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EVALUATION OF RESOLVED RESONANCE PARAMETERS OF FISSION PRODUCT NUCLIDES WITH ATOMIC NUMBERS Z=46 - 51 FOR JENDL-3.2

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EVALUATION OF RESOLVED RESONANCE PARAMETERS OF FISSION PRODUCT NUCLIDES WITH ATOMIC NUMBERS Z=46-51 FOR JENDL-3.2

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Resolved resonance parameters of the following fission product nuclides with atomic numbers Z=46-51 have been evaluated for JENDL-3.2: ^{102,104,105,106,107,108,110}Pd, ^{107,109,110m}Ag, ^{106,108,110,111,112,113,114,116}Cd, ^{113,115}In, ^{121,123}Sb. Evaluation was made on the basis of JENDL-2 for most nuclides and of the data recommended by Mughabghab et al. for the nuclides whose data have not been contained in JENDL-2. Data measured after the JENDL-2 evaluation (1982) have been taken into account in the evaluation. Spin of the resonance state and angular momentum of the incident neutron have been given for all levels. When there exist no measured data, the spin has been given tentatively on the basis of a random sampling technique using their statistical properties, and the angular momentum was also tentatively given on the basis of the Bayes's theorem on conditional probability using the s- and p-wave strength functions and average level spacings. The resonance parameters have been evaluated so as to reproduce measured capture area of individual resonance levels, thermal cross section and resonance integral. Evaluated results have been compiled into JENDL-3.2 in the formats of ENDF-5 and ENDF-6.

Keywords: Resonance Parameter, Fission Product, Evaluation, JENDL

JAERI-Data/Code 96-027

JENDL-3.2のための核分裂生成核種Z=46-51の分離共鳴パラメータの評価

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(1996年7月12日受理)

JENDL-3.2 のため原子番号Z=46-51の核分裂生成核種の分離共鳴パラメータの評価を行った。評価を行った核種は次の通りである。^{102,104,105,106,107,108,110}Pd、^{107,109,110m}Ag、^{106,108,110,111,112,113,114,116}Cd、^{113,115}In、^{121,123}Sb。評価は概ねJENDL-2をベースに行ったが、JENDL-2にデータのない核種はMughabghab達の推奨値をもとに評価した。JENDL-2の評価を行った1982年以降に測定されたデータも考慮した。また全ての共鳴準位のスピンを実験値あるいは共鳴パラメータの統計的性質を利用したランダムサンプリング法により決定した。また共鳴を生成する入射中性子の角運動量を実験値あるいはs波及びp波強度関数を用いてベーズの定理により決定した。個々の共鳴の捕獲積分断面積、熱中性子断面積や共鳴積分の測定値を再現するように共鳴パラメータを評価した。評価値はENDF-5とENDF-6フォーマットでJENDL-3.2に編集した。

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Contents

目　　次

I,. Introduction

Fission products(FPs) in nuclear reactors make an important role in determining reactor kinetics and fuel burnup performance. Well known Xenon oscillation in thermal reactors is an example of effect on reactor kinetics which is induced by strong absorption of thermal neutron by ^{135}Xe. In a reactor FPs add a negative reactivity worth, so accumulation of FPs decrease an initial excess positive reactivity of the reactors through burnup and are a major factor determining fuel burnup period. In addition, decay heat of FPs may give a serious problem on reactor safety. Neutron cross sections of FP nuclide are needed for estimation of reactivity worth and accumulation of FP nuclide. From the point of view of radioactive nuclide waste management, the neutron cross sections are important to incinerate long-lived FP nuclide such as ^{99}Tc, ^{137}Cs, ^{154,155}Eu by using fission reactors and/or intense neutron source produced by particle accelerators. Since the cross sections in the resonance region have large contribution to the effect on the reactivity worth and FP accumulation, the accurate cross sections are needed. Such accurate cross sections can be obtained with reliable resonance parameters.

The first version of the Japanese FP nuclear data file was released in 1975 as a part of Japanese Evaluated Nuclear Data Library version 1(JENDL-1).[1] The library contains 27 FP nuclide data important to fast breeder reactor burnup calculation. The resonance parameters were prepared by using the data recommended by Mughabghab et al.(BNL-325 third edition)[2] and supplemented by average parameters for the nuclide whose resolved resonance parameters had not been measured.

The first actual evaluation of the resonance parameters of the FP nuclides was made for the FP file of JENDL-2 released in 1982.[3] It contains data for 100 FP nuclides from ^{75}As to ^{159}Tb. These nuclides cover about 99% of the capture by ^{239}Pu FPs and 95% cumulative yield of FP of ^{239}Pu. In the evaluation, vast amount of experimental data of the resolved resonance parameter were treated with the resonance parameter storage and retrieval system REPSTOR developed by Nakagawa[4] to make comparison of the measured and evaluated values. The data recommended by Mughabghab et al.[5] were used as a reference of the evaluation and partly adopted to JENDL-2 FP library. A part of the evaluation was reported by Kikuchi et al.[6]

The files of JENDL-1 and JENDL-2 were compiled in ENDF/B-4 format and the spin value of the resonance levels was tentatively assigned as the target spin. This treatment might give an ambiguity of the resonance cross sections calculated with the milt-level formalism that includes exactly interference effect between the resonance levels with the same spin. Therefore, such an unphysical treatment was inhibited in the format of ENDF-5 and -6.

After the JENDL-2 evaluation a lot of experimental data have been reported from ORELA, JAERI and Russia. Particularly Macklin et al. of ORNL made a lot of efforts to measure the resonance parameters of a wide range of FP nuclides at ORELA. Unfortunately they reported corrigenda[7] that the correction should be made to the previously measured data which were included in the JENDL-2 library. This information strongly forced us to revise the resonance parameters.

The evaluation scope was expanded. The number of nuclides was increased from 100 to 172 that covered about 99.5% cumulative yield. The threshold reaction cross sections were evaluated for application to neutron activation analysis and fusion reactor neutronics. As for the resonance parameter evaluation was made for the newly added nuclide and the nuclide of which measured resonance parameters were newly reported.

The evaluation work was made by taking into account the new experimental data of the resolved resonance parameters reported after JENDL-2 evaluation and the correction of the ORELA data given in the corrigenda for the ORELA data. The evaluated results were compiled into JENDL-3.2[8], the latest version of JENDL, in the ENDF-5 and -6 format.

In this report the evaluation is described for the resolved resonance parameters of the following nuclides with the atomic number Z=46 - 51: ^{102,104,105,106,107,108,110}Pd, ^{107,109,110m}Ag, ^{106,108,110,111,112,113,114,116}Cd, ^{113,115}In, ^{121,123}Sb. In Section 2 general description of evaluation is briefly summarized. In Section 3 evaluation of each nuclide is described in detail.

References

1) Igarasi S. et al.:JAERI 1261(1979).

2) Mughabghab S.F. and Garber D.I.:Neutron Cross Sections, Volume 1, Resonance Parameters, BNL-325, Third Edition(1973).

3) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).

4) Nakagawa T.: JAERI-M 8163, P.51(1979) [in Japanese] .

5) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).

6) Kikuchi Y. et al.:JAERI-1268(1981).

7) Macklin R.L. and Winters R.R.:Nucl. Sci. Eng., **78**, 110(1981);Allen B.J., Baldman J.W. and Macklin R.L.:Nucl. Sci. Eng., **82**, 230(1982).

8) Nakagawa T. et al.:J. Nucl. Sci. Technol., **32**, 1259(1995).

2. General Description of Evaluation

The evaluation was carried out using the storage and retrieval system REPSTOR. In this system the resonance parameters can be compared each others and their average values can be calculated.

Generally the resonance energies were adopted from the values measured in the widest energy range. The neutron widths and radiation widths were evaluated as the average values over the reliable measured data. For the resonances whose neutron width was measured and whose radiation width was not measured the radiation width was determined as the average value of the measured data.

The spin of all resonance levels was determined using measured values or tentatively with random sampling technique assuming the neutron width follows the Porter-Thomas distribution[1]. The angular momentum of the incident neutron forming the resonance was determined using measured values or based on the Bayes's theorem on conditional probability proposed by Bollinger and Thomas[2] using the -s and p-wave neutron strength functions and average level spacings.

Considering consistency between the measured and calculated quantities such as thermal cross sections and resonance integral some levels at negative energies were added and some resonance parameters of low energy levels were adjusted within experimental error to reproduce the measured thermal cross sections and resonance integral.

It is especially important in the FP file to evaluate the capture cross section accurately. Capture area $g\Gamma_n\Gamma_\gamma/\Gamma$ for each resonance has been measured for a lot of nuclides and are the important quantities to represent the capture cross sections accurately. Therefore the resonance parameters were evaluated so as to reproduce the measured values of the capture area. For the resonances whose neutron width has not been measured the average radiation width was used to calculate the neutron width from the capture area and for the resonances whose neutron width has been measured the radiation width was obtained from the capture area using the measured neutron width. To confirm that the evaluation was made so as to reproduce the data, the capture area has been calculated from the evaluated parameters and compared with the measured values. The comparison is shown in the column WW5 in the Table of Section 3. This is a very useful method to avoid evaluation error.

References

1) Porter C.E. and Thomas G.E.: Phys. Rev., **104**, 483 (1956).

2) Bollinger L.M. and Thomas G.E.: Phys. Rev., **171**, 1293 (1968).

3. Evaluation of Each Nuclide

In this Section it is described in detail on the basis of the file 1 of JENDL-3.2 how to evaluate the resonance parameters for each resonance and the evaluated resonance parameters(JENDL-3.2) are compared with measured data and/or values recommended by Mughabghab et al.[1] in the Table. The meaning of the symbols given in the column "MISCELLANEOUS" of Table is the following :

Symbol	meaning
GT	Total width(Γ)
GN0	S-wave reduced neutron width($\Gamma_n^{(0)}$)
WG0	2g(statistical weight factor) times s-wave reduced neutron width($2g\Gamma_n^{(0)}$)
WGH	g times s-wave reduced neutron width($g\Gamma_n^{(0)}$)
WGI	g times p-wave reduced neutron width($g\Gamma_n^{(1)}$)
WW1	g times capture width($g\Gamma_\gamma$)
WW5	the capture area ($g\Gamma_n\Gamma_\gamma/\Gamma$)
W	Statistical wight factor(g=(2J+1)/{2(2I+1)})

The values in the parentheses are the assumed values. The quantities attached with the symbols A and B mean $g\Gamma_n$ and $2g\Gamma_n$ respectively. The other quantities are self-explanatory.

Reference

1) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).

46-Pd-102

Abundance	:1.02%
Spin-Parity	:0^+
Potential Scattering Radius	:6.4 fm
Cross Sections of 2200 m/s for Total	:8.387 b
Elastic	:5.025 b
Capture	:3.363 b
Maxwellian Average Capture Cross Section	:2.974 b
Resonance Integral of Capture	:19.49 b

Resolved resonance region (MLBW formula) : below 0.25 keV. Resonance parameters were taken from JENDL-2[1]. For JENDL-2, evaluation of resonance parameters was based on Mughabghab et al.[2]

References:

1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).

References of Table:

BNL325-4TH:Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

PD-102 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
-10.0 -10	0	0.5	2.1788	109.0 (109)	GT = 111.18 WGH= 0.689	JENDL-3.2 BNL325-4TH
190.73 190.73 ± 0.25	0	0.5	269.0 A269 ± 4	109.0 109 ±16	GT = 378.0 WGH= 19.5 ± 0.3	JENDL-3.2 BNL325-4TH

46-Pd-104

Abundance	:11.14%
Spin-Parity	:0^+
Potential Scattering Radius	:6.5 fm
Cross Sections of 2200 m/s for Total	:5.445 b
Elastic	:4.917 b
Capture	:0.5231 b
Maxwellian Average Capture Cross Section	:0.4638 b
Resonance Integral of Capture	:21.88 b

Resolved resonance region (SLBW formula) : below 279 eV. Resonance parameters were taken from JENDL-2[1]. Parameters of 182.3-eV resonance were taken from the data measured by Popov et al.[2]

References:

1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Popov Ju. P., et al.: JINR-P3-11013 (1977).

References of Table:

77POPOV: Popov Ju. P., et al.: JINR-P3-11013 (1977).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

PD-104 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
186.0	0	0.5	270.0	219.0	GT = 489.0	JENDL-3.2
182.3 ± 0.2	0	0.5	A297.0 ± 4.0	217.0 ±12.0	WGH= 22.0 ± 0.3	77POPOV

46-Pd-105

Abundance	:22.33%	
Spin-Parity	:$5/2^+$	
Potential Scattering Radius		:6.5 fm
Cross Sections of 2200 m/s for Total		:25.36 b
	Elastic	:5.116 b
	Capture	:20.25 b
Maxwellian Average Capture Cross Section		:17.93 b
Resonance Integral of Capture		:96.71 b

Resolved resonance region (MLBW formula) : below 2.0485 keV. Resonance parameters were mainly taken from JENDL-2[1].

Evaluation for JENDL-2 was made on the basis of data measured by Staveloz et al.[2] Data by Bollinger et al.[3] and by Coceva et al.[4] were also taken into account to determine the angular momentum ℓ and the spin J. The average radiation width of 0.15 eV was assumed for s-wave levels. Two negative resonances were added so as to reproduce the thermal capture and scattering cross sections given by Mughabghab et al.[5]

For JENDL-3.1[6], total spin J of some resonances was tentatively estimated with a random number method. Neutron orbital angular momentum ℓ of some resonances was estimated with a method of Bollinger and Thomas.[7]

References:

1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Staveloz P., et al.: "Proc. Specialist's Meeting on Neutron Cross Sections of Fission Product Nuclei, Bologna 1979", NEANDC(E)209L, 53 (1979).
3) Bollinger L.M., et al.: "Proc. Congres International de Physique Nucleaire, Paris 1964", Vol.2, 673 (1964).
4) Coceva C., et al.: Phys. Lett., **16**, 159 (1965).
5) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).
6) Kawai M. et al.: J. Nucl. Sci. Technol., **29**, 195 (1992).
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79STAVELOZ+:Staveloz P., et al.: "Proc. Specialist's Meeting on Neutron Cross Sections of Fission Product Nuclei, Bologna 1979", NEANDC(E)209L, 53 (1979).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

PD-105

1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-18.1	0	2.0	15.1	393.0		GT = 408.1	JENDL-3.2
-18.0	0	3.0	15.1	393.0		GT = 408.1	JENDL-3.2
-8.07	0	3.0		(177.0)		WGO= 1.9	BNL325-4TH
11.8	0	3.0	0.18	151.0		GT = 151.18	JENDL-3.2
11.8	0	3.0	0.18	151.0		GT = 151.18	BNL325-4TH
11.78 ± 0.04		3.0	0.184± 0.002	149.0 ± 3.0		GNO= 0.0536± 0.0008	65COCEVA+
11.7 ± 0.05		3.0	0.19 ± 0.01				72YAMAMURO+
11.79 ± 0.01			0.21 ± 0.01	151.1 ± 2.1			79STAVELOZ+
13.2	0	2.0	2.8	175.0		GT = 177.8	JENDL-3.2
13.2	0	2.0	2.8	175.0		GT = 177.8	BNL325-4TH
13.21 ± 0.05		2.0	3.12 ± 0.03	167.0 ± 3.0		GNO= 0.858± 0.008	65COCEVA+
13.2 ± 0.1		2.0	3.2 ± 0.1				72YAMAMURO+
13.23 ± 0.01			2.29 ± 0.03	174.5 ± 3.4			79STAVELOZ+
25.2	0	3.0	3.4	135.0		GT = 138.4	JENDL-3.2
25.2	0	3.0	3.4	135.0		GT = 138.4	BNL325-4TH
25.33 ± 0.11		3.0	3.33 ± 0.04	147.0 ± 7.0		GNO= 0.866± 0.008	65COCEVA+
25.1 ± 0.1		3.0	3.4 ± 0.3				72YAMAMURO+
25.15 ± 0.01			3.92 ± 0.05	135.1 ± 2.5			79STAVELOZ+
30.1	0	2.0	0.43	152.0		GT = 152.43	JENDL-3.2
30.1	0	2.0	0.43	152.0		GT = 152.43	BNL325-4TH
30.3 ± 0.2			0.48 ± 0.01	180.0 ±27.0		GNO= 0.081± 0.0018	65COCEVA+
30.12 ± 0.01			0.36 ± 0.01	151.7 ± 4.1			79STAVELOZ+
38.4	0	3.0	0.3	154.0		GT = 154.3	JENDL-3.2
38.4	0	3.0	0.3	154.0		GT = 154.3	BNL325-4TH
38.7 ± 0.3		3.0	0.294± 0.012			GNO= 0.0473± 0.0019	65COCEVA+
38.44 ± 0.02			0.35 ± 0.01	154.1 ± 8.7			79STAVELOZ+
42.6	0	2.5	0.07	150.0		GT = 150.07	JENDL-3.2
42.6	0	2.5	0.07	150.0		GT = 150.07	BNL325-4TH
42.58 ± 0.02			0.07 ± 0.02				79STAVELOZ+
55.2	0	3.0	5.7	151.0		GT = 156.7	JENDL-3.2
55.2	0	3.0	5.7	151.0		GT = 156.7	BNL325-4TH
55.8 ± 0.04		3.0	7.28 ± 0.3	153.0 ±20.0		GNO= 0.975± 0.04	65COCEVA+
55.2 ± 0.3		3.0	7.1 ± 0.9				72YAMAMURO+
55.21 ± 0.03			8.7 ± 0.04				79STAVELOZ+
68.3	0	3.0	1.8	137.0		GT = 138.8	JENDL-3.2
68.3	0	3.0	1.8	137.0		GT = 138.8	BNL325-4TH
68.8 ± 0.5		3.0	0.24 ± 0.02				65COCEVA+
68.4 ± 0.5		3.0	2.1 ± 0.4				72YAMAMURO+
68.32 ± 0.04			1.88 ± 0.02	137.0 ±13.0			79STAVELOZ+
77.7	0	2.0	16.8	136.0		GT = 154.8	JENDL-3.2
77.7	0	2.0	16.8	138.0		GT = 154.8	BNL325-4TH
78.4 ± 0.8		2.0	2.3 ± 0.1				65COCEVA+
78.0 ± 0.5		2.0	18.2 ± 4.0				72YAMAMURO+
77.73 ± 0.05			14.0 ± 0.2	138.0 ±18.0			79STAVELOZ+
88.7	0	3.0	13.8	125.0		GT = 138.8	JENDL-3.2
88.7	0	3.0	13.8	125.0		GT = 138.8	BNL325-4TH
87.8 ± 0.7		3.0	1.9 ± 0.2				65COCEVA+
87.0 ± 0.5		3.0	18.7 ± 2.5				72YAMAMURO+
88.72 ± 0.05			16.1 ± 0.3	125.0 ±15.0			79STAVELOZ+
101.1	0	2.5	0.06	150.0		GT = 150.06	JENDL-3.2
101.1	0	2.5	0.06	150.0		GT = 150.06	BNL325-4TH
101.09 ± 0.06			0.06 ± 0.01				79STAVELOZ+
101.7	0	2.5	0.03	150.0		GT = 150.03	JENDL-3.2
101.7	0	2.5	0.03	150.0		GT = 150.03	BNL325-4TH
101.71 ± 0.07			0.03 ± 0.01				79STAVELOZ+
104.0	0	3.0	1.1	150.0		GT = 151.1	JENDL-3.2
104.0	0	3.0	1.1	150.0		GT = 151.1	BNL325-4TH
105.0 ± 1.5		3.0					65COCEVA+
104.0 ± 0.07			1.32 ± 0.03				79STAVELOZ+
117.0	0	2.5	0.14	150.0		GT = 150.14	JENDL-3.2
117.0	0	2.5	0.14	150.0		GT = 150.14	BNL325-4TH
117.01 ± 0.08			0.14 ± 0.01				79STAVELOZ+
128.3	0	3.0	3.0	150.0		GT = 153.0	JENDL-3.2
128.3	0	3.0	3.0	150.0		GT = 153.0	BNL325-4TH
127.0 ± 2.0		3.0					65COCEVA+
127.0 ± 2.0		3.0					72YAMAMURO+
128.33 ± 0.09			2.5 ± 1.5				79STAVELOZ+
			3.5 ± 0.04				
130.6	0	2.5	0.11	150.0		GT = 150.11	JENDL-3.2
130.6	0	2.5	0.11	150.0		GT = 150.11	BNL325-4TH
130.59 ± 0.09			0.11 ± 0.01				79STAVELOZ+
134.1	0	3.0	0.28	150.0		GT = 150.26	JENDL-3.2
134.1	0	3.0	0.28	150.0		GT = 150.26	BNL325-4TH
134.12 ± 0.09			0.3 ± 0.01				79STAVELOZ+
136.4	0	2.5	0.12	150.0		GT = 150.12	JENDL-3.2
136.4	0	2.5	0.12	150.0		GT = 150.12	BNL325-4TH
136.42 ± 0.1			0.12 ± 0.01				79STAVELOZ+
141.2	0	2.0	13.8	145.0		GT = 158.8	JENDL-3.2
141.2	0	2.0	13.8	145.0		GT = 158.8	BNL325-4TH
142.0 ± 2.0		2.0					65COCEVA+
142.0 ± 2.0		2.0					72YAMAMURO+
141.21 ± 0.1			12.9 ± 4.6				79STAVELOZ+
			11.5 ± 0.1	145.0 ±25.0			
150.2	0	2.0	70.6	130.0		GT = 200.6	JENDL-3.2
150.2	0	2.0	70.6	130.0		GT = 200.6	BNL325-4TH
152.0 ± 2.0		2.0					65COCEVA+

PD-105 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
150.21 ± 0.11			* 58.8 ± 1.5	130.0 ±20.0			79STAVELOZ+
155.0	0	3.0	0.05	150.0		GT = 150.05	JENDL-3.2
155.0	0	3.0	0.05	150.0		GT = 150.05	BNL325-4TH
155.04 ± 0.12			* 4.0 ± 0.06				79STAVELOZ+
158.9	0	2.0	8.6	150.0		GT = 158.6	JENDL-3.2
158.9	0	2.0	8.6	150.0		GT = 158.6	BNL325-4TH
158.87 ± 0.12			* 7.2 ± 0.07				79STAVELOZ+
168.4	0	3.0	1.3	150.0		GT = 151.3	JENDL-3.2
168.4	0	3.0	1.3	150.0		GT = 151.3	BNL325-4TH
168.36 ± 0.13			* 1.5 ± 0.1				79STAVELOZ+
170.3	0	2.5	0.2	150.0		GT = 150.2	JENDL-3.2
170.3	0	2.5	0.2	150.0		GT = 150.2	BNL325-4TH
170.73 ± 0.14			* 0.2 ± 0.01				79STAVELOZ+
184.0	0	2.0	20.2	171.0		GT = 191.2	JENDL-3.2
184.0	0	2.0	20.2	171.0		GT = 191.2	BNL325-4TH
183.97 ± 0.15			* 18.8 ± 0.1	171.0 ±13.0			79STAVELOZ+
202.6	0	2.0	14.2	150.0		GT = 164.2	JENDL-3.2
202.6	0	2.0	14.2	150.0		GT = 164.2	BNL325-4TH
202.63 ± 0.18			* 11.8 ± 0.1				79STAVELOZ+
208.4	0	2.5	0.07	150.0		GT = 150.07	JENDL-3.2
208.4	0	2.5	0.07	150.0		GT = 150.07	BNL325-4TH
208.38 ± 0.19			* 0.07 ± 0.01				79STAVELOZ+
215.9	0	2.5	0.19	150.0		GT = 150.19	JENDL-3.2
215.9	0	2.5	0.19	150.0		GT = 150.19	BNL325-4TH
215.91 ± 0.2			* 0.19 ± 0.02				79STAVELOZ+
226.8	0	3.0	7.3	150.0		GT = 157.3	JENDL-3.2
226.8	0	3.0	7.3	150.0		GT = 157.3	BNL325-4TH
226.75 ± 0.21			* 8.5 ± 0.1				79STAVELOZ+
251.4	0	2.0	7.7	150.0		GT = 157.7	JENDL-3.2
251.4	0	2.0	7.7	150.0		GT = 157.7	BNL325-4TH
251.4 ± 0.24			* 6.4 ± 0.4				79STAVELOZ+
252.5	0	3.0	32.9	150.0		GT = 182.9	JENDL-3.2
252.5	0	3.0	32.9	150.0		GT = 182.9	BNL325-4TH
252.49 ± 0.25			* 38.4 ± 0.5				79STAVELOZ+
260.0	0	2.0	52.6	140.0		GT = 192.6	JENDL-3.2
260.0	0	2.0	52.6	140.0		GT = 192.6	BNL325-4TH
259.99 ± 0.26			* 43.8 ± 0.5	140.0 ±13.0			79STAVELOZ+
287.0	0	3.0	5.2	150.0		GT = 155.2	JENDL-3.2
287.0	0	3.0	5.2	150.0		GT = 155.2	BNL325-4TH
288.98 ± 0.3			* 8.1 ± 0.2				79STAVELOZ+
305.6	0	2.0	128.3	150.0		GT = 278.3	JENDL-3.2
305.8	0	2.0	128.3	150.0		GT = 278.3	BNL325-4TH
305.83 ± 0.08			*106.9 ± 0.9	150.0 ±15.0			79STAVELOZ+
313.9	0	2.0	5.2	150.0		GT = 155.2	JENDL-3.2
313.9	0	2.0	5.2	150.0		GT = 155.2	BNL325-4TH
313.94 ± 0.09			* 4.3 ± 0.2				79STAVELOZ+
328.1	0	3.0	2.9	150.0		GT = 152.9	JENDL-3.2
328.1	0	3.0	2.9	150.0		GT = 152.9	BNL325-4TH
328.14 ± 0.09			* 3.4 ± 0.2				79STAVELOZ+
339.9	0	2.5	0.74	150.0		GT = 150.74	JENDL-3.2
339.9	0	2.5	0.74	150.0		GT = 150.74	BNL325-4TH
339.86 ± 0.1			* 0.74 ± 0.03				79STAVELOZ+
347.2	0	3.0	51.9	175.0		GT = 226.9	JENDL-3.2
347.2	0	3.0	51.9	175.0		GT = 226.9	BNL325-4TH
347.24 ± 0.1			* 60.6 ± 0.9	175.0 ± 7.0			79STAVELOZ+
354.7	0	3.0	87.2	185.0		GT = 252.2	JENDL-3.2
354.7	0	3.0	87.2	185.0		GT = 252.2	BNL325-4TH
354.66 ± 0.11			* 78.4 ± 1.4	185.0 ± 8.0			79STAVELOZ+
370.7	0	2.0	28.8	118.0		GT = 146.8	JENDL-3.2
370.7	0	2.0	28.8	118.0		GT = 146.8	BNL325-4TH
370.66 ± 0.11			* 24.0 ± 0.34	118.0 ±17.0			79STAVELOZ+
377.5	0	2.0	8.7	150.0		GT = 156.7	JENDL-3.2
377.5	0	2.0	8.7	150.0		GT = 156.7	BNL325-4TH
377.49 ± 0.12			* 5.8 ± 0.3				79STAVELOZ+
389.4	0	3.0	23.2	159.0		GT = 182.2	JENDL-3.2
389.4	0	3.0	23.2	159.0		GT = 182.2	BNL325-4TH
389.4 ± 0.12			* 27.1 ± 0.4	159.0 ±20.0			79STAVELOZ+
392.9	0	2.5	0.88	150.0		GT = 150.88	JENDL-3.2
392.9	0	2.5	0.88	150.0		GT = 150.88	BNL325-4TH
392.94 ± 0.12			* 0.88 ± 0.03				79STAVELOZ+
395.1	0	2.5	1.1	150.0		GT = 151.1	JENDL-3.2
395.1	0	2.5	1.1	150.0		GT = 151.1	BNL325-4TH
395.08 ± 0.12			* 1.07 ± 0.03				79STAVELOZ+
401.9	0	3.0	6.4	150.0		GT = 156.4	JENDL-3.2
401.9	0	3.0	6.4	150.0		GT = 156.4	BNL325-4TH
401.87 ± 0.13			* 7.5 ± 0.2				79STAVELOZ+
411.9	0	2.5	0.94	150.0		GT = 150.94	JENDL-3.2
411.9	0	2.5	0.94	150.0		GT = 150.94	BNL325-4TH
411.88 ± 0.13			* 0.94 ± 0.04				79STAVELOZ+
418.6	0	2.5	2.7	150.0		GT = 152.7	JENDL-3.2

PD-105

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
418.8 418.59 ± 0.13	0	2.5	2.7 P 2.7 ± 0.2	150.0		GT = 152.7	BNL325-4TH 79STAVELOZ+
431.4 431.4 431.41 ± 0.14	0 0	2.0 2.0	77.0 77.0 P 84.2 ± 0.9	115.0 115.0 115.0 ± 5.0		GT = 192.0 GT = 192.0	JENDL-3.2 BNL325-4TH 79STAVELOZ+
449.7 449.7 449.73 ± 0.15	0 0	3.0 3.0	45.9 45.9 P 53.5 ± 0.7	189.0 189.0 189.0 ± 8.0		GT = 234.9 GT = 234.9	JENDL-3.2 BNL325-4TH 79STAVELOZ+
466.8 466.8 466.77 ± 0.15	0 0	2.0 2.0	134.0 134.0 P 112.0 ± 2.0	150.0 150.0		GT = 284.0 GT = 284.0	JENDL-3.2 BNL325-4TH 79STAVELOZ+
482.5 482.5 482.54 ± 0.16	0 0	2.5 2.5	5.2 5.2 P 5.2 ± 0.3	150.0 150.0		GT = 155.2 GT = 155.2	JENDL-3.2 BNL325-4TH 79STAVELOZ+
492.1 492.1 492.05 ± 0.16	0 0	2.5 2.5	0.18 0.18 P 0.18 ± 0.04	150.0 150.0		GT = 150.18 GT = 150.18	JENDL-3.2 BNL325-4TH 79STAVELOZ+
499.1 499.1 499.11 ± 0.17	0 0	2.5 2.5	0.32 0.32 P 0.32 ± 0.04	150.0 150.0		GT = 150.32 GT = 150.32	JENDL-3.2 BNL325-4TH 79STAVELOZ+
511.6 511.6 511.58 ± 0.17	0 0	2.5 2.5	2.5 2.5 P 2.5 ± 0.05	150.0 150.0		GT = 152.5 GT = 152.5	JENDL-3.2 BNL325-4TH 79STAVELOZ+
513.0 513.0 512.99 ± 0.18	0 0	2.5 2.5	3.3 3.3 P 3.31 ± 0.06	150.0 150.0		GT = 153.3 GT = 153.3	JENDL-3.2 BNL325-4TH 79STAVELOZ+
532.3 532.3 532.3 ± 0.18	0 0	3.0 3.0	24.4 24.4 P 28.5 ± 0.6	167.0 167.0 167.0 ±25.0		GT = 191.4 GT = 191.4	JENDL-3.2 BNL325-4TH 79STAVELOZ+
543.3 543.3 543.32 ± 0.19	0 0	2.5 2.5	2.0 2.0 P 1.98 ± 0.05	150.0 150.0		GT = 152.0 GT = 152.0	JENDL-3.2 BNL325-4TH 79STAVELOZ+
547.2 547.2 547.21 ± 0.2	0 0	3.0 3.0	76.8 76.8 P 89.4 ± 4.3	152.0 152.0 152.0 ±15.0		GT = 228.8 GT = 228.8	JENDL-3.2 BNL325-4TH 79STAVELOZ+
566.1 566.1 566.08 ± 0.2	0 0	2.0 2.0	33.2 33.2 P 27.7 ± 0.7	114.0 114.0 114.0 ±15.0		GT = 147.2 GT = 147.2	JENDL-3.2 BNL325-4TH 79STAVELOZ+
579.0 579.0 578.97 ± 0.21	0 0	3.0 3.0	19.4 19.4 P 22.8 ± 0.5	150.0 150.0		GT = 169.4 GT = 169.4	JENDL-3.2 BNL325-4TH 79STAVELOZ+
591.1 591.1 591.05 ± 0.22	0 0	3.0 3.0	81.6 81.6 P 95.2 ± 1.6	130.0 130.0 130.0 ±15.0		GT = 211.6 GT = 211.6	JENDL-3.2 BNL325-4TH 79STAVELOZ+
593.2 593.2 593.24 ± 0.22	0 0	2.0 2.0	41.2 41.2 P 34.3 ± 0.8	150.0 150.0		GT = 191.2 GT = 191.2	JENDL-3.2 BNL325-4TH 79STAVELOZ+
605.3 605.3 605.32 ± 0.23	0 0	3.0 3.0	72.8 72.8 P 84.3 ± 1.4	155.0 155.0 155.0 ±10.0		GT = 227.8 GT = 227.8	JENDL-3.2 BNL325-4TH 79STAVELOZ+
611.3 611.3 611.27 ± 0.23	0 0	2.5 2.5	1.7 1.7 P 1.69 ± 0.08	150.0 150.0		GT = 151.7 GT = 151.7	JENDL-3.2 BNL325-4TH 79STAVELOZ+
617.1 617.1 617.08 ± 0.23	0 0	2.5 2.5	4.9 4.9 P 4.9 ± 0.8	150.0 150.0		GT = 154.9 GT = 154.9	JENDL-3.2 BNL325-4TH 79STAVELOZ+
621.3 621.3 621.31 ± 0.24	0 0	3.0 3.0	25.2 25.2 P 29.4 ± 0.8	171.0 171.0 171.0 ±40.0		GT = 196.2 GT = 196.2	JENDL-3.2 BNL325-4TH 79STAVELOZ+
628.9 628.9 628.93 ± 0.24	0 0	2.5 2.5	1.7 1.7 P 1.65 ± 0.06	150.0 150.0		GT = 151.7 GT = 151.7	JENDL-3.2 BNL325-4TH 79STAVELOZ+
659.3 659.3 659.33 ± 0.26	0 0	2.5 2.5	2.0 2.0 P 2.01 ± 0.06	150.0 150.0		GT = 152.0 GT = 152.0	JENDL-3.2 BNL325-4TH 79STAVELOZ+
663.2 663.2 663.22 ± 0.26	0 0	2.0 2.0	81.5 81.5 P 87.9 ± 1.9	140.0 140.0 140.0 ±20.0		GT = 221.5 GT = 221.5	JENDL-3.2 BNL325-4TH 79STAVELOZ+
671.4 671.4 671.36 ± 0.27	0 0	2.5 2.5	1.4 1.4 P 1.4 ± 0.06	150.0 150.0		GT = 151.4 GT = 151.4	JENDL-3.2 BNL325-4TH 79STAVELOZ+
682.6 682.6 682.64 ± 0.27	0 0	3.0 3.0	7.5 7.5 P 8.7 ± 0.9	150.0 150.0		GT = 157.5 GT = 157.5	JENDL-3.2 BNL325-4TH 79STAVELOZ+
697.0 697.0 697.0 ± 0.28	0 0	3.0 3.0	33.8 33.8 P 39.4 ± 1.4	137.0 137.0 137.0 ±20.0		GT = 170.8 GT = 170.8	JENDL-3.2 BNL325-4TH 79STAVELOZ+
700.7 700.7 700.66 ± 0.28	0 0	2.0 2.0	31.0 31.0 P 25.8 ± 1.2	150.0 150.0		GT = 181.0 GT = 181.0	JENDL-3.2 BNL325-4TH 79STAVELOZ+

PD-105 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
712.1	0	3.0	80.8	150.0		GT = 230.8	JENDL-3.2
712.1	0	3.0	80.8	150.0		GT = 230.8	BNL325-4TH
712.11 ± 0.29			g 84.0 ± 5.6				79STAVELOZ+
717.4	0	2.5	2.5	150.0		GT = 152.5	JENDL-3.2
717.4	0	2.5	2.5	150.0		GT = 152.5	BNL325-4TH
717.36 ± 0.29			g 2.53 ± 0.08				79STAVELOZ+
724.4	0	3.0	54.7	217.0		GT = 271.7	JENDL-3.2
724.4	0	3.0	54.7	217.0		GT = 271.7	BNL325-4TH
724.44 ± 0.3			g 53.9 ± 1.8	217.0 ±25.0			79STAVELOZ+
733.7	0	2.5	2.4	150.0		GT = 152.4	JENDL-3.2
733.7	0	2.5	2.4	150.0		GT = 152.4	BNL325-4TH
733.74 ± 0.3			g 2.37 ± 0.08				79STAVELOZ+
738.3	0	2.5	1.8	150.0		GT = 151.8	JENDL-3.2
738.3	0	2.5	1.8	150.0		GT = 151.8	BNL325-4TH
738.31 ± 0.31			g 1.78 ± 0.07				79STAVELOZ+
750.7	0	2.5	6.5	150.0		GT = 156.5	JENDL-3.2
750.7	0	2.5	6.5	150.0		GT = 156.5	BNL325-4TH
750.7 ± 0.31			g 6.45 ± 0.09				79STAVELOZ+
757.6	0	3.0	59.1	163.0		GT = 222.1	JENDL-3.2
757.6	0	3.0	59.1	163.0		GT = 222.1	BNL325-4TH
757.64 ± 0.32			g 58.9 ± 2.1	163.0 ±10.0			79STAVELOZ+
780.3	0	3.0	111.5	155.0		GT = 266.5	JENDL-3.2
780.3	0	3.0	111.5	155.0		GT = 266.5	BNL325-4TH
780.73 ± 0.33			g 130.1 ± 2.7	155.0 ± 5.0			79STAVELOZ+
789.5	0	2.0	85.0	108.0		GT = 193.0	JENDL-3.2
789.5	0	2.0	85.0	108.0		GT = 193.0	BNL325-4TH
789.45 ± 0.34			g 70.8 ± 1.9	108.0 ± 7.0			79STAVELOZ+
794.5	0	3.0	81.9	145.0		GT = 226.9	JENDL-3.2
794.5	0	3.0	81.9	145.0		GT = 226.9	BNL325-4TH
794.54 ± 0.34			g 95.6 ± 2.3	145.0 ± 6.0			79STAVELOZ+
808.0	0	2.0	34.8	120.0		GT = 154.8	JENDL-3.2
808.0	0	2.0	34.8	120.0		GT = 154.8	BNL325-4TH
808.03 ± 0.35			g 29.0 ± 1.4	120.0 ±30.0			79STAVELOZ+
819.7	0	2.5	15.7	150.0		GT = 165.7	JENDL-3.2
819.7	0	2.5	15.7	150.0		GT = 165.7	BNL325-4TH
819.71 ± 0.36			g 15.7 ± 1.6				79STAVELOZ+
824.7	0	2.5	37.3	102.0		GT = 139.3	JENDL-3.2
824.7	0	2.5	37.3	102.0		GT = 139.3	BNL325-4TH
824.74 ± 0.36			g 37.3 ± 1.9	102.0 ±25.0			79STAVELOZ+
833.1	0	2.5	5.6	150.0		GT = 155.6	JENDL-3.2
833.1	0	2.5	5.6	150.0		GT = 155.6	BNL325-4TH
833.11 ± 0.36			g 5.6 ± 1.4				79STAVELOZ+
839.4	0	2.5	36.4	128.0		GT = 164.4	JENDL-3.2
839.4	0	2.5	36.4	128.0		GT = 164.4	BNL325-4TH
839.38 ± 0.37			g 36.4 ± 1.9	128.0 ±30.0			79STAVELOZ+
857.7	0	2.5	12.7	150.0		GT = 162.7	JENDL-3.2
857.7	0	2.5	12.7	150.0		GT = 162.7	BNL325-4TH
857.74 ± 0.37			g 12.7 ± 1.6				79STAVELOZ+
861.3	0	2.5	25.5	150.0		GT = 175.5	JENDL-3.2
861.3	0	2.5	25.5	150.0		GT = 175.5	BNL325-4TH
861.3 ± 0.38			g 25.5 ± 1.8				79STAVELOZ+
873.0	0	2.5	31.7	150.0		GT = 181.7	JENDL-3.2
873.0	0	2.5	31.7	150.0		GT = 181.7	BNL325-4TH
872.98 ± 0.38			g 31.7 ± 2.0				79STAVELOZ+
875.7	0	2.5	1.5	150.0		GT = 151.5	JENDL-3.2
875.7	0	2.5	1.5	150.0		GT = 151.5	BNL325-4TH
875.74 ± 0.39			g 1.5 ± 0.1				79STAVELOZ+
890.1	0	2.5	21.8	150.0		GT = 171.8	JENDL-3.2
890.1	0	2.5	21.8	150.0		GT = 171.8	BNL325-4TH
890.13 ± 0.4			g 21.8 ± 1.9				79STAVELOZ+
897.5	0	2.5	4.2	150.0		GT = 154.2	JENDL-3.2
897.5	0	2.5	4.2	150.0		GT = 154.2	BNL325-4TH
897.47 ± 0.41			g 4.2 ± 1.6				79STAVELOZ+
904.1	0	2.5	8.1	150.0		GT = 158.1	JENDL-3.2
904.1	0	2.5	8.1	150.0		GT = 158.1	BNL325-4TH
904.06 ± 0.42			g 8.1 ± 1.7				79STAVELOZ+
925.6	0	2.5	208.0	185.0		GT = 373.0	JENDL-3.2
925.6	0	2.5	208.0	185.0		GT = 373.0	BNL325-4TH
925.57 ± 0.43			g 208.0 ± 5.7	185.0 ± 5.0			79STAVELOZ+
941.0	0	2.5	77.1	129.0		GT = 206.1	JENDL-3.2
941.0	0	2.5	77.1	129.0		GT = 206.1	BNL325-4TH
940.98 ± 0.44			g 77.1 ± 3.2	129.0 ±10.0			79STAVELOZ+
958.6	0	2.5	183.0	198.0		GT = 381.0	JENDL-3.2
958.6	0	2.5	183.0	198.0		GT = 381.0	BNL325-4TH
958.63 ± 0.45			g 183.0 ± 3.9	198.0 ± 7.0			79STAVELOZ+
977.7	0	2.5	102.9	159.0		GT = 261.9	JENDL-3.2
977.7	0	2.5	102.9	159.0		GT = 261.9	BNL325-4TH
977.73 ± 0.46			g 102.9 ± 2.8	159.0 ± 7.0			79STAVELOZ+
986.8	0	2.5	14.0	150.0		GT = 164.0	JENDL-3.2
986.8	0	2.5	14.0	150.0		GT = 164.0	BNL325-4TH

