E-02	3.956E-03	6.850E 00	6.175E-03	1.746E-03
7.500E-01	1.192E-02	1.324E-02	2.625E 00	2.378E-02	4.058E-03	6.950E 00	5.870E-03	1.672E-03
7.700E-01	2.182E-02	1.309E-02	2.675E 00	2.463E-02	3.790E-03	7.050E 00	5.666E-03	1.601E-03
7.900E-01	3.271E-02	1.197E-02	2.725E 00	2.339E-02	3.550E-03	7.150E 00	5.383E-03	1.533E-03
8.100E-01	4.433E-02	1.080E-02	2.775E 00	2.328E-02	3.439E-03	7.250E 00	5.076E-03	1.446E-03
8.300E-01	5.936E-02	1.067E-02	2.825E 00	2.542E-02	3.497E-03	7.350E 00	4.969E-03	1.339E-03
8.500E-01	8.033E-02	1.078E-02	2.875E 00	2.556E-02	3.389E-03	7.450E 00	5.195E-03	1.246E-03
8.700E-01	1.103E-01	1.122E-02	2.925E 00	2.270E-02	3.258E-03	7.550E 00	5.289E-03	1.215E-03
8.900E-01	1.528E-01	1.104E-02	2.975E 00	2.118E-02	3.178E-03	7.650E 00	4.557E-03	1.151E-03
9.125E-01	2.287E-01	1.106E-02	3.030E 00	2.225E-02	3.136E-03	7.780E 00	3.288E-03	1.048E-03
9.375E-01	3.644E-01	1.198E-02	3.090E 00	2.210E-02	3.032E-03	7.900E 00	2.421E-03	9.920E-04
9.625E-01	4.953E-01	1.320E-02	3.150E 00	2.062E-02	2.960E-03	8.020E 00	2.113E-03	9.613E-04
9.875E-01	5.103E-01	1.414E-02	3.210E 00	2.014E-02	2.942E-03	8.140E 00	2.004E-03	9.208E-04
1.012E 00	4.039E-01	1.277E-02	3.270E 00	1.886E-02	2.924E-03	8.260E 00	1.937E-03	8.641E-04
1.037E 00	2.835E-01	1.150E-02	3.330E 00	1.816E-02	2.906E-03	8.380E 00	1.883E-03	8.228E-04
1.063E 00	1.925E-01	1.126E-02	3.390E 00	1.879E-02	2.797E-03	8.500E 00	1.748E-03	8.171E-04
1.087E 00	1.448E-01	1.085E-02	3.450E 00	1.840E-02	2.823E-03	8.620E 00	1.483E-03	7.765E-04
1.112E 00	1.204E-01	9.349E-03	3.510E 00	1.762E-02	2.858E-03	8.740E 00	1.252E-03	7.323E-04
1.137E 00	9.955E-02	8.378E-03	3.570E 00	1.730E-02	2.779E-03	8.860E 00	1.246E-03	7.281E-04
1.162E 00	8.018E-02	8.029E-03	3.630E 00	1.624E-02	2.863E-03	8.980E 00	1.504E-03	7.477E-04
1.188E 00	6.841E-02	8.785E-03	3.690E 00	1.524E-02	2.846E-03	9.100E 00	1.788E-03	6.865E-04
1.212E 00	8.220E-02	9.509E-03	3.750E 00	1.538E-02	2.812E-03	9.220E 00	1.843E-03	6.528E-04
1.237E 00	1.230E-01	9.395E-03	3.810E 00	1.538E-02	2.736E-03	9.340E 00	1.564E-03	6.532E-04
1.262E 00	1.778E-01	1.005E-02	3.870E 00	1.443E-02	2.812E-03	9.470E 00	9.314E-04	7.384E-04
1.287E 00	2.122E-01	9.949E-03	3.930E 00	1.307E-02	2.919E-03	9.610E 00	3.568E-04	6.392E-04
1.315E 00	2.129E-01	1.038E-02	3.990E 00	1.148E-02	2.883E-03	9.750E 00	-3.053E-05	5.902E-04
1.345E 00	1.720E-01	9.197E-03	4.050E 00	1.074E-02	2.654E-03	9.890E 00	-4.562E-05	6.884E-04
1.375E 00	1.201E-01	8.095E-03	4.110E 00	1.141E-02	2.623E-03	1.003E 01	3.088E-04	7.222E-04
1.405E 00	8.506E-02	7.960E-03	4.170E 00	1.261E-02	2.575E-03	1.017E 01	6.380E-04	5.696E-04
1.435E 00	6.988E-02	8.256E-03	4.240E 00	1.223E-02	2.555E-03	1.031E 01	8.544E-04	4.346E-04
