ORNL/TM-5299
ENDF-221

The V(n,xγ) Reaction Cross Section for Incident Neutron Energies Between 0.2 and 20.0 MeV

E. Newman
G. L. Morgan

OAK RIDGE NATIONAL LABORATORY
OPERATED BY UNION CARBIDE CORPORATION FOR THE ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

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U.S. Department of Commerce
5285 Port Royal Road, Springfield, Virginia 22161
Price: Printed Copy $4.50; Microfiche $2.25

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Contract No. W-7405-eng-26

Neutron Physics Division

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APRIL 1976

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ABSTRACT

Differential cross sections for the neutron-induced gamma-ray production from natural vanadium have been measured for incident neutron energies between 0.2 and 20.0 MeV. The Oak Ridge 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 and higher resolution in the neutron energy is also presented. The experimental results are compared with the Evaluated Neutron Data Files (ENDF).

INTRODUCTION

As part of a continuing program[1] 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 vanadium. The data are presented in this report in tabular and graphical form and are compared to the current evaluated data file for vanadium (MAT 1196 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 elsewhere[3] 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 12 ns. The total electron beam power was 18 kW.

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

with respect to the incident beam. The slab was 30 cm wide by 30 cm high with a thickness of 0.0231 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 FERD and measured response functions of the NaI detector. The results were the gamma-ray spectra defined by 148 points covering the gamma-ray energy range from 0.26 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_γ = 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 0.04 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 1196) 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 ΔE_n = 0.1 MeV at E_n = 1 MeV increasing to ΔE_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 Figures 21-24. Two values of the lower cut-off in gamma-ray energy were used, 0.26 and 0.70 MeV. 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 the 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.

ACKNOWLEDGEMENTS

We wish to thank J. W. McConnell for help with the electronics, J. G. Craven for aid with the computers and H. A. Todd and the ORELA staff for operation of the accelerator. We appreciate the help of R. E. McDonald in obtaining the vanadium sample.

REFERENCES

1. G. L. Morgan, T. A. Love, J. K. Dickens and F. G. Perey, "Gamma-Ray Production Cross Sections of Tantalum and Carbon for Incident Neutron Energies Between 0.007 and 20.0 MeV," ORNL-TM-3702 (February 1972).

J. K. Dickens, G. L. Morgan and F. G. Perey, "Gamma-Ray Production Due to Interactions with Iron for Incident Neutron Energies Between 0.8 and 20 MeV: Tabulated Differential Cross Sections," ORNL-4798 (August 1972).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Tungsten for Incident Neutron Energies Between 1.0 and 20 MeV: Tabulated Differential Cross Sections," ORNL-4847 (January 1973).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Copper for Incident Neutron Energies Between 2.0 and 20 MeV: Tabulated Differential Cross Sections," ORNL-4846 (January 1973).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Nitrogen for Incident Neutron Energies Between 2.0 and 20 MeV: Tabulated Differential Cross Sections," ORNL-4864 (April 1973).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Aluminum for Incident Neutron Energies Between 0.85 and 20 MeV: Tabulated Differential Cross Sections," ORNL-TM-4232 (July 1973).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Calcium for Incident Neutron Energies Between 0.85 and 20 MeV: Tabulated Differential Cross Sections," ORNL-TM-4252 (July 1973).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Nickel for Incident Neutron Energies Between 1.0 and 20 MeV: Tabulated Differential Cross Sections," ORNL-TM-4379 (November 1973).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production from Neutron Interactions with Silicon for Incident Neutron Energies Between 1.0 and 20 MeV: Tabulated Differential Cross Sections," ORNL-TM-4389 (December 1973).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Tin for Incident Neutron Energies Between 0.75 and 20 MeV: Tabulated Differential Cross Sections," ORNL-TM-4406 (November 1973).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Zinc for Incident Neutron Energies Between 0.85 and 20 MeV: Tabulated Differential Cross Sections," ORNL-TM-4464 (February 1974).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Fluorine and Lithium for Incident Neutron Energies Between 0.85 and 20 MeV: Tabulated Differential Cross Sections," ORNL-TM-4538 (April 1974).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Magnesium for Incident Neutron Energies Between 0.8 and 20 MeV: Tabulated Differential Cross Sections," ORNL-TM-4544 (May 1974).

G. T. Chapman and G. L. Morgan, "The Pb(n,xγ) Reaction for Incident Neutron Energies Between 0.6 and 20.0 MeV," ORNL-TM-4822 (February 1975).

G. L. Morgan and J. K. Dickens, "Production of Low Energy Gamma Rays by Neutron Interactions with Fluorine for Incident Neutron Energies Between 0.1 and 20 MeV," ORNL-TM-4823 (February 1975).

G. L. Morgan and E. Newman, "The Au(n,xγ) Reaction Cross Section for Incident Neutron Energies Between 0.2 and 20.0 MeV," ORNL-TM-4973 (August 1975).

J. K. Dickens, G. L. Morgan and E. Newman, "The Nb(n,xγ) Reaction Cross Section for Incident Neutron Energies Between 0.65 and 20.0 MeV," ORNL-TM-4972 (September 1975).

J. K. Dickens, T. A. Love and G. L. Morgan, "Gamma-Ray Production Due to Neutron Interactions with Silver for Incident Neutron Energies Between 0.3 and 20 MeV: Tabulated Differential Cross Sections," ORNL-TM-5081 (October 1975).

G. L. Morgan and E. Newman, "The Cr(n,xγ) Reaction Cross Section for Incident Neutron Energies Between 0.2 and 20.0 MeV," ORNL-TM-5098, ENDF-222 (November 1975).

G. L. Morgan and E. Newman, "The Mo(n,xγ) Reaction Cross Section for Incident Neutron Energies Between 0.2 and 20.0 MeV," ORNL-TM-5097, ENDF-220 (December 1975).

G. T. Chapman, "The Cu(n,xγ) Reaction Cross Section for Incident Neutron Energies Between 0.2 and 20.0 MeV," ORNL/TM-5215 (February 1976).

2. S. K. Penny and L. W. Owen, "A Re-evaluation of Vanadium Neutron and Gamma-Ray Production Cross Sections," ORNL-TM-4007 (November 1972).

3. J. K. Dickens, G. L. Morgan and F. G. Perey, Nucl. Sci. Eng. 50, 311 (1973).

4. Frances Pleasonton, Robert L. Ferguson and H. W. Schmitt, Phys. Rev. C 6, 1023 (1972).

5. G. L. Morgan, T. A. Love and F. G. Perey, "Integral Neutron Scattering Measurements on Carbon from 1 to 20 MeV," ORNL-TM-4157 (April 1973).

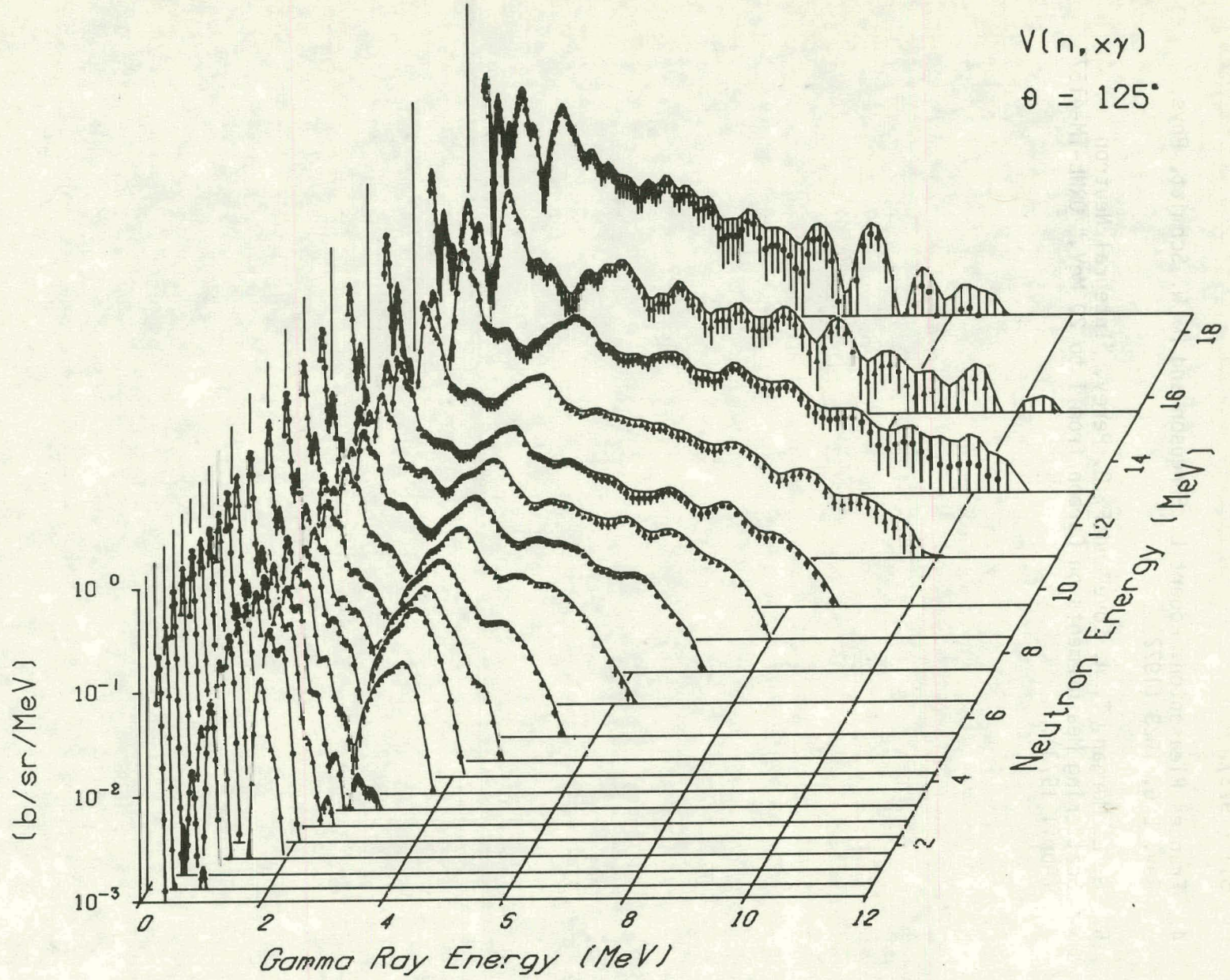
V(n,xγ)
θ = 125°
(b/sr/MeV)
10 0
10-1
10-2
10-3
0
2
4
5
8
10
12
Gamma Ray Energy (MeV)
2
4
6
8
10
12
14
16
18
Neutron Energy (MeV)

FIGURE 1

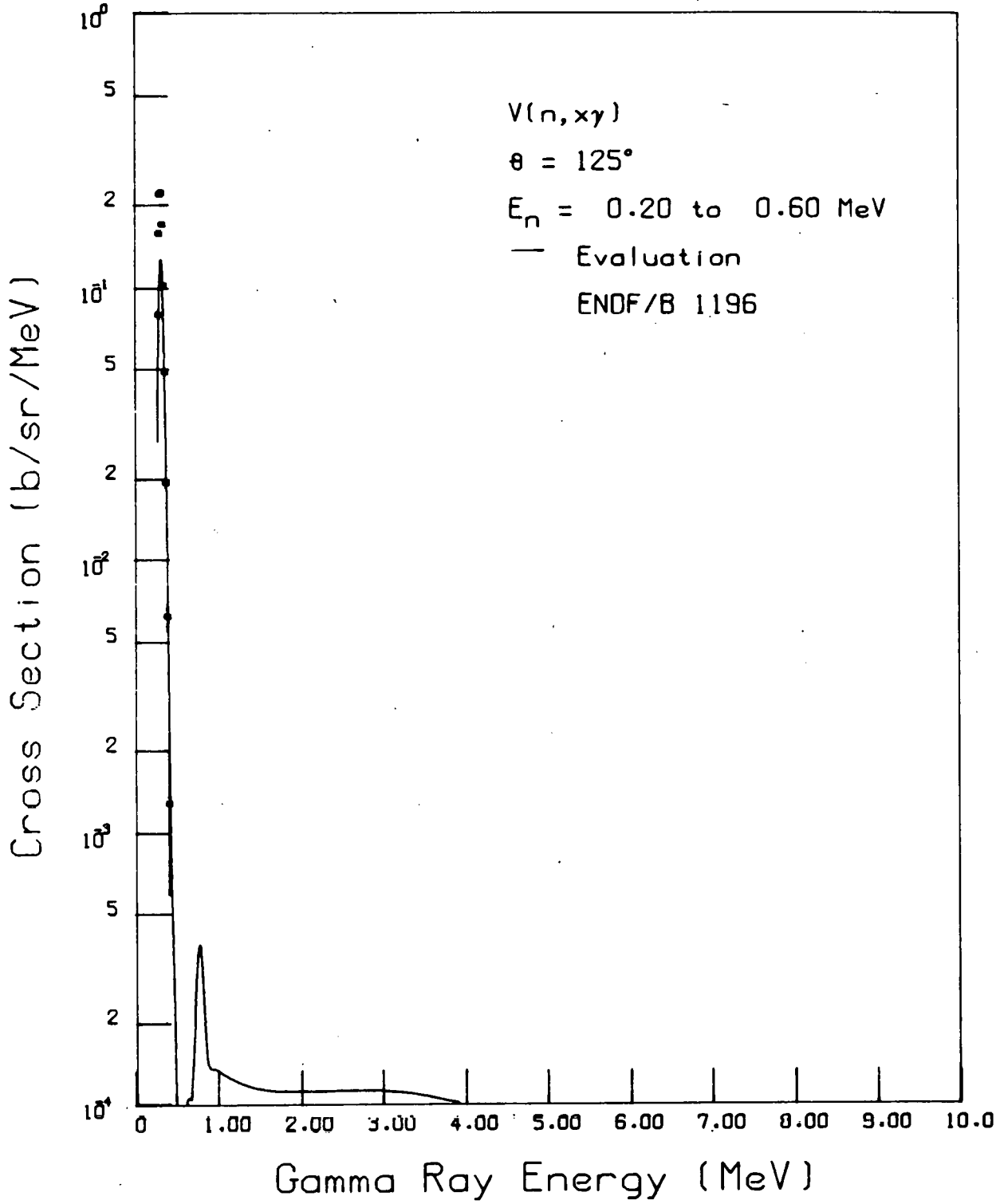
V(n,xγ)
θ = 125°
E_n = 0.20 to 0.60 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^1
5
2
10^2
5
2
10^3
5
2
10^4
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 2

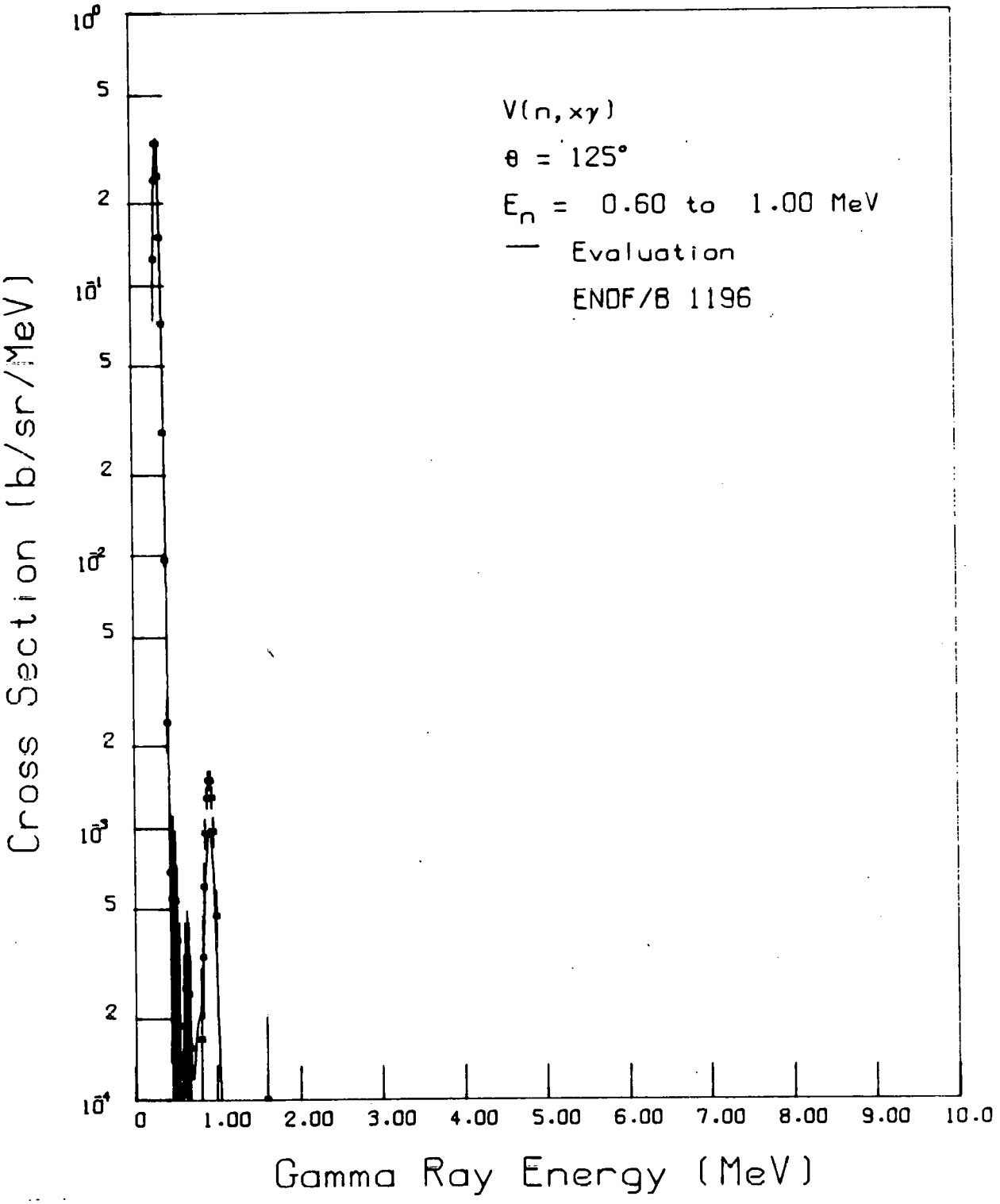
V(n,xγ)
θ = 125°
E_n = 0.60 to 1.00 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 3

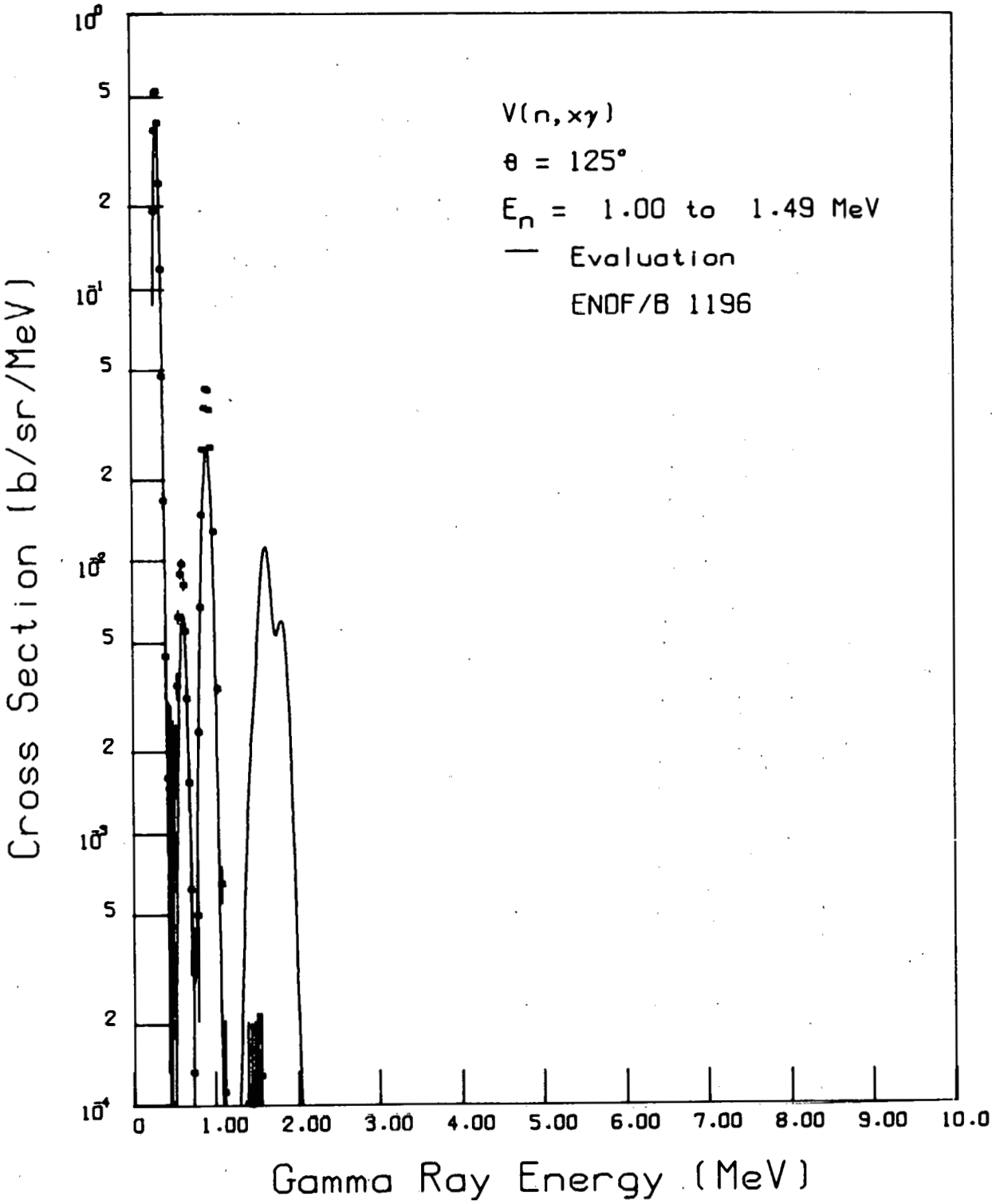
V(n,xγ)
θ = 125°
E_n = 1.00 to 1.49 MeV
— Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^{-1}
5
2
10^{-2}
5
2
10^{-3}
5
2
10^{-4}
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 4

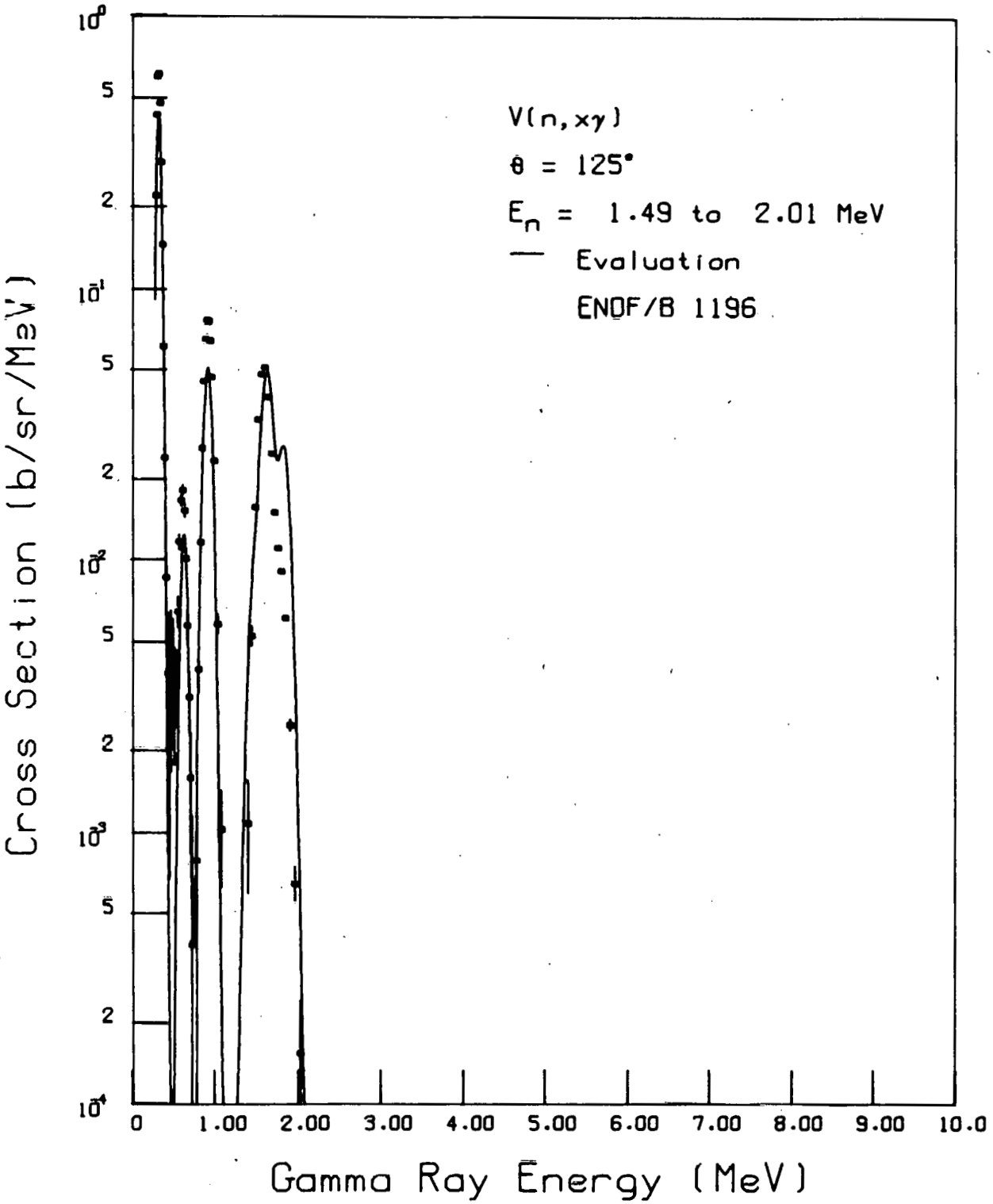
V(n,xγ)
θ = 125°
E_n = 1.49 to 2.01 MeV
— Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^{-1}
5
2
10^{-2}
5
2
10^{-3}
5
2
10^{-4}
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 5

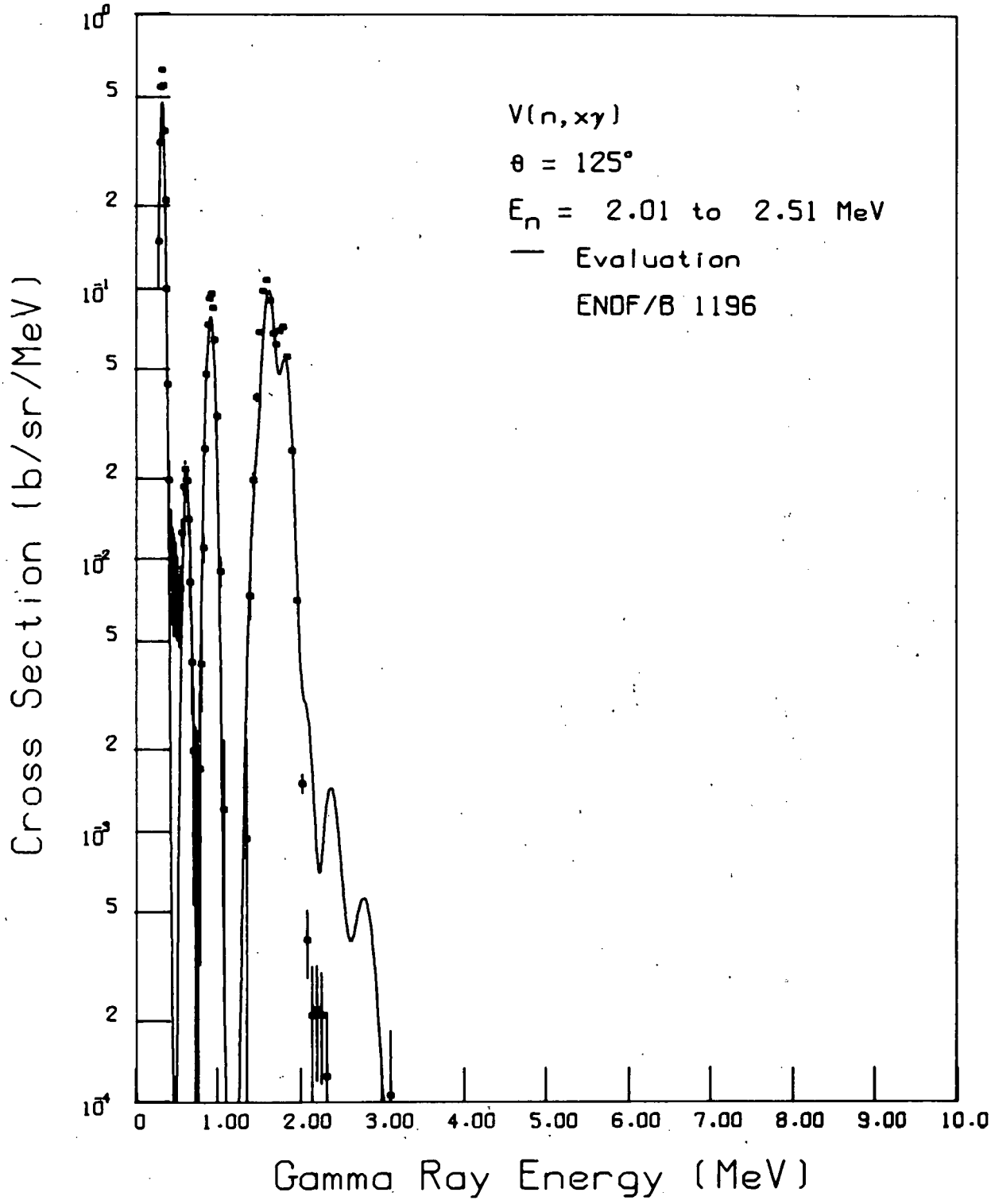
V(n,xγ)
θ = 125°
E_n = 2.01 to 2.51 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10⁰
5
2
10⁻¹
5
2
10⁻²
5
2
10⁻³
5
2
10⁻⁴
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 6

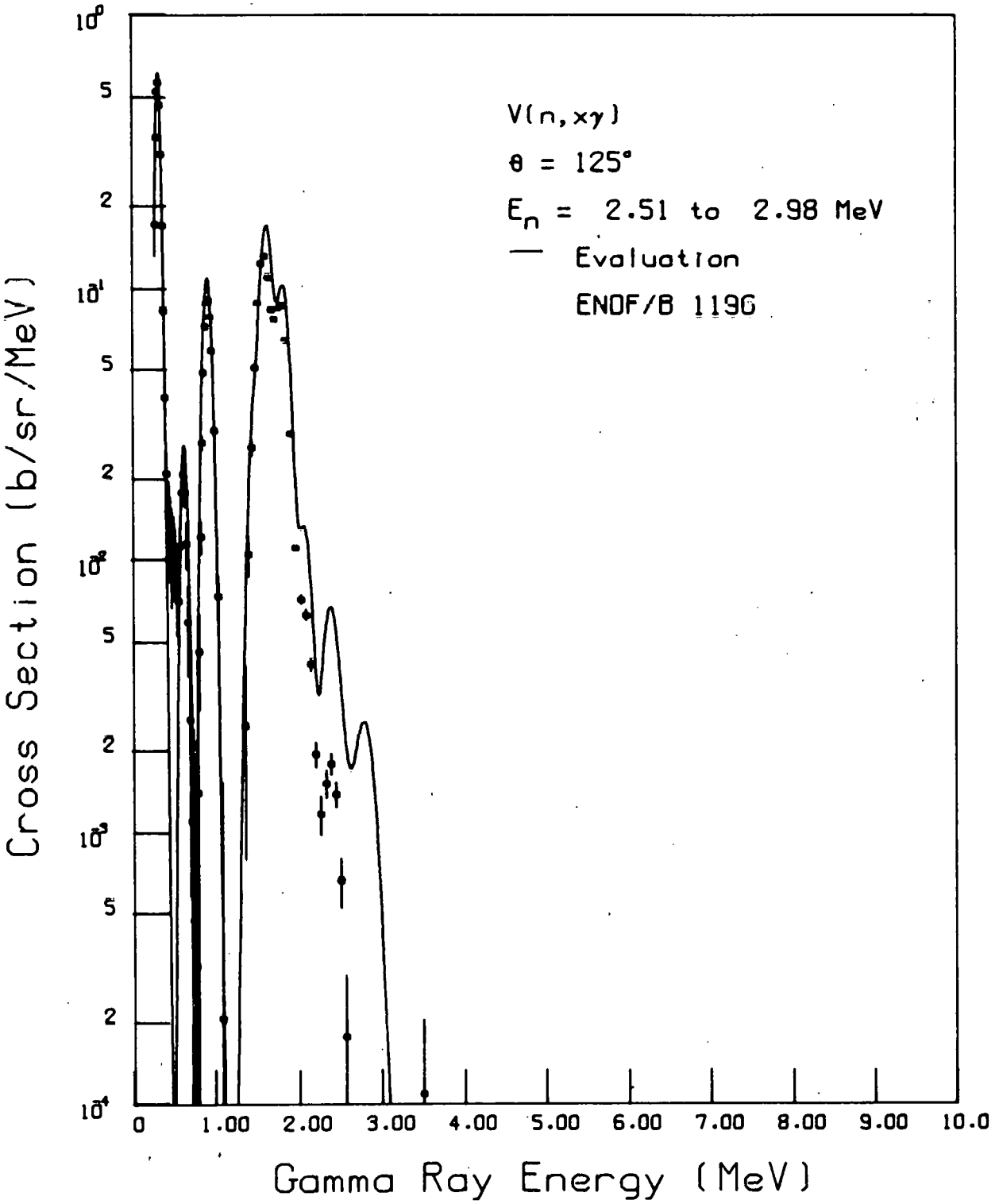
V(n,xγ)
θ = 125°
E_n = 2.51 to 2.98 MeV
— Evaluation
ENDF/B 119G
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^-1
5
2
10^-2
5
2
10^-3
5
2
10^-4
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 7