PD-105

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
988.84 ± 0.46			† 14.0 ± 1.6				79STAVELOZ+
1015.1	0	2.5	8.9	150.0		GT = 158.9	JENDL-3.2
1015.1	0	2.5	8.9	150.0		GT = 158.9	BNL325-4TH
1015.1 ± 0.13			† 8.9 ± 1.6				79STAVELOZ+
1020.5	0	2.5	34.5	93.0		GT = 127.5	JENDL-3.2
1020.5	0	2.5	34.5	93.0		GT = 127.5	BNL325-4TH
1020.5 ± 0.13			† 34.5 ± 2.0	93.0 ±25.0			79STAVELOZ+
1035.3	0	2.5	6.7	150.0		GT = 156.7	JENDL-3.2
1035.3	0	2.5	6.7	150.0		GT = 156.7	BNL325-4TH
1035.3 ± 0.13			† 6.7 ± 1.7				79STAVELOZ+
1038.1	0	2.5	4.4	150.0		GT = 154.4	JENDL-3.2
1038.1	0	2.5	4.4	150.0		GT = 154.4	BNL325-4TH
1038.1 ± 0.13			† 4.4 ± 0.1				79STAVELOZ+
1057.5	0	2.5	99.0	153.0		GT = 252.0	JENDL-3.2
1057.5	0	2.5	99.0	153.0		GT = 252.0	BNL325-4TH
1057.5 ± 0.13			† 99.0 ± 4.0	153.0 ± 8.0			79STAVELOZ+
1070.2	0	2.5	34.9	150.0		GT = 184.9	JENDL-3.2
1070.2	0	2.5	34.9	150.0		GT = 184.9	BNL325-4TH
1070.2 ± 0.13			† 34.9 ± 3.0				79STAVELOZ+
1081.3	0	2.5	30.7	150.0		GT = 180.7	JENDL-3.2
1081.3	0	2.5	30.7	150.0		GT = 180.7	BNL325-4TH
1081.3 ± 0.14			† 30.7 ± 2.7				79STAVELOZ+
1085.6	0	2.5	17.7	150.0		GT = 167.7	JENDL-3.2
1085.6	0	2.5	17.7	150.0		GT = 167.7	BNL325-4TH
1085.6 ± 0.14			† 17.7 ± 2.7				79STAVELOZ+
1101.9	0	2.5	8.7	150.0		GT = 158.7	JENDL-3.2
1101.9	0	2.5	8.7	150.0		GT = 158.7	BNL325-4TH
1101.9 ± 0.14			† 8.7 ± 3.0				79STAVELOZ+
1108.6	0	2.5	132.3	149.0		GT = 281.3	JENDL-3.2
1108.6	0	2.5	132.3	149.0		GT = 281.3	BNL325-4TH
1108.6 ± 0.14			†132.3 ± 5.3	146.0 ± 8.0			79STAVELOZ+
1113.1	0	2.5	3.0	150.0		GT = 153.0	JENDL-3.2
1113.1	0	2.5	3.0	150.0		GT = 153.0	BNL325-4TH
1113.1 ± 0.14			† 3.0 ± 0.2				79STAVELOZ+
1117.1	0	2.5	4.5	150.0		GT = 154.5	JENDL-3.2
1117.1	0	2.5	4.5	150.0		GT = 154.5	BNL325-4TH
1117.1 ± 0.14			† 4.5 ± 1.7				79STAVELOZ+
1124.5	0	2.5	43.9	123.0		GT = 166.9	JENDL-3.2
1124.5	0	2.5	43.9	123.0		GT = 166.9	BNL325-4TH
1124.5 ± 0.14			† 43.9 ± 2.3	123.0 ±25.0			79STAVELOZ+
1131.2	0	2.5	3.0	150.0		GT = 153.0	JENDL-3.2
1131.2	0	2.5	3.0	150.0		GT = 153.0	BNL325-4TH
1131.2 ± 0.15			† 3.0 ± 0.2				79STAVELOZ+
1138.3	0	2.5	4.0	150.0		GT = 154.0	JENDL-3.2
1138.3	0	2.5	4.0	150.0		GT = 154.0	BNL325-4TH
1138.3 ± 0.15			† 4.0 ± 2.0				79STAVELOZ+
1151.9	0	2.5	3.3	150.0		GT = 153.3	JENDL-3.2
1151.9	0	2.5	3.3	150.0		GT = 153.3	BNL325-4TH
1151.9 ± 0.15			† 3.3 ± 1.9				79STAVELOZ+
1157.7	0	2.5	14.7	150.0		GT = 164.7	JENDL-3.2
1157.7	0	2.5	14.7	150.0		GT = 164.7	BNL325-4TH
1157.7 ± 0.15			† 14.7 ± 2.1				79STAVELOZ+
1161.0	0	2.5	23.5	150.0		GT = 173.5	JENDL-3.2
1161.0	0	2.5	23.5	150.0		GT = 173.5	BNL325-4TH
1161.0 ± 0.15			† 23.5 ± 2.2				79STAVELOZ+
1165.3	0	2.5	5.6	150.0		GT = 155.6	JENDL-3.2
1165.3	0	2.5	5.6	150.0		GT = 155.6	BNL325-4TH
1165.3 ± 0.15			† 5.6 ± 0.2				79STAVELOZ+
1178.4	0	2.5	3.5	150.0		GT = 153.5	JENDL-3.2
1178.4	0	2.5	3.5	150.0		GT = 153.5	BNL325-4TH
1178.4 ± 0.15			† 3.5 ± 0.2				79STAVELOZ+
1192.1	0	2.5	21.5	150.0		GT = 171.5	JENDL-3.2
1192.1	0	2.5	21.5	150.0		GT = 171.5	BNL325-4TH
1192.1 ± 0.18			† 21.5 ± 2.2				79STAVELOZ+
1204.7	0	2.5	2.8	150.0		GT = 152.8	JENDL-3.2
1204.7	0	2.5	2.8	150.0		GT = 152.8	BNL325-4TH
1204.7 ± 0.18			† 2.8 ± 0.2				79STAVELOZ+
1210.6	0	2.5	18.4	150.0		GT = 168.4	JENDL-3.2
1210.6	0	2.5	18.4	150.0		GT = 168.4	BNL325-4TH
1210.6 ± 0.18			† 18.4 ± 2.4				79STAVELOZ+
1223.1	0	2.5	106.0	150.0		GT = 256.0	JENDL-3.2
1223.1	0	2.5	106.0	150.0		GT = 256.0	BNL325-4TH
1223.1 ± 0.18			†106.0 ± 3.9				79STAVELOZ+
1227.4	0	2.5	95.0	159.0		GT = 254.0	JENDL-3.2
1227.4	0	2.5	95.0	159.0		GT = 254.0	BNL325-4TH
1227.4 ± 0.17			† 95.0 ± 3.8	159.0 ±10.0			79STAVELOZ+
1241.4	0	2.5	206.4	166.0		GT = 372.4	JENDL-3.2
1241.4	0	2.5	206.4	166.0		GT = 372.4	BNL325-4TH
1241.4 ± 0.17			†206.4 ± 5.3	166.0 ± 5.0			79STAVELOZ+
1261.7	0	2.5	129.7	164.0		GT = 293.7	JENDL-3.2

PD-105 6

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
1261.7	0	2.5	129.7	184.0		GT = 293.7	BNL325-4TH
1261.7 ± 0.17			B129.7 ± 4.0	184.0 ± 5.0			79STAVELOZ+
1286.4	0	2.5	182.2	150.0		GT = 332.2	JENDL-3.2
1286.4	0	2.5	182.2	150.0		GT = 332.2	BNL325-4TH
1286.4 ± 0.17			B182.2 ± 5.0	150.0 ± 5.0			79STAVELOZ+
1296.7	0	2.5	51.6	115.0		GT = 166.6	JENDL-3.2
1296.7	0	2.5	51.6	115.0		GT = 166.6	BNL325-4TH
1296.7 ± 0.18			B 51.6 ± 3.0	115.0 ±10.0			79STAVELOZ+
1312.9	0	2.5	89.8	143.0		GT = 212.8	JENDL-3.2
1312.9	0	2.5	89.8	143.0		GT = 212.8	BNL325-4TH
1312.9 ± 0.18			B 58.8 ± 3.3	143.0 ±20.0			79STAVELOZ+
1320.2	0	2.5	3.3	150.0		GT = 153.3	JENDL-3.2
1320.2	0	2.5	3.3	150.0		GT = 153.3	BNL325-4TH
1320.2 ± 0.18			B 3.3 ± 0.2				79STAVELOZ+
1337.9	0	2.5	48.6	95.0		GT = 144.6	JENDL-3.2
1337.9	0	2.5	48.6	95.0		GT = 144.6	BNL325-4TH
1337.9 ± 0.19			B 48.6 ± 2.7	95.0 ±15.0			79STAVELOZ+
1342.7	0	2.5	43.1	137.0		GT = 180.1	JENDL-3.2
1342.7	0	2.5	43.1	137.0		GT = 180.1	BNL325-4TH
1342.7 ± 0.19			B 43.1 ± 2.6	137.0 ±30.0			79STAVELOZ+
1360.9	0	2.5	24.3	150.0		GT = 174.3	JENDL-3.2
1360.9	0	2.5	24.3	150.0		GT = 174.3	BNL325-4TH
1360.9 ± 0.19			B 24.3 ± 2.4				79STAVELOZ+
1375.8	0	2.5	113.1	246.0		GT = 359.1	JENDL-3.2
1375.8	0	2.5	113.1	246.0		GT = 359.1	BNL325-4TH
1375.8 ± 0.19			B113.1 ± 3.8	246.0 ±15.0			79STAVELOZ+
1384.2	0	2.5	15.1	150.0		GT = 165.1	JENDL-3.2
1384.2	0	2.5	15.1	150.0		GT = 165.1	BNL325-4TH
1384.2 ± 0.2			B 15.1 ± 2.4				79STAVELOZ+
1400.2	0	2.5	49.7	87.0		GT = 136.7	JENDL-3.2
1400.2	0	2.5	49.7	87.0		GT = 136.7	BNL325-4TH
1400.0 ± 0.2			B 49.7 ± 2.9	87.0 ±17.0			79STAVELOZ+
1413.1	0	2.5	47.9	111.0		GT = 158.9	JENDL-3.2
1413.1	0	2.5	47.9	111.0		GT = 158.9	BNL325-4TH
1413.1 ± 0.2			B 47.9 ± 3.0	111.0 ±25.0			79STAVELOZ+
1423.9	0	2.5	1.5	150.0		GT = 151.5	JENDL-3.2
1423.9	0	2.5	1.5	150.0		GT = 151.5	BNL325-4TH
1423.9 ± 0.2			B 1.5 ± 0.2				79STAVELOZ+
1436.2	0	2.5	7.2	150.0		GT = 157.2	JENDL-3.2
1436.2	0	2.5	7.2	150.0		GT = 157.2	BNL325-4TH
1436.2 ± 0.21			B 7.2 ± 0.2				79STAVELOZ+
1443.3	0	2.5	38.3	150.0		GT = 188.3	JENDL-3.2
1443.3	0	2.5	38.3	150.0		GT = 188.3	BNL325-4TH
1443.3 ± 0.21			B 38.3 ± 3.9				79STAVELOZ+
1448.8	0	2.5	131.5	125.0		GT = 256.5	JENDL-3.2
1448.8	0	2.5	131.5	125.0		GT = 256.5	BNL325-4TH
1448.8 ± 0.21			B131.5 ± 5.5	125.0 ± 7.0			79STAVELOZ+
1457.0	0	2.5	41.8	150.0		GT = 191.8	JENDL-3.2
1457.0	0	2.5	41.8	150.0		GT = 191.8	BNL325-4TH
1457.0 ± 0.21			B 41.8 ± 3.8				79STAVELOZ+
1468.4	0	2.5	67.2	119.0		GT = 186.2	JENDL-3.2
1468.4	0	2.5	67.2	119.0		GT = 186.2	BNL325-4TH
1468.4 ± 0.21			B 67.2 ± 4.3	119.0 ±17.0			79STAVELOZ+
1480.8	0	2.5	238.5	248.0		GT = 486.5	JENDL-3.2
1480.8	0	2.5	238.5	248.0		GT = 486.5	BNL325-4TH
1480.8 ± 0.22			B238.5 ± 7.3	248.0 ±12.0			79STAVELOZ+
1515.3	0	2.5	30.6	150.0		GT = 180.6	JENDL-3.2
1515.3	0	2.5	30.6	150.0		GT = 180.6	BNL325-4TH
1515.3 ± 0.22			B 30.6 ± 4.0				79STAVELOZ+
1525.2	0	2.5	36.0	150.0		GT = 186.0	JENDL-3.2
1525.2	0	2.5	36.0	150.0		GT = 186.0	BNL325-4TH
1525.2 ± 0.23			B 36.0 ± 4.2				79STAVELOZ+
1537.6	0	2.5	12.5	150.0		GT = 162.5	JENDL-3.2
1537.6	0	2.5	12.5	150.0		GT = 162.5	BNL325-4TH
1537.6 ± 0.23			B 12.5 ± 3.9				79STAVELOZ+
1548.9	0	2.5	242.1	194.0		GT = 436.1	JENDL-3.2
1548.9	0	2.5	242.1	194.0		GT = 436.1	BNL325-4TH
1548.9 ± 0.23			B242.1 ± 8.6	194.0 ± 5.0			79STAVELOZ+
1557.1	0	2.5	6.3	150.0		GT = 156.3	JENDL-3.2
1557.1	0	2.5	6.3	150.0		GT = 156.3	BNL325-4TH
1557.1 ± 0.23			B 6.3 ± 3.9				79STAVELOZ+
1565.3	0	2.5	168.0	113.0		GT = 281.0	JENDL-3.2
1565.3	0	2.5	168.0	113.0		GT = 281.0	BNL325-4TH
1565.3 ± 0.24			B168.0 ± 7.0	113.0 ± 5.0			79STAVELOZ+
1585.5	0	2.5	6.1	150.0		GT = 156.1	JENDL-3.2
1585.5	0	2.5	6.1	150.0		GT = 156.1	BNL325-4TH
1585.5 ± 0.24			B 6.1 ± 0.2				79STAVELOZ+
1601.3	0	2.5	140.1	108.0		GT = 248.1	JENDL-3.2
1601.3	0	2.5	140.1	108.0		GT = 248.1	BNL325-4TH
1601.3 ± 0.24			B140.1 ± 7.2	108.0 ± 7.0			79STAVELOZ+

PD-105 7

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
1604.8	0	2.5	129.3	126.0		GT = 255.3	JENDL-3.2
1604.8	0	2.5	129.3	126.0		GT = 255.3	BNL325-4TH
1604.8 ± 0.25			*129.3 ± 7.0	126.0 ± 8.0			79STAVELOZ+
1608.2	0	2.5	47.4	150.0		GT = 197.4	JENDL-3.2
1608.2	0	2.5	47.4	150.0		GT = 197.4	BNL325-4TH
1608.2 ± 0.25			* 47.4 ± 0.7				79STAVELOZ+
1632.0	0	2.5	79.0	151.0		GT = 230.0	JENDL-3.2
1632.0	0	2.5	79.0	151.0		GT = 230.0	BNL325-4TH
1632.0 ± 0.25			* 79.0 ± 5.5	151.0 ±25.0			79STAVELOZ+
1640.3	0	2.5	91.3	147.0		GT = 238.3	JENDL-3.2
1640.3	0	2.5	91.3	147.0		GT = 238.3	BNL325-4TH
1640.3 ± 0.25			* 91.3 ± 5.8	147.0 ±23.0			79STAVELOZ+
1651.8	0	2.5	134.0	210.0		GT = 344.0	JENDL-3.2
1651.8	0	2.5	134.0	210.0		GT = 344.0	BNL325-4TH
1651.8 ± 0.26			*134.0 ± 8.8	210.0 ±25.0			79STAVELOZ+
1664.4	0	2.5	6.8	150.0		GT = 156.8	JENDL-3.2
1664.4	0	2.5	6.8	150.0		GT = 156.8	BNL325-4TH
1664.4 ± 0.26			* 6.8 ± 0.2				79STAVELOZ+
1671.1	0	2.5	1.4	150.0		GT = 151.4	JENDL-3.2
1671.1	0	2.5	1.4	150.0		GT = 151.4	BNL325-4TH
1671.1 ± 0.26			* 1.4 ± 0.2				79STAVELOZ+
1691.1	0	2.5	3.4	150.0		GT = 153.4	JENDL-3.2
1691.1	0	2.5	3.4	150.0		GT = 153.4	BNL325-4TH
1691.1 ± 0.26			* 3.4 ± 0.2				79STAVELOZ+
1710.4	0	2.5	2.1	150.0		GT = 152.1	JENDL-3.2
1710.4	0	2.5	2.1	150.0		GT = 152.1	BNL325-4TH
1710.3 ± 0.27			* 2.1 ± 0.2				79STAVELOZ+
1719.0	0	2.5	9.0	150.0		GT = 159.0	JENDL-3.2
1719.0	0	2.5	9.0	150.0		GT = 159.0	BNL325-4TH
1719.0 ± 0.27			* 9.0 ± 0.3				79STAVELOZ+
1723.9	0	2.5	3.8	150.0		GT = 153.8	JENDL-3.2
1723.9	0	2.5	3.8	150.0		GT = 153.8	BNL325-4TH
1723.9 ± 0.27			* 3.8 ± 0.2				79STAVELOZ+
1731.0	0	2.5	5.8	150.0		GT = 155.8	JENDL-3.2
1731.0	0	2.5	5.8	150.0		GT = 155.8	BNL325-4TH
1731.0 ± 0.27			* 5.8 ± 0.3				79STAVELOZ+
1737.6	0	2.5	11.0	150.0		GT = 161.0	JENDL-3.2
1737.6	0	2.5	11.0	150.0		GT = 161.0	BNL325-4TH
1737.6 ± 0.28			* 11.0 ± 0.3				79STAVELOZ+
1743.2	0	2.5	2.9	150.0		GT = 152.9	JENDL-3.2
1743.2	0	2.5	2.9	150.0		GT = 152.9	BNL325-4TH
1743.2 ± 0.28			* 2.9 ± 0.2				79STAVELOZ+
1750.4	0	2.5	18.7	150.0		GT = 168.7	JENDL-3.2
1750.4	0	2.5	18.7	150.0		GT = 168.7	BNL325-4TH
1750.4 ± 0.28			* 18.7 ± 4.8				79STAVELOZ+
1763.0	0	2.5	8.5	150.0		GT = 158.5	JENDL-3.2
1763.0	0	2.5	8.5	150.0		GT = 158.5	BNL325-4TH
1763.0 ± 0.28			* 8.5 ± 0.3				79STAVELOZ+
1782.4	0	2.5	30.0	150.0		GT = 180.0	JENDL-3.2
1782.4	0	2.5	30.0	150.0		GT = 180.0	BNL325-4TH
1782.4 ± 0.28			* 30.0 ± 5.1				79STAVELOZ+
1798.8	0	2.5	6.7	150.0		GT = 156.7	JENDL-3.2
1798.8	0	2.5	6.7	150.0		GT = 156.7	BNL325-4TH
1798.8 ± 0.29			* 6.7 ± 0.3				79STAVELOZ+
1805.2	0	2.5	18.1	150.0		GT = 168.1	JENDL-3.2
1805.2	0	2.5	18.1	150.0		GT = 168.1	BNL325-4TH
1805.2 ± 0.29			* 18.1 ± 0.4				79STAVELOZ+
1813.0	0	2.5	171.4	152.0		GT = 323.4	JENDL-3.2
1813.0	0	2.5	171.4	152.0		GT = 323.4	BNL325-4TH
1813.0 ± 0.29			*171.4 ± 8.1	152.0 ± 8.0			79STAVELOZ+
1817.0	0	2.5	32.3	150.0		GT = 182.3	JENDL-3.2
1817.0	0	2.5	32.3	150.0		GT = 182.3	BNL325-4TH
1817.0 ± 0.3			* 32.3 ± 0.7				79STAVELOZ+
1824.4	0	2.5	7.8	150.0		GT = 157.8	JENDL-3.2
1824.4	0	2.5	7.8	150.0		GT = 157.8	BNL325-4TH
1824.4 ± 0.3			* 7.8 ± 0.3				79STAVELOZ+
1830.7	0	2.5	7.7	150.0		GT = 157.7	JENDL-3.2
1830.7	0	2.5	7.7	150.0		GT = 157.7	BNL325-4TH
1830.7 ± 0.3			* 7.7 ± 0.3				79STAVELOZ+
1844.5	0	2.5	63.5	150.0		GT = 213.5	JENDL-3.2
1844.5	0	2.5	63.5	150.0		GT = 213.5	BNL325-4TH
1844.5 ± 0.3			* 63.5 ± 8.3				79STAVELOZ+
1849.3	0	2.5	49.7	150.0		GT = 199.7	JENDL-3.2
1849.3	0	2.5	49.7	150.0		GT = 199.7	BNL325-4TH
1849.3 ± 0.3			* 49.7 ± 8.0				79STAVELOZ+
1869.5	0	2.5	102.1	115.0		GT = 217.1	JENDL-3.2
1869.5	0	2.5	102.1	115.0		GT = 217.1	BNL325-4TH
1869.5 ± 0.31			*102.1 ± 7.3	115.0 ± 7.0			79STAVELOZ+
1873.8	0	2.5	12.8	150.0		GT = 162.8	JENDL-3.2
1873.8	0	2.5	12.8	150.0		GT = 162.8	BNL325-4TH

PD-105 8

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
1873.8 ± 0.31			P 12.8 ± 0.4				79STAVELOZ+
1880.9	0	2.5	297.3	176.0		GT = 475.3	JENDL-3.2
1880.9	0	2.5	297.3	176.0		GT = 475.3	BNL325-4TH
1880.9 ± 0.31			P 297.3 ±11.0	176.0 ± 5.0			79STAVELOZ+
1900.0	0	2.5	33.1	150.0		GT = 183.1	JENDL-3.2
1900.0	0	2.5	33.1	150.0		GT = 183.1	BNL325-4TH
1900.0 ± 0.32			P 33.1 ± 0.3				79STAVELOZ+
1902.8	0	2.5	5.9	150.0		GT = 155.9	JENDL-3.2
1902.8	0	2.5	5.9	150.0		GT = 155.9	BNL325-4TH
1902.8 ± 0.32			P 5.9 ± 0.3				79STAVELOZ+
1909.9	0	2.5	5.0	150.0		GT = 155.0	JENDL-3.2
1909.9	0	2.5	5.0	150.0		GT = 155.0	BNL325-4TH
1909.8 ± 0.32			P 5.0 ± 0.3				79STAVELOZ+
1932.3	0	2.5	181.0	199.0		GT = 380.0	JENDL-3.2
1932.3	0	2.5	181.0	199.0		GT = 380.0	BNL325-4TH
1932.3 ± 0.32			P 181.0 ±10.0	199.0 ±15.0			79STAVELOZ+
1938.2	0	2.5	168.1	158.0		GT = 322.1	JENDL-3.2
1938.2	0	2.5	168.1	158.0		GT = 322.1	BNL325-4TH
1938.2 ± 0.33			P 168.1 ± 9.8	158.0 ± 8.0			79STAVELOZ+
1942.4	0	2.5	24.5	150.0		GT = 174.5	JENDL-3.2
1942.4	0	2.5	24.5	150.0		GT = 174.5	BNL325-4TH
1942.4 ± 0.33			P 24.5 ± 0.6				79STAVELOZ+
1953.2	0	2.5	49.3	150.0		GT = 199.3	JENDL-3.2
1953.2	0	2.5	49.3	150.0		GT = 199.3	BNL325-4TH
1953.2 ± 0.33			P 49.3 ± 7.1				79STAVELOZ+
1960.5	0	2.5	89.5	150.0		GT = 219.5	JENDL-3.2
1960.5	0	2.5	89.5	150.0		GT = 219.5	BNL325-4TH
1960.5 ± 0.33			P 89.5 ± 7.5				79STAVELOZ+
1970.1	0	2.5	81.1	150.0		GT = 211.1	JENDL-3.2
1970.1	0	2.5	81.1	150.0		GT = 211.1	BNL325-4TH
1970.1 ± 0.33			P 81.1 ± 7.5				79STAVELOZ+
1978.8	0	2.5	18.1	150.0		GT = 168.1	JENDL-3.2
1978.8	0	2.5	18.1	150.0		GT = 168.1	BNL325-4TH
1978.8 ± 0.34			P 18.1 ± 0.4				79STAVELOZ+
1984.2	0	2.5	2.3	150.0		GT = 152.3	JENDL-3.2
1984.2	0	2.5	2.3	150.0		GT = 152.3	BNL325-4TH
1984.2 ± 0.34			P 2.3 ± 0.3				79STAVELOZ+
1998.4	0	2.5	9.4	150.0		GT = 159.4	JENDL-3.2
1998.4	0	2.5	9.4	150.0		GT = 159.4	BNL325-4TH
1998.4 ± 0.34			P 9.4 ± 0.4				79STAVELOZ+
2003.5	0	2.5	220.3	141.0		GT = 361.3	JENDL-3.2
2003.5	0	2.5	220.3	141.0		GT = 361.3	BNL325-4TH
2003.5 ± 0.34			P 220.3 ±12.0	141.0 ± 8.0			79STAVELOZ+
2008.7	0	2.5	78.4	150.0		GT = 228.4	JENDL-3.2
2008.7	0	2.5	78.4	150.0		GT = 228.4	BNL325-4TH
2008.8 ± 0.35			P 78.4 ± 8.5				79STAVELOZ+
2030.8	0	2.5	78.9	150.0		GT = 228.9	JENDL-3.2
2030.8	0	2.5	78.9	150.0		GT = 228.9	BNL325-4TH
2030.8 ± 0.35			P 78.9 ± 0.3				79STAVELOZ+
2043.7	0	2.5	122.8	154.0		GT = 276.8	JENDL-3.2
2043.7	0	2.5	122.8	154.0		GT = 276.8	BNL325-4TH
2043.7 ± 0.35			P 122.8 ±10.0	154.0 ±15.0			79STAVELOZ+
2053.3	0	2.5	80.0	150.0		GT = 230.0	JENDL-3.2
2053.3	0	2.5	80.0	150.0		GT = 230.0	BNL325-4TH
2053.3 ± 0.36			P 80.0 ± 9.22				79STAVELOZ+
2630.3				(180.0)	40.1 ± 0.9		79MACKLIN+
2639.7				(180.0)	70.3 ± 1.8		79MACKLIN+
2656.2				(180.0)	5.1 ± 0.7		79MACKLIN+
2664.6				(180.0)	80.5 ± 0.3		79MACKLIN+
2677.9				(180.0)	2.9 ± 0.7		79MACKLIN+
2683.5				(180.0)	8.8 ± 0.7		79MACKLIN+
2700.4				(180.0)	22.7 ± 1.1		79MACKLIN+
2705.8				(180.0)	45.4 ± 1.1		79MACKLIN+
2715.4				(180.0)	5.2 ± 0.8		79MACKLIN+
2721.7				(180.0)	2.8 ± 0.7		79MACKLIN+
2734.9				(180.0)	43.3 ± 1.5		79MACKLIN+
2745.4				(180.0)	5.6 ± 3.1		79MACKLIN+
2752.9				(180.0)	34.2 ± 7.8		79MACKLIN+
2758.4				(180.0)	14.0 ± 3.9		79MACKLIN+
2767.8				(180.0)	3.2 ± 2.8		79MACKLIN+
2773.8				(180.0)	16.8 ± 2.8		79MACKLIN+
2793.4				(180.0)	54.8 ± 8.8		79MACKLIN+

PD-105

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2801.6				(160.0)	6.7 ± 3.1		79MACKLIN+
2820.0				(160.0)	18.9 ± 4.4		79MACKLIN+
2837.7				(160.0)	73.2 ± 7.7		79MACKLIN+
2858.6				(160.0)	46.8 ± 6.5		79MACKLIN+
2868.9				(160.0)	11.7 ± 5.4		79MACKLIN+
2885.9				(160.0)	21.4 ± 5.9		79MACKLIN+
2897.2				(160.0)	6.6 ± 3.1		79MACKLIN+
2907.5				(160.0)	56.0 ± 7.0		79MACKLIN+
2917.6				(160.0)	67.2 ± 6.6		79MACKLIN+
2935.0				(160.0)	56.6 ± 5.6		79MACKLIN+
2955.0				(160.0)	27.4 ± 4.1		79MACKLIN+
2969.7				(160.0)	35.3 ± 4.2		79MACKLIN+
2987.0				(160.0)	29.2 ± 3.3		79MACKLIN+
2994.5				(160.0)	78.1 ± 5.1		79MACKLIN+
3012.1				(160.0)	45.4 ± 4.7		79MACKLIN+
3027.8				(160.0)	9.4 ± 2.4		79MACKLIN+
3036.8				(160.0)	15.3 ± 3.0		79MACKLIN+
3047.1				(160.0)	76.7 ± 6.3		79MACKLIN+
3068.1				(160.0)	28.1 ± 4.5		79MACKLIN+
3086.3				(160.0)	18.2 ± 8.0		79MACKLIN+
3093.3				(160.0)	9.0 ± 3.8		79MACKLIN+
3098.0				(160.0)	7.8 ± 3.1		79MACKLIN+
3103.2				(160.0)	15.5 ± 2.5		79MACKLIN+
3116.4				(160.0)	20.8 ± 0.9		79MACKLIN+
3129.4				(160.0)	4.4 ± 0.4		79MACKLIN+
3142.6				(160.0)	21.7 ± 1.1		79MACKLIN+
3150.0				(160.0)	4.2 ± 1.4		79MACKLIN+
3158.4				(160.0)	83.8 ± 1.2		79MACKLIN+
3165.3				(160.0)	9.7 ± 0.7		79MACKLIN+
3176.3				(160.0)	102.2 ± 1.5		79MACKLIN+
3188.2				(160.0)	29.2 ± 0.5		79MACKLIN+
3205.3				(160.0)	21.4 ± 1.2		79MACKLIN+
3211.4				(160.0)	14.4 ± 0.6		79MACKLIN+
3225.3				(160.0)	39.7 ± 0.8		79MACKLIN+
3233.0				(160.0)	4.9 ± 0.8		79MACKLIN+
3239.0				(160.0)	2.5 ± 0.8		79MACKLIN+
3246.6				(160.0)	28.3 ± 1.1		79MACKLIN+
3256.4				(160.0)	19.6 ± 1.0		79MACKLIN+
3271.6				(160.0)	2.1 ± 0.4		79MACKLIN+
3288.5				(160.0)	58.9 ± 1.7		79MACKLIN+
3299.2				(160.0)	62.8 ± 2.1		79MACKLIN+
3314.2				(160.0)	151.9 ± 1.6		79MACKLIN+
3327.3					22.4 ± 0.8		79MACKLIN+
3340.2					23.4 ± 1.3		79MACKLIN+
3354.7					32.0 ± 1.1		79MACKLIN+
3368.5					18.8 ± 0.8		79MACKLIN+
3379.0					29.2 ± 0.8		79MACKLIN+
3387.3					27.2 ± 1.4		79MACKLIN+
3393.7				(160.0)	70.2 ± 1.7		79MACKLIN+
3405.4				(160.0)	38.1 ± 1.4		79MACKLIN+
3412.3					17.5 ± 1.2		79MACKLIN+
3424.4				(160.0)	35.4 ± 1.0		79MACKLIN+
3436.8					21.8 ± 0.8		79MACKLIN+
3454.0				(160.0)	32.1 ± 1.3		79MACKLIN+

PD-105 10

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
3465.4					21.5 ± 1.0		79MACKLIN+
3491.0					30.3 ± 1.1		79MACKLIN+
3501.0				(160.0)	5.1 ± 0.8		79MACKLIN+
3516.5				(160.0)	78.2 ± 1.8		79MACKLIN+
3527.3					24.2 ± 1.0		79MACKLIN+
3539.9					14.5 ± 1.0		79MACKLIN+
3557.4				(160.0)	62.2 ± 1.6		79MACKLIN+
3566.2				(160.0)	44.5 ± 1.5		79MACKLIN+
3584.2				(160.0)	32.3 ± 1.3		79MACKLIN+
3608.2				(160.0)	66.9 ± 1.7		79MACKLIN+
3628.2					20.4 ± 1.1		79MACKLIN+
3635.4					16.3 ± 1.3		79MACKLIN+
3643.1					11.0 ± 1.3		79MACKLIN+
3652.0				(160.0)	59.9 ± 1.7		79MACKLIN+

46-Pd-106

Abundance	:27.33%	
Spin-Parity	:0^+	
Potential Scattering Radius		:6.5 fm
Cross Sections of 2200 m/s for Total		:5.306 b
	Elastic	:5.025 b
	Capture	:3.363 b
Maxwellian Average Capture Cross Section		:2.974 b
Resonance Integral of Capture		:19.49 b

Resolved resonance region (SLBW formula) : below 423 eV. Parameters of a positive level were taken from JENDL-2[1] which were evaluated on the basis of measured data by Popov et al.[2] A negative resonance was added so as to reproduce the capture and elastic scattering cross sections at 0.0253 eV given by Mughabghab et al.[3] Scattering radius of 6.5 fm was adopted.

References:

1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Popov Ju. P., et al.: JINR-P3-11013 (1977).
3) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).

References of Table:

BNL325-4TH:Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

PD-106 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
-54.0	0	0.5	10.0	85.0	GT = 95.0	JENDL-3.2
282.1 281.9 ± 0.3	0	0.5	519.0 A529 ±25	85.0 (177)	GT = 604.0 WGH= 31.5 ± 1.5	JENDL-3.2 BNL325-4TH

46-Pd-107

Abundance	:22.33%
Spin-Parity	:$5/2^+$
Potential Scattering Radius	:6.5 fm
Cross Sections of 2200 m/s for Total	:25.36 b
Elastic	:5.116 b
Capture	:20.25 b
Maxwellian Average Capture Cross Section	:17.93 b
Resonance Integral of Capture	:96.71 b

Resolved resonance region (MLBW formula) : below 1.0 keV. Resonance parameters of JENDL-2[1] were reevaluated as follows:

For JENDL-2, resonance energies were based on the data by Macklin[2]. Neutron widths were taken from experimental data of Singh et al.[3] and Macklin[2]. The average radiation width of 0.125 eV[3] was assumed.

For JENDL-3.1[4], the resonance energies were adopted from JENDL-2. Neutron widths were taken from the measurement of Anufriev et al.[5] or determined from the capture area data measured by Macklin[6] and an averaged radiation width of 131 ± 69 meV. Radiation widths of resonances whose neutron width was measured by Anufriev et al.[5] were determined from the data of the capture area measured by Macklin[6] and the neutron width[5]. Total spin J of some resonances was tentatively estimated with a random number method. Neutron orbital angular momentum ℓ of some resonances was estimated with a method of Bollinger and Thomas[7].

References:

1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Macklin R.L.: Private communication (1984).
3) Singh U.N. et al.: Nucl. Sci. Eng., **67**, 54 (1978).
4) Kawai M. et al.: J. Nucl. Sci. Technol., **29**, 195 (1992).
5) Anufriev V.A. et al.: Proc Fifth All Union Conf on Neutron Physics, Kiev, Sept. 1980, Vol. 2, 159 (1980).
6) Macklin R.L. : Nucl. Sci. Eng., **89**, 79 (1985).
7) Bollinger L.M. and Thomas, G.E.: Phys. Rev., **171**,1293(1968).

References of Table:

80ANUFRIEV+:Anufriev V.A. et al.: Proc Fifth All Union Conf on Neutron Physics, Kiev, Sept. 1980, Vol. 2, 159 (1980).
85MACKLIN:Macklin R.L. : Nucl. Sci. Eng., **89**, 79 (1985).
78SINGH+:Singh U.N. et al.:Nucl. Sci. Eng., **67**, 55(1978).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

PD-107

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
3.92 3.92 3.92	0 0	3.0	1.714-3 0.002± 0.0002	131.0	9.998-4 0.00097±0.00010 0.0010± 0.0001	GT = 131.0	JENDL-3.2 78SINGH+ 85WACKLIN
5.2 5.2 5.20	0 0	3.0	0.01971 0.023± 0.002	131.0	0.0115 0.0113± 0.0010 0.0115± 0.0010	GT = 131.02	JENDL-3.2 78SINGH+ 85WACKLIN
6.834 6.834 6.8 6.834	0 0	2.0	0.0588 0.049± 0.005	131.0	0.02449 0.024± 0.003 0.0245± 0.0025	GT = 131.08	JENDL-3.2 78SINGH+ 80ANUFRIEV+ 85WACKLIN
27.98 28.00 28.2 27.98	0 0	3.0	0.5653 0.58 ± 0.06	131.0	0.3284 0.29 ± 0.03 0.327± 0.009	GT = 131.56 WGO= 0.08 ± 0.03	JENDL-3.2 78SINGH+ 80ANUFRIEV+ 85WACKLIN
41.31 41.33 41.5 41.31	0 0	3.0	13.8 9.82 ± 0.60	31.54	5.8 3.28 ± 0.21 5.8 ± 0.1	GT = 45.34 WGO= 2.5 ± 0.5	JENDL-3.2 78SINGH+ 80ANUFRIEV+ 85WACKLIN
44.43 44.46 44.6 44.43	0 0	2.0	50.4 35.3 ± 1.90	141.6	15.49 8.8 ± 0.4 15.5 ± 0.1	GT = 192.0 WGO= 6.3 ± 0.6	JENDL-3.2 78SINGH+ 80ANUFRIEV+ 85WACKLIN
58.9 58.94 58.90 58.90	0 0	3.0	8.571 7.17 ± 0.74	51.43	4.286 2.9 ± 0.3 4.29 ± 0.02	GT = 60.001 WGO= 1.3 ± 0.4	JENDL-3.2 78SINGH+ 80ANUFRIEV+ 85WACKLIN
73.37 73.43 73.37	0 0	3.0	0.9323 22 ± 3	131.0	0.54 6.85 ± 1.0 0.54 ± 0.01	GT = 131.93	JENDL-3.2 78SINGH+ 85WACKLIN
84.13 84.20 84.2 84.13	0 0	3.0	12.0 13.1 ± 1.30	154.3	6.495 4.9 ± 0.5 6.5 ± 0.1	GT = 166.3 WGO= 1.3 ± 0.5	JENDL-3.2 78SINGH+ 80ANUFRIEV+ 85WACKLIN
88.43 88.48 88.43	0 0	2.0	33.01 26.5 ± 1.80	131.0	10.99 8.1 ± 0.5 11.0 ± 0.1	GT = 164.01	JENDL-3.2 78SINGH+ 85WACKLIN
100.47 100.6 100.47	0 0	2.0	4.283 2.0 ± 0.3	131.0	1.728 1.8 ± 0.3 1.73 ± 0.02	GT = 135.28	JENDL-3.2 78SINGH+ 85WACKLIN
114.79 114.9 114.5 114.79	0 0	3.0	15.43 17 ± 2	140.8	8.111 6.5 ± 0.8 8.11 ± 0.05	GT = 156.03 WGO= 1.4 ± 0.5	JENDL-3.2 78SINGH+ 80ANUFRIEV+ 85WACKLIN
132.0 132.2 132.0	0 0	3.0	3.142 16 ± 2	131.0	1.79 6.4 ± 0.9 1.79 ± 0.02	GT = 134.14	JENDL-3.2 78SINGH+ 85WACKLIN
140.3 140.5 140.3	0 0	3.0	21.35 27 ± 3	131.0	10.71 9.3 ± 1.1 10.7 ± 0.1	GT = 152.35	JENDL-3.2 78SINGH+ 85WACKLIN
152.2 152.4 152.2	0 0	3.0	43.02 36.1 ± 3.60	131.0	18.89 11.8 ± 1.2 18.9 ± 0.1	GT = 174.02	JENDL-3.2 78SINGH+ 85WACKLIN
172.5 172.7 172.5	0 0	3.0	72.8 125 ±20	131.0	27.3 20 ± 4 27.3 ± 0.1	GT = 203.8	JENDL-3.2 78SINGH+ 85WACKLIN
173.9 173.9	0	3.0	5.651	131.0	3.16 3.16 ± 0.04	GT = 136.65	JENDL-3.2 85WACKLIN
181.5 181.5	0	3.0	33.87	131.0	15.7 15.7 ± 0.1	GT = 164.87	JENDL-3.2 85WACKLIN
198.1 198.3 198.1	0 0	2.0	5.949 4 ± 1	131.0	2.371 2.0 ± 0.5 2.37 ± 0.03	GT = 136.95	JENDL-3.2 78SINGH+ 85WACKLIN
211.2 211.5 211.2	0 0	2.0	2.419 2.0 ± 0.5	131.0	0.9896 0.97 ± 0.26 0.99 ± 0.02	GT = 133.42	JENDL-3.2 78SINGH+ 85WACKLIN
223.0 222.9 223.0	0 0	2.0	13.8 10 ± 2	131.0	5.202 5.0 ± 1.0 5.19 ± 0.05	GT = 144.8	JENDL-3.2 78SINGH+ 85WACKLIN
226.5 226.5	0	2.0	75.21	131.0	19.91 19.9 ± 0.1	GT = 206.21	JENDL-3.2 85WACKLIN
232.3 232.6 232.3	0 0	3.0	14.66 18 ± 3	131.0	7.795 7.4 ± 1.3 7.8 ± 0.1	GT = 145.88	JENDL-3.2 78SINGH+ 85WACKLIN
266.9 266.9	0	3.0	8.57	131.0	3.649 3.65 ± 0.05	GT = 137.57	JENDL-3.2 85WACKLIN
271.6 272.0 271.6	0 0	2.0	8.724 8.5 ± 1.5	131.0	3.408 3.3 ± 0.8 3.41 ± 0.06	GT = 139.72	JENDL-3.2 78SINGH+ 85WACKLIN
291.7 292.0 291.7	0 0	2.0	53.31 40 ±10	131.0	15.79 15 ± 4 15.8 ± 0.1	GT = 184.31	JENDL-3.2 78SINGH+ 85WACKLIN

PD-107 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
294.7 294.7	0	3.0	46.45	131.0	20.0 20.0 ± 0.1	GT = 177.45	JENDL-3.2 85MACKLIN
300.7 301.0 300.7	0 0	2.0	18.3 B 15 ± 5	131.0	6.89 7.2 ± 2.4 6.7 ± 0.1	GT = 149.3	JENDL-3.2 78SINGH+ 85MACKLIN
314.4 314.4	0	3.0	16.61	131.0	8.599 8.6 ± 0.1	GT = 147.61	JENDL-3.2 85MACKLIN
325.1 325.5 325.1	0 0	3.0	45.47 B 60 ±10	131.0	19.89 17 ± 3 19.7 ± 0.1	GT = 176.47	JENDL-3.2 78SINGH+ 85MACKLIN
344.0 344.0	0	2.0	24.5	131.0	8.6 8.6 ± 0.2	GT = 155.5	JENDL-3.2 85MACKLIN
356.7 356.7	0	2.0	66.09	131.0	18.3 18.3 ± 0.3	GT = 197.09	JENDL-3.2 85MACKLIN
368.7 369.2 368.7	0 0	3.0	66.75 B 180 ±40	131.0	25.79 30 ± 7 25.8 ± 0.2	GT = 197.75	JENDL-3.2 78SINGH+ 85MACKLIN
375.7 376.3 375.7	0 0	3.0	14.72 B 15 ± 5	131.0	7.719 8 ± 3 7.7 ± 0.1	GT = 145.72	JENDL-3.2 78SINGH+ 85MACKLIN
380.3 380.7 380.3	0 0	3.0	16.2 B 15 ± 5	131.0	8.41 7.3 ± 2.5 8.4 ± 0.1	GT = 147.2	JENDL-3.2 78SINGH+ 85MACKLIN
434.7 434.7	0	3.0	15.54	131.0	8.104 8.1 ± 0.1	GT = 146.54	JENDL-3.2 85MACKLIN
472.0 472.3 472.0	0 0	3.0	49.63 B 60 ±10	131.0	21.0 19 ± 4 21.0 ± 0.1	GT = 180.63	JENDL-3.2 78SINGH+ 85MACKLIN
479.1 479.1	0	3.0	5.025	131.0	2.823 2.8 ± 0.1	GT = 136.02	JENDL-3.2 85MACKLIN
488.6 489.3 488.6	0 0	2.0	40.9 B 40 ±10	131.0	12.99 13 ± 4 13.0 ± 0.1	GT = 171.9	JENDL-3.2 78SINGH+ 85MACKLIN
507.1 507.1	0	3.0	48.04	131.0	20.5 20.5 ± 0.2	GT = 179.04	JENDL-3.2 85MACKLIN
518.4 518.4	0	3.0	256.8	131.0	50.6 50.6 ± 0.3	GT = 387.8	JENDL-3.2 85MACKLIN
520.6 520.6	0	3.0	99.56	131.0	33.0 33.0 ± 0.2	GT = 230.56	JENDL-3.2 85MACKLIN
538.0 538.7 538.0	0 0	3.0	30.98 B 60 ±15	131.0	14.81 19 ± 5 14.8 ± 0.1	GT = 161.98	JENDL-3.2 78SINGH+ 85MACKLIN
558.4 559.1 558.4	0 0	3.0	74.49 B 80 ±20	131.0	27.7 24 ± 7 27.7 ± 0.1	GT = 205.49	JENDL-3.2 78SINGH+ 85MACKLIN
569.2 569.2	0	2.0	111.4	131.0	25.08 25.1 ± 0.3	GT = 242.4	JENDL-3.2 85MACKLIN
586.5 587.2 586.5	0 0	3.0	34.68 B 70 ±18	131.0	15.99 20 ± 8 32.0 ± 0.2	GT = 165.68	JENDL-3.2 78SINGH+ 85MACKLIN
627.2 628.0 627.2	0 0	3.0	85.62 B 160 ±30	131.0	30.2 29 ± 8 30.2 ± 0.1	GT = 216.62	JENDL-3.2 78SINGH+ 85MACKLIN
633.3 633.3	0	3.0	45.47	131.0	19.89 19.7 ± 0.3	GT = 176.47	JENDL-3.2 85MACKLIN
653.7 654.6 653.7	0 0	3.0	111.3 B 170 ±30	131.0	35.1 29 ± 8 35.1 ± 0.2	GT = 242.3	JENDL-3.2 78SINGH+ 85MACKLIN
665.0 665.0	0	3.0	114.3	131.0	35.61 35.6 ± 0.4	GT = 245.3	JENDL-3.2 85MACKLIN
679.3 679.3	0	3.0	111.3	131.0	35.1 35.1 ± 0.2	GT = 242.3	JENDL-3.2 85MACKLIN
701.7 701.7	0	2.0	134.0	131.0	27.6 27.6 ± 0.3	GT = 265.0	JENDL-3.2 85MACKLIN
719.7 719.7	0	2.0	313.6	131.0	38.5 38.5 ± 0.4	GT = 444.6	JENDL-3.2 85MACKLIN
802.4 802.4	0	3.0	73.22	131.0	27.4 27.4 ± 0.3	GT = 204.22	JENDL-3.2 85MACKLIN
813.0 813.0	0	3.0	17.84	131.0	9.159 9.3 ± 0.3	GT = 148.84	JENDL-3.2 85MACKLIN
851.1 851.1	0	3.0	10.96	131.0	5.9 5.9 ± 0.1	GT = 141.96	JENDL-3.2 85MACKLIN
878.2 878.2	0	2.0	4382.0	131.0	52.99 53.0 ± 0.3	GT = 4493.0	JENDL-3.2 85MACKLIN
883.7	0	2.0	7.144	131.0	2.823	GT = 138.14	JENDL-3.2