1.465E 00	6.328E-02	7.813E-03	4.320E 00	1.053E-02	2.597E-03	1.045E 01	9.105E-04	4.433E-04
1.495E 00	5.896E-02	7.516E-03	4.400E 00	1.114E-02	2.564E-03	1.059E 01	7.418E-04	4.670E-04
1.525E 00	5.810E-02	7.761E-03	4.480E 00	1.312E-02	2.470E-03			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	9.617E-03	2.372E-03
4.000E-01 - 5.000E-01	5.303E-03	2.700E-03
5.000E-01 - 6.000E-01	5.807E-03	1.640E-03
6.000E-01 - 7.000E-01	1.012E-03	1.580E-03
7.000E-01 - 8.000E-01	1.581E-03	1.302E-03
8.000E-01 - 1.000E 00	4.876E-02	2.348E-03
1.000E 00 - 1.200E 00	3.493E-02	2.023E-03
1.200E 00 - 1.400E 00	3.097E-02	1.879E-03
1.400E 00 - 1.600E 00	1.254E-02	1.552E-03
1.600E 00 - 1.800E 00	8.262E-03	1.270E-03
1.800E 00 - 2.000E 00	5.344E-03	1.155E-03
2.000E 00 - 2.500E 00	1.764E-02	2.433E-03
2.500E 00 - 3.000E 00	1.176E-02	1.803E-03
3.000E 00 - 3.500E 00	9.914E-03	1.468E-03
3.500E 00 - 4.000E 00	7.594E-03	1.415E-03
4.000E 00 - 4.500E 00	5.797E-03	1.294E-03
4.500E 00 - 5.000E 00	6.602E-03	1.236E-03
5.000E 00 - 5.500E 00	9.382E-03	2.389E-03
5.500E 00 - 6.000E 00	6.837E-03	1.946E-03
6.000E 00 - 7.000E 00	4.477E-03	1.260E-03
7.000E 00 - 8.000E 00	1.671E-03	8.155E-04
8.000E 00 - 9.000E 00	8.661E-04	6.670E-04
9.000E 00 - 1.000E 01		

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN TI. THE FIRST SET OF NUMBERS IS THE DOUBLY DIFFERENTIAL CROSS SECTION, WHILE THE SECOND SET IS THE GAMMA RAY PRODUCTION CROSS SECTION FOR THE DESIGNATED GAMMA RAY ENERGY INTERVALS. THIS SECOND SET RESULTS FROM INTEGRATION OF THE DOUBLY DIFFERENTIAL DATA. THE UNCERTAINTIES ARE GIVEN IN THE SAME UNITS AS THE DATA AND DO NOT INCLUDE AN ESTIMATED 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION.

INCIDENT NEUTRON ENERGY = 16.94 TO 19.93 MEV. ANGLE = 125 DEGREES.

PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
3.075E-01	9.098E-02	2.978E-02	1.555E 00	5.110E-02	8.977E-03	4.560E 00	6.043E-03	3.059E-03
3.225E-01	1.012E-01	2.876E-02	1.585E 00	4.913E-02	8.408E-03	4.640E 00	4.331E-03	2.987E-03
3.375E-01	1.062E-01	2.832E-02	1.615E 00	4.620E-02	7.469E-03	4.720E 00	5.460E-03	2.980E-03
3.525E-01	9.900E-02	2.874E-02	1.645E 00	4.101E-02	7.228E-03	4.800E 00	6.706E-03	2.829E-03
3.675E-01	8.187E-02	2.948E-02	1.680E 00	3.679E-02	7.775E-03	4.880E 00	5.513E-03	2.703E-03
3.825E-01	6.523E-02	3.191E-02	1.720E 00	4.051E-02	7.819E-03	4.960E 00	3.823E-03	2.740E-03
3.975E-01	5.401E-02	3.648E-02	1.760E 00	4.955E-02	7.581E-03	5.040E 00	4.087E-03	2.818E-03
4.125E-01	4.361E-02	3.808E-02	1.800E 00	5.332E-02	7.341E-03	5.120E 00	5.078E-03	2.710E-03
4.275E-01	3.681E-02	3.785E-02	1.840E 00	4.015E-02	6.440E-03	5.200E 00	5.293E-03	2.770E-03