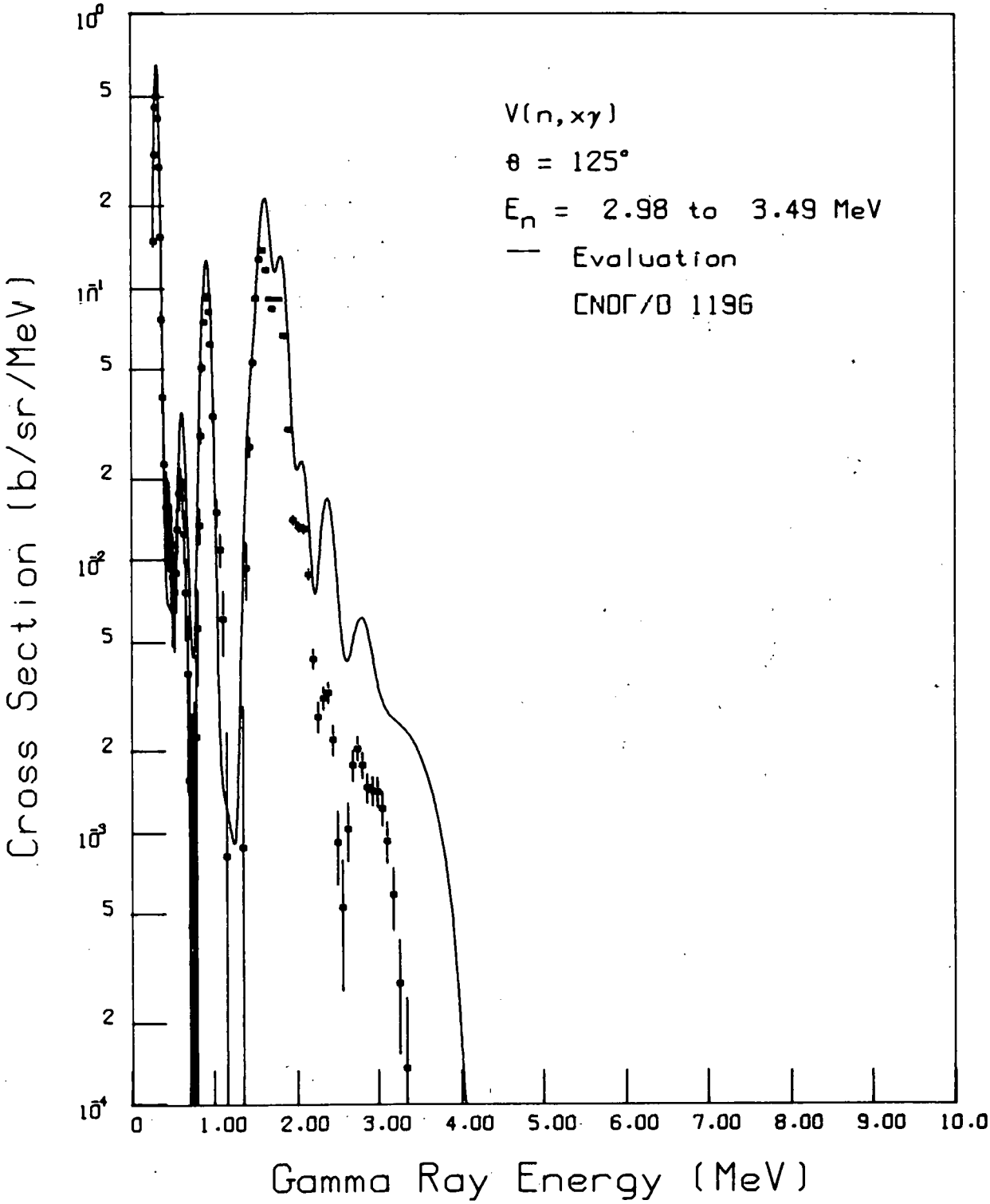
V(n,xγ)
θ = 125°
E_n = 2.98 to 3.49 MeV
Evaluation
CNDC/D 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 8

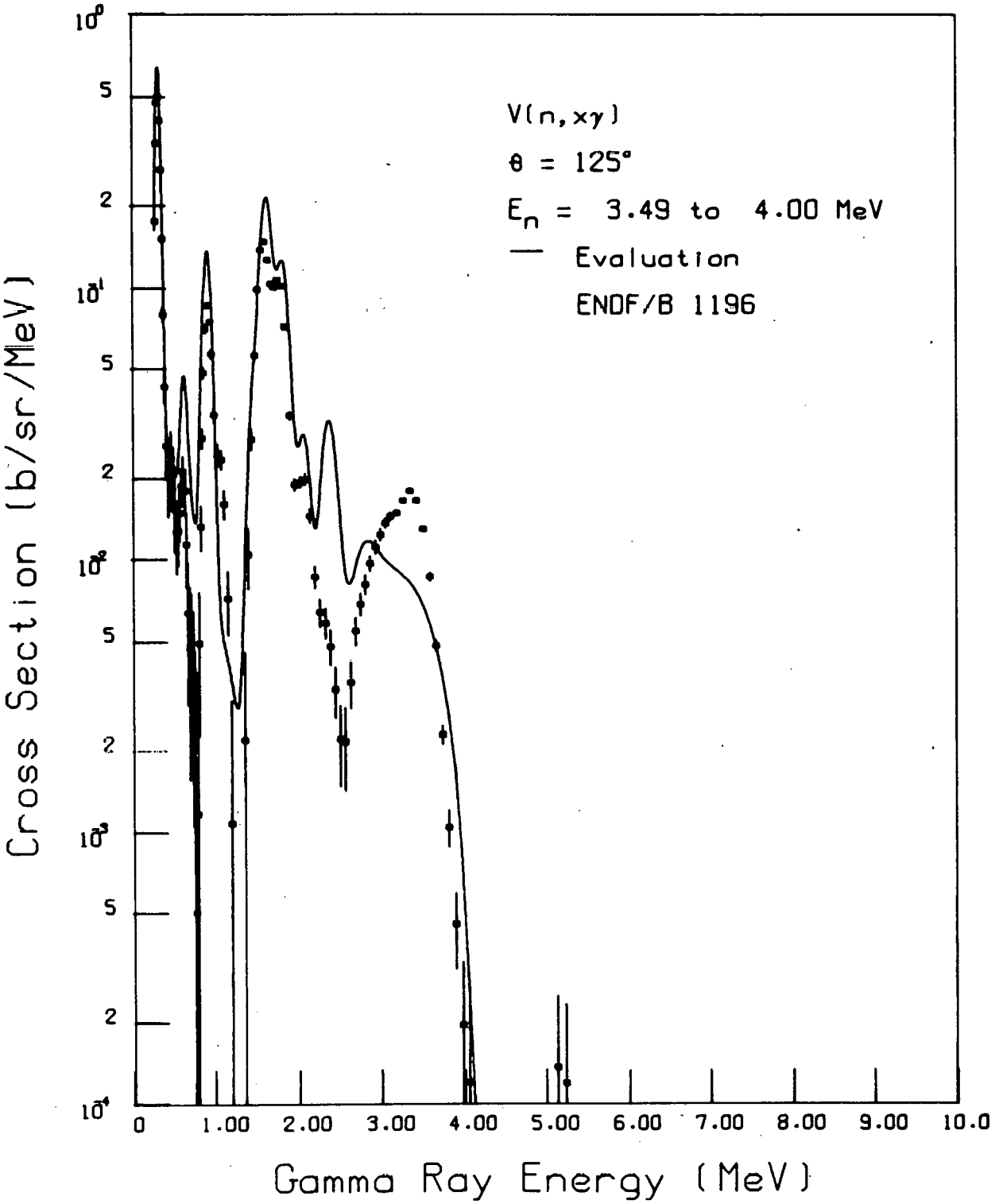
V(n,xγ)
θ = 125°
E_n = 3.49 to 4.00 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 9

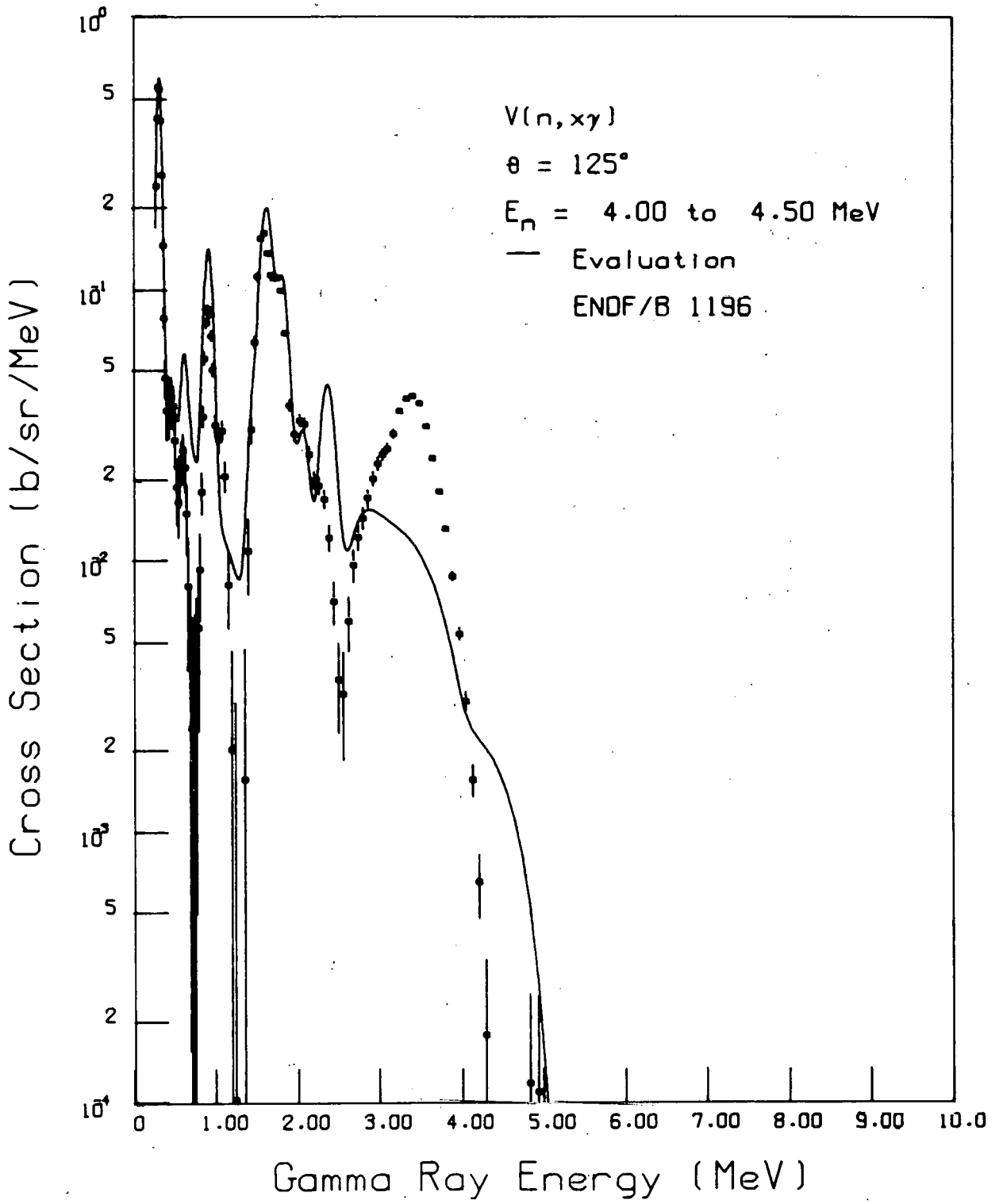
V(n,xγ)
θ = 125°
E_n = 4.00 to 4.50 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^1
5
2
10^2
5
2
10^3
5
2
10^4
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 10

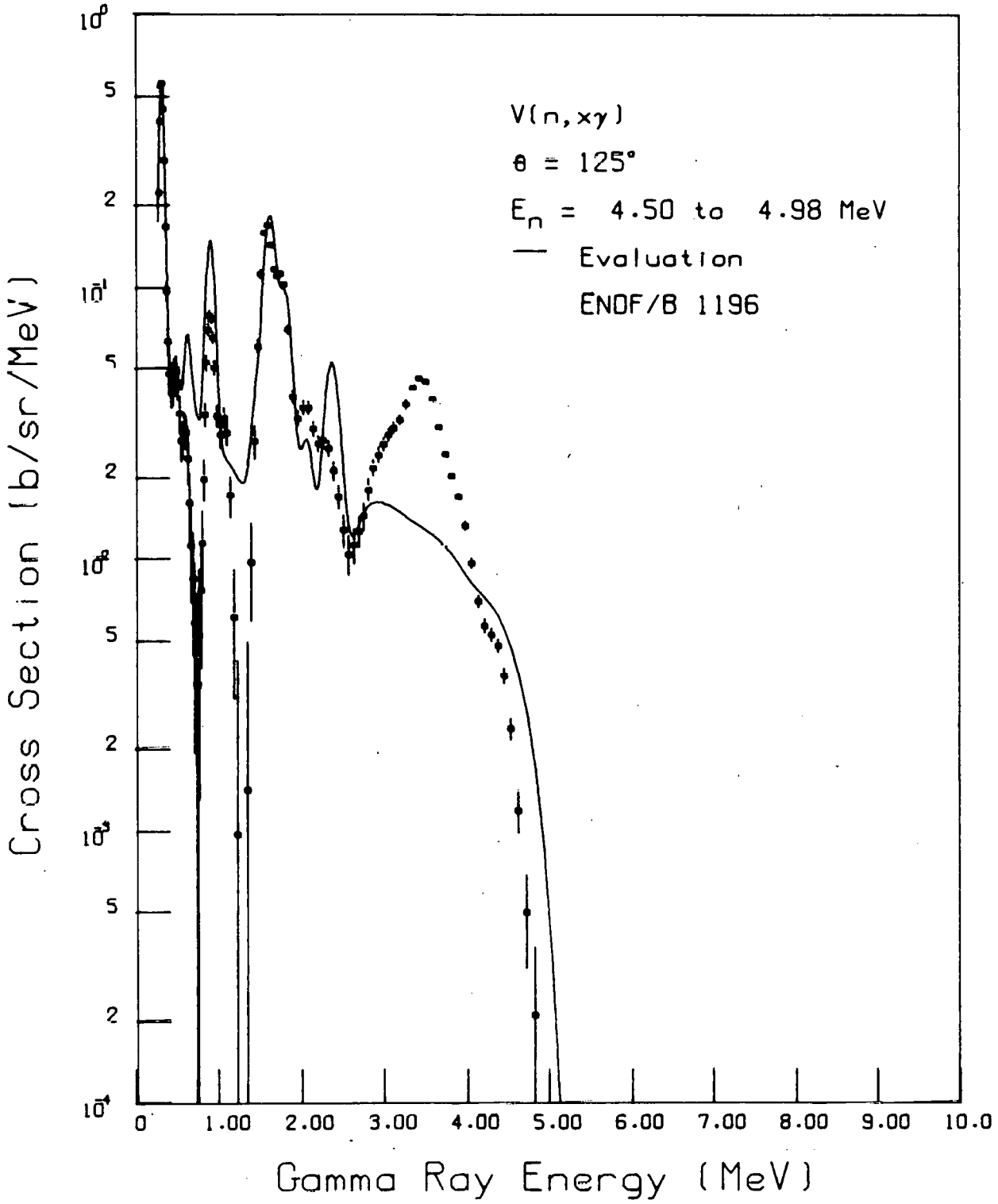
V(n,xγ)
θ = 125°
E_n = 4.50 to 4.98 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 11

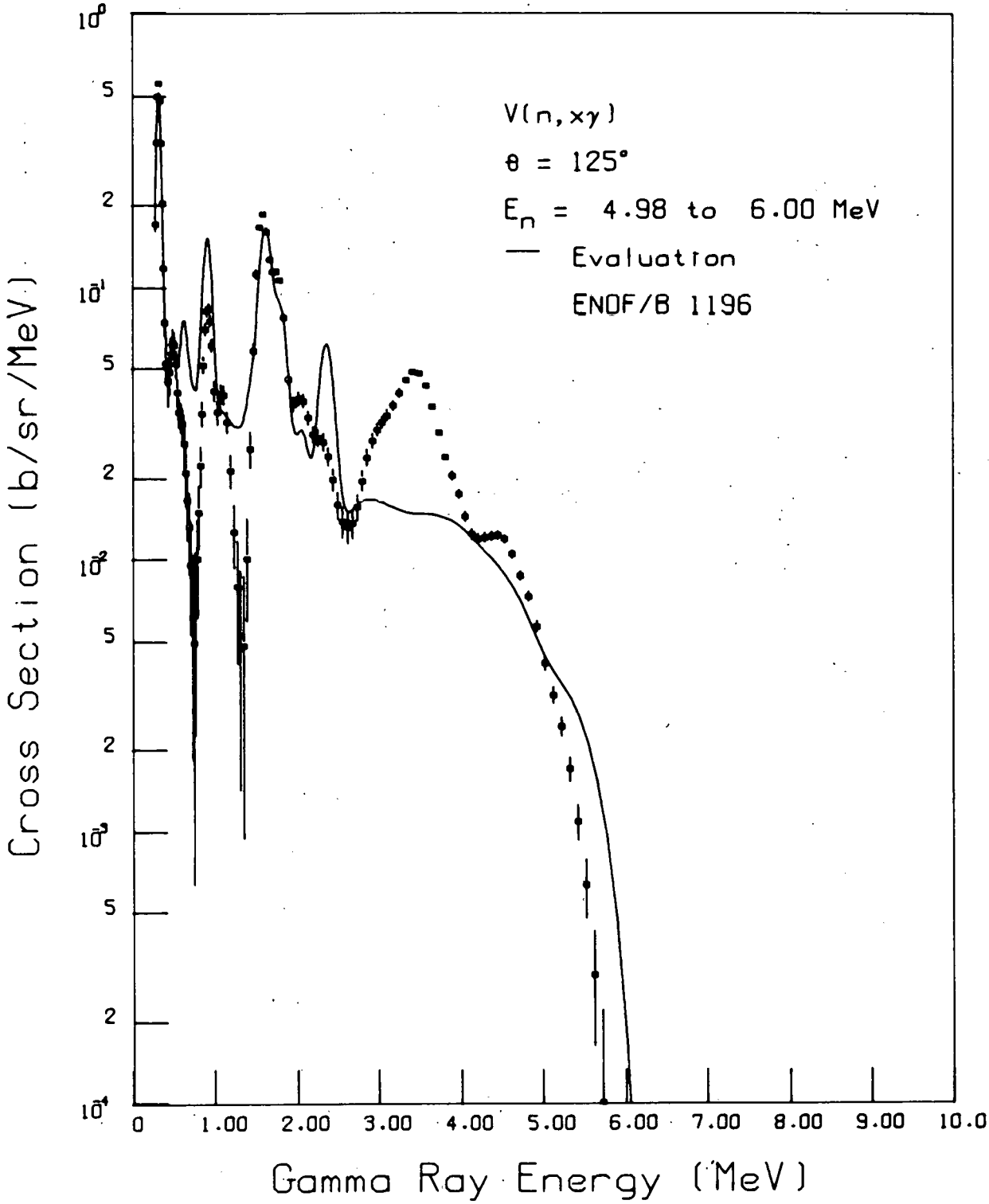
V(n,xγ)
θ = 125°
E_n = 4.98 to 6.00 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^-1
5
2
10^-2
5
2
10^-3
5
2
10^-4
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 12

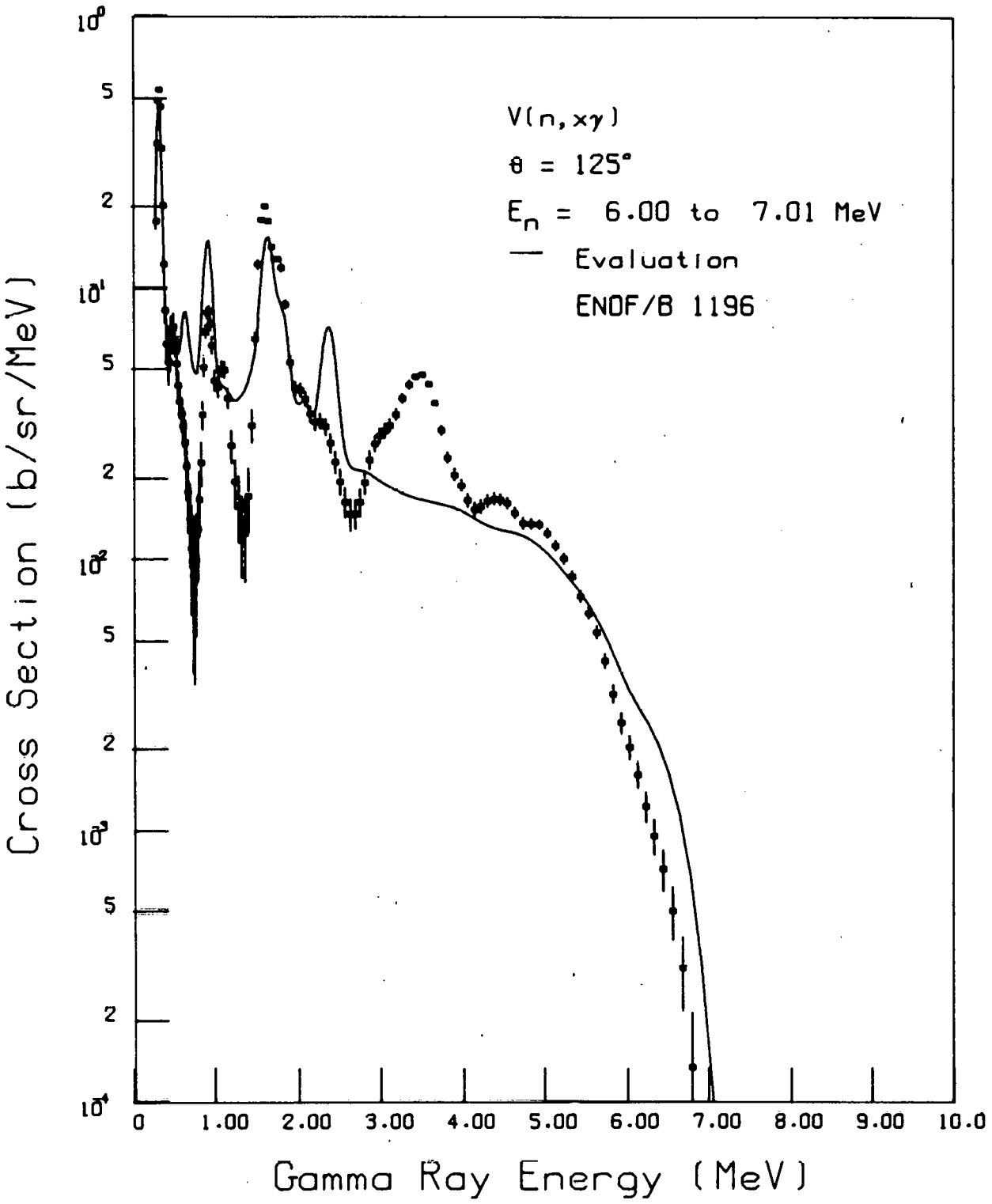
V(n,xγ)
θ = 125°
E_n = 6.00 to 7.01 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^1
5
2
10^2
5
2
10^3
5
2
10^4
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 13

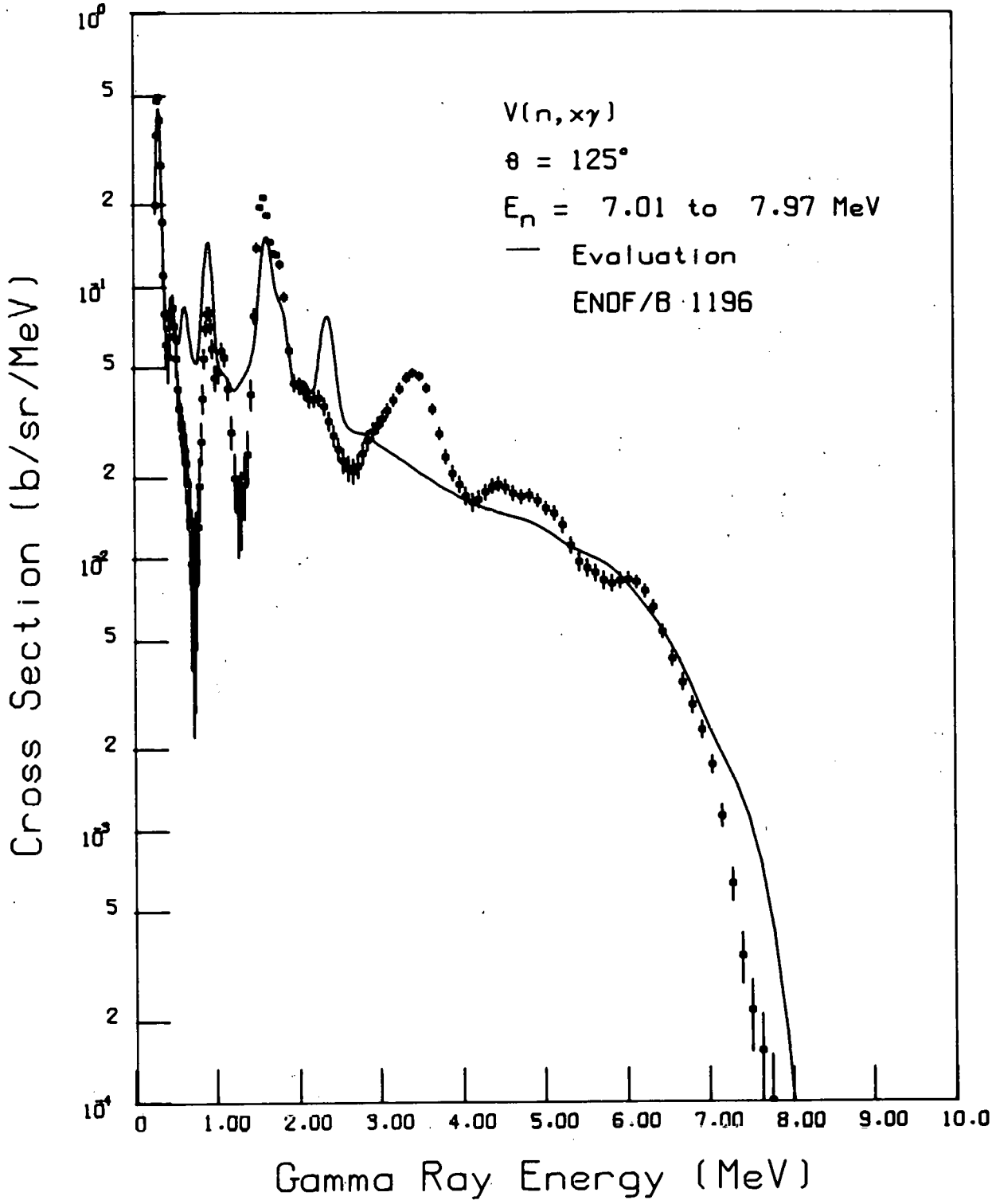
V(n,xγ)
θ = 125°
E_n = 7.01 to 7.97 MeV
Evaluation
ENDF/B-1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^1
5
2
10^2
5
2
10^3
5
2
10^4
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 14

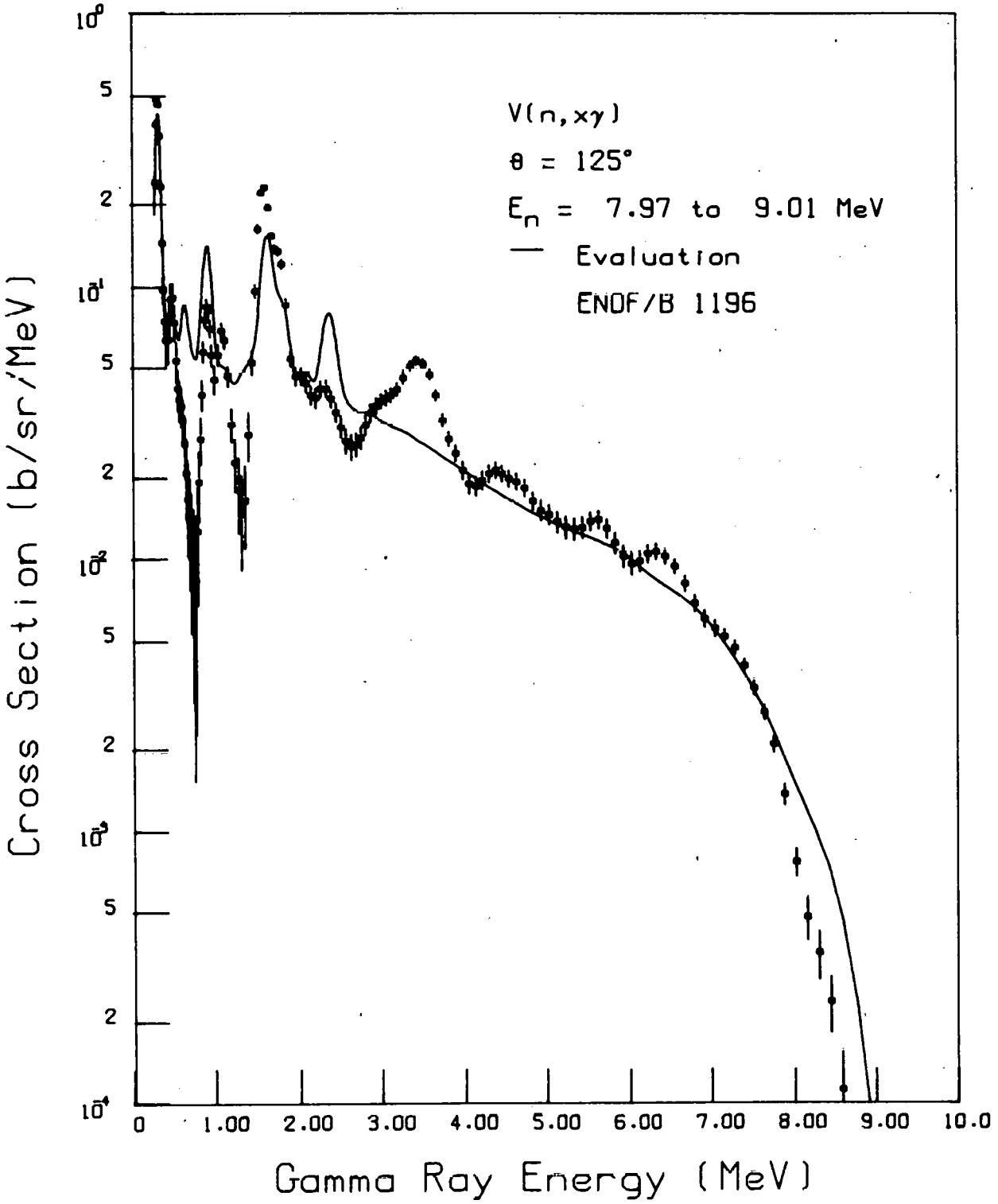
V(n,xγ)
θ = 125°
E_n = 7.97 to 9.01 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^-1
5
2
10^-2
5
2
10^-3
5
2
10^-4
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 15

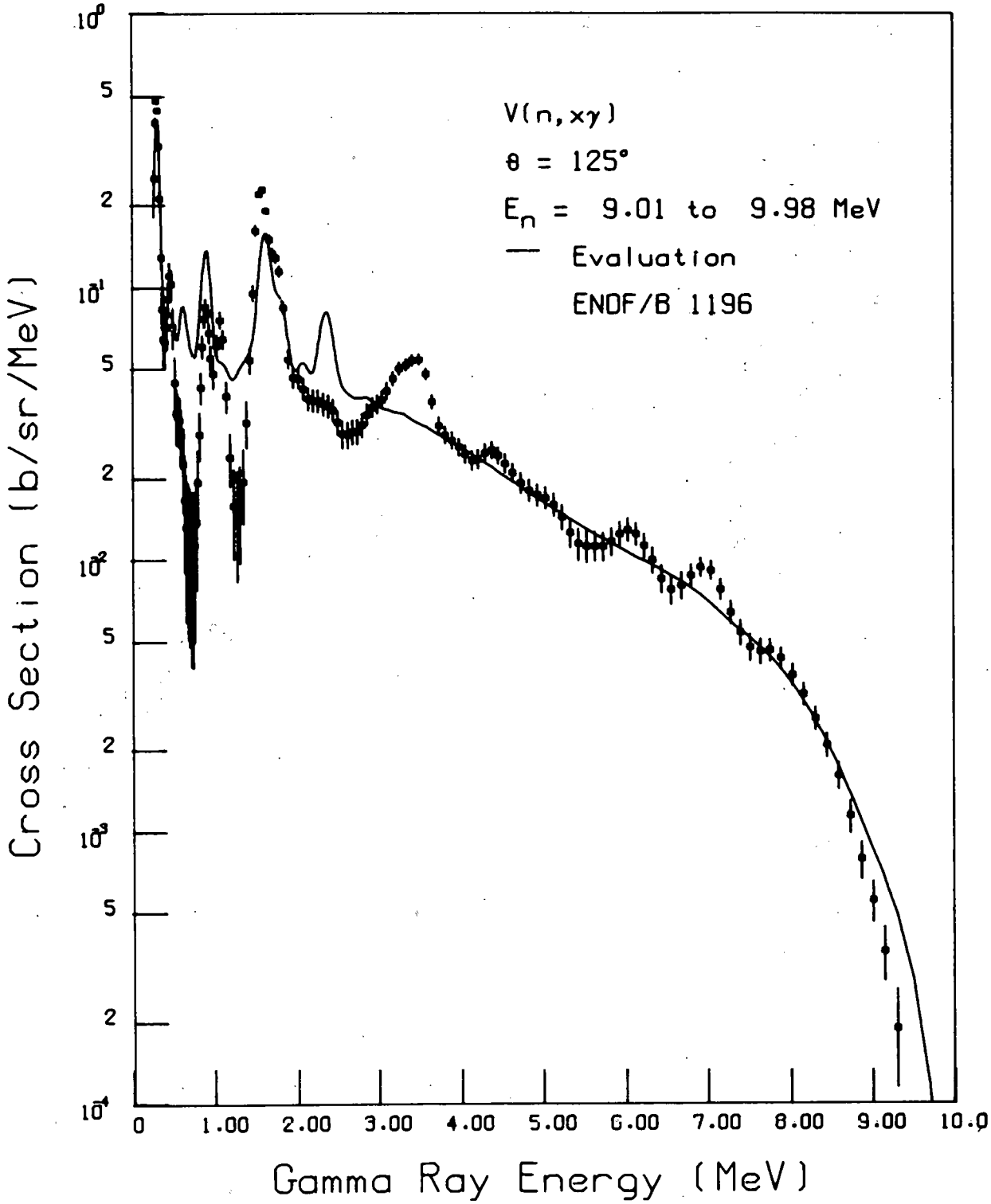
V(n,xγ)
θ = 125°
E_n = 9.01 to 9.98 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^1
5
2
10^2
5
2
10^3
5
2
10^4
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 16

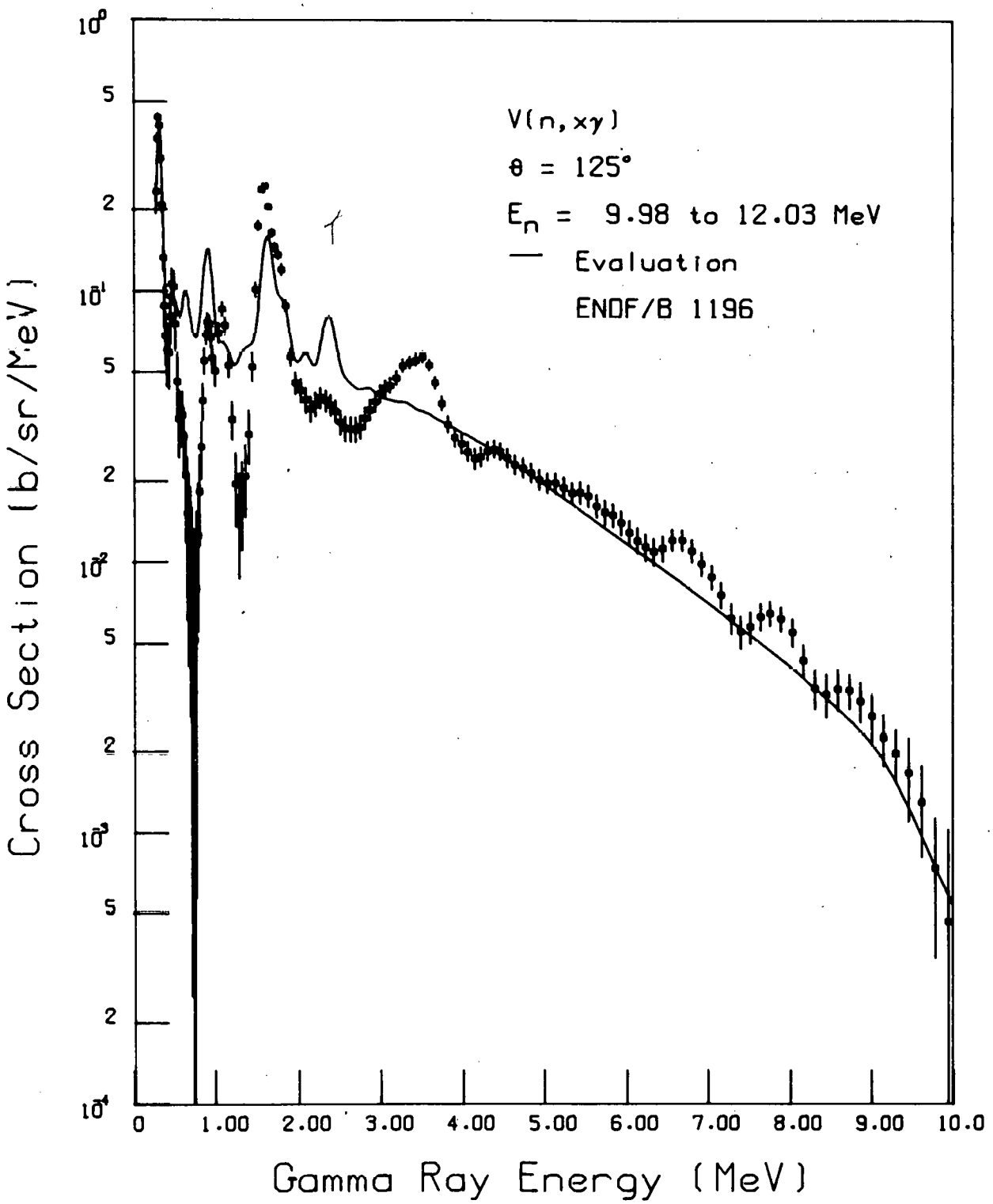
V(n, xγ)
θ = 125°
E_n = 9.98 to 12.03 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^1
5
2
10^2
5
2
10^3
5
2
10^4
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 17