PD-107 3

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
883.7					2.8 ± 0.1		85MACKLIN
910.6 910.6	0	2.0	59.79	131.0	17.11 17.1 ± 0.2	GT = 190.79	JENDL-3.2 85MACKLIN
917.9 917.9	0	3.0	18.42	131.0	9.42 9.4 ± 0.2	GT = 149.42	JENDL-3.2 85MACKLIN
1010.5 1010.5	0	3.0	45.18	131.0	19.59 19.5 ± 0.3	GT = 176.18	JENDL-3.2 85MACKLIN
1021.1 1021.1	0	3.0	131.7	131.0	38.31 38.3 ± 0.5	GT = 262.7	JENDL-3.2 85MACKLIN
1027.2 1027.2	0	2.0	24.5	131.0	8.8 8.6 ± 0.3	GT = 155.5	JENDL-3.2 85MACKLIN
1079.3 1079.3	0	3.0	16.37	131.0	8.488 8.5 ± 0.6	GT = 147.37	JENDL-3.2 85MACKLIN
1082.0 1082.0	0	3.0	103.3	131.0	33.69 33.7 ± 0.8	GT = 234.3	JENDL-3.2 85MACKLIN
1117.5 1117.5	0	2.0	46.12	131.0	14.21 14.2 ± 0.4	GT = 177.12	JENDL-3.2 85MACKLIN
1145.2 1145.2	0	3.0	90.95	131.0	31.31 31.3 ± 0.3	GT = 221.95	JENDL-3.2 85MACKLIN
1208.5 1208.5	0	2.0	122.8	131.0	26.41 26.4 ± 0.4	GT = 253.8	JENDL-3.2 85MACKLIN
1298.1 1298.1	0	2.0	98.28	131.0	23.4 23.4 ± 0.7	GT = 229.28	JENDL-3.2 85MACKLIN
1332.5 1332.5	0	2.0	34.18	131.0	11.29 11.3 ± 0.3	GT = 165.18	JENDL-3.2 85MACKLIN
1367.8 1367.8	0	3.0	153.2	131.0	41.19 41.2 ± 0.3	GT = 284.2	JENDL-3.2 85MACKLIN
1407.3 1407.3	0	3.0	47.74	131.0	20.41 20.4 ± 0.5	GT = 178.74	JENDL-3.2 85MACKLIN
1428.7 1428.7	0	3.0	81.11	131.0	24.31 24.3 ± 0.3	GT = 192.11	JENDL-3.2 85MACKLIN
1464.2 1464.2	0	3.0	21.1	131.0	10.8 10.8 ± 1.5	GT = 152.1	JENDL-3.2 85MACKLIN
1494.8 1494.8	0	3.0	113.1	131.0	35.41 35.4 ± 0.4	GT = 244.1	JENDL-3.2 85MACKLIN
1502.0 1502.0	0	2.0	176.1	131.0	31.3 31.3 ± 0.4	GT = 307.1	JENDL-3.2 85MACKLIN
1555.2 1555.2	0	2.0	133.0	131.0	27.5 27.5 ± 0.5	GT = 264.0	JENDL-3.2 85MACKLIN
1596.0 1596.0	0	2.0	442.7	131.0	42.12 42.1 ± 0.8	GT = 573.7	JENDL-3.2 85MACKLIN
1616.3 1616.3	0	2.0	69.91	131.0	18.99 19.0 ± 1.5	GT = 200.91	JENDL-3.2 85MACKLIN
1701.0 1701.0	0	3.0	69.18	131.0	26.41 26.4 ± 0.7	GT = 200.18	JENDL-3.2 85MACKLIN
1705.7 1705.7	0	3.0	48.65	131.0	20.69 20.7 ± 1.5	GT = 179.65	JENDL-3.2 85MACKLIN
1718.0 1718.0	0	3.0	25.38	131.0	12.4 12.4 ± 1.6	GT = 156.38	JENDL-3.2 85MACKLIN
1721.3 1721.3	0	3.0	170.5	131.0	43.21 43.2 ± 0.7	GT = 301.5	JENDL-3.2 85MACKLIN
1742.2 1742.2	0	2.0	31.97	131.0	10.71 10.7 ± 1.6	GT = 162.97	JENDL-3.2 85MACKLIN
1806.7 1806.7	0	3.0	632.2	131.0	63.3 63.3 ± 0.9	GT = 763.2	JENDL-3.2 85MACKLIN
1807.2	0	2.0	153.6	150.0	31.62	GT = 303.6	JENDL-3.2
1809.4 1809.4	0	2.0	195.8	131.0	32.7 32.7 ± 0.8	GT = 326.8	JENDL-3.2 85MACKLIN
1826.9 1826.9	0	2.0	2432.0	131.0	51.79 51.8 ± 0.4	GT = 2563.0	JENDL-3.2 85MACKLIN
1853.3 1853.3	0	3.0	140.7	131.0	39.57 39.6 ± 0.8	GT = 271.7	JENDL-3.2 85MACKLIN
1857.3 1857.3	0	3.0	26.74	131.0	12.95 13.1 ± 1.8	GT = 157.74	JENDL-3.2 85MACKLIN
1863.1 1863.1	0	3.0	25.14	131.0	12.3 12.3 ± 1.2	GT = 156.14	JENDL-3.2 85MACKLIN
1885.2	0	2.0	270.1	131.0	36.76	GT = 401.1	JENDL-3.2
1886.2 1886.2	0	2.0	270.1	131.0	36.76 73.5 ± 1.3	GT = 401.1	JENDL-3.2 85MACKLIN
1898.8	0	3.0	644.0	131.0	63.5	GT = 775.0	JENDL-3.2

PD-107

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
1896.8					83.5 ± 0.8		85MACKLIN
1897.3	0	2.0	154.8	150.0	31.74	GT = 304.8	JENDL-3.2
1915.3 1915.3	0	2.0	189.1	131.0	32.25 32.2 ± 0.8	GT = 320.1	JENDL-3.2 85MACKLIN
1921.4 1921.4	0	3.0	52.33	131.0	21.81 21.8 ± 1.4	GT = 183.33	JENDL-3.2 85MACKLIN
2103.0 2103.0	0	3.0	50.98	131.0	21.41 21.4 ± 0.5	GT = 181.98	JENDL-3.2 85MACKLIN
2223.9 2223.9	0	3.0	29.61	131.0	14.09 14.1 ± 0.6	GT = 160.61	JENDL-3.2 85MACKLIN
2266.5 2266.5	0	3.0	135.1	131.0	38.8 38.8 ± 1.0	GT = 266.1	JENDL-3.2 85MACKLIN
2272.0 2272.0	0	3.0	175.2	131.0	43.72 43.7 ± 0.6	GT = 306.2	JENDL-3.2 85MACKLIN
2343.6 2343.6	0	3.0	163.0	131.0	42.37 84.7 ± 2.4	GT = 294.0	JENDL-3.2 85MACKLIN
2344.6	0	2.0	454.6	131.0	42.37	GT = 585.6	JENDL-3.2
2412.9 2412.9	0	3.0	96.93	131.0	32.5 32.5 ± 3.9	GT = 227.93	JENDL-3.2 85MACKLIN
2565.9 2565.9	0	3.0	229.0	131.0	48.61 48.6 ± 0.7	GT = 360.0	JENDL-3.2 85MACKLIN
2694.0 2694.0	0	2.0	5438.0	321.6	126.5 126.5 ± 4.9	GT = 5759.6 GT = 4800 ±300	JENDL-3.2 85MACKLIN
2737.0 2737.0	0	2.0	130.1	131.0	27.2 27.2 ± 4.3	GT = 261.1	JENDL-3.2 85MACKLIN
2743.0 2743.0	0	3.0	140.2	131.0	39.5 39.5 ± 1.4	GT = 271.2	JENDL-3.2 85MACKLIN
2768.0					55.8 ± 5.3		85MACKLIN
2787.0 2787.0	0	3.0	865.7	77.14	41.32 41.4 ± 5.8	GT = 942.84 GT = 1100 ±200	JENDL-3.2 85MACKLIN
2836.0 2836.0	0	3.0	3347.0	81.69	46.52 46.5 ± 3.9	GT = 3428.7 GT = 4000 ±600	JENDL-3.2 85MACKLIN
2879.0 2879.0	0	3.0	1977.0	79.71	44.7 44.7 ± 3.8	GT = 2056.7 GT = 2400 ±300	JENDL-3.2 85MACKLIN
2888.0 2888.0	0	2.0	282.1	131.0	37.27 37.3 ± 2.6	GT = 413.1	JENDL-3.2 85MACKLIN
2902.0 2902.0	0	2.0	1803.0	77.28	30.72 30.7 ± 3.1	GT = 1880.3 GT = 1400 ±200	JENDL-3.2 85MACKLIN
2951.0 2951.0	0	2.0	2996.0	123.6	49.48 49.5 ± 1.7	GT = 3119.6 GT = 2600 ±200	JENDL-3.2 85MACKLIN
2993.0 2993.0	0	3.0	415.6	131.0	58.1 58.1 ± 2.6	GT = 546.6	JENDL-3.2 85MACKLIN
3040.0 3040.0	0	2.0	520.7	131.0	43.61 87.2 ± 3.9	GT = 651.7	JENDL-3.2 85MACKLIN
3041.0	0	3.0	174.1	131.0	43.61	GT = 305.1	JENDL-3.2
3082.0 3082.0	0	3.0	317.7	131.0	54.11 54.1 ± 2.2	GT = 448.7	JENDL-3.2 85MACKLIN
3117.0 3117.0	0	2.0	314.1	131.0	38.52 38.5 ± 2.2	GT = 445.1	JENDL-3.2 85MACKLIN
3141.0 3141.0	0	3.0	4206.0	165.4	92.83 92.8 ± 4.4	GT = 4371.4 GT = 5100 ±500	JENDL-3.2 85MACKLIN
3161.0 3161.0	0	2.0	6486.0	114.0	46.68 46.5 ± 5.1	GT = 6600.0 GT = 5500 ±1000	JENDL-3.2 85MACKLIN
3181.0 3181.0	0	3.0	84.87	131.0	30.04 30.1 ± 3.4	GT = 215.87	JENDL-3.2 85MACKLIN
3255.0 3255.0	0	2.0	48.27	131.0	14.7 14.7 ± 2.0	GT = 179.27	JENDL-3.2 85MACKLIN
3276.0 3276.0	0	2.0	880.1	131.0	47.51 47.5 ± 2.2	GT = 1011.1	JENDL-3.2 85MACKLIN
3293.0 3293.0	0	3.0	104.8	131.0	33.96 34.0 ± 3.7	GT = 235.8	JENDL-3.2 85MACKLIN
3303.0 3303.0	0	3.0	19.72	131.0	9.998 10.0 ± 3.8	GT = 150.72	JENDL-3.2 85MACKLIN
3322.0 3322.0	0	2.0	6282.0	338.4	133.8 133.9 ±10.8	GT = 6600.4 GT = 5500 ±700	JENDL-3.2 85MACKLIN
3330.0 3330.0	0	2.0	130.1	131.0	27.2 27.2 ± 4.7	GT = 261.1	JENDL-3.2 85MACKLIN
3342.0 3342.0	0	2.0	31.58	131.0	10.6 10.6 ± 1.8	GT = 162.58	JENDL-3.2 85MACKLIN
3355.0	0	2.0	5824.0	296.4	117.5	GT = 6120.4	JENDL-3.2

PD-107

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
3355.0					117.7 ± 5.5	GT = 5100 ±400	85MACKLIN
3399.0 3399.0	0	3.0	467.8	131.0	59.7 59.7 ± 3.9	GT = 598.8	JENDL-3.2 85MACKLIN
3430.0 3430.0	0	2.0	1027.0	131.0	48.41 48.4 ± 3.9	GT = 1158.0	JENDL-3.2 85MACKLIN
3443.0 3443.0	0	2.0	3498.0	220.8	86.54 86.9 ± 4.0	GT = 3718.8 GT = 3100 ±200	JENDL-3.2 85MACKLIN
3454.0 3454.0	0	2.0	139.0	131.0	28.1 28.1 ± 3.6	GT = 270.0	JENDL-3.2 85MACKLIN
3466.0 3466.0	0	2.0	9715.0	244.8	99.49 99.6 ±13.3	GT = 9959.8 GT = 8300 ±1400	JENDL-3.2 85MACKLIN
3499.0 3499.0	0	2.0	28.6	131.0	9.781 9.8 ± 2.6	GT = 159.6	JENDL-3.2 85MACKLIN
3510.0 3510.0	0	2.0	3843.0	316.8	121.4 121.5 ± 4.2	GT = 3959.8 GT = 3300 ±200	JENDL-3.2 85MACKLIN

46-Pd-108

Abundance	:26.46%	
Spin-Parity	:0^+	
Potential Scattering Radius		:6.5 fm
Cross Sections of 2200 m/s for Total		:10.42 b
	Elastic	:1.920 b
	Capture	:8.504 b
Maxwellian Average Capture Cross Section		:7.546 b
Resonance Integral of Capture		:252.1 b

Resolved resonance region (MLBW formula) : below 9 keV. Resonance parameters are the same as JENDL-2[1] which were mainly taken from the recommendation by Mughabghab et al.[2] The average radiation width of 0.077 eV[2] was assumed.

References:
1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).

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65COCEVA+:Coceva C. et al.: Phys. Lett., **16**, 159(1965).
BNL325-4TH:Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

PD-108

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2.98 2.96 ± 0.01 2.96 ± 0.01	1 1	1.5 1.5	0.01 A0.00504±0.00005 0.00504±0.00005	92.0 91.8 ± 1.3 90.0 ± 2.0	0.02	GT = 92.01 WGI= 496 ± 5 GNO= 0.00293±0.00003	JENDL-3.2 BNL325-4TH 65COCEVA+
33.1 33.10 ± 0.17 33.24 ± 0.17	0 0	0.5 0.5	120.0 A117 ± 8 109.0 ± 1.0	92.0 91.5 ± 0.6 116.0 ± 3.0	52.08	GT = 212.0 WGH= 20.3 ± 1.4 GNO= 18.9 ± 0.2	JENDL-3.2 BNL325-4TH 65COCEVA+
90.6 90.8 ± 0.2 91.5 ± 0.8	0 0	0.5	200.0 A199 ± 8 215.0 ±30.0	103.0 103 ±21	67.99	GT = 303.0 WGH= 20.9 ± 0.8 GNO= 22.5 ± 3.1	JENDL-3.2 BNL325-4TH 65COCEVA+
112.8 112.8 ± 0.1	0	0.5	2.3 A 2.3 ± 0.3	77.0	2.233	GT = 79.3 WGH= 0.22 ± 0.03	JENDL-3.2 BNL325-4TH
150.0 150.00 ± 0.15	1 1	0.5	0.16 A 0.16 ± 0.02	77.0	0.1597	GT = 77.16 WGI= 44 ± 5	JENDL-3.2 BNL325-4TH
303.2 303.2 ± 0.3	0	0.5	3.91 A 3.91 ± 0.04	77.0	3.721	GT = 80.91 WGH= 0.225± 0.002	JENDL-3.2 BNL325-4TH
411.8 411.8 ± 0.4	0	0.5	0.8 A 0.80 ± 0.04	77.0	0.7916	GT = 77.8 WGH= 0.039± 0.002	JENDL-3.2 BNL325-4TH
427.6 427.8 ± 0.4	0	0.5	400.0 A402.5 ± 4.1	77.0 77.1 ± 3.5	64.57	GT = 477.0 WGH= 19.46 ± 0.20	JENDL-3.2 BNL325-4TH
481.3 481.3 ± 0.5	0	0.5	0.61 A 0.61 ± 0.05	77.0	0.6052	GT = 77.61 WGH= 0.028± 0.002	JENDL-3.2 BNL325-4TH
545.0 545.0 ± 0.8	0	0.5	5.9 A 5.90 ± 0.08	77.0	5.48	GT = 82.9 WGH= 0.253± 0.003	JENDL-3.2 BNL325-4TH
638.2 638.2 ± 0.6	0	0.5	480.0 A482.1 ± 8.4	76.0 78.2 ± 4.0	65.22	GT = 536.0 WGH= 18.32 ± 0.25	JENDL-3.2 BNL325-4TH
643.2 643.2 ± 0.6	0	0.5	2.1 A 2.13 ± 0.07	77.0	2.044	GT = 79.1 WGH= 0.0840± 0.0028	JENDL-3.2 BNL325-4TH
799.4 799.4 ± 0.8	0	0.5	7.2 A 7.17 ± 0.12	77.0	6.584	GT = 84.2 WGH= 0.254± 0.004	JENDL-3.2 BNL325-4TH
845.0 845.0 ± 0.9	1 1	0.5	1.55 A 1.55 ± 0.11	77.0	1.519	GT = 78.55 WGI= 31.7 ± 2.2	JENDL-3.2 BNL325-4TH
906.2 906.20 ± 0.91	0	0.5	580.0 A581.0 ±12	77.0	67.98	GT = 657.0 WGH= 19.3 ± 0.4	JENDL-3.2 BNL325-4TH
956.9 956.90 ± 0.96	0	0.5	1020.0 A1018 ±15	77.0	71.8	GT = 1097.0 WGH= 32.91 ± 0.48	JENDL-3.2 BNL325-4TH
962.4 962.40 ± 0.96	0	0.5	47.1 A 47.1 ± 0.4	77.0	29.22	GT = 124.1 WGH= 1.52 ± 0.01	JENDL-3.2 BNL325-4TH
1085.0 1084.9 ± 1.1	1 1	0.5	11.0 A 11 ± 5	77.0	9.825	GT = 88.0 WGI= 150 ±70	JENDL-3.2 BNL325-4TH
1215.0 1215.0 ± 1.2	0	0.5	420.0 A416 ±13	77.0	65.07	GT = 497.0 WGH= 12.0 ± 0.4	JENDL-3.2 BNL325-4TH
1363.0 1363.3 ± 1.4	1 1	0.5	24.0 A 24 ± 5	77.0	18.3	GT = 101.0 WGI= 240 ±50	JENDL-3.2 BNL325-4TH
1438.0 1437.5 ± 1.4	0	0.5	140.0 A139 ± 7	77.0	49.68	GT = 217.0 WGH= 3.87 ± 0.18	JENDL-3.2 BNL325-4TH
1460.0 1460.0 ± 1.5	0	0.5	5.0 A 5.0 ± 1.5	77.0	4.695	GT = 82.0 WGH= 0.13 ± 0.04	JENDL-3.2 BNL325-4TH
1527.0 1527.3 ± 1.5	0	0.5	0.05 A 2.0 ± 1.7	77.0	0.04997	GT = 77.05 WGH= 0.051± 0.043	JENDL-3.2 BNL325-4TH
1658.0 1657.5 ± 1.7	0	0.5	1580.0 A1558 ±23	78.0 78 ± 6	74.29	GT = 1638.0 WGH= 38.27 ± 0.56	JENDL-3.2 BNL325-4TH
1716.0 1715.8 ± 1.7	0	0.5	77.0 A 76.5 ± 9.0	77.0	38.5	GT = 154.0 WGH= 1.85 ± 0.22	JENDL-3.2 BNL325-4TH
2008.0 2008.4 ± 2.0	0	0.5	10.0 A 10 ± 3	77.0	8.851	GT = 87.0 WGH= 0.22 ± 0.07	JENDL-3.2 BNL325-4TH
2015.0 2015.2 ± 2.0	0	0.5	810.0 A813 ±230	77.0 76.7 ± 5.0	70.32	GT = 887.0 WGH= 18.1 ± 5.1	JENDL-3.2 BNL325-4TH
2125.0 2125.0 ± 2.1	0	0.5	8.0 A 8 ± 3	77.0	7.247	GT = 85.0 WGH= 0.17 ± 0.07	JENDL-3.2 BNL325-4TH
2296.0 2296.0 ± 2.3	1 1	0.5	50.0 A 50 ± 7	77.0	30.31	GT = 127.0 WGI= 230 ±30	JENDL-3.2 BNL325-4TH
2457.0 ± 2.5							BNL325-4TH
2505.0 2504.6 ± 2.5	0	0.5	820.0 A823 ±30	68.0 68.3 ± 5.7	62.79	GT = 888.0 WGH= 16.4 ± 0.6	JENDL-3.2 BNL325-4TH
2530.0 2529.6 ± 2.5	1 1	0.5	40.0 A 40.3 ± 1.7	77.0	26.32	GT = 117.0 WGI= 160 ± 7	JENDL-3.2 BNL325-4TH
2658.0 2658.3 ± 2.7 2658.3	0	0.5	8.5 A 8.5 ± 1.0	13.4	5.201 5.2 ± 0.3 7.8 ± 0.6	GT = 21.9 WGH= 0.15 ± 0.02	JENDL-3.2 BNL325-4TH 79WACKLIN+
2739.0 2739.1 ± 2.7 2739.1	0	0.5	530.0 A527 ±30	75.0	65.7 65.8 ± 1.3 105.0 ± 4.9	GT = 605.0 WGH= 10.1 ± 0.6	JENDL-3.2 BNL325-4TH 79WACKLIN+
2823.0	0	0.5	43.0	340.0	38.17	GT = 383.0	JENDL-3.2

PD-108

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2823.4 ± 2.8 2823.4			A 43.4 ± 8.4		38.2 ± 0.6 54.9 ± 1.3	WGH= 0.817± 0.120	BNL325-4TH 79MACKLIN+
2869.0 2869.4 ± 2.8 2869.4	0	0.5	45.0 A 45.3 ± 8.7	280.0	38.77 38.7 ± 0.7 55.9 ± 1.5	GT = 325.0 WGH= 0.646± 0.125	JENDL-3.2 BNL325-4TH 79MACKLIN+
2913.0 2913.4 ± 2.9 2913.4	0	0.5	37.0 A 37.2 ± 9.3	130.0	28.8 28.8 ± 0.8 40.8 ± 1.2	GT = 167.0 WGH= 0.889± 0.172	JENDL-3.2 BNL325-4TH 79MACKLIN+
3030.0 3029.8 ± 3.0 3029.8	0	0.5	1.3	77.0	1.278 1.3 ± 0.2 2.2 ± 0.4	GT = 78.3	JENDL-3.2 BNL325-4TH 79MACKLIN+
3055.0 3055.2 ± 3.1 3055.2	0	0.5	280.0 A283 ±30	92.0 86 ± 9	69.25 69.1 ± 3.1 111.1 ± 8.7	GT = 372.0 WGH= 5.12 ± 0.54	JENDL-3.2 BNL325-4TH 79MACKLIN+
3130.0 3129.8 ± 3.1 3129.8	0	0.5	98.0 A 98 ±27	90.0	46.91 47 ±31 87.1 ± 1.8	GT = 188.0 WGH= 1.8 ± 0.5	JENDL-3.2 BNL325-4TH 79MACKLIN+
3182.0 3181.8 ± 3.2 3181.8	0	0.5	1200.0 A1207 ±44	79.0	74.12 74.1 ± 1.5 129.9 ± 3.6	GT = 1279.0 WGH= 21.47 ± 0.78	JENDL-3.2 BNL325-4TH 79MACKLIN+
3188.0 3187.6 ± 3.2 3187.6	0	0.5	0.8	77.0	0.7918 0.8 ± 0.2 1.1 ± 0.4	GT = 77.8	JENDL-3.2 BNL325-4TH 79MACKLIN+
3220.0 3220.3 ± 3.2 3220.3	0	0.5	6.0 A 6 ± 5	8.9	3.209 3.2 ± 0.3 4.8 ± 0.5	GT = 12.9 WGH= 0.11 ± 0.09	JENDL-3.2 BNL325-4TH 79MACKLIN+
3283.0 3282.8 ± 3.3 3282.8	0	0.5	120.0 A119 ±32	95.0	53.02 53.0 ± 0.8 78.2 ± 1.7	GT = 215.0 WGH= 2.08 ± 0.56	JENDL-3.2 BNL325-4TH 79MACKLIN+
3290.0 3290.5 ± 3.3 3290.5	0	0.5	220.0 A220 ±32	130.0 109 ±12	81.71 79.8- ± 1.5 128.3 ± 3.5	GT = 350.0 WGH= 3.84 ± 0.56	JENDL-3.2 BNL325-4TH 79MACKLIN+
3546.0 3545.5 ± 3.5 3545.5	0	0.5	33.0 A 33.5 ±11.0	150.0	27.05 27.0 ± 0.6 38.3 ± 1.2	GT = 183.0 WGH= 0.563± 0.185	JENDL-3.2 BNL325-4TH 79MACKLIN+
3613.0 3613.0 ± 3.8 3613.0	0	0.5	1200.0 A1170 ±55	88.0 88 ± 9	81.99 82.2 ± 2.0 127.7 ± 4.6	GT = 1288.0 WGH= 19.46 ± 0.92	JENDL-3.2 BNL325-4TH 79MACKLIN+
3724.0 3724.4 ± 3.7 3724.4	0	0.5	8.5 A 8.5 ± 1.2	13.0	5.14 5.1 ± 0.3 7.8 ± 0.6	GT = 21.5 WGH= 0.14 ± 0.02	JENDL-3.2 BNL325-4TH 79MACKLIN+
3736.0 3735.8 ± 3.7 3735.8	0	0.5	2.3	77.0	2.233 2.2 ± 0.3 3.6 ± 0.6	GT = 79.3	JENDL-3.2 BNL325-4TH 79MACKLIN+
3829.0 3828.5 ± 3.8 3828.5	0	0.5	84.5	77.0	40.29 80.9 ± 8.0 121.7 ± 5.8	GT = 161.5	JENDL-3.2 BNL325-4TH 79MACKLIN+
3830.0	0	0.5	84.5	77.0	40.29	GT = 161.5	JENDL-3.2
3874.0 3874.0 ± 3.9 3874.0	0	0.5	14.1 A 18 ± 4	77.0	11.92 11.9 ± 0.9 19.3 ± 1.7	GT = 91.1 WGH= 0.29 ± 0.06	JENDL-3.2 BNL325-4TH 79MACKLIN+
3999.0 3998.5 ± 4.0 3998.5	0	0.5	79.0	77.0	38.99 76.9 ± 2.5 115.2 ± 4.3	GT = 156.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
4000.0	0	0.5	79.0	77.0	38.99	GT = 156.0	JENDL-3.2
4087.0 4087.3 ± 4.1 4087.3	0	0.5	440.0	77.0	65.53 65.6 ± 1.2 94.4 ± 2.2	GT = 517.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
4170.0 4169.8 ± 4.2 4169.8	0	0.5	3.8	77.0	3.621 3.6 ± 0.4 5.7 ± 0.7	GT = 80.8	JENDL-3.2 BNL325-4TH 79MACKLIN+
4382.0 4381.7 ± 4.4 4381.7	0	0.5	3200.0 A3228 ±99	103.0 127 ± 6	99.79 79.2 ± 1.7 133.9 ± 3.7	GT = 3303.0 WGH= 48.77 ± 1.50	JENDL-3.2 BNL325-4TH 79MACKLIN+
4411.0 4411.1 ± 4.4 4411.1	0	0.5	550.0	77.0	87.54 87.5 ± 1.3 87.5 ± 2.4	GT = 627.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
4463.0 4462.7 ± 4.5 4462.7	0	0.5	23.0	77.0	17.71 17.8 ± 0.9 34.4 ± 2.0	GT = 100.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
4479.0 4479.4 ± 4.5 4479.4	0	0.5	240.0 A235 ±58	87.0 89 ±14	83.85 82.8 ± 1.0 89.5 ± 1.9	GT = 327.0 WGH= 3.51 ± 0.87	JENDL-3.2 BNL325-4TH 79MACKLIN+
4548.0 4548.2 ± 4.5 4548.2	0	0.5	17.0	77.0	13.93 14.2 ± 1.1 25.5 ± 1.7	GT = 94.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
4643.0 4643.5 4643.5	0	0.5	3.9	77.0	3.712 3.7 ± 0.4 5.8 ± 0.6	GT = 80.9	JENDL-3.2 BNL325-4TH 79MACKLIN+

PD-108

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4687.0 4686.7 4686.7	0	0.5	3400.0	77.0	75.28 75.3 * 1.7 117.7 * 3.5	GT = 3477.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4710.0 4709.9 4709.9	0	0.5	190.0	77.0	54.79 109.9 * 2.7 159.0 * 6.0	GT = 267.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4711.0	0	0.5	190.0	77.0	54.79	GT = 267.0	JENDL-3.2
4800.0 4800.4 4800.4	0	0.5	39.0	77.0	25.89 25.8 * 1.8 40.5 * 3.0	GT = 116.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4828.0 4827.7 4827.7	0	0.5	77.0	77.0	38.5 77.1 * 2.2 113.5 * 4.5	GT = 154.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4829.0	0	0.5	77.0	77.0	38.5	GT = 154.0	JENDL-3.2
4985.0 4985.4 4985.4	0	0.5	49.0	77.0	29.94 30.1 * 0.9 42.5 * 1.6	GT = 126.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5035.0 5034.5 5034.5	0	0.5	7.8	77.0	6.917 6.9 * 0.6 10.5 * 1.0	GT = 84.6	JENDL-3.2 BNL325-4TH 79WACKLIN+
5082.0 5081.9 5081.9	0	0.5	87.0	77.0	40.85 81.7 * 2.1 127.4 * 4.3	GT = 164.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5083.0	0	0.5	87.0	77.0	40.85	GT = 164.0	JENDL-3.2
5141.0 5141.1 5141.1	0	0.5	105.0	77.0	44.42 44.5 * 1.2 83.7 * 2.1	GT = 182.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5197.0 5196.6 5196.6	0	0.5	62.0	77.0	34.35 34.2 * 8.7 124.0 * 5.0	GT = 139.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5238.0 5237.5 5237.5	0	0.5	88.0	77.0	41.07 82.0 * 4.6 118.0 * 6.0	GT = 165.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5239.0	0	0.5	88.0	77.0	41.07	GT = 165.0	JENDL-3.2
5393.0 5393.4 5393.4	0	0.5	220.0	77.0	57.04 113.9 * 4.3 175.0 * 8.0	GT = 297.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5394.0	0	0.5	220.0	77.0	57.04	GT = 297.0	JENDL-3.2
5576.0 5576.1 5576.1	0	0.5	92.0	77.0	41.92 83.7 * 2.2 130.0 * 5.0	GT = 169.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5577.0	0	0.5	91.0	77.0	41.71	GT = 168.0	JENDL-3.2
5619.0 5618.5 5618.5	0	0.5	39.0	77.0	25.89 26.1 * 3.3 36.5 * 5.5	GT = 116.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5787.0 5787.3 5787.3	0	0.5	72.0	77.0	37.21 37.2 *19.0 55.3 * 3.4	GT = 149.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5835.0 5835.3 5835.3	0	0.5	82.0	77.0	39.71 79.3 * 3.2 124.0 * 6.0	GT = 159.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5836.0	0	0.5	82.0	77.0	39.71	GT = 159.0	JENDL-3.2
5887.0 5886.8 5886.8	0	0.5	130.0	77.0	48.36 95.8 * 2.3 157.0 * 5.0	GT = 207.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5888.0	0	0.5	130.0	77.0	48.36	GT = 207.0	JENDL-3.2
5910.0 5910.2 5910.2	0	0.5	10.3	77.0	9.085 9.1 * 1.4 14.5 * 2.3	GT = 87.3	JENDL-3.2 BNL325-4TH 79WACKLIN+
5922.0 5921.7 5921.7	0	0.5	1160.0	77.0	72.28 72.3 * 3.5 110.0 * 6.0	GT = 1257.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5980.0 5980.3 5980.3	0	0.5	116.0	77.0	46.28 46.3 * 8.6 168.0 * 9.0	GT = 193.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5982.0 5982.4 5982.4	0	0.5	270.0	77.0	59.91 120.1 * 0.9 67.0	GT = 347.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5983.0	0	0.5	270.0	77.0	59.91	GT = 347.0	JENDL-3.2
6023.0 6023 6023.0	0	0.5	53.0	77.0	31.39 31.3 * 1.4 47.2 * 2.7	GT = 130.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
6080.0 6080 6080.0	0	0.5	6.7	77.0	6.164 6.2 * 0.9 10.5 * 1.6	GT = 83.7	JENDL-3.2 BNL325-4TH 79WACKLIN+
6104.0	0	0.5	96.0	77.0	42.73	GT = 173.0	JENDL-3.2

PD-108 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
6104.4 6104.4					85.4 ± 3.5 126.0 ± 7.0		BNL325-4TH 79MACKLIN+
6105.0	0	0.5	96.0	77.0	42.73	GT = 173.0	JENDL-3.2
6133.0 6133.4 6133.4	0	0.5	49.0	77.0	29.94 29.8 ± 2.0 43.0 ± 3.7	GT = 126.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6263.0 6263.8 6263.8	0	0.5	170.0	77.0	53.0 159.7 ± 4.1 236.0 ± 8.0	GT = 247.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6264.0	0	0.5	170.0	77.0	53.0	GT = 247.0	JENDL-3.2
6265.0	0	0.5	170.0	77.0	53.0	GT = 247.0	JENDL-3.2
6318.0 6317.9 6317.9	0	0.5	620.0	77.0	68.49 88.5 ± 2.0 100.0 ± 4.0	GT = 697.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6482.0 6481.9 6481.9	0	0.5	75.0	77.0	37.99 38 ± 3 57.0 ± 4.7	GT = 152.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6530.0 6530.1 6530.1	0	0.5	33.0	77.0	23.1 23.3 ± 4.0 37.1 ± 6.4	GT = 110.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6589.0 6589 6589.0	0	0.5	5.5	77.0	5.133 5.1 ± 0.8 8.3 ± 1.4	GT = 82.5	JENDL-3.2 BNL325-4TH 79MACKLIN+
6657.0 6657 6657.0	0	0.5	66.0	77.0	35.54 35.8 ± 2.8 55.9 ± 4.6	GT = 143.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6758.0 6757.8 6757.8	0	0.5	160.0	77.0	51.98 52.3 ± 8.0 79.0 ±13.0	GT = 237.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6792.0 6791.8 6791.8	0	0.5	890.0	77.0	70.87 70.9 ± 5.3 105.0 ± 7.0	GT = 967.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6920.0 6920.3 6920.3	0	0.5	190.0	77.0	54.79 54.6 ± 2.7 81.0 ± 9.0	GT = 267.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6974.0 6974.4 6974.4	0	0.5	91.0	77.0	41.71 83.4 ± 4.2 124.0 ± 7.0	GT = 168.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6975.0	0	0.5	91.0	77.0	41.71	GT = 168.0	JENDL-3.2
7162.0 7161.9 7161.9	0	0.5	680.0	77.0	69.17 69.2 ± 2.7 108.0 ± 5.0	GT = 757.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7234.0 7234.4 7234.4	0	0.5	930.0	77.0	71.11 71.1 ± 5.2 105.0 ± 8.0	GT = 1007.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7359.0 7359.4 7359.4	0	0.5	99.0	77.0	43.31 86.7 ± 3.2 130.0 ± 8.0	GT = 176.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7360.0	0	0.5	99.0	77.0	43.31	GT = 176.0	JENDL-3.2
7487.0 7487.4 7487.4	0	0.5	160.0	77.0	51.98 51.9 ± 2.4 86.0 ± 5.0	GT = 237.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7509.0 7509 7509.0	0	0.5	18.0	77.0	14.59 14.67 ± 3.20 207.0 ± 8.0	GT = 95.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7545.0 7545.2 7545.2	0	0.5	13.7	77.0	11.83 11.81 ± 3.70 177.0 ± 9.0	GT = 90.7	JENDL-3.2 BNL325-4TH 79MACKLIN+
7568.0 7567.9 7567.9	0	0.5	21.0	77.0	16.5 16.3 ± 1.3 24.0 ± 2.3	GT = 98.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7599.0 7599.4 7599.4	0	0.5	87.0	77.0	40.85 81.6 ± 4.6 122.0 ± 8.0	GT = 164.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7600.0	0	0.5	87.0	77.0	40.85	GT = 164.0	JENDL-3.2
7635.0 7635.1 7635.1	0	0.5	460.0	77.0	65.96 65.9 ± 3.0 101.0 ±10.0	GT = 537.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7819.0 7819 7819.0	0	0.5	53.0	77.0	31.39 5.0 ± 1.1 11.0 ± 3.0	GT = 130.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7833.0 7832.6 7832.6	0	0.5	52.0	77.0	31.04 31.0 ± 1.5 45.7 ± 2.8	GT = 129.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7890.0 7890.4	0	0.5	15.8	77.0	13.11 13.1 ± 1.2	GT = 92.8	JENDL-3.2 BNL325-4TH
7920.0	0	0.5	4.1	77.0	3.893	GT = 81.1	JENDL-3.2

PD-108 5

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
7920.3 7920.3					3.9 ± 1.1 7.7 ± 1.8		BNL325-4TH 79MACKLIN+
8030.0	0	0.5	540.0	77.0	67.39	GT = 617.0	JENDL-3.2
8031.0 8031 8031.0	0	0.5	540.0	77.0	67.39 202.4 ±23.0 261.0 ±14.0	GT = 617.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8032.0	0	0.5	540.0	77.0	67.39	GT = 617.0	JENDL-3.2
8250.0 8250.1 8250.1	0	0.5	83.0	77.0	34.65 123.7 ± 7.8 188.0 ± 8.0	GT = 140.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8251.0	0	0.5	83.0	77.0	34.65	GT = 140.0	JENDL-3.2
8296.0 8295.8 8295.8	0	0.5	77.0	77.0	38.5 77.1 ± 5.2 113.0 ± 8.0	GT = 154.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8297.0	0	0.5	77.0	77.0	38.5	GT = 154.0	JENDL-3.2
8310.0 8310 8310.0	0	0.5	14.1	77.0	11.92 11.89 ± 4.70 174.0 ± 8.0	GT = 91.1	JENDL-3.2 BNL325-4TH 79MACKLIN+
8418.0 8417.8 8417.8	0	0.5	420.0	77.0	65.07 130.0 ± 4.3 193.0 ±46.0	GT = 497.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8419.0	0	0.5	420.0	77.0	65.07	GT = 497.0	JENDL-3.2
8494.0 8493.7 8493.7	0	0.5	80.0	77.0	33.72 33.7 ± 2.2 48.1 ± 3.4	GT = 137.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8563.0 8562.6 8562.6	0	0.5	42.0	77.0	27.18 27.2 ± 2.3 39.8 ± 3.8	GT = 119.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8604.0 8604.7 8604.7	0	0.5	910.0	77.0	70.99 284.0 ± 8.8 384.0 ±14.0	GT = 987.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8605.0	0	0.5	910.0	77.0	70.99	GT = 987.0	JENDL-3.2
8606.0	0	0.5	910.0	77.0	70.99	GT = 987.0	JENDL-3.2
8607.0	0	0.5	910.0	77.0	70.99	GT = 987.0	JENDL-3.2
8655.0 8654.5 8654.5	0	0.5	19.0	77.0	15.24 15.1 ± 1.8 22.7 ± 2.8	GT = 96.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8813.0 8813.1 8813.1	0	0.5	220.0	77.0	57.04 114.4 ±10.8 165.0 ±14.0	GT = 297.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8814.0	0	0.5	220.0	77.0	57.04	GT = 297.0	JENDL-3.2
8858.0 8858.2 8858.2	0	0.5	5.7	77.0	5.307 5.3 ± 1.7 9.5 ± 2.5	GT = 82.7	JENDL-3.2 BNL325-4TH 79MACKLIN+
8905.0 8905 8905.0	0	0.5	108.0	77.0	44.95 90.0 ± 9.5 129.0 ±11.0	GT = 185.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8906.0	0	0.5	108.0	77.0	44.95	GT = 185.0	JENDL-3.2
8917.0 8916.7 8916.7	0	0.5	130.0	77.0	48.36 97.30 ± 1.25 136.0 ±15.0	GT = 207.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
8918.0	0	0.5	130.0	77.0	48.36	GT = 207.0	JENDL-3.2

46-Pd-110

Abundance	:11.72%
Spin-Parity	:0^+
Potential Scattering Radius	:6.5 fm
Cross Sections of 2200 m/s for Total	:5.224 b
Elastic	:4.995 b
Capture	:0.227 b
Maxwellian Average Capture Cross Section	:0.201 b
Resonance Integral of Capture	:2.813 b

Resolved resonance region (MLBW formula) : below 8 keV. Resonance parameters are the same as JENDL-2[1] which were mainly taken from the recommendation by Mughabghab et al.[2] Average radiation width of 0.06 eV[2] was assumed. A negative resonance was added at -20 eV so as to reproduce the thermal capture cross section given by Mughabghab et al.

References:

1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).