4.425E-01	3.650E-02	3.811E-02	1.880E 00	4.081E-02	6.878E-03	5.280E 00	5.237E-03	2.801E-03
4.575E-01	3.824E-02	3.677E-02	1.920E 00	3.475E-02	6.710E-03	5.360E 00	4.899E-03	2.690E-03
4.725E-01	4.398E-02	3.392E-02	1.960E 00	2.942E-02	6.623E-03	5.440E 00	4.027E-03	2.767E-03
4.875E-01	5.696E-02	3.229E-02	2.000E 00	2.628E-02	6.615E-03	5.520E 00	3.421E-03	2.813E-03
5.025E-01	7.275E-02	2.939E-02	2.040E 00	2.679E-02	6.392E-03	5.600E 00	4.235E-03	2.799E-03
5.175E-01	9.666E-02	2.511E-02	2.080E 00	2.882E-02	6.715E-03	5.680E 00	6.045E-03	2.733E-03
5.325E-01	9.571E-02	2.177E-02	2.120E 00	3.067E-02	6.938E-03	5.760E 00	7.013E-03	2.646E-03
5.475E-01	9.429E-02	1.947E-02	2.160E 00	3.243E-02	6.677E-03	5.850E 00	5.908E-03	2.601E-03
5.625E-01	8.104E-02	1.770E-02	2.200E 00	3.412E-02	6.408E-03	5.950E 00	3.831E-03	2.588E-03
5.775E-01	5.973E-02	1.789E-02	2.240E 00	3.628E-02	6.386E-03	6.050E 00	2.919E-03	2.526E-03
5.925E-01	3.723E-02	1.842E-02	2.280E 00	3.909E-02	6.287E-03	6.150E 00	2.756E-03	2.417E-03
6.100E-01	1.830E-02	2.015E-02	2.320E 00	4.093E-02	5.948E-03	6.250E 00	2.651E-03	2.318E-03
6.300E-01	1.248E-02	2.222E-02	2.360E 00	3.989E-02	5.505E-03	6.350E 00	3.027E-03	2.271E-03
6.500E-01	1.241E-02	2.124E-02	2.400E 00	3.503E-02	5.167E-03	6.450E 00	3.751E-03	2.150E-03
6.700E-01	9.838E-03	2.005E-02	2.440E 00	2.904E-02	5.141E-03	6.550E 00	4.027E-03	2.062E-03
6.900E-01	9.595E-03	1.840E-02	2.480E 00	2.483E-02	5.035E-03	6.650E 00	3.415E-03	1.991E-03
7.100E-01	1.728E-02	1.805E-02	2.525E 00	2.291E-02	4.680E-03	6.750E 00	2.526E-03	1.839E-03
7.300E-01	2.172E-02	1.758E-02	2.575E 00	2.176E-02	4.718E-03	6.850E 00	1.937E-03	1.771E-03
7.500E-01	1.977E-02	1.709E-02	2.625E 00	2.134E-02	4.837E-03	6.950E 00	1.550E-03	1.686E-03
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9.125E-01	1.696E-01	1.311E-02	3.030E 00	1.610E-02	3.639E-03	7.780E 00	1.432E-03	1.140E-03
9.375E-01	2.381E-01	1.421E-02	3.090E 00	1.799E-02	3.581E-03	7.900E 00	1.331E-03	1.061E-03
9.625E-01	3.062E-01	1.494E-02	3.150E 00	1.545E-02	3.735E-03	8.020E 00	1.055E-03	9.740E-04
9.875E-01	3.258E-01	1.554E-02	3.210E 00	1.773E-02	3.606E-03	8.140E 00	9.946E-04	9.565E-04
1.012E 00	2.809E-01	1.448E-02	3.270E 00	1.170E-02	3.692E-03	8.260E 00	1.218E-03	8.931E-04
1.037E 00	2.181E-01	1.385E-02	3.330E 00	1.371E-02	3.549E-03	8.380E 00	1.225E-03	8.247E-04
1.063E 00	1.673E-01	1.385E-02	3.390E 00	1.720E-02	3.399E-03	8.500E 00	8.379E-04	7.756E-04
1.087E 00	1.380E-01	1.381E-02	3.450E 00	1.786E-02	3.337E-03	8.620E 00	3.546E-04	7.221E-04
1.112E 00	1.174E-01	1.212E-02	3.510E 00	1.509E-02	3.457E-03	8.740E 00	1.702E-04	6.835E-04
1.137E 00	9.763E-02	1.077E-02	3.570E 00	1.235E-02	3.422E-03	8.860E 00	3.648E-04	6.874E-04