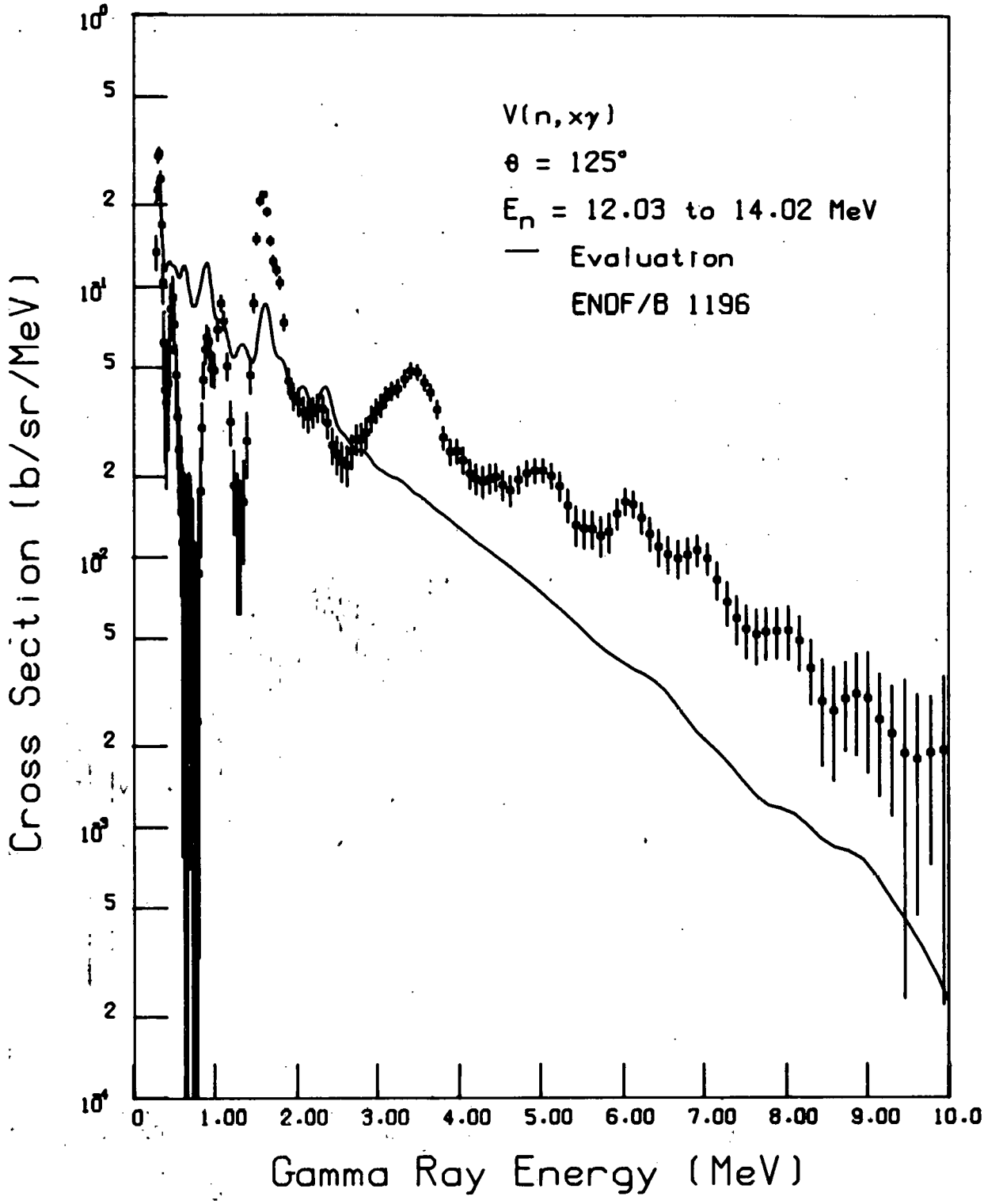
V(n,xγ)
θ = 125°
E_n = 12.03 to 14.02 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 18

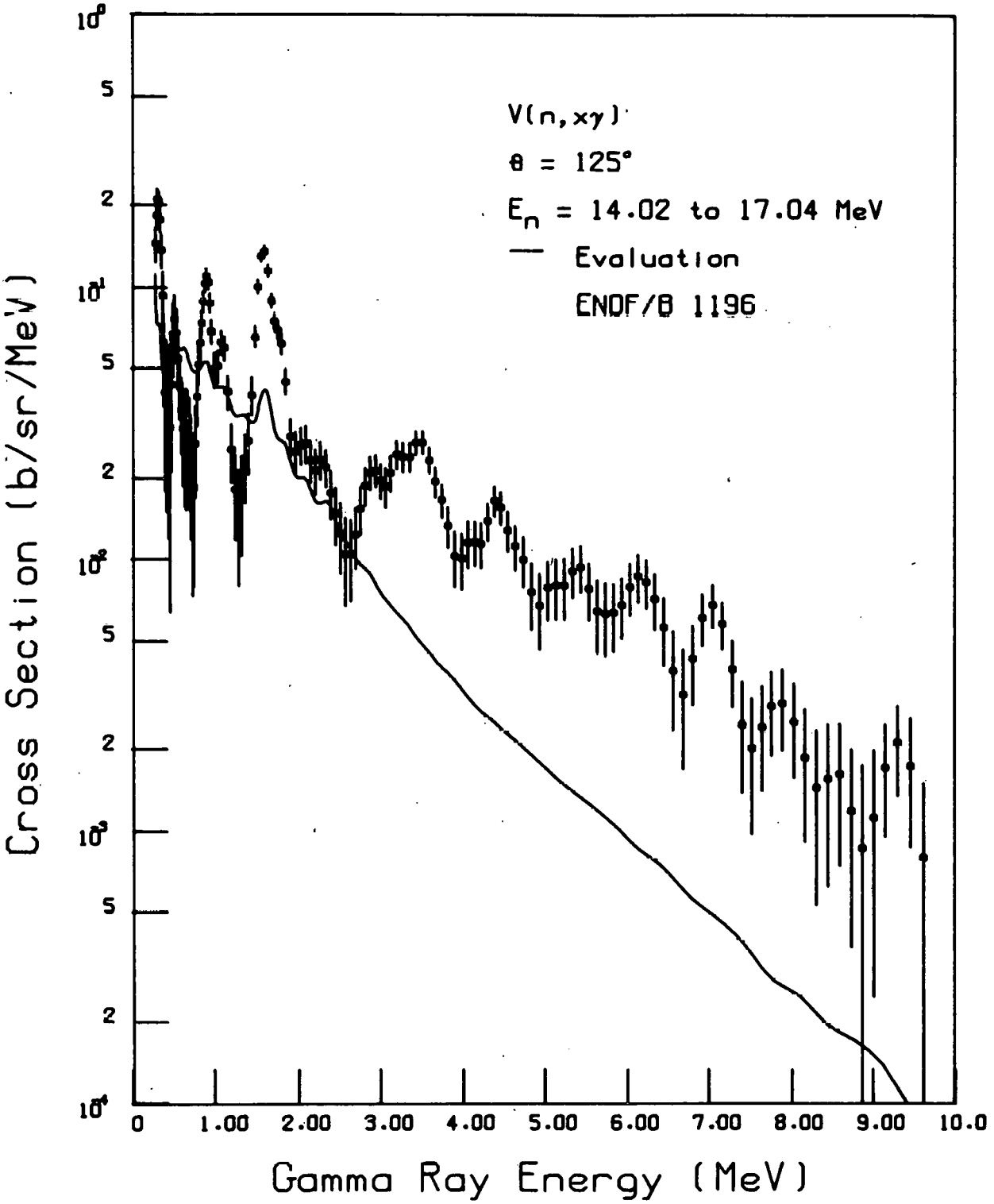
V(n,xγ)
θ = 125°
E_n = 14.02 to 17.04 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 19

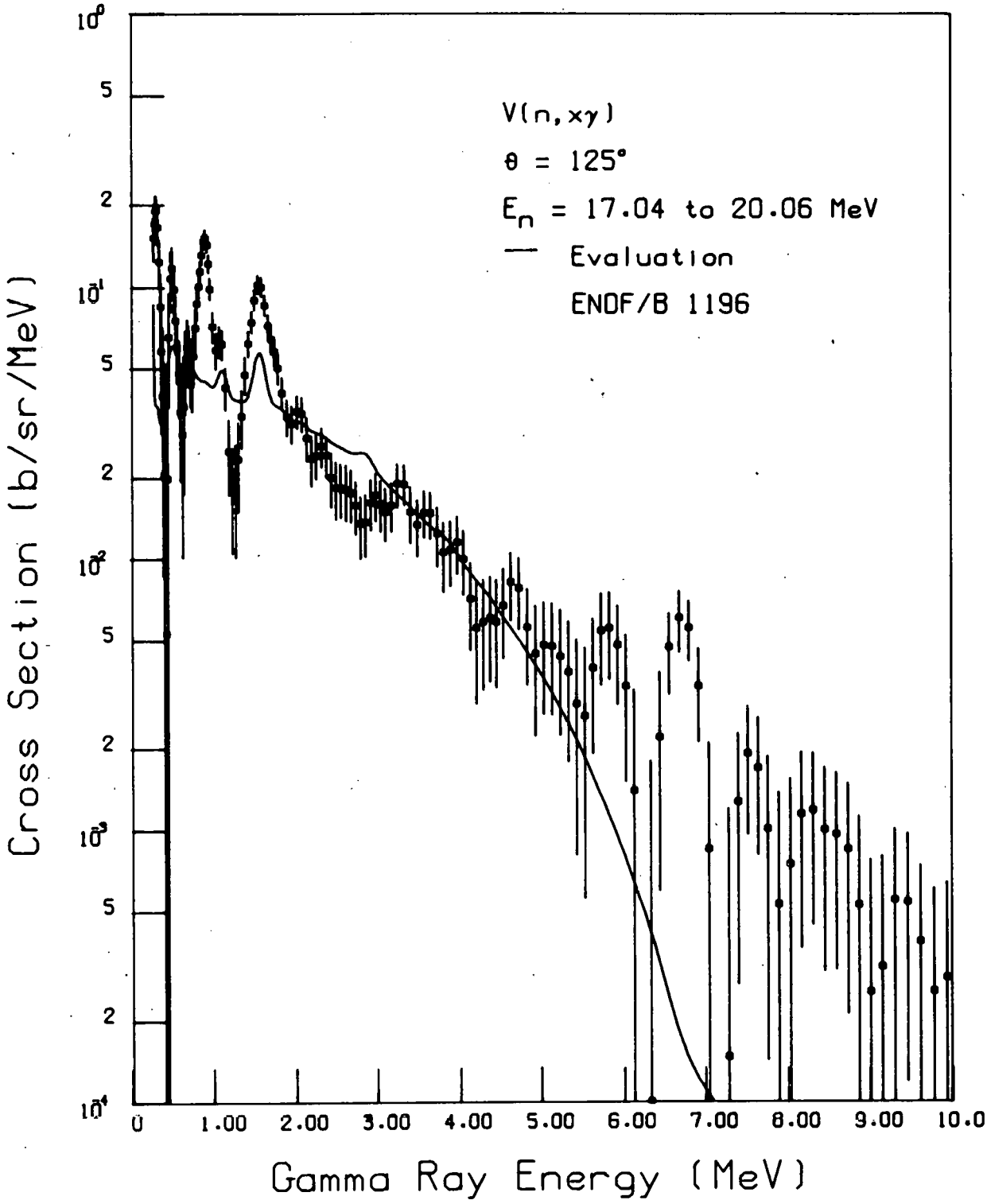
V(n,xγ)
θ = 125°
E_n = 17.04 to 20.06 MeV
Evaluation
ENDF/B 1196
Cross Section (b/sr/MeV)
Gamma Ray Energy (MeV)
10^0
5
2
10^{-1}
5
2
10^{-2}
5
2
10^{-3}
5
2
10^{-4}
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.0

FIGURE 20

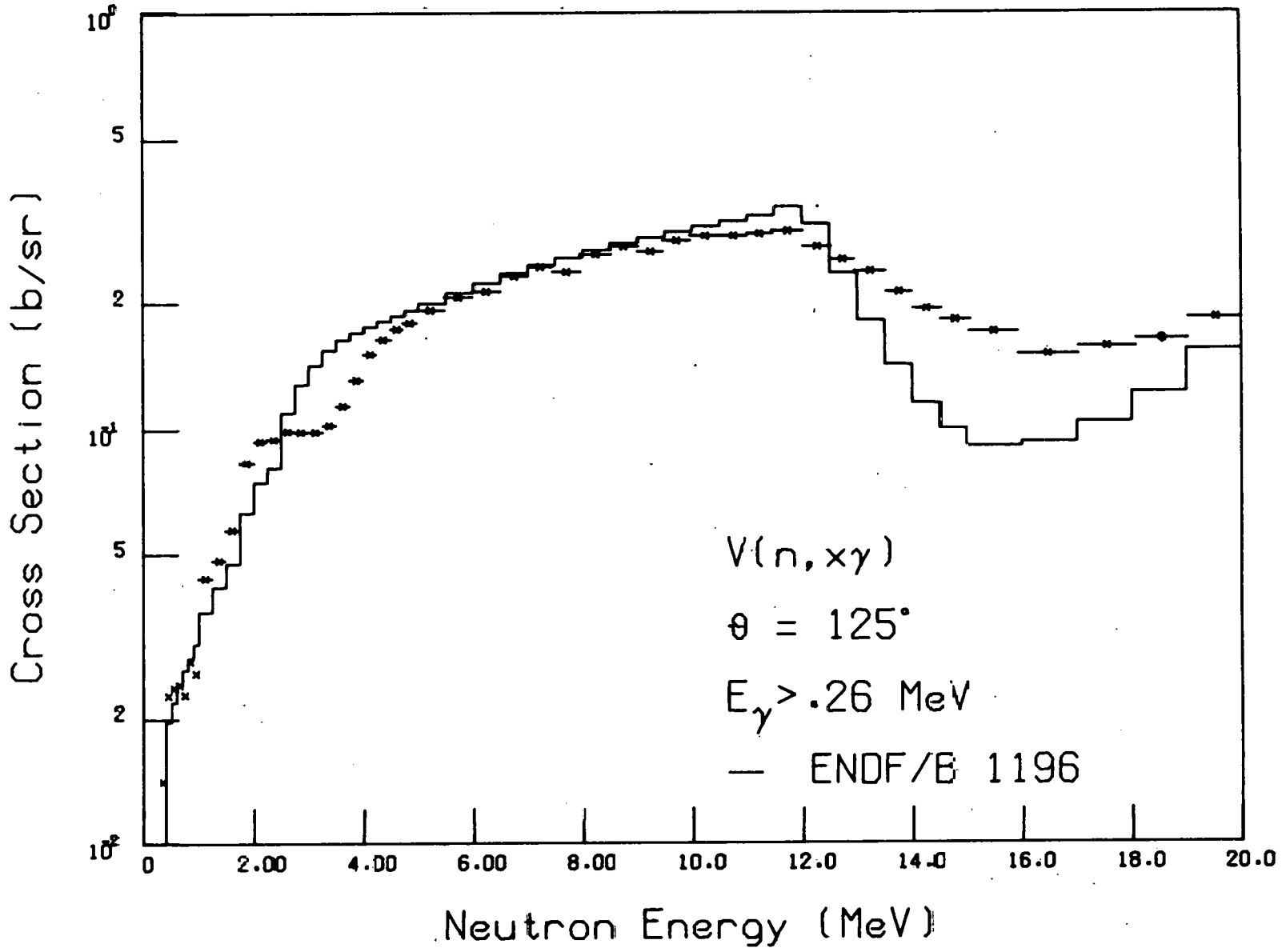
Cross Section (b/sr)
10⁰
5
2
10⁻¹
5
2
10⁻²
0
2.00
4.00
6.00
8.00
10.0
12.0
14.0
16.0
18.0
20.0
Neutron Energy (MeV)
V(n,xγ)
θ = 125°
Eγ>.26 MeV
— ENDF/B 1196

FIGURE 21

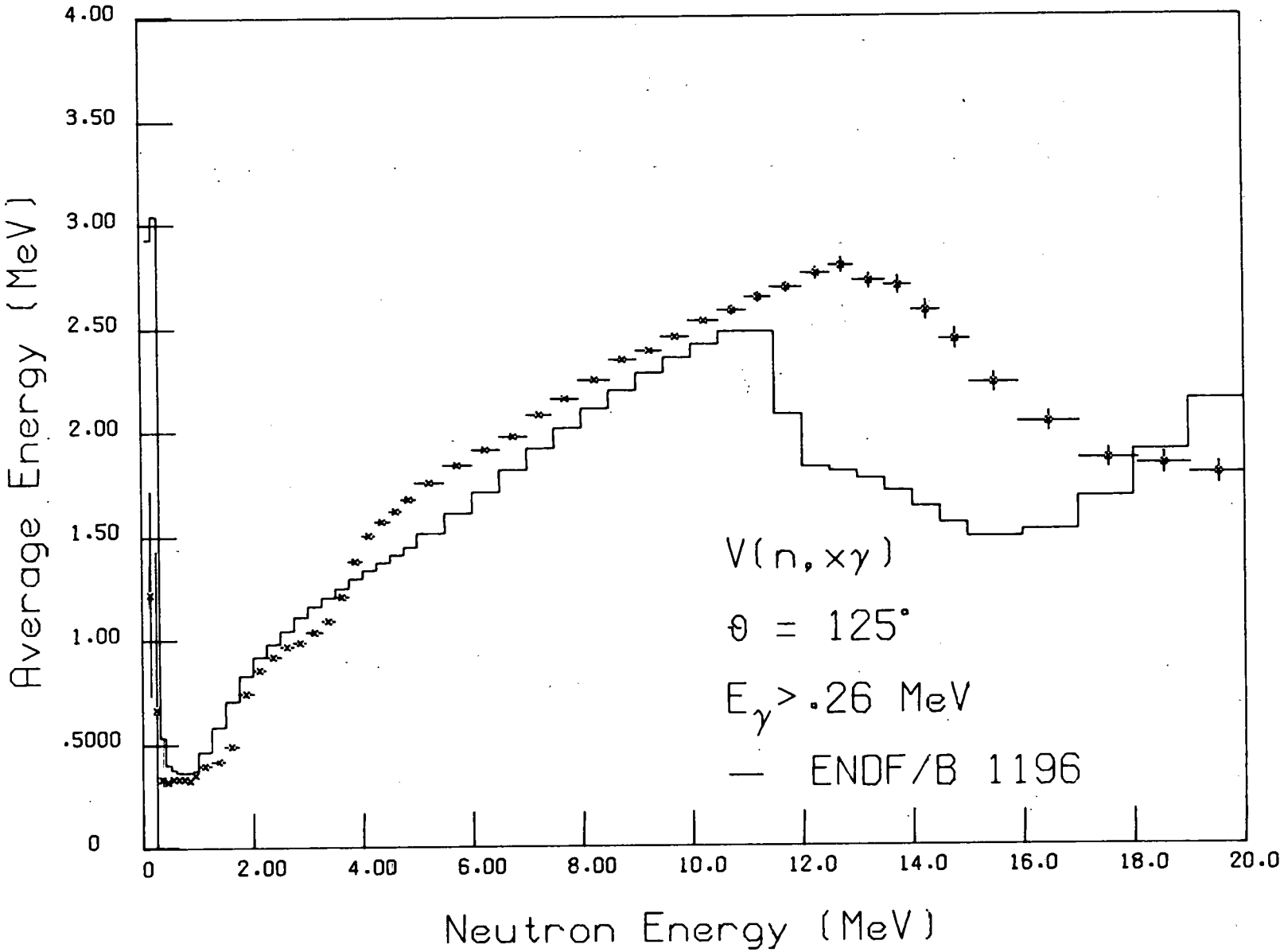
4.00
3.50
3.00
2.50
2.00
1.50
1.00
.5000
0
Average Energy (MeV)
0
2.00
4.00
6.00
8.00
10.0
12.0
14.0
16.0
18.0
20.0
Neutron Energy (MeV)
V(n,xγ)
θ = 125°
Eγ>.26 MeV
— ENDF/B 1196

FIGURE 22

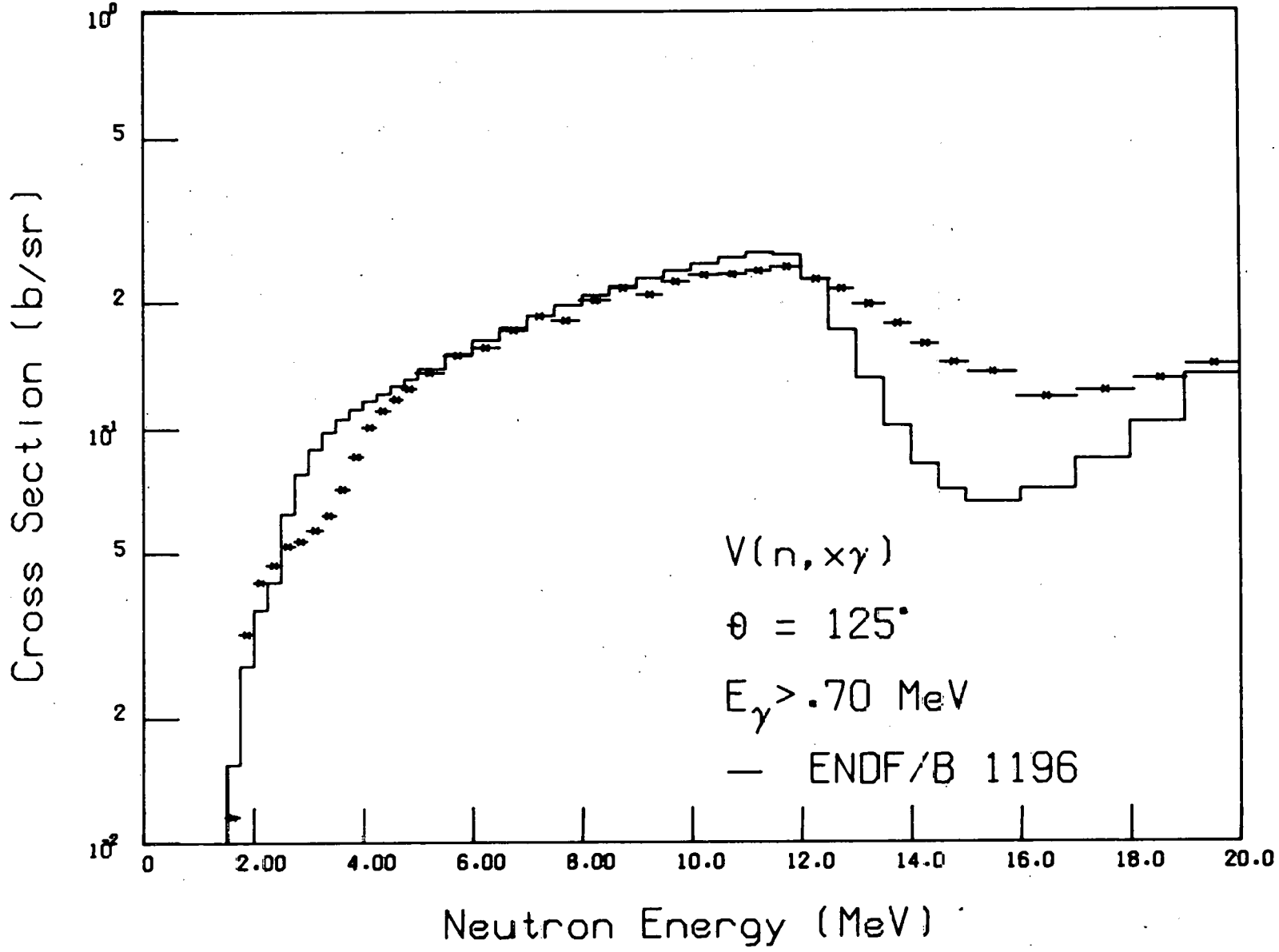
Cross Section (b/sr)
Neutron Energy (MeV)
V(n,xγ)
θ = 125°
Eγ>.70 MeV
— ENDF/B 1196
10⁰
5
2
10¹
5
2
10²
0
2.00
4.00
6.00
8.00
10.0
12.0
14.0
16.0
18.0
20.0

FIGURE 23

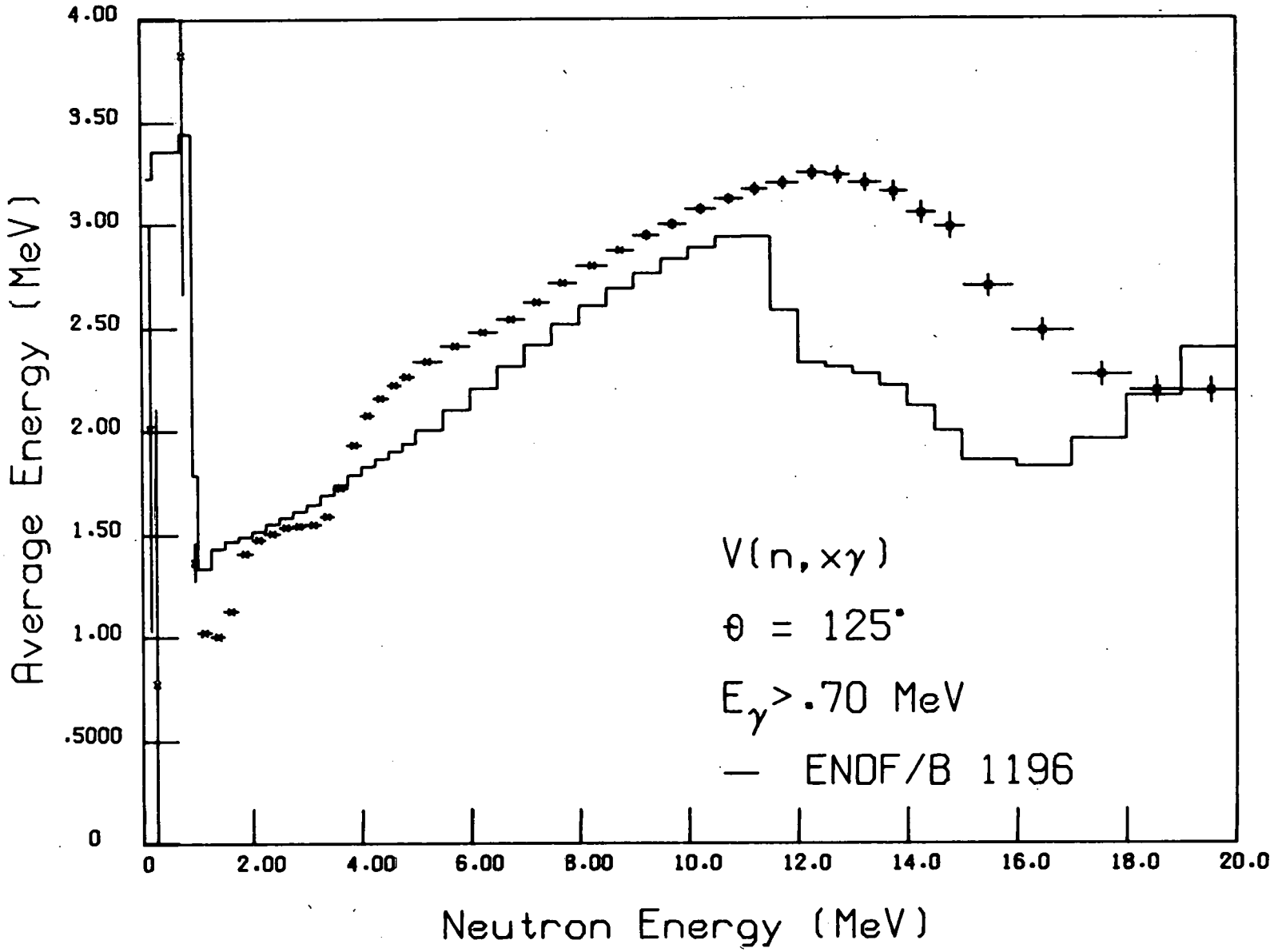
4.00
3.50
3.00
2.50
2.00
1.50
1.00
.5000
0
Average Energy (MeV)
0
2.00
4.00
6.00
8.00
10.0
12.0
14.0
16.0
18.0
20.0
Neutron Energy (MeV)
V(n,xγ)
θ = 125°
Eγ>.70 MeV
— ENDF/B 1196

FIGURE 24

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 0.20 TO 0.60 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)
2.725E-01	8.005E-02	1.633E-03	2.750E 00	-9.703E-06	1.426E-04
2.875E-01	1.588E-01	1.631E-03	2.810E 00	-1.694E-05	1.404E-04
3.025E-01	2.195E-01	1.536E-03	2.870E 00	-9.549E-06	1.360E-04
3.175E-01	2.221E-01	1.448E-03	2.930E 00	3.659E-05	1.451E-04
3.325E-01	1.705E-01	1.290E-03	2.990E 00	6.947E-05	1.351E-04
3.475E-01	1.024E-01	1.092E-03	3.050E 00	8.319E-05	1.381E-04
3.625E-01	4.918E-02	9.808E-04	3.110E 00	6.200E-05	1.397E-04
3.775E-01	1.925E-02	9.046E-04	3.180E 00	2.996E-05	1.294E-04
3.925E-01	6.198E-03	7.657E-04	3.260E 00	1.248E-05	1.195E-04
4.100E-01	1.284E-03	6.944E-04	3.340E 00	3.020E-06	1.244E-04
4.300E-01	8.680E-05	6.824E-04	3.420E 00	-2.250E-05	1.283E-04
4.500E-01	-1.303E-04	6.558E-04	3.500E 00	-4.997E-05	1.149E-04
4.700E-01	-2.228E-04	5.964E-04	3.580E 00	-5.992E-05	1.205E-04
4.900E-01	-1.971E-04	5.666E-04	3.660E 00	-4.295E-05	1.330E-04
5.100E-01	-1.624E-04	5.219E-04	3.740E 00	-5.194E-05	1.108E-04
5.300E-01	-1.156E-04	4.574E-04	3.820E 00	-7.152E-06	1.127E-04
5.500E-01	-2.631E-04	4.338E-04	3.900E 00	5.611E-05	1.160E-04
5.700E-01	-3.644E-04	4.492E-04	3.980E 00	7.648E-05	1.133E-04
5.900E-01	-4.458E-04	4.814E-04	4.060E 00	5.583E-05	1.110E-04
6.100E-01	-4.394E-04	4.999E-04	4.140E 00	2.739E-05	1.111E-04
6.300E-01	-3.586E-04	4.778E-04	4.220E 00	-2.882E-06	1.124E-04
6.500E-01	-2.295E-04	4.531E-04	4.300E 00	-2.985E-05	9.969E-05
6.700E-01	-1.271E-04	4.190E-04	4.380E 00	-6.127E-05	8.959E-05
6.900E-01	-7.392E-05	3.838E-04	4.460E 00	-6.097E-05	1.008E-04
7.100E-01	-7.073E-05	3.744E-04	4.540E 00	-6.186E-05	1.084E-04
7.300E-01	-5.805E-05	3.701E-04	4.630E 00	-2.827E-05	8.872E-05
7.500E-01	-5.337E-05	3.383E-04	4.730E 00	2.168E-05	1.037E-04
7.700E-01	8.649E-06	3.531E-04	4.830E 00	7.347E-05	9.776E-05
7.900E-01	4.326E-05	3.353E-04	4.930E 00	8.578E-05	1.002E-04
8.100E-01	6.958E-05	3.138E-04	5.030E 00	8.284E-05	1.020E-04
8.300E-01	8.088E-05	3.118E-04	5.130E 00	3.167E-05	8.964E-05
8.500E-01	7.968E-05	3.082E-04	5.230E 00	8.689E-06	1.094E-04
8.700E-01	6.971E-05	2.956E-04	5.330E 00	-3.804E-06	1.131E-04
8.900E-01	6.844E-05	2.889E-04	5.430E 00	-2.703E-05	9.894E-05
9.100E-01	6.518E-05	2.898E-04	5.530E 00	-3.837E-05	9.789E-05
9.300E-01	3.560E-05	2.712E-04	5.630E 00	-3.119E-05	1.033E-04
9.500E-01	6.500E-06	2.620E-04	5.730E 00	-6.792E-06	1.018E-04
9.700E-01	-3.772E-05	2.497E-04	5.830E 00	1.996E-05	1.002E-04
1.000E 00	-8.701E-05	2.349E-04	5.930E 00	4.578E-05	1.011E-04
1.040E 00	-1.337E-04	2.341E-04	6.030E 00	6.301E-05	1.013E-04
1.080E 00	-1.183E-04	2.242E-04	6.130E 00	5.957E-05	9.489E-05
1.120E 00	-8.895E-05	2.290E-04	6.230E 00	3.817E-05	9.334E-05
1.160E 00	-8.901E-05	2.177E-04	6.330E 00	1.526E-05	8.907E-05
1.200E 00	-8.392E-05	2.048E-04	6.440E 00	-6.763E-06	7.117E-05
1.240E 00	-8.455E-05	2.308E-04	6.560E 00	-1.609E-05	6.457E-05
1.280E 00	-1.489E-05	2.500E-04	6.680E 00	-2.638E-05	5.747E-05
1.320E 00	-1.580E-05	2.716E-04	6.800E 00	-3.888E-05	4.657E-05
1.360E 00	-1.264E-05	2.854E-04	6.920E 00	-3.168E-05	3.777E-05
1.000E 00	3.942E-06	2.724E-04	7.040E 00	-6.411E-06	2.789E-05
1.440E 00	5.430E-05	2.756E-04	7.160E 00	2.578E-05	1.941E-05
1.480E 00	8.159E-05	2.657E-04	7.280E 00	5.250E-05	1.356E-05
1.520E 00	9.335E-05	2.433E-04	7.400E 00	7.399E-05	1.195E-05
1.560E 00	7.055E-05	2.428E-04	7.520E 00	8.480E-05	1.108E-05
1.600E 00	4.390E-05	2.511E-04	7.640E 00	7.821E-05	1.002E-05
1.640E 00	2.497E-06	2.329E-04	7.760E 00	5.899E-05	8.570E-06
1.680E 00	-1.335E-06	2.419E-04	7.890E 00	3.491E-05	7.200E-06
1.720E 00	-5.402E-06	2.396E-04	8.030E 00	1.689E-05	6.353E-06
1.760E 00	-2.532E-06	2.282E-04	8.170E 00	6.718E-06	4.643E-06
1.800E 00	4.341E-06	2.197E-04	8.310E 00	2.200E-06	3.443E-06
1.850E 00	1.395E-05	2.022E-04	8.450E 00	6.181E-09	2.954E-06
1.910E 00	-5.564E-08	1.958E-04	8.590E 00	-1.012E-06	2.751E-06
1.970E 00	-5.738E-05	1.887E-04	8.730E 00	-1.306E-06	1.883E-06
2.030E 00	-9.907E-05	1.866E-04	8.870E 00	-9.996E-07	1.744E-06
2.090E 00	-5.486E-05	1.967E-04	9.010E 00	-3.448E-07	2.045E-06
2.150E 00	2.284E-05	2.019E-04	9.150E 00	3.965E-07	1.898E-06
2.210E 00	8.270E-05	2.064E-04	9.300E 00	6.622E-07	1.971E-06
2.270E 00	7.540E-05	1.852E-04	9.460E 00	1.159E-06	1.896E-06
2.330E 00	4.051E-05	1.668E-04	9.620E 00	9.416E-07	1.864E-06
2.390E 00	8.395E-06	1.572E-04	9.780E 00	9.071E-07	2.024E-06
2.450E 00	-1.107E-03	1.470E-04	9.940E 00	2.209E-07	2.197E-06
2.510E 00	-1.741E-05	1.468E-04	1.010E 01	-7.387E-08	1.970E-06
2.570E 00	-4.258E-06	1.455E-04	1.026E 01	-3.034E-07	1.367E-06
2.630E 00	9.957E-06	1.472E-04	1.042E 01	-4.359E-07	1.584E-06
2.690E 00	6.829E-06	1.033E-04	1.058E 01	1.360E-07	2.009E-06