References of Table:

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79MACKLIN+:Macklin R.L. et al.:Nucl. Sci. Eng., **71**, 182(1979).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

PD-110 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-20.0 -0.02	0	0.5	1.3	70.6 (60)	1.276	GT = 71.9 WGH= 0.29	JENDL-3.2 BNL325-4TH
86.33 86.33 ± 0.05	0	0.5	0.48 A 0.48 ± 0.03	60.0	0.4762	GT = 60.48 WGH= 0.052± 0.003	JENDL-3.2 BNL325-4TH
176.9 176.9 ± 0.2	0	0.5	0.24 A 0.24 ± 0.03	60.0	0.239	GT = 60.24 WGH= 0.018± 0.002	JENDL-3.2 BNL325-4TH
263.2 263.2 ± 0.2	0	0.5	5.5 A 5.5 ± 0.3	60.0	5.038	GT = 65.5 WGH= 0.34 ± 0.02	JENDL-3.2 BNL325-4TH
553.7 553.7 ± 0.4	0	0.5	4.7 A 4.7 ± 0.3	60.0	4.359	GT = 64.7 WGH= 0.20 ± 0.01	JENDL-3.2 BNL325-4TH
578.8 578.8 ± 0.4	0	0.5	0.91 A 0.91 ± 0.07	60.0	0.8964	GT = 60.91 WGH= 0.036± 0.003	JENDL-3.2 BNL325-4TH
636.5 636.5 ± 0.5	0	0.5	0.71 A 0.71 ± 0.06	60.0	0.7037	GT = 60.71 WGH= 0.028± 0.002	JENDL-3.2 BNL325-4TH
735.1 735.1 ± 0.6	0	0.5	1.27 A 1.27 ± 0.10	60.0	1.244	GT = 61.27 WGH= 0.0468± 0.0037	JENDL-3.2 BNL325-4TH
857.9 857.9 ± 0.8	0	0.5	28.8 A 28.8 ± 1.5	60.0	19.46	GT = 88.8 WGH= 0.983± 0.051	JENDL-3.2 BNL325-4TH
899.9 899.9 ± 0.8	0	0.5	122.0 A 122.2 ± 3.8	47.0 46.7 ± 4.0	33.93	GT = 169.0 WGH= 4.074± 0.127	JENDL-3.2 BNL325-4TH
954.0 954.0 ± 0.9	0	0.5	6.8 A 6.8 ± 0.5	60.0	6.108	GT = 66.8 WGH= 0.22 ± 0.02	JENDL-3.2 BNL325-4TH
958.0 958.0 ± 0.9	0	0.5	17.5 A 17.5 ± 0.2	60.0	13.55	GT = 77.5 WGH= 0.585± 0.006	JENDL-3.2 BNL325-4TH
1004.0 1004.3 ± 1.0	0	0.5	60.0 A 59.8 ± 9.0	60.0	30.0	GT = 120.0 WGH= 1.88 ± 0.28	JENDL-3.2 BNL325-4TH
1174.0 1174.3 ± 0.8	0	0.5	24.6 A 24.8 ± 2.1	60.0	17.45	GT = 84.6 WGH= 0.718± 0.061	JENDL-3.2 BNL325-4TH
1321.0 1321.4 ± 0.7	0	0.5	19.4 A 19.4 ± 1.5	60.0	14.66	GT = 79.4 WGH= 0.534± 0.041	JENDL-3.2 BNL325-4TH
1429.0 1429.1 ± 0.8	0	0.5	5.4 A 5.4 ± 0.4	60.0	4.954	GT = 65.4 WGH= 0.14 ± 0.01	JENDL-3.2 BNL325-4TH
1605.0 1605.9 ± 1.0	0	0.5	15.4 A 15.4 ± 1.2	60.0	12.25	GT = 75.4 WGH= 0.384± 0.030	JENDL-3.2 BNL325-4TH
1665.0 1664.6 ± 1.1	0	0.5	950.0 A 981 ±24	57.0 57.4 ± 4.0	53.81	GT = 1017.0 WGH= 23.6 ± 0.6	JENDL-3.2 BNL325-4TH
1694.0 1693.6 ± 1.1	0	0.5	23.2 A 23.2 ± 5.7	60.0	16.73	GT = 83.2 WGH= 0.564± 0.139	JENDL-3.2 BNL325-4TH
1789.0 1789.2 ± 1.1	0	0.5	3.0 A 3.0 ± 0.3	60.0	2.857	GT = 63.0 WGH= 0.071± 0.007	JENDL-3.2 BNL325-4TH
1855.0 1854.8 ± 1.2	0	0.5	12.3 A 12.3 ± 1.0	60.0	10.21	GT = 72.3 WGH= 0.286± 0.023	JENDL-3.2 BNL325-4TH
2006.0 2006.4 ± 1.3	0	0.5	15.8 A 15.8 ± 1.3	60.0	12.51	GT = 75.8 WGH= 0.353± 0.029	JENDL-3.2 BNL325-4TH
2074.0 2073.8 ± 1.4	0	0.5	61.0 A 61.4 ± 6.9	60.0	30.25	GT = 121.0 WGH= 1.35 ± 0.15	JENDL-3.2 BNL325-4TH
2238.0 2238.9 ± 1.6	0	0.5	2.8 A 2.8 ± 0.3	60.0	2.875	GT = 62.8 WGH= 0.059± 0.006	JENDL-3.2 BNL325-4TH
2313.0 2312.8 ± 1.8	0	0.5	15.7 A 15.7 ± 1.3	60.0	12.44	GT = 75.7 WGH= 0.326± 0.027	JENDL-3.2 BNL325-4TH
2518.0 2517.8 ± 1.8	0	0.5	160.0 A 156 ±15	60.0 74.9 ±11.0	43.64	GT = 220.0 WGH= 3.11 ± 0.30	JENDL-3.2 BNL325-4TH
2613.0 2613.0 ± 1.8 2613.0	0	0.5	550.0	75.0	66.0 66 ± 3 100.0 ± 4.0	GT = 825.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
2687.0 2686.8 ± 2.0 2686.8	0	0.5	480.0 A 484 ±22	66.0 53.6 ± 3.5	58.02 67.5 ± 1.7 102.0 ± 2.3	GT = 546.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
2803.0 2802.7 ± 2.2 2800.6	0	0.5	14.7 A 14.7 ± 1.3	255.0	13.9 13.9 ± 0.5 19.8 ± 0.8	GT = 269.7 WGH= 0.278± 0.025	JENDL-3.2 BNL325-4TH 79MACKLIN+
2972.0 2972.4 ± 2.3 2972.4	0	0.5	8.3 A 6.2 ± 0.7	60.0	7.291 7.3 ± 0.4 11.0 ± 0.7	GT = 68.3 WGH= 0.11 ± 0.01	JENDL-3.2 BNL325-4TH 79MACKLIN+
3038.0 3037.9 ± 2.4 3035.8	0	0.5	10.0 A 7.8 ± 0.8	60.0	8.571 8.8 ± 0.5 12.9 ± 0.7	GT = 70.0 WGH= 0.14 ± 0.01	JENDL-3.2 BNL325-4TH 79MACKLIN+
3069.0 3069.3 ± 2.8 3067.1	0	0.5	2.3 A 2.8 ± 0.4	60.0	2.215 2.2 ± 0.3 3.9 ± 0.5	GT = 62.3 WGH= 0.051± 0.007	JENDL-3.2 BNL325-4TH 79MACKLIN+
3104.0 3103.5 ± 2.5 3101.2	0	0.5	5.6 A 5.2 ± 0.6	60.0	5.122 5.2 ± 0.4 8.0 ± 0.6	GT = 65.6 WGH= 0.093± 0.011	JENDL-3.2 BNL325-4TH 79MACKLIN+
3190.0	0	0.5	400.0	60.0	52.17	GT = 460.0	JENDL-3.2

PD-110 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
3190.2 ± 2.6 3185.2			A 32 ±15		52.2 ± 1.9 73.1 ± 2.7	WGH- 0.57 ± 0.27	BNL325-4TH 79WACKLIN+
3193.0 3192.7 ± 2.6 3190.4	0	0.5	103.0 A103 ±17	88.0 61.1 ± 7.0	47.46 54.4 ± 1.5 77.2 ± 2.3	GT - 191.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
3320.0 3320.3 ± 2.8 3317.6	0	0.5	7.8 A 6.1 ± 0.7	80.0	8.903 8.9 ± 0.4 10.2 ± 0.7	GT - 87.8 WGH- 0.11 ± 0.01	JENDL-3.2 BNL325-4TH 79WACKLIN+
3434.0 3433.8 ± 2.8 3431.1	0	0.5	310.0 A 58 ±18	75.0	60.39 60.4 ± 3.0 84.5 ± 4.3	GT - 385.0 WGH- 0.99 ± 0.31	JENDL-3.2 BNL325-4TH 79WACKLIN+
3523.0 3523.3 ± 3.6 3520.6	0	0.5	120.0 A119 ±15	74.0 63 ±15	45.77 49.6 ± 8.0 89.0 ± 1.6	GT - 194.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
3780.0 3779.7 ± 0.8 3773.9	0	0.5	800.0 A803 ±43	70.0 57 ± 4	64.37 75.9 ± 1.9 106.7 ± 3.4	GT - 870.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
3820.0 3819.6 ± 0.9 3813.7	0	0.5	150.0 A 57 ±23	80.0	42.86 85.6 ± 1.3 120.8 ± 2.3	GT - 210.0 WGH- 0.92 ± 0.37	JENDL-3.2 BNL325-4TH 79WACKLIN+
3821.0	0	0.5	150.0	80.0	42.86	GT - 210.0	JENDL-3.2
3881.0 3881.0 ± 0.9 3875.0	0	0.5	550.0 A113 ±26	80.0	54.1 108.1 ±19.0 164.6 ± 4.0	GT - 810.0 WGH- 1.81 ± 0.42	JENDL-3.2 BNL325-4TH 79WACKLIN+
3882.0	0	0.5	550.0	80.0	54.1	GT - 810.0	JENDL-3.2
4017.0 4016.9 ± 0.9 4010.6	0	0.5	650.0	80.0	54.93 34.9 ± 0.8 49.3 ± 1.3	GT - 710.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4118.0 4118 ± 1 4111.8	0	0.5	140.0	80.0	42.0 41.8 ± 3.4 57.7 ± 2.3	GT - 200.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4178.0 4177.7 ± 1.0 4172.1	0	0.5	560.0 A564 ±45	82.0	71.53 71.9 ± 1.7 102.2 ± 3.1	GT - 842.0 WGH- 8.73 ± 0.70	JENDL-3.2 BNL325-4TH 79WACKLIN+
4268.0 4268 ± 1 4261.2	0	0.5	190.0	80.0	45.8 45.4 ± 5.8 62.7 ± 2.7	GT - 250.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4272.0 4272.3 ± 1.0 4271.4	0	0.5	55.0	80.0	28.7 28.6 ± 0.9 39.8 ± 1.4	GT - 115.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4356.0 4355.7 ± 0.5 4348.8	0	0.5	2600.0 A2615 ±260	94.0	90.72 90.8 ± 1.7 134.2 ± 2.9	GT - 2694.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4585.0 4584.7 ± 0.6 4577.2	0	0.5	180.0 A183 ±36	830.0	140.0 139.4 ± 7.6 192.2 ± 5.4	GT - 810.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4702.0 4701.9 ± 0.8 4694.2	0	0.5	450.0 A447 ±47	93.0 62.2 ± 6.0	77.07 77.2 ± 1.8 119.3 ± 3.7	GT - 543.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
4736.0 4737.6 ± 0.6 4730.1	0	0.5	84.0 A 84 ±11	290.0	85.13 85.0 ± 1.7 85.5 ± 3.7	GT - 374.0 WGH- 1.2 ± 0.2	JENDL-3.2 BNL325-4TH 79WACKLIN+
4793.0 4792.5 ± 0.6 4784.5	0	0.5	230.0 A231 ±42	320.0	133.8 133.1 ± 2.1 202.2 ± 5.9	GT - 550.0 WGH- 3.34 ± 0.81	JENDL-3.2 BNL325-4TH 79WACKLIN+
4912.0 4911.6 ± 0.8 4905.8	0	0.5	64.0 A 64 ± 9	5.3	4.895 4.9 ± 2.0 8.8 ± 2.1	GT - 69.3 WGH- 0.91 ± 0.13	JENDL-3.2 BNL325-4TH 79WACKLIN+
4919.0 4919.3 ± 0.6 4911.6	0	0.5	84.0 A 84 ± 9	70.0	33.43 33.4 ± 2.0 47.7 ± 2.2	GT - 134.0 WGH- 0.91 ± 0.13	JENDL-3.2 BNL325-4TH 79WACKLIN+
5118.0 5116.2 ± 0.7 5107.5	0	0.5	2200.0 A2200 ±200	83.0 56 ± 5	79.98 79.7 ± 2.0 121.9 ± 3.4	GT - 2283.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5138.0 5136.3 ± 0.7 5127.4	0	0.5	180.0	80.0	45.0 90.4 ± 1.9 132.6 ± 5.0	GT - 240.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5137.0	0	0.5	180.0	80.0	45.0	GT - 240.0	JENDL-3.2
5274.0 5274.0 ± 0.7 5264.9	0	0.5	530.0	75.0	65.7 65.7 ± 1.3 90.0 ± 4.4	GT - 805.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5397.0 5397.0 ± 0.7 5397.0	0	0.5	43.0	80.0	25.05 4 ± 1 6.0 ± 2.0	GT - 103.0	JENDL-3.2 BNL325-4TH 79WACKLIN+
5486.0 5485.6 ± 0.7 5478.6	0	0.5	30.0	470.0 30 ± 4	28.2 28.2 ± 1.0 40.3 ± 2.5	GT - 500.0 WGH- 0.41 ± 0.05	JENDL-3.2 BNL325-4TH 79WACKLIN+
5514.0	0	0.5	3.2	80.0	3.038	GT - 63.2	JENDL-3.2

PD-110 3

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
5514.0 ± 0.7 5514.0					3 ± 1 4.0 ± 2.0		BNL325-4TH 79MACKLIN+
5544.0 5544.1 ± 0.8 5534.1	0	0.5	42.0	460.0 42 ± 6	38.49 38.5 ± 1.2 53.9 ± 3.0	GT = 502.0 WGH= 0.56 ± 0.08	JENDL-3.2 BNL325-4TH 79MACKLIN+
5703.0 5703.1 ± 0.8 5693.9	0	0.5	48.0	80.0 23 ± 3	26.67 26.8 ± 1.5 44.8 ± 2.5	GT = 108.0 WGH= 0.30 ± 0.04	JENDL-3.2 BNL325-4TH 79MACKLIN+
5733.0 5733.0 ± 0.8 5733.0	0	0.5	3.2	60.0	3.038 3 ± 1 5.0 ± 2.0	GT = 63.2	JENDL-3.2 BNL325-4TH 79MACKLIN+
5752.0 5752.0 ± 0.8 5752.0	0	0.5	4.3	60.0	4.012 4 ± 1 6.0 ± 2.0	GT = 64.3	JENDL-3.2 BNL325-4TH 79MACKLIN+
5831.0 5830.5 ± 0.8 5819.8	0	0.5	2400.0 A2418 ±210	150.0	141.2 145.0 ± 3.1 210.0 ± 6.0	GT = 2550.0 WGH= 31.67 ± 2.75	JENDL-3.2 BNL325-4TH 79MACKLIN+
5873.0 5872.7 ± 0.8 5872.7	0	0.5	20.0	60.0	15.0 15.15 ± 7.30 215.0 ± 8.0	GT = 80.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
5905.0 5905 5905.0	0	0.5	15.0	60.0	12.0 12 ± 4 18.0 ± 6.0	GT = 75.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6036.0 6035.8 6035.8	0	0.5	24.0	60.0	17.14 17.2 ± 1.2 26.1 ± 2.3	GT = 84.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6182.0 6181.9 6181.9	0	0.5	1050.0	75.0	70.0 69.8 ± 2.4 88.3 ± 4.8	GT = 1125.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6257.0 6256.9 6256.9	0	0.5	280.0	60.0	49.41 148.0 ± 2.9 200.0 ± 8.0	GT = 340.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6258.0	0	0.5	280.0	60.0	49.41	GT = 340.0	JENDL-3.2
6259.0	0	0.5	280.0	60.0	49.41	GT = 340.0	JENDL-3.2
6382.0 6381.7 6381.7	0	0.5	180.0	60.0	43.64 87.5 ± 2.4 124.0 ± 8.0	GT = 220.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6383.0	0	0.5	180.0	60.0	43.64	GT = 220.0	JENDL-3.2
6414.0 6414 6414.0	0	0.5	84.0	60.0	30.97 5.8 ± 1.4 8.5 ± 2.2	GT = 124.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6428.0 6427.8 6427.8	0	0.5	7.7	60.0	6.824 6.8 ± 1.8 10.0 ± 2.7	GT = 67.7	JENDL-3.2 BNL325-4TH 79MACKLIN+
6449.0 6448.5 6448.5	0	0.5	180.0	60.0	45.0 179.4 ± 3.7 254.0 ± 7.0	GT = 240.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6450.0	0	0.5	180.0	60.0	45.0	GT = 240.0	JENDL-3.2
6451.0	0	0.5	180.0	60.0	45.0	GT = 240.0	JENDL-3.2
6452.0	0	0.5	180.0	60.0	45.0	GT = 240.0	JENDL-3.2
6631.0 6631 6631.0	0	0.5	9.2	60.0	7.977 8 ± 3 12.0 ± 4.0	GT = 69.2	JENDL-3.2 BNL325-4TH 79MACKLIN+
6771.0 6771.1 6771.1	0	0.5	180.0	60.0	43.64 87.4 ± 2.4 120.0 ±16.0	GT = 220.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6772.0	0	0.5	180.0	60.0	43.64	GT = 220.0	JENDL-3.2
6853.0 6852.9 6852.9	0	0.5	980.0	75.0	69.72 69.7 ± 2.0 98.9 ± 4.1	GT = 1065.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6873.0 6873.4 6873.4	0	0.5	230.0	60.0	47.59 238.0 ± 5.1 320.0 ±10.0	GT = 290.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
6874.0	0	0.5	230.0	60.0	47.59	GT = 290.0	JENDL-3.2
6875.0	0	0.5	230.0	60.0	47.59	GT = 290.0	JENDL-3.2
6876.0	0	0.5	230.0	60.0	47.59	GT = 290.0	JENDL-3.2
6877.0	0	0.5	230.0	60.0	47.59	GT = 290.0	JENDL-3.2
7090.0 7089.8 7089.8	0	0.5	140.0	60.0	42.0 125.0 ± 2.5 174.0 ± 5.0	GT = 200.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7091.0	0	0.5	140.0	60.0	42.0	GT = 200.0	JENDL-3.2
7092.0	0	0.5	140.0	60.0	42.0	GT = 200.0	JENDL-3.2
7145.0	0	0.5	88.0	60.0	35.68	GT = 148.0	JENDL-3.2

PD-110 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
7144.9 7144.9					71.3 ± 2.9 97.7 ± 7.9		BNL325-4TH 79MACKLIN+
7146.0	0	0.5	88.0	60.0	35.68	GT = 148.0	JENDL-3.2
7250.0 7249.9 7249.9	0	0.5	2.8	60.0	2.875 2.7 ± 1.0 5.9 ± 1.8	GT = 62.8	JENDL-3.2 BNL325-4TH 79MACKLIN+
7274.0 7274.1 7274.1	0	0.5	9.8	60.0	8.424 8.4 ± 1.1 13.9 ± 2.0	GT = 69.8	JENDL-3.2 BNL325-4TH 79MACKLIN+
7426.0 7425.5 7425.5	0	0.5	180.0	60.0	43.84 87.2 ± 3.1 126.0 ± 8.0	GT = 220.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7427.0	0	0.5	180.0	60.0	43.84	GT = 220.0	JENDL-3.2
7481.0 7481.4 7481.4	0	0.5	130.0	60.0	41.05 82.7 ± 2.6 118.0 ± 5.0	GT = 190.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7482.0	0	0.5	130.0	60.0	41.05	GT = 190.0	JENDL-3.2
7610.0 7609.6 7609.6	0	0.5	390.0	60.0	52.0 52.0 ± 2.2 87.0 ± 5.0	GT = 450.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7622.0 7622.2 7622.2	0	0.5	860.0	60.0	56.09 56.1 ± 2.1 83.0 ± 4.0	GT = 920.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7817.0 7817.3 7817.3	0	0.5	140.0	60.0	42.0 83.4 ± 2.9 113.0 ± 6.0	GT = 200.0	JENDL-3.2 BNL325-4TH 79MACKLIN+
7818.0	0	0.5	140.0	60.0	42.0	GT = 200.0	JENDL-3.2
7983.0 7982.7 7982.7	0	0.5	870.0	60.0	56.13 56.13 ± 1.90 80.0 ± 4.0	GT = 930.0	JENDL-3.2 BNL325-4TH 79MACKLIN+

47-Ag-107

Abundance	:51.839%	
Spin-Parity	:1/2$^-$	
Potential Scattering Radius		:6.78 fm
Cross Sections of 2200 m/s for Total		:46.31 b
	Elastic	:7.688 b
	Capture	:38.62 b
Maxwellian Average Capture Cross Section		:34.17 b
Resonance Integral of Capture		:103.9 b

Resolved resonance parameters (below 7.0095keV) for JENDL-3.1[1] are the same as those of JENDL-2[2], which were made by Nakajima on the basis of experimental data by Moxon and Rae[3], Garg et al.[4], Asghar et al.[5], Muradjan and Adamchuk[6], de Barros et al.[7], Pattenden and Jolly[8], Macklin[9] and Mizumoto et al.[10] There were no new experimental data available since JENDL-2 evaluation. Only total spin J and angular momentum ℓ of some resonances was estimated with a random number method and a method of Bollinger and Thomas[11], respectively.

The capture cross section of JENDL-3.1 between 1.3 and 2.6 keV is too low compared with interpolated values from the lower and higher energy regions. To compensate the lower capture cross section, p-wave resonances with a capture area of 0.04 eV were added every 40 eV between 1.28 and 2.04 keV, and every 15 eV between 2.04 and 2.64 keV. The other data are the same as JENDL-3.1, except for neutron width which was modified so as to reproduce the capture area measured by Macklin[9].

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AG-107

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-11.0	0	1.0	32.78	141.5	19.981	GT = 174.28	JENDL-3.2
16.3	0	0.0	11.8	154.0	2.74	GT = 165.8	JENDL-3.2
16.5	0	0	11.5 ± 0.4	154.0 ± 8.0		GNO- 2.92 ± 0.1	65ASGHAR+
16.5		0	(11.0 ± 0.3)	148.0			68MOXON
41.3	0	1.0	5.4	139.0	3.8985	GT = 144.4	JENDL-3.2
41.4	0	1.0	6.3 ± 0.4	144.4 ±10.3		GNO- 0.96 ± 0.06	65ASGHAR+
41.5		1.0	(5.2 ± 0.4)	133.0			68MOXON
44.8	0	0.0	3.4	148.0	0.83086	GT = 149.4	JENDL-3.2
44.7	0	0	3.8 ± 2.0	148.0 ±11.0		GNO- 0.54 ± 0.3	65ASGHAR+
44.8		0	(3.2 ± 0.3)	144.0			68MOXON
51.4	0	1.0	21.6	135.0	13.966	GT = 155.6	JENDL-3.2
51.3	0	1.0	21.2 ± 0.4	142.0 ± 5.0		GNO- 2.96 ± 0.05	65ASGHAR+
51.4		1.0	(22.8 ± 1.2)	128.0			68MOXON
82.4	0	0.0	0.08	140.0	1.499-2	GT = 140.08	JENDL-3.2
128.0	0	1.0	0.08	140.0	4.498-2	GT = 140.08	JENDL-3.2
139.9							69BARR0+
144.2	0	0.0	20.0	128.0	4.3243	GT = 148.0	JENDL-3.2
144.0		0	(17.0)	128.0			68MOXON
155.0	0	1.0	0.04	140.0	2.999-2	GT = 140.04	JENDL-3.2
162.4	0	0.0	0.5	140.0	0.12456	GT = 140.5	JENDL-3.2
167.1	0	0.0	0.46	140.0	0.11462	GT = 140.46	JENDL-3.2
173.5	0	1.0	3.287	140.0	2.3944	GT = 143.27	JENDL-3.2
173.4		0	(168.0)	172.0			68MOXON
173.4							69BARR0+
173.4		1.0	(56.0)	137.0			68MOXON
183.6	0	1.0	0.1067	140.0	7.996-2	GT = 140.11	JENDL-3.2
202.5	0	1.0	13.2	125.0	8.9544	GT = 138.2	JENDL-3.2
202.0	0	1.0	14.9 ± 1.7	154.0 ±14.7		GNO- 1.05 ± 0.12	65ASGHAR+
202.9		1.0	(16.0)	98.0			68MOXON
218.2	0	0.0	0.38	140.0	8.978-2	GT = 140.38	JENDL-3.2
228.4	0	1.0	1.133	140.0	0.84293	GT = 141.13	JENDL-3.2
251.4	0	1.0	15.0	136.0	10.132	GT = 151.0	JENDL-3.2
251.5	0	1.0	27.5 ± 2.1	182.0 ±14.0		GNO- 1.73 ± 0.13	65ASGHAR+
251.6		0	(84.0)	170.0			68MOXON
251.6		1.0	(28.0)	110.0			68MOXON
259.4	0	0.0	0.54	111.0	0.13435	GT = 111.54	JENDL-3.2
259.0			(4.0)	111.0			68MOXON
264.7	0	1.0	3.133	150.0	2.3017	GT = 153.13	JENDL-3.2
265.0			(5.0)	150.0			68MOXON
270.5	0	1.0	0.08	140.0	5.998-2	GT = 140.08	JENDL-3.2
311.0	0	1.0	113.0	134.0	45.978	GT = 247.0	JENDL-3.2
310.8	0	1.0	113.0 ± 3.0	137.0 ±10.0		GNO- 6.32 ± 0.17	65ASGHAR+
311.6		1.0	(110.0)	127.0			68MOXON
311.15		1.0	A 92.0 ± 6.0	136.0		GT = 260.0 ±60.0	69BARR0+
			122.0 ± 8.0				
329.0	0	1.0	0.22	140.0	0.18474	GT = 140.22	JENDL-3.2
329.0							69BARR0+
347.3	0	0.0	0.74	140.0	0.18403	GT = 140.74	JENDL-3.2
347.35							69BARR0+
356.2	0	0.0	0.74	140.0	0.18403	GT = 140.74	JENDL-3.2
357.0							69BARR0+
361.8	0	1.0	20.0	175.0	13.462	GT = 195.0	JENDL-3.2
362.0	0	1.0	21.0 ± 1.9	175.0 ±24.8		GNO- 1.1 ± 0.19	65ASGHAR+
361.8			A 17.5 ± 0.8				69BARR0+
374.3	0	0.0	0.58	140.0	0.13944	GT = 140.58	JENDL-3.2
374.5							69BARR0+
382.1	0	0.0	0.78	140.0	0.19392	GT = 140.78	JENDL-3.2
382.1							69BARR0+
402.4	0	1.0	0.32	140.0	0.23945	GT = 140.32	JENDL-3.2
402.2							69BARR0+
402.4				(140.0)			83MIZUMOTO+
410.0	0	1.0	0.2133	140.0	0.15973	GT = 140.21	JENDL-3.2
409.8							69BARR0+
410.0				(140.0)			83MIZUMOTO+
444.8	0	0.0	68.0	140.0	11.442	GT = 208.0	JENDL-3.2
444.9			A 17.3 ± 1.7				69BARR0+
444.8			B 34.0 ± 2.8	(140.0)			83MIZUMOTO+
461.5	0	1.0	14.87	140.0	9.9589	GT = 154.87	JENDL-3.2
461.5			A 11.0 ± 0.8				69BARR0+
461.5			B 22.2 ± 1.8	(140.0)			83MIZUMOTO+
466.7	0	1.0	80.0	138.0	37.982	GT = 218.0	JENDL-3.2
468.7		1.0	A 61.0 ± 3.6	138.0		GT = 220.0 ±40.0	69BARR0+
			82.0 ± 4.0				

AG-107

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
466.7			B 137.0 ±11.0	(140.0)			83MIZUMOTO+
472.2 472.2 472.2	0	1.0	18.0 A 14.0 ± 0.7 B 28.7 ± 2.2	140.0 (140.0)	11.982	GT = 158.0	JENDL-3.2 69BARRO+ 83MIZUMOTO+
476.2 476.2	0	0.0	7.0	140.0	1.6667	GT = 147.0	JENDL-3.2 69BARRO+
479.5 479.6 479.5	0	1.0	1.733	140.0 (140.0)	1.2839	GT = 141.73	JENDL-3.2 69BARRO+ 83MIZUMOTO+
511.8				(140.0)			83MIZUMOTO+
513.4 512.4 515.4	0	0.0	155.4 A 12.0 ± 0.9 B 76.0 ± 8.0	140.0 (140.0)	18.412	GT = 295.4	JENDL-3.2 69BARRO+ 83MIZUMOTO+
525.0 525.1 525.0	0	0.0	0.92	140.0 (140.0)	0.2285	GT = 140.92	JENDL-3.2 69BARRO+ 83MIZUMOTO+
531.6 532.0 531.6	0	1.0	0.1067	140.0 (140.0)	7.995-2	GT = 140.11	JENDL-3.2 69BARRO+ 83MIZUMOTO+
554.6 554.5 554.6	0	0.0 0	420.0 A 107.0 ± 8.0 428.0 ±32.0 B 218.0 ±17.0	140.0 (140.0)	28.25	GT = 560.0 GT = 540.0 ±100.0	JENDL-3.2 69BARRO+ 83MIZUMOTO+
563.2				(140.0)			83MIZUMOTO+
578.9 578.9 576.9	0	1.0	28.67 A 22.0 B 39.9 ± 3.2	140.0 (140.0)	17.848	GT = 168.67	JENDL-3.2 69BARRO+ 83MIZUMOTO+
587.7 587.7 587.7	0	0.0 0	198.0 A 51.0 ± 3.0 202.0 ±15.0 B 94.0 ± 8.0	118.0 118.0 (140.0)	18.519	GT = 317.0 GT = 320.0 ±40.0	JENDL-3.2 69BARRO+ 83MIZUMOTO+
593.3				(140.0)			83MIZUMOTO+
608.2 605.1 608.2	0	0.0	12.8 B 8.4 ± 0.7	140.0 (140.0)	2.9319	GT = 152.8	JENDL-3.2 69BARRO+ 83MIZUMOTO+
625.9 623.0 625.9	0	0.0	54.0 A 15.0 ± 1.0 B 26.5 ± 2.2	140.0 (140.0)	9.7423	GT = 194.0	JENDL-3.2 69BARRO+ 83MIZUMOTO+
648.7				(140.0)			83MIZUMOTO+
653.4 653.3 653.4	0	0.0	30.0 A 10.0 ± 1.0 B 15.1 ± 1.3	140.0 (140.0)	6.1765	GT = 170.0	JENDL-3.2 69BARRO+ 83MIZUMOTO+
674.6 674.9 674.6	0	0.0	118.0 A 31.0 ± 2.0 41.0 ± 2.5 B 54.0 ± 4.0	130.0 129.0 (140.0)	15.464	GT = 248.0 GT = 170.0 ±30.0	JENDL-3.2 69BARRO+ 83MIZUMOTO+
696.0 695.9 696.0	0	0.0	44.0 A 10.4 ± 1.0 B 17.7 ± 1.5	140.0 (140.0)	8.3896	GT = 184.0	JENDL-3.2 69BARRO+ 83MIZUMOTO+
703.5 703.0 703.1	0	0.0	13.8	140.0 (140.0)	3.1404	GT = 153.8	JENDL-3.2 69BARRO+ 83MIZUMOTO+
721.5 722.0 722.1	0	1.0	0.7333	140.0 (140.0)	0.54711	GT = 140.73	JENDL-3.2 69BARRO+ 83MIZUMOTO+
737.9				(140.0)			83MIZUMOTO+
745.3				(140.0)			83MIZUMOTO+
752.9 753.0 752.9	0	0.0	142.0 A 50.0 ± 4.0 B 79.5 ± 8.0	140.0 (140.0)	17.624	GT = 282.0	JENDL-3.2 69BARRO+ 83MIZUMOTO+
780.2 780.2	0	1.0	8.333 B 14.4 ± 1.3	140.0 (140.0)	6.5623	GT = 149.33	JENDL-3.2 83MIZUMOTO+
804.2 804.2	0	0.0	9.0 B 6.8 ± 1.0	140.0 (140.0)	2.1141	GT = 149.0	JENDL-3.2 83MIZUMOTO+
813.0 813.2	0	0.0	13.8	140.0 (140.0)	3.099	GT = 153.8	JENDL-3.2 83MIZUMOTO+
844.0 844.0	0	0.0	13.4 B 6.5 ± 1.0	140.0 (140.0)	3.0574	GT = 153.4	JENDL-3.2 83MIZUMOTO+
848.9 848.9	0	1.0	7.333 B 12.4 ± 1.3	140.0 (140.0)	5.226	GT = 147.33	JENDL-3.2 83MIZUMOTO+
872.6 872.6	0	1.0	11.33 B 14.4 ± 1.5	140.0 (140.0)	7.8513	GT = 151.33	JENDL-3.2 83MIZUMOTO+
879.4 879.4	0	0.0	28.0 B 11.5 ± 1.3	140.0 (140.0)	5.8333	GT = 168.0	JENDL-3.2 83MIZUMOTO+
886.7	0	0.0	28.0	140.0	5.8333	GT = 168.0	JENDL-3.2

AG-107 3

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
885.8			' 16.0 ± 1.6	(140.0)			83MIZUMOTO+
909.4 909.4	0	1.0	10.0 ' 15.1 ± 1.6	140.0 (140.0)	7.0	GT = 150.0	JENDL-3.2 83MIZUMOTO+
915.4 915.4	0	1.0	6.4 ' 9.6 ± 1.2	140.0 (140.0)	4.5902	GT = 146.4	JENDL-3.2 83MIZUMOTO+
923.9 923.9	0	0.0	20.0 ' 10.2 ± 1.3	140.0 (140.0)	4.375	GT = 160.0	JENDL-3.2 83MIZUMOTO+
934.1 934.1	0	0.0	600.0 '310.0 ±24.0	140.0 (140.0)	28.378	GT = 740.0	JENDL-3.2 83MIZUMOTO+
945.8 945.8	0	0.0	132.0 ' 75.0 ± 8.0	140.0 (140.0)	16.985	GT = 272.0	JENDL-3.2 83MIZUMOTO+
990.4 990.4	0	0.0	246.0 '123.0 ±10.0	140.0 (140.0)	22.306	GT = 386.0	JENDL-3.2 83MIZUMOTO+
1010.0				(140.0)			83MIZUMOTO+
1017.0 1017.0	0	1.0	11.33 ' 18.4 ± 1.9	140.0 (140.0)	7.8613	GT = 151.33	JENDL-3.2 83MIZUMOTO+
1028.0 1028.0	0	0.0	0.64	140.0 (140.0)	0.15927	GT = 140.64	JENDL-3.2 83MIZUMOTO+
1048.0 1048.0	0	0.0	210.0 '117.0 ± 9.0	140.0 (140.0)	21.0	GT = 350.0	JENDL-3.2 83MIZUMOTO+
1068.0 1068.0	0	1.0	83.33 '145.0 ±11.0	140.0 (140.0)	39.178	GT = 223.33	JENDL-3.2 83MIZUMOTO+
1078.0 1078.0	0	0.0	4.8	140.0 (140.0)	1.1134	GT = 144.8	JENDL-3.2 83MIZUMOTO+
1116.0 1116.0	0	0.0	42.0 ' 21.1 ± 2.3	140.0 (140.0)	8.0759	GT = 182.0	JENDL-3.2 83MIZUMOTO+
1135.0 1135.0	0	0.0	168.0 '103.0 ± 9.0	140.0 (140.0)	19.091	GT = 308.0	JENDL-3.2 83MIZUMOTO+
1149.0 1149.0	0	1.0	22.67 ' 33.8 ± 3.2	140.0 (140.0)	14.633	GT = 162.67	JENDL-3.2 83MIZUMOTO+
1179.0 1179.0	0	1.0	133.3 '210.0 ±16.0	140.0 (140.0)	51.213	GT = 273.3	JENDL-3.2 83MIZUMOTO+
1199.0 1199.0	0	1.0	7.333 ' 7.9 ± 1.8	140.0 (140.0)	5.226	GT = 147.33	JENDL-3.2 83MIZUMOTO+
1206.0 1206.0	0	1.0	20.67 ' 30.9 ± 3.1	140.0 (140.0)	13.508	GT = 160.67	JENDL-3.2 83MIZUMOTO+
1220.0 1220.0	0	1.0	3.533 ' 5.3 ± 1.8	140.0 (140.0)	2.5845	GT = 143.53	JENDL-3.2 83MIZUMOTO+
1228.0 1228.0	0	1.0	8.0 ' 17.8 ± 2.3	140.0 (140.0)	5.8757	GT = 148.0	JENDL-3.2 83MIZUMOTO+
1238.0 1238.0	0	0.0	15.6 ' 7.8 ± 1.9	140.0 (140.0)	3.509	GT = 155.6	JENDL-3.2 83MIZUMOTO+
1250.0	1	0.0	23.3	140.0		GT = 163.3	JENDL-3.2
1270.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
1284.0 1284.0	0	1.0	6.667 ' 13.2 ± 2.2	140.0 (140.0)	4.773	GT = 146.67	JENDL-3.2 83MIZUMOTO+
1290.0 1290.0	0	0.0	28.0 ' 14.0 ± 2.3	140.0 (140.0)	5.8333	GT = 168.0	JENDL-3.2 83MIZUMOTO+
1291.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
1310.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
1330.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1342.0 1342.0	0	1.0	3.867 ' 6.5 ± 2.2	140.0 (140.0)	2.6801	GT = 143.87	JENDL-3.2 83MIZUMOTO+
1346.0 1346.0	0	1.0	5.6 ' 8.4 ± 2.3	140.0 (140.0)	4.0385	GT = 145.6	JENDL-3.2 83MIZUMOTO+
1350.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1353.0 1353.0	0	0.0	10.6 ' 5.3 ± 2.1	140.0 (140.0)	2.4635	GT = 150.6	JENDL-3.2 83MIZUMOTO+
1370.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1373.0 1373.0	0	1.0	20.0 ' 38.0 ± 4.0	140.0 (140.0)	13.125	GT = 180.0	JENDL-3.2 83MIZUMOTO+
1390.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1398.0 1399.0	0	1.0	12.67 ' 20.8 ± 2.9	140.0 (140.0)	8.7139	GT = 152.67	JENDL-3.2 83MIZUMOTO+
1410.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1417.0 1417.0	0	0.0	340.0 '196.0 ±15.0	140.0 (140.0)	24.792	GT = 480.0	JENDL-3.2 83MIZUMOTO+
1430.0	1	0.0	23.3	140.0		GT = 163.3	JENDL-3.2

AG-107

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
1439.0 1439.0	0	0.0	108.0 57.0 ± 5.0	140.0 (140.0)	15.081	GT = 248.0	JENDL-3.2 83MIZUMOTO+
1447.0 1447.0	0	1.0	52.67 82.0 ± 7.0	140.0 (140.0)	28.704	GT = 192.67	JENDL-3.2 83MIZUMOTO+
1450.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
1461.0 1461.0	0	1.0	6.667 10.0 ± 6.0	140.0 (140.0)	4.773	GT = 146.67	JENDL-3.2 83MIZUMOTO+
1470.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
1490.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
1497.0 1497.0	0	1.0	14.67 23.0 ± 5.0	140.0 (140.0)	9.9589	GT = 154.67	JENDL-3.2 83MIZUMOTO+
1510.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1520.0 1520.0	0	0.0	38.0 23.0 ± 8.0	140.0 (140.0)	7.4719	GT = 178.0	JENDL-3.2 83MIZUMOTO+
1530.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1550.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1568.0 1568.0	0	1.0	10.0 15.0 ± 5.0	140.0 (140.0)	7.0	GT = 150.0	JENDL-3.2 83MIZUMOTO+
1570.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1589.0 1589.0	0	1.0	52.0 77.0 ± 9.0	140.0 (140.0)	28.437	GT = 192.0	JENDL-3.2 83MIZUMOTO+
1590.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1628.0 1628.0	0	0.0	260.0 134.0 ±13.0	140.0 (140.0)	22.75	GT = 400.0	JENDL-3.2 83MIZUMOTO+
1630.0	1	0.0	23.3	140.0		GT = 163.3	JENDL-3.2
1643.0 1643.0	0	1.0	133.3 215.0 ±20.0	140.0 (140.0)	51.213	GT = 273.3	JENDL-3.2 83MIZUMOTO+
1670.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
1706.0 1706.0	0	1.0	33.33 44.0 ± 9.0	140.0 (140.0)	20.191	GT = 173.33	JENDL-3.2 83MIZUMOTO+
1710.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
1720.0 1720.0	0	0.0	220.0 94.0 ±11.0	140.0 (140.0)	21.389	GT = 360.0	JENDL-3.2 83MIZUMOTO+
1750.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
1790.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1830.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1834.0 1834.0	0	1.0	68.67 96.0 ±12.0	140.0 (140.0)	34.554	GT = 208.67	JENDL-3.2 83MIZUMOTO+
1854.0 1854.0	0	1.0	44.0 64.0 ±10.0	140.0 (140.0)	25.109	GT = 184.0	JENDL-3.2 83MIZUMOTO+
1870.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1880.0 1880.0	0	0.0	42.0 21.0 ± 8.0	140.0 (140.0)	8.0769	GT = 182.0	JENDL-3.2 83MIZUMOTO+
1906.0 1906.0	0	0.0	660.0 342.0 ±30.0	140.0 (140.0)	28.875	GT = 800.0	JENDL-3.2 83MIZUMOTO+
1910.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1938.0 1938.0	0	0.0	1500.0 780.0 ±60.0	140.0 (140.0)	32.012	GT = 1640.0	JENDL-3.2 83MIZUMOTO+
1950.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
1958.0 1958.0	0	1.0	42.67 70.0 ±11.0	140.0 (140.0)	24.527	GT = 182.67	JENDL-3.2 83MIZUMOTO+
1988.0 1988.0	0	0.0	260.0 108.0 ±13.0	140.0 (140.0)	22.75	GT = 400.0	JENDL-3.2 83MIZUMOTO+
1990.0	1	0.0	23.3	140.0		GT = 163.3	JENDL-3.2
2027.0 2027.0	0	0.0	80.0 27.0 ± 9.0	140.0 (140.0)	10.5	GT = 200.0	JENDL-3.2 83MIZUMOTO+
2030.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
2047.0 2047.0	0	0.0	640.0 324.0 ±30.0	140.0 (140.0)	28.718	GT = 780.0	JENDL-3.2 83MIZUMOTO+
2070.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
2074.0 2074.0	0	0.0	50.0 31.0 ± 9.0	140.0 (140.0)	9.2105	GT = 190.0	JENDL-3.2 83MIZUMOTO+
2098.0 2098.0	0	1.0	26.67 41.0 ±10.0	140.0 (140.0)	16.802	GT = 166.67	JENDL-3.2 83MIZUMOTO+
2105.0	0	1.0	20.0	140.0	13.125	GT = 160.0	JENDL-3.2

AG-107 5

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2105.0			P 29.0 ± 5.0	(140.0)			83MIZUMOTO+
2110.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
2113.0	0	1.0	23.33	140.0	14.998	GT = 163.33	JENDL-3.2
2113.0			P 40.0 ± 5.0	(140.0)			83MIZUMOTO+
2130.0	0	1.0	13.33	140.0	9.1284	GT = 153.33	JENDL-3.2
2130.0			P 20.0 ± 5.0	(140.0)			83MIZUMOTO+
2150.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
2152.0	0	1.0	44.0	140.0	25.109	GT = 184.0	JENDL-3.2
2152.0			P 62.0 ± 8.0	(140.0)			83MIZUMOTO+
2177.0	0	0.0	740.0	140.0	29.432	GT = 880.0	JENDL-3.2
2177.0			P 386.0 ±29.0	(140.0)			83MIZUMOTO+
2190.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
2199.0	0	0.0	24.0	140.0	5.122	GT = 164.0	JENDL-3.2
2199.0			P 16.0 ± 5.0	(140.0)			83MIZUMOTO+
2203.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
2203.0			P 10.0 ± 5.0	(140.0)			83MIZUMOTO+
2254.0	0	0.0	80.0	140.0	12.727	GT = 220.0	JENDL-3.2
2254.0			P 52.0 ± 8.0	(140.0)			83MIZUMOTO+
2270.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
2310.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
2314.0	0	0.0	340.0	140.0	24.792	GT = 480.0	JENDL-3.2
2314.0			P 183.0 ±13.0	(140.0)			83MIZUMOTO+
2350.0	1	0.0	23.3	140.0		GT = 163.3	JENDL-3.2
2390.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
2395.0	0	1.0	553.3	140.0	83.787	GT = 693.3	JENDL-3.2
2395.0			P 880.0 ±60.0	(140.0)			83MIZUMOTO+
2430.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
2434.0	0	0.0	240.0	140.0	22.105	GT = 380.0	JENDL-3.2
2434.0			P 125.0 ±11.0	(140.0)			83MIZUMOTO+
2457.0	0	0.0	48.0	140.0	8.8559	GT = 188.0	JENDL-3.2
2457.0			P 23.0 ± 8.0	(140.0)			83MIZUMOTO+
2469.0	0	0.0	44.0	140.0	8.3696	GT = 184.0	JENDL-3.2
2469.0			P 24.0 ± 8.0	(140.0)			83MIZUMOTO+
2470.0	1	1.0	23.3	140.0		GT = 163.3	JENDL-3.2
2474.0	0	0.0	40.0	140.0	7.7778	GT = 180.0	JENDL-3.2
2474.0			P 20.0 ± 8.0	(140.0)			83MIZUMOTO+
2497.0	0	0.0	144.0	140.0	17.746	GT = 284.0	JENDL-3.2
2497.0			P 72.0 ± 8.0	(140.0)			83MIZUMOTO+
2510.0	0	0.0	240.0	140.0	22.105	GT = 380.0	JENDL-3.2
2510.0			P 122.0 ±11.0	(140.0)			83MIZUMOTO+
2511.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
2526.0	0	1.0	86.67	140.0	40.148	GT = 226.67	JENDL-3.2
2526.0			P 122.0 ±11.0	(140.0)			83MIZUMOTO+
2550.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
2555.0	0	0.0	80.0	140.0	12.727	GT = 220.0	JENDL-3.2
2555.0			P 48.0 ± 7.0	(140.0)			83MIZUMOTO+
2570.0	0	0.0	40.0	140.0	7.7778	GT = 180.0	JENDL-3.2
2570.0			P 21.0 ± 8.0	(140.0)			83MIZUMOTO+
2583.0	0	1.0	8.667	140.0	4.773	GT = 146.67	JENDL-3.2
2583.0			P 10.0 ± 8.0	(140.0)			83MIZUMOTO+
2590.0	1	2.0	23.3	140.0		GT = 163.3	JENDL-3.2
2592.0	0	0.0	18.0	140.0	3.9873	GT = 158.0	JENDL-3.2
2592.0			P 14.0 ± 8.0	(140.0)			83MIZUMOTO+
2611.0	0	1.0	28.67	140.0	17.848	GT = 168.67	JENDL-3.2
2611.0			P 35.0 ± 7.0	(140.0)			83MIZUMOTO+
2633.0	0	1.0	8.667	140.0	6.1213	GT = 148.67	JENDL-3.2
2633.0			P 15.0 ± 8.0	(140.0)			83MIZUMOTO+
2662.0	0	1.0	84.0	140.0	39.375	GT = 224.0	JENDL-3.2
2663.0	(1.0)		(301.5)	119.5 ± 2.3	89.1 ± 0.9		82MACKLIN
2662.0			P 600.0 ±40.0	(140.0)			83MIZUMOTO+
2673.0	1	2.0	2.284	140.0	2.785	GT = 142.28	JENDL-3.2
2673.0	(1.0)				2.8 ± 0.4		82MACKLIN
2680.0	0	1.0	51.33	140.0	28.169	GT = 191.33	JENDL-3.2
2680.0	(1.0)				28.1 ± 0.7		82MACKLIN
2680.0			P 52.0 ± 7.0	(140.0)			83MIZUMOTO+
2688.0	1	1.0	2.052	140.0	1.5168	GT = 142.05	JENDL-3.2
2688.0	(1.0)				1.5 ± 0.3		82MACKLIN
2697.0	0	0.0	21.08	140.0	4.5803	GT = 161.08	JENDL-3.2