1.162E 00	8.424E-02	1.026E-02	3.630E 00	1.112E-02	3.566E-03	8.980E 00	8.513E-04	6.715E-04
1.187E 00	6.227E-02	1.065E-02	3.690E 00	1.074E-02	3.593E-03	9.100E 00	1.328E-03	5.807E-04
1.212E 00	9.970E-02	1.146E-02	3.750E 00	1.051E-02	3.433E-03	9.220E 00	1.551E-03	4.974E-04
1.237E 00	1.318E-01	1.187E-02	3.810E 00	9.648E-03	3.342E-03	9.340E 00	1.343E-03	5.001E-04
1.262E 00	1.636E-01	1.350E-02	3.870E 00	7.248E-03	3.417E-03	9.470E 00	7.214E-04	4.819E-04
1.287E 00	1.733E-01	1.391E-02	3.930E 00	4.538E-03	3.676E-03	9.610E 00	8.256E-05	3.676E-04
1.315E 00	1.596E-01	1.350E-02	3.990E 00	3.556E-03	3.611E-03	9.750E 00	-2.528E-04	3.068E-04
1.345E 00	1.295E-01	1.208E-02	4.050E 00	4.394E-03	3.268E-03	9.890E 00	-2.227E-04	3.366E-04
1.375E 00	9.910E-02	1.033E-02	4.110E 00	5.522E-03	3.205E-03	1.003E 01	2.232E-05	3.116E-04
1.405E 00	7.776E-02	9.684E-03	4.170E 00	6.131E-03	3.287E-03	1.017E 01	2.489E-04	2.244E-04
1.435E 00	7.018E-02	9.485E-03	4.240E 00	6.973E-03	3.200E-03	1.031E 01	4.451E-04	1.817E-04
1.465E 00	6.968E-02	9.060E-03	4.320E 00	8.935E-03	3.173E-03	1.045E 01	5.409E-04	1.989E-04
1.495E 00	6.583E-02	8.526E-03	4.400E 00	1.022E-02	3.078E-03	1.059E 01	4.930E-04	2.108E-04
1.525E 00	5.728E-02	9.016E-03	4.480E 00	9.048E-03	3.033E-03			

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	8.706E-03	3.017E-03
4.000E-01 - 5.000E-01	4.440E-03	3.588E-03
5.000E-01 - 6.000E-01	7.559E-03	2.096E-03
6.000E-01 - 7.000E-01	1.299E-03	2.043E-03
7.000E-01 - 8.000E-01	2.191E-03	1.698E-03
8.000E-01 - 1.000E 00	3.296E-02	2.764E-03
1.000E 00 - 1.200E 00	2.969E-02	2.496E-03
1.200E 00 - 1.400E 00	2.668E-02	2.442E-03
1.400E 00 - 1.600E 00	1.241E-02	1.811E-03
1.600E 00 - 1.800E 00	8.758E-03	1.516E-03
1.800E 00 - 2.000E 00	7.705E-03	1.364E-03
2.000E 00 - 2.500E 00	1.644E-02	3.035E-03
2.500E 00 - 3.000E 00	1.122E-02	2.173E-03
3.000E 00 - 3.500E 00	7.661E-03	1.786E-03
3.500E 00 - 4.000E 00	4.702E-03	1.750E-03
4.000E 00 - 4.500E 00	3.682E-03	1.595E-03
4.500E 00 - 5.000E 00	2.719E-03	1.444E-03
5.000E 00 - 6.000E 00	4.928E-03	2.721E-03
6.000E 00 - 7.000E 00	2.860E-03	2.103E-03
7.000E 00 - 8.000E 00	1.634E-03	1.311E-03
8.000E 00 - 9.000E 00	7.650E-04	7.971E-04
9.000E 00 - 1.000E 01	5.910E-04	4.361E-04

TOTAL SECONDARY GAMMA RAY YIELD AND AVERAGE SECONDARY GAMMA RAY ENERGY FROM TI AS A FUNCTION OF THE INCIDENT NEUTRON ENERGY. THESE DATA RESULT FROM A PULSE HEIGHT WEIGHTING ANALYSIS FOR PULSE HEIGHTS GREATER THAN 0.300 MEV. UNCERTAINTIES ARE GIVEN IN PARENTHESES IN THE SAME UNITS AS THE DATA. THE UNCERTAINTIES IN TOTAL YIELD DO NOT INCLUDE A 10 PERCENT ERROR IN ABSOLUTE NORMALIZATION. THE ANGLE IS 125 DEGREES.