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.076E-02	1.126E-04
4.000E-01 - 5.000E-01	2.438E-05	6.398E-05
5.000E-01 - 6.000E-01	-2.817E-05	4.685E-05
6.000E-01 - 7.000E-01	-2.455E-05	4.464E-05
7.000E-01 - 8.000E-01	-2.555E-06	3.547E-05
8.000E-01 - 1.000E 00	7.254E-06	5.664E-05
1.000E 00 - 1.200E 00	-2.082E-05	4.501E-05
1.200E 00 - 1.400E 00	-5.011E-06	5.123E-05
1.400E 00 - 1.600E 00	1.324E-05	5.156E-05
1.600E 00 - 1.800E 00	5.267E-07	4.710E-05
1.800E 00 - 2.000E 00	-2.408E-06	3.961E-05
2.000E 00 - 2.500E 00	2.871E-06	8.986E-05
2.500E 00 - 3.000E 00	2.832E-06	7.136E-05
3.000E 00 - 3.500E 00	1.026E-05	6.429E-05
3.500E 00 - 4.000E 00	-6.497E-06	5.811E-05
4.000E 00 - 4.500E 00	-4.412E-06	5.216E-05
4.500E 00 - 5.000E 00	1.215E-05	4.953E-05
5.000E 00 - 6.000E 00	7.259E-06	1.015E-04
6.000E 00 - 7.000E 00	1.752E-06	6.970E-05
7.000E 00 - 8.000E 00	5.022E-05	1.298E-05
8.000E 00 - 9.000E 00	2.288E-06	3.170E-06
9.000E 00 - 1.000E 01	6.660E-07	1.971E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 0.60 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)
2.725E-01	1.255E-01	1.249E-03	2.750E 00	5.016E-06	6.133E-05
2.875E-01	2.839E-01	1.288E-03	2.810E 00	-8.057E-06	6.133E-05
3.025E-01	3.325E-01	1.184E-03	2.870E 00	-2.500E-06	5.982E-05
3.175E-01	3.329E-01	1.044E-03	2.930E 00	1.088E-05	6.000E-05
3.325E-01	2.531E-01	8.590E-04	2.990E 00	2.640E-05	6.218E-05
3.475E-01	1.505E-01	7.087E-04	3.050E 00	3.476E-05	6.129E-05
3.625E-01	7.204E-02	6.366E-04	3.110E 00	3.969E-05	5.918E-05
3.775E-01	2.854E-02	5.724E-04	3.180E 00	3.803E-05	6.010E-05
3.925E-01	9.665E-03	5.555E-04	3.260E 00	2.462E-05	5.799E-05
4.100E-01	2.441E-03	5.464E-04	3.340E 00	1.330E-05	5.749E-05
4.300E-01	6.875E-04	5.507E-04	3.420E 00	1.431E-05	5.945E-05
4.500E-01	5.503E-04	5.515E-04	3.500E 00	7.647E-06	5.927E-05
4.700E-01	6.024E-04	5.163E-04	3.580E 00	-7.946E-06	5.287E-05
4.900E-01	5.447E-04	4.402E-04	3.660E 00	-1.947E-05	5.081E-05
5.100E-01	3.877E-04	3.456E-04	3.740E 00	-2.240E-05	5.228E-05
5.300E-01	1.877E-04	2.644E-04	3.820E 00	-1.294E-05	5.453E-05
5.500E-01	5.107E-05	2.246E-04	3.900E 00	-3.445E-07	5.588E-05
5.700E-01	4.683E-05	2.093E-04	3.980E 00	1.922E-05	5.547E-05
5.900E-01	1.467E-04	1.955E-04	4.060E 00	3.772E-05	4.823E-05
6.100E-01	2.566E-04	1.962E-04	4.140E 00	5.296E-05	4.595E-05
6.300E-01	2.929E-04	2.069E-04	4.220E 00	5.558E-05	4.590E-05
6.500E-01	2.457E-04	2.021E-04	4.300E 00	5.029E-05	5.078E-05
6.700E-01	1.558E-04	1.899E-04	4.380E 00	3.672E-05	4.953E-05
6.900E-01	6.874E-05	1.764E-04	4.460E 00	1.644E-05	4.850E-05
7.100E-01	1.807E-06	1.640E-04	4.540E 00	-3.954E-06	4.142E-05
7.300E-01	-1.909E-05	1.571E-04	4.630E 00	-2.378E-05	3.979E-05
7.500E-01	-2.931E-05	1.498E-04	4.730E 00	-3.317E-05	4.198E-05
7.700E-01	3.311E-05	1.436E-04	4.830E 00	-2.583E-05	4.777E-05
7.900E-01	8.218E-05	1.387E-04	4.930E 00	-8.193E-06	4.985E-05
8.100E-01	1.677E-04	1.374E-04	5.030E 00	9.042E-06	4.238E-05
8.300E-01	3.352E-04	1.373E-04	5.130E 00	2.797E-05	4.311E-05
8.500E-01	6.085E-04	1.351E-04	5.230E 00	3.651E-05	4.491E-05
8.700E-01	9.581E-04	1.277E-04	5.330E 00	3.191E-05	5.076E-05
8.900E-01	1.292E-03	1.246E-04	5.430E 00	2.481E-05	5.224E-05
9.100E-01	1.498E-03	1.275E-04	5.530E 00	2.997E-05	5.179E-05
9.300E-01	1.498E-03	1.274E-04	5.630E 00	4.169E-05	5.357E-05
9.500E-01	1.295E-03	1.252E-04	5.730E 00	3.815E-05	5.037E-05
9.700E-01	9.711E-04	1.227E-04	5.830E 00	3.135E-05	5.617E-05
1.000E 00	4.771E-04	1.143E-04	5.930E 00	1.447E-05	5.397E-05
1.040E 00	9.509E-05	1.037E-04	6.030E 00	5.985E-06	5.148E-05
1.080E 00	-1.622E-05	9.571E-05	6.130E 00	9.126E-06	4.675E-05
1.120E 00	-1.524E-05	9.323E-05	6.230E 00	1.270E-05	4.749E-05
1.160E 00	1.129E-05	9.355E-05	6.330E 00	1.507E-05	4.436E-05
1.200E 00	3.527E-05	8.995E-05	6.440E 00	1.295E-05	3.931E-05
1.240E 00	5.058E-05	9.175E-05	6.560E 00	1.197E-05	3.322E-05
1.280E 00	5.586E-05	1.071E-04	6.680E 00	6.696E-06	2.803E-05
1.320E 00	5.014E-05	1.132E-04	6.800E 00	-1.453E-06	2.470E-05
1.360E 00	4.765E-05	1.173E-04	6.920E 00	-8.657E-06	1.966E-05
1.400E 00	4.638E-05	1.139E-04	7.040E 00	-6.906E-06	1.508E-05
1.440E 00	4.283E-05	1.113E-04	7.160E 00	-1.352E-06	1.104E-05
1.480E 00	4.903E-05	1.060E-04	7.280E 00	3.134E-06	8.757E-06
1.520E 00	7.059E-05	1.024E-04	7.400E 00	6.326E-06	7.553E-06
1.560E 00	9.081E-05	9.997E-05	7.520E 00	1.122E-05	6.793E-06
1.600E 00	1.004E-04	1.020E-04	7.640E 00	1.911E-05	6.489E-06
1.640E 00	9.716E-05	1.023E-04	7.760E 00	2.750E-05	5.844E-06
1.680E 00	9.023E-05	1.050E-04	7.890E 00	3.443E-05	4.817E-06
1.720E 00	7.636E-05	1.017E-04	8.030E 00	3.697E-05	4.181E-06
1.760E 00	5.912E-05	9.593E-05	8.170E 00	3.158E-05	3.544E-06
1.800E 00	4.717E-05	9.586E-05	8.310E 00	2.022E-05	2.750E-06
1.850E 00	4.204E-05	9.692E-05	8.450E 00	9.042E-06	1.763E-06
1.910E 00	3.418E-05	8.826E-05	8.590E 00	2.782E-06	1.318E-06
1.970E 00	1.409E-05	7.970E-05	8.730E 00	2.699E-07	1.220E-06
2.030E 00	2.097E-05	8.280E-05	8.870E 00	-5.987E-07	1.081E-06
2.090E 00	5.560E-05	8.289E-05	9.010E 00	-6.764E-07	8.449E-07
2.150E 00	7.413E-05	8.761E-05	9.150E 00	-3.903E-07	6.786E-07
2.210E 00	8.908E-05	8.586E-05	9.300E 00	1.023E-07	6.111E-07
2.270E 00	1.211E-05	7.796E-05	9.460E 00	5.283E-07	5.614E-07
2.330E 00	-2.584E-06	6.981E-05	9.620E 00	6.398E-07	6.888E-07
2.390E 00	2.869E-06	6.513E-05	9.780E 00	8.820E-07	5.676E-07
2.450E 00	1.717E-05	6.570E-05	9.940E 00	8.485E-07	5.630E-07
2.510E 00	3.005E-05	6.432E-05	1.010E 01	7.768E-07	6.539E-07
2.570E 00	3.766E-05	6.401E-05	1.026E 01	6.841E-07	6.352E-07
2.630E 00	3.599E-05	6.385E-05	1.042E 01	3.901E-07	7.364E-07
2.690E 00	2.190E-05	6.182E-05	1.058E 01	2.051E-07	8.348E-07

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	1.605E-02	7.733E-05
4.000E-01	-	5.000E-01	1.081E-04	5.207E-05
5.000E-01	-	6.000E-01	1.646E-05	2.485E-05
6.000E-01	-	7.000E-01	2.020E-05	1.940E-05
7.000E-01	-	8.000E-01	2.049E-06	1.508E-05
8.000E-01	-	1.000E 00	1.850E-04	2.565E-05
1.000E 00	-	1.200E 00	1.171E-05	1.950E-05
1.200E 00	-	1.400E 00	9.874E-06	2.130E-05
1.400E 00	-	1.600E 00	1.302E-05	2.108E-05
1.600E 00	-	1.800E 00	1.590E-05	2.015E-05
1.800E 00	-	2.000E 00	6.500E-06	1.731E-05
2.000E 00	-	2.500E 00	1.430E-05	3.830E-05
2.500E 00	-	3.000E 00	8.292E-06	3.097E-05
3.000E 00	-	3.500E 00	1.264E-05	2.964E-05
3.500E 00	-	4.000E 00	-3.828E-06	2.695E-05
4.000E 00	-	4.500E 00	2.043E-05	2.415E-05
4.500E 00	-	5.000E 00	-9.264E-06	2.216E-05
5.000E 00	-	6.000E 00	2.873E-05	5.017E-05
6.000E 00	-	7.000E 00	6.674E-06	3.566E-05
7.000E 00	-	8.000E 00	1.354E-05	7.917E-06
8.000E 00	-	9.000E 00	1.249E-05	2.102E-06
9.000E 00	-	1.000E 01	3.573E-07	6.276E-07

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 1.49 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)
2.725E-01	1.932E-01	2.417E-03	2.750E 00	3.709E-05	5.533E-05
2.875E-01	3.785E-01	2.373E-03	2.810E 00	3.389E-05	5.599E-05
3.025E-01	5.191E-01	2.111E-03	2.870E 00	3.093E-05	5.731E-05
3.175E-01	5.241E-01	1.865E-03	2.930E 00	3.299E-05	5.746E-05
3.325E-01	4.030E-01	1.559E-03	2.990E 00	3.267E-05	5.622E-05
3.475E-01	2.431E-01	1.429E-03	3.050E 00	3.123E-05	5.563E-05
3.625E-01	1.184E-01	1.328E-03	3.110E 00	3.547E-05	5.580E-05
3.775E-01	4.797E-02	1.264E-03	3.180E 00	4.817E-05	5.706E-05
3.925E-01	1.672E-02	1.287E-03	3.260E 00	5.172E-05	5.726E-05
4.100E-01	4.454E-03	1.344E-03	3.340E 00	3.988E-05	5.719E-05
4.300E-01	1.599E-03	1.468E-03	3.420E 00	2.573E-05	5.616E-05
4.500E-01	1.474E-03	1.574E-03	3.500E 00	9.704E-06	5.490E-05
4.700E-01	1.476E-03	1.480E-03	3.580E 00	-9.086E-06	5.237E-05
4.900E-01	1.393E-03	1.217E-03	3.660E 00	-1.010E-05	5.064E-05
5.100E-01	1.458E-03	8.459E-04	3.740E 00	2.339E-06	5.071E-05
5.300E-01	1.960E-03	5.458E-04	3.820E 00	1.319E-05	5.286E-05
5.500E-01	3.481E-03	4.140E-04	3.900E 00	1.396E-05	5.207E-05
5.700E-01	6.248E-03	3.784E-04	3.980E 00	2.231E-05	5.134E-05
5.900E-01	8.982E-03	3.776E-04	4.060E 00	4.029E-05	4.913E-05
6.100E-01	9.770E-03	3.928E-04	4.140E 00	4.003E-05	4.837E-05
6.300E-01	8.190E-03	4.425E-04	4.220E 00	2.275E-05	4.890E-05
6.500E-01	5.512E-03	4.146E-04	4.300E 00	-2.277E-06	4.530E-05
6.700E-01	3.138E-03	3.673E-04	4.380E 00	-1.231E-05	4.769E-05
6.900E-01	1.537E-03	3.368E-04	4.460E 00	1.842E-06	4.865E-05
7.100E-01	6.240E-04	3.208E-04	4.540E 00	2.273E-05	4.836E-05
7.300E-01	1.321E-04	3.195E-04	4.630E 00	2.956E-05	4.582E-05
7.500E-01	-1.091E-04	3.148E-04	4.730E 00	2.053E-05	4.459E-05
7.700E-01	-7.552E-05	3.082E-04	4.830E 00	2.894E-06	4.710E-05
7.900E-01	5.016E-04	2.997E-04	4.930E 00	-4.716E-07	5.080E-05
8.100E-01	2.357E-03	3.014E-04	5.030E 00	3.401E-06	4.850E-05
8.300E-01	6.765E-03	2.940E-04	5.130E 00	1.729E-05	5.120E-05
8.500E-01	1.478E-02	2.923E-04	5.230E 00	3.128E-05	5.241E-05
8.700E-01	2.578E-02	3.012E-04	5.330E 00	3.839E-05	5.442E-05
8.900E-01	3.657E-02	3.147E-04	5.430E 00	2.918E-05	5.075E-05
9.100E-01	4.295E-02	2.950E-04	5.530E 00	2.097E-05	4.862E-05
9.300E-01	4.244E-02	2.620E-04	5.630E 00	1.236E-05	5.066E-05
9.500E-01	3.581E-02	2.324E-04	5.730E 00	-4.011E-06	5.048E-05
9.700E-01	2.615E-02	2.168E-04	5.830E 00	-1.795E-05	5.040E-05
1.000E 00	1.281E-02	1.601E-04	5.930E 00	-2.219E-05	4.842E-05
1.040E 00	3.380E-03	1.361E-04	6.030E 00	-7.101E-06	4.750E-05
1.080E 00	6.525E-04	1.014E-04	6.130E 00	2.502E-05	4.497E-05
1.120E 00	1.114E-04	9.440E-05	6.230E 00	4.867E-05	4.364E-05
1.160E 00	2.166E-05	8.918E-05	6.330E 00	5.240E-05	4.162E-05
1.200E 00	1.052E-05	8.561E-05	6.440E 00	4.416E-05	3.954E-05
1.240E 00	1.668E-05	8.505E-05	6.560E 00	3.838E-05	3.486E-05
1.280E 00	3.260E-05	9.621E-05	6.680E 00	3.251E-05	3.118E-05
1.320E 00	5.960E-05	1.004E-04	6.800E 00	2.625E-05	2.629E-05
1.360E 00	8.980E-05	1.019E-04	6.920E 00	1.159E-05	2.233E-05
1.400E 00	1.010E-04	1.009E-04	7.040E 00	-8.262E-06	1.747E-05
1.440E 00	1.000E-04	1.001E-04	7.160E 00	-2.091E-05	1.355E-05
1.480E 00	1.078E-04	9.507E-05	7.280E 00	-1.880E-05	1.106E-05
1.520E 00	1.282E-04	8.965E-05	7.400E 00	-5.138E-06	9.242E-06
1.560E 00	1.283E-04	8.971E-05	7.52CE 00	1.033E-05	8.224E-06
1.600E 00	9.584E-05	8.794E-05	7.640E 00	1.928E-05	7.495E-06
1.640E 00	5.898E-05	8.801E-05	7.760E 00	2.022E-05	7.296E-06
1.680E 00	4.295E-05	8.845E-05	7.890E 00	1.661E-05	7.042E-06
1.720E 00	5.202E-05	8.645E-05	8.030E 00	1.502E-05	6.078E-06
1.760E 00	7.169E-05	8.537E-05	8.170E 00	2.050E-05	5.306E-06
1.800E 00	8.915E-05	8.133E-05	8.310E 00	2.837E-05	4.878E-06
1.850E 00	8.937E-05	7.840E-05	8.450E 00	3.060E-05	4.235E-06
1.910E 00	5.385E-05	7.667E-05	8.590E 00	2.471E-05	3.305E-06
1.970E 00	1.790E-05	7.389E-05	8.730E 00	1.651E-05	2.640E-06
2.030E 00	1.296E-05	7.365E-05	8.870E 00	9.723E-06	2.042E-06
2.090E 00	2.225E-05	7.340E-05	9.010E 00	5.220E-06	1.699E-06
2.150E 00	2.716E-05	7.508E-05	9.150E 00	2.055E-06	1.324E-06
2.210E 00	2.012E-05	7.309E-05	9.300E 00	-1.164E-09	9.127E-07
2.270E 00	3.050E-05	7.045E-05	9.460E 00	-6.242E-07	7.196E-07
2.330E 00	2.151E-05	6.494E-05	9.620E 00	-5.607E-07	7.065E-07
2.390E 00	9.548E-06	6.103E-05	9.780E 00	-2.324E-07	6.372E-07
2.450E 00	5.110E-06	5.955E-05	9.940E 00	1.523E-07	5.715E-07
2.510E 00	3.463E-06	5.951E-05	1.010E 01	4.383E-07	4.268E-07
2.570E 00	4.751E-06	5.779E-05	1.026E 01	6.846E-07	3.366E-07
2.630E 00	1.705E-05	5.850E-05	1.042E 01	6.988E-07	5.078E-07
2.690E 00	3.238E-05	5.791E-05	1.058E 01	6.017E-07	5.964E-07

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	2.554E-02	1.522E-04
4.000E-01 - 5.000E-01	2.281E-04	1.406E-04
5.000E-01 - 6.000E-01	4.410E-04	5.146E-05
6.000E-01 - 7.000E-01	5.603E-04	3.915E-05
7.000E-01 - 8.000E-01	2.453E-03	3.137E-05
8.000E-01 - 1.000E 00	5.004E-03	5.381E-05
1.000E 00 - 1.200E 00	3.879E-04	2.164E-05
1.200E 00 - 1.400E 00	1.017E-05	1.909E-05
1.400E 00 - 1.600E 00	2.265E-05	1.877E-05
1.600E 00 - 1.800E 00	1.251E-05	1.734E-05
1.800E 00 - 2.000E 00	1.165E-05	1.538E-05
2.000E 00 - 2.500E 00	9.549E-06	3.432E-05
2.500E 00 - 3.000E 00	1.278E-05	2.868E-05
3.000E 00 - 3.500E 00	1.834E-05	2.627E-05
3.500E 00 - 4.000E 00	2.335E-06	2.595E-05
4.000E 00 - 4.500E 00	7.796E-06	2.340E-05
4.500E 00 - 5.000E 00	6.983E-06	2.366E-05
5.000E 00 - 6.000E 00	1.068E-05	5.061E-05
6.000E 00 - 7.000E 00	3.006E-05	3.567E-05
7.000E 00 - 8.000E 00	2.667E-06	9.793E-06
8.000E 00 - 9.000E 00	2.016E-05	3.842E-06
9.000E 00 - 1.000E 01	4.589E-07	8.737E-07

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 1.49 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)
2.725E-01	2.204E-01	3.735E-03	2.750E 00	1.644E-05	6.562E-05
2.875E-01	4.335E-01	3.591E-03	2.810E 00	1.230E-05	6.682E-05
3.025E-01	6.004E-01	3.273E-03	2.870E 00	7.098E-06	6.547E-05
3.175E-01	6.133E-01	2.926E-03	2.930E 00	1.727E-06	6.391E-05
3.325E-01	4.776E-01	2.563E-03	2.990E 00	1.349E-06	6.506E-05
3.475E-01	2.921E-01	2.478E-03	3.050E 00	1.129E-05	6.362E-05
3.625E-01	1.451E-01	2.249E-03	3.110E 00	2.441E-05	6.252E-05
3.775E-01	6.130E-02	2.229E-03	3.180E 00	2.970E-05	6.279E-05
3.925E-01	2.389E-02	2.321E-03	3.260E 00	2.876E-05	6.345E-05
4.100E-01	8.623E-03	2.377E-03	3.340E 00	3.569E-05	6.482E-05
4.300E-01	3.833E-03	2.561E-03	3.420E 00	5.180E-05	6.197E-05
4.500E-01	3.275E-03	2.608E-03	3.500E 00	4.614E-05	6.103E-05
4.700E-01	4.104E-03	2.444E-03	3.580E 00	8.909E-06	5.546E-05
4.900E-01	4.094E-03	1.999E-03	3.660E 00	-1.076E-05	5.039E-05
5.100E-01	3.268E-03	1.515E-03	3.740E 00	-4.832E-06	5.189E-05
5.300E-01	3.524E-03	1.115E-03	3.820E 00	1.944E-05	5.821E-05
5.500E-01	6.451E-03	8.663E-04	3.900E 00	3.796E-05	5.810E-05
5.700E-01	1.166E-02	8.120E-04	3.980E 00	2.336E-05	5.239E-05
5.900E-01	1.659E-02	8.118E-04	4.060E 00	2.380E-05	5.528E-05
6.100E-01	1.808E-02	8.299E-04	4.140E 00	2.344E-05	4.767E-05
6.300E-01	1.522E-02	9.449E-04	4.220E 00	2.930E-05	4.704E-05
6.500E-01	1.013E-02	9.462E-04	4.300E 00	3.474E-05	5.240E-05
6.700E-01	5.728E-03	8.855E-04	4.380E 00	4.029E-05	5.144E-05
6.900E-01	3.118E-03	8.026E-04	4.460E 00	4.776E-05	4.949E-05
7.100E-01	1.584E-03	7.528E-04	4.540E 00	4.515E-05	4.951E-05
7.300E-01	3.828E-04	7.725E-04	4.630E 00	2.514E-05	4.691E-05
7.500E-01	-3.775E-04	7.864E-04	4.730E 00	-7.358E-06	4.578E-05
7.700E-01	-3.347E-04	7.626E-04	4.830E 00	-3.350E-05	4.241E-05
7.900E-01	7.833E-04	7.368E-04	4.930E 00	-4.548E-05	4.539E-05
8.100E-01	3.961E-03	7.370E-04	5.030E 00	-3.653E-05	4.261E-05
8.300E-01	1.159E-02	7.258E-04	5.130E 00	-7.648E-06	4.364E-05
8.500E-01	2.583E-02	7.202E-04	5.230E 00	2.274E-05	4.100E-05
8.700E-01	4.562E-02	7.328E-04	5.330E 00	4.599E-05	4.310E-05
8.900E-01	6.514E-02	7.282E-04	5.430E 00	5.454E-05	4.425E-05
9.100E-01	7.676E-02	6.955E-04	5.530E 00	5.090E-05	4.278E-05
9.300E-01	7.608E-02	6.379E-04	5.630E 00	4.105E-05	4.406E-05
9.500E-01	6.440E-02	6.168E-04	5.730E 00	2.290E-05	4.580E-05
9.700E-01	4.720E-02	6.074E-04	5.830E 00	-2.750E-06	4.599E-05
1.000E 00	2.312E-02	5.259E-04	5.930E 00	-2.069E-05	4.898E-05
1.040E 00	5.804E-03	4.884E-04	6.030E 00	-2.237E-05	4.871E-05
1.080E 00	1.024E-03	4.001E-04	6.130E 00	-5.990E-06	4.520E-05
1.120E 00	-3.330E-05	4.102E-04	6.230E 00	1.683E-05	4.277E-05
1.160E 00	-6.473E-04	3.971E-04	6.330E 00	3.217E-05	4.203E-05
1.200E 00	-8.725E-04	4.167E-04	6.440E 00	3.856E-05	4.115E-05
1.240E 00	-6.879E-04	4.494E-04	6.560E 00	3.484E-05	3.542E-05
1.280E 00	-4.688E-04	4.822E-04	6.680E 00	2.212E-05	3.053E-05
1.320E 00	-2.236E-04	4.960E-04	6.800E 00	1.492E-05	2.759E-05
1.360E 00	-2.014E-04	4.759E-04	6.920E 00	2.391E-05	2.432E-05
1.400E 00	1.076E 00	4.050E-04	7.040E 00	3.044E-05	1.979E-05
1.440E 00	5.255E-03	4.762E-04	7.160E 00	3.100E-05	1.600E-05
1.480E 00	1.565E-02	5.202E-04	7.280E 00	1.390E-05	1.288E-05
1.520E 00	3.286E-02	6.748E-04	7.400E 00	-6.575E-07	1.148E-05
1.560E 00	4.855E-02	7.494E-04	7.520E 00	-1.118E-06	1.09CE-05
1.600E 00	5.117E-02	6.921E-04	7.640E 00	8.684E-06	1.140E-05
1.640E 00	3.980E-02	5.308E-04	7.760E 00	1.459E-05	1.063E-05
1.680E 00	2.475E-02	3.624E-04	7.890E 00	1.205E-05	9.766E-06
1.720E 00	1.498E-02	2.660E-04	8.030E 00	7.358E-06	9.534E-06
1.760E 00	1.101E-02	2.211E-04	8.170E 00	1.027E-05	9.194E-06
1.800E 00	9.075E-03	2.203E-04	8.310E 00	1.703E-05	8.643E-06
1.850E 00	6.088E-03	1.652E-04	8.450E 00	2.128E-05	8.205E-06
1.910E 00	2.475E-03	1.251E-04	8.590E 00	2.132E-05	7.548E-06
1.970E 00	6.471E-04	9.678E-05	8.730E 00	1.902E-05	7.012E-06
2.030E 00	1.527E-04	8.901E-05	8.870E 00	1.820E-05	6.374E-06
2.090E 00	7.833E-05	8.668E-05	9.010E 00	1.957E-05	5.001E-06
2.150E 00	6.365E-05	8.343E-05	9.150E 00	1.848E-05	4.615E-06
2.210E 00	5.205E-05	8.362E-05	9.300E 00	1.359E-05	3.876E-06
2.270E 00	5.774E-05	7.721E-05	9.460E 00	7.210E-06	2.997E-06
2.330E 00	6.870E-05	7.209E-05	9.620E 00	2.965E-06	2.471E-06
2.390E 00	5.957E-05	7.090E-05	9.780E 00	9.199E-07	2.749E-06
2.450E 00	5.089E-05	7.069E-05	9.940E 00	2.896E-07	1.843E-06
2.510E 00	6.601E-05	6.793E-05	1.010E 01	1.430E-07	1.218E-06
2.570E 00	7.580E-05	6.615E-05	1.026E 01	3.495E-07	9.547E-07
2.630E 00	5.721E-05	6.513E-05	1.042E 01	2.787E-07	1.007E-06
2.690E 00	3.004E-05	6.577E-05	1.058E 01	2.992E-07	9.403E-07

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	3.027E-02	2.536E-04
4.000E-01	-	5.000E-01	5.009E-04	2.398E-04
5.000E-01	-	6.000E-01	8.280E-04	1.027E-04
6.000E-01	-	7.000E-01	1.041E-03	8.824E-05
7.000E-01	-	8.000E-01	4.541E-05	7.635E-05
8.000E-01	-	1.000E 00	8.933E-03	1.352E-04
1.000E 00	-	1.200E 00	6.270E-04	8.628E-05
1.200E 00	-	1.400E 00	-7.231E-05	9.424E-05
1.400E 00	-	1.600E 00	5.153E-03	1.206E-04
1.600E 00	-	1.800E 00	4.783E-03	7.251E-05
1.800E 00	-	2.000E 00	7.243E-04	2.759E-05
2.000E 00	-	2.500E 00	3.842E-05	3.943E-05
2.500E 00	-	3.000E 00	1.483E-05	3.284E-05
3.000E 00	-	3.500E 00	1.586E-05	3.155E-05
3.500E 00	-	4.000E 00	6.703E-06	2.750E-05
4.000E 00	-	4.500E 00	1.635E-05	2.530E-05
4.500E 00	-	5.000E 00	-3.281E-06	2.283E-05
5.000E 00	-	6.000E 00	1.750E-05	4.436E-05
6.000E 00	-	7.000E 00	1.929E-05	3.636E-05
7.000E 00	-	8.000E 00	1.353E-05	1.251E-05
8.000E 00	-	9.000E 00	1.689E-05	7.848E-06
9.000E 00	-	1.000E 01	8.143E-06	3.183E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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)
2.725E-01	1.490D-01	4.965E-03	2.750E 00	-1.187E-05	7.791E-05
2.875E-01	3.414E-01	4.705E-03	2.810E 00	1.804E-05	7.668E-05
3.025E-01	5.419E-01	4.487E-03	2.870E 00	3.871E-05	7.649E-05
3.175E-01	6.276E-01	4.272E-03	2.930E 00	4.338E-05	7.974E-05
3.325E-01	5.496E-01	4.007E-03	2.990E 00	5.783E-05	7.909E-05
3.475E-01	3.766E-01	3.828E-03	3.050E 00	9.211E-05	7.698E-05
3.625E-01	2.095E-01	3.369E-03	3.110E 00	1.056E-04	7.704E-05
3.775E-01	9.938E-02	3.388E-03	3.180E 00	6.708E-05	6.275E-05
3.925E-01	4.412E-02	3.386E-03	3.260E 00	7.676E-06	6.628E-05
4.100E-01	1.964E-02	3.501E-03	3.340E 00	4.049E-06	6.728E-05
4.300E-01	1.156E-02	3.708E-03	3.420E 00	4.489E-05	7.559E-05
4.500E-01	9.390E-03	3.701E-03	3.500E 00	7.222E-06	7.182E-05
4.700E-01	8.778E-03	3.633E-03	3.580E 00	7.146E-05	7.502E-05
4.900E-01	8.336E-03	3.192E-03	3.660E 00	4.485E-05	6.190E-05
5.100E-01	7.606E-03	2.616E-03	3.740E 00	2.904E-05	6.015E-05
5.300E-01	6.691E-03	1.985E-03	3.820E 00	3.208E-05	6.451E-05
5.500E-01	7.824E-03	1.603E-03	3.900E 00	5.059E-06	6.910E-05
5.700E-01	1.258E-02	1.473E-03	3.980E 00	6.900E-06	6.603E-05
5.900E-01	1.850E-02	1.416E-03	4.060E 00	4.235E-05	6.847E-05
6.100E-01	2.149E-02	1.494E-03	4.140E 00	3.918E-06	6.025E-05
6.300E-01	1.950E-02	1.770E-03	4.220E 00	-1.905E-05	5.560E-05
6.500E-01	1.403E-02	1.767E-03	4.300E 00	-3.789E-05	5.685E-05
6.700E 01	0.845E 03	1.620E-03	4.380E 00	-4.656E-05	6.117E-05
6.900E-01	4.180E-03	1.501E-03	4.460E 00	-3.965E-05	5.377E-05
7.100E-01	1.967E-03	1.437E-03	4.540E 00	-6.798E-06	5.345E-05
7.300E-01	9.714E-04	1.438E-03	4.630E 00	4.127E-05	5.110E-05
7.500E-01	7.192E-04	1.431E-03	4.730E 00	7.515E-05	4.943E-05
7.700E-01	9.353E-04	1.415E-03	4.830E 00	7.626E-05	5.758E-05
7.900E-01	1.703E-03	1.385E-03	4.930E 00	3.921E-05	5.122E-05
8.100E-01	4.123E-03	1.399E-03	5.030E 00	3.539E-06	5.061E-05
8.300E-01	1.105E-02	1.371E-03	5.130E 00	-2.023E-05	5.253E-05
8.500E-01	2.560E-02	1.352E-03	5.230E 00	-1.9C2E-05	4.795E-05
8.700E-01	4.818E-02	1.404E-03	5.330E 00	-5.780E-06	5.412E-05
8.900E-01	7.339E-02	1.415E-03	5.430E 00	1.006E-05	5.666E-05
9.100E-01	9.177E-02	1.364E-03	5.530E 00	1.610E-05	4.720E-05
9.300E-01	9.576E-02	1.303E-03	5.630E 00	2.067E-05	4.504E-05
9.500E-01	8.473E-02	1.336E-03	5.730E 00	2.099E-05	4.446E-05
9.700E-01	6.466E-02	1.331E-03	5.830E 00	2.971E-05	5.055E-05
1.000E 00	3.368E-02	1.237E-03	5.930E 00	4.249E-05	4.892E-05
1.040E 00	9.008E-03	1.163E-03	6.030E 00	5.209E-05	4.875E-05
1.080E 00	1.200E-03	9.670E-04	6.130E 00	3.631E-05	4.660E-05
1.120E 00	-3.795E-04	1.001E-03	6.230E 00	2.147E-05	4.675E-05
1.160E 00	-1.196E-03	9.448E-04	6.330E 00	1.179E-05	4.271E-05
1.200E 00	-1.748E-03	9.954E-04	6.440E 00	-1.501E-06	4.413E-05
1.240E 00	-1.468E-03	1.152E-03	6.560E 00	-9.298E-06	4.276E-05
1.280E 00	-1.246E-03	1.323E-03	6.680E 00	-2.291E-05	3.578E-05
1.320E 00	-1.069E-03	1.279E-03	6.800E 00	-2.211E-05	3.282E-05
1.360E 00	9.372E-04	1.252E-03	6.920E 00	-5.274E-06	2.984E-05
1.400E 00	7.314E-03	1.359E-03	7.040E 00	1.350E-05	2.452E-05
1.440E 00	1.960E-02	1.352E-03	7.160E 00	2.615E-05	2.068E-05
1.480E 00	3.956E-02	1.410E-03	7.280E 00	2.509E-05	1.073E-05
1.520E 00	6.881E-02	1.632E-03	7.400E 00	1.603E-05	1.750E-06
1.560E 00	9.786E-02	1.848E-03	7.520E 00	9.299E-06	1.633E-05
1.600E 00	1.069E-01	1.656E-03	7.640E 00	7.607E-06	1.517E-05
1.640E 00	9.013E-02	1.330E-03	7.760E 00	1.035E-05	1.499E-05
1.680E 00	6.815E-02	1.053E-03	7.890E 00	1.422E-05	1.430E-05
1.720E 00	6.213E-02	9.692E-04	8.030E 00	1.426E-05	1.423E-05
1.760E 00	6.946E-02	9.693E-04	8.170E 00	1.193E-05	1.333E-05
1.800E 00	7.222E-02	1.066E-03	8.310E 00	7.981E-06	1.260E-05
1.850E 00	5.580E-02	7.506E-04	8.450E 00	4.955E-06	1.218E-05
1.910E 00	2.517E-02	4.022E-04	8.590E 00	1.744E-06	1.136E-05
1.970E 00	7.050E-03	2.026E-04	8.730E 00	6.650E-07	1.061E-05
2.030E 00	1.497E-03	1.223E-04	8.870E 00	4.302E-06	9.933E-06
2.090E 00	3.961E-04	1.129E-04	9.010E 00	9.786E-06	9.532E-06
2.150E 00	2.074E-04	1.094E-04	9.150E 00	1.497E-05	8.642E-06
2.210E 00	2.184E-04	9.999E-05	9.300E 00	1.818E-05	7.749E-06
2.270E 00	2.083E-04	9.250E-05	9.460E 00	1.903E-05	7.340E-06
2.330E 00	1.235E-04	9.034E-05	9.620E 00	1.518E-05	5.967E-06
2.390E 00	4.931E-05	8.926E-05	9.780E 00	8.749E-06	5.583E-06
2.450E 00	2.466E-05	8.758E-05	9.940E 00	2.676E-06	4.946E-06
2.510E 00	1.966E-05	8.413E-05	1.010E 01	1.068E-06	3.320E-06
2.570E 00	7.738E-06	8.383E-05	1.026E 01	8.379E-07	2.428E-06
2.630E 00	-1.109E-05	8.481E-05	1.042E 01	1.578E-07	2.972E-06
2.690E 00	-2.441E-05	8.029E-05	1.058E 01	2.296E-07	2.900E-06