AG-107 6

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2699.0 2697.0		(1.0) S 7.0 ± 8.0	(140.0)	4.6 ± 0.4		82MACKLIN 83MIZUMOTO+
2714.0 2715.0 2714.0	0	1.0 (1.0) S 56.0 ± 8.0	413.3 (140.0)	29.008 30.2 ± 0.7	GT = 455.97	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2721.0 2721.0	1	2.0 (1.0)	5.39	140.0	6.4877 6.5 ± 0.6	GT = 145.39	JENDL-3.2 82MACKLIN
2737.0 2737.0	1	2.0 (1.0)	9.487	140.0	11.108 11.1 ± 0.5	GT = 149.49	JENDL-3.2 82MACKLIN
2756.0 2757.0 2756.0	0	0.0 (1.0) S 32.0 ± 7.0	84.0 (140.0)	1680.0	20.0 21.4 ± 0.7	GT = 1764.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2768.0 2769.0 2768.0	0	1.0 (1.0) S 10.0 ± 5.0	8.406 (140.0)	140.0	5.9474 6.1 ± 0.4	GT = 148.41	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2784.0 2785.0 2784.0	0	0.0 (1.0) S 48.0 ± 8.0	110.0 (140.0)	1900.0	25.995 27.2 ± 0.7	GT = 2010.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2813.0 2813.0	1	2.0 (1.0)	1.146	140.0	1.4209 1.4 ± 0.3	GT = 141.15	JENDL-3.2 82MACKLIN
2821.0 2821.0	1	0.0 (1.0)	11.67	140.0	2.693 2.7 ± 0.3	GT = 151.67	JENDL-3.2 82MACKLIN
2835.0 2835.0 2835.0	0	1.0 (1.0) S 227.0 ±18.0	153.3 (140.0)	240.0	70.18 69.2 ± 0.9	GT = 393.3	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2849.0 2849.0 2849.0	0	0.0 (1.0) S 13.0 ± 7.0	79.63 (140.0)	140.0	12.69 12.8 ± 0.6	GT = 219.63	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2873.0 2873.0 2873.0	0	1.0 (1.0) S 91.0 ±10.0	60.67 (140.0)	453.3	40.131 40.1 ± 0.9	GT = 513.97	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2885.0 2885.0	1	2.0 (1.0)	2.378	140.0	2.9229 2.9 ± 0.4	GT = 142.38	JENDL-3.2 82MACKLIN
2905.0 2905.0 2905.0	0	1.0 (1.0) S 72.0 ± 9.0	45.33 (140.0)	206.7	27.883 27.9 ± 0.8	GT = 252.03	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2915.0 2915.0	1	1.0 (1.0)	19.82	140.0	13.022 13.0 ± 0.6	GT = 159.82	JENDL-3.2 82MACKLIN
2929.0 2929.0	1	2.0 (1.0)	3.429	140.0	4.1838 4.2 ± 0.4	GT = 143.43	JENDL-3.2 82MACKLIN
2944.0 2944.0	1	0.0 (1.0)	37.41	140.0	7.3804 7.4 ± 0.5	GT = 177.41	JENDL-3.2 82MACKLIN
2962.0 2962.0 2962.0	0	1.0 (1.0) (229.0) S 458.0 ±33.0	300.0 155.6 ± 4.3 (140.0)	153.3	76.092 77.3 ± 1.1	GT = 453.3	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2983.0 2983.0 2983.0	0	1.0 (1.0) S 19.0 ± 8.0	22.11 (140.0)	140.0	14.321 14.4 ± 0.8	GT = 162.11	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3020.0 3020.0 3020.0	0	1.0 (1.0) S 78.0 ±10.0	53.33 (140.0)	186.7	31.111 31.1 ± 0.9	GT = 240.03	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3033.0 3033.0	1	0.0 (1.0)	17.65	140.0	3.9185 3.9 ± 0.4	GT = 157.65	JENDL-3.2 82MACKLIN
3050.0 3050.0 3050.0	0	0.0 (1.0) S 23.0 ± 8.0	46.0 (140.0)	36.0	5.0488 5.0 ± 0.5	GT = 82.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3062.0 3062.0	1	2.0 (1.0)	4.019	140.0	4.8836 4.9 ± 0.5	GT = 144.02	JENDL-3.2 82MACKLIN
3068.0 3071.0 3068.0	0	1.0 (1.0) S 13.0 ± 8.0	8.667 (140.0)	10.67	3.5858 3.6 ± 0.4	GT = 19.337	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3084.0 3084.0	1	2.0 (1.0)	4.202	140.0	5.0994 5.1 ± 0.5	GT = 144.2	JENDL-3.2 82MACKLIN
3096.0 3096.0	1	1.0 (1.0)	4.848	140.0	3.5143 3.5 ± 0.6	GT = 144.85	JENDL-3.2 82MACKLIN
3103.0 3104.0 3103.0	0	0.0 (1.0) S 148.0 ±14.0	260.0 (140.0)	780.0	48.75 48.2 ± 1.1	GT = 1040.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3118.0 3119.0 3118.0	0	1.0 (1.0) S 28.0 ± 8.0	18.67 (140.0)	80.0	11.353 11.3 ± 0.6	GT = 98.67	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3136.0 3138.0 3136.0	0	0.0 (1.0) S 127.0 ±13.0	260.0 (140.0)	580.0	44.881 44.1 ± 1.1	GT = 840.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3143.0 3143.0	1	2.0 (1.0)	5.089	140.0	6.1148 6.1 ± 0.6	GT = 145.07	JENDL-3.2 82MACKLIN
3150.0	1	2.0	7.232	140.0	8.596	GT = 147.23	JENDL-3.2

AG-107 7

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
3150.0		(1.0)			8.6 ± 0.7		82MACKLIN
3157.0	0	1.0	54.67	206.7	32.426	GT = 261.37	JENDL-3.2
3158.0		(1.0)			32.4 ± 1.1		82MACKLIN
3157.0			82.0 ±10.0	(140.0)			83MIZUMOTO+
3184.0	0	0.0	134.0	720.0	28.244	GT = 854.0	JENDL-3.2
3185.0		(1.0)			28.2 ± 1.1		82MACKLIN
3184.0			57.0 ±10.0	(140.0)			83MIZUMOTO+
3191.0	0	1.0	20.0	513.3	14.437	GT = 533.3	JENDL-3.2
3190.0		(1.0)			14.9 ± 0.8		82MACKLIN
3191.0			31.0 ± 9.0	(140.0)			83MIZUMOTO+
3202.0	0	0.0	540.0	820.0	81.397	GT = 1360.0	JENDL-3.2
3202.0		(1.0)			81.3 ± 1.2		82MACKLIN
3202.0			292.0 ±23.0	(140.0)			83MIZUMOTO+
3221.0	0	1.0	18.0	148.7	10.82	GT = 182.7	JENDL-3.2
3221.0		(1.0)			10.8 ± 0.8		82MACKLIN
3221.0			18.0 ± 9.0	(140.0)			83MIZUMOTO+
3239.0	1	2.0	3.28	140.0	4.0061	GT = 143.28	JENDL-3.2
3239.0		(1.0)			4.0 ± 0.4		82MACKLIN
3252.0	0	1.0	20.67	226.7	14.207	GT = 247.37	JENDL-3.2
3253.0		(1.0)			14.2 ± 1.8		82MACKLIN
3252.0			25.0 ± 9.0	(140.0)			83MIZUMOTO+
3256.0	1	0.0	37.92	140.0	7.4595	GT = 177.92	JENDL-3.2
3256.0		(1.0)			13.5 ± 1.4		82MACKLIN
3269.0	0	1.0	48.0	50.67	18.083	GT = 98.67	JENDL-3.2
3269.0		(1.0)			18.1 ± 1.2		82MACKLIN
3269.0			89.0 ±11.0	(140.0)			83MIZUMOTO+
3276.0	0	1.0	116.0	186.7	53.66	GT = 302.7	JENDL-3.2
3276.0		(1.0)			53.9 ± 1.3		82MACKLIN
3276.0			174.0 ±17.0	(140.0)			83MIZUMOTO+
3288.0	1	2.0	2.53	140.0	3.1064	GT = 142.53	JENDL-3.2
3288.0		(1.0)			3.1 ± 0.4		82MACKLIN
3311.0	0	0.0	80.0	1520.0	19.0	GT = 1600.0	JENDL-3.2
3311.0		(1.0)			19.0 ± 0.8		82MACKLIN
3311.0			31.0 ±10.0	(140.0)			83MIZUMOTO+
3317.0	1	1.0	14.42	140.0	9.8051	GT = 154.42	JENDL-3.2
3317.0		(1.0)			9.8 ± 0.8		82MACKLIN
3328.0	0	1.0	35.33	553.3	24.907	GT = 588.63	JENDL-3.2
3328.0		(1.0)			23.6 ± 0.8		82MACKLIN
3328.0			44.0 ±10.0	(140.0)			83MIZUMOTO+
3337.0	0	0.0	18.69	140.0	4.3155	GT = 159.69	JENDL-3.2
3337.0		(1.0)			4.3 ± 0.4		82MACKLIN
3369.0	0	1.0	186.7	133.3	55.553	GT = 300.0	JENDL-3.2
3369.0		(1.0)	(95.5)	180.5 ±19.4	56.0 ± 1.1		82MACKLIN
3369.0			191.0 ±18.0	(140.0)			83MIZUMOTO+
3385.0	0	0.0	38.38	140.0	7.2191	GT = 178.38	JENDL-3.2
3385.0		(1.0)			7.2 ± 0.5		82MACKLIN
3398.0	0	1.0	4.977	140.0	3.8046	GT = 144.98	JENDL-3.2
3398.0		(1.0)			3.8 ± 0.4		82MACKLIN
3411.0	0	1.0	24.35	140.0	15.557	GT = 164.35	JENDL-3.2
3412.0		(1.0)			22.4 ± 0.8		82MACKLIN
3411.0			27.0 ±10.0	(140.0)			83MIZUMOTO+
3428.0	0	1.0	46.0	120.0	24.94	GT = 166.0	JENDL-3.2
3428.0		(1.0)			24.9 ± 0.8		82MACKLIN
3428.0			68.0 ±12.0	(140.0)			83MIZUMOTO+
3452.0	0	0.0	112.0	140.0	15.556	GT = 252.0	JENDL-3.2
3452.0		(1.0)			24.1 ± 0.8		82MACKLIN
3452.0			20.0 ±10.0	(140.0)			83MIZUMOTO+
3474.0	0	0.0	19.01	140.0	4.1843	GT = 159.01	JENDL-3.2
3474.0		(1.0)			4.2 ± 0.5		82MACKLIN
3485.0	0	1.0	64.62	140.0	33.18	GT = 204.62	JENDL-3.2
3485.0		(1.0)			33.2 ± 1.5		82MACKLIN
3491.0	0	0.0	534.0	580.0	69.506	GT = 1114.0	JENDL-3.2
3491.0		(1.0)			69.7 ± 1.4		82MACKLIN
3491.0			274.0 ±23.0	(140.0)			83MIZUMOTO+
3512.0	0	1.0	22.67	6.667	3.8639	GT = 29.337	JENDL-3.2
3512.0		(1.0)			4.0 ± 0.4		82MACKLIN
3512.0			34.0 ±11.0	(140.0)			83MIZUMOTO+
3526.0	0	0.0	640.0	420.0	63.396	GT = 1060.0	JENDL-3.2
3527.0		(1.0)	(145.0)	152.8 ± 8.7	64.0 ± 1.2		82MACKLIN
3526.0			290.0 ±25.0	(140.0)			83MIZUMOTO+
3543.0	0	0.0	50.0	240.0	10.345	GT = 290.0	JENDL-3.2
3545.0		(1.0)			10.3 ± 0.8		82MACKLIN
3543.0			25.0 ±11.0	(140.0)			83MIZUMOTO+
3548.0	0	0.0	80.0	820.0	13.676	GT = 880.0	JENDL-3.2
3551.0		(1.0)			13.7 ± 0.7		82MACKLIN
3548.0			19.0 ±11.0	(140.0)			83MIZUMOTO+
3567.0	0	0.0	11.23	140.0	2.599	GT = 151.23	JENDL-3.2

AG-107

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
3567.0		(1.0)			2.6 ± 0.3		82MACKLIN
3585.0	0	1.0	23.23	140.0	14.943	GT = 163.23	JENDL-3.2
3585.0		(1.0)			15.0 ± 0.6		82MACKLIN
3595.0	0	1.0	2.988	140.0	2.1798	GT = 142.97	JENDL-3.2
3595.0		(1.0)			2.2 ± 0.3		82MACKLIN
3610.0	0	1.0	14.72	140.0	9.9897	GT = 154.72	JENDL-3.2
3610.0		(1.0)			10.0 ± 0.8		82MACKLIN
3615.0	0	1.0	226.7	46.67	29.027	GT = 273.37	JENDL-3.2
3616.0		(1.0)			28.8 ± 0.9		82MACKLIN
3615.0			P343.0 ±28.0	(140.0)			83MIZUMOTO+
3635.0	0	1.0	8.344	140.0	5.906	GT = 148.34	JENDL-3.2
3635.0		(1.0)			5.9 ± 0.4		82MACKLIN
3649.0	0	1.0	86.67	500.0	55.4	GT = 586.67	JENDL-3.2
3649.0		(1.0)			55.4 ± 1.1		82MACKLIN
3649.0			P130.0 ±18.0	(140.0)			83MIZUMOTO+
3657.0	0	0.0	54.47	140.0	9.8033	GT = 194.47	JENDL-3.2
3657.0		(1.0)			9.8 ± 0.8		82MACKLIN
3670.0	0	0.0	740.0	640.0	85.797	GT = 1380.0	JENDL-3.2
3671.0		(1.0)			85.9 ± 1.1		82MACKLIN
3670.0			P356.0 ±29.0	(140.0)			83MIZUMOTO+
3696.0	0	0.0	500.0	440.0	58.511	GT = 940.0	JENDL-3.2
3696.0		(1.0)	F124.0)	144.8 ±10.4	57.9 ± 1.2		82MACKLIN
3696.0			P248.0 ±23.0	(140.0)			83MIZUMOTO+
3702.0	0	0.0	460.0	144.0	27.417	GT = 604.0	JENDL-3.2
3703.0		(1.0)			27.4 ± 1.3		82MACKLIN
3702.0			P231.0 ±22.0	(140.0)			83MIZUMOTO+
3711.0	0	0.0	100.0	380.0	19.792	GT = 480.0	JENDL-3.2
3712.0		(1.0)			19.8 ± 0.7		82MACKLIN
3711.0			P 37.0 ±13.0	(140.0)			83MIZUMOTO+
3722.0	0	1.0	33.33	36.0	13.317	GT = 71.33	JENDL-3.2
3723.0		(1.0)			13.3 ± 0.6		82MACKLIN
3722.0			P 26.0 ±12.0	(140.0)			83MIZUMOTO+
3737.0	0	0.0	650.0	300.0	51.318	GT = 950.0	JENDL-3.2
3738.0		(1.0)	F141.0)	109.8 ± 5.3	52.0 ± 1.0		82MACKLIN
3737.0			P282.0 ±25.0	(140.0)			83MIZUMOTO+
3759.0	0	1.0	7.019	140.0	5.0129	GT = 147.02	JENDL-3.2
3759.0		(1.0)			5.0 ± 0.4		82MACKLIN
3785.0	0	0.0	148.0	800.0	31.224	GT = 948.0	JENDL-3.2
3786.0		(1.0)			31.2 ± 1.0		82MACKLIN
3785.0			P 74.0 ±15.0	(140.0)			83MIZUMOTO+
3796.0	0	1.0	106.7	333.3	60.819	GT = 440.0	JENDL-3.2
3795.0		(1.0)			60.6 ± 1.3		82MACKLIN
3796.0			P148.0 ±17.0	(140.0)			83MIZUMOTO+
3824.0	0	0.0	192.3	140.0	20.254	GT = 332.3	JENDL-3.2
3824.0		(1.0)			20.3 ± 0.8		82MACKLIN
3838.0	0	1.0	173.3	186.7	67.406	GT = 360.0	JENDL-3.2
3839.0		(1.0)	F128.0)	184.0 ±15.8	68.4 ± 1.3		82MACKLIN
3838.0			P256.0 ±24.0	(140.0)			83MIZUMOTO+
3869.0	0	1.0	30.0	553.3	21.343	GT = 583.3	JENDL-3.2
3869.0		(1.0)			21.3 ± 0.8		82MACKLIN
3869.0			P 40.0 ±15.0	(140.0)			83MIZUMOTO+
3890.0	0	0.0	242.7	140.0	22.196	GT = 382.7	JENDL-3.2
3890.0		(1.0)			22.1 ± 0.9		82MACKLIN
3890.0			P 31.0 ±15.0	(140.0)			83MIZUMOTO+
3901.0	0	0.0	132.0	640.0	27.358	GT = 772.0	JENDL-3.2
3902.0		(1.0)			27.3 ± 0.9		82MACKLIN
3901.0			P 66.0 ±15.0	(140.0)			83MIZUMOTO+
3911.0	0	0.0	35.62	140.0	7.0988	GT = 175.62	JENDL-3.2
3911.0		(1.0)			7.1 ± 0.6		82MACKLIN
3933.0	0	0.0	85.07	140.0	11.106	GT = 205.07	JENDL-3.2
3933.0		(1.0)			11.1 ± 0.6		82MACKLIN
3940.0	0	0.0	24.35	140.0	5.1856	GT = 164.35	JENDL-3.2
3940.0		(1.0)			5.2 ± 0.7		82MACKLIN
3948.0	0	1.0	26.0	140.0	16.448	GT = 166.0	JENDL-3.2
3948.0		(1.0)			16.4 ± 0.8		82MACKLIN
3971.0	0	1.0	17.03	140.0	11.387	GT = 157.03	JENDL-3.2
3971.0		(1.0)			11.4 ± 0.8		82MACKLIN
3992.0	0	0.0	154.0	1700.0	35.302	GT = 1854.0	JENDL-3.2
3993.0		(1.0)			35.3 ± 1.0		82MACKLIN
3992.0			P 77.0 ±18.0	(140.0)			83MIZUMOTO+
4005.0	0	1.0	8.907	140.0	6.2807	GT = 148.91	JENDL-3.2
4005.0		(1.0)			6.3 ± 0.5		82MACKLIN
4025.0	0	0.0	74.0	880.0	16.884	GT = 754.0	JENDL-3.2
4025.0		(1.0)			21.8 ± 0.8		82MACKLIN
4025.0			P 37.0 ±13.0	(140.0)			83MIZUMOTO+
4042.0	0	0.0	188.0	320.0	27.541	GT = 488.0	JENDL-3.2

AG-107

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4043.0 4042.0		(1.0)	$ 84.0 ±14.0	(140.0)	27.4 ± 0.7		82WACKLIN 83MIZUMOTO+
4056.0 4056.0 4056.0	0	0.0 (1.0)	1060.0 (266.5) $ 533.0 ±40.0	440.0 144.6 ± 3.8 (140.0)	77.733 77.1 ± 1.1	GT = 1500.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4079.0 4078.0 4079.0	0	1.0 (1.0)	28.67 $ 43.0 ±13.0	186.7 (140.0)	18.64 18.6 ± 0.6	GT = 215.37	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4091.0 4092.0 4091.0	0	0.0 (1.0)	186.0 $ 93.0 ±15.0	800.0 (140.0)	37.728 37.7 ± 0.8	GT = 986.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4107.0 4107.0 4107.0	0	0.0 (1.0)	120.0 $ 60.0 ±14.0	116.0 (140.0)	14.746 14.7 ± 0.5	GT = 236.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4120.0 4120.0	0	0.0 (1.0)	15.52	140.0	3.6941 3.7 ± 0.3	GT = 156.52	JENDL-3.2 82WACKLIN
4156.0 4157.0 4156.0	0	0.0 (1.0)	320.0 $ 164.0 ±18.0	740.0 (140.0)	55.849 56.7 ± 0.9	GT = 1060.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4167.0 4167.0	1	2.0 (1.0)	5.39	140.0	6.4877 6.5 ± 0.5	GT = 145.39	JENDL-3.2 82WACKLIN
4180.0 4180.0	1	0.0 (1.0)	4.47	140.0	1.0829 1.1 ± 0.3	GT = 144.47	JENDL-3.2 82WACKLIN
4197.0 4197.0	1	0.0 (1.0)	249.7	140.0	22.428 22.5 ± 0.7	GT = 389.7	JENDL-3.2 82WACKLIN
4204.0 4205.0 4204.0	0	1.0 (1.0)	21.33 $ 32.0 ±13.0	160.0 (140.0)	14.118 13.3 ± 0.7	GT = 181.33	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4219.0 4219.0	1	1.0 (1.0)	1.723	140.0	1.2765 1.3 ± 0.8	GT = 141.72	JENDL-3.2 82WACKLIN
4225.0 4226.0 4225.0	0	0.0 (1.0)	130.0 $ 65.0 ±15.0	168.0 (140.0)	18.322 18.3 ± 0.9	GT = 298.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4236.0 4236.0	1	1.0 (1.0)	2.838	140.0	2.0862 2.1 ± 0.6	GT = 142.84	JENDL-3.2 82WACKLIN
4250.0 4250.0	1	1.0 (1.0)	6.129	140.0	4.404 4.4 ± 0.5	GT = 146.13	JENDL-3.2 82WACKLIN
4264.0 4264.0	1	1.0 (1.0)	8.907	140.0	6.2807 6.3 ± 0.6	GT = 148.91	JENDL-3.2 82WACKLIN
4292.0 4292.0	1	0.0 (1.0)	18.1	140.0	4.007 4.0 ± 0.5	GT = 158.1	JENDL-3.2 82WACKLIN
4310.0 4311.0 4310.0	0	1.0 (1.0)	206.7 $ 305.0 ±26.0	246.7 (140.0)	84.351 83.7 ± 1.7	GT = 453.4	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4329.0 4330.0 4329.0	0	0.0 (1.0)	214.0 $ 107.0 ±16.0	480.0 (140.0)	37.003 36.8 ± 1.2	GT = 694.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4339.0 4339.0	1	2.0 (1.0)	17.8	140.0	19.74 19.7 ± 1.1	GT = 157.8	JENDL-3.2 82WACKLIN
4354.0 4355.0 4354.0	0	0.0 (1.0)	1027.0 $ 110.0 ±17.0	140.0 (140.0)	30.801 30.8 ± 1.1	GT = 1167.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4391.0 4393.0 4391.0	0	1.0 (1.0)	86.67 $ 129.0 ±18.0	200.0 (140.0)	45.35 45.0 ± 1.4	GT = 286.67	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4405.0 4404.0 4405.0	0	0.0 (1.0)	160.0 $ 87.0 ±15.0	840.0 (140.0)	33.6 33.6 ± 1.2	GT = 1000.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4423.0 4423.0	1	2.0 (1.0)	11.99	140.0	13.805 13.8 ± 1.2	GT = 151.99	JENDL-3.2 82WACKLIN
4429.0 4429.0 4429.0	0	0.0 (1.0)	660.0 (163.7) $ 327.0 ±28.0	520.0 189.7 ±10.4 (140.0)	72.712 71.6 ± 1.5	GT = 1180.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4445.0 4446.0 4445.0	0	1.0 (1.0)	133.0 $ 75.0 ±18.0	140.0 (140.0)	51.154 53.8 ± 1.0	GT = 273.0	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4462.0 4462.0	1	0.0 (1.0)	26.73	140.0	5.6112 5.6 ± 0.4	GT = 166.73	JENDL-3.2 82WACKLIN
4477.0 4477.0	1	1.0 (1.0)	20.4	140.0	13.354 13.2 ± 0.6	GT = 160.4	JENDL-3.2 82WACKLIN
4492.0 4493.0 4492.0	0	1.0 (1.0)	70.67 $ 106.0 ±17.0	208.7 (140.0)	39.498 39.4 ± 0.9	GT = 277.37	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4509.0 4510.0 4509.0	0	1.0 (1.0)	180.0 $ 269.0 ±30.0	86.67 (140.0)	36.488 36.4 ± 1.5	GT = 246.67	JENDL-3.2 82WACKLIN 83MIZUMOTO+
4517.0	1	2.0	22.47	140.0	24.203	GT = 162.47	JENDL-3.2

AG-107 10

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4517.0		(1.0)			24.1 ± 1.0		82MACKLIN
4532.0 4532.0	1	2.0 (1.0)	12.77	140.0	14.628 14.5 ± 0.6	GT = 152.77	JENDL-3.2 82MACKLIN
4550.0 4551.0 4550.0	0	1.0 (1.0)	148.7 *219.0 ±27.0	220.0 (140.0)	66.009 65.8 ± 1.2	GT = 368.7	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4559.0 4559.0	1	1.0 (1.0)	7.715	140.0	5.484 5.5 ± 0.7	GT = 147.71	JENDL-3.2 82MACKLIN
4573.0 4573.0	1	0.0 (1.0)	280.0	140.0	23.333 23.3 ± 0.7	GT = 420.0	JENDL-3.2 82MACKLIN
4593.0 4593.0	1	0.0 (1.0)	56.77	140.0	10.098 10.1 ± 0.8	GT = 196.77	JENDL-3.2 82MACKLIN
4604.0 4604.0 4604.0	0	0.0 (1.0)	180.0 * 60.0 ±21.0	820.0 (140.0)	31.795 31.8 ± 0.8	GT = 780.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4619.0 4619.0	0	0.0	65.9 * 27.0 ±20.0	140.0 (140.0)	11.317	GT = 206.9	JENDL-3.2 83MIZUMOTO+
4630.0 4630.0	1	2.0 (1.0)	6.442	140.0	7.6983 7.7 ± 1.2	GT = 146.44	JENDL-3.2 82MACKLIN
4637.0 4637.0	1	0.0 (1.0)	631.6	140.0	28.85 28.7 ± 1.2	GT = 771.6	JENDL-3.2 82MACKLIN
4659.0 4659.0	1	2.0 (1.0)	35.0	140.0	35.0 35.1 ± 1.2	GT = 175.0	JENDL-3.2 82MACKLIN
4669.0 4670.0 4669.0	0	1.0 (1.0)	81.33 *122.0 ±24.0	46.87 (140.0)	22.24 22.1 ± 0.9	GT = 128.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4686.0 4686.0	1	1.0 (1.0)	55.57	140.0	29.835 29.9 ± 1.7	GT = 195.57	JENDL-3.2 82MACKLIN
4694.0 4694.0 4694.0	0	1.0 (1.0)	105.3 *158.0 ±25.0	240.0 (140.0)	54.891 55.0 ± 1.6	GT = 345.3	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4707.0 4707.0 4707.0	0	0.0 (1.0)	514.0 *257.0 ±31.0	800.0 (140.0)	78.234 78.1 ± 1.6	GT = 1314.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4717.0 4719.0 4717.0	0	1.0 (1.0)	46.67 * 47.0 ±21.0	186.7 (140.0)	28.003 29.8 ± 1.1	GT = 233.37	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4733.0 4733.0	1	2.0 (1.0)	1.224	140.0	1.5167 1.5 ± 0.8	GT = 141.22	JENDL-3.2 82MACKLIN
4741.0 4740.0 4741.0	0	0.0 (1.0)	90.0 * 45.0 ±21.0	164.0 (140.0)	14.528 14.5 ± 2.1	GT = 254.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4744.0 4744.0	1	0.0 (1.0)	150.8	140.0	18.15 18.1 ± 1.9	GT = 290.8	JENDL-3.2 82MACKLIN
4756.0 4756.0	1	2.0 (1.0)	32.73	140.0	33.16 33.1 ± 1.0	GT = 172.73	JENDL-3.2 82MACKLIN
4768.0 4768.0	1	1.0 (1.0)	49.41	140.0	27.391 27.3 ± 1.6	GT = 189.41	JENDL-3.2 82MACKLIN
4774.0 4774.0 4774.0	0	1.0 (1.0)	73.33 * 92.0 ±24.0	260.0 (140.0)	42.898 42.8 ± 1.5	GT = 333.33	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4788.0 4788.0	1	1.0 (1.0)	55.57	140.0	29.835 29.8 ± 1.3	GT = 195.57	JENDL-3.2 82MACKLIN
4797.0 4798.0 4797.0	0	0.0 (1.0)	280.0 *114.0 ±25.0	920.0 (140.0)	53.667 53.8 ± 1.4	GT = 1200.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4819.0 4819.0	1	1.0 (1.0)	9.841	140.0	6.895 6.9 ± 1.0	GT = 149.84	JENDL-3.2 82MACKLIN
4824.0	0	1.0	10.28	140.0	7.1826	GT = 150.28	JENDL-3.2
4827.0 4827.0	1	1.0 (1.0)	47.59	140.0	26.838 26.8 ± 1.0	GT = 187.59	JENDL-3.2 82MACKLIN
4840.0 4840.0	1	2.0 (1.0)	3.208	140.0	3.9178 3.9 ± 0.5	GT = 143.21	JENDL-3.2 82MACKLIN
4863.0 4863.0 4863.0	0	0.0 (1.0)	740.0 *370.0 ±40.0	820.0 (140.0)	84.338 84.8 ± 1.6	GT = 1360.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4875.0 4877.0 4875.0	0	0.0 (1.0)	220.0 *109.0 ±25.0	400.0 (140.0)	35.484 68.4 ± 1.5	GT = 820.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4908.0 4908.0	1	0.0 (1.0)	55.04	140.0	9.8769 9.8 ± 0.5	GT = 195.04	JENDL-3.2 82MACKLIN
4924.0 4924.0	1	1.0 (1.0)	24.9	140.0	15.855 15.9 ± 0.7	GT = 164.9	JENDL-3.2 82MACKLIN
4934.0	1	2.0	13.66	140.0	15.557	GT = 153.66	JENDL-3.2

AG-107 11

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4934.0		(1.0)			15.6 ± 1.0		82MACKLIN
4941.0	1	0.0	82.98	140.0	13.023	GT = 222.98	JENDL-3.2
4941.0		(1.0)			12.9 ± 1.2		82MACKLIN
4949.0	0	1.0	154.9	140.0	55.153	GT = 294.9	JENDL-3.2
4948.0		(1.0)			56.4 ± 1.4	COM-DOUBLET	82MACKLIN
4949.0			*520.0 ±50.0	(140.0)			83MIZUMOTO+
4968.0	0	0.0	180.0	1180.0	39.044	GT = 1360.0	JENDL-3.2
4968.0		(1.0)			41.0 ± 1.0		82MACKLIN
4968.0			* 63.0 ±24.0	(140.0)			83MIZUMOTO+
4988.0	1	1.0	40.98	140.0	23.776	GT = 180.98	JENDL-3.2
4988.0		(1.0)			23.7 ± 0.8		82MACKLIN
5003.0	0	1.0	228.7	173.3	73.883	GT = 400.0	JENDL-3.2
5003.0		(1.0)	(167.6)	175.4 ±12.3	73.7 ± 1.2		82MACKLIN
5003.0			*335.0 ±33.0	(140.0)			83MIZUMOTO+
5020.0	1	2.0	4.89	140.0	5.9062	GT = 144.89	JENDL-3.2
5020.0		(1.0)			5.9 ± 0.8		82MACKLIN
5030.0	0	0.0	460.0	500.0	59.896	GT = 960.0	JENDL-3.2
5030.0		(1.0)			59.1 ± 1.2		82MACKLIN
5030.0			*225.0 ±28.0	(140.0)			83MIZUMOTO+
5043.0	1	2.0	6.546	140.0	7.817	GT = 146.55	JENDL-3.2
5043.0		(1.0)			7.8 ± 0.7		82MACKLIN
5055.0	0	0.0	1100.0	800.0	97.059	GT = 1700.0	JENDL-3.2
5055.0		(1.0)			95.9 ± 1.5		82MACKLIN
5055.0			*550.0 ±50.0	(140.0)			83MIZUMOTO+
5065.0	1	1.0	13.94	140.0	9.5082	GT = 153.94	JENDL-3.2
5065.0		(1.0)			9.5 ± 0.9		82MACKLIN
5074.0	1	0.0	155.8	140.0	18.424	GT = 295.8	JENDL-3.2
5074.0		(1.0)			18.3 ± 0.8		82MACKLIN
5108.0	1	2.0	15.09	140.0	17.027	GT = 155.09	JENDL-3.2
5108.0		(1.0)			17.0 ± 1.4		82MACKLIN
5118.0	0	0.0	280.0	520.0	48.222	GT = 900.0	JENDL-3.2
5118.0		(1.0)			48.9 ± 1.5		82MACKLIN
5118.0			*143.0 ±24.0	(140.0)			83MIZUMOTO+
5150.0	1	2.0	8.142	140.0	9.8181	GT = 148.14	JENDL-3.2
5150.0		(1.0)			9.8 ± 0.8		82MACKLIN
5161.0	1	0.0	18.55	140.0	4.0949	GT = 158.55	JENDL-3.2
5161.0		(1.0)			4.1 ± 0.7		82MACKLIN
5183.0	1	0.0	572.2	140.0	28.12	GT = 712.2	JENDL-3.2
5183.0		(1.0)			28.1 ± 1.6		82MACKLIN
5191.0	0	0.0	200.0	320.0	30.769	GT = 520.0	JENDL-3.2
5191.0		(1.0)			30.8 ± 1.4		82MACKLIN
5191.0			*101.0 ±24.0	(140.0)			83MIZUMOTO+
5203.0	1	2.0	11.87	140.0	13.678	GT = 151.87	JENDL-3.2
5203.0		(1.0)			13.6 ± 1.0		82MACKLIN
5217.0	0	1.0	126.7	286.7	65.901	GT = 413.4	JENDL-3.2
5218.0		(1.0)			65.1 ± 1.6		82MACKLIN
5217.0			*187.0 ±27.0	(140.0)			83MIZUMOTO+
5229.0	1	1.0	7.904	140.0	5.6112	GT = 147.9	JENDL-3.2
5229.0		(1.0)			5.6 ± 0.7		82MACKLIN
5244.0	0	1.0	73.33	500.0	47.963	GT = 573.33	JENDL-3.2
5245.0		(1.0)			48.0 ± 1.4		82MACKLIN
5244.0			* 87.0 ±23.0	(140.0)			83MIZUMOTO+
5260.0	1	2.0	11.55	140.0	13.348	GT = 151.56	JENDL-3.2
5260.0		(1.0)			13.3 ± 1.1		82MACKLIN
5267.0	0	0.0	1020.0	420.0	74.375	GT = 1440.0	JENDL-3.2
5270.0		(1.0)	(252.6)	142.8 ± 8.6	75.2 ± 1.9		82MACKLIN
5267.0			*510.0 ±40.0	(140.0)			83MIZUMOTO+
5292.0	1	1.0	16.91	140.0	11.316	GT = 156.91	JENDL-3.2
5292.0		(1.0)			11.4 ± 0.8		82MACKLIN
5314.0	1	1.0	10.58	140.0	7.3775	GT = 150.58	JENDL-3.2
5314.0		(1.0)			7.4 ± 0.8		82MACKLIN
5327.0	1	0.0	332.5	140.0	24.63	GT = 472.5	JENDL-3.2
5327.0		(1.0)			24.6 ± 0.9		82MACKLIN
5345.0	0	0.0	186.0	240.0	26.197	GT = 426.0	JENDL-3.2
5344.0		(1.0)			26.3 ± 0.9		82MACKLIN
5345.0			* 93.0 ±25.0	(140.0)			83MIZUMOTO+
5359.0	1	2.0	5.212	140.0	6.2812	GT = 145.21	JENDL-3.2
5359.0		(1.0)			6.3 ± 0.8		82MACKLIN
5370.0	0	1.0	300.0	160.0	78.261	GT = 460.0	JENDL-3.2
5370.0		(1.0)	(223.5)	158.2 ± 7.8	77.5 ± 1.5		82MACKLIN
5370.0			*450.0 ±40.0	(140.0)			83MIZUMOTO+
5392.0	0	0.0	280.0	640.0	48.695	GT = 920.0	JENDL-3.2
5392.0		(1.0)			48.3 ± 1.2		82MACKLIN
5392.0			*138.0 ±27.0	(140.0)			83MIZUMOTO+
5417.0	1	1.0	26.55	140.0	16.738	GT = 166.55	JENDL-3.2

AG-107

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
5417.0		(1.0)			18.8 ± 0.9		82MACKLIN
5428.0	1	2.0	10.95	140.0	12.695	GT = 150.95	JENDL-3.2
5426.0		(1.0)			12.7 ± 1.1		82MACKLIN
5453.0	0	0.0	(240.0	520.0	91.591	GT = 1760.0	JENDL-3.2
5453.0		(1.0)	(311.0)	171.3 ± 5.9	90.9 ± 1.5		82MACKLIN
5453.0			*620.0 ±50.0	(140.0)			83MIZUMOTO+
5474.0	1	0.0	86.36	140.0	13.353	GT = 226.36	JENDL-3.2
5474.0		(1.0)			13.4 ± 0.8		82MACKLIN
5486.0	1	1.0	18.67	140.0	12.355	GT = 158.67	JENDL-3.2
5486.0		(1.0)			12.4 ± 1.1		82MACKLIN
5495.0	1	2.0	13.37	140.0	15.256	GT = 153.37	JENDL-3.2
5495.0		(1.0)			15.1 ± 1.3		82MACKLIN
5502.0	0	1.0	(80.0	173.3	88.22	GT = 353.3	JENDL-3.2
5503.0		(1.0)			88.1 ± 1.7		82MACKLIN
5502.0			*273.0 ±33.0	(140.0)			83MIZUMOTO+
5512.0	0	1.0	80.0	29.33	14.775	GT = 89.33	JENDL-3.2
5513.0		(1.0)			14.8 ± 1.1		82MACKLIN
5512.0			* 89.0 ±26.0	(140.0)			83MIZUMOTO+
5524.0	1	1.0	44.8	140.0	25.455	GT = 184.8	JENDL-3.2
5524.0		(1.0)			25.5 ± 1.0		82MACKLIN
5556.0	1	0.0	198.0	140.0	20.503	GT = 338.0	JENDL-3.2
5556.0		(1.0)			20.4 ± 0.8		82MACKLIN
5572.0	1	1.0	11.08	140.0	7.7008	GT = 151.08	JENDL-3.2
5572.0		(1.0)			7.7 ± 0.8		82MACKLIN
5584.0	1	0.0	175.8	140.0	19.484	GT = 315.8	JENDL-3.2
5584.0		(1.0)			19.4 ± 0.9		82MACKLIN
5598.0	1	2.0	10.63	140.0	12.35	GT = 150.63	JENDL-3.2
5598.0		(1.0)			12.4 ± 1.1		82MACKLIN
5610.0	0	1.0	446.7	153.3	85.599	GT = 600.0	JENDL-3.2
5610.0		(1.0)	(336.5)	150.4 ± 5.1	84.5 ± 1.7		82MACKLIN
5610.0			*670.0 ±60.0	(140.0)			83MIZUMOTO+
5632.0	1	0.0	170.8	140.0	19.224	GT = 310.8	JENDL-3.2
5632.0		(1.0)			19.1 ± 1.1		82MACKLIN
5644.0	0	0.0	460.0	580.0	84.135	GT = 1040.0	JENDL-3.2
5644.0		(1.0)			84.0 ± 1.5		82MACKLIN
5644.0			*230.0 ±33.0	(140.0)			83MIZUMOTO+
5657.0	1	1.0	30.85	140.0	18.96	GT = 170.85	JENDL-3.2
5657.0		(1.0)			19.0 ± 1.0		82MACKLIN
5672.0	0	1.0	65.67	37.33	17.948	GT = 104.0	JENDL-3.2
5669.0		(1.0)			18.0 ± 1.0		82MACKLIN
5672.0			*101.0 ±29.0	(140.0)			83MIZUMOTO+
5680.0	1	0.0	272.1	140.0	23.11	GT = 412.1	JENDL-3.2
5680.0		(1.0)			23.2 ± 1.6		82MACKLIN
5689.0	0	1.0	66.67	106.7	30.774	GT = 173.37	JENDL-3.2
5689.0		(1.0)			30.2 ± 1.4		82MACKLIN
5689.0			* 98.0 ±27.0	(140.0)			83MIZUMOTO+
5701.0	1	2.0	12.17	140.0	13.996	GT = 152.17	JENDL-3.2
5701.0		(1.0)			13.9 ± 1.0		82MACKLIN
5712.0	0	0.0	240.0	1020.0	48.571	GT = 1260.0	JENDL-3.2
5714.0		(1.0)			48.5 ± 1.3		82MACKLIN
5712.0			* 89.0 ±28.0	(140.0)			83MIZUMOTO+
5731.0	0	1.0	226.7	226.7	85.012	GT = 453.4	JENDL-3.2
5731.0		(1.0)			84.8 ± 1.7		82MACKLIN
5731.0			*340.0 ±40.0	(140.0)			83MIZUMOTO+
5749.0	0	0.0	420.0	1600.0	83.188	GT = 2020.0	JENDL-3.2
5750.0		(1.0)			85.9 ± 1.7		82MACKLIN
5749.0			*144.0 ±31.0	(140.0)			83MIZUMOTO+
5782.0	0	1.0	140.0	533.3	83.167	GT = 673.3	JENDL-3.2
5782.0		(1.0)			81.5 ± 1.6		82MACKLIN
5782.0			*205.0 ±33.0	(140.0)			83MIZUMOTO+
5794.0	1	0.0	70.0	140.0	11.667	GT = 210.0	JENDL-3.2
5794.0		(1.0)			11.6 ± 1.0		82MACKLIN
5810.0	1	0.0	26.73	140.0	5.6112	GT = 166.73	JENDL-3.2
5810.0		(1.0)			5.6 ± 0.6		82MACKLIN
5838.0	0	0.0	200.0	600.0	37.5	GT = 800.0	JENDL-3.2
5833.0		(1.0)			37.5 ± 1.2		82MACKLIN
5838.0			* 72.0 ±32.0	(140.0)			83MIZUMOTO+
5844.0	1	2.0	28.0	140.0	29.167	GT = 168.0	JENDL-3.2
5844.0		(1.0)			29.2 ± 1.1		82MACKLIN
5865.0	1	2.0	5.673	140.0	6.8151	GT = 145.67	JENDL-3.2
5865.0		(1.0)			6.8 ± 0.7		82MACKLIN
5879.0	1	0.0	155.6	140.0	18.424	GT = 295.6	JENDL-3.2
5879.0		(1.0)			18.5 ± 1.2		82MACKLIN
5892.0	0	1.0	386.7	133.3	74.347	GT = 520.0	JENDL-3.2
5892.0		(1.0)			74.2 ± 1.6		82MACKLIN