INC.NT. ENERGY (MEV)	ENERGY SPREAD (MEV)	SECONDARY PHOTON YIELD (B/SR)	AVERAGE ENERGY (MEV)	INC.NT. ENERGY (MEV)	ENERGY SPREAD (MEV)	SECONDARY PHOTON YIELD (B/SR)	AVERAGE ENERGY (MEV)
0.452	0.095	0.469E-03 (0.803E-04)	0.289E 01(0.639E 00)	6.268	0.515	0.265E 00(0.121E-02)	0.152E 01(0.895E-02)
0.549	0.095	0.511E-03 (0.558E-04)	0.298E 01(0.415E 00)	6.775	0.497	0.290E 00(0.134E-02)	0.159E 01(0.944E-02)
0.651	0.110	0.656E-03 (0.529E-04)	0.265E 01(0.276E 00)	7.252	0.459	0.309E 00(0.148E-02)	0.166E 01(0.102E-01)
0.752	0.091	0.606E-03 (0.562E-04)	0.293E 01(0.326E 00)	7.734	0.505	0.296E 00(0.146E-02)	0.173E 01(0.109E-01)
0.853	0.110	0.785E-03 (0.612E-04)	0.266E 01(0.245E 00)	8.267	0.559	0.330E 00(0.161E-02)	0.181E 01(0.113E-01)
0.954	0.091	0.221E-02 (0.822E-04)	0.152E 01(0.756E-01)	8.759	0.427	0.346E 00(0.188E-02)	0.187E 01(0.130E-01)
1.127	0.255	0.196E-01 (0.119E-03)	0.965E 00(0.796E-02)	9.237	0.528	0.325E 00(0.179E-02)	0.193E 01(0.135E-01)
1.375	0.240	0.397E-01 (0.186E-03)	0.946E 00(0.571E-02)	9.752	0.502	0.348E 00(0.200E-02)	0.200E 01(0.146E-01)
1.620	0.250	0.484E-01 (0.225E-03)	0.963E 00(0.569E-02)	10.234	0.463	0.357E 00(0.222E-02)	0.204E 01(0.163E-01)
1.877	0.264	0.651E-01 (0.298E-03)	0.982E 00(0.567E-02)	10.714	0.496	0.350E 00(0.231E-02)	0.208E 01(0.175E-01)
2.125	0.232	0.716E-01 (0.336E-03)	0.101E 01(0.602E-02)	11.228	0.532	0.359E 00(0.246E-02)	0.212E 01(0.186E-01)
2.378	0.274	0.847E-01 (0.390E-03)	0.101E 01(0.595E-02)	11.731	0.474	0.367E 00(0.285E-02)	0.216E 01(0.213E-01)
2.635	0.240	0.107E 00(0.481E-03)	0.107E 01(0.622E-02)	12.219	0.504	0.359E 00(0.296E-02)	0.220E 01(0.228E-01)
2.869	0.227	0.108E 00(0.544E-03)	0.109E 01(0.712E-02)	12.740	0.537	0.351E 00(0.314E-02)	0.219E 01(0.250E-01)
3.111	0.257	0.120E 00(0.615E-03)	0.110E 01(0.733E-02)	13.235	0.455	0.331E 00(0.348E-02)	0.221E 01(0.296E-01)
3.369	0.261	0.135E 00(0.708E-03)	0.115E 01(0.782E-02)	13.702	0.479	0.311E 00(0.369E-02)	0.220E 01(0.330E-01)
3.629	0.259	0.153E 00(0.799E-03)	0.120E 01(0.811E-02)	14.195	0.505	0.290E 00(0.377E-02)	0.215E 01(0.357E-01)
3.884	0.251	0.163E 00(0.888E-03)	0.127E 01(0.893E-02)	14.714	0.534	0.264E 00(0.393E-02)	0.214E 01(0.401E-01)
4.128	0.235	0.182E 00(0.989E-03)	0.132E 01(0.935E-02)	15.485	1.008	0.227E 00(0.327E-02)	0.205E 01(0.367E-01)
4.374	0.257	0.197E 00(0.108E-02)	0.135E 01(0.953E-02)	16.464	0.949	0.189E 00(0.362E-02)	0.199E 01(0.471E-01)
4.619	0.233	0.206E 00(0.112E-02)	0.137E 01(0.972E-02)	17.456	1.036	0.189E 00(0.393E-02)	0.186E 01(0.488E-01)
4.861	0.251	0.217E 00(0.115E-02)	0.139E 01(0.960E-02)	18.444	0.939	0.194E 00(0.456E-02)	0.180E 01(0.534E-01)
5.240	0.505	0.233E 00(0.111E-02)	0.143E 01(0.866E-02)	19.421	1.015	0.201E 00(0.505E-02)	0.176E 01(0.567E-01)
5.752	0.518	0.250E 00(0.116E-02)	0.147E 01(0.878E-02)				

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