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	3.417E-02	3.786E-04
4.000E-01 - 5.000E-01	1.190E-03	3.546E-04
5.000E-01 - 6.000E-01	1.061E-03	1.822E-04
6.000E-01 - 7.000E-01	1.343E-03	1.635E-04
7.000E-01 - 8.000E-01	1.311E-04	1.423E-04
8.000E-01 - 1.000E 00	1.085E-02	2.710E-04
1.000E 00 - 1.200E 00	8.927E-04	2.067E-04
1.200E 00 - 1.400E 00	-3.004E-05	2.477E-04
1.400E 00 - 1.600E 00	1.135E-02	3.110E-04
1.600E 00 - 1.800E 00	1.509E-02	2.254E-04
1.800E 00 - 2.000E 00	6.646E-03	1.017E-04
2.000E 00 - 2.500E 00	1.865E-04	5.032E-05
2.500E 00 - 3.000E 00	6.619E-06	8.012E-05
3.000E 00 - 3.500E 00	2.601E-05	3.557E-05
3.500E 00 - 4.000E 00	2.584E-05	3.398E-05
4.000E 00 - 4.500E 00	-6.411E-06	2.993E-05
4.500E 00 - 5.000E 00	2.291E-05	2.629E-05
5.000E 00 - 6.000E 00	1.060E-05	4.985E-05
6.000E 00 - 7.000E 00	3.821E-06	4.017E-05
7.000E 00 - 8.000E 00	1.532E-05	1.743E-05
8.000E 00 - 9.000E 00	6.331E-06	1.179E-05
9.000E 00 - 1.000E 01	1.325E-05	6.915E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN Y . 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)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)	PHOTON ENERGY (MEV)	X-SECTION (B/SR/MEV)	ERROR (B/SR/MEV)
2.725E-01	1.714E-01	5.919E-03	2.750E 00	1.189E-05	1.003E-04
2.875E-01	3.568E-01	5.642E-03	2.810E 00	2.732E-05	9.810E-05
3.025E-01	5.238E-01	5.317E-03	2.870E 00	4.335E-05	9.785E-05
3.175E-01	5.668E-01	5.014E-03	2.930E 00	5.386E-05	1.048E-04
3.325E-01	4.689E-01	4.815E-03	2.990E 00	2.092E-05	9.945E-05
3.475E-01	3.084E-01	4.586E-03	3.050E 00	-2.106E-05	9.976E-05
3.625E-01	1.694E-01	3.976E-03	3.110E 00	-4.875E-05	9.484E-05
3.775E-01	8.273E-02	3.935E-03	3.180E 00	-2.391E-05	1.018E-04
3.925E-01	3.969E-02	4.069E-03	3.260E 00	2.270E-05	1.000E-04
4.100E-01	2.074E-02	4.230E-03	3.340E 00	6.252E-05	9.433E-05
4.300E-01	1.513E-02	4.317E-03	3.420E 00	9.376E-05	9.508E-05
4.500E-01	1.264E-02	4.430E-03	3.500E 00	1.086E-04	9.404E-05
4.700E-01	1.094E-02	4.346E-03	3.580E 00	9.655E-05	9.566E-05
4.900E-01	1.079E-02	3.764E-03	3.660E 00	7.113E-05	9.360E-05
5.100E-01	1.012E-02	3.004E-03	3.740E 00	4.921E-05	8.798E-05
5.300E-01	7.673E-03	2.444E-03	3.820E 00	3.217E-05	9.023E-05
5.500E-01	7.042E-03	2.161E-03	3.900E 00	1.710E-05	8.442E-05
5.700E-01	1.122E-02	1.992E-03	3.980E 00	-5.008E-06	8.366E-05
5.900E-01	1.764E-02	1.875E-03	4.060E 00	-4.127E-06	9.212E-05
6.100E-01	2.065E-02	1.891E-03	4.140E 00	-1.035E-05	8.701E-05
6.300E-01	1.773E-02	2.196E-03	4.220E 00	-2.833E-05	8.258E-05
6.500E-01	1.149E-02	2.292E-03	4.300E 00	-4.254E-05	8.728E-05
6.700E-01	5.875E-03	2.169E-03	4.380E 00	-4.283E-05	7.523E-05
6.900E-01	2.580E-03	2.007E-03	4.460E 00	-2.232E-05	6.964E-05
7.100E-01	1.098E-03	1.915E-03	4.540E 00	8.107E-06	7.466E-05
7.300E-01	4.736E-04	1.923E-03	4.630E 00	3.652E-05	7.804E-05
7.500E-01	2.050E-04	1.890E-03	4.730E 00	5.707E-05	7.548E-05
7.700E-01	3.220E-04	1.835E-03	4.830E 00	4.869E-05	8.327E-05
7.900E-01	1.395E-03	1.814E-03	4.930E 00	2.210E-05	7.494E-05
8.100E-01	4.592E-03	1.805E-03	5.030E 00	1.695E-06	6.902E-05
8.300E-01	1.215E-02	1.723E-03	5.130E 00	-2.440E-05	7.186E-05
8.500E-01	2.688E-02	1.738E-03	5.230E 00	-5.008E-05	7.655E-05
8.700E-01	4.887E-02	1.778E-03	5.330E 00	-2.395E-05	7.928E-05
8.900E-01	7.204E-02	1.747E-03	5.430E 00	2.433E-05	7.945E-05
9.100E-01	8.831E-02	1.710E-03	5.530E 00	5.787E-05	6.845E-05
9.300E-01	9.011E-02	1.666E-03	5.630E 00	5.921E-05	7.225E-05
9.500E-01	7.823E-02	1.691E-03	5.730E 00	3.203E-05	6.822E-05
9.700E-01	5.873E-02	1.678E-03	5.830E 00	1.202E-05	6.471E-05
1.000E 00	2.992E-02	1.587E-03	5.930E 00	8.600E-06	6.522E-05
1.040E 00	7.311E-03	1.512E-03	6.030E 00	6.510E-06	6.760E-05
1.080E 00	2.069E-04	1.327E-03	6.130E 00	1.106E-05	6.404E-05
1.120E 00	-1.026E-03	1.350E-03	6.230E 00	-1.130E-05	5.847E-05
1.160E 00	-1.470E-03	1.283E-03	6.330E 00	-3.200E-05	5.885E-05
1.200E 00	-2.132E-03	1.338E-03	6.440E 00	-2.358E-05	5.633E-05
1.240E 00	-2.954E-03	1.559E-03	6.560E 00	1.783E-05	4.989E-05
1.280E 00	-2.249E-03	1.755E-03	6.680E 00	4.132E-05	4.941E-05
1.320E 00	-5.208E-04	1.690E-03	6.800E 00	4.113E-05	4.609E-05
1.360E 00	2.455E-03	1.663E-03	6.920E 00	1.442E-05	3.546E-05
1.400E 00	1.047E-02	1.849E-03	7.040E 00	1.787E-06	3.338E-05
1.440E 00	2.582E-02	1.828E-03	7.160E 00	2.550E-06	2.978E-05
1.480E 00	5.099E-02	1.904E-03	7.280E 00	3.580E-06	2.666E-05
1.520E 00	8.819E-02	2.221E-03	7.400E 00	3.004E-06	2.041E-05
1.560E 00	1.231E-01	2.442E-03	7.520E 00	4.160E-06	1.914E-05
1.600E 00	1.310E-01	2.150E-03	7.640E 00	1.426E-05	2.009E-05
1.640E 00	1.089E-01	1.766E-03	7.760E 00	2.245E-05	1.834E-05
1.680E 00	8.295E-02	1.426E-03	7.890E 00	2.053E-05	1.650E-05
1.720E 00	7.664E-02	1.397E-03	8.030E 00	7.357E-06	1.579E-05
1.760E 00	8.482E-02	1.380E-03	8.170E 00	-4.057E-06	1.473E-05
1.800E 00	8.589E-02	1.456E-03	8.310E 00	-1.327E-06	1.462E-05
1.850E 00	6.413E-02	1.027E-03	8.450E 00	1.685E-05	1.468E-05
1.910E 00	2.907E-02	5.777E-04	8.590E 00	3.549E-05	1.575E-05
1.970E 00	1.100E-02	3.641E-04	8.730E 00	3.586E-05	1.517E-05
2.030E 00	7.127E-03	2.997E-04	8.870E 00	1.573E-05	1.392E-05
2.090E 00	6.247E-03	3.030E-04	9.010E 00	-5.737E-06	1.385E-05
2.150E 00	9.112E-03	2.471E-04	9.150E 00	-1.111E-05	1.383E-05
2.210E 00	1.930E-03	2.078E-04	9.300E 00	-6.745E-07	1.243E-05
2.270E 00	1.161E-03	1.938E-04	9.460E 00	1.579E-05	9.973E-06
2.330E 00	1.505E-03	1.791E-04	9.620E 00	2.073E-05	9.462E-06
2.390E 00	1.780E-03	1.651E-04	9.780E 00	2.487E-05	1.052E-05
2.450E 00	1.370E-03	1.475E-04	9.940E 00	1.672E-05	7.103E-06
2.510E 00	6.616E-04	1.389E-04	1.010E 01	1.032E-05	4.983E-06
2.570E 00	1.757E-04	1.211E-04	1.026E 01	5.728E-06	3.920E-06
2.630E 00	6.750E-06	1.011E-04	1.042E 01	1.681E-06	4.834E-06
2.690E 00	-4.616E-06	9.686E-05	1.058E 01	1.240E-06	3.718E-06

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	2.987E-02	4.487E-04
4.000E-01	-	5.000E-01	1.033E-03	9.201E-04
5.000E-01	-	6.000E-01	1.069E-03	2.301E-04
6.000E-01	-	7.000E-01	1.160E-03	2.115E-04
7.000E-01	-	8.000E-01	7.516E-05	1.877E-04
8.000E-01	-	1.000E 00	1.037E-02	3.431E-04
1.000E 00	-	1.200E 00	6.740E-04	2.764E-04
1.200E 00	-	1.400E 00	-3.612E-06	3.306E-04
1.400E 00	-	1.600E 00	1.440E-02	4.177E-04
1.600E 00	-	1.800E 00	1.837E-02	3.093E-04
1.800E 00	-	2.000E 00	7.872E-03	1.460E-04
2.000E 00	-	2.500E 00	1.552E-03	1.079E-04
2.500E 00	-	3.000E 00	4.369E-05	5.272E-05
3.000E 00	-	3.500E 00	1.258E-05	4.865E-05
3.500E 00	-	4.000E 00	2.539E-05	4.496E-05
4.000E 00	-	4.500E 00	-1.204E-05	4.123E-05
4.500E 00	-	5.000E 00	1.715E-05	3.861E-05
5.000E 00	-	6.000E 00	9.653E-06	7.148E-05
6.000E 00	-	7.000E 00	8.611E-06	5.272E-05
7.000E 00	-	8.000E 00	9.577E-06	2.240E-05
8.000E 00	-	9.000E 00	1.437E-05	1.482E-05
9.000E 00	-	1.000E 01	1.060E-05	1.079E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 3.49 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)
2.725E-01	1.488E-01	6.922E-03	2.750E 00	2.033E-03	2.167E-04
2.875E-01	3.069E-01	6.461E-03	2.810E 00	1.764E-03	1.982E-04
3.025E-01	4.559E-01	6.081E-03	2.870E 00	1.462E-03	1.865E-04
3.175E-01	4.999E-01	5.604E-03	2.930E 00	1.423E-03	1.778E-04
3.325E-01	4.178E-01	5.678E-03	2.990E 00	1.414E-03	1.830E-04
3.475E-01	2.775E-01	5.564E-03	3.050E 00	1.227E-03	1.820E-04
3.625E-01	1.538E-01	5.093E-03	3.110E 00	9.300E-04	1.687E-04
3.775E-01	7.691E-02	5.096E-03	3.180E 00	5.881E-04	1.533E-04
3.925E-01	3.956E-02	5.012E-03	3.260E 00	2.773E-04	1.261E-04
4.100E-01	2.249E-02	5.088E-03	3.340E 00	1.348E-04	1.110E-04
4.300E-01	1.570E-02	5.508E-03	3.420E 00	9.479E-05	1.172E-04
4.500E-01	1.465E-02	5.355E-03	3.500E 00	8.509E-05	1.311E-04
4.700E-01	1.420E-02	5.171E-03	3.580E 00	1.306E-05	1.087E-04
4.900E-01	1.142E-02	4.695E-03	3.660E 00	-4.147E-05	9.719E-05
5.100E-01	8.660E-03	3.883E-03	3.740E 00	-6.310E-05	1.088E-04
5.300E-01	9.638E-03	3.072E-03	3.820E 00	-7.261E-05	9.222E-05
5.500E-01	8.970E-03	2.603E-03	3.900E 00	-3.442E-05	9.864E-05
5.700E-01	1.233E-02	2.477E-03	3.980E 00	1.962E-05	1.028E-04
5.900E-01	1.756E-02	2.427E-03	4.060E 00	8.335E-05	1.022E-04
6.100E-01	1.919E-02	2.534E-03	4.140E 00	8.981E-05	9.894E-05
6.300E-01	1.702E-02	2.882E-03	4.220E 00	5.456E-05	1.055E-04
6.500E-01	1.247E-02	2.775E-03	4.300E 00	1.355E-05	1.057E-04
6.700E-01	7.589E-03	2.551E-03	4.380E 00	-3.902E-06	1.124E-04
6.900E-01	3.816E-03	2.410E-03	4.460E 00	1.281E-05	1.019E-04
7.100E-01	1.559E-03	2.314E-03	4.540E 00	3.702E-05	9.450E-05
7.300E-01	4.523E-04	2.287E-03	4.630E 00	5.268E-05	1.059E-04
7.500E-01	1.970E-04	2.316E-03	4.730E 00	7.013E-05	1.218E-04
7.700E-01	6.096E-04	2.316E-03	4.830E 00	7.001E-05	9.704E-05
7.900E-01	2.254E-03	2.222E-03	4.930E 00	7.926E-05	8.430E-05
8.100E-01	5.613E-03	2.156E-03	5.030E 00	4.541E-05	7.759E-05
8.300E-01	1.343E-02	2.053E-03	5.130E 00	-2.118E-05	8.590E-05
8.500E-01	2.860E-02	2.007E-03	5.230E 00	-6.750E-05	9.617E-05
8.700E-01	5.102E-02	2.048E-03	5.330E 00	-6.290E-05	8.959E-05
8.900E-01	7.482E-02	2.019E-03	5.430E 00	-4.634E-05	7.735E-05
9.100E-01	9.093E-02	1.927E-03	5.530E 00	-2.838E-05	7.982E-05
9.300E-01	9.313E-02	1.886E-03	5.630E 00	1.480E-06	8.622E-05
9.500E-01	8.156E-02	1.940E-03	5.730E 00	1.863E-05	8.631E-05
9.700E-01	6.207E-02	1.952E-03	5.830E 00	3.997E-05	8.544E-05
1.000E 00	3.365E-02	1.858E-03	5.930E 00	6.049E-05	8.370E-05
1.040E 00	1.497E-02	1.830E-03	6.030E 00	6.231E-05	7.364E-05
1.080E 00	1.092E-02	1.603E-03	6.130E 00	3.868E-05	7.473E-05
1.120E 00	6.069E-03	1.647E-03	6.230E 00	9.794E-06	7.620E-05
1.160E 00	8.177E-04	1.531E-03	6.330E 00	-2.986E-05	7.231E-05
1.200E 00	-1.501E-03	1.594E-03	6.440E 00	-7.522E-05	6.866E-05
1.240E 00	-1.697E-03	1.768E-03	6.560E 00	-1.012E-04	5.211E-05
1.280E 00	-1.228E-03	2.011E-03	6.680E 00	-9.951E-05	4.918E-05
1.320E 00	-1.225E-03	1.995E-03	6.800E 00	-3.718E-05	5.725E-05
1.360E 00	8.822E-04	2.037E-03	6.920E 00	3.365E-05	4.107E-05
1.400E 00	9.340E-03	2.255E-03	7.040E 00	8.352E-05	3.575E-05
1.440E 00	2.595E-02	2.246E-03	7.160E 00	9.491E-05	3.672E-05
1.480E 00	5.296E-02	2.204E-03	7.280E 00	7.098E-05	2.825E-05
1.520E 00	9.160E-02	2.504E-03	7.400E 00	4.233E-05	2.639E-05
1.560E 00	1.275E-01	2.685E-03	7.520E 00	1.569E-05	2.385E-05
1.600E 00	1.369E-01	2.523E-03	7.640E 00	-1.311E-06	1.811E-05
1.640E 00	1.163E-01	2.126E-03	7.760E 00	-3.358E-06	1.534E-05
1.680E 00	9.071E-02	1.738E-03	7.890E 00	5.412E-06	1.394E-05
1.720E 00	8.345E-02	1.673E-03	8.030E 00	1.722E-05	1.266E-05
1.760E 00	9.025E-02	1.719E-03	8.170E 00	1.768E-05	1.144E-05
1.800E 00	8.990E-02	1.904E-03	8.310E 00	6.387E-06	1.035E-05
1.850E 00	6.629E-02	1.307E-03	8.450E 00	-2.882E-06	1.012E-05
1.910E 00	3.007E-02	8.328E-04	8.590E 00	-2.132E-06	1.020E-05
1.970E 00	1.394E-02	5.888E-04	8.730E 00	5.511E-06	9.970E-06
2.030E 00	1.315E-02	5.363E-04	8.870E 00	1.302E-05	1.122E-05
2.090E 00	1.296E-02	5.397E-04	9.010E 00	1.654E-05	1.160E-05
2.150E 00	8.834E-03	4.602E-04	9.150E 00	1.959E-05	1.144E-05
2.210E 00	8.326E-03	3.809E-04	9.300E 00	1.815E-05	1.102E-05
2.270E 00	2.652E-03	3.521E-04	9.460E 00	1.370E-05	9.158E-06
2.330E 00	3.104E-03	3.177E-04	9.620E 00	7.650E-06	9.011E-06
2.390E 00	3.253E-03	2.980E-04	9.780E 00	3.892E-06	1.078E-05
2.450E 00	2.186E-03	2.971E-04	9.940E 00	4.880E-06	1.031E-05
2.510E 00	9.198E-04	2.832E-04	1.010E 01	5.531E-06	8.423E-06
2.570E 00	5.271E-04	2.683E-04	1.026E 01	8.239E-06	6.577E-06
2.630E 00	1.031E-03	2.554E-04	1.042E 01	1.019E-05	7.183E-06
2.690E 00	1.768E-03	2.387E-04	1.058E 01	1.020E-05	8.136E-06

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	2.663E-02	5.408E-04
4.000E-01 - 5.000E-01	1.592E-03	5.171E-04
5.000E-01 - 6.000E-01	1.117E-03	2.896E-04
6.000E-01 - 7.000E-01	1.197E-03	2.634E-04
7.000E-01 - 8.000E-01	1.086E-04	2.292E-04
8.000E-01 - 1.000E 00	1.086E-02	3.982E-04
1.000E 00 - 1.200E 00	1.896E-03	3.331E-04
1.200E 00 - 1.400E 00	-1.257E-05	3.892E-04
1.400E 00 - 1.600E 00	1.490E-02	4.817E-04
1.600E 00 - 1.800E 00	1.968E-02	3.761E-04
1.800E 00 - 2.000E 00	8.314E-03	2.009E-04
2.000E 00 - 2.500E 00	3.067E-03	1.973E-04
2.500E 00 - 3.000E 00	6.902E-04	1.110E-04
3.000E 00 - 3.500E 00	2.484E-04	7.045E-05
3.500E 00 - 4.000E 00	-1.217E-05	5.158E-05
4.000E 00 - 4.500E 00	2.074E-05	5.220E-05
4.500E 00 - 5.000E 00	3.095E-05	5.006E-05
5.000E 00 - 6.000E 00	-6.161E-06	8.482E-05
6.000E 00 - 7.000E 00	-2.533E-05	6.139E-05
7.000E 00 - 8.000E 00	3.598E-05	2.395E-05
8.000E 00 - 9.000E 00	7.987E-06	1.080E-05
9.000E 00 - 1.000E 01	1.164E-05	1.037E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 3.49 TO 4.00 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)
2.725E-01	1.756E-01	8.385E-03	2.750E 00	6.830E-03	6.783E-04
2.875E-01	3.389E-01	7.763E-03	2.810E 00	8.060E-03	6.901E-04
3.025E-01	4.750E-01	7.380E-03	2.870E 00	9.635E-03	6.708E-04
3.175E-01	5.016E-01	6.866E-03	2.930E 00	1.108E-02	6.658E-04
3.325E-01	4.106E-01	6.800E-03	2.990E 00	1.230E-02	6.512E-04
3.475E-01	2.703E-01	6.700E-03	3.050E 00	1.356E-02	5.984E-04
3.625E-01	1.517E-01	6.150E-03	3.110E 00	1.434E-02	5.458E-04
3.775E-01	7.931E-02	5.968E-03	3.180E 00	1.480E-02	5.110E-04
3.925E-01	4.309E-02	6.125E-03	3.260E 00	1.637E-02	4.837E-04
4.100E-01	2.614E-02	6.387E-03	3.340E 00	1.777E-02	4.702E-04
4.300E-01	2.073E-02	6.532E-03	3.420E 00	1.645E-02	4.184E-04
4.500E-01	2.157E-02	6.805E-03	3.500E 00	1.285E-02	3.709E-04
4.700E-01	2.390E-02	6.261E-03	3.580E 00	8.616E-03	3.032E-04
4.900E-01	2.069E-02	5.504E-03	3.660E 00	4.812E-03	2.280E-04
5.100E-01	1.527E-02	4.708E-03	3.740E 00	2.275E-03	2.001E-04
5.300E-01	1.259E-02	3.828E-03	3.820E 00	1.036E-03	1.667E-04
5.500E-01	1.275E-02	3.355E-03	3.900E 00	4.532E-04	1.435E-04
5.700E-01	1.475E-02	3.188E-03	3.980E 00	1.940E-04	1.37CE-04
5.900E-01	1.863E-02	3.005E-03	4.060E 00	1.197E-04	1.480E-04
6.100E-01	2.097E-02	3.047E-03	4.140E 00	9.811E-05	1.416E-04
6.300E-01	1.790E-02	3.445E-03	4.220E 00	7.647E-05	1.453E-04
6.500E-01	1.133E-02	3.535E-03	4.300E 00	1.784E-05	1.299E-04
6.700E-01	6.347E-03	3.447E-03	4.380E 00	-1.704E-05	1.255E-04
6.900E-01	4.742E-03	3.199E-03	4.460E 00	-5.692E-05	1.193E-04
7.100E-01	4.608E-03	2.905E-03	4.540E 00	-1.101E-04	1.200E-04
7.300E-01	3.752E-03	2.711E-03	4.630E 00	-1.068E-04	1.377E-04
7.500E-01	1.965E-03	2.685E-03	4.730E 00	-8.374E-05	1.160E-04
7.700E-01	5.030E-04	2.712E-03	4.830E 00	-2.544E-05	1.117E-04
7.900E-01	1.163E-03	2.704E-03	4.930E 00	4.070E-05	1.105E-04
8.100E-01	4.913E-03	2.669E-03	5.030E 00	9.273E-05	1.031E-04
8.300E-01	1.321E-02	2.567E-03	5.130E 00	1.356E-04	1.131E-04
8.500E-01	2.779E-02	2.494E-03	5.230E 00	1.186E-04	1.127E-04
8.700E-01	4.851E-02	2.545E-03	5.330E 00	7.071E-05	1.165E-04
8.900E-01	7.031E-02	2.618E-03	5.430E 00	1.811E-05	1.023E-04
9.100E-01	8.481E-02	2.553E-03	5.530E 00	6.950E-06	1.032E-04
9.300E-01	8.613E-02	2.446E-03	5.630E 00	5.002E-06	9.827E-05
9.500E-01	7.467E-02	2.530E-03	5.730E 00	3.525E-05	1.091E-04
9.700E-01	5.676E-02	2.531E-03	5.830E 00	2.458E-05	1.061E-04
1.000E 00	3.393E-02	2.416E-03	5.930E 00	5.980E-06	9.495E-05
1.040E 00	2.412E-02	2.309E-03	6.030E 00	-1.595E-05	8.902E-05
1.080E 00	2.313E-02	2.029E-03	6.130E 00	-3.202E-05	8.777E-05
1.120E 00	1.595E-02	2.079E-03	6.230E 00	-1.393E-05	1.039E-04
1.160E 00	7.151E-03	1.933E-03	6.330E 00	3.756E-06	9.359E-05
1.200E 00	1.073E-03	1.956E-03	6.440E 00	2.446E-05	8.344E-05
1.240E 00	-2.538E-03	2.273E-03	6.560E 00	2.679E-05	7.109E-05
1.280E 00	-2.167E-03	2.489E-03	6.680E 00	-8.581E-06	7.837E-05
1.320E 00	-2.801E-04	2.462E-03	6.800E 00	-4.442E-05	6.909E-05
1.360E 00	2.171E-03	2.406E-03	6.920E 00	-6.068E-05	5.594E-05
1.400E 00	1.040E-02	2.667E-03	7.040E 00	-5.460E-06	8.733E-05
1.440E 00	2.757E-02	2.634E-03	7.160E 00	-2.868E-05	4.037E-05
1.480E 00	5.629E-02	2.606E-03	7.280E 00	1.082E-06	3.969E-05
1.520E 00	9.813E-02	3.061E-03	7.400E 00	2.066E-05	3.177E-05
1.560E 00	1.371E-01	3.434E-03	7.520E 00	2.943E-05	2.857E-05
1.600E 00	1.471E-01	3.132E-03	7.640E 00	3.437E-05	2.805E-05
1.640E 00	1.261E-01	2.797E-03	7.760E 00	3.216E-05	2.444E-05
1.680E 00	1.029E-01	2.367E-03	7.890E 00	1.926E-05	1.951E-05
1.720E 00	9.988E-02	2.238E-03	8.030E 00	3.797E-06	1.691E-05
1.760E 00	1.067E-01	2.183E-03	8.170E 00	-3.329E-06	1.551E-05
1.800E 00	1.014E-01	2.371E-03	8.310E 00	-3.393E-06	1.578E-05
1.850E 00	7.136E-02	1.712E-03	8.450E 00	2.516E-06	1.322E-05
1.910E 00	3.364E-02	1.217E-03	8.590E 00	8.902E-06	1.114E-05
1.970E 00	1.871E-02	1.066E-03	8.730E 00	1.706E-05	1.177E-05
2.030E 00	1.917E-02	9.913E-04	8.870E 00	2.011E-05	1.059E-05
2.090E 00	1.961E-02	1.005E-03	9.010E 00	1.742E-05	9.766E-06
2.150E 00	1.437E-02	9.083E-04	9.150E 00	1.071E-05	9.571E-06
2.210E 00	8.595E-03	8.450E-04	9.300E 00	5.058E-06	9.180E-06
2.270E 00	6.388E-03	7.838E-04	9.460E 00	3.769E-06	9.030E-06
2.330E 00	5.837E-03	7.697E-04	9.620E 00	7.344E-06	8.507E-06
2.390E 00	4.792E-03	7.342E-04	9.780E 00	1.021E-05	8.701E-06
2.450E 00	3.321E-03	7.162E-04	9.940E 00	1.155E-05	1.028E-05
2.510E 00	2.189E-03	7.246E-04	1.010E 01	9.307E-06	7.183E-06
2.570E 00	2.135E-03	7.346E-04	1.026E 01	8.385E-06	5.176E-06
2.630E 00	3.534E-03	7.104E-04	1.042E 01	5.742E-06	5.792E-06
2.690E 00	5.467E-03	6.752E-04	1.058E 01	3.727E-06	5.867E-06

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	2.667E-02	6.521E-04
4.000E-01	-	5.000E-01	2.268E-03	6.214E-04
5.000E-01	-	6.000E-01	1.483E-03	3.629E-04
6.000E-01	-	7.000E-01	1.221E-03	3.339E-04
7.000E-01	-	8.000E-01	2.437E-04	2.745E-04
8.000E-01	-	1.000E 00	1.015E-02	5.083E-04
1.000E 00	-	1.200E 00	3.507E-03	4.202E-04
1.200E 00	-	1.400E 00	6.523E-05	4.777E-04
1.400E 00	-	1.600E 00	1.596E-02	5.866E-04
1.600E 00	-	1.800E 00	2.233E-02	4.908E-04
1.800E 00	-	2.000E 00	9.343E-03	2.853E-04
2.000E 00	-	2.500E 00	4.988E-03	4.203E-04
2.500E 00	-	3.000E 00	3.376E-03	3.447E-04
3.000E 00	-	3.500E 00	7.702E-03	2.477E-04
3.500E 00	-	4.000E 00	1.869E-03	1.058E-04
4.000E 00	-	4.500E 00	2.247E-05	6.753E-05
4.500E 00	-	5.000E 00	-2.442E-05	5.938E-05
5.000E 00	-	6.000E 00	4.968E-05	1.059E-04
6.000E 00	-	7.000E 00	-1.385E-05	7.956E-05
7.000E 00	-	8.000E 00	8.439E-06	3.128E-05
8.000E 00	-	9.000E 00	1.260E-06	1.320E-05
9.000E 00	-	1.000E 01	8.641E-06	9.182E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 4.00 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)
2.725E-01	2.398E-01	1.040E-02	2.750E 00	1.214E-02	1.341E-03
2.875E-01	4.246E-01	9.484E-03	2.810E 00	1.429E-02	1.368E-03
3.025E-01	5.523E-01	8.958E-03	2.870E 00	1.695E-02	1.335E-03
3.175E-01	5.432E-01	8.352E-03	2.930E 00	1.995E-02	1.303E-03
3.325E-01	4.173E-01	8.231E-03	2.990E 00	2.262E-02	1.311E-03
3.475E-01	2.625E-01	8.079E-03	3.050E 00	2.448E-02	1.298E-03
3.625E-01	1.454E-01	7.713E-03	3.110E 00	2.578E-02	1.252E-03
3.775E-01	7.851E-02	7.679E-03	3.180E 00	2.917E-02	1.159E-03
3.925E-01	4.702E-02	7.808E-03	3.260E 00	3.556E-02	1.065E-03
4.100E-01	3.565E-02	8.173E-03	3.340E 00	3.941E-02	1.013E-03
4.300E-01	3.573E-02	7.807E-03	3.420E 00	4.022E-02	9.692E-04
4.500E-01	3.818E-02	7.793E-03	3.500E 00	3.779E-02	8.716E-04
4.700E-01	4.009E-02	7.595E-03	3.580E 00	3.102E-02	7.420E-04
4.900E-01	3.711E-02	6.912E-03	3.660E 00	2.369E-02	5.719E-04
5.100E-01	2.763E-02	6.018E-03	3.740E 00	1.788E-02	4.585E-04
5.300E-01	1.861E-02	5.168E-03	3.820E 00	1.299E-02	4.015E-04
5.500E-01	1.636E-02	4.346E-03	3.900E 00	8.712E 03	3.517E-04
5.700E-01	1.946E-02	3.853E-03	3.980E 00	5.343E-03	3.124E-04
5.900E-01	2.385E-02	3.859E-03	4.060E 00	3.025E-03	2.612E-04
6.100E-01	2.548E-02	3.856E-03	4.140E 00	1.550E-03	2.181E-04
6.300E-01	2.200E-02	4.309E-03	4.220E 00	6.505E-04	1.737E-04
6.500E-01	1.484E-02	4.424E-03	4.300E 00	1.770E-04	1.603E-04
6.700E-01	8.023E-03	4.112E-03	4.380E 00	-6.814E-06	1.583E-04
6.900E-01	3.996E-03	3.843E-03	4.460E 00	-8.540E-05	1.461E-04
7.100E-01	2.406E-03	3.800E-03	4.540E 00	-8.665E-06	1.493E-04
7.300E-01	2.126E-03	3.752E-03	4.620E 00	6.109E-05	1.600E-04
7.500E-01	2.747E-03	3.596E-03	4.730E 00	9.935E-05	1.548E-04
7.700E-01	3.891E-03	3.398E-03	4.830E 00	1.175E-04	1.331E-04
7.900E-01	5.666E-03	3.335E-03	4.930E 00	1.090E-04	1.378E-04
8.100E-01	9.294E-03	3.348E-03	5.030E 00	8.518E-05	1.350E-04
8.300E-01	1.790E-02	3.271E-03	5.130E 00	6.088E-05	1.431E-04
8.500E-01	3.395E-02	3.232E-03	5.230E 00	9.055E-06	1.362E-04
8.700E-01	5.562E-02	3.270E-03	5.330E 00	-2.843E-05	1.278E-04
8.900E-01	7.535E-02	3.245E-03	5.430E 00	-1.971E-05	1.194E-04
9.100E-01	8.480E-02	3.113E-03	5.530E 00	3.471E-05	1.184E-04
9.300E-01	8.110E-02	3.023E-03	5.630E 00	7.146E-05	1.181E-04
9.500E-01	6.739E-02	3.067E-03	5.730E 00	6.857E-05	1.061E-04
9.700E-01	5.031E-02	3.063E-03	5.830E 00	4.036E-05	9.428E-05
1.000E 00	3.147E-02	3.095E-03	5.930E 00	-3.865E-07	1.009E-04
1.040E 00	2.780E-02	3.134E-03	6.030E 00	-1.501E-05	1.043E-04
1.080E 00	3.007E-02	2.673E-03	6.130E 00	-4.279E-05	9.634E-05
1.120E 00	2.046E-02	2.737E-03	6.230E 00	-5.639E-05	9.303E-05
1.160E 00	8.134E-03	2.568E-03	6.330E 00	-3.730E-05	9.213E-05
1.200E 00	2.003E-03	2.646E-03	6.440E 00	1.772E-05	8.352E-05
1.240E 00	1.022E-04	2.898E-03	6.560E 00	7.863E-05	9.543E-05
1.280E 00	-1.020E-03	3.288E-03	6.680E 00	9.054E-05	7.639E-05
1.320E 00	-1.347E-03	3.255E-03	6.800E 00	5.474E-05	6.224E-05
1.360E 00	1.554E-03	3.183E-03	6.920E 00	2.498E-06	5.796E-05
1.400E 00	1.087E-02	3.436E-03	7.040E 00	-2.682E-05	5.191E-05
1.440E 00	3.043E-02	3.668E-03	7.160E 00	2.210E-05	4.398E-05
1.480E 00	6.373E-02	3.467E-03	7.280E 00	6.955E-06	3.496E-05
1.520E 00	1.115E-01	4.141E-03	7.400E 00	3.052E-05	2.694E-05
1.560E 00	1.539E-01	4.345E-03	7.520E 00	3.321E-05	2.765E-05
1.600E 00	1.611E-01	3.997E-03	7.640E 00	1.438E-05	2.448E-05
1.640E 00	1.358E-01	3.536E-03	7.760E 00	-1.047E-05	2.012E-05
1.680E 00	1.120E-01	3.136E-03	7.890E 00	-2.299E-05	1.850E-05
1.720E 00	1.094E-01	3.035E-03	8.030E 00	-1.927E-05	1.765E-05
1.760E 00	1.105E-01	2.995E-03	8.170E 00	-3.014E-06	1.617E-05
1.800E 00	9.910E-02	3.215E-03	8.310E 00	1.291E-05	1.521E-05
1.850E 00	6.866E-02	2.313E-03	8.450E 00	2.335E-05	1.348E-05
1.910E 00	3.717E-02	1.958E-03	8.590E 00	2.714E-05	1.268E-05
1.970E 00	2.911E-02	1.913E-03	8.730E 00	2.808E-05	1.198E-05
2.030E 00	3.280E-02	1.778E-03	8.870E 00	2.421E-05	1.072E-05
2.090E 00	3.178E-02	1.711E-03	9.010E 00	1.614E-05	9.616E-06
2.150E 00	2.457E-02	1.700E-03	9.150E 00	5.881E-06	9.09CE-06
2.210E 00	1.976E-02	1.539E 03	9.300E 00	-2.567E-06	8.928E-06
2.270E 00	1.882E-02	1.467E-03	9.460E 00	-2.717E-06	7.498E-06
2.330E 00	1.680E-02	1.403E-03	9.620E 00	1.590E-06	7.356E-06
2.390E 00	1.211E-02	1.378E-03	9.700E 00	5.335E-06	9.473E-06
2.450E 00	7.032E-03	1.321E-03	9.980E 00	8.568E-06	8.942E-06
2.510E 00	3.638E-03	1.350E-03	1.010E 01	9.193E-06	7.323E-06
2.570E 00	3.210E-03	1.388E-03	1.026E 01	9.836E-06	5.743E-06
2.630E 00	5.952E-03	1.371E-03	1.042E 01	7.956E-06	5.725E-06
2.690E 00	9.600E-03	1.340E-03	1.058E 01	9.320E-06	5.987E-06