AG-107 13

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
5912.0 5912.0	0	1.0 (1.0)	127.3	140.0	50.005 50.1 ± 1.3	GT = 267.3	JENDL-3.2 82MACKLIN
5933.0 5933.0	1	0.0 (1.0)	93.33	140.0	14.0 13.9 ± 0.8	GT = 233.33	JENDL-3.2 82MACKLIN
5948.0 5948.0	1	2.0 (1.0)	17.28	140.0	19.227 19.1 ± 2.5	GT = 157.28	JENDL-3.2 82MACKLIN
5953.0 5953.0	1	0.0 (1.0)	128.3	140.0	16.737 16.7 ± 2.1	GT = 268.3	JENDL-3.2 82MACKLIN
5974.0 5974.0 5974.0	0	0.0 (1.0)	1260.0 {313.0 } [830.0 ±50.0	480.0 159.9 ± 6.4 (140.0)	86.897 86.7 ± 1.8	GT = 1740.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5996.0 5996.0	1	2.0 (1.0)	8.842	140.0	9.5064 9.4 ± 0.9	GT = 148.84	JENDL-3.2 82MACKLIN
6014.0 6014.0	1	1.0 (1.0)	35.0	140.0	21.0 21.0 ± 1.7	GT = 175.0	JENDL-3.2 82MACKLIN
6026.0 6026.0 6026.0	0	0.0 (1.0)	240.0 [120.0 ±40.0	1780.0 (140.0)	52.871 54.4 ± 1.9	GT = 2020.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6042.0 6042.0 6042.0	0	1.0 (1.0)	240.0 {181.5 } [360.0 ±50.0	180.0 176.7 ±18.2 (140.0)	77.143 77.1 ± 2.6	GT = 420.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6053.0 6054.0 6053.0	0	0.0 (1.0)	1240.0 {311.5 } [620.0 ±60.0	540.0 177.9 ± 9.1 (140.0)	94.045 93.4 ± 2.5	GT = 1780.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6077.0 6076.0 6077.0	0	1.0 (1.0)	98.25 [220.0 ±40.0	140.0 (140.0)	42.778 64.9 ± 2.0	GT = 238.25	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6090.0 6090.0	1	0.0 (1.0)	872.9	140.0	30.162 42.2 ± 2.1	GT = 1012.9	JENDL-3.2 82MACKLIN
6099.0 6099.0	0	1.0 (1.0)	73.68	140.0	36.206 36.5 ± 2.7	GT = 213.68	JENDL-3.2 82MACKLIN
6112.0 6112.0	0	1.0 (1.0)	109.6	140.0	46.106 46.3 ± 1.8	GT = 249.6	JENDL-3.2 82MACKLIN
6128.0 6128.0 6128.0	0	1.0 (1.0)	240.0 [360.0 ±50.0	260.0 (140.0)	93.8 93.3 ± 2.3	GT = 500.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6140.0 6140.0	1	2.0 (1.0)	24.49	140.0	26.055 26.0 ± 1.9	GT = 164.49	JENDL-3.2 82MACKLIN
6164.0 6164.0	1	2.0 (1.0)	8.891	140.0	8.2097 8.2 ± 0.8	GT = 148.89	JENDL-3.2 82MACKLIN
6185.0 6185.0	1	0.0 (1.0)	407.7	140.0	26.053 26.1 ± 1.2	GT = 547.7	JENDL-3.2 82MACKLIN
6206.0 6206.0	1	2.0 (1.0)	30.09	140.0	30.959 31.0 ± 1.3	GT = 170.09	JENDL-3.2 82MACKLIN
6224.0 6224.0 6224.0	0	1.0 (1.0)	120.0 [180.0 ±40.0	200.0 (140.0)	56.25 55.7 ± 1.7	GT = 320.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6242.0 6241.0 6242.0	0	0.0 (1.0)	1520.0 [780.0 ±70.0	680.0 (140.0)	115.05 115.1 ± 2.2	GT = 2180.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6256.0 6256.0 6256.0	0	0.0 (1.0)	240.0 [120.0 ±40.0	200.0 (140.0)	27.273 26.8 ± 1.4	GT = 440.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6271.0 6271.0	1	0.0 (1.0)	181.2	140.0	19.745 19.8 ± 1.0	GT = 321.2	JENDL-3.2 82MACKLIN
6315.0 6314.0 6315.0	0	1.0 (1.0)	146.7 [220.0 ±40.0	186.7 (140.0)	61.613 62.1 ± 2.8	GT = 333.4	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6315.0 6315.0	0	1.0 (1.0)	138.3	140.0	52.179 52.3 ± 2.4	GT = 278.3	JENDL-3.2 82MACKLIN
6334.0 6334.0	1	2.0 (1.0)	20.82	140.0	22.656 22.7 ± 1.8	GT = 160.82	JENDL-3.2 82MACKLIN
6346.0 6347.0 6346.0	0	0.0 (1.0)	380.0 [190.0 ±40.0	540.0 (140.0)	55.781 56.5 ± 1.9	GT = 920.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6374.0 6374.0 6374.0	0	1.0 (1.0)	153.3 [230.0 ±40.0	166.7 (140.0)	59.895 59.2 ± 2.1	GT = 320.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6385.0 6387.0 6385.0	0	0.0 (1.0)	780.0 [390.0 ±50.0	220.0 (140.0)	42.9 43.8 ± 1.9	GT = 1000.0 COM=DOUBLET	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6418.0 6418.0	1	2.0 (1.0)	11.56	140.0	13.348 13.5 ± 1.1	GT = 151.56	JENDL-3.2 82MACKLIN
6435.0 6435.0	1	0.0 (1.0)	21.54	140.0	4.667 4.7 ± 0.9	GT = 161.54	JENDL-3.2 82MACKLIN
6448.0	1	2.0	7.368	140.0	8.7495	GT = 147.37	JENDL-3.2

AG-107 14

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	RMS (MILLI-EV)	MISCELLANEOUS	REFERENCE
6448.0		(1.0)			8.7 ± 1.0		82MACKLIN
6451.0 6461.0	1	1.0 (1.0)	2.968	140.0	2.1798 2.2 ± 1.2	GT = 142.97	JENDL-3.2 82MACKLIN
6473.0 6473.0	1	0.0 (1.0)	459.6	140.0	26.826 26.9 ± 2.8	GT = 599.6	JENDL-3.2 82MACKLIN
6481.0 6481.0 6481.0	0	1.0 (1.0) P	186.7 280.0 ±50.0	180.0 (140.0)	64.821 64.8 ± 2.9	GT = 346.7	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6499.0 6499.0	1	0.0 (1.0)	2987.0	140.0	33.433 33.4 ± 1.8	GT = 3127.0	JENDL-3.2 82MACKLIN
6518.0 6512.0 6518.0	0	1.0 (1.0) P	353.3 530.0 ±60.0	106.7 (140.0)	61.463 60.0 ± 2.1	GT = 460.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6525.0 6525.0	0	1.0 (1.0)	182.0	140.0	59.348 59.3 ± 2.2	GT = 322.0	JENDL-3.2 82MACKLIN
6536.0 6536.0	1	2.0 (1.0)	16.74	140.0	18.69 18.5 ± 1.8	GT = 156.74	JENDL-3.2 82MACKLIN
6562.0 6562.0	1	2.0 (1.0)	6.891	140.0	8.2097 8.2 ± 1.8	GT = 146.89	JENDL-3.2 82MACKLIN
6574.0 6575.0 6574.0	0	0.0 (1.0) P	260.0 130.0 ±40.0	400.0 (140.0)	39.394 74.4 ± 2.8	GT = 660.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6600.0 6600.0	1	1.0 (1.0)	35.51	140.0	21.244 21.3 ± 1.5	GT = 175.51 COM-DOUBLET	JENDL-3.2 82MACKLIN
6624.0 6625.0 6624.0	0	1.0 (1.0) P	126.7 190.0 ±50.0	286.7 (140.0)	65.901 64.9 ± 2.4	GT = 413.4 COM-DOUBLET	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6648.0 6648.0	0	1.0 (1.0)	84.0	140.0	39.375 38.8 ± 2.0	GT = 224.0	JENDL-3.2 82MACKLIN
6667.0 6667.0	1	2.0 (1.0)	29.34	140.0	30.321 30.4 ± 1.9	GT = 169.34	JENDL-3.2 82MACKLIN
6682.0 6682.0	1	1.0 (1.0)	54.71	140.0	29.503 29.5 ± 1.9	GT = 194.71	JENDL-3.2 82MACKLIN
6711.0 6711.0	0	1.0 (1.0)	84.0	140.0	39.375 39.5 ± 2.1	GT = 224.0	JENDL-3.2 82MACKLIN
6724.0 6724.0	1	0.0 (1.0)	42.1	140.0	8.0917 8.1 ± 1.4	GT = 182.1	JENDL-3.2 82MACKLIN
6747.0 6747.0 6747.0	0	1.0 (1.0) P	648.7 483.5) 970.0 ±80.0	146.7 143.0 ± 8.2 (140.0)	89.681 87.8 ± 2.9	GT = 793.4	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6759.0 6759.0	0	1.0 (1.0)	121.1	140.0	48.7 48.7 ± 3.1	GT = 261.1	JENDL-3.2 82MACKLIN
6779.0 6779.0	1	1.0 (1.0)	7.904	140.0	5.8112 5.8 ± 1.3	GT = 147.9	JENDL-3.2 82MACKLIN
6796.0 6796.0	1	2.0 (1.0)	19.34	140.0	21.241 21.3 ± 2.4	GT = 159.34	JENDL-3.2 82MACKLIN
6807.0 6807.0	1	2.0 (1.0)	33.39	140.0	33.7 33.8 ± 2.3	GT = 173.39	JENDL-3.2 82MACKLIN
6821.0 6821.0	1	2.0 (1.0)	14.24	140.0	16.157 16.0 ± 2.2	GT = 154.24	JENDL-3.2 82MACKLIN
6844.0 6845.0 6844.0	0	0.0 (1.0) P	240.0 120.0 ±50.0	1020.0 (140.0)	48.571 49.2 ± 2.2	GT = 1260.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6868.0 6868.0	1	2.0 (1.0)	8.548	140.0	7.817 7.8 ± 2.5	GT = 148.55	JENDL-3.2 82MACKLIN
6878.0 6878.0	1	0.0 (1.0)	82.96	140.0	13.023 12.9 ± 1.8	GT = 222.96	JENDL-3.2 82MACKLIN
6896.0 6896.0	1	2.0 (1.0)	32.39	140.0	32.88 32.9 ± 2.2	GT = 172.39	JENDL-3.2 82MACKLIN
6911.0 6911.0	1	2.0 (1.0)	7.232	140.0	8.596 8.6 ± 2.0	GT = 147.23	JENDL-3.2 82MACKLIN
6923.0 6923.0	0	1.0 (1.0)	80.68	140.0	38.388 38.8 ± 2.8	GT = 220.68	JENDL-3.2 82MACKLIN
6944.0 6944.0 6944.0	0	1.0 (1.0) P	520.0 391.0) 780.0 ±80.0	186.7 187.9 ±10.6 (140.0)	103.03 103.8 ± 3.7	GT = 706.7	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6968.0 6968.0	1	2.0 (1.0)	13.95	140.0	15.857 15.8 ± 2.2	GT = 153.95	JENDL-3.2 82MACKLIN
6983.0 6983.0 6983.0	0	1.0 (1.0) P	100.0 150.0 ±50.0	280.0 (140.0)	55.263 56.5 ± 2.8	GT = 380.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6999.0 6999.0	1	0.0 (1.0)	37.41	140.0	7.3804 7.4 ± 1.8	GT = 177.41	JENDL-3.2 82MACKLIN
7020.0	1	2.0	336.0	80.0	80.769	GT = 416.0	JENDL-3.2

AG-107 15

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WW5 (MILLI-EV)	MISCELLANEOUS	REFERENCE
7020.0		(1.0)			80.8 ± 3.1		82MACKLIN

47-Ag-109

Abundance	:48.161%	
Spin-Parity	:1/2$^-$	
Potential Scattering Radius		:7.05 fm
Cross Sections of 2200 m/s for Total		:93.02 b
	Elastic	:2.482 b
	Capture	:90.54 b
Maxwellian Average Capture Cross Section		:80.66 b
Resonance Integral of Capture		:1,472 b

Resolved resonance parameters (below 7.0095keV). Resolved resonance parameters (below 7.0095keV) of JENDL-3.1[1] are the same as those of JENDL-2[2], which were made by Nakajima on the basis of experimental data by Moxon and Rae[3], Garg et al.[4], Asghar et al.[5], Pattenden[6], Muradjan and Adamchuk[7], de Barros et al.[8], Pattenden and Jolly[9], Macklin[10] and Mizumoto et al.[11]. There was no new experimental data available since the JENDL-2 evaluation. Total spin J and angular momentum ℓ of some resonances was estimated with a random number method and a method of Bollinger and Thomas[12], respectively.

The capture cross section of JENDL-3.1 is too low between 1.3 keV and 2.6 keV compared with interpolated values from the higher and lower energy regions. To compensate the low capture cross section, p-wave resonances with capture area of 0.020 eV were added every 20 eV between 1.25 and 1.59 keV, and every 40 eV between 1.59 and 2.59 keV. The other data are the same as JENDL-3.1, except for neutron width which was modified so as to reproduce the capture area data measured by Macklin[10].

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AG-109

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
5.19	0	1.0	12.7	138.0	8.7115	GT = 148.7	JENDL-3.2
5.2	0		12.7 ± 0.2	135.0 ± 7.8		GNO= 5.62 ± 0.1	65ASGHAR+
5.145± 0.003			19.3 ± 0.6	143.0 ±20.0		GT = 156.0 ±20.0	82ANUFRIJEV+
30.4	0	1.0	7.3	128.0	5.1796	GT = 135.3	JENDL-3.2
30.4	0	1.0	7.3 ± 0.4	128.0 ±12.1		GNO= 1.32 ± 0.08	65ASGHAR+
30.35 ± 0.08	0			(120.0)		WGH= 1.02 ± 0.01	66CHRIEN
30.5		1.0	(6.8 ± 0.3)	128.0			68MOXON
30.7 ± 0.3			11.0 ± 0.4	132.0 ± 7.0		GT = 145.0 ± 7.0	82ANUFRIJEV+
40.1	0	1.0	6.2	131.0	4.4399	GT = 137.2	JENDL-3.2
40.2	0	1.0	6.2 ± 0.5	132.2 ±16.2		GNO= 0.97 ± 0.07	65ASGHAR+
40.04 ± 0.12	0			(120.0)		WGH= 0.59 ± 0.01	66CHRIEN
40.2		1.0	(5.0 ± 0.4)	128.0			68MOXON
40.5 ± 0.4			7.4 ± 0.5	147.0 ±13.0		GT = 152.0 ±13.0	82ANUFRIJEV+
55.7	0	0.0	36.8	139.0	7.2742	GT = 175.8	JENDL-3.2
55.6	0	0	36.8 ± 1.4	148.1 ±10.4		GNO= 4.95 ± 0.19	65ASGHAR+
55.4 ± 0.2	0			(120.0)		WGH= 1.04 ± 0.02	66CHRIEN
55.7		0	(38.0 ± 1.3)	132.0			68MOXON
56.0 ± 0.7			16.6 ± 1.1	172.0 ±19.0		GT = 200.0 ±19.0	82ANUFRIJEV+
62.2	0		0.095± 0.047	(130.0)		WGO= 0.012± 0.006	65PATTENDEN
70.8	0	1.0	28.4	117.0	16.155	GT = 143.4	JENDL-3.2
70.8	0	1.0	27.7 ± 0.5	119.1 ± 4.2		GNO= 3.3 ± 0.07	65ASGHAR+
70.7	0		32.9 ± 1.1	(130.0)		WGO= 3.91 ± 0.13	65PATTENDEN
70.4 ± 0.2	0			(120.0)		WGH= 2.44 ± 0.05	66CHRIEN
70.8		1.0	(28.8 ± 3.1)	114.0			68MOXON
71.1 ± 0.9			38.6 ± 1.6	149.0 ± 9.0		GT = 175.0 ± 9.0	82ANUFRIJEV+
80.6	0		0.16 ± 0.05	(130.0)		WGO= 0.018± 0.006	65PATTENDEN
83.5 ± 0.4	0			(120.0)		WGH= 0.004± 0.001	66CHRIEN
87.7	0	1.0	6.2	131.0	4.4399	GT = 137.2	JENDL-3.2
87.4	0	1.0	6.4 ± 0.5	140.7 ±20.7		GNO= 0.88 ± 0.05	65ASGHAR+
87.3	0		7.9 ± 0.5	(130.0)		WGO= 0.85 ± 0.05	65PATTENDEN
87.8 ± 0.4	0			(120.0)		WGH= 0.51 ± 0.02	66CHRIEN
87.4		1.0	(5.3 ± 0.4)	122.0			68MOXON
88.1 ± 1.3			4.7 ± 1.0	258.0 ±76.0		GT = 260.0 ±76.0	82ANUFRIJEV+
91.5	0	0.0	0.1	130.0	2.498-2	GT = 130.1	JENDL-3.2
91.3 ± 1.5			0.032			GT = 148.0	82ANUFRIJEV+
106.3	0	1.0	0.1	130.0	7.494-2	GT = 130.1	JENDL-3.2
106.0	0		0.18 ± 0.12	(130.0)		WGO= 0.017± 0.012	65PATTENDEN
108.0 ± 0.8	0			(120.0)		WGH= 0.01 ± 0.002	66CHRIEN
108.8 ± 1.7			0.22 ± 0.08	141.0 ±35.0		GT = 141.0 ±35.0	82ANUFRIJEV+
113.4	0	0.0	0.22	130.0	5.490-2	GT = 130.22	JENDL-3.2
113.4	0		0.18 ± 0.13	(130.0)		WGO= 0.015± 0.012	65PATTENDEN
133.9	0	1.0	82.0	120.0	36.535	GT = 202.0	JENDL-3.2
133.5	0	1.0	92.4 ± 1.5	115.8 ± 4.3		GNO= 8.0 ± 0.13	65ASGHAR+
133.8	0		111.0 ± 8.0	(130.0)		WGO= 9.8 ± 0.5	65PATTENDEN
133.2 ± 0.7	0			(120.0)		WGH= 5.4 ± 1.5	66CHRIEN
134.0		1.0	(86.0)	124.0			68MOXON
134.3 ± 2.4			121.0 ± 4.0	159.0 ±16.0		GT = 240.0 ±16.0	82ANUFRIJEV+
139.7	0	0.0	5.0	133.0	1.2047	GT = 138.0	JENDL-3.2
143.9	0	0	20.5 ± 1.0	132.2 ±25.5		GNO= 1.67 ± 0.08	65ASGHAR+
139.5	0		2.7 ± 0.2	(130.0)		WGO= 0.23 ± 0.02	65PATTENDEN
141.0 ± 1.0	0			(120.0)		WGH= 0.081± 0.014	66CHRIEN
139.9			(3.0 ± 0.5)	133.0			68MOXON
139.9 ± 2.5			3.2 ± 0.9	134.0 ±21.0		GT = 135.0 ±21.0	82ANUFRIJEV+
144.3							69BARRO+
147.0							69BARRO+
169.8	0	1.0	0.2933	130.0	0.21948	GT = 130.29	JENDL-3.2
169.3	0		0.52 ± 0.35	(130.0)		WGO= 0.04 ± 0.027	65PATTENDEN
170.0							69BARRO+
170.0 ± 3.4			0.41			GT = 148.0	82ANUFRIJEV+
173.1	0	1.0	50.0	130.0	27.083	GT = 180.0	JENDL-3.2
173.2	0		53.2 ± 4.3	(130.0)		WGO= 4.04 ± 0.33	65PATTENDEN
172.0 ± 1.0	0			(120.0)		WGH= 3.2 ± 0.27	66CHRIEN
172.6 ± 3.4			57.0 ± 5.0	164.0 ±30.0		GT = 202.0 ±30.0	82ANUFRIJEV+
184.9	0		0.84 ± 0.48	(130.0)		WGO= 0.062± 0.035	65PATTENDEN
191.0	0		0.65 ± 0.43	(130.0)		WGO= 0.047± 0.031	65PATTENDEN
209.6	0	1.0	24.4	123.0	15.271	GT = 147.4	JENDL-3.2
208.9	0	1.0	23.5 ± 1.0	126.5 ±16.0		GNO= 1.63 ± 0.07	65ASGHAR+
209.8	0		38.2 ± 5.7	(130.0)		WGO= 2.64 ± 0.39	65PATTENDEN
209.0 ± 1.5	0			(120.0)		WGH= 0.73 ± 0.1	66CHRIEN
209.0		1.0	(23.0)	119.0			68MOXON
207.6 ± 4.5			37.6	140.0 ±47.0		GT = 165.0 ±47.0	82ANUFRIJEV+
251.3	0	1.0	11.8	130.0	8.1135	GT = 141.8	JENDL-3.2
252.2	0		15.7 ± 1.9	(130.0)		WGO= 0.99 ± 0.12	65PATTENDEN
252.0 ± 2.0	0			(120.0)		WGH= 0.48 ± 0.11	66CHRIEN
259.0	0	0.0	5.2	130.0	1.25	GT = 135.2	JENDL-3.2
260.0	0		2.9 ± 1.0	(130.0)		WGO= 0.18 ± 0.06	65PATTENDEN
264.7	0	0.0	0.72	130.0	0.17901	GT = 130.72	JENDL-3.2
264.0 ± 2.0	0			(120.0)		WGH= 0.1 ± 0.02	66CHRIEN
272.6	0	0.0	4.0	130.0	0.97015	GT = 134.0	JENDL-3.2
274.2	0		1.5 ± 1.0	(130.0)		WGO= 0.09 ± 0.06	65PATTENDEN
291.0	0	0.0	34.2	140.0	8.8714	GT = 174.2	JENDL-3.2
292.1	0		18.3 ± 2.9	(130.0)		WGO= 1.07 ± 0.17	65PATTENDEN

AG-109 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
291.0 ± 3.0	0			(120.0)		WGH- 0.51 ± 0.07	66CHRIEN
291.0		0	(35.0)	148.0			68WOXON
291.05			A 8.6 ± 0.5				69BARRO+
293.3	0	0.0	0.68	130.0	0.16912	GT - 130.68	JENDL-3.2
317.0 ± 3.0	0	1.0		(120.0)		WGH- 7.2 ± 0.5	66CHRIEN
293.7							69BARRO+
300.9	0	1.0	0.9333	130.0	0.69499	GT - 130.93	JENDL-3.2
301.15							69BARRO+
316.5	0	1.0	158.0	124.0	52.106	GT - 282.0	JENDL-3.2
318.0	0		B 232.0 ±21.0	(130.0)		WGO- 13.0 ± 1.2	65PATTENDEN
317.3		1.0	(167.0)	124.0			68WOXON
316.8		1.0	A 128.0 ±13.0			GT - 300.0 ±60.0	69BARRO+
			169.0 ±17.0				
322.1	0	1.0	0.1687	130.0	0.12486	GT - 130.17	JENDL-3.2
322.1							69BARRO+
327.8	0	0.0	15.4	130.0	3.4422	GT - 145.4	JENDL-3.2
329.0	0		B 3.6 ± 1.6	(130.0)		WGO- 0.2 ± 0.09	65PATTENDEN
327.8			A 4.5 ± 1.0				69BARRO+
340.2	0	1.0	0.12	130.0	8.991-2	GT - 130.12	JENDL-3.2
340.2							69BARRO+
387.0	0	1.0	43.1	147.0	24.998	GT - 190.1	JENDL-3.2
389.0	0		B 89.0 ±10.0	(130.0)		WGO- 3.51 ± 0.5	65PATTENDEN
387.1		1.0	A 32.3 ± 1.8	147.0		GT - 190.0 ±35.0	69BARRO+
			43.0 ± 3.0				
391.6	0	0.0	0.84	130.0	0.15922	GT - 130.84	JENDL-3.2
391.7							69BARRO+
398.0	0	1.0	22.7	140.0	14.65	GT - 162.7	JENDL-3.2
398.1	0	1.0	25.2 ± 2.0	139.9 ±22.4		GNO- 1.26 ± 0.1	65ASGHAR+
401.0	0		B 32.0 ± 8.0	(130.0)		WGO- 1.8 ± 0.3	65PATTENDEN
398.1			A 16.5 ± 1.0				69BARRO+
404.4	0	0.0	190.0	143.0	20.388	GT - 333.0	JENDL-3.2
404.1	0	0	182.5 ± 8.0	143.1 ±10.0		GNO- 8.05 ± 0.3	65ASGHAR+
407.0	0		B 75.0 ±16.0	(130.0)		WGO- 3.7 ± 0.8	65PATTENDEN
404.45		0	A 54.3 ± 3.0	112.0		GT - 325.0 ±30.0	69BARRO+
			213.0 ±12.0				
404.4			B 103.0 ± 9.0	(130.0)			83MIZUMOTO+
428.8	0	0.0	37.4	130.0	7.2611	GT - 167.4	JENDL-3.2
431.0	0		B 14.1 ± 4.2	(130.0)		WGO- 0.68 ± 0.2	65PATTENDEN
428.6			A 10.0 ± 0.5				69BARRO+
428.8			B 20.1 ± 1.7	(130.0)			83MIZUMOTO+
440.4	0	1.0	0.1267	130.0	9.493-2	GT - 130.13	JENDL-3.2
441.0							69BARRO+
440.4				(130.0)			83MIZUMOTO+
448.3				(130.0)			83MIZUMOTO+
469.8	0	0.0	148.0	134.0	17.582	GT - 282.0	JENDL-3.2
474.0	0		B 78.0 ±15.0	(130.0)		WGO- 3.6 ± 0.7	65PATTENDEN
469.8		0	A 36.0 ± 2.0	134.0		GT - 280.0 ±70.0	69BARRO+
			144.0 ± 9.0				
469.8			B 74.0 ± 8.0	(130.0)			83MIZUMOTO+
487.7	0	0.0	46.8	130.0	8.8029	GT - 178.8	JENDL-3.2
487.8			A 11.0 ± 0.6				69BARRO+
487.7			B 22.7 ± 1.9	(130.0)			83MIZUMOTO+
495.2	0	1.0	0.5933	130.0	0.44295	GT - 130.59	JENDL-3.2
492.0	0		B 24.0 ± 7.0	(130.0)		WGO- 1.1 ± 0.3	65PATTENDEN
495.3							69BARRO+
500.8	0	1.0	149.0	117.0	49.153	GT - 266.0	JENDL-3.2
506.0	0		B 175.0 ±36.0	(130.0)		WGO- 7.8 ± 1.6	65PATTENDEN
500.8		1.0	A 114.0 ± 7.0	117.0		GT - 280.0 ±30.0	69BARRO+
			153.0 ±10.0				
500.6			B 240.0 ±20.0	(130.0)			83MIZUMOTO+
512.5	0	0.0	51.4	130.0	9.2089	GT - 181.4	JENDL-3.2
518.0	0		B 19.3 ± 5.0	(130.0)		WGO- 0.85 ± 0.22	65PATTENDEN
515.4		0	A 43.0 ± 2.0			GT - 250.0 ±40.0	69BARRO+
			188.0 ±10.0				
512.5			B 23.1 ± 1.9	(130.0)			83MIZUMOTO+
526.8	0	0.0	1.84	130.0	0.45358	GT - 131.84	JENDL-3.2
526.7							69BARRO+
526.8				(130.0)			83MIZUMOTO+
556.6	0	0.0	50.4	130.0	9.0798	GT - 180.4	JENDL-3.2
557.0			A 12.0 ± 3.0				69BARRO+
556.6			B 24.8 ± 2.0	(130.0)			83MIZUMOTO+
560.8	0	0.0	270.0	127.0	21.593	GT - 397.0	JENDL-3.2
568.0	0		B 498.0 ±60.0	(130.0)		WGO- 20.8 ± 2.5	65PATTENDEN
560.82		0	A 68.0 ± 4.0	127.0		GT - 390.0 ±60.0	69BARRO+
			283.0 ±12.0				
560.8			B 144.0 ±12.0	(130.0)			83MIZUMOTO+
565.8	0	1.0	91.0	138.0	41.129	GT - 229.0	JENDL-3.2
565.8		1.0	A 69.0 ± 4.0	138.0		GT - 230.0 ±40.0	69BARRO+
			92.0 ± 4.0				
565.8			B 142.0 ±12.0	(130.0)			83MIZUMOTO+
605.1	0	1.0	4.267	130.0	3.0985	GT - 134.27	JENDL-3.2
605.1			B 6.4 ± 0.7	(130.0)			83MIZUMOTO+
608.1	0	1.0	29.6	155.0	18.84	GT - 184.6	JENDL-3.2

AG-109

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
514.0	0		B 54.0 ±12.0	(130.0)		WGD- 2.2 ± 0.5	65PATTENDEN
608.1		1.0	A 24.4 ± 1.3	155.0		GT - 190.0 ±30.0	69BARRO+
			32.0 ± 2.0				
608.1			B 43.0 ± 4.0	(130.0)			83MIZUMOTO+
622.5	0	0.0	190.0	110.0	17.417	GT - 300.0	JENDL-3.2
630.0	0		B 70.0 ±15.0	(130.0)		WGD- 2.8 ± 0.6	65PATTENDEN
622.6		0	A 51.0 ± 3.0	110.0		GT - 310.0 ±40.0	69BARRO+
			200.0 ± 8.0				
622.5			B 95.0 ± 8.0	(130.0)			83MIZUMOTO+
629.7				(130.0)			83MIZUMOTO+
634.5	0	1.0	0.8687	130.0	0.49747	GT - 130.67	JENDL-3.2
634.8							69BARRO+
633.9				(130.0)			83MIZUMOTO+
648.4							69BARRO+
669.8	0	1.0	24.27	130.0	15.339	GT - 154.27	JENDL-3.2
669.8			A 19.0 ± 2.0				69BARRO+
669.8			B 36.5 ± 3.0	(130.0)			83MIZUMOTO+
691.0				(130.0)			83MIZUMOTO+
713.9	0	0.0	3.0	130.0	0.73308	GT - 133.0	JENDL-3.2
713.7							69BARRO+
713.9				(130.0)			83MIZUMOTO+
726.3	0	0.0	64.6	130.0	10.789	GT - 194.6	JENDL-3.2
726.1			A 15.0 ± 1.2				69BARRO+
726.3			B 33.9 ± 2.8	(130.0)			83MIZUMOTO+
730.3	0	0.0	4.2	130.0	1.0171	GT - 134.2	JENDL-3.2
730.2							69BARRO+
733.8				(130.0)			83MIZUMOTO+
736.0				(130.0)			83MIZUMOTO+
747.9	0	1.0	75.33	130.0	35.77	GT - 205.33	JENDL-3.2
747.8			A 56.0 ± 4.0			GT - 310.0 ±70.0	69BARRO+
747.9			B 111.0 ± 9.0	(130.0)			83MIZUMOTO+
753.0			A 50.0 ± 4.0				69BARRO+
780.9	0	0.0	28.2	130.0	5.7933	GT - 158.2	JENDL-3.2
780.9			B 14.1 ± 1.3	(130.0)			83MIZUMOTO+
785.3	0	0.0	510.0	130.0	25.898	GT - 840.0	JENDL-3.2
785.3			B 234.0 ±18.0	(130.0)			83MIZUMOTO+
794.1			B 7.0 ± 0.9	(130.0)			83MIZUMOTO+
803.7	0	0.0	40.0	130.0	7.8471	GT - 170.0	JENDL-3.2
803.7			B 17.8 ± 1.7	(130.0)			83MIZUMOTO+
822.3				(130.0)			83MIZUMOTO+
831.4	0	0.0	12.0	130.0	2.7465	GT - 142.0	JENDL-3.2
832.4				(130.0)			83MIZUMOTO+
840.7				(130.0)			83MIZUMOTO+
849.1	0	0.0	20.0	130.0	4.3333	GT - 150.0	JENDL-3.2
849.1			B 11.1 ± 1.3	(130.0)			83MIZUMOTO+
861.9	0	0.0	28.0	130.0	5.7595	GT - 158.0	JENDL-3.2
861.9			B 12.9 ± 1.4	(130.0)			83MIZUMOTO+
882.7	0	0.0	200.0	130.0	19.887	GT - 330.0	JENDL-3.2
882.7			B 99.0 ± 8.0	(130.0)			83MIZUMOTO+
888.9	0	0.0	11.4	130.0	2.6202	GT - 141.4	JENDL-3.2
888.9			B 5.7 ± 1.1	(130.0)			83MIZUMOTO+
903.4	0	0.0	36.8	130.0	7.1703	GT - 166.8	JENDL-3.2
903.4			B 18.8 ± 1.8	(130.0)			83MIZUMOTO+
925.7				(130.0)			83MIZUMOTO+
931.6	0	0.0	220.0	130.0	20.429	GT - 350.0	JENDL-3.2
931.6			B 110.0 ± 9.0	(130.0)			83MIZUMOTO+
949.5	0	1.0	12.67	130.0	8.6586	GT - 142.67	JENDL-3.2
949.5			B 18.5 ± 1.9	(130.0)			83MIZUMOTO+
961.2	0	1.0	25.33	130.0	15.9	GT - 155.33	JENDL-3.2
961.2			B 36.8 ± 3.2	(130.0)			83MIZUMOTO+
975.5	0	0.0	204.0	130.0	19.85	GT - 334.0	JENDL-3.2
975.5			B 96.0 ± 8.0	(130.0)			83MIZUMOTO+
981.3				(130.0)			83MIZUMOTO+
999.5				(130.0)			83MIZUMOTO+
1009.0	0	0.0	288.0	130.0	22.392	GT - 418.0	JENDL-3.2
1009.0			B 151.0 ±12.0	(130.0)			83MIZUMOTO+
1037.0	0	1.0	21.33	130.0	13.743	GT - 151.33	JENDL-3.2
1037.0			B 32.1 ± 2.9	(130.0)			83MIZUMOTO+
1057.0	0	1.0	48.0	130.0	26.292	GT - 178.0	JENDL-3.2
1057.0			B 72.4 ± 2.6	(130.0)			83MIZUMOTO+
1062.0	0	1.0	51.33	130.0	27.8	GT - 181.33	JENDL-3.2

AG-109 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
1062.0			' 92.7 ± 2.8	(130.0)			83MIZUMOTO+
1116.0 1116.0	0	1.0	56.67 ' 79.0 ± 7.0	130.0 (130.0)	29.599	GT = 186.67	JENDL-3.2 83MIZUMOTO+
1147.0 1147.0	0	0.0	28.0 ' 14.0 ± 2.3	130.0 (130.0)	5.7595	GT = 158.0	JENDL-3.2 83MIZUMOTO+
1174.0 1174.0	0	1.0	7.4 ' 13.9 ± 2.4	130.0 (130.0)	5.2511	GT = 137.4	JENDL-3.2 83MIZUMOTO+
1204.0 1204.0	0	1.0	200.0 '281.0 ±23.0	130.0 (130.0)	59.091	GT = 330.0	JENDL-3.2 83MIZUMOTO+
1220.0 1220.0	0	1.0	213.3 '314.0 ±25.0	130.0 (130.0)	60.579	GT = 343.3	JENDL-3.2 83MIZUMOTO+
1238.0 1238.0	0	0.0	340.0 '179.0 ±15.0	130.0 (130.0)	23.511	GT = 470.0	JENDL-3.2 83MIZUMOTO+
1240.0	1	0.0	24.0	130.0		GT = 338.0	JENDL-3.2
1255.0 1255.0	0	1.0	22.67 ' 33.0 ± 4.0	130.0 (130.0)	14.478	GT = 152.67	JENDL-3.2 83MIZUMOTO+
1271.0 1271.0	0	1.0	6.267 ' 10.1 ± 2.5	130.0 (130.0)	4.4841	GT = 136.27	JENDL-3.2 83MIZUMOTO+
1277.0 1277.0	0	0.0	56.0 ' 28.0 ± 4.0	130.0 (130.0)	9.7849	GT = 186.0	JENDL-3.2 83MIZUMOTO+
1280.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
1300.0 1300.0	0	0.0	240.0 '126.0 ±11.0	130.0 (130.0)	21.081	GT = 370.0	JENDL-3.2 83MIZUMOTO+
1311.0 1311.0	0	1.0	17.33 ' 25.0 ± 4.0	130.0 (130.0)	11.469	GT = 147.33	JENDL-3.2 83MIZUMOTO+
1320.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
1347.0 1347.0	0	0.0	72.0 ' 36.0 ± 4.0	130.0 (130.0)	11.584	GT = 202.0	JENDL-3.2 83MIZUMOTO+
1353.0 1353.0	0	0.0	30.2 ' 15.1 ± 3.0	130.0 (130.0)	6.1267	GT = 160.2	JENDL-3.2 83MIZUMOTO+
1360.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
1371.0 1371.0	0	1.0	11.27 ' 11.5 ± 2.9	130.0 (130.0)	7.7782	GT = 141.27	JENDL-3.2 83MIZUMOTO+
1383.0 1383.0	0	1.0	63.33 ' 98.0 ± 9.0	130.0 (130.0)	31.939	GT = 193.33	JENDL-3.2 83MIZUMOTO+
1400.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
1415.0 1415.0	0	1.0	133.3 '209.0 ±17.0	130.0 (130.0)	49.361	GT = 263.3	JENDL-3.2 83MIZUMOTO+
1424.0 1424.0	0	0.0	17.8 ' 8.9 ± 3.1	130.0 (130.0)	3.9141	GT = 147.8	JENDL-3.2 83MIZUMOTO+
1440.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
1462.0 1462.0	0	1.0	36.67 ' 55.0 ± 8.0	130.0 (130.0)	21.452	GT = 166.67	JENDL-3.2 83MIZUMOTO+
1474.0 1474.0	0	0.0	76.0 ' 38.0 ± 5.0	130.0 (130.0)	11.99	GT = 206.0	JENDL-3.2 83MIZUMOTO+
1480.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
1484.0 1484.0	0	0.0	160.0 ' 89.0 ± 7.0	130.0 (130.0)	17.931	GT = 290.0	JENDL-3.2 83MIZUMOTO+
1505.0 1505.0	0	1.0	18.0 ' 36.0 ± 4.0	130.0 (130.0)	11.858	GT = 148.0	JENDL-3.2 83MIZUMOTO+
1511.0 1511.0	0	0.0	300.0 '158.0 ±13.0	130.0 (130.0)	22.874	GT = 430.0	JENDL-3.2 83MIZUMOTO+
1520.0 1532.0	1	2.0	24.0	130.0 (130.0)		GT = 338.0	JENDL-3.2 83MIZUMOTO+
1543.0 1543.0	0	0.0	19.4 ' 10.0 ± 3.0	130.0 (130.0)	4.2202	GT = 149.4	JENDL-3.2 83MIZUMOTO+
1560.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
1562.0 1562.0	0	0.0	26.6 ' 17.0 ± 4.0	130.0 (130.0)	5.5204	GT = 156.6	JENDL-3.2 83MIZUMOTO+
1569.0 1569.0	0	1.0	18.67 ' 39.0 ± 5.0	130.0 (130.0)	12.244	GT = 148.67	JENDL-3.2 83MIZUMOTO+
1587.0 1587.0	0	1.0	173.3 '261.0 ±20.0	130.0 (130.0)	55.71	GT = 303.3	JENDL-3.2 83MIZUMOTO+
1600.0	1	0.0	24.0	130.0		GT = 338.0	JENDL-3.2
1621.0 1621.0	0	1.0	26.0 ' 45.0 ± 5.0	130.0 (130.0)	16.25	GT = 156.0	JENDL-3.2 83MIZUMOTO+
1635.0 1635.0	0	1.0	6.4 ' 16.0 ± 5.0	130.0 (130.0)	4.5748	GT = 136.4	JENDL-3.2 83MIZUMOTO+

AG-109 5

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
1640.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
1678.0 1678.0	0	0.0	250.0 95.0 ± 9.0	130.0 (130.0)	21.382	GT = 380.0	JENDL-3.2 83MIZUMOTO+
1680.0 1706.0	1	1.0	24.0	130.0 (130.0)		GT = 338.0	JENDL-3.2 83MIZUMOTO+
1718.0 1718.0	0	1.0	46.67 70.0 ± 9.0	130.0 (130.0)	25.756	GT = 176.67	JENDL-3.2 83MIZUMOTO+
1720.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
1727.0 1727.0	0	1.0	44.67 75.0 ±10.0	130.0 (130.0)	24.935	GT = 174.67	JENDL-3.2 83MIZUMOTO+
1755.0 1755.0	0	1.0	16.67 29.0 ± 8.0	130.0 (130.0)	11.082	GT = 146.67	JENDL-3.2 83MIZUMOTO+
1760.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
1778.0 1778.0	0	0.0	82.0 31.0 ± 8.0	130.0 (130.0)	10.495	GT = 192.0	JENDL-3.2 83MIZUMOTO+
1800.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
1807.0 1807.0	0	0.0	60.0 29.0 ± 8.0	130.0 (130.0)	10.263	GT = 190.0	JENDL-3.2 83MIZUMOTO+
1840.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
1842.0 1842.0	0	0.0	26.6 18.0 ± 8.0	130.0 (130.0)	5.5204	GT = 156.6	JENDL-3.2 83MIZUMOTO+
1858.0				(130.0)			83MIZUMOTO+
1871.0 1871.0	0	0.0	22.0 11.0 ± 8.0	130.0 (130.0)	4.7039	GT = 152.0	JENDL-3.2 83MIZUMOTO+
1880.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
1883.0 1883.0	0	0.0	98.0 49.0 ±10.0	130.0 (130.0)	13.969	GT = 228.0	JENDL-3.2 83MIZUMOTO+
1915.0 1915.0	0	0.0	940.0 490.0 ±40.0	130.0 (130.0)	28.551	GT = 1070.0	JENDL-3.2 83MIZUMOTO+
1920.0 1926.0	1	2.0	24.0	130.0 (130.0)		GT = 338.0	JENDL-3.2 83MIZUMOTO+
1936.0 1936.0	0	0.0	84.0 42.0 ±10.0	130.0 (130.0)	12.757	GT = 214.0	JENDL-3.2 83MIZUMOTO+
1948.0 1948.0	0	1.0	78.67 20.0 ± 9.0	130.0 (130.0)	38.758	GT = 208.67	JENDL-3.2 83MIZUMOTO+
1960.0	1	0.0	24.0	130.0		GT = 338.0	JENDL-3.2
1969.0 1969.0	0	0.0	260.0 148.0 ±17.0	130.0 (130.0)	21.667	GT = 390.0	JENDL-3.2 83MIZUMOTO+
2000.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
2024.0 2024.0	0	0.0	156.0 65.0 ±12.0	130.0 (130.0)	17.727	GT = 286.0	JENDL-3.2 83MIZUMOTO+
2040.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
2065.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
2069.0 2069.0	0	0.0	20.2 13.0 ± 4.0	130.0 (130.0)	4.3708	GT = 150.2	JENDL-3.2 83MIZUMOTO+
2090.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2091.0 2091.0	0	0.0	360.0 155.0 ±13.0	130.0 (130.0)	23.878	GT = 490.0	JENDL-3.2 83MIZUMOTO+
2115.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2116.0 2116.0	0	1.0	4.8 7.0 ± 4.0	130.0 (130.0)	3.4718	GT = 134.8	JENDL-3.2 83MIZUMOTO+
2130.0 2130.0	0	0.0	740.0 342.0 ±25.0	130.0 (130.0)	27.644	GT = 870.0	JENDL-3.2 83MIZUMOTO+
2140.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2142.0 2142.0	0	1.0	20.67 36.0 ± 5.0	130.0 (130.0)	13.378	GT = 150.67	JENDL-3.2 83MIZUMOTO+
2165.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2170.0 2170.0	0	0.0	72.0 43.0 ± 6.0	130.0 (130.0)	11.584	GT = 202.0	JENDL-3.2 83MIZUMOTO+
2190.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2192.0 2192.0	0	0.0	54.0 43.0 ± 8.0	130.0 (130.0)	9.538	GT = 184.0	JENDL-3.2 83MIZUMOTO+
2215.0	1	0.0	24.0	130.0		GT = 338.0	JENDL-3.2
2219.0 2219.0	0	1.0	4.867 9.0 ± 5.0	130.0 (130.0)	3.5185	GT = 134.87	JENDL-3.2 83MIZUMOTO+
2228.0	0	0.0	17.4	130.0	3.8385	GT = 147.4	JENDL-3.2