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	2.796E-02	8.067E-04
4.000E-01	-	5.000E-01	3.747E-03	7.647E-04
5.000E-01	-	6.000E-01	2.119E-03	4.653E-04
6.000E-01	-	7.000E-01	1.483E-03	4.117E-04
7.000E-01	-	8.000E-01	3.429E-04	3.577E-04
8.000E-01	-	1.000E 00	1.024E-02	6.341E-04
1.000E 00	-	1.200E 00	8.146E-03	5.579E-04
1.200E 00	-	1.400E 00	1.796E-04	6.268E-04
1.400E 00	-	1.600E 00	1.790E-02	7.749E-04
1.600E 00	-	1.800E 00	2.389E-02	6.491E-04
1.800E 00	-	2.000E 00	9.979E-03	4.337E-04
2.000E 00	-	2.500E 00	9.904E-03	7.638E-04
2.500E 00	-	3.000E 00	5.956E-03	6.739E-04
3.000E 00	-	3.500E 00	1.656E-02	5.514E-04
3.500E 00	-	4.000E 00	9.339E-03	2.547E-04
4.000E 00	-	4.500E 00	5.241E-04	9.556E-05
4.500E 00	-	5.000E 00	3.983E-05	7.314E-05
5.000E 00	-	6.000E 00	3.034E-05	1.193E-04
6.000E 00	-	7.000E 00	1.383E-05	8.252E-05
7.000E 00	-	8.000E 00	6.653E-08	2.982E-05
8.000E 00	-	9.000E 00	1.510E-05	1.358E-05
9.000E 00	-	1.000E 01	3.378E-06	8.690E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 4.98 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)
2.725E-01	2.232E-01	1.152E-02	2.750E 00	1.434E-02	1.719E-03
2.875E-01	4.058E-01	1.039E-02	2.810E 00	1.794E-02	1.761E-03
3.025E-01	5.462E-01	1.014E-02	2.870E 00	2.156E-02	1.663E-03
3.175E-01	5.602E-01	9.253E-03	2.930E 00	2.401E-02	1.637E-03
3.325E-01	4.490E-01	9.114E-03	2.990E 00	2.627E-02	1.634E-03
3.475E-01	2.925E-01	9.121E-03	3.050E 00	2.853E-02	1.590E-03
3.625E-01	1.674E-01	8.503E-03	3.110E 00	3.020E-02	1.535E-03
3.775E-01	9.637E-02	8.182E-03	3.180E 00	3.241E-02	1.502E-03
3.925E-01	6.310E-02	8.110E-03	3.260E 00	3.691E-02	1.435E-03
4.100E-01	4.777E-02	8.171E-03	3.340E 00	4.233E-02	1.339E-03
4.300E-01	4.378E-02	8.370E-03	3.420E 00	4.601E-02	1.248E-03
4.500E-01	4.452E-02	8.156E-03	3.500E 00	4.469E-02	1.201E-03
4.700E-01	4.706E-02	8.043E-03	3.580E 00	3.836E-02	1.018E-03
4.900E-01	4.898E-02	7.173E-03	3.660E 00	3.046E-02	8.594E-04
5.100E-01	4.439E-02	6.416E-03	3.740E 00	2.407E-02	7.505E-04
5.300E-01	3.406E-02	5.547E-03	3.820E 00	2.005E-02	6.371E-04
5.500E-01	2.714E-02	4.653E-03	3.900E 00	1.684E-02	5.597E-04
5.700E-01	2.738E-02	4.223E-03	3.980E 00	1.319E-02	4.940E-04
5.900E-01	3.012E-02	4.098E-03	4.060E 00	9.613E-03	4.244E-04
6.100E-01	2.921E-02	4.273E-03	4.140E 00	6.964E-03	3.775E-04
6.300E-01	2.337E-02	4.746E-03	4.220E 00	5.654E-03	3.595E-04
6.500E-01	1.604E-02	4.658E-03	4.300E 00	5.250E-03	3.233E-04
6.700E-01	1.115E-02	4.303E-03	4.380E 00	4.779E-03	2.782E-04
6.900E-01	8.453E-03	4.076E-03	4.460E 00	3.713E-03	2.566E-04
7.100E-01	5.809E-03	3.894E-03	4.540E 00	2.372E-03	2.30CE-04
7.300E-01	3.473E-03	3.996E-03	4.630E 00	1.180E-03	2.08CE-04
7.500E-01	3.431E-03	4.083E-03	4.730E 00	4.975E-04	1.901E-04
7.700E-01	5.246E-03	3.952E-03	4.830E 00	2.084E-04	1.655E-04
7.900E-01	7.658E-03	3.726E-03	4.930E 00	7.889E-05	1.476E-04
8.100E-01	1.144E-02	3.647E-03	5.030E 00	5.394E-06	1.221E-04
8.300E-01	1.965E-02	3.507E-03	5.130E 00	6.126E-06	1.211E-04
8.500E-01	3.387E-02	3.434E-03	5.230E 00	2.659E-05	1.389E-04
8.700E-01	5.243E-02	3.616E-03	5.330E 00	5.610E-05	1.32CE-04
8.900E-01	6.964E-02	3.699E-03	5.430E 00	4.346E-05	1.209E-04
9.100E-01	7.870E-02	3.448E-03	5.530E 00	2.643E-05	1.179E-04
9.300E-01	7.638E-02	3.266E-03	5.630E 00	5.151E-05	1.256E-04
9.500E-01	6.497E-02	3.410E-03	5.730E 00	2.257E-05	1.082E-04
9.700E-01	5.030E-02	3.319E-03	5.830E 00	3.488E-05	1.101E-04
1.000E 00	3.343E-02	3.230E-03	5.930E 00	2.924E-05	1.164E-04
1.040E 00	2.851E-02	3.277E-03	6.030E 00	3.380E-05	1.154E-04
1.080E 00	3.305E-02	3.071E-03	6.130E 00	4.860E-05	1.15CE-04
1.120E 00	2.903E-02	3.119E-03	6.230E 00	3.566E-05	9.774E-05
1.160E 00	1.705E-02	3.035E-03	6.330E 00	7.179E-06	9.746E-05
1.200E 00	6.104E-03	3.072E-03	6.440E 00	-4.087E-05	1.054E-04
1.240E 00	9.670E-04	3.262E-03	6.560E 00	-7.302E-05	9.076E-05
1.280E 00	-6.427E-04	3.634E-03	6.680E 00	-8.618E-05	7.654E-05
1.320E 00	-1.305E-03	3.561E-03	6.800E 00	-5.885E-05	8.399E-05
1.360E 00	1.410E-03	3.568E-03	6.920E 00	-1.385E-05	6.189E-05
1.400E 00	9.714E-03	3.867E-03	7.040E 00	1.598E-05	5.963E-05
1.440E 00	2.702E-02	3.917E-03	7.160E 00	3.344E-05	5.602E-05
1.480E 00	6.031E-02	3.704E-03	7.280E 00	1.578E-05	4.202E-05
1.520E 00	1.115E-01	4.409E-03	7.400E 00	1.549E-05	3.827E-05
1.560E 00	1.583E-01	4.737E-03	7.520E 00	1.956E-05	3.560E-05
1.600E 00	1.684E-01	4.358E-03	7.640E 00	2.546E-05	3.364E-05
1.640E 00	1.430E-01	3.927E-03	7.760E 00	3.082E-05	2.768E-05
1.680E 00	1.160E-01	3.504E-03	7.890E 00	2.288E-05	2.145E-05
1.720E 00	1.096E-01	3.454E-03	8.030E 00	1.262E-05	1.755E-05
1.760E 00	1.123E-01	3.374E-03	8.170E 00	5.914E-06	1.627E-05
1.800E 00	1.022E-01	3.435E-03	8.310E 00	4.196E-06	1.478E-05
1.850E 00	6.975E-02	2.828E-03	8.450E 00	1.065E-05	1.386E-05
1.910E 00	3.936E-02	2.280E-03	8.590E 00	2.104E-05	1.239E-05
1.970E 00	3.279E-02	2.239E-03	8.730E 00	2.462E-05	1.256E-05
2.030E 00	3.591E-02	2.262E-03	8.870E 00	2.145E-05	1.286E-05
2.090E 00	3.592E-02	2.135E-03	9.010E 00	9.698E-06	9.408E-06
2.150E 00	2.996E-02	2.027E-03	9.150E 00	2.256E-06	9.167E-06
2.210E 00	2.646E-02	1.910E-03	9.300E 00	-8.561E-07	9.358E-06
2.270E 00	2.722E-02	1.911E-03	9.460E 00	-5.833E-07	9.631E-06
2.330E 00	2.544E-02	1.850E-03	9.620E 00	2.959E-06	8.277E-06
2.390E 00	2.100E-02	1.801E-03	9.780E 00	5.615E-06	7.625E-06
2.450E 00	1.689E-02	1.761E-03	9.940E 00	8.053E-06	9.198E-06
2.510E 00	1.277E-02	1.746E-03	1.010E 01	8.976E-06	7.744E-06
2.570E 00	1.038E-02	1.792E-03	1.026E 01	8.794E-06	6.749E-06
2.630E 00	1.119E-02	1.708E-03	1.042E 01	5.365E-06	9.366E-06
2.690E 00	1.261E-02	1.662E-03	1.058E 01	3.380E-06	9.362E-06

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	2.995E-02	8.841E-04
4.000E-01 - 5.000E-01	4.657E-03	7.988E-04
5.000E-01 - 6.000E-01	3.252E-03	4.994E-04
6.000E-01 - 7.000E-01	1.758E-03	4.415E-04
7.000E-01 - 8.000E-01	5.167E-04	3.936E-04
8.000E-01 - 1.000E 00	9.903E-03	6.918E-04
1.000E 00 - 1.200E 00	5.129E-03	6.256E-04
1.200E 00 - 1.400E 00	2.778E-04	6.997E-04
1.400E 00 - 1.600E 00	1.790E-02	8.363E-04
1.600E 00 - 1.800E 00	2.458E-02	7.255E-04
1.800E 00 - 2.000E 00	1.045E-02	5.070E-04
2.000E 00 - 2.500E 00	1.340E-02	9.740E-04
2.500E 00 - 3.000E 00	8.258E-03	8.521E-04
3.000E 00 - 3.500E 00	1.848E-02	7.100E-04
3.500E 00 - 4.000E 00	1.293E-02	3.825E-04
4.000E 00 - 4.500E 00	3.120E-03	1.709E-04
4.500E 00 - 5.000E 00	3.919E-04	9.215E-05
5.000E 00 - 6.000E 00	3.100E-05	1.211E-04
6.000E 00 - 7.000E 00	-2.048E-05	9.192E-05
7.000E 00 - 8.000E 00	2.254E-05	3.773E-05
8.000E 00 - 9.000E 00	1.424E-05	1.393E-05
9.000E 00 - 1.000E 01	3.242E-06	8.862E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 4.98 TO 6.00 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)
2.725E-01	1.713E-01	1.145E-02	2.750E 00	1.558E-02	1.755E-03
2.875E-01	3.379E-01	1.088E-02	2.810E 00	1.943E-02	1.805E-03
3.025E-01	4.993E-01	1.021E-02	2.870E 00	2.363E-02	1.776E-03
3.175E-01	5.569E-01	9.479E-03	2.930E 00	2.722E-02	1.770E-03
3.325E-01	4.815E-01	9.373E-03	2.990E 00	2.991E-02	1.720E-03
3.475E-01	3.362E-01	9.455E-03	3.050E 00	3.186E-02	1.669E-03
3.625E-01	2.027E-01	8.767E-03	3.110E 00	3.378E-02	1.607E-03
3.775E-01	1.176E-01	8.583E-03	3.180E 00	3.666E-02	1.565E-03
3.925E-01	7.417E-02	8.536E-03	3.260E 00	4.081E-02	1.538E-03
4.100E-01	5.234E-02	9.013E-03	3.340E 00	4.542E-02	1.451E-03
4.300E-01	4.523E-02	9.174E-03	3.420E 00	4.873E-02	1.361E-03
4.500E-01	4.876E-02	8.976E-03	3.500E 00	4.822E-02	1.279E-03
4.700E-01	5.638E-02	8.756E-03	3.580E 00	4.338E-02	1.185E-03
4.900E-01	6.220E-02	8.184E-03	3.660E 00	3.629E-02	1.015E-03
5.100E-01	6.130E-02	7.253E-03	3.740E 00	2.916E-02	9.224E-04
5.300E-01	5.217E-02	6.054E-03	3.820E 00	2.375E-02	8.300E-04
5.500E-01	4.097E-02	5.032E-03	3.900E 00	2.032E-02	7.645E-04
5.700E-01	3.470E-02	4.491E-03	3.980E 00	1.739E-02	6.963E-04
5.900E-01	3.329E-02	4.270E-03	4.060E 00	1.438E-02	6.317E-04
6.100E-01	3.150E-02	4.454E-03	4.140E 00	1.236E-02	6.027E-04
6.300E-01	2.683E-02	4.219E-03	4.220E 00	1.188E-02	5.603E-04
6.500E-01	2.071E-02	3.252E-03	4.300E 00	1.204E-02	5.227E-04
6.700E-01	1.645E-02	2.756E-03	4.380E 00	1.220E-02	4.882E-04
6.900E-01	1.319E-02	2.428E-03	4.460E 00	1.229E-02	4.653E-04
7.100E-01	9.547E-03	2.290E-03	4.540E 00	1.188E-02	4.497E-04
7.300E-01	6.132E-03	2.308E-03	4.630E 00	1.045E-02	3.893E-04
7.500E-01	4.915E-03	2.285E-03	4.730E 00	8.702E-03	3.567E-04
7.700E-01	6.437E-03	2.197E-03	4.830E 00	7.304E-03	3.242E-04
7.900E-01	1.006E-02	2.017E-03	4.930E 00	5.668E-03	2.815E-04
8.100E-01	1.485E-02	3.935E-03	5.030E 00	4.133E-03	2.590E-04
8.300E-01	2.210E-02	3.833E-03	5.130E 00	3.167E-03	2.365E-04
8.500E-01	3.430E-02	3.761E-03	5.230E 00	2.426E-03	2.051E-04
8.700E-01	5.168E-02	3.865E-03	5.330E 00	1.695E-03	1.827E-04
8.900E-01	6.987E-02	3.824E-03	5.430E 00	1.085E-03	1.667E-04
9.100E-01	8.196E-02	3.622E-03	5.530E 00	6.317E-04	1.579E-04
9.300E-01	8.366E-02	3.488E-03	5.630E 00	2.957E-04	1.344E-04
9.500E-01	7.520E-02	3.557E-03	5.730E 00	1.004E-04	1.193E-04
9.700E-01	6.097E-02	3.564E-03	5.830E 00	2.824E-05	1.047E-04
1.000E 00	4.145E-02	3.637E-03	5.930E 00	5.331E-05	1.031E-04
1.040E 00	3.460E-02	3.642E-03	6.030E 00	8.724E-05	1.018E-04
1.080E 00	4.053E-02	3.268E-03	6.130E 00	8.614E-05	9.640E-05
1.120E 00	4.004E-02	3.277E-03	6.230E 00	3.781E-05	8.698E-05
1.160E 00	3.185E-02	3.049E-03	6.330E 00	-3.621E-05	7.990E-05
1.200E 00	2.115E-02	3.076E-03	6.440E 00	-9.309E-05	6.688E-05
1.240E 00	1.260E-02	3.363E-03	6.560E 00	-1.082E-04	6.982E-05
1.280E 00	7.940E-03	3.813E-03	6.680E 00	-5.200E-05	6.593E-05
1.320E 00	5.268E-03	3.856E-03	6.800E 00	2.892E-05	5.775E-05
1.360E 00	4.013E-03	3.880E-03	6.920E 00	9.556E-05	4.862E-05
1.400E 00	1.005E-02	4.145E-03	7.040E 00	9.813E-05	4.450E-05
1.440E 00	2.545E-02	4.000E-03	7.160E 00	8.504E-05	4.139E-05
1.480E 00	5.808E-02	4.016E-03	7.280E 00	3.091E-05	3.845E-05
1.520E 00	1.117E-01	4.512E-03	7.400E 00	2.006E-06	3.259E-05
1.560E 00	1.661E-01	4.961E-03	7.520E 00	1.856E-05	2.918E-05
1.600E 00	1.846E-01	4.703E-03	7.640E 00	1.685E-05	2.692E-05
1.640E 00	1.595E-01	4.224E-03	7.760E 00	1.123E-05	2.303E-05
1.680E 00	1.256E-01	3.811E-03	7.890E 00	4.828E-06	1.899E-05
1.720E 00	1.132E-01	3.651E-03	8.030E 00	-7.529E-07	1.465E-05
1.760E 00	1.143E-01	3.565E-03	8.170E 00	-1.218E-06	1.473E-05
1.800E 00	1.062E-01	3.681E-03	8.310E 00	2.654E-06	1.260E-05
1.850E 00	7.707E-02	2.958E-03	8.450E 00	4.825E-06	1.306E-05
1.910E 00	4.579E-02	2.447E-03	8.590E 00	1.092E-05	1.054E-05
1.970E 00	3.700E-02	2.374E-03	8.730E 00	1.505E-05	9.455E-06
2.030E 00	3.881E-02	2.361E-03	8.870E 00	1.736E-05	1.143E-05
2.090E 00	3.812E-02	2.327E-03	9.010E 00	1.190E-05	9.760E-06
2.150E 00	3.304E-02	2.127E-03	9.150E 00	4.005E-06	6.616E-06
2.210E 00	2.869E-02	2.074E-03	9.300E 00	1.194E-07	5.621E-06
2.270E 00	2.788E-02	2.086E-03	9.460E 00	-1.932E-06	5.384E-06
2.330E 00	2.690E-02	2.061E-03	9.620E 00	-1.574E-06	5.211E-06
2.390E 00	2.380E-02	1.924E-03	9.780E 00	3.861E-07	5.422E-06
2.450E 00	1.961E-02	1.903E-03	9.940E 00	3.027E-06	5.441E-06
2.510E 00	1.586E-02	1.860E-03	1.010E 01	5.580E-06	4.824E-06
2.570E 00	1.369E-02	1.841E-03	1.026E 01	9.679E-06	5.618E-06
2.630E 00	1.312E-02	1.764E-03	1.042E 01	9.091E-06	5.451E-06
2.690E 00	1.355E-02	1.729E-03	1.058E 01	9.061E-06	5.989E-06

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	3.164E-02	9.143E-04
4.000E-01	-	5.000E-01	5.322E-03	8.808E-04
5.000E-01	-	6.000E-01	4.437E-03	5.426E-04
6.000E-01	-	7.000E-01	2.165E-03	4.830E-04
7.000E-01	-	8.000E-01	7.464E-04	4.223E-04
8.000E-01	-	1.000E 00	1.083E-02	7.412E-04
1.000E 00	-	1.200E 00	7.161E-03	6.626E-04
1.200E 00	-	1.400E 00	1.790E-03	7.413E-04
1.400E 00	-	1.600E 00	1.836E-02	8.773E-04
1.600E 00	-	1.800E 00	2.624E-02	7.750E-04
1.800E 00	-	2.000E 00	1.161E-02	5.382E-04
2.000E 00	-	2.500E 00	1.455E-02	1.049E-03
2.500E 00	-	3.000E 00	9.382E-03	8.900E-04
3.000E 00	-	3.500E 00	2.021E-02	7.556E-04
3.500E 00	-	4.000E 00	1.518E-02	4.698E-04
4.000E 00	-	4.500E 00	6.340E-03	2.753E-04
4.500E 00	-	5.000E 00	4.253E-03	1.764E-04
5.000E 00	-	6.000E 00	1.277E-03	1.637E-04
6.000E 00	-	7.000E 00	2.361E-06	7.250E-05
7.000E 00	-	8.000E 00	2.979E-05	3.072E-05
8.000E 00	-	9.000E 00	7.634E-06	1.213E-05
9.000E 00	-	1.000E 01	1.337E-06	5.880E-06

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 6.00 TO 7.01 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)
2.725E-01	1.768E-01	1.250E-02	2.750E 00	1.618E-02	1.948E-03
2.875E-01	3.414E-01	1.138E-02	2.810E 00	1.920E-02	2.047E-03
3.025E-01	4.903E-01	1.072E-02	2.870E 00	2.319E-02	1.976E-03
3.175E-01	5.383E-01	1.006E-02	2.930E 00	2.660E-02	1.919E-03
3.325E-01	4.643E-01	1.011E-02	2.990E 00	2.852E-02	1.917E-03
3.475E-01	3.272E-01	1.018E-02	3.050E 00	2.964E-02	1.890E-03
3.625E-01	2.013E-01	9.510E-03	3.110E 00	3.113E-02	1.827E-03
3.775E-01	1.221E-01	9.289E-03	3.180E 00	3.416E-02	1.745E-03
3.925E-01	8.279E-02	9.411E-03	3.260E 00	3.910E-02	1.708E-03
4.100E-01	6.202E-02	1.006E-02	3.340E 00	4.399E-02	1.641E-03
4.300E-01	5.346E-02	1.015E-02	3.420E 00	4.712E-02	1.593E-03
4.500E-01	5.853E-02	9.693E-03	3.500E 00	4.773E-02	1.508E-03
4.700E-01	6.904E-02	9.403E-03	3.580E 00	4.428E-02	1.410E-03
4.900E-01	7.190E-02	8.974E-03	3.660E 00	3.749E-02	1.310E-03
5.100E-01	6.407E-02	8.963E-03	3.740E 00	2.981E-02	1.255E-03
5.300E-01	5.246E-02	7.193E-03	3.820E 00	2.361E-02	1.154E-03
5.500E-01	4.361E-02	5.840E-03	3.900E 00	2.047E-02	1.102E-03
5.700E-01	3.793E-02	5.241E-03	3.980E 00	1.867E-02	1.030E-03
5.900E-01	3.421E-02	5.084E-03	4.060E 00	1.652E-02	9.863E-04
6.100E-01	3.095E-02	5.265E-03	4.140E 00	1.526E-02	9.563E-04
6.300E-01	2.685E-02	5.683E-03	4.220E 00	1.568E-02	9.502E-04
6.500E-01	2.197E-02	5.644E-03	4.300E 00	1.644E-02	9.156E-04
6.700E-01	1.768E-02	5.330E-03	4.380E 00	1.669E-02	8.757E-04
6.900E-01	1.413E-02	4.932E-03	4.460E 00	1.660E-02	8.267E-04
7.100E-01	1.098E-02	4.823E-03	4.540E 00	1.612E-02	7.917E-04
7.300E-01	8.703E-03	4.955E-03	4.630E 00	1.482E-02	7.246E-04
7.500E-01	8.369E-03	4.944E-03	4.730E 00	1.358E-02	6.993E-04
7.700E-01	9.921E-03	4.764E-03	4.830E 00	1.353E-02	6.32CE-04
7.900E-01	1.285E-02	4.569E-03	4.930E 00	1.343E-02	5.568E-04
8.100E-01	1.656E-02	4.527E-03	5.030E 00	1.248E-02	5.23CE-04
8.300E-01	2.270E-02	4.382E-03	5.130E 00	1.124E-02	5.059E-04
8.500E-01	3.400E-02	4.275E-03	5.230E 00	1.004E-02	4.771E-04
8.700E-01	5.100E-02	4.309E-03	5.330E 00	8.650E-03	4.271E-04
8.900E-01	6.910E-02	4.192E-03	5.430E 00	7.301E-03	3.781E-04
9.100E-01	8.088E-02	4.035E-03	5.530E 00	6.327E-03	3.374E-04
9.300E-01	8.215E-02	3.979E-03	5.630E 00	5.377E-03	3.056E-04
9.500E-01	7.388E-02	4.080E-03	5.730E 00	4.216E-03	2.878E-04
9.700E-01	6.113E-02	4.101E-03	5.830E 00	3.187E-03	2.593E-04
1.000E 00	4.545E-02	4.300E-03	5.930E 00	2.504E-03	2.242E-04
1.040E 00	4.307E-02	4.023E-03	6.030E 00	2.031E-03	2.030E-04
1.080E 00	5.046E-02	3.671E-03	6.130E 00	1.599E-03	1.771E-04
1.120E 00	4.995E-02	3.668E-03	6.230E 00	1.226E-03	1.636E-04
1.160E 00	3.917E-02	3.485E-03	6.330E 00	9.515E-04	1.465E-04
1.200E 00	2.610E-02	3.728E-03	6.440E 00	7.181E-04	1.291E-04
1.240E 00	1.923E-02	3.993E-03	6.560E 00	5.018E-04	1.139E-04
1.280E 00	1.583E-02	4.430E-03	6.680E 00	3.086E-04	9.456E-05
1.320E 00	1.275E-02	4.281E-03	6.800E 00	1.335E-04	7.872E-05
1.360E 00	1.240E-02	4.261E-03	6.920E 00	3.894E-05	6.895E-05
1.400E 00	1.711E-02	4.674E-03	7.040E 00	1.806E-05	5.195E-06
1.440E 00	3.116E-02	4.528E-03	7.160E 00	2.325E-05	5.511E-05
1.480E 00	6.506E-02	4.617E-03	7.280E 00	1.425E-05	4.379E-05
1.520E 00	1.222E-01	5.170E-03	7.400E 00	-2.043E-05	3.167E-05
1.560E 00	1.794E-01	5.632E-03	7.520E 00	-4.085E-05	3.041E-05
1.600E 00	2.001E-01	5.339E-03	7.640E 00	-2.903E-05	2.681E-05
1.640E 00	1.764E-01	4.623E-03	7.760E 00	1.929E-06	2.406E-05
1.680E 00	1.419E-01	4.122E-03	7.890E 00	3.139E-05	2.158E-05
1.720E 00	1.279E-01	4.033E-03	8.030E 00	4.225E-05	1.859E-05
1.760E 00	1.281E-01	4.042E-03	8.170E 00	3.844E-05	1.719E-05
1.800E 00	1.190E-01	4.224E-03	8.310E 00	3.142E-05	1.685E-05
1.850E 00	8.724E-02	3.475E-03	8.450E 00	2.567E-05	1.693E-05
1.910E 00	5.304E-02	2.995E-03	8.590E 00	1.597E-05	1.727E-05
1.970E 00	4.258E-02	2.696E-03	8.730E 00	8.184E-06	1.762E-05
2.030E 00	4.196E-02	2.616E-03	8.870E 00	4.649E-06	1.573E-05
2.090E 00	3.886E-02	2.550E-03	9.010E 00	1.081E-05	1.660E-05
2.150E 00	3.418E-02	2.487E-03	9.150E 00	1.586E-05	1.777E-05
2.210E 00	3.202E-02	2.428E-03	9.300E 00	1.857E-05	1.490E-05
2.270E 00	3.226E-02	2.366E-03	9.460E 00	1.856E-05	1.150E-05
2.330E 00	3.070E-02	2.314E-03	9.620E 00	1.592E-05	1.289E-05
2.390E 00	2.674E-02	2.267E-03	9.780E 00	1.237E-05	1.259E-05
2.450E 00	2.278E-02	2.199E-03	9.940E 00	7.127E-06	6.925E-06
2.510E 00	1.929E-02	2.171E-03	1.010E 01	6.356E-06	4.760E-06
2.570E 00	1.625E-02	2.126E-03	1.026E 01	5.981E-06	4.592E-06
2.630E 00	1.465E-02	2.042E-03	1.042E 01	5.256E-06	5.310E-06
2.690E 00	1.472E-02	1.916E-03	1.058E 01	4.338E-06	4.889E-06

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	3.103E-02	9.849E-04
4.000E-01 - 5.000E-01	6.313E-03	9.644E-04
5.000E-01 - 6.000E-01	4.643E-03	6.362E-04
6.000E-01 - 7.000E-01	2.231E-03	5.367E-04
7.000E-01 - 8.000E-01	1.021E-03	4.816E-04
8.000E-01 - 1.000E 00	1.082E-02	8.419E-04
1.000E 00 - 1.200E 00	8.790E-03	7.514E-04
1.200E 00 - 1.400E 00	3.229E-03	8.482E-04
1.400E 00 - 1.600E 00	2.026E-02	9.991E-04
1.600E 00 - 1.800E 00	2.928E-02	8.601E-04
1.800E 00 - 2.000E 00	1.323E-02	6.339E-04
2.000E 00 - 2.500E 00	1.597E-02	1.194E-03
2.500E 00 - 3.000E 00	9.739E-03	1.002E-03
3.000E 00 - 3.500E 00	1.928E-02	0.574E-04
3.500E 00 - 4.000E 00	1.547E-02	6.203E-04
4.000E 00 - 4.500E 00	8.134E-03	4.612E-04
4.500E 00 - 5.000E 00	7.078E-03	3.353E-04
5.000E 00 - 6.000E 00	6.918E-03	3.663E-04
6.000E 00 - 7.000E 00	7.430E-04	1.241E-04
7.000E 00 - 8.000E 00	1.845E-06	3.457E-05
8.000E 00 - 9.000E 00	8.215E 06	1.707E-05
9.000E 00 - 1.000E 01	1.467E-05	1.320E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 7.01 TO 7.97 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)
2.725E-01	1.990E-01	1.369E-02	2.750E 00	2.176E-02	2.302E-03
2.875E-01	3.595E-01	1.257E-02	2.810E 00	2.426E-02	2.383E-03
3.025E-01	4.797E-01	1.196E-02	2.870E 00	2.706E-02	2.316E-03
3.175E-01	4.942E-01	1.126E-02	2.930E 00	2.921E-02	2.261E-03
3.325E-01	4.068E-01	1.134E-02	2.990E 00	3.077E-02	2.181E-03
3.475E-01	2.788E-01	1.141E-02	3.050E 00	3.255E-02	2.131E-03
3.625E-01	1.724E-01	1.060E-02	3.110E 00	3.489E-02	2.083E-03
3.775E-01	1.102E-01	1.049E-02	3.180E 00	3.800E-02	2.049E-03
3.925E-01	7.953E-02	1.041E-02	3.260E 00	4.177E-02	2.016E-03
4.100E-01	6.112E-02	1.086E-02	3.340E 00	4.581E-02	1.974E-03
4.300E-01	5.518E-02	1.137E-02	3.420E 00	4.701E-02	1.860E-03
4.500E-01	6.585E-02	1.092E-02	3.500E 00	4.694E-02	1.797E-03
4.700E-01	8.054E-02	1.093E-02	3.580E 00	4.188E-02	1.715E-03
4.900E-01	8.352E-02	1.062E-02	3.660E 00	3.512E-02	1.626E-03
5.100E-01	7.167E-02	9.730E-03	3.740E 00	2.859E-02	1.534E-03
5.300E-01	5.447E-02	8.887E-03	3.820E 00	2.348E-02	1.446E-03
5.500E-01	4.198E-02	8.926E-03	3.900E 00	2.045E-02	1.425E-03
5.700E-01	3.544E-02	6.128E-03	3.980E 00	1.861E-02	1.356E-03
5.900E-01	3.153E-02	5.775E-03	4.060E 00	1.688E-02	1.316E-03
6.100E-01	2.802E-02	5.909E-03	4.140E 00	1.599E-02	1.290E-03
6.300E-01	2.501E-02	6.608E-03	4.220E 00	1.645E-02	1.269E-03
6.500E-01	2.229E-02	6.565E-03	4.300E 00	1.743E-02	1.235E-03
6.700E-01	1.878E-02	6.083E-03	4.380E 00	1.831E-02	1.173E-03
6.900E-01	1.388E-02	5.881E-03	4.460E 00	1.861E-02	1.176E-03
7.100E-01	9.606E-03	5.743E-03	4.540E 00	1.824E-02	1.193E-03
7.300E-01	7.835E-03	5.652E-03	4.630E 00	1.726E-02	1.101E-03
7.500E-01	8.162E-03	5.448E-03	4.730E 00	1.674E-02	1.044E-03
7.700E-01	9.751E-03	5.156E-03	4.830E 00	1.696E-02	9.727E-04
7.900E-01	1.308E-02	4.971E-03	4.930E 00	1.622E-02	9.470E-04
8.100E-01	1.856E-02	4.945E-03	5.030E 00	1.520E-02	9.355E-04
8.300E-01	2.684E-02	4.867E-03	5.130E 00	1.455E-02	9.438E-04
8.500E-01	3.877E-02	4.825E-03	5.230E 00	1.315E-02	9.065E-04
8.700E-01	5.427E-02	4.829E-03	5.330E 00	1.107E-02	8.005E-04
8.900E-01	6.995E-02	4.717E-03	5.430E 00	9.640E-03	7.681E-04
9.100E-01	7.963E-02	4.674E-03	5.530E 00	9.168E-03	7.169E-04
9.300E-01	7.967E-02	4.607E-03	5.630E 00	8.788E-03	6.662E-04
9.500E-01	7.107E-02	4.713E-03	5.730E 00	8.248E-03	6.491E-04
9.700E-01	5.893E-02	4.763E-03	5.830E 00	8.046E-03	5.989E-04
1.000E 00	4.591E-02	5.030E-03	5.930E 00	8.237E-03	5.488E-04
1.040E 00	4.028E-02	4.725E-03	6.030E 00	8.340E-03	5.019E-04
1.080E 00	5.774E-02	4.348E-03	6.130E 00	8.111E-03	4.595E-04
1.120E 00	5.464E-02	4.373E-03	6.230E 00	7.529E-03	4.296E-04
1.160E 00	4.195E-02	4.117E-03	6.330E 00	6.572E-03	3.832E-04
1.200E 00	2.909E-02	4.177E-03	6.440E 00	5.339E-03	3.316E-04
1.240E 00	1.969E-02	4.540E-03	6.560E 00	4.244E-03	2.958E-04
1.280E 00	1.506E-02	5.087E-03	6.680E 00	3.469E-03	2.570E-04
1.320E 00	1.580E-02	5.096E-03	6.800E 00	2.863E-03	2.104E-04
1.360E 00	1.672E-02	4.949E-03	6.920E 00	2.314E-03	1.787E-04
1.400E 00	2.406E-02	5.486E-03	7.040E 00	1.725E-03	1.425E-04
1.440E 00	4.007E-02	5.331E-03	7.160E 00	1.117E-03	1.108E-04
1.480E 00	7.750E-02	5.098E-03	7.280E 00	6.275E-04	8.992E-05
1.520E 00	1.383E-01	5.929E-03	7.400E 00	3.400E-04	7.334E-05
1.560E 00	1.955E-01	6.338E-03	7.520E 00	2.145E-04	6.370E-05
1.600E 00	2.109E-01	6.123E-03	7.640E 00	1.530E-04	5.571E-05
1.640E 00	1.815E-01	5.611E-03	7.760E 00	1.005E-04	4.841E-05
1.680E 00	1.455E-01	4.821E-03	7.890E 00	4.899E-05	4.055E-05
1.720E 00	1.319E-01	4.613E-03	8.030E 00	1.915E-05	3.935E-05
1.760E 00	1.304E-01	4.561E-03	8.170E 00	1.440E-05	3.456E-05
1.800E 00	1.200E-01	4.741E-03	8.310E 00	1.645E-05	2.859E-05
1.850E 00	9.119E-02	3.821E-03	8.450E 00	2.491E-05	2.532E-05
1.910E 00	5.804E-02	3.315E-03	8.590E 00	3.325E-05	2.419E-05
1.970E 00	4.400E-02	3.365E-03	8.730E 00	3.204E-05	2.257E-05
2.030E 00	4.288E-02	3.165E-03	8.870E 00	2.107E-05	1.947E-05
2.090E 00	4.120E-02	3.200E-03	9.010E 00	9.022E-06	1.674E-05
2.150E 00	3.851E-02	3.043E-03	9.150E 00	5.057E-06	1.503E-05
2.210E 00	3.852E-02	2.923E-03	9.300E 00	5.700E-06	1.446E-05
2.270E 00	3.879E-02	2.753E-03	9.460E 00	5.939E-06	1.243E-05
2.330E 00	3.600E-02	2.759E-03	9.620E 00	3.652E-06	1.159E-05
2.390E 00	3.186E-02	2.689E-03	9.780E 00	5.021E-06	1.185E-05
2.450E 00	2.811E-02	2.565E-03	9.940E 00	9.768E-06	1.307E-05
2.510E 00	2.510E-02	2.492E-03	1.010E 01	1.533E-05	1.386E-05
2.570E 00	2.282E-02	2.431E-03	1.026E 01	2.009E-05	1.037E-05
2.630E 00	2.139E-02	2.355E-03	1.042E 01	2.287E-05	1.136E-05
2.690E 00	2.009E-02	2.278E-03	1.058E 01	1.949E-05	1.308E-05

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	2.797E-02	1.102E-03
4.000E-01 - 5.000E-01	6.930E-03	1.092E-03
5.000E-01 - 6.000E-01	4.698E-03	7.417E-04
6.000E-01 - 7.000E-01	2.163E-03	6.206E-04
7.000E-01 - 8.000E-01	9.775E-04	5.396E-04
8.000E-01 - 1.000E 00	1.093E-02	9.573E-04
1.000E 00 - 1.200E 00	9.676E-03	8.843E-04
1.200E 00 - 1.400E 00	3.772E-03	9.793E-04
1.400E 00 - 1.600E 00	2.279E-02	1.140E-03
1.600E 00 - 1.800E 00	3.011E-02	9.979E-04
1.800E 00 - 2.000E 00	1.390E-02	7.212E-04
2.000E 00 - 2.500E 00	1.827E-02	1.435E-03
2.500E 00 - 3.000E 00	1.226E-02	1.166E-03
3.000E 00 - 3.500E 00	2.041E-02	1.000E-03
3.500E 00 - 4.000E 00	1.491E-02	7.737E-04
4.000E 00 - 4.500E 00	8.654E-03	6.228E-04
4.500E 00 - 5.000E 00	8.488E-03	5.201E-04
5.000E 00 - 6.000E 00	1.047E-02	7.460E-04
6.000E 00 - 7.000E 00	5.114E-03	3.230E-04
7.000E 00 - 8.000E 00	4.841E-04	7.442E-05
8.000E 00 - 9.000E 00	2.251E-05	2.660E-05
9.000E 00 - 1.000E 01	5.947E-06	1.335E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 7.97 TO 9.01 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)
2.725E-01	2.416E-01	1.552E-02	2.750E 00	2.772E-02	2.700E-03
2.875E-01	3.940E-01	1.462E-02	2.810E 00	3.094E-02	2.810E-03
3.025E-01	4.867E-01	1.373E-02	2.870E 00	3.420E-02	2.692E-03
3.175E-01	4.647E-01	1.234E-02	2.930E 00	3.634E-02	2.567E-03
3.325E-01	3.568E-01	1.232E-02	2.990E 00	3.778E-02	2.563E-03
3.475E-01	2.331E-01	1.253E-02	3.050E 00	3.878E-02	2.557E-03
3.625E-01	1.442E-01	1.191E-02	3.110E 00	3.966E-02	2.587E-03
3.775E-01	9.710E-02	1.174E-02	3.180E 00	4.166E-02	2.486E-03
3.925E-01	7.475E-02	1.190E-02	3.260E 00	4.586E-02	2.437E-03
4.100E-01	6.339E-02	1.233E-02	3.340E 00	5.073E-02	2.391E-03
4.300E-01	6.376E-02	1.230E-02	3.420E 00	5.322E-02	2.201E-03
4.500E-01	7.566E-02	1.247E-02	3.500E 00	5.198E-02	2.157E-03
4.700E-01	9.021E-02	1.254E-02	3.580E 00	4.711E-02	2.063E-03
4.900E-01	9.095E-02	1.205E-02	3.660E 00	3.949E-02	1.923E-03
5.100E-01	7.381E-02	1.122E-02	3.740E 00	3.206E-02	1.907E-03
5.300E-01	5.331E-02	9.483E-03	3.820E 00	2.736E-02	1.780E-03
5.500E-01	4.218E-02	7.473E-03	3.900E 00	2.426E-02	1.732E-03
5.700E-01	3.854E-02	6.519E-03	3.980E 00	2.097E-02	1.710E-03
5.900E-01	3.628E-02	6.227E-03	4.060E 00	1.870E-02	1.641E-03
6.100E-01	3.223E-02	6.310E-03	4.140E 00	1.836E-02	1.599E-03
6.300E-01	2.642E-02	6.801E-03	4.220E 00	1.925E-02	1.581E-03
6.500E-01	2.068E-02	6.839E-03	4.300E 00	2.045E-02	1.578E-03
6.700E-01	1.656E-02	6.430E-03	4.380E 00	2.103E-02	1.483E-03
6.900E-01	1.374E-02	6.098E-03	4.460E 00	2.043E-02	1.443E-03
7.100E-01	1.140E-02	6.124E-03	4.540E 00	1.957E-02	1.458E-03
7.300E-01	9.139E-03	6.196E-03	4.630E 00	1.910E-02	1.430E-03
7.500E-01	7.653E-03	6.140E-03	4.730E 00	1.811E-02	1.389E-03
7.700E-01	8.350E-03	6.095E-03	4.830E 00	1.619E-02	1.320E-03
7.900E-01	1.266E-02	5.917E-03	4.930E 00	1.500E-02	1.328E-03
8.100E-01	1.919E-02	5.642E-03	5.030E 00	1.447E-02	1.305E-03
8.300E-01	2.755E-02	5.484E-03	5.130E 00	1.362E-02	1.292E-03
8.500E-01	3.007E-02	5.372E-03	5.230E 00	1.300E-02	1.289E-03
8.700E-01	5.764E-02	5.433E-03	5.330E 00	1.282E-02	1.254E-03
8.900E-01	7.541E-02	5.393E-03	5.430E 00	1.299E-02	1.208E-03
9.100E-01	8.496E-02	5.123E-03	5.530E 00	1.365E-02	1.154E-03
9.300E-01	8.212E-02	5.162E-03	5.630E 00	1.386E-02	1.112E-03
9.500E-01	6.999E-02	5.381E-03	5.730E 00	1.285E-02	1.086E-03
9.700E-01	5.586E-02	5.415E-03	5.830E 00	1.139E-02	1.077E-03
1.000E 00	4.551E-02	5.663E-03	5.930E 00	1.017E-02	1.006E-03
1.040E 00	5.599E-02	5.428E-03	6.030E 00	9.539E-03	9.271E-04
1.080E 00	6.864E-02	4.925E-03	6.130E 00	9.750E-03	8.722E-04
1.120E 00	6.330E-02	4.821E-03	6.230E 00	1.039E-02	8.344E-04
1.160E 00	4.669E-02	4.376E-03	6.330E 00	1.058E-02	7.706E-04
1.200E 00	3.116E-02	4.547E-03	6.440E 00	1.015E-02	6.940E-04
1.240E 00	2.248E-02	5.030E-03	6.560E 00	9.320E-03	6.210E-04
1.280E 00	1.798E-02	5.651E-03	6.680E 00	8.091E-03	5.771E-04
1.320E 00	1.466E-02	5.662E-03	6.800E 00	6.825E-03	5.138E-04
1.360E 00	1.643E-02	5.615E-03	6.920E 00	6.003E-03	4.618E-04
1.400E 00	2.853E-02	5.859E-03	7.040E 00	5.512E-03	3.993E-04
1.440E 00	5.251E-02	5.649E-03	7.160E 00	5.155E-03	3.481E-04
1.480E 00	9.598E-02	5.707E-03	7.280E 00	4.686E-03	2.957E-04
1.520E 00	1.621E-01	6.644E-03	7.400E 00	4.024E-03	2.489E-04
1.560E 00	2.203E-01	7.060E-03	7.520E 00	3.335E-03	2.198E-04
1.600E 00	2.307E-01	6.806E-03	7.640E 00	2.711E-03	1.912E-04
1.640E 00	1.943E-01	6.126E-03	7.760E 00	2.072E-03	1.577E-04
1.680E 00	1.533E-01	5.355E-03	7.890E 00	1.355E-03	1.250E-04
1.720E 00	1.371E-01	5.137E-03	8.030E 00	7.626E-04	9.534E-05
1.760E 00	1.340E-01	5.211E-03	8.170E 00	4.706E-04	8.709E-05
1.800E 00	1.201E-01	5.460E-03	8.310E 00	3.538E-04	7.385E-05
1.850E 00	8.550E-02	4.497E-03	8.450E 00	2.341E-04	5.573E-05
1.910E 00	5.398E-02	3.858E-03	8.590E 00	1.118E-04	4.251E-05
1.970E 00	4.646E-02	3.825E-03	8.730E 00	4.099E-05	3.741E-05
2.030E 00	4.652E-02	3.687E-03	8.870E 00	2.274E-05	3.267E-05
2.090E 00	4.391E-02	3.584E-03	9.010E 00	2.502E-05	2.984E-05
2.150E 00	3.962E-02	3.363E-03	9.150E 00	2.804E-05	2.413E-05
2.210E 00	3.876E-02	3.396E-03	9.300E 00	2.075E-05	2.088E-05
2.270E 00	4.187E-02	3.140E-03	9.460E 00	5.197E-06	2.273E-05
2.330E 00	4.192E-02	3.140E-03	9.620E 00	-7.637E-06	1.988E-05
2.390E 00	3.838E-02	2.939E-03	9.780E 00	-1.044E-05	1.719E-05
2.450E 00	3.430E-02	2.930E-03	9.940E 00	-2.601E-06	1.519E-05
2.510E 00	3.038E-02	2.893E-03	1.010E 01	8.513E-06	1.076E-05
2.570E 00	2.694E-02	2.932E-03	1.026E 01	1.742E-05	9.506E-06
2.630E 00	2.564E-02	2.799E-03	1.042E 01	2.244E-05	1.092E-05
2.690E 00	2.614E-02	2.665E-03	1.058E 01	2.197E-05	1.189E-05

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	2.543E-02	1.226E-03
4.000E-01	-	5.000E-01	7.676E-03	1.232E-03
5.000E-01	-	6.000E-01	4.880E-03	8.184E-04
6.000E-01	-	7.000E-01	2.192E-03	6.505E-04
7.000E-01	-	8.000E-01	9.894E-04	6.094E-04
8.000E-01	-	1.000E 00	1.120E-02	1.080E-03
1.000E 00	-	1.200E 00	1.103E-02	9.832E-04
1.200E 00	-	1.400E 00	3.968E-03	1.088E-03
1.400E 00	-	1.600E 00	2.651E-02	1.256E-03
1.600E 00	-	1.800E 00	3.166E-02	1.114E-03
1.800E 00	-	2.000E 00	1.344E-02	8.364E-04
2.000E 00	-	2.500E 00	2.014E-02	1.630E-03
2.500E 00	-	3.000E 00	1.518E-02	1.369E-03
3.000E 00	-	3.500E 00	2.288E-02	1.210E-03
3.500E 00	-	4.000E 00	1.694E-02	9.403E-04
4.000E 00	-	4.500E 00	9.865E-03	7.800E-04
4.500E 00	-	5.000E 00	8.702E-03	6.890E-04
5.000E 00	-	6.000E 00	1.278E-02	1.171E-03
6.000E 00	-	7.000E 00	8.795E-03	6.740E-04
7.000E 00	-	8.000E 00	3.416E-03	2.368E-04
8.000E 00	-	9.000E 00	2.485E-04	5.745E-05
9.000E 00	-	1.000E 01	6.863E-06	2.071E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 9.01 TO 9.98 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)
2.725E-01	2.513E-01	1.716E-02	2.750E 00	2.943E-02	3.105E-03
2.875E-01	4.006E-01	1.541E-02	2.810E 00	3.100E-02	3.176E-03
3.025E-01	4.822E-01	1.837E-02	2.870E 00	3.397E-02	3.085E-03
3.175E-01	4.453E-01	1.313E-02	2.930E 00	3.618E-02	2.998E-03
3.325E-01	3.295E-01	1.347E-02	2.990E 00	3.701E-02	3.008E-03
3.475E-01	2.112E-01	1.359E-02	3.050E 00	3.842E-02	3.039E-03
3.625E-01	1.290E-01	1.295E-02	3.110E 00	4.147E-02	2.976E-03
3.775E-01	8.321E-02	1.333E-02	3.180E 00	4.601E-02	2.742E-03
3.925E-01	6.452E-02	1.352E-02	3.260E 00	5.000E-02	2.762E-03
4.100E-01	6.296E-02	1.320E-02	3.340E 00	5.168E-02	2.705E-03
4.300E-01	7.167E-02	1.326E-02	3.420E 00	5.355E-02	2.633E-03
4.500E-01	9.079E-02	1.305E-02	3.500E 00	5.399E-02	2.488E-03
4.700E-01	1.102E-01	1.313E-02	3.500D 00	4.777E-02	2.427E-03
4.900E-01	1.027E-01	1.288E-02	3.660E 00	3.776E-02	2.284E-03
5.100E-01	7.161E-02	1.242E-02	3.740E 00	3.097E-02	2.242E-03
5.300E-01	4.456E-02	1.045E-02	3.820E 00	2.851E-02	2.130E-03
5.500E-01	3.444E-02	8.202E-03	3.900E 00	2.728E-02	2.024E-03
5.700E-01	3.342E-02	7.245E-03	3.980E 00	2.580E-02	1.942E-03
5.900E-01	3.298E-02	6.847E-03	4.060E 00	2.439E-02	1.901E-03
6.100E-01	2.864E-02	6.991E-03	4.140E 00	2.307E-02	1.897E-03
6.300E-01	2.257E-02	7.741E-03	4.220E 00	2.328E-02	1.890E-03
6.500E-01	1.657E-02	7.688E-03	4.300E 00	2.460E-02	1.839E-03
6.700E-01	1.320E-02	7.356E-03	4.380E 00	2.506E-02	1.774E-03
6.900E-01	1.209E-02	7.049E-03	4.460E 00	2.397E-02	1.772E-03
7.100E-01	1.156E-02	6.808E-03	4.540E 00	2.244E-02	1.772E-03
7.300E-01	1.087E-02	6.859E-03	4.630E 00	2.073E-02	1.705E-03
7.500E-01	1.076E-02	6.787E-03	4.730E 00	1.903E-02	1.691E-03
7.700E-01	1.137E-02	6.406E-03	4.830E 00	1.791E-02	1.647E-03
7.900E-01	1.382E-02	6.110E-03	4.930E 00	1.725E-02	1.639E-03
8.100E-01	1.925E-02	6.022E-03	5.030E 00	1.680E-02	1.583E-03
8.300E-01	2.882E-02	5.809E-03	5.130E 00	1.589E-02	1.572E-03
8.500E-01	4.287E-02	5.737E-03	5.230E 00	1.429E-02	1.574E-03
8.700E-01	6.051E-02	5.959E-03	5.330E 00	1.250E-02	1.524E-03
8.900E-01	7.695E-02	6.116E-03	5.430E 00	1.139E-02	1.545E-03
9.100E-01	8.455E-02	6.901E-03	5.530E 00	1.118E-02	1.503E-03
9.300E-01	8.027E-02	5.631E-03	5.630E 00	1.118E-02	1.398E-03
9.500E-01	6.781E-02	5.855E-03	5.730E 00	1.115E-02	1.400E-03
9.700E-01	5.509E-02	5.946E-03	5.830E 00	1.159E-02	1.362E-03
1.000E 00	4.805E-02	5.996E-03	5.930E 00	1.239E-02	1.291E-03
1.040E 00	6.113E-02	5.883E-03	6.030E 00	1.283E-02	1.267E-03
1.080E 00	7.581E-02	5.330E-03	6.130E 00	1.236E-02	1.176E-03
1.120E 00	6.449E-02	5.122E-03	6.230E 00	1.123E-02	1.175E-03
1.160E 00	3.970E-02	5.175E-03	6.330E 00	9.929E-03	1.124E-03
1.200E 00	2.373E-02	5.266E-03	6.440E 00	8.881E-03	1.034E-03
1.240E 00	1.574E-02	5.723E-03	6.560E 00	7.704E-03	9.592E-04
1.280E 00	1.473E-02	6.454E-03	6.680E 00	8.010E-03	9.312E-04
1.320E 00	1.582E-02	6.165E-03	6.800E 00	8.690E-03	8.876E-04
1.360E 00	1.944E-02	5.975E-03	6.920E 00	9.349E-03	7.955E-04
1.400E 00	3.186E-02	6.287E-03	7.040E 00	9.090E-03	7.267E-04
1.440E 00	5.391E-02	6.079E-03	7.160E 00	7.717E-03	6.791E-04
1.480E 00	9.519E-02	6.568E-03	7.280E 00	6.348E-03	6.364E-04
1.520E 00	1.618E-01	7.407E-03	7.400E 00	5.365E-03	5.878E-04
1.560E 00	2.192E-01	7.683E-03	7.520E 00	4.733E-03	5.434E-04
1.600E 00	2.279E-01	7.124E-03	7.640E 00	4.575E-03	4.952E-04
1.640E 00	1.904E-01	6.243E-03	7.760E 00	4.618E-03	4.468E-04
1.680E 00	1.497E-01	5.690E-03	7.890E 00	4.307E-03	3.895E-04
1.720E 00	1.331E-01	5.518E-03	8.030E 00	3.739E-03	3.500E-04
1.760E 00	1.280E-01	5.409E-03	8.170E 00	3.176E-03	3.018E-04
1.800E 00	1.143E-01	5.451E-03	8.310E 00	2.587E-03	2.609E-04
1.850E 00	8.398E-02	4.822E-03	8.450E 00	2.067E-03	2.158E-04
1.910E 00	5.448E-02	4.259E-03	8.590E 00	1.593E-03	1.842E-04
1.970E 00	4.658E-02	4.068E-03	8.730E 00	1.132E-03	1.587E-04
2.030E 00	4.601E-02	3.824E-03	8.870E 00	7.835E-04	1.252E-04
2.090E 00	4.215E-02	3.996E-03	9.010E 00	5.532E-04	9.652E-05
2.150E 00	3.898E-02	3.822E-03	9.150E 00	3.594E-04	8.158E-05
2.210E 00	3.833E-02	3.648E-03	9.300E 00	1.873E-04	7.378E-05
2.270E 00	3.818E-02	3.628E-03	9.460E 00	8.363E-05	5.440E-05
2.330E 00	3.712E-02	3.668E-03	9.620E 00	4.290E-05	3.709E-05
2.390E 00	3.649E-02	3.536E-03	9.780E 00	2.167E-05	3.964E-05
2.450E 00	3.521E-02	3.417E-03	9.940E 00	1.445E-05	3.570E-05
2.510E 00	3.177E-02	3.275E-03	1.010E 01	1.293E-05	2.319E-05
2.570E 00	2.879E-02	3.361E-03	1.026E 01	1.564E-05	1.388E-05
2.630E 00	2.868E-02	3.218E-03	1.042E 01	1.332E-05	1.515E-05
2.690E 00	2.930E-02	3.062E-03	1.058E 01	1.012E-05	1.518E-05

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	2.375E-02	1.341E-03
4.000E-01	-	5.000E-01	8.746E-03	1.310E-03
5.000E-01	-	6.000E-01	4.341E-03	9.027E-04
6.000E-01	-	7.000E-01	1.861E-03	7.373E-04
7.000E-01	-	8.000E-01	1.173E-03	6.600E-04
8.000E-01	-	1.000E 00	1.129E-02	1.179E-03
1.000E 00	-	1.200E 00	1.121E-02	1.084E-03
1.200E 00	-	1.400E 00	3.655E-03	1.205E-03
1.400E 00	-	1.600E 00	2.647E-02	1.379E-03
1.600E 00	-	1.800E 00	3.079E-02	1.162E-03
1.800E 00	-	2.000E 00	1.328E-02	8.743E-04
2.000E 00	-	2.500E 00	1.939E-02	1.840E-03
2.500E 00	-	3.000E 00	1.577E-02	1.572E-03
3.000E 00	-	3.500E 00	2.379E-02	1.390E-03
3.500E 00	-	4.000E 00	1.745E-02	1.104E-03
4.000E 00	-	4.500E 00	1.205E-02	9.244E-04
4.500E 00	-	5.000E 00	9.632E-03	8.408E-04
5.000E 00	-	6.000E 00	1.275E-02	1.469E-03
6.000E 00	-	7.000E 00	9.628E-03	1.016E-03
7.000E 00	-	8.000E 00	5.665E-03	5.482E-04
8.000E 00	-	9.000E 00	1.992E-03	2.152E-04
9.000E 00	-	1.000E 01	1.482E-04	5.671E-05

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 9.98 TO 12.03 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)
2.725E-01	2.327E-01	1.769E-02	2.750E 00	3.196E-02	3.260E-03
2.875E-01	3.660E-01	1.622E-02	2.810E 00	3.385E-02	3.314E-03
3.025E-01	4.374E-01	1.555E-02	2.870E 00	3.621E-02	3.323E-03
3.175E-01	4.064E-01	1.449E-02	2.930E 00	3.884E-02	3.328E-03
3.325E-01	3.093E-01	1.495E-02	2.990E 00	4.173E-02	3.237E-03
3.475E-01	2.079E-01	1.493E-02	3.050E 00	4.372E-02	3.166E-03
3.625E-01	1.324E-01	1.492E-02	3.110E 00	4.479E-02	3.105E-03
3.775E-01	8.810E-02	1.571E-02	3.180E 00	4.763E-02	3.096E-03
3.925E-01	6.856E-02	1.568E-02	3.260E 00	5.275E-02	3.055E-03
4.100E-01	6.012E-02	1.667E-02	3.340E 00	5.435E-02	2.925E-03
4.300E-01	5.928E-02	1.624E-02	3.420E 00	5.535E-02	2.908E-03
4.500E-01	6.014E-02	1.666E-02	3.500E 00	5.683E-02	2.727E-03
4.700E-01	1.060E-01	1.561E-02	3.580E 00	5.294E-02	2.582E-03
4.900E-01	1.037E-01	1.547E-02	3.660E 00	4.558E-02	2.534E-03
5.100E-01	7.529E-02	1.480E-02	3.740E 00	3.828E-02	2.462E-03
5.300E-01	4.620E-02	1.241E-02	3.820E 00	3.205E-02	2.395E-03
5.500E-01	3.367E-02	9.553E-03	3.900E 00	2.866E-02	2.366E-03
5.700E-01	3.429E-02	8.061E-03	3.980E 00	2.723E-02	2.333E-03
5.900E-01	3.493E-02	7.679E-03	4.060E 00	2.548E-02	2.225E-03
6.100E-01	2.903E-02	8.112E-03	4.140E 00	2.395E-02	2.140E-03
6.300E-01	2.086E-02	9.186E-03	4.220E 00	2.439E-02	2.101E-03
6.500E-01	1.513E-02	9.098E-03	4.300E 00	2.556E-02	2.070E-03
6.700E-01	1.254E-02	8.493E-03	4.380E 00	2.601E-02	1.968E-03
6.900E-01	1.080E-02	8.148E-03	4.460E 00	2.545E-02	1.941E-03
7.100E-01	8.146E-03	7.898E-03	4.540E 00	2.413E-02	1.956E-03
7.300E-01	5.432E-03	7.807E-03	4.630E 00	2.275E-02	1.881E-03
7.500E-01	5.161E-03	7.787E-03	4.730E 00	2.212E-02	1.823E-03
7.700E-01	8.006E-03	7.437E-03	4.830E 00	2.130E-02	1.783E-03
7.900E-01	1.255E-02	7.067E-03	4.930E 00	2.010E-02	1.770E-03
8.100E-01	1.815E-02	6.723E-03	5.030E 00	1.950E-02	1.723E-03
8.300E-01	2.654E-02	6.411E-03	5.130E 00	1.949E-02	1.771E-03
8.500E-01	3.943E-02	6.290E-03	5.230E 00	1.875E-02	1.782E-03
8.700E-01	5.530E-02	6.327E-03	5.330E 00	1.790E-02	1.716E-03
8.900E-01	6.930E-02	6.367E-03	5.430E 00	1.799E-02	1.729E-03
9.100E-01	7.655E-02	6.133E-03	5.530E 00	1.752E-02	1.629E-03
9.300E-01	7.548E-02	6.005E-03	5.630E 00	1.607E-02	1.598E-03
9.500E-01	6.707E-02	6.058E-03	5.730E 00	1.522E-02	1.625E-03
9.700E-01	5.652E-02	6.215E-03	5.830E 00	1.488E-02	1.556E-03
1.000E 00	5.078E-02	6.646E-03	5.930E 00	1.394E-02	1.467E-03
1.040E 00	7.018E-02	6.268E-03	6.030E 00	1.278E-02	1.437E-03
1.080E 00	8.551E-02	5.808E-03	6.130E 00	1.198E-02	1.328E-03
1.120E 00	7.441E-02	5.741E-03	6.230E 00	1.133E-02	1.326E-03
1.160E 00	5.297E-02	5.263E-03	6.330E 00	1.089E-02	1.303E-03
1.200E 00	3.355E-02	5.453E-03	6.440E 00	1.119E-02	1.222E-03
1.240E 00	1.934E-02	5.939E-03	6.560E 00	1.202E-02	1.124E-03
1.280E 00	1.496E-02	6.354E-03	6.680E 00	1.199E-02	1.090E-03
1.320E 00	1.718E-02	6.233E-03	6.800E 00	1.097E-02	1.084E-03
1.360E 00	2.080E-02	6.285E-03	6.920E 00	9.815E-03	1.001E-03
1.800E 00	2.956E-02	6.742E-03	7.040E 00	8.794E-03	9.252E-04
1.440E 00	5.256E-02	6.523E-03	7.160E 00	7.552E-03	8.666E-04
1.480E 00	1.011E-01	6.693E-03	7.280E 00	6.210E-03	8.464E-04
1.520E 00	1.742E-01	7.533E-03	7.400E 00	5.526E-03	7.836E-04
1.560E 00	2.356E-01	7.938E-03	7.520E 00	5.746E-03	7.806E-04
1.600E 00	2.437E-01	7.429E-03	7.640E 00	6.276E-03	7.521E-04
1.640E 00	2.047E-01	6.578E-03	7.760E 00	6.459E-03	6.993E-04
1.680E 00	1.639E-01	5.809E-03	7.890E 00	6.151E-03	6.653E-04
1.720E 00	1.450E-01	5.857E-03	8.030E 00	5.483E-03	6.746E-04
1.760E 00	1.359E-01	5.954E-03	8.170E 00	4.327E-03	6.326E-04
1.800E 00	1.197E-01	6.017E-03	8.310E 00	3.400E-03	5.677E-04
1.850E 00	8.791E-02	4.899E-03	8.450E 00	3.241E-03	5.941E-04
1.910E 00	5.690E-02	4.482E-03	8.590E 00	3.391E-03	5.844E-04
1.970E 00	4.565E-02	4.531E-03	8.730E 00	3.340E-03	5.046E-04
2.030E 00	4.286E-02	4.446E-03	8.870E 00	3.062E-03	5.254E-04
2.090E 00	3.948E-02	4.326E-03	9.010E 00	2.694E-03	5.484E-04
2.150E 00	3.669E-02	4.114E-03	9.150E 00	2.235E-03	4.875E-04
2.210E 00	3.809E-02	3.967E-03	9.300E 00	1.964E-03	4.362E-04
2.270E 00	4.022E-02	3.782E-03	9.460E 00	1.659E-03	5.665E-04
2.330E 00	3.925E-02	3.726E-03	9.620E 00	1.285E-03	4.802E-04
2.390E 00	3.787E-02	3.675E-03	9.780E 00	7.358E-04	3.949E-04
2.450E 00	3.593E-02	3.605E-03	9.940E 00	4.685E-04	5.55EE-04
2.510E 00	3.271E-02	3.475E-03	1.010E 01	4.864E-04	5.345E-04
2.570E 00	3.099E-02	3.511E-03	1.026E 01	5.587E-04	3.109E-04
2.630E 00	3.090E-02	3.413E-03	1.042E 01	5.950E-04	2.676E-04
2.690E 00	3.068E-02	3.306E-03	1.058E 01	3.953E-04	3.242E-04

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	2.255E-02	1.514E-03
4.000E-01	-	5.000E-01	8.160E-03	1.598E-03
5.000E-01	-	6.000E-01	4.486E-03	1.046E-03
6.000E-01	-	7.000E-01	1.765E-03	8.615E-04
7.000E-01	-	8.000E-01	7.902E-04	7.599E-04
8.000E-01	-	1.000E 00	1.071E-02	1.259E-03
1.000E 00	-	1.200E 00	1.318E-02	1.162E-03
1.200E 00	-	1.400E 00	4.057E-03	1.237E-03
1.400E 00	-	1.600E 00	2.810E-02	1.432E-03
1.600E 00	-	1.800E 00	3.315E-02	1.232E-03
1.800E 00	-	2.000E 00	1.372E-02	9.528E-04
2.000E 00	-	2.500E 00	1.930E-02	1.969E-03
2.500E 00	-	3.000E 00	1.693E-02	1.677E-03
3.000E 00	-	3.500E 00	2.521E-02	1.510E-03
3.500E 00	-	4.000E 00	1.968E-02	1.236E-03
4.000E 00	-	4.500E 00	1.260E-02	1.043E-03
4.500E 00	-	5.000E 00	1.096E-02	9.163E-04
5.000E 00	-	6.000E 00	1.700E-02	1.654E-03
6.000E 00	-	7.000E 00	1.134E-02	1.192E-03
7.000E 00	-	8.000E 00	6.497E-03	7.796E-04
8.000E 00	-	9.000E 00	3.610E-03	5.765E-04
9.000E 00	-	1.000E 01	1.491E-03	4.866E-04