AG-109 6

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2228.0			# 8.0 ± 4.0	(130.0)			83MIZUMOTO+
2240.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
2246.0 2246.0	0	1.0	17.33 # 14.0 ± 4.0	130.0 (130.0)	11.469	GT = 147.33	JENDL-3.2 83MIZUMOTO+
2265.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
2276.0 2276.0	0	0.0	28.6 # 17.0 ± 5.0	130.0 (130.0)	5.6607	GT = 158.6	JENDL-3.2 83MIZUMOTO+
2290.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
2302.0 2302.0	0	1.0	9.533 # 19.0 ± 5.0	130.0 (130.0)	6.6613	GT = 139.53	JENDL-3.2 83MIZUMOTO+
2315.0 2315.0	0	0.0	80.0 # 40.0 ± 8.0	130.0 (130.0)	12.381	GT = 210.0	JENDL-3.2 83MIZUMOTO+
2316.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2320.0 2320.0	0	0.0	300.0 #209.0 ±16.0	130.0 (130.0)	22.674	GT = 430.0	JENDL-3.2 83MIZUMOTO+
2329.0 2329.0	0	1.0	100.0 #152.0 ±12.0	130.0 (130.0)	42.391	GT = 230.0	JENDL-3.2 83MIZUMOTO+
2340.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2342.0 2342.0	0	1.0	20.67 # 43.0 ± 8.0	130.0 (130.0)	13.376	GT = 150.67	JENDL-3.2 83MIZUMOTO+
2352.0 2352.0	0	1.0	85.33 # 99.0 ± 9.0	130.0 (130.0)	32.81	GT = 195.33	JENDL-3.2 83MIZUMOTO+
2365.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2372.0 2372.0	0	0.0	82.0 # 33.0 ± 8.0	130.0 (130.0)	10.495	GT = 192.0	JENDL-3.2 83MIZUMOTO+
2390.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2415.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2439.0 2439.0	0	0.0	14.0 # 7.0 ± 5.0	130.0 (130.0)	3.1597	GT = 144.0	JENDL-3.2 83MIZUMOTO+
2440.0	1	0.0	24.0	130.0		GT = 338.0	JENDL-3.2
2459.0 2459.0	0	1.0	30.67 # 46.0 ± 8.0	130.0 (130.0)	18.612	GT = 160.67	JENDL-3.2 83MIZUMOTO+
2465.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
2473.0 2473.0	0	0.0	82.0 # 31.0 ± 8.0	130.0 (130.0)	10.495	GT = 192.0	JENDL-3.2 83MIZUMOTO+
2490.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
2498.0 2498.0	0	1.0	9.333 # 14.0 ±10.0	130.0 (130.0)	6.5309	GT = 139.33	JENDL-3.2 83MIZUMOTO+
2507.0 2507.0	0	0.0	820.0 #259.0 ±20.0	130.0 (130.0)	26.867	GT = 750.0	JENDL-3.2 83MIZUMOTO+
2515.0	1	1.0	24.0	130.0		GT = 338.0	JENDL-3.2
2540.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2541.0 2541.0	0	1.0	29.33 # 48.0 ± 7.0	130.0 (130.0)	17.948	GT = 159.33	JENDL-3.2 83MIZUMOTO+
2561.0 2561.0	0	0.0	70.0 # 49.0 ± 7.0	130.0 (130.0)	11.375	GT = 200.0	JENDL-3.2 83MIZUMOTO+
2565.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2578.0 2578.0	0	1.0	246.7 #362.0 ±27.0	130.0 (130.0)	63.853	GT = 376.7	JENDL-3.2 83MIZUMOTO+
2590.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2612.0 2612.0	0	0.0	78.0 # 26.0 ± 8.0	130.0 (130.0)	12.187	GT = 208.0	JENDL-3.2 83MIZUMOTO+
2615.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2639.0 2639.0	0	1.0	31.33 # 53.0 ± 7.0	130.0 (130.0)	18.934	GT = 161.33	JENDL-3.2 83MIZUMOTO+
2640.0	1	2.0	24.0	130.0		GT = 338.0	JENDL-3.2
2656.0 2656.0 2656.0	0 (1.0)	0.0	21.67 # 13.0 ± 8.0	130.0 (130.0)	4.8435 12.2 ± 0.6	GT = 151.67	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2665.0 2665.0	1 (1.0)	2.0	2.107	130.0	2.5917 2.6 ± 0.4	GT = 132.11	JENDL-3.2 82MACKLIN
2686.0 2687.0 2686.0	0 (1.0)	0.0	220.0 #108.0 ±10.0	380.0 (130.0)	34.833 34.8 ± 1.0	GT = 600.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2701.0 2701.0	0 (1.0)	0.0	138.0	400.0	25.651 25.6 ± 0.9	GT = 538.0	JENDL-3.2 82MACKLIN

AG-109 7

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2701.0			S 89.0 ± 8.0 (130.0)				83MIZUMOTO+
2710.0 2710.0	1	2.0 (1.0)	9.158	130.0	10.694 10.7 ± 0.9	GT = 139.16	JENDL-3.2 82MACKLIN
2715.0 2715.0 2715.0	0	1.0 (1.0)	73.33 S107.0 ±10.0	46.67 (130.0)	21.389 21.3 ± 0.9	GT = 120.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2727.0 2728.0 2727.0	0	0.0 (1.0)	250.0 S125.0 ±11.0	1440.0 (130.0)	53.254 53.3 ± 1.2	GT = 1690.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2751.0 2751.0 2751.0	0	1.0 (1.0)	24.67 S 32.0 ± 7.0	133.3 (130.0)	15.813 15.8 ± 0.7	GT = 157.97	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2759.0 2760.0 2759.0	0	1.0 (1.0)	20.67 S 21.0 ± 6.0	80.0 (130.0)	12.319 12.3 ± 0.8	GT = 100.67	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2780.0 2780.0 2780.0	0	1.0 (1.0)	220.0 S319.0 ±23.0	126.7 (130.0)	60.299 59.8 ± 1.3	GT = 346.7	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2808.0 2808.0 2808.0	0	0.0 (1.0)	112.0 S 56.0 ± 8.0	1840.0 (130.0)	26.393 26.4 ± 0.9	GT = 1952.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2820.0 2820.0	1	2.0 (1.0)	4.478	130.0	5.4088 5.4 ± 0.7	GT = 134.48	JENDL-3.2 82MACKLIN
2829.0 2827.0 2827.0	0	1.0 (1.0)	113.3 S195.0 ±18.0	57.33 (130.0)	28.551 28.5 ± 1.0	GT = 170.83	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2835.0 2835.0	1	2.0 (1.0)	2.449	130.0	3.0046 3.0 ± 0.5	GT = 132.45	JENDL-3.2 82MACKLIN
2850.0 2850.0 2850.0	0	0.0 (1.0)	440.0 S196.0 ±18.0	400.0 (130.0)	52.381 51.8 ± 1.2	GT = 840.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2877.0 2877.0	1	2.0 (1.0)	5.331	130.0	6.4012 6.4 ± 0.4	GT = 135.33	JENDL-3.2 82MACKLIN
2912.0 2912.0 2912.0	0	0.0 (1.0)	100.0 S 45.0 ± 8.0	1280.0 (130.0)	23.188 23.2 ± 0.8	GT = 1380.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2919.0 2920.0 2919.0	0	1.0 (1.0)	100.0 S152.0 ±13.0	226.7 (130.0)	52.043 52.3 ± 1.1	GT = 326.7	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2942.0 2942.0	1	1.0 (1.0)	7.321	130.0	5.198 5.2 ± 0.6	GT = 137.32	JENDL-3.2 82MACKLIN
2948.0 2948.0 2948.0	0	0.0 (1.0)	212.0 S104.0 ±10.0	800.0 (130.0)	39.163 39.3 ± 0.9	GT = 812.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2955.0 2955.0	1	0.0 (1.0)	14.8	130.0	3.3218 3.3 ± 0.5	GT = 144.8	JENDL-3.2 82MACKLIN
2972.0 2971.0 2972.0	0	0.0 (1.0)	140.0 S 62.0 ± 9.0	1680.0 (130.0)	32.308 32.3 ± 1.1	GT = 1820.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
2976.0 2976.0	1	2.0 (1.0)	15.48	130.0	17.291 17.3 ± 1.1	GT = 145.48	JENDL-3.2 82MACKLIN
3002.0 3002.0	1	2.0 (1.0)	1.455	130.0	1.7986 1.8 ± 0.3	GT = 131.45	JENDL-3.2 82MACKLIN
3013.0 3013.0	1	2.0 (1.0)	5.508	130.0	5.6028 5.6 ± 0.4	GT = 135.51	JENDL-3.2 82MACKLIN
3032.0 3033.0 3032.0	0	1.0 (1.0)	173.3 (131.5) S283.0 ±22.0	153.3 156.4 ± 8.7 (130.0)	81.008 82.0 ± 1.1	GT = 326.8	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3043.0 3043.0	1	2.0 (1.0)	5.577	130.0	6.6845 6.7 ± 0.6	GT = 135.58	JENDL-3.2 82MACKLIN
3051.0 3051.0 3051.0	0	0.0 (1.0)	780.0 (200.0) S400.0 ±30.0	420.0 138.0 ± 4.7 (130.0)	68.25 68.2 ± 1.2	GT = 1200.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3065.0 3065.0	1	2.0 (1.0)	4.799	130.0	5.7852 5.8 ± 0.4	GT = 134.8	JENDL-3.2 82MACKLIN
3078.0 3079.0	0	1.0 (1.0)	72.22	130.0	34.821 34.8 ± 1.5	GT = 202.22	JENDL-3.2 82MACKLIN
3083.0 3084.0 3083.0	0	1.0 (1.0)	200.0 (137.5) S275.0 ±22.0	140.0 151.0 ± 8.9 (130.0)	61.765 62.1 ± 1.4	GT = 340.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3115.0 3116.0 3116.0	0	1.0 (1.0)	200.0 S340.0 ±26.0	306.7 (130.0)	90.793 91.3 ± 2.0	GT = 506.7	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3123.0 3123.0	1	2.0 (1.0)	2.449	130.0	3.0046 3.0 ± 1.0	GT = 132.45	JENDL-3.2 82MACKLIN
3131.0	1	2.0	2.787	130.0	3.4106	GT = 132.79	JENDL-3.2

AG-109 8

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
3131.0		(1.0)			3.4 ± 0.9		82MACKLIN
3136.0	0	0.0	88.0	420.0	14.831	GT = 488.0	JENDL-3.2
3137.0		(1.0)			14.8 ± 1.0		82MACKLIN
3136.0			P 22.0 ±10.0	(130.0)			83MIZUMOTO+
3152.0	0	0.0	212.0	480.0	36.28	GT = 572.0	JENDL-3.2
3151.0		(1.0)			36.5 ± 1.3		82MACKLIN
3152.0			P 106.0 ±13.0	(130.0)			83MIZUMOTO+
3178.0	0	0.0	88.0	760.0	15.804	GT = 828.0	JENDL-3.2
3179.0		(1.0)			15.8 ± 0.9		82MACKLIN
3178.0			P 25.0 ±10.0	(130.0)			83MIZUMOTO+
3194.0	1	1.0	6.753	130.0	4.8146	GT = 136.75	JENDL-3.2
3194.0		(1.0)			4.8 ± 0.6		82MACKLIN
3210.0	0	1.0	53.33	146.7	29.334	GT = 200.03	JENDL-3.2
3210.0		(1.0)			29.2 ± 1.3		82MACKLIN
3210.0			P 79.0 ±12.0	(130.0)			83MIZUMOTO+
3219.0	0	1.0	193.3	33.33	21.321	GT = 226.63	JENDL-3.2
3219.0		(1.0)			36.4 ± 1.5		82MACKLIN
3219.0			P 277.0 ±23.0	(130.0)			83MIZUMOTO+
3227.0	1	2.0	2.449	130.0	3.0046	GT = 132.45	JENDL-3.2
3227.0		(1.0)			3.0 ± 0.8		82MACKLIN
3246.0	0	1.0	340.0	193.3	92.427	GT = 533.3	JENDL-3.2
3247.0		(1.0)			91.8 ± 2.4		82MACKLIN
3246.0			P 480.0 ±40.0	(130.0)			83MIZUMOTO+
3252.0	1	1.0	11.77	130.0	8.0946	GT = 141.77	JENDL-3.2
3252.0		(1.0)			8.1 ± 1.6		82MACKLIN
3264.0	0	0.0	142.0	1220.0	31.799	GT = 1362.0	JENDL-3.2
3264.0		(1.0)			31.8 ± 1.4		82MACKLIN
3264.0			P 71.0 ±12.0	(130.0)			83MIZUMOTO+
3277.0	0	1.0	86.67	380.0	42.189	GT = 426.67	JENDL-3.2
3276.0		(1.0)			42.2 ± 1.5		82MACKLIN
3277.0			P 66.0 ±14.0	(130.0)			83MIZUMOTO+
3281.0	0	0.0	26.44	130.0	5.4928	GT = 156.44	JENDL-3.2
3281.0			P 12.0 ±12.0	(130.0)			83MIZUMOTO+
3286.0	1	2.0	13.22	130.0	15.0	GT = 143.22	JENDL-3.2
3286.0		(1.0)			15.0 ± 1.0		82MACKLIN
3301.0	1	2.0	3.86	130.0	4.6859	GT = 133.86	JENDL-3.2
3301.0		(1.0)			4.7 ± 1.7		82MACKLIN
3303.0	0	1.0	25.33	206.7	16.924	GT = 232.03	JENDL-3.2
3305.0		(1.0)			16.9 ± 1.7		82MACKLIN
3303.0			P 30.0 ±11.0	(130.0)			83MIZUMOTO+
3335.0	0	0.0	100.0	240.0	17.647	GT = 340.0	JENDL-3.2
3334.0		(1.0)			8.2 ± 1.6		82MACKLIN
3335.0			P 36.0 ±12.0	(130.0)			83MIZUMOTO+
3337.0	1	2.0	15.98	130.0	17.788	GT = 145.98	JENDL-3.2
3337.0		(1.0)			17.7 ± 1.5		82MACKLIN
3349.0	1	1.0	4.133	130.0	3.0042	GT = 134.13	JENDL-3.2
3349.0		(1.0)			3.0 ± 1.3		82MACKLIN
3351.0	1	2.0	3.383	130.0	4.1215	GT = 133.38	JENDL-3.2
3351.0		(1.0)			4.1 ± 1.3		82MACKLIN
3364.0	0	1.0	33.33	153.3	20.533	GT = 186.63	JENDL-3.2
3365.0		(1.0)			20.5 ± 1.4		82MACKLIN
3364.0			P 28.0 ±12.0	(130.0)			83MIZUMOTO+
3368.0	1	2.0	0.1597	130.0	0.19938	GT = 130.16	JENDL-3.2
3368.0		(1.0)			0.2 ± 1.9		82MACKLIN
3371.0	1	2.0	11.21	130.0	12.9	GT = 141.21	JENDL-3.2
3371.0		(1.0)			12.9 ± 1.4		82MACKLIN
3383.0	0	0.0	142.4	130.0	16.99	GT = 272.4	JENDL-3.2
3383.0		(1.0)			17.5 ± 0.7		82MACKLIN
3383.0			P 59.0 ±12.0	(130.0)			83MIZUMOTO+
3396.0	0	1.0	106.7	180.0	50.242	GT = 286.7	JENDL-3.2
3396.0		(1.0)	[79.0)	181.6 ±28.4	50.0 ± 1.2		82MACKLIN
3396.0			P 158.0 ±17.0	(130.0)			83MIZUMOTO+
3403.0	1	0.0	23.56	130.0	4.9863	GT = 153.56	JENDL-3.2
3403.0		(1.0)			5.0 ± 0.7		82MACKLIN
3423.0	1	2.0	13.51	130.0	15.298	GT = 143.51	JENDL-3.2
3423.0		(1.0)			15.2 ± 0.7		82MACKLIN
3438.0	0	1.0	53.33	540.0	36.402	GT = 593.33	JENDL-3.2
3438.0		(1.0)			36.4 ± 1.0		82MACKLIN
3438.0			P 64.0 ±13.0	(130.0)			83MIZUMOTO+
3449.0	1	2.0	8.966	130.0	10.484	GT = 138.97	JENDL-3.2
3449.0		(1.0)			10.3 ± 0.8		82MACKLIN
3463.0	0	0.0	99.57	130.0	14.096	GT = 229.57	JENDL-3.2
3463.0		(1.0)			14.4 ± 0.8		82MACKLIN
3463.0			P 14.0 ±11.0	(130.0)			83MIZUMOTO+
3505.0	1	2.0	15.45	130.0	17.261	GT = 145.45	JENDL-3.2
3505.0		(1.0)			17.2 ± 1.4		82MACKLIN

AG-109 9

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
3510.0 3510.0 3510.0	0	1.0 (1.0)	82.0 93.0 ±12.0	213.3 (130.0)	30.054 29.8 ± 1.3	GT = 175.3	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3516.0 3516.0	1	2.0 (1.0)	3.604	130.0	4.3835 4.4 ± 0.8	GT = 133.8	JENDL-3.2 82MACKLIN
3531.0 3531.0 3531.0	0	0.0 (1.0)	92.0 35.0 ±11.0	460.0 (130.0)	19.167 19.1 ± 0.7	GT = 552.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3540.0 3540.0	1	1.0 (1.0)	11.17	130.0	7.7148 7.7 ± 0.8	GT = 141.17	JENDL-3.2 82MACKLIN
3545.0 3545.0 3545.0	0	1.0 (1.0)	93.33 142.0 ±17.0	206.7 (130.0)	48.223 48.7 ± 1.2	GT = 300.03	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3559.0 3559.0	1	2.0 (1.0)	4.042	130.0	4.9001 4.9 ± 0.4	GT = 134.04	JENDL-3.2 82MACKLIN
3576.0 3576.0	1	2.0 (1.0)	4.656	130.0	5.6188 5.6 ± 0.6	GT = 134.66	JENDL-3.2 82MACKLIN
3584.0 3584.0 3584.0	0	1.0 (1.0)	24.19 14.0 ±11.0	130.0 (130.0)	15.296 16.1 ± 0.7	GT = 154.19	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3616.0 3616.0	1	2.0 (1.0)	22.29	130.0	23.784 23.7 ± 4.4	GT = 152.29	JENDL-3.2 82MACKLIN
3618.0 3618.0 3618.0	0	0.0 (1.0)	2200.0 (553.5) 1110.0 ±80.0	360.0 119.3 ± 9.7 (130.0)	77.344 77.0 ± 5.4	GT = 2560.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3632.0 3631.0 3632.0	0	0.0 (1.0)	50.0 25.0 ±12.0	1000.0 (130.0)	11.905 11.9 ± 0.6	GT = 1050.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3649.0 3649.0 3649.0	0	1.0 (1.0)	93.33 135.0 ±17.0	73.33 (130.0)	30.799 30.1 ± 1.0	GT = 166.66	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3663.0 3663.0 3663.0	0	0.0 (1.0)	150.0 75.0 ±14.0	960.0 (130.0)	32.432 32.4 ± 1.0	GT = 1110.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3680.0 3680.0	1	2.0 (1.0)	2.787	130.0	3.4106 3.4 ± 0.4	GT = 132.79	JENDL-3.2 82MACKLIN
3696.0 3696.0 3696.0	0	0.0 (1.0)	138.0 69.0 ±14.0	1360.0 (130.0)	31.322 31.3 ± 1.0	GT = 1498.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3717.0 3717.0	1	2.0 (1.0)	13.22	130.0	15.0 15.0 ± 0.7	GT = 143.22	JENDL-3.2 82MACKLIN
3743.0 3743.0	1	1.0 (1.0)	23.08	130.0	14.7 14.8 ± 0.7	GT = 153.08	JENDL-3.2 82MACKLIN
3763.0 3763.0	1	0.0 (1.0)	147.2	130.0	17.258 17.2 ± 0.7	GT = 277.2	JENDL-3.2 82MACKLIN
3783.0 3783.0	1	1.0 (1.0)	21.97	130.0	14.095 14.0 ± 0.7	GT = 151.97	JENDL-3.2 82MACKLIN
3797.0 3797.0	1	2.0 (1.0)	14.07	130.0	15.87 15.9 ± 0.8	GT = 144.07	JENDL-3.2 82MACKLIN
3805.0 3805.0	1	2.0 (1.0)	5.331	130.0	6.4012 6.4 ± 0.7	GT = 135.33	JENDL-3.2 82MACKLIN
3817.0 3817.0	1	2.0 (1.0)	4.977	130.0	5.9919 6.0 ± 1.1	GT = 134.98	JENDL-3.2 82MACKLIN
3822.0 3823.0 3822.0	0	1.0 (1.0)	53.06 46.0 ±14.0	130.0 (130.0)	28.26 29.1 ± 1.2	GT = 183.06	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3837.0 3837.0 3837.0	0	1.0 (1.0)	53.33 67.0 ±15.0	346.7 (130.0)	34.665 34.7 ± 1.1	GT = 400.03	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3861.0 3861.0	1	1.0 (1.0)	33.66	130.0	20.053 20.0 ± 0.8	GT = 163.66	JENDL-3.2 82MACKLIN
3872.0 3872.0	1	1.0 (1.0)	38.12	130.0	22.107 22.1 ± 0.9	GT = 168.12	JENDL-3.2 82MACKLIN
3883.0 3883.0	1	2.0 (1.0)	6.305	130.0	7.5187 7.5 ± 0.9	GT = 136.3	JENDL-3.2 82MACKLIN
3893.0 3893.0 3893.0	0	1.0 (1.0)	360.0 (268.9) 540.0 ±40.0	186.7 184.8 ± 7.1 (130.0)	92.206 91.4 ± 1.8	GT = 546.7	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3902.0 3902.0	1	0.0 (1.0)	137.6	130.0	16.712 16.7 ± 1.2	GT = 267.6	JENDL-3.2 82MACKLIN
3910.0 3910.0 3910.0	0	0.0 (1.0)	800.0 (400.0) 800.0 ±60.0	380.0 124.7 ± 3.6 (130.0)	64.407 75.8 ± 1.7	GT = 1180.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3926.0 3926.0 3925.0	0	0.0 (1.0)	173.3 26.0 ±14.0	130.0 (130.0)	18.57 18.5 ± 0.9	GT = 303.3	JENDL-3.2 82MACKLIN 83MIZUMOTO+

AG-109 10

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
3953.0 3953.0	1	0.0 (1.0)	24.0	130.0	12.7 ± 0.8	GT = 338.0	JENDL-3.2 82MACKLIN
3963.0 3963.0 3963.0	0	1.0 (1.0)	24.19 S 30.0 ±14.0	130.0 (130.0)	15.296 15.1 ± 0.9	GT = 154.19	JENDL-3.2 82MACKLIN 83MIZUMOTO+
3989.0 3989.0	1	1.0 (1.0)	24.0	130.0	9.9 ± 1.5	GT = 338.0	JENDL-3.2 82MACKLIN
3995.0 3995.0 3995.0	0	0.0 (1.0)	1100.0 (274.9) S 550.0 ±40.0	460.0 148.1 ± 8.2 (130.0)	81.09 79.1 ± 2.1	GT = 1560.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4007.0 4007.0	1	1.0 (1.0)	28.38	130.0	16.437 16.5 ± 0.9	GT = 156.38	JENDL-3.2 82MACKLIN
4019.0 4019.0 4019.0	0	1.0 (1.0)	85.33 S 128.0 ±16.0	193.3 (130.0)	44.398 44.8 ± 1.4	GT = 278.63	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4037.0 4037.0 4037.0	0	1.0 (1.0)	30.67 S 46.0 ±14.0	100.0 (130.0)	17.604 17.8 ± 1.6	GT = 130.67	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4043.0 4043.0 4043.0	0	0.0 (1.0)	108.0 S 54.0 ±14.0	1220.0 (130.0)	24.804 24.8 ± 1.4	GT = 1328.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4051.0 4051.0	1	1.0 (1.0)	3.88	130.0	2.684 2.7 ± 0.8	GT = 133.88	JENDL-3.2 82MACKLIN
4061.0 4061.0 4061.0	0	1.0 (1.0)	73.33 S 110.0 ±15.0	246.7 (130.0)	42.395 43.2 ± 1.4	GT = 320.03	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4071.0 4071.0	1	2.0 (1.0)	4.296	130.0	5.1982 5.2 ± 0.7	GT = 134.3	JENDL-3.2 82MACKLIN
4081.0 4081.0 4081.0	0	0.0 (1.0)	380.0 (90.3) S 180.0 ±18.0	500.0 165.1 ±22.5 (130.0)	52.326 52.2 ± 1.5	GT = 860.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4091.0 4091.0 4091.0	0	0.0 (1.0)	94.0 S 47.0 ±13.0	38.0 (130.0)	6.7552 6.8 ± 0.7	GT = 132.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4104.0 4104.0 4104.0	0	1.0 (1.0)	506.7 S 760.0 ±60.0	193.3 (130.0)	104.94 105.1 ± 2.2	GT = 700.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4112.0 4112.0	1	0.0 (1.0)	95.79	130.0	13.786 13.8 ± 1.3	GT = 225.79	JENDL-3.2 82MACKLIN
4125.0 4124.0 4125.0	0	1.0 (1.0)	28.55 S 32.0 ±13.0	130.0 (130.0)	18.058 18.2 ± 0.9	GT = 159.55	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4148.0 4148.0	1	2.0 (1.0)	3.53	130.0	4.2959 4.3 ± 0.6	GT = 133.53	JENDL-3.2 82MACKLIN
4158.0 4158.0	1	2.0 (1.0)	8.305	130.0	7.5167 7.7 ± 0.7	GT = 138.3	JENDL-3.2 82MACKLIN
4178.0 4178.0 4178.0	0	0.0 (1.0)	220.0 S 52.0 ±14.0	280.0 (130.0)	30.8 30.1 ± 1.5	GT = 500.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4184.0 4184.0	1	2.0 (1.0)	6.987	130.0	8.2883 8.2 ± 1.0	GT = 136.99	JENDL-3.2 82MACKLIN
4208.0 4208.0	1	0.0 (1.0)	19.8	130.0	4.2957 4.3 ± 0.6	GT = 149.8	JENDL-3.2 82MACKLIN
4223.0 4223.0 4223.0	0	0.0 (1.0)	400.0 S 201.0 ±21.0	134.0 (130.0)	25.094 25.1 ± 1.3	GT = 534.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4237.0 4237.0 4237.0	0	1.0 (1.0)	117.2 (158.9) S 318.0 ±30.0	130.0 150.5 ±11.6 (130.0)	46.226 86.0 ± 2.1	GT = 247.2	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4244.0 4244.0	0	1.0 (1.0)	72.22	130.0	34.821 34.3 ± 2.3	GT = 202.22	JENDL-3.2 82MACKLIN
4267.0 4267.0	1	2.0 (1.0)	13.22	130.0	15.0 15.0 ± 1.4	GT = 143.22	JENDL-3.2 82MACKLIN
4278.0 4278.0	1	2.0 (1.0)	27.18	130.0	28.1 28.1 ± 1.4	GT = 157.18	JENDL-3.2 82MACKLIN
4287.0 4287.0	1	2.0 (1.0)	21.16	130.0	22.747 22.7 ± 1.3	GT = 151.16	JENDL-3.2 82MACKLIN
4298.0 4298.0	0	0.0 (1.0)	1993.0	130.0	30.51 30.5 ± 1.3	GT = 2123.0	JENDL-3.2 82MACKLIN
4310.0 4310.0	1	0.0 (1.0)	18.88	130.0	4.1214 4.1 ± 0.7	GT = 148.88	JENDL-3.2 82MACKLIN
4320.0 4320.0	1	2.0 (1.0)	13.51	130.0	15.298 15.4 ± 1.5	GT = 143.51	JENDL-3.2 82MACKLIN
4327.0 4327.0	1	1.0 (1.0)	27.43	130.0	16.988 17.1 ± 1.3	GT = 157.43	JENDL-3.2 82MACKLIN
4348.0	1	1.0	28.38	130.0	16.437	GT = 158.38	JENDL-3.2

AG-109 11

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4348.0		(1.0)			16.5 ± 1.0		82MACKLIN
4375.0	1	0.0	33.91	130.0	6.7237	GT = 163.91	JENDL-3.2
4375.0		(1.0)			6.7 ± 0.7		82MACKLIN
4405.0	0	1.0	286.7	193.3	84.054	GT = 480.0	JENDL-3.2
4404.0		(1.0)			84.3 ± 1.9		82MACKLIN
4405.0			S 395.0 ±32.0	(130.0)			83MIZUMOTO+
4425.0	1	1.0	10.88	130.0	7.517	GT = 140.88	JENDL-3.2
4425.0		(1.0)			7.5 ± 0.8		82MACKLIN
4436.0	0	0.0	92.0	220.0	16.218	GT = 312.0	JENDL-3.2
4436.0		(1.0)			16.1 ± 0.9		82MACKLIN
4436.0			S 46.0 ±15.0	(130.0)			83MIZUMOTO+
4457.0	0	1.0	44.28	130.0	24.764	GT = 174.28	JENDL-3.2
4458.0		(1.0)			24.8 ± 1.1		82MACKLIN
4457.0			S 79.0 ±17.0	(130.0)			83MIZUMOTO+
4473.0	1	2.0	5.812	130.0	6.7247	GT = 135.81	JENDL-3.2
4473.0		(1.0)			6.7 ± 0.7		82MACKLIN
4484.0	1	2.0	8.965	130.0	10.484	GT = 138.97	JENDL-3.2
4484.0		(1.0)			10.5 ± 0.8		82MACKLIN
4500.0	1	2.0	10.54	130.0	12.187	GT = 140.54	JENDL-3.2
4500.0		(1.0)			12.2 ± 1.8		82MACKLIN
4507.0	0	0.0	620.0	400.0	80.784	GT = 1020.0	JENDL-3.2
4507.0		(1.0)	(154.4)	132.6 ± 9.5	80.5 ± 2.1		82MACKLIN
4507.0			S 309.0 ±27.0	(130.0)			83MIZUMOTO+
4530.0	1	0.0	92.08	130.0	13.475	GT = 222.08	JENDL-3.2
4530.0		(1.0)			13.5 ± 1.5		82MACKLIN
4538.0	0	0.0	220.0	540.0	39.079	GT = 760.0	JENDL-3.2
4537.0		(1.0)			38.9 ± 1.6		82MACKLIN
4538.0			S 110.0 ±18.0	(130.0)			83MIZUMOTO+
4568.0	1	1.0	15.68	130.0	10.482	GT = 145.88	JENDL-3.2
4568.0		(1.0)			10.6 ± 0.9		82MACKLIN
4581.0	0	0.0	780.0	900.0	104.46	GT = 1680.0	JENDL-3.2
4582.0		(1.0)			103.9 ± 2.2		82MACKLIN
4581.0			S 388.0 ±32.0	(130.0)			83MIZUMOTO+
4611.0	0	1.0	22.0	20.67	7.9929	GT = 42.67	JENDL-3.2
4611.0		(1.0)			8.0 ± 0.6		82MACKLIN
4611.0			S 33.0 ±18.0	(130.0)			83MIZUMOTO+
4622.0	1	2.0	2.862	130.0	3.5004	GT = 132.86	JENDL-3.2
4622.0		(1.0)			3.5 ± 0.6		82MACKLIN
4634.0	1	1.0	10.88	130.0	7.517	GT = 140.88	JENDL-3.2
4634.0		(1.0)			7.7 ± 0.8		82MACKLIN
4652.0	1	2.0	18.05	130.0	19.812	GT = 148.05	JENDL-3.2
4652.0		(1.0)			19.7 ± 1.3		82MACKLIN
4664.0	0	0.0	560.0	640.0	74.867	GT = 1200.0	JENDL-3.2
4662.0		(1.0)			74.4 ± 1.7		82MACKLIN
4664.0			S 284.0 ±28.0	(130.0)			83MIZUMOTO+
4676.0	1	1.0	3.421	130.0	2.5	GT = 133.42	JENDL-3.2
4676.0		(1.0)			2.5 ± 0.6		82MACKLIN
4695.0	0	0.0	240.0	420.0	38.182	GT = 660.0	JENDL-3.2
4695.0		(1.0)			38.4 ± 1.3		82MACKLIN
4695.0			S 115.0 ±19.0	(130.0)			83MIZUMOTO+
4710.0	1	2.0	4.727	130.0	5.7014	GT = 134.73	JENDL-3.2
4710.0		(1.0)			5.7 ± 0.6		82MACKLIN
4740.0	0	1.0	41.94	130.0	23.782	GT = 171.94	JENDL-3.2
4739.0		(1.0)			24.3 ± 1.0		82MACKLIN
4740.0			S 75.0 ±18.0	(130.0)			83MIZUMOTO+
4755.0	0	0.0	300.0	130.0	22.674	GT = 430.0	JENDL-3.2
4754.0		(1.0)			22.6 ± 1.0		82MACKLIN
4755.0			S 147.0 ±21.0	(130.0)			83MIZUMOTO+
4784.0	0	1.0	53.08	130.0	28.28	GT = 183.08	JENDL-3.2
4785.0		(1.0)			28.7 ± 1.2		82MACKLIN
4784.0			S 48.0 ±17.0	(130.0)			83MIZUMOTO+
4782.0	0	1.0	47.33	48.67	17.996	GT = 96.0	JENDL-3.2
4783.0		(1.0)			17.9 ± 1.3		82MACKLIN
4782.0			S 71.0 ±18.0	(130.0)			83MIZUMOTO+
4792.0	0	1.0	146.7	140.0	53.727	GT = 286.7	JENDL-3.2
4792.0		(1.0)	(109.0)	142.2 ±15.4	53.9 ± 1.5		82MACKLIN
4792.0			S 218.0 ±24.0	(130.0)			83MIZUMOTO+
4809.0	1	2.0	22.72	130.0	24.175	GT = 152.72	JENDL-3.2
4809.0		(1.0)			24.1 ± 1.0		82MACKLIN
4827.0	0	1.0	80.0	866.7	53.572	GT = 746.7	JENDL-3.2
4827.0		(1.0)			53.9 ± 1.8		82MACKLIN
4827.0			S 116.0 ±19.0	(130.0)			83MIZUMOTO+
4837.0	0	0.0	8320.0	130.0	32.0	GT = 8450.0	JENDL-3.2
4837.0		(1.0)			32.0 ± 1.4		82MACKLIN
4872.0	1	1.0	6.753	130.0	4.8146	GT = 136.75	JENDL-3.2
4872.0		(1.0)			4.8 ± 0.6		82MACKLIN

AG-109 12

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4887.0 4887.0	1	2.0 (1.0)	14.9	130.0	16.71 16.8 ± 1.5	GT = 144.9	JENDL-3.2 82MACKLIN
4897.0 4896.0 4897.0	0	0.0 (1.0)	1700.0 (422.6) B 850.0 ±60.0	480.0 158.1 ± 4.9 (130.0)	93.578 92.6 ± 2.1	GT = 2180.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4917.0 4917.0 4917.0	0	1.0 (1.0)	82.11 B 60.0 ±19.0	130.0 (130.0)	37.743 38.6 ± 1.3	GT = 212.11	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4948.0 4948.0 4948.0	0	1.0 (1.0)	85.67 B 128.0 ±21.0	866.7 (130.0)	57.524 57.5 ± 1.5	GT = 753.37	JENDL-3.2 82MACKLIN 83MIZUMOTO+
4963.0 4963.0	1	0.0 (1.0)	354.5	130.0	23.78 23.7 ± 1.1	GT = 484.5	JENDL-3.2 82MACKLIN
4974.0 4974.0	1	2.0 (1.0)	3.604	130.0	4.3835 4.4 ± 0.7	GT = 133.6	JENDL-3.2 82MACKLIN
4996.0 4996.0	1	1.0 (1.0)	28.9	130.0	16.716 16.8 ± 0.9	GT = 158.9	JENDL-3.2 82MACKLIN
5016.0 5016.0	1	2.0 (1.0)	15.72	130.0	17.53 17.6 ± 0.9	GT = 145.72	JENDL-3.2 82MACKLIN
5031.0 5031.0	1	2.0 (1.0)	14.35	130.0	16.154 16.2 ± 1.0	GT = 144.35	JENDL-3.2 82MACKLIN
5041.0 5041.0	1	1.0 (1.0)	18.83	130.0	11.176 11.3 ± 0.9	GT = 148.83	JENDL-3.2 82MACKLIN
5058.0 5057.0 5058.0	0	1.0 (1.0)	86.67 B 104.0 ±24.0	148.7 (130.0)	34.379 34.2 ± 2.1	GT = 213.37	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5067.0 5067.0 5067.0	0	1.0 (1.0)	180.0 (135.7) B 271.0 ±31.0	140.0 138.8 ±14.6 (130.0)	59.062 58.9 ± 2.4	GT = 320.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5074.0 5074.0	1	2.0 (1.0)	17.03	130.0	18.822 18.7 ± 2.2	GT = 147.03	JENDL-3.2 82MACKLIN
5095.0 5094.0 5095.0	0	1.0 (1.0)	253.3 B 380.0 ±40.0	246.7 (130.0)	93.734 94.2 ± 2.2	GT = 500.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5108.0 5108.0	1	2.0 (1.0)	22.29	130.0	23.784 23.7 ± 1.2	GT = 152.29	JENDL-3.2 82MACKLIN
5138.0 5138.0 5138.0	0	1.0 (1.0)	100.0 B 149.0 ±25.0	433.3 (130.0)	60.937 61.0 ± 1.9	GT = 533.3	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5151.0 5151.0 5151.0	0	1.0 (1.0)	88.14 B 97.0 ±24.0	130.0 (130.0)	39.395 41.2 ± 1.8	GT = 218.14	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5168.0 5168.0	1	1.0 (1.0)	37.63	130.0	21.887 21.8 ± 1.2	GT = 167.63	JENDL-3.2 82MACKLIN
5187.0 5187.0	1	2.0 (1.0)	5.154	130.0	6.1968 6.2 ± 0.9	GT = 135.15	JENDL-3.2 82MACKLIN
5198.0 5198.0	1	2.0 (1.0)	18.8	130.0	20.531 20.5 ± 1.7	GT = 148.8	JENDL-3.2 82MACKLIN
5209.0 5209.0 5209.0	0	1.0 (1.0)	120.0 B 178.0 ±28.0	193.3 (130.0)	55.528 55.4 ± 1.9	GT = 313.3	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5218.0 5218.0	1	2.0 (1.0)	10.54	130.0	12.187 12.3 ± 1.4	GT = 140.54	JENDL-3.2 82MACKLIN
5239.0 5239.0	1	2.0 (1.0)	1.955	130.0	2.4075 2.4 ± 0.8	GT = 131.96	JENDL-3.2 82MACKLIN
5265.0 5265.0	1	0.0 (1.0)	30.83	130.0	6.1973 6.2 ± 0.7	GT = 160.83	JENDL-3.2 82MACKLIN
5277.0 5277.0	1	1.0 (1.0)	16.83	130.0	11.176 11.2 ± 0.9	GT = 146.83	JENDL-3.2 82MACKLIN
5290.0 5290.0	0	1.0 (1.0)	91.0	130.0	40.147 40.3 ± 1.4	GT = 221.0	JENDL-3.2 82MACKLIN
5304.0 5304.0	1	0.0 (1.0)	124.1	130.0	15.873 15.9 ± 1.5	GT = 254.1	JENDL-3.2 82MACKLIN
5313.0 5313.0	1	2.0 (1.0)	38.1	130.0	36.831 37.0 ± 1.4	GT = 168.1	JENDL-3.2 82MACKLIN
5331.0 5331.0	1	2.0 (1.0)	26.8	130.0	27.774 27.8 ± 2.3	GT = 156.8	JENDL-3.2 82MACKLIN
5338.0 5338.0 5338.0	0	0.0 (1.0)	178.0 B 89.0 ±24.0	360.0 (130.0)	29.777 29.5 ± 1.7	GT = 538.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5355.0 5354.0 5355.0	0	0.0 (1.0)	760.0 B 380.0 ±40.0	1040.0 (130.0)	109.78 107.3 ± 2.2	GT = 1800.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5366.0 5366.0	0	1.0 (1.0)	200.0	44.67	27.386 27.3 ± 1.8	GT = 244.67	JENDL-3.2 82MACKLIN

AG-109

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
5366.0			B310.0 ±40.0	(130.0)			83MIZUMOTO+
5373.0 5373.0	1	1.0 (1.0)	27.43	130.0	16.988 17.0 ± 1.7	GT = 157.43	JENDL-3.2 82MACKLIN
5395.0 5395.0	1	0.0 (1.0)	278.5	130.0	22.108 22.0 ± 1.2	GT = 406.5	JENDL-3.2 82MACKLIN
5405.0 5405.0	1	1.0 (1.0)	35.17	130.0	20.761 20.7 ± 1.2	GT = 165.17	JENDL-3.2 82MACKLIN
5425.0 5425.0	1	2.0 (1.0)	4.296	130.0	5.1982 5.2 ± 0.7	GT = 134.3	JENDL-3.2 82MACKLIN
5454.0 5452.0 5454.0	0	0.0 (1.0)	640.0 (158.0) B320.0 ±40.0	560.0 186.5 ±18.3 (130.0)	74.667 74.2 ± 1.8	GT = 1200.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5470.0 5470.0	1	1.0 (1.0)	49.83	130.0	26.938 26.9 ± 2.4	GT = 179.83	JENDL-3.2 82MACKLIN
5479.0 5477.0 5479.0	0	0.0 (1.0)	860.0 (215.5) B430.0 ±50.0	400.0 134.2 ± 8.6 (130.0)	68.254 68.6 ± 2.4	GT = 1260.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5486.0 5486.0	1	2.0 (1.0)	14.07	130.0	15.87 15.8 ± 2.1	GT = 144.07	JENDL-3.2 82MACKLIN
5496.0 5495.0 5496.0	0	1.0 (1.0)	113.0 B300.0 ±40.0	130.0 (130.0)	45.34 48.8 ± 1.8	GT = 243.0 COM=1.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5508.0 5506.0	1	1.0 (1.0)	22.53	130.0	14.402 14.4 ± 1.3	GT = 152.53	JENDL-3.2 82MACKLIN
5514.0 5514.0	1	2.0 (1.0)	5.331	130.0	6.4012 6.4 ± 1.3	GT = 135.33	JENDL-3.2 82MACKLIN
5530.0 5530.0	1	0.0 (1.0)	88.45	130.0	13.159 13.1 ± 0.9	GT = 218.45	JENDL-3.2 82MACKLIN
5546.0 5546.0	1	1.0 (1.0)	16.83	130.0	11.176 11.1 ± 0.8	GT = 146.83	JENDL-3.2 82MACKLIN
5573.0 5573.0 5573.0	0	0.0 (1.0)	280.0 B136.0 ±29.0	780.0 (130.0)	51.509 50.4 ± 1.5	GT = 1060.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5596.0 5596.0 5596.0	0	1.0 (1.0)	46.87 B 41.0 ±26.0	100.0 (130.0)	23.865 24.1 ± 1.1	GT = 146.87	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5614.0 5614.0	1	0.0 (1.0)	68.16	130.0	11.179 11.1 ± 1.1	GT = 198.16	JENDL-3.2 82MACKLIN
5632.0 5631.0 5632.0	0	0.0 (1.0)	340.0 B167.0 ±31.0	720.0 (130.0)	57.736 57.9 ± 1.9	GT = 1060.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5650.0 5649.0 5650.0	0	0.0 (1.0)	1260.0 (313.0) B630.0 ±60.0	420.0 138.3 ± 8.0 (130.0)	78.75 77.9 ± 2.2	GT = 1680.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5661.0 5661.0	1	1.0 (1.0)	9.63	130.0	6.7244 6.8 ± 1.2	GT = 139.63	JENDL-3.2 82MACKLIN
5674.0 5674.0	1	0.0 (1.0)	402.7	130.0	24.589 24.6 ± 2.1	GT = 532.7	JENDL-3.2 82MACKLIN
5685.0 5683.0 5685.0	0	0.0 (1.0)	260.0 B132.0 ±30.0	172.0 (130.0)	25.88 26.0 ± 3.0	GT = 432.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5688.0 5688.0	0	0.0 (1.0)	1430.0	130.0	29.792 30.1 ± 2.8	GT = 1560.0	JENDL-3.2 82MACKLIN
5700.0 5700.0 5700.0	0	0.0 (1.0)	300.0 B133.0 ±31.0	580.0 (130.0)	48.837 59.3 ± 2.1	GT = 880.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5713.0 5713.0	0	1.0 (1.0)	82.11	130.0	37.743 37.9 ± 1.7	GT = 212.11	JENDL-3.2 82MACKLIN
5731.0 5730.0 5731.0	0	1.0 (1.0)	213.3 (162.0) B320.0 ±40.0	186.7 189.9 ±20.8 (130.0)	74.668 75.8 ± 2.2	GT = 400.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5743.0 5743.0	1	1.0 (1.0)	25.28	130.0	15.873 16.0 ± 1.9	GT = 155.28	JENDL-3.2 82MACKLIN
5751.0 5751.0	0	1.0 (1.0)	85.17	130.0	38.593 38.6 ± 2.7	GT = 215.17	JENDL-3.2 82MACKLIN
5760.0 5751.0 5760.0	0	1.0 (1.0)	133.3 B200.0 ±40.0	193.3 (130.0)	59.171 60.3 ± 2.3	GT = 326.6	JENDL-3.2 82MACKLIN 83MIZUMOTO+
5780.0 5780.0	1	1.0 (1.0)	18.0	130.0	11.858 11.7 ± 1.0	GT = 148.0	JENDL-3.2 82MACKLIN
5797.0 5797.0	1	1.0 (1.0)	50.93	130.0	27.445 27.5 ± 1.4	GT = 180.93	JENDL-3.2 82MACKLIN
5820.0 5820.0	1	1.0 (1.0)	3.68	130.0	2.684 2.7 ± 0.9	GT = 133.68	JENDL-3.2 82MACKLIN
5840.0	1	1.0	45.17	130.0	25.142	GT = 175.17	JENDL-3.2