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 12.03 TO 14.02 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)
2.725E-01	1.341E-01	1.971E-02	2.750E 00	2.721E-02	3.555E-03
2.875E-01	2.263E-01	1.050E-02	2.810E 00	2.737E-02	3.759E-03
3.025E-01	3.016E-01	1.767E-02	2.870E 00	2.876E-02	3.801E-03
3.175E-01	3.092E-01	1.685E-02	2.930E 00	3.242E-02	3.652E-03
3.325E-01	2.494E-01	1.650E-02	2.990E 00	3.465E-02	3.521E-03
3.475E-01	1.689E-01	1.732E-02	3.050E 00	3.623E-02	3.514E-03
3.625E-01	1.036E-01	1.822E-02	3.110E 00	3.898E-02	3.451E-03
3.775E-01	6.193E-02	1.876E-02	3.180E 00	4.099E-02	3.285E-03
3.925E-01	4.151E-02	1.925E-02	3.260E 00	4.193E-02	3.280E-03
4.100E-01	3.735E-02	1.962E-02	3.340E 00	4.549E-02	3.373E-03
4.300E-01	4.379E-02	1.911E-02	3.420E 00	4.879E-02	3.286E-03
4.500E-01	5.869E-02	1.960E-02	3.500E 00	4.813E-02	3.177E-03
4.700E-01	8.255E-02	1.954E-02	3.580E 00	4.403E-02	3.066E-03
4.900E-01	9.097E-02	1.784E-02	3.660E 00	4.050E-02	2.849E-03
5.100E-01	7.232E-02	1.624E-02	3.740E 00	3.512E-02	2.755E-03
5.300E-01	4.704E-02	1.384E-02	3.820E 00	2.763E-02	2.813E-03
5.500E-01	3.289E-02	1.180E-02	3.900E 00	2.450E-02	2.796E-03
5.700E-01	2.499E-02	1.067E-02	3.980E 00	2.465E-02	2.621E-03
5.900E-01	1.755E-02	1.042E-02	4.060E 00	2.279E-02	2.586E-03
6.100E-01	1.137E-02	1.060E-02	4.140E 00	2.030E-02	2.569E-03
6.300E-01	8.828E-03	1.174E-02	4.220E 00	1.949E-02	2.497E-03
6.500E-01	8.621E-03	1.154E-02	4.300E 00	1.906E-02	2.523E-03
6.700E-01	9.382E-03	1.061E-02	4.380E 00	1.950E-02	2.442E-03
6.900E-01	1.059E-02	9.896E-03	4.460E 00	1.979E-02	2.350E-03
7.100E-01	1.049E-02	9.587E-03	4.540E 00	1.847E-02	2.227E-03
7.300E-01	7.278E-03	9.229E-03	4.630E 00	1.764E-02	2.358E-03
7.500E-01	2.339E-03	9.120E-03	4.730E 00	1.938E-02	2.271E-03
7.700E-01	-3.626E-05	9.246E-03	4.830E 00	2.044E-02	2.223E-03
7.900E-01	2.469E-03	8.874E-03	4.930E 00	2.085E-02	2.254E-03
8.100E-01	8.685E-03	8.357E-03	5.030E 00	2.084E-02	2.151E-03
8.300E-01	1.761E-02	7.619E-03	5.130E 00	1.998E-02	2.203E-03
8.500E-01	2.999E-02	7.266E-03	5.230E 00	1.831E-02	2.347E-03
8.700E-01	4.527E-02	7.141E-03	5.330E 00	1.553E-02	2.212E-03
8.900E-01	5.860E-02	7.247E-03	5.430E 00	1.314E-02	2.221E-03
9.100E-01	6.483E-02	7.166E-03	5.530E 00	1.276E-02	2.125E-03
9.300E-01	6.290E-02	7.091E-03	5.630E 00	1.266E-02	2.034E-03
9.500E-01	5.606E-02	7.076E-03	5.730E 00	1.196E-02	2.049E-03
9.700E-01	4.958E-02	7.069E-03	5.830E 00	1.237E-02	2.062E-03
1.000E 00	4.902E-02	7.154E-03	5.930E 00	1.447E-02	1.963E-03
1.040E 00	6.929E-02	6.850E-03	6.030E 00	1.605E-02	1.873E-03
1.080E 00	8.654E-02	6.268E-03	6.130E 00	1.568E-02	1.829E-03
1.12CE 00	7.451E-02	6.242E-03	6.230E 00	1.396E-02	1.859E-03
1.160E 00	5.061E-02	5.870E-03	6.330E 00	1.218E-02	1.797E-03
1.200E 00	3.164E-02	5.999E-03	6.440E 00	1.087E-02	1.693E-03
1.24CE 00	1.844E-02	6.404E-03	6.560E 00	1.024E-02	1.630E-03
1.280E 00	1.326E-02	7.154E-03	6.680E 00	9.887E-03	1.616E-03
1.320E 00	1.267E-02	6.568E-03	6.800E 00	1.016E-02	1.557E-03
1.36CE 00	1.606E-02	6.694E-03	6.920E 00	1.059E-02	1.434E-03
1.400E 00	2.692E-02	7.385E-03	7.040E 00	9.872E-03	1.358E-03
1.440E 00	4.711E-02	7.205E-03	7.160E 00	8.227E-03	1.341E-03
1.480E 00	8.671E-02	7.063E-03	7.280E 00	6.792E-03	1.309E-03
1.520E 00	1.497E-01	7.777E-03	7.400E 00	5.934E-03	1.228E-03
1.560E 00	2.060E-01	8.135E-03	7.520E 00	5.397E-03	1.222E-03
1.600E 00	2.190E-01	7.566E-03	7.640E 00	5.166E-03	1.208E-03
1.640E 00	1.883E-01	6.716E-03	7.760E 00	5.283E-03	1.155E-03
1.680E 00	1.473E-01	6.020E-03	7.890E 00	5.321E-03	1.145E-03
1.720E 00	1.234E-01	5.975E-03	8.030E 00	5.355E-03	1.228E-03
1.760E 00	1.147E-01	5.808E-03	8.170E 00	4.896E-03	1.133E-03
1.800E 00	1.030E-01	5.741E-03	8.310E 00	3.870E-03	1.055E-03
1.850E 00	7.319E-02	5.232E-03	8.450E 00	2.918E-03	1.248E-03
1.910E 00	4.468E-02	5.072E-03	8.590E 00	2.691E-03	1.222E-03
1.970E 00	3.909E-02	4.511E-03	8.730E 00	2.986E-03	1.094E-03
2.030E 00	3.742E-02	4.515E-03	8.870E 00	3.114E-03	1.284E-03
2.090E 00	3.438E-02	4.601E-03	9.010E 00	3.006E-03	1.428E-03
2.150E 00	3.318E-02	4.479E-03	9.150E 00	2.492E-03	1.204E-03
2.210E 00	3.424E-02	4.366E-03	9.300E 00	2.213E-03	1.123E-03
2.270E 00	3.591E-02	4.222E-03	9.460E 00	1.870E-03	1.639E-03
2.330E 00	3.315E-02	4.154E-03	9.620E 00	1.790E-03	1.322E-03
2.390E 00	3.119E-02	3.940E-03	9.780E 00	1.885E-03	1.469E-03
2.450E 00	2.583E-02	3.954E-03	9.940E 00	1.926E-03	1.707E-03
2.510E 00	2.393E-02	3.893E-03	1.010E 01	1.827E-03	1.525E-03
2.570E 00	2.269E-02	3.814E-03	1.026E 01	1.455E-03	9.733E-04
2.630E 00	2.190E-02	3.789E-03	1.042E 01	1.341E-03	8.926E-04
2.69CE 00	2.463E-02	3.628E-03	1.058E 01	9.284E-04	1.007E-03

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)			X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01	-	4.000E-01	1.707E-02	1.785E-03
4.000E-01	-	5.000E-01	6.249E-03	1.912E-03
5.000E-01	-	6.000E-01	3.892E-03	1.260E-03
6.000E-01	-	7.000E-01	9.806E-04	1.089E-03
7.000E-01	-	8.000E-01	4.540E-04	9.210E-04
8.000E-01	-	1.000E 00	8.828E-03	1.463E-03
1.000E 00	-	1.200E 00	1.302E-02	1.266E-03
1.200E 00	-	1.400E 00	3.489E-03	1.341E-03
1.400E 00	-	1.600E 00	2.456E-02	1.508E-03
1.600E 00	-	1.800E 00	2.930E-02	1.243E-03
1.800E 00	-	2.000E 00	1.135E-02	1.008E-03
2.000E 00	-	2.500E 00	1.651E-02	2.132E-03
2.500E 00	-	3.000E 00	1.343E-02	1.857E-03
3.000E 00	-	3.500E 00	2.133E-02	1.675E-03
3.500E 00	-	4.000E 00	1.711E-02	1.427E-03
4.000E 00	-	4.500E 00	1.015E-02	1.251E-03
4.500E 00	-	5.000E 00	9.730E-03	1.141E-03
5.000E 00	-	6.000E 00	1.509E-02	2.123E-03
6.000E 00	-	7.000E 00	1.187E-02	1.678E-03
7.000E 00	-	8.000E 00	6.352E-03	1.239E-03
8.000E 00	-	9.000E 00	3.583E-03	1.189E-03
9.000E 00	-	1.000E 01	2.092E-03	1.348E-03

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 14.02 TO 17.04 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)
2.725E-01	1.443E-01	2.201E-02	2.750E 00	1.530E-02	3.156E-03
2.875E-01	1.832E-01	2.090E-02	2.810E 00	1.861E-02	3.043E-03
3.025E-01	2.104E-01	1.984E-02	2.870E 00	2.081E-02	3.059E-03
3.175E-01	2.065E-01	1.927E-02	2.930E 00	2.116E-02	3.011E-03
3.325E-01	1.770E-01	1.989E-02	2.990E 00	1.945E-02	2.983E-03
3.475E-01	1.362E-01	2.006E-02	3.050E 00	1.850E-02	3.154E-03
3.625E-01	9.319E-02	2.099E-02	3.110E 00	2.078E-02	3.192E-03
3.775E-01	5.824E-02	2.216E-02	3.180E 00	2.421E-02	2.943E-03
3.925E-01	4.108E-02	2.348E-02	3.260E 00	2.372E-02	3.093E-03
4.100E-01	3.925E-02	2.449E-02	3.340E 00	2.370E-02	2.911E-03
4.300E-01	3.578E-02	2.399E-02	3.420E 00	2.678E-02	2.777E-03
4.500E-01	3.055E-02	2.422E-02	3.500E 00	2.678E-02	2.683E-03
4.700E-01	4.379E-02	2.367E-02	3.580E 00	2.306E-02	2.596E-03
4.900E-01	6.712E-02	2.052E-02	3.660E 00	1.924E-02	2.549E-03
5.100E-01	7.622E-02	1.790E-02	3.740E 00	1.646E-02	2.416E-03
5.300E-01	6.761E-02	1.543E-02	3.820E 00	1.326E-02	2.351E-03
5.500E-01	5.450E-02	1.282E-02	3.900E 00	1.025E-02	2.418E-03
5.700E-01	4.374E-02	1.143E-02	3.980E 00	1.006E-02	2.413E-03
5.900E-01	3.533E-02	1.120E-02	4.060E 00	1.151E-02	2.322E-03
6.100E-01	3.020E-02	1.180E-02	4.140E 00	1.152E-02	2.210E-03
6.300E-01	2.880E-02	1.333E-02	4.220E 00	1.136E-02	2.191E-03
6.500E-01	2.870E-02	1.364E-02	4.300E 00	1.377E-02	2.245E-03
6.700E-01	2.866E-02	1.316E-02	4.380E 00	1.638E-02	2.171E-03
6.900E-01	2.710E-02	1.193E-02	4.460E 00	1.546E-02	2.195E-03
7.100E-01	2.279E-02	1.104E-02	4.540E 00	1.276E-02	2.223E-03
7.300E-01	1.800E-02	1.077E-02	4.630E 00	1.115E-02	2.125E-03
7.500E-01	1.841E-02	1.055E-02	4.730E 00	9.964E-03	2.147E-03
7.700E-01	2.668E-02	1.002E-02	4.830E 00	7.503E-03	2.121E-03
7.900E-01	3.965E-02	9.042E-03	4.930E 00	6.705E-03	2.112E-03
8.100E-01	5.193E-02	8.586E-03	5.030E 00	7.856E-03	1.956E-03
8.300E-01	6.235E-02	8.498E-03	5.130E 00	7.976E-03	2.049E-03
8.500E-01	7.383E-02	8.431E-03	5.230E 00	8.000E-03	2.078E-03
8.700E-01	8.848E-02	8.304E-03	5.330E 00	9.036E-03	1.909E-03
8.900E-01	1.030E-01	8.245E-03	5.430E 00	9.343E-03	1.894E-03
9.100E-01	1.097E-01	7.551E-03	5.530E 00	7.776E-03	1.876E-03
9.300E-01	1.040E-01	7.099E-03	5.630E 00	6.430E-03	1.946E-03
9.500E-01	8.768E-02	7.010E-03	5.730E 00	6.260E-03	1.907E-03
9.700E-01	6.869E-02	7.347E-03	5.830E 00	6.337E-03	1.810E-03
1.000E 00	4.993E-02	7.692E-03	5.930E 00	6.775E-03	1.736E-03
1.040E 00	5.122E-02	7.271E-03	6.030E 00	7.907E-03	1.774E-03
1.080E 00	6.257E-02	6.681E-03	6.130E 00	8.641E-03	1.791E-03
1.120E 00	5.982E-02	6.580E-03	6.230E 00	8.208E-03	1.725E-03
1.160E 00	4.121E-02	6.161E-03	6.330E 00	7.116E-03	1.677E-03
1.200E 00	2.519E-02	6.236E-03	6.440E 00	5.607E-03	1.610E-03
1.240E 00	1.796E-02	6.268E-03	6.560E 00	3.877E-03	1.549E-03
1.280E 00	1.461E-02	6.723E-03	6.680E 00	3.161E-03	1.496E-03
1.320E 00	1.712E-02	6.864E-03	6.800E 00	4.281E-03	1.414E-03
1.360E 00	2.239E-02	6.476E-03	6.920E 00	6.072E-03	1.345E-03
1.400E 00	2.730E-02	7.027E-03	7.040E 00	6.753E-03	1.271E-03
1.440E 00	4.008E-02	6.560E-03	7.160E 00	5.750E-03	1.159E-03
1.480E 00	6.547E-03	6.995E-03	7.280E 00	3.918E-03	1.090E-03
1.520E 00	1.002E-01	6.422E-03	7.400E 00	2.447E-03	1.079E-03
1.560E 00	1.299E-01	6.817E-03	7.520E 00	2.012E-03	1.053E-03
1.600E 00	1.352E-01	6.631E-03	7.640E 00	2.401E-03	1.012E-03
1.640E 00	1.144E-01	6.399E-03	7.760E 00	2.864E-03	9.922E-04
1.680E 00	8.876E-02	5.819E-03	7.890E 00	2.932E-03	9.861E-04
1.720E 00	7.474E-02	5.658E-03	8.030E 00	2.516E-03	9.639E-04
1.760E 00	6.913E-02	5.842E-03	8.170E 00	1.849E-03	9.488E-04
1.800E 00	6.172E-02	5.736E-03	8.310E 00	1.435E-03	9.082E-04
1.850E 00	4.879E-02	4.983E-03	8.450E 00	1.545E-03	9.270E-04
1.910E 00	2.816E-02	4.575E-03	8.590E 00	1.612E-03	8.775E-04
1.970E 00	2.486E-02	4.426E-03	8.730E 00	1.184E-03	8.155E-04
2.030E 00	2.620E-02	4.155E-03	8.870E 00	8.589E-04	8.881E-04
2.090E 00	2.656E-02	4.315E-03	9.010E 00	1.114E-03	8.700E-04
2.150E 00	2.304E-02	4.124E-03	9.150E 00	1.707E-03	7.651E-04
2.210E 00	2.116E-02	4.129E-03	9.300E 00	2.112E-03	7.772E-04
2.270E 00	2.317E-02	3.838E-03	9.460E 00	1.731E-03	8.693E-04
2.330E 00	2.169E-02	3.489E-03	9.620E 00	7.931E-04	7.015E-04
2.390E 00	1.743E-02	3.547E-03	9.780E 00	1.851E-05	6.714E-04
2.450E 00	1.474E-02	3.590E-03	9.940E 00	7.448E-05	8.467E-04
2.510E 00	1.241E-02	3.677E-03	1.010E 01	5.645E-04	7.027E-04
2.570E 00	1.042E-02	3.764E-03	1.026E 01	8.628E-04	4.687E-04
2.630E 00	1.043E-02	3.511E-03	1.042E 01	9.965E-04	4.248E-04
2.690E 00	1.229E-02	3.185E-03	1.058E 01	7.995E-04	4.845E-04

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.279E-02	2.085E-03
4.000E-01 - 5.000E-01	4.319E-03	2.322E-03
5.000E-01 - 6.000E-01	5.526E-03	1.378E-03
6.000E-01 - 7.000E-01	2.871E-03	1.279E-03
7.000E-01 - 8.000E-01	2.515E-03	1.030E-03
8.000E-01 - 1.000E 00	1.607E-02	1.574E-03
1.000E 00 - 1.200E 00	1.017E-02	1.343E-03
1.200E 00 - 1.400E 00	3.884E-03	1.316E-03
1.400E 00 - 1.600E 00	1.673E-02	1.303E-03
1.600E 00 - 1.800E 00	1.776E-02	1.196E-03
1.800E 00 - 2.000E 00	7.041E-03	9.516E-04
2.000E 00 - 2.500E 00	1.070E-02	1.947E-03
2.500E 00 - 3.000E 00	7.815E-03	1.632E-03
3.000E 00 - 3.500E 00	1.169E-02	1.488E-03
3.500E 00 - 4.000E 00	8.221E-03	1.238E-03
4.000E 00 - 4.500E 00	6.603E-03	1.114E-03
4.500E 00 - 5.000E 00	4.721E-03	1.067E-03
5.000E 00 - 6.000E 00	7.573E-03	1.914E-03
6.000E 00 - 7.000E 00	5.925E-03	1.576E-03
7.000E 00 - 8.000E 00	3.513E-03	1.069E-03
8.000E 00 - 9.000E 00	1.495E-03	8.991E-04
9.000E 00 - 1.000E 01	1.088E-03	7.724E-04

DIFFERENTIAL CROSS SECTIONS FOR GAMMA RAY PRODUCTION IN V . 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 = 17.04 TO 20.06 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)
2.725E-01	1.519E-01	2.819E-02	2.750E 00	1.573E-02	3.516E-03
2.075E-01	1.708E-01	2.684E-02	2.810E 00	1.346E-02	3.528E-03
3.025E-01	1.906E-01	2.540E-02	2.870E 00	1.366E-02	3.568E-03
3.175E-01	1.918E-01	2.448E-02	2.930E 00	1.613E-02	3.483E-03
3.325E-01	1.655E-01	2.442E-02	2.990E 00	1.721E-02	3.479E-03
3.475E-01	1.239E-01	2.500E-02	3.050E 00	1.596E-02	3.452E-03
3.625E-01	8.526E-02	2.692E-02	3.110E 00	1.485E-02	3.292E-03
3.775E-01	5.838E-02	2.951E-02	3.180E 00	1.577E-02	3.260E-03
3.925E-01	3.990E-02	3.130E-02	3.260E 00	1.897E-02	3.444E-03
4.100E-01	2.049E-02	3.268E-02	3.340E 00	1.886E-02	3.223E-03
4.300E-01	5.304E-03	3.342E-02	3.420E 00	1.487E-02	3.504E-03
4.500E-01	1.989E-02	3.262E-02	3.500E 00	1.330E-02	3.171E-03
4.700E-01	6.551E 02	2.947E-02	3.580E 00	1.481E-02	2.960E-03
4.900E-01	1.077E-01	2.686E-02	3.660E 00	1.467E-02	2.949E-03
5.100E-01	1.172E-01	2.322E-02	3.740E 00	1.239E-02	3.126E-03
5.300E-01	9.819E-02	2.044E-02	3.820E 00	1.051E-02	3.043E-03
5.500E-01	7.531E-02	1.834E-02	3.900E 00	1.078E-02	2.933E-03
5.700E-01	6.039E-02	1.617E-02	3.980E 00	1.147E-02	2.780E-03
5.900E-01	4.827E-02	1.437E-02	4.060E 00	9.965E-03	2.698E-03
6.100E-01	3.479E-02	1.554E-02	4.140E 00	7.061E-03	2.545E-03
6.300E-01	2.880E-02	1.872E-02	4.220E 00	5.513E-03	2.632E-03
6.500E-01	3.658E-02	1.928E-02	4.300E 00	5.814E-03	2.566E-03
6.700E-01	5.160E-02	1.765E-02	4.380E 00	6.010E-03	2.529E-03
6.900E-01	6.013E-02	1.570E-02	4.460E 00	5.814E-03	2.512E-03
7.100E-01	5.741E-02	1.452E-02	4.540E 00	6.700E-03	2.450E-03
7.300E-01	5.037E-02	1.433E-02	4.630E 00	8.157E-03	2.302E-03
7.500E-01	4.826E-02	1.366E-02	4.730E 00	7.741E-03	2.310E-03
7.700E-01	5.584E-02	1.302E-02	4.830E 00	5.555E-03	2.167E-03
7.900E-01	7.070E-02	1.262E-02	4.930E 00	4.450E-03	2.245E-03
8.100E-01	8.702E-02	1.208E-02	5.030E 00	4.774E-03	2.122E-03
8.300E-01	1.008E-01	1.084E-02	5.130E 00	4.727E-03	2.102E-03
8.500E-01	1.142E-01	1.045E-02	5.230E 00	4.340E-03	2.133E-03
8.700E-01	1.309E-01	1.061E-02	5.330E 00	3.812E-03	2.040E-03
8.900E-01	1.468E-01	1.026E-02	5.430E 00	2.903E-03	2.097E-03
9.100E-01	1.523E-01	9.452E-03	5.530E 00	2.620E-03	2.068E-03
9.300E-01	1.428E-01	9.252E-03	5.630E 00	3.938E-03	2.038E-03
9.500E-01	1.217E-01	9.308E-03	5.730E 00	5.393E-03	2.004E-03
9.700E-01	9.828E-02	9.294E-03	5.830E 00	5.526E-03	1.985E-03
1.000E 00	7.144E-02	9.400E-03	5.930E 00	4.781E-03	1.915E-03
1.040E 00	5.870E-02	9.090E-03	6.030E 00	3.363E-03	1.865E-03
1.080E 00	6.319E-02	8.594E-03	6.130E 00	1.386E-03	1.880E-03
1.120E 00	6.157E-02	7.738E-03	6.230E 00	-1.840E-04	1.811E-03
1.160E 00	4.275E-02	7.615E-03	6.330E 00	1.002E-04	1.690E-03
1.200E 00	2.479E-02	7.717E-03	6.440E 00	2.191E-03	1.601E-03
1.240E 00	1.795E-02	7.565E-03	6.560E 00	4.705E-03	1.575E-03
1.280E 00	1.816E-02	8.106E-03	6.680E 00	6.017E-03	1.557E-03
1.320E 00	2.328E-02	8.506E-03	6.800E 00	5.543E-03	1.399E-03
1.360E 00	3.354E-02	8.182E-03	6.920E 00	3.364E-03	1.281E-03
1.400E 00	4.768E-02	7.544E-03	7.040E 00	8.459E-04	1.247E-03
1.440E 00	6.184E-02	6.869E-03	7.160E 00	-3.256E-04	1.154E-03
1.480E 00	7.430E-02	7.038E-03	7.280E 00	1.466E-04	1.047E-03
1.520E 00	8.958E-02	7.886E-03	7.400E 00	1.268E-03	9.983E-04
1.560E 00	1.018E-01	8.190E-03	7.520E 00	1.907E-03	9.496E-04
1.600E 00	1.000E-01	8.186E-03	7.640E 00	1.693E-03	8.910E-04
1.640E 00	8.565E-02	7.776E-03	7.760E 00	1.003E-03	8.624E-04
1.680E 00	7.184E-02	7.134E-03	7.890E 00	5.314E-04	8.408E-04
1.720E 00	6.405E-02	7.110E-03	8.030E 00	7.461E-04	7.955E-04
1.760E 00	5.791E-02	7.243E-03	8.170E 00	1.145E-03	7.791E-04
1.800E 00	5.032E-02	6.728E-03	8.310E 00	1.182E-03	7.389E-04
1.850E 00	4.071E-02	5.657E-03	8.450E 00	1.000E-03	7.000E-04
1.910E 00	3.326E-02	5.103E-03	8.590E 00	9.630E-04	6.587E-04
1.970E 00	3.152E-02	5.052E-03	8.730E 00	8.448E-04	6.355E-04
2.030E 00	3.493E-02	4.975E-03	8.870E 00	5.291E-04	5.875E-04
2.090E 00	3.431E-02	5.088E-03	9.010E 00	2.520E-04	5.255E-04
2.150E 00	2.789E-02	5.153E-03	9.150E 00	3.132E-04	4.868E-04
2.210E 00	2.341E-02	4.999E-03	9.300E 00	5.487E-04	4.546E-04
2.270E 00	2.400E-02	4.441E-03	9.460E 00	5.410E-04	4.236E-04
2.330E 00	2.800E-02	4.318E-03	9.620E 00	3.873E-04	3.479E-04
2.390E 00	2.406E-02	4.185E-03	9.780E 00	2.545E-04	3.911E-04
2.450E 00	2.000E-02	4.568E-03	9.940E 00	2.856E-04	3.536E-04
2.510E 00	1.930E-02	4.419E-03	1.010E 01	2.908E-04	2.689E-04
2.570E 00	1.826E-02	4.142E-03	1.026E 01	2.660E-04	1.937E-04
2.630E 00	1.796E-02	4.199E-03	1.042E 01	2.238E-04	1.921E-04
2.690E 00	1.743E-02	3.858E-03	1.058E 01	1.775E-04	2.057E-04

INTEGRATED DATA

PHOTON ENERGY INTERVAL (MEV)	X-SECTION (B/SR)	ERROR (B/SR)
3.000E-01 - 4.000E-01	1.188E-02	2.678E-03
4.000E-01 - 5.000E-01	8.362E-03	3.096E-03
5.000E-01 - 6.000E-01	7.945E-03	1.874E-03
6.000E-01 - 7.000E-01	8.238E-03	1.742E-03
7.000E-01 - 8.000E-01	5.656E-03	1.365E-03
8.000E-01 - 1.000E 00	2.345E-02	2.017E-03
1.000E 00 - 1.200E 00	1.100E-02	1.663E-03
1.200E 00 - 1.400E 00	5.082E-03	1.602E-03
1.400E 00 - 1.600E 00	1.613E-02	1.511E-03
1.600E 00 - 1.800E 00	1.415E-02	1.469E-03
1.800E 00 - 2.000E 00	7.327E-03	1.081E-03
2.000E 00 - 2.500E 00	1.325E-02	2.348E-03
2.500E 00 - 3.000E 00	8.177E-03	1.891E-03
3.000E 00 - 3.500E 00	8.195E-03	1.679E-03
3.500E 00 - 4.000E 00	6.284E-03	1.493E-03
4.000E 00 - 4.500E 00	3.441E-03	1.293E-03
4.500E 00 - 5.000E 00	3.220E-03	1.140E-03
5.000E 00 - 6.000E 00	4.261E-03	2.085E-03
6.000E 00 - 7.000E 00	3.035E-03	1.603E-03
7.000E 00 - 8.000E 00	8.632E-04	9.828E-04
8.000E 00 - 9.000E 00	8.929E-04	6.859E-04
9.000E 00 - 1.000E 01	3.788E-04	4.110E-04

TOTAL SECONDARY GAMMA RAY YIELD AND AVERAGE SECONDARY GAMMA RAY ENERGY FROM V AS A FUNCTION OF THE INCIDENT NEUTRON ENERGY. THESE DATA RESULT FROM A PULSE HEIGHT WEIGHTING ANALYSIS FOR PULSE HEIGHTS GREATER THAN 0.260 MEV. UNCERTAINTIES ARE GIVEN IN PARENTHIESES 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)
0.150	0.101	-0.273E-02(0.757E-03)	0.122E 01(0.493E 00)	5.230	0.504	0.193E 00(0.997E-03)	0.175E 01(0.113E-01)
0.251	0.100	-0.499E-03(0.231E-03)	0.665E 00(0.766E 00)	5.740	0.516	0.208E 00(0.106E-02)	0.184E C1(0.116E-01)
0.350	0.100	0.140E-01(0.143E-03)	0.331E 00(0.142E-01)	6.255	0.514	0.214E 00(0.109E-C2)	0.191E 01(0.121E-01)
0.451	0.101	0.227E-01(0.133E-03)	0.315E 00(0.748E-02)	6.759	0.495	0.233E 00(0.117E-02)	0.197E 01(0.123E-01)
0.551	0.099	0.238E-01(0.110E-03)	0.329E 00(0.515E-02)	7.235	0.457	0.245E 00(0.129E-02)	0.208E 01(0.135E-01)
0.649	0.097	0.241E-01(0.105E-03)	0.330E 00(0.445E-02)	7.716	0.504	0.238E 00(0.127E-02)	0.215E 01(0.141E-01)
0.746	0.096	0.228E-01(0.982E-04)	0.329E 00(0.405E-02)	8.246	0.557	0.263E 00(0.138E-C2)	0.224E 01(0.145E-01)
0.845	0.101	0.275E-01(0.112E-03)	0.325E 0C(0.321E-02)	8.768	0.489	0.276E 00(0.156E-02)	0.234E 01(0.161E-01)
0.947	0.103	0.257E-01(0.116E-03)	0.351E 00(0.344E-02)	9.244	0.463	0.267E 00(0.157E-02)	0.238E 01(0.170E-01)
1.126	0.255	0.437E-01(0.158E-03)	0.393E 00(0.243E-02)	9.725	0.50C	0.284E 00(0.170E-02)	0.245E 01(0.179E-01)
1.374	0.240	0.482E-01(0.195E-03)	0.412E 00(0.265E-02)	10.246	0.541	0.292E 00(0.186E-02)	0.253E 01(0.194E-01)
1.618	0.250	0.571E-01(0.239E-03)	0.487E 00(0.297E-02)	10.766	0.499	0.292E 00(0.197E-02)	0.258E 01(0.209E-01)
1.875	0.264	0.828E-01(0.331E-03)	0.738E 00(0.407E-02)	11.237	0.444	0.295E 00(0.218E-02)	0.264E 01(0.237E-01)
2.122	0.231	0.933E-01(0.389E-03)	0.852E 00(0.486E-02)	11.744	0.569	0.299E 00(0.224E-02)	0.269E 01(0.242E-01)
2.375	0.274	0.943E-01(0.415E-03)	0.917E 00(0.549E-02)	12.283	0.508	0.276E 00(0.239E-02)	0.276E C1(0.285E-01)
2.631	0.240	0.989E-01(0.470E-03)	0.966E 00(0.627E-02)	12.751	0.430	0.256E 00(0.269E-02)	0.279E C1(0.348E-01)
2.864	0.227	0.983E-01(0.525E-03)	0.988E 00(0.711E-02)	13.251	0.569	0.239E 00(0.255E-02)	0.272E C1(0.345E-01)
3.120	0.284	0.986E-01(0.559E-03)	0.104E 01(0.781E-02)	13.777	0.483	0.214E 00(0.287E-02)	0.270E 01(0.429E-01)
3.378	0.233	0.102E 00(0.650E-03)	0.109E 01(0.906E-02)	14.274	0.510	0.195E 00(0.306E-02)	0.258E C1(0.481E-01)
3.623	0.258	0.114E 00(0.694E-03)	0.121E 01(0.951E-02)	14.798	0.538	0.183E 00(0.316E-02)	0.248E 01(0.502E-01)
3.878	0.250	0.131E 00(0.785E-03)	0.138E 01(0.105E-01)	15.500	0.866	0.172E 00(0.297E-02)	0.223E 01(0.457E-01)
4.120	0.235	0.151E 00(0.892E-03)	0.150E 01(0.113E-01)	16.487	1.109	0.151E 00(0.289E-02)	0.204E 01(0.461E-01)
4.366	0.257	0.164E 00(0.968E-03)	0.157E 01(0.118E-01)	17.565	1.046	0.158E 00(0.331E-02)	0.186E C1(0.472E-01)
4.611	0.232	0.174E 00(0.101E-02)	0.162E 01(0.120E-01)	18.562	0.948	0.164E 00(0.389E-C2)	0.183E C1(0.530E-01)
4.852	0.251	0.180E 00(0.104E-02)	0.167E 01(0.123E-01)	19.548	1.025	0.185E 00(0.430E-02)	0.179E C1(0.508E-01)

TOTAL SECONDARY GAMMA RAY YIELD AND AVERAGE SECONDARY GAMMA RAY ENERGY FROM V AS A FUNCTION OF THE INCIDENT NEUTRON ENERGY. THESE DATA RESULT FROM A PULSE HEIGHT WEIGHTING ANALYSIS FOR PULSE HEIGHTS GREATER THAN 0.700 MEV. UNCERTAINTIES ARE GIVEN IN PARENTHIESES 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 (E/SR)	AVERAGE ENERGY (MEV)	INC.NT. ENERGY (MEV)	ENERGY SPREAD (MEV)	SECONDARY PHOTON YIELD (E/SR)	AVERAGE ENERGY (MEV)
0.150	0.101	-0.138E-02(0.465E-03)	0.201E 01(0.983E 00)	5.230	0.504	0.136E 00(0.722E-03)	0.233E 01(0.158E-01)
0.251	0.100	-0.280E-03(0.151E-03)	0.774E 00(0.133E 01)	5.740	0.516	0.150E 00(0.776E-03)	0.241E 01(0.158E-01)
0.350	0.100	-0.195E-04(0.808E-04)	-0.171E 02(-0.716E 02)	6.255	0.514	0.156E 00(0.823E-03)	0.247E 01(0.164E-01)
0.451	0.101	-0.260E-04(0.656E-04)	-0.308E 01(-0.988E 01)	6.759	0.495	0.172E 00(0.888E-03)	0.254E 01(0.165E-01)
0.551	0.099	0.123E-03(0.444E-04)	0.412E 01(0.175E 01)	7.235	0.457	0.186E 00(0.985E-03)	0.262E 01(0.174E-01)
0.649	0.097	0.104E-03(0.384E-04)	0.510E 01(0.211E 01)	7.716	0.504	0.181E 00(0.994E-03)	0.271E 01(0.185E-01)
0.746	0.096	0.123E-03(0.308E-04)	0.383E 01(0.116E 01)	8.246	0.557	0.203E 00(0.107E-02)	0.280E 01(0.185E-01)
0.845	0.101	0.982E-04(0.287E-04)	0.507E 01(0.166E 01)	8.768	0.489	0.217E 00(0.119E-02)	0.287E 01(0.197E-01)
0.947	0.103	0.899E-03(0.295E-04)	0.137E 01(0.905E-01)	9.244	0.463	0.209E 00(0.121E-02)	0.294E 01(0.213E-01)
1.126	0.255	0.468E-02(0.425E-04)	0.102E 01(0.179E-01)	9.725	0.500	0.225E 00(0.132E-02)	0.300E 01(0.221E-01)
1.374	0.240	0.662E-02(0.556E-04)	0.100E 01(0.145E-01)	10.246	0.541	0.233E 00(0.141E-02)	0.307E 01(0.231E-01)
1.618	0.250	0.115E-01(0.802E-04)	0.113E 01(0.117E-01)	10.766	0.499	0.234E 00(0.149E-02)	0.312E 01(0.248E-01)
1.875	0.264	0.318E-01(0.168E-03)	0.141E 01(0.103E-01)	11.237	0.444	0.239E 00(0.171E-02)	0.317E 01(0.281E-01)
2.122	0.231	0.426E-01(0.223E-03)	0.147E 01(0.106E-01)	11.744	0.569	0.245E 00(0.177E-02)	0.320E 01(0.284E-01)
2.375	0.274	0.468E-01(0.249E-03)	0.150E 01(0.110E-01)	12.283	0.508	0.228E 00(0.185E-02)	0.325E 01(0.325E-01)
2.631	0.240	0.521E-01(0.305E-03)	0.153E 01(0.122E-01)	12.751	0.430	0.217E 00(0.202E-02)	0.324E 01(0.377E-01)
2.864	0.227	0.535E-01(0.330E-03)	0.154E 01(0.130E-01)	13.251	0.569	0.198E 00(0.196E-02)	0.320E 01(0.390E-01)
3.120	0.284	0.569E-01(0.362E-03)	0.155E 01(0.134E-01)	13.777	0.483	0.179E 00(0.213E-02)	0.316E 01(0.469E-01)
3.378	0.233	0.617E-01(0.415E-03)	0.159E 01(0.145E-01)	14.274	0.510	0.160E 00(0.222E-02)	0.305E 01(0.531E-01)
3.623	0.258	0.714E-01(0.453E-03)	0.172E 01(0.147E-01)	14.798	0.538	0.144E 00(0.241E-02)	0.299E 01(0.613E-01)
3.878	0.250	0.855E-01(0.527E-03)	0.193E 01(0.156E-01)	15.500	0.866	0.136E 00(0.207E-02)	0.270E 01(0.515E-01)
4.120	0.235	0.101E 00(0.631E-03)	0.207E 01(0.168E-01)	16.487	1.109	0.119E 00(0.202E-02)	0.248E 01(0.530E-01)
4.366	0.257	0.110E 00(0.686E-03)	0.216E 01(0.173E-01)	17.565	1.046	0.123E 00(0.232E-02)	0.227E 01(0.550E-01)
4.611	0.232	0.118E 00(0.714E-03)	0.222E 01(0.176E-01)	18.562	0.948	0.131E 00(0.283E-02)	0.219E 01(0.610E-01)
4.852	0.251	0.124E 00(0.741E-03)	0.226E 01(0.175E-01)	19.548	1.025	0.142E 00(0.296E-02)	0.219E 01(0.594E-01)

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