AG-109 14

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
5840.0		(1.0)			25.1 ± 1.7		82MACKLIN
5850.0 5850.0	1	2.0 (1.0)	9.918	130.0	11.519 11.5 ± 1.5	GT = 139.92	JENDL-3.2 82MACKLIN
5886.0 5888.0	1	2.0 (1.0)	11.15	130.0	12.837 12.7 ± 1.5	GT = 141.15	JENDL-3.2 82MACKLIN
5881.0 5881.0	0	1.0 (1.0)	200.0	130.0	59.091 59.2 ± 2.3	GT = 330.0	JENDL-3.2 82MACKLIN
5899.0 5899.0	0	1.0 (1.0)	88.14	130.0	39.395 39.5 ± 2.0	GT = 218.14	JENDL-3.2 82MACKLIN
5912.0 5912.0	1	0.0 (1.0)	526.0	130.0	26.059 26.1 ± 1.9	GT = 656.0	JENDL-3.2 82MACKLIN
5921.0 5921.0	1	2.0 (1.0)	17.29	130.0	19.075 19.2 ± 2.4	GT = 147.29	JENDL-3.2 82MACKLIN
5942.0 5942.0	1	2.0 (1.0)	18.55	130.0	20.292 20.4 ± 1.8	GT = 148.55	JENDL-3.2 82MACKLIN
5953.0 5953.0	1	2.0 (1.0)	22.29	130.0	23.784 23.7 ± 1.8	GT = 152.29	JENDL-3.2 82MACKLIN
5985.0 5985.0	1	0.0 (1.0)	33.15	130.0	6.6036 6.6 ± 2.1	GT = 163.15	JENDL-3.2 82MACKLIN
5995.0 5994.0 5995.0	0	0.0 (1.0)	560.0 [142.0] [280.0 ±50.0	560.0 183.6 ±28.4 (130.0)	70.0 69.9 ± 2.8	GT = 1120.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6007.0 6007.0	1	1.0 (1.0)	29.02	130.0	17.793 17.7 ± 2.0	GT = 159.02	JENDL-3.2 82MACKLIN
6018.0 6018.0	1	0.0 (1.0)	796.2	130.0	27.938 28.0 ± 2.0	GT = 926.2	JENDL-3.2 82MACKLIN
6043.0 6040.0 6043.0	0	0.0 (1.0) [160.0 ±40.0	320.0	1420.0 (130.0)	65.287 63.8 ± 2.8	GT = 1740.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6054.0 6053.0 6054.0	0	1.0 (1.0) [120.0 ±40.0	80.0	240.0 (130.0)	45.0 44.5 ± 2.2	GT = 320.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6071.0 6071.0	1	1.0 (1.0)	44.71	130.0	24.951 25.0 ± 5.0	GT = 174.71	JENDL-3.2 82MACKLIN
6081.0 6081.0	1	2.0 (1.0)	28.99	130.0	27.937 27.9 ± 3.4	GT = 158.99	JENDL-3.2 82MACKLIN
6101.0 6100.0 6101.0	0	1.0 (1.0) [510.0 ±60.0	340.0	240.0 (130.0)	105.52 105.3 ±10.5	GT = 580.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6136.0 6136.0	1	0.0 (1.0)	303.3	130.0	22.749 22.7 ± 5.5	GT = 433.3	JENDL-3.2 82MACKLIN
6146.0 6146.0	0	1.0 (1.0)	123.0	130.0	47.401 47.3 ± 5.2	GT = 253.0	JENDL-3.2 82MACKLIN
6161.0 6161.0	0	1.0 (1.0)	65.8	130.0	32.699 32.7 ± 4.3	GT = 195.8	JENDL-3.2 82MACKLIN
6179.0 6179.0	0	1.0 (1.0)	54.32	130.0	28.734 28.8 ± 5.8	GT = 184.32	JENDL-3.2 82MACKLIN
6188.0 6188.0	1	0.0 (1.0)	564.4	130.0	26.416 26.5 ± 5.0	GT = 694.4	JENDL-3.2 82MACKLIN
6206.0 6206.0	0	1.0 (1.0)	119.2	130.0	46.637 46.8 ± 5.0	GT = 249.2	JENDL-3.2 82MACKLIN
6221.0 6221.0	1	0.0 (1.0)	564.4	130.0	26.416 26.5 ± 3.7	GT = 694.4	JENDL-3.2 82MACKLIN
6235.0 6235.0	1	0.0 (1.0)	237.1	130.0	20.991 20.9 ± 3.8	GT = 367.1	JENDL-3.2 82MACKLIN
6248.0 6248.0	0	1.0 (1.0)	85.17	130.0	38.593 38.5 ± 4.0	GT = 215.17	JENDL-3.2 82MACKLIN
6272.0 6272.0	0	1.0 (1.0)	72.22	130.0	34.821 34.3 ± 4.1	GT = 202.22	JENDL-3.2 82MACKLIN
6292.0 6292.0	0	0.0 (1.0)	3120.0	130.0	31.2 31.0 ± 5.6	GT = 3250.0	JENDL-3.2 82MACKLIN
6309.0 6307.0 6309.0	0	0.0 (1.0) [230.0 ±40.0	460.0	1120.0 (130.0)	81.519 81.3 ± 8.6	GT = 1580.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6324.0 6323.0 6324.0	0	1.0 (1.0) [280.0 ±40.0	186.7	106.7 (130.0)	50.923 70.0 ± 8.4	GT = 293.4	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6334.0 6334.0	0	1.0 (1.0)	61.18	130.0	31.201 31.4 ± 8.0	GT = 191.18	JENDL-3.2 82MACKLIN
6365.0 6363.0 6365.0	0	1.0 (1.0) [160.0 ±40.0	106.7	433.3 (130.0)	64.213 64.1 ± 3.3	GT = 540.0	JENDL-3.2 82MACKLIN 83MIZUMOTO+
6377.0	1	0.0	78.0	130.0	12.187	GT = 208.0	JENDL-3.2

AG-109 15

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WW5 (MILLI-EV)	MISCELLANEOUS	REFERENCE
6377.0		(1.0)			12.1 ± 2.5		82MACKLIN
6391.0	0	1.0	140.0	140.0	52.5	GT = 280.0	JENDL-3.2
6389.0		(1.0)	{105.0 }	141.1 ±31.5	52.7 ± 3.2		82MACKLIN
6391.0			*210.0 ±40.0	(130.0)			83MIZUMOTO+
6432.0	0	1.0	833.3	133.3	97.11	GT = 986.6	JENDL-3.2
6431.0		(1.0)	{623.5 }	151.9 ± 8.3	96.3 ± 4.4		82MACKLIN
6432.0			*1250.0 ±90.0	(130.0)			83MIZUMOTO+
6446.0	0	1.0	306.7	133.3	69.687	GT = 440.0	JENDL-3.2
6446.0		(1.0)			69.8 ± 4.2		82MACKLIN
6458.0	0	1.0	85.17	130.0	38.593	GT = 215.17	JENDL-3.2
6458.0		(1.0)			38.9 ± 5.0		82MACKLIN
6467.0	0	0.0	2240.0	480.0	98.824	GT = 2720.0	JENDL-3.2
6468.0		(1.0)	{560.0 }	161.3 ± 9.3	99.5 ± 4.6		82MACKLIN
6467.0			*1120.0 ±90.0	(130.0)			83MIZUMOTO+
6497.0	0	1.0	466.7	200.0	105.0	GT = 666.7	JENDL-3.2
6498.0		(1.0)			105.0 ± 4.2		82MACKLIN
6497.0			*710.0 ±70.0	(130.0)			83MIZUMOTO+
6509.0	0	1.0	68.68	130.0	33.704	GT = 198.68	JENDL-3.2
6509.0		(1.0)			33.4 ± 3.5		82MACKLIN
6531.0	1	0.0	103.4	130.0	14.398	GT = 233.4	JENDL-3.2
6531.0		(1.0)			14.5 ± 1.9		82MACKLIN
6552.0	0	1.0	203.4	130.0	59.483	GT = 333.4	JENDL-3.2
6552.0		(1.0)			59.5 ± 3.2		82MACKLIN
6576.0	0	1.0	153.3	186.7	59.895	GT = 320.0	JENDL-3.2
6576.0		(1.0)	{113.5 }	187.3 ±39.4	59.6 ± 3.3		82MACKLIN
6576.0			*230.0 ±50.0	(130.0)			83MIZUMOTO+
6607.0	0	1.0	246.7	213.3	85.795	GT = 460.0	JENDL-3.2
6606.0		(1.0)			84.6 ± 3.7		82MACKLIN
6607.0			*370.0 ±50.0	(130.0)			83MIZUMOTO+
6629.0	0	1.0	213.3	480.0	110.76	GT = 693.3	JENDL-3.2
6627.0		(1.0)			109.5 ± 3.9		82MACKLIN
6629.0			*320.0 ±50.0	(130.0)			83MIZUMOTO+
6646.0	1	0.0	402.7	130.0	24.589	GT = 532.7	JENDL-3.2
6646.0		(1.0)			24.6 ± 2.2		82MACKLIN
6659.0	1	0.0	50.09	130.0	9.0395	GT = 180.09	JENDL-3.2
6659.0		(1.0)			9.1 ± 2.5		82MACKLIN
6672.0	0	1.0	180.0	220.0	74.25	GT = 400.0	JENDL-3.2
6672.0		(1.0)			73.5 ± 3.5		82MACKLIN
6672.0			*270.0 ±50.0	(130.0)			83MIZUMOTO+
6691.0	1	0.0	111.4	130.0	14.998	GT = 241.4	JENDL-3.2
6691.0		(1.0)			15.1 ± 1.9		82MACKLIN
6705.0	0	1.0	72.22	130.0	34.821	GT = 202.22	JENDL-3.2
6705.0		(1.0)			34.7 ± 2.8		82MACKLIN
6716.0	1	0.0	167.8	130.0	18.313	GT = 297.8	JENDL-3.2
6716.0		(1.0)			18.2 ± 2.9		82MACKLIN
6729.0	0	0.0	240.0	560.0	42.0	GT = 800.0	JENDL-3.2
6729.0		(1.0)			41.9 ± 2.8		82MACKLIN
6729.0			*100.0 ±40.0	(130.0)			83MIZUMOTO+
6746.0	0	1.0	140.0	146.7	53.727	GT = 286.7	JENDL-3.2
6747.0		(1.0)	{106.0 }	147.3 ±35.5	54.1 ± 2.8		82MACKLIN
6748.0			*210.0 ±50.0	(130.0)			83MIZUMOTO+
6771.0	1	0.0	734.1	130.0	27.611	GT = 864.1	JENDL-3.2
6771.0		(1.0)			27.6 ± 2.2		82MACKLIN
6794.0	0	1.0	72.22	130.0	34.821	GT = 202.22	JENDL-3.2
6794.0		(1.0)			35.3 ± 2.3		82MACKLIN
6829.0	0	0.0	460.0	800.0	73.016	GT = 1260.0	JENDL-3.2
6828.0		(1.0)			74.0 ± 3.3		82MACKLIN
6829.0			*230.0 ±50.0	(130.0)			83MIZUMOTO+
6861.0	0	1.0	119.2	130.0	46.637	GT = 249.2	JENDL-3.2
6857.0		(1.0)			48.8 ± 3.3		82MACKLIN
6861.0			* 80.0 ±50.0	(130.0)			83MIZUMOTO+
6872.0	0	1.0	165.2	130.0	54.563	GT = 295.2	JENDL-3.2
6872.0		(1.0)			54.8 ± 3.2		82MACKLIN
6903.0	1	0.0	88.45	130.0	13.159	GT = 218.45	JENDL-3.2
6903.0		(1.0)			13.1 ± 2.7		82MACKLIN
6916.0	0	1.0	66.51	130.0	32.999	GT = 196.51	JENDL-3.2
6916.0		(1.0)			33.0 ± 2.9		82MACKLIN
6931.0	1	0.0	606.7	130.0	26.765	GT = 736.7	JENDL-3.2
6931.0		(1.0)			26.8 ± 3.3		82MACKLIN
6938.0	0	0.0	800.0	200.0	40.0	GT = 1000.0	JENDL-3.2
6941.0		(1.0)			41.1 ± 3.2		82MACKLIN
6938.0			*400.0 ±60.0	(130.0)			83MIZUMOTO+
6958.0	0	1.0	104.0	130.0	43.333	GT = 234.0	JENDL-3.2
6958.0		(1.0)			43.1 ± 2.0		82MACKLIN
6979.0	1	0.0	41.79	130.0	7.906	GT = 171.79	JENDL-3.2

AG-109

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
6979.0		(1.0)			7.8 ± 2.6		82MACKLIN
6992.0 6992.0	0	1.0 (1.0)	119.2	130.0	46.637 46.6 ± 3.3	GT = 249.2	JENDL-3.2 82MACKLIN
7007.0 7007.0	0	1.0 (1.0)	121.1	130.0	47.022 47.1 ± 3.4	GT = 251.1	JENDL-3.2 82MACKLIN
7022.0 7022.0	1	0.0 (1.0)	429.8	130.0	24.953 24.9 ± 3.8	GT = 559.8	JENDL-3.2 82MACKLIN
7031.0 7031.0	0	1.0 (1.0)	93.77	130.0	40.857 40.7 ± 4.1	GT = 223.77	JENDL-3.2 82MACKLIN
7043.0 7043.0	0	0.0 (1.0)	1040.0	130.0	28.889 28.9 ± 3.6	GT = 1170.0	JENDL-3.2 82MACKLIN
7059.0 7059.0	0	1.0 (1.0)	640.0	133.3	82.741 82.8 ± 3.9	GT = 773.3	JENDL-3.2 82MACKLIN
7086.0 7086.0	1	0.0 (1.0)	229.9	130.0	20.761 20.8 ± 2.3	GT = 359.9	JENDL-3.2 82MACKLIN
7105.0 7105.0	0	0.0 (1.0)	1080.0	400.0	72.973 73.0 ± 3.6	GT = 1480.0	JENDL-3.2 82MACKLIN

47-Ag-110m

Half Life		:249.79 d
Spin-Parity	:0^+	
Potential Scattering Radius		:6.6 fm
Cross Sections of 2200 m/s for Total		:88.47 b
	Elastic	:6.470 b
	Capture	:82.00 b
Maxwellian Average Capture Cross Section		:71.86 b
Resonance Integral of Capture		:93.88 b

Resolved resonance region (MLBW formula) : below 0.125 keV. Most parameters were based on the experiments by Anufriev et al.[1] Average radiation width of 148 meV[1] was adopted. Total spin J was tentatively estimated with a random number method. Neutron orbital angular momentum ℓ was estimated with a method of Bollinger and Thomas[2]. A negative resonance at -2 eV was added so as to reproduce the thermal capture cross sections given by Mughabghab et al.[3]

References:
1) Anufriev V.A. et al.: Atom. Energiya, **53**, 29 (1982).
2) Bollinger L.M. and Thomas G.E.: Phys. Rev., **171**,1293(1968).
3) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).

References of Table:
82ANUFRIEV+:Anufriev V.A. et al.:Atom. Energiya, **53**, 29 (1982).
JENDL-3.2:Nakagaw, T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

AG-110 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
-2.0	0	6.5	1.42	148.0	GT = 149.42	JENDL-3.2
11.54 11.54 ± 0.05	0	6.5	0.2414 B 0.26 ± 0.05	133.0 133 ±45	GT = 133.24 WGO- 0.076± 0.015	JENDL-3.2 82ANUFRIEV+
19.45 19.45 ± 0.13	0	5.5	1.235 B 1.14 ± 0.25	224.0 224 ±41	GT = 225.23 WGO- 0.26 ± 0.04	JENDL-3.2 82ANUFRIEV+
21.2 21.20 ± 0.15	0	6.5	1.207 B 1.3 ± 0.2	168.0 168 ±36	GT = 169.21 WGO- 0.28 ± 0.04	JENDL-3.2 82ANUFRIEV+
26.5 26.5 ± 0.2	0	6.5	0.5107 B 0.55 ± 0.12	90.0 90 ±11	GT = 90.511 WGO- 0.11 ± 0.02	JENDL-3.2 82ANUFRIEV+
45.7 45.7 ± 0.5	0	5.5	1.3 B 1.2 ± 0.4	148.0 148	GT = 149.3 WGO- 0.18 ± 0.16	JENDL-3.2 82ANUFRIEV+
58.5 58.5 ± 0.7	0	5.5	0.9317 B 0.86 ± 0.42	148.0 148	GT = 148.93 WGO- 0.11 ± 0.06	JENDL-3.2 82ANUFRIEV+
62.5 62.5 ± 0.7	0	6.5	0.9564 B 1.03 ± 0.52	148.0 148	GT = 148.96 WGO- 0.13 ± 0.06	JENDL-3.2 82ANUFRIEV+
78.4 78.4 ± 1.1	0	5.5	1.192 B 1.1 ± 0.8	148.0 148	GT = 149.19 WGO- 0.12 ± 0.09	JENDL-3.2 82ANUFRIEV+
98.4 98.4 ± 1.5	0	6.5	2.971 B 3.2 ± 1.6	148.0 148	GT = 150.97 WGO- 0.32 ± 0.20	JENDL-3.2 82ANUFRIEV+
120.2 120.2 ± 1.9	0	5.5	3.358 B 3.1 ± 1.5	148.0 148	GT = 151.36 WGO- 0.28 ± 0.15	JENDL-3.2 82ANUFRIEV+
152 ± 3						82ANUFRIEV+

48-Cd-106

Abundance	:1.25%	
Spin-Parity	:0^+	
Potential Scattering Radius		:6.5 fm
Cross Sections of 2200 m/s for Total		:6.498 b
	Elastic	:5.522 b
	Capture	:0.9695 b
Maxwellian Average Capture Cross Section		:0.8593 b
Resonance Integral of Capture		:10.71 b

Resolved resonance region (MLBW formula) : below 700 eV. Resonance parameters were based on Mughabghab et al.[1] Neutron orbital angular momentum ℓ of some resonances was estimated with a method of Bollinger and Thomas[2]. Average radiation width of 0.153 eV was determined from the experimental data of Musgrove et al.[3] above 2.6 keV. Scattering radius of 6.5 fm was adopted from the systematics of measured values. A negative resonance was added so as to reproduce the thermal capture cross section given by Mughabghab et al.

References:

1) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).
2) Bollinger L.M. and Thomas G.E.: Phys. Rev., **171**,1293(1968).
3) Musgrove A.R. de L. et al.: J. Phys. pt G, **4**, 771 (1978).

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BNL325-4TH:Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).
FREITAG+76:Freitag K. et al. :Int. Conf. on Interactions of Neutrons with Nuclei, Lowell, Massachusetts, 6 - 9 July, 1976, p. 1390.
MUSGROVE+78:Musgrove A.R. de L. et al.: J. Phys. pt G, 4, 771 (1978).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

CD-106 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-100.0 -100	0	0.5	120.0	180.0 (180)	72.0	GT - 300.0 GNO-(12)	JENDL-3.2 BNL325-4TH
232.0 232 ± 2 232.0	1	0.5	0.49475	153.0	0.4931	GT - 153.5	JENDL-3.2 BNL325-4TH FREITAG+76
456.0 456 ± 2 456.0	0	0.5	110.0 110 ±40	153.0	83.99	GT - 253.0 GNO- 5.2 ± 1.9	JENDL-3.2 BNL325-4TH FREITAG+76
497.0 497 ±40	1	0.5	4.0 4 ± 3	153.0	3.898	GT - 157.0 GNO- 0.2 ± 0.1	JENDL-3.2 BNL325-4TH
630.0 630 ±10 633.0	0	0.5	830.0 830	153.0	129.2	GT - 983.0 GNO- 33	JENDL-3.2 BNL325-4TH FREITAG+76
879.0 879 ±10	1	0.5	3.6439	153.0	3.559	GT - 156.84	JENDL-3.2 BNL325-4TH
2647 ± 4 2647.0			500 ±250 300 ±150	360	210 ±12 210.0 ±12.0	GNO- 9.7 ± 4.9 WW1-(320.0)	BNL325-4TH MUSGROVE+76
2678 ± 4 2678.0					10 ± 1 10.0 ± 1.0		BNL325-4TH MUSGROVE+76
2766 ± 4 2766.0					18 ± 1 18.0 ± 1.0		BNL325-4TH MUSGROVE+76
2809 ± 4 2809.0					100 ± 5 100.0 ± 5.0		BNL325-4TH MUSGROVE+76
2855 ± 4 2855.0					38 ± 2 38.0 ± 2.0		BNL325-4TH MUSGROVE+76
2942 ± 4 2942.0					40 ± 2 40.0 ± 2.0		BNL325-4TH MUSGROVE+76
2965 ± 4 2965.0					76 ± 4 76.0 ± 4.0		BNL325-4TH MUSGROVE+76
3010 ± 5 3010.0			1000 ±200 1000 ±200	150 ±20	133 ± 7 133 ± 7	GNO- 18 ± 4 WW1- 153 ±10	BNL325-4TH MUSGROVE+76
3072 ± 5 3072.0					21 ± 1 21.0 ± 1.0		BNL325-4TH MUSGROVE+76
3106 ± 5 3106.0					11 ± 1 11.0 ± 1.0		BNL325-4TH MUSGROVE+76
3143 ± 5 3143.0			800 ±300 800 ±300	150 ±30	129 ± 7 129 ± 7	GNO- 14 ± 5 WW1- 154 ±20	BNL325-4TH MUSGROVE+76
3334 ± 5 3334.0			2500 ±500 2500 ±500	130 ±20	124 ± 9 124 ± 9	GNO- 43 ± 9 WW1- 130 ±12	BNL325-4TH MUSGROVE+76
3335 ± 5 3335.0					63 ± 5 63.0 ± 5.0		BNL325-4TH MUSGROVE+76
3379 ± 5 3379.0					41 ± 3 41.0 ± 3.0		BNL325-4TH MUSGROVE+76
3432 ± 5 3432.0			1000 ±300 1000 ±300	180 ±30	155 ±10 155 ±10	GNO- 17 ± 5 WW1- 184 ±20	BNL325-4TH MUSGROVE+76
3437 ± 5 3437.0					125 ±10 125.0 ±10.0		BNL325-4TH MUSGROVE+76
3669 ± 6 3669.0					47 ± 3 47.0 ± 3.0		BNL325-4TH MUSGROVE+76
3840 ± 6 3840.0			1000 ±500 1000 ±500	170 ±30	140 ±10 140 ±10	GNO- 16 ± 8 WW1- 168 ±15	BNL325-4TH MUSGROVE+76
3842 ± 6 3842.0					36 ± 4 36.0 ± 4.0		BNL325-4TH MUSGROVE+76
3915 ± 6 3915.0					65 ± 4 65.0 ± 4.0		BNL325-4TH MUSGROVE+76
4000 ± 6 4000.0					44 ± 3 44.0 ± 3.0		BNL325-4TH MUSGROVE+76
4013 ± 6 4013.0					65 ± 4 65.0 ± 4.0		BNL325-4TH MUSGROVE+76
4054 ± 6 4054.0					28 ± 2 28.0 ± 2.0		BNL325-4TH MUSGROVE+76
4095 ± 6 4095.0			1300 ±300 1300 ±300	150 ±20	138 ± 7 138 ± 7	GNO- 20 ± 5 WW1- 154 ±10	BNL325-4TH MUSGROVE+76
4156 ± 6 4156.0					23 ± 1 23.0 ± 1.0		BNL325-4TH MUSGROVE+76
4166 ± 6 4166.0					74 ± 4 74.0 ± 4.0		BNL325-4TH MUSGROVE+76
4281 ± 6 4281.0					56 ± 3 56.0 ± 3.0		BNL325-4TH MUSGROVE+76
4308 ± 6 4308.0			500 ±300 500 ±300	175	130 ± 7 130 ± 7	GNO- 8 ± 5 WW1-(175)	BNL325-4TH MUSGROVE+76
4331 ± 6			1500 ±700	200 ±30	176 ± 9	GNO- 23 ±11	BNL325-4TH

CD-106 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4331.0			1500 ±700		176 ± 9	WW1= 200 ±30	MUSGROVE+78
4497 ± 7 4497.0			2000 ±500 2000 ±500	2000 ±30	185 ±15 185 ±15	GNO= 30 ± 7 WW1= 203 ±25	BNL325-4TH MUSGROVE+78
4498 ± 7 4498.0					94 ± 8 94.0 ± 8.0		BNL325-4TH MUSGROVE+78
4598 ± 7 4598.0					51 ± 3 51.0 ± 3.0		BNL325-4TH MUSGROVE+78
4600 ± 7 4600.0					147 ±10 147.0 ±10.0		BNL325-4TH MUSGROVE+78
4624 ± 7 4624.0			900 ±300 900 ±300	210 ±30	163 ± 8 163 ± 8	GNO= 13 ± 4 WW1= 208 ±15	BNL325-4TH MUSGROVE+78
4698 ± 7 4698.0					53 ± 3 53.0 ± 3.0		BNL325-4TH MUSGROVE+78
4815 ± 7 4816.0			2000 ±800 2000 ±800	130 ±15	125 ± 6 125 ± 6	GNO= 29 ±12 WW1= 133 ± 8	BNL325-4TH MUSGROVE+78
4829 ± 7 4829.0					21 ± 1 21.0 ± 1.0		BNL325-4TH MUSGROVE+78
4935 ± 7 4935.0					118 ± 8 118.0 ± 8.0		BNL325-4TH MUSGROVE+78
4949 ± 7 4949.0					19 ± 2 19.0 ± 2.0		BNL325-4TH MUSGROVE+78
5026 ± 8 5026.0			1500 ±500 1500 ±500	140 ±20	131 ± 6 131 ± 6	GNO= 21 ± 7 WW1= 143 ±10	BNL325-4TH MUSGROVE+78
5077 ± 8 5077.0					157 ± 8 157.0 ± 8.0		BNL325-4TH MUSGROVE+78
5173 ± 8 5173.0					43 ± 2 43.0 ± 2.0		BNL325-4TH MUSGROVE+78
5225 ± 8 5225.0					164 ± 8 164.0 ± 8.0		BNL325-4TH MUSGROVE+78
5228 ± 8 5288.0					101 ± 5 101.0 ± 5.0		BNL325-4TH MUSGROVE+78
5341 ± 8 5341.0					19 ± 2 19.0 ± 2.0		BNL325-4TH MUSGROVE+78
5593 ± 8 5593.0					133 ± 8 133.0 ± 8.0		BNL325-4TH MUSGROVE+78
5600 ± 8 5600.0					35 ± 2 35.0 ± 2.0		BNL325-4TH MUSGROVE+78
5629 ± 8 5629.0					282 ±14 282.0 ±14.0		BNL325-4TH MUSGROVE+78
5679 ± 9 5679.0					60 ± 3 60.0 ± 3.0		BNL325-4TH MUSGROVE+78
5853 ± 9 5853.0					27 ± 2 27.0 ± 2.0		BNL325-4TH MUSGROVE+78
5864 ± 9 5864.0					116 ± 6 116.0 ± 6.0		BNL325-4TH MUSGROVE+78
5881 ± 9 5881.0					136 ± 8 136.0 ± 8.0		BNL325-4TH MUSGROVE+78

48-Cd-108

Abundance	:0.89 %
Spin-Parity	:0^-
Potential Scattering Radius	:6.5 fm
Cross Sections of 2200 m/s for Total	:6.624 b
Elastic	:5.533 b
Capture	:1.087 b
Maxwellian Average Capture Cross Section	:0.9633 b
Resonance Integral of Capture	:27.16 b

Resolved resonance region (MLBW formula) : below 380 eV. Resonance parameters were based on the experimental data of Anufriev et al.[1] Neutron orbital angular momentum ℓ was estimated with a method of Bollinger and Thomas[2]. Scattering radius of 6.5 fm was assumed from the systematics of measured values for neighboring nuclide. A negative resonance was added so as to reproduce the thermal capture cross section given by Mughabghab et al.[3]

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1) Anufriev V.A. et al.: Atomnaya Energiya, **57**, 59 (1984).
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JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

CD-108 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-250.0 -250	0	0.5	700.0	110.0 (110)	95.08	GT = 810.0 GNO= 110	JENDL-3.2 BNL325-4TH
54.2 54.2 ± 0.5 54.2 ± 0.4	1	0.5	0.315 0.34 * 0.63 ± 0.03	115.0 115 ±45	0.3142	GT = 115.31 GNO= 0.046	JENDL-3.2 BNL325-4TH 84ANUFRIEV+
233.6 234 ± 2 233.6 ± 3.5	0	0.5	192.0 240 ±30 *384 ±50	345.0 345 ±48	123.4	GT = 537.0 GNO= 16 ± 2	JENDL-3.2 BNL325-4TH 84ANUFRIEV+
312.0 312 ± 3 312 ± 5	0	0.5	355.0 530 ±100 *710 ±80	500.0 500 ±128	207.6	GT = 855.0 GNO= 30 ± 6	JENDL-3.2 BNL325-4TH 84ANUFRIEV+
337.0 337 ± 5	1	0.5	2.15 * 4.3 ± 0.5	110.0 (110)	2.109	GT = 112.15	JENDL-3.2 84ANUFRIEV+
1043 ±10							BNL325-4TH
2590 ±40 2590.0			500 ±200 500 ±200	130 ±30	103 ± 6 103 ± 6	GNO= 10 ± 4 WW1= 130.0 ±30.0	BNL325-4TH MUSGROVE+78
2651 ± 4 2651.0			500 ±200 500 ±200	130 ±20	103 ± 6 103 ± 6	GNO= 10 ± 4 WW1= 130.0 ±20.0	BNL325-4TH MUSGROVE+78
2721 ± 4 2721.0					64 ± 3 64.0 ± 3.0		BNL325-4TH MUSGROVE+78
2792 ± 4 2792.0					45 ± 2 45.0 ± 2.0		BNL325-4TH MUSGROVE+78
2850 ± 4 2850.0			400 ±200 400 ±200	120 ±50	92 ± 5 92 ± 5	GNO= 7 ± 4 WW1= 120.0 ±50.0	BNL325-4TH MUSGROVE+78
2898 ± 4 2898.0					30 ± 2 30.0 ± 2.0		BNL325-4TH MUSGROVE+78
3045 ± 5 3045.0					61 ± 3 61.0 ± 3.0		BNL325-4TH MUSGROVE+78
3084 ± 5 3084.0			1250 ±500 1250 ±500	120 ±20	107 ± 6 107 ± 6	GNO= 22.5 ± 9.0 WW1= 117.0 ±10.0	BNL325-4TH MUSGROVE+78
3170 ± 5 3170.0					30 ± 2 30.0 ± 2.0		BNL325-4TH MUSGROVE+78
3213 ± 5 3213.0					8 ± 1 8.0 ± 1.0		BNL325-4TH MUSGROVE+78
3224 ± 5 3224.0					7 ± 1 7.0 ± 1.0		BNL325-4TH MUSGROVE+78
3249 ± 5 3249.0					20 ± 2 20.0 ± 2.0		BNL325-4TH MUSGROVE+78
3339 ± 5 3339.0			1200 ±300 1200 ±300	70 ±10	64 ± 4 64 ± 4	GNO= 21 ± 5 WW1= 70.0 ± 5.0	BNL325-4TH MUSGROVE+78
3430 ± 5 3430.0					42 ± 3 42.0 ± 3.0		BNL325-4TH MUSGROVE+78
3523 ± 5 3523.0			1000 ±300 1000 ±300	110 ±15	102 ± 6 102 ± 6	GNO= 17 ± 5 WW1= 114.0 ± 8.0	BNL325-4TH MUSGROVE+78
3691 ± 5 3691.0			1000 ±200 1000 ±200	75 ± 9	69 ± 4 69 ± 4	GNO= 16 ± 3 WW1= 75.0 ± 6.0	BNL325-4TH MUSGROVE+78
3703.0					10.0 ± 1.0		MUSGROVE+78
3714.0					10.0 ± 1.0		MUSGROVE+78
3741 ± 5 3741.0					62 ± 3 62.0 ± 3.0		BNL325-4TH MUSGROVE+78
3770.0			500 ±250		165.0 ± 9.0		MUSGROVE+78
3775 ± 5 3775.0					48 ± 3 48.0 ± 3.0		BNL325-4TH MUSGROVE+78
3855 ± 5 3855.0					13 ± 1 13.0 ± 1.0		BNL325-4TH MUSGROVE+78
3880 ± 5 3880.0			1000 ±500 1000 ±500	110 ±15	101 ± 6 101 ± 6	GNO= 16 ± 8 WW1= 112.0 ± 8.0	BNL325-4TH MUSGROVE+78
3959 ± 5 3959.0			500 ±300 500 ±300	130	105 ± 6 105 ± 6	GNO= 8 ± 5 WW1=(133.0)	BNL325-4TH MUSGROVE+78
4105 ± 8 4105.0					46 ± 4 46.0 ± 4.0		BNL325-4TH MUSGROVE+78
4110 ± 8 4110.0					111 ±10 111.0 ±10.0		BNL325-4TH MUSGROVE+78
4207 ± 8 4207.0					22 ± 1 22.0 ± 1.0		BNL325-4TH MUSGROVE+78
4242 ± 8 4242.0			1000 ±500 1000 ±500	61 ± 9	57 ± 3 57 ± 3	GNO= 15 ± 8 WW1= 61.0 ± 6.0	BNL325-4TH MUSGROVE+78
4299 ± 8 4299.0					42 ± 2 42.0 ± 2.0		BNL325-4TH MUSGROVE+78
4347 ± 8 4347.0					42 ± 2 42.0 ± 2.0		BNL325-4TH MUSGROVE+78

CD-108 2

ENERGY (EV)	L J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4415 ± 6 4416.0				16 ± 2 16.0 ± 2.0		BNL325-4TH MUSGROVE+78
4425 ± 6 4425.0				119 ± 6 119.0 ± 6.0		BNL325-4TH MUSGROVE+78
4480 ± 6 4480.0		7000 ±3000 7000 ±3000	130 ±20	123 ±16 123 ±16	GNO= 100 ±40 WW1= 126 ±16	BNL325-4TH MUSGROVE+78
4480.0				49.0 ± 6.0		MUSGROVE+78
4590 ± 6 4590.0		1500 ±500 1500 ±500	110 ±20	102 ± 6 102 ± 6	GNO= 22 ± 7 WW1= 110.0 ±10.0	BNL325-4TH MUSGROVE+78
4631 ± 6 4631.0				90 ± 5 90.0 ± 5.0		BNL325-4TH MUSGROVE+78
4959 ± 7 4959.0				60 ± 4 60.0 ± 4.0		BNL325-4TH MUSGROVE+78
4979 ± 7 4979.0		1000 ±500 1000 ±500	100 ±15	102 ± 6 102 ± 6	GNO= 14 ± 7 WW1= 102.0 ±10.0	BNL325-4TH MUSGROVE+78
5005 ± 8 5005.0				34 ± 2 34.0 ± 2.0		BNL325-4TH MUSGROVE+78
5036 ± 8 5036.0				37 ± 2 37.0 ± 2.0		BNL325-4TH MUSGROVE+78
5119 ± 8 5119.0		2500 ±1000 2500 ±1000	140 ±20	131 ± 7 131 ± 7	GNO= 35 ±14 WW1= 139 ±10	BNL325-4TH MUSGROVE+78
5140 ± 8 5140.0				23 ± 2 23.0 ± 2.0		BNL325-4TH MUSGROVE+78
5220 ± 8 5220.0				72 ± 4 72.0 ± 4.0		BNL325-4TH MUSGROVE+78
5272 ± 8 5272.0		1500 ±500 1500 ±500	97 ±10	91 ± 5 91 ± 5	GNO= 21 ± 7 WW1= 97.0 ±10.0	BNL325-4TH MUSGROVE+78
5360 ± 8 5360.0				30 ± 2 30.0 ± 2.0		BNL325-4TH MUSGROVE+78
5372 ± 8 5372.0				14 ± 1 14.0 ± 1.0		BNL325-4TH MUSGROVE+78
5389 ± 8 5389.0		2000 ±1000 2000 ±1000	110 ±15	103 ± 8 103 ± 8	GNO= 30 ±10 WW1= 108 ±10	BNL325-4TH MUSGROVE+78
5422 ± 8 5422.0				64 ± 3 64.0 ± 3.0		BNL325-4TH MUSGROVE+78
5478 ± 8 5478.0				172 ± 3 172.0 ± 3.0		BNL325-4TH MUSGROVE+78
5520 ± 8				154 ± 8		BNL325-4TH
5550 ± 8 5550.0				84 ± 4 84.0 ± 4.0		BNL325-4TH MUSGROVE+78
5696 ± 9 5696.0				61 ± 3 61.0 ± 3.0		BNL325-4TH MUSGROVE+78
5715 ± 9 5715.0				17 ± 1 17.0 ± 1.0		BNL325-4TH MUSGROVE+78
5742 ± 9 5742.0				160 ± 8 160.0 ± 8.0		BNL325-4TH MUSGROVE+78
5828 ± 9 5828.0				136 ± 7 136.0 ± 7.0		BNL325-4TH MUSGROVE+78
5847 ± 9 5847.0				54 ± 3 54.0 ± 3.0		BNL325-4TH MUSGROVE+78
5874 ± 9 5874.0				67 ± 4 67.0 ± 4.0		BNL325-4TH MUSGROVE+78
5884 ± 9 5884.0				86 ± 5 86.0 ± 5.0		BNL325-4TH MUSGROVE+78
5888 ± 9 5888.0				21 ± 1 21.0 ± 1.0		BNL325-4TH MUSGROVE+78
5970 ± 9 5970.0		2500 ±1000 2500 ±1000	110 ±15	105 ± 8 105 ± 8	GNO= 32 ±13 WW1= 109 ±10	BNL325-4TH MUSGROVE+78

48-Cd-110

Abundance	:12.49 %
Spin-Parity	:0^+
Potential Scattering Radius	:6.5 fm
Cross Sections of 2200 m/s for Total	:16.93 b
Elastic	:5.847 b
Capture	:11.05 b
Maxwellian Average Capture Cross Section	:9.789 b
Resonance Integral of Capture	:39.25 b

Resolved resonance region (MLBW formula) : below 7 keV. Resonance parameters were taken from JENDL-2[1], and slightly modified for JENDL-3.2.

For JENDL-2, evaluation was made on the basis of experimental data of Liou et al.[2] and Musgrove et al.[3] The average radiation width was assumed to be 0.1 eV[4] below 3.1 keV, and to be 0.071 eV for s-wave levels and 0.084 eV for p-wave ones[3] above 3.1 keV. A negative resonance was added so as to reproduce the thermal capture and total cross sections given by Mughabghab et al.[4]

For JENDL-3.2, the parameters of the negative resonance were adjusted to decrease the elastic scattering cross section in the energy region below about 1 keV. This modification was needed to improve the total cross section of natural Cd around 10 eV.

References:

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MUSGROVE+78:Musgrove A.R. de L. et al.: J. Phys. G, **4**, 771 (1978).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

CD-110 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-20.0	0	0.5	40.0	110.0	29.33	GT = 150.0	JENDL-3.2
89.5 89.27 ± 0.15 89.52 ± 0.15	0 0	0.5	130.0 A 142 ±10	110.0 110 ±15	59.58	GT = 240.0 WGH= 15.0 ± 1.0 GNO= 16.0 ± 1.0	JENDL-3.2 BNL-325 LIOU+74
230.9 230.93 ± 0.18 230.93 ± 0.18	0 0	0.5	8.4 A 8.3 ± 0.9	100.0	7.749	GT = 108.4 WGH= 0.54 ± 0.05 GNO= 0.55 ± 0.06	JENDL-3.2 BNL-325 LIOU+74
339.7 339.66 ± 0.28 339.66 ± 0.28	1 1)	0.5	0.72 A 0.71 ± 0.09	100.0	0.7149	GT = 100.72 WGH= 0.038± 0.004 GNO= 0.039± 0.005	JENDL-3.2 BNL-325 LIOU+74
369.6 369.61 ± 0.20 369.61 ± 0.2	0 0	0.5	23.0 A 23 ± 2	97.0 97 ±20	18.59	GT = 120.0 WGH= 1.1 ± 0.1 GNO= 1.2 ± 0.1	JENDL-3.2 BNL-325 LIOU+74
505.3 505.34 ± 0.25 505.34 ± 0.25	1 1)	0.5	1.4 A 1.44 ± 0.18	100.0	1.381	GT = 101.4 WGH= 0.064± 0.008 GNO= 0.064± 0.008	JENDL-3.2 BNL-325 LIOU+74
652.1 652.05 ± 0.37 652.05 ± 0.37	1 1)	0.5	3.8 A 3.8 ± 0.4	100.0	3.661	GT = 103.8 WGH= 0.14 ± 0.02 GNO= 0.15 ± 0.02	JENDL-3.2 BNL-325 LIOU+74
761.8 761.78 ± 0.46 761.78 ± 0.46	1 1)	0.5	11.0 A 11 ± 1	100.0	9.91	GT = 111.0 WGH= 0.39 ± 0.04 GNO= 0.4 ± 0.04	JENDL-3.2 BNL-325 LIOU+74
799.8 799.76 ± 0.50 799.76 ± 0.5	0 0	0.5	410.0 A 410 ±30	125.0 125 ±25	95.79	GT = 535.0 WGH= 14.4 ± 1.0 GNO= 14.5 ± 1.1	JENDL-3.2 BNL-325 LIOU+74
824.1 824.07 ± 0.52 824.08 ± 0.52	1 1)	0.5	8.9 A 7 ± 1	100.0	8.455	GT = 108.9 WGH= 0.24 ± 0.04 GNO= 0.24 ± 0.03	JENDL-3.2 BNL-325 LIOU+74
918.9 918.89 ± 0.31 918.89 ± 0.31	0 0	0.5	20.0 A 20 ± 4	100.0	16.67	GT = 120.0 WGH= 0.66 ± 0.13 GNO= 0.66 ± 0.13	JENDL-3.2 BNL-325 LIOU+74
920.9 920.85 ± 0.31 920.85 ± 0.31	0 0	0.5	76.0 A 75 ± 7	100.0	43.18	GT = 176.0 WGH= 2.4 ± 0.2 GNO= 2.5 ± 0.2	JENDL-3.2 BNL-325 LIOU+74
1116.0 1115.9 ± 0.4 1115.9 ± 0.4	0 0	0.5	31.0 A 31 ± 4	85.0 85 ±20	22.72	GT = 116.0 WGH= 0.92 ± 0.12 GNO= 0.93 ± 0.12	JENDL-3.2 BNL-325 LIOU+74
1135.0 1135.3 ± 0.4 1135.3 ± 0.4	1 1)	0.5	7.1 A 7.1 ± 1.4	100.0	6.829	GT = 107.1 WGH= 0.21 ± 0.04 GNO= 0.21 ± 0.04	JENDL-3.2 BNL-325 LIOU+74
1242.0 1241.5 ± 0.5 1241.5 ± 0.5	1 1)	0.5	4.9 A 4.9 ± 1.2	100.0	4.671	GT = 104.9 WGH= 0.13 ± 0.03 GNO= 0.14 ± 0.03	JENDL-3.2 BNL-325 LIOU+74
1318.0 1318.1 ± 0.3 1318.1 ± 0.3	1 1)	0.5	20.0 A 20 ± 2	100.0	16.67	GT = 120.0 WGH= 0.55 ± 0.06 GNO= 0.55 ± 0.06	JENDL-3.2 BNL-325 LIOU+74
1347.0 1346.7 ± 0.3 1346.7 ± 0.3	0 0	0.5	950.0 A 980 ±80	100.0	90.48	GT = 1050.0 WGH= 26.1 ± 2.1 GNO= 26.0 ± 2.0	JENDL-3.2 BNL-325 LIOU+74
1686.0 1685.8 ± 0.4 1685.8 ± 0.4	1 1)	0.5	13.0 A 13 ± 2	100.0	11.5	GT = 113.0 WGH= 0.32 ± 0.05 GNO= 0.32 ± 0.05	JENDL-3.2 BNL-325 LIOU+74
1806.0 1809.5 ± 0.4 1809.5 ± 0.4	1 1)	0.5	24.0 A 24 ± 5	100.0	19.35	GT = 124.0 WGH= 0.55 ± 0.12 GNO= 0.56 ± 0.12	JENDL-3.2 BNL-325 LIOU+74
1828.0 1828.2 ± 0.4 1828.2 ± 0.4	0 0	0.5	340.0 A 340 ±40	97.0 97 ±20	75.47	GT = 437.0 WGH= 7.59 ± 0.93 GNO= 8.0 ± 0.9	JENDL-3.2 BNL-325 LIOU+74
1983.0 1982.9 ± 0.5 1982.9 ± 0.5	0 0	0.5	280.0 A 275 ±30	90.0 90 ±20	68.11	GT = 370.0 WGH= 6.17 ± 0.87 GNO= 6.2 ± 0.7	JENDL-3.2 BNL-325 LIOU+74
2066.0 2065.7 ± 0.5 2065.7 ± 0.5	0 0	0.5	2100.0 A 2100 ±200	100.0	95.45	GT = 2200.0 WGH= 46.20 ± 4.40 GNO= 46.0 ± 4.0	JENDL-3.2 BNL-325 LIOU+74
2100.0 2100.4 ± 2.7 2100.4 ± 2.7	1 1)	0.5	11.0 A 11 ± 4	100.0	9.91	GT = 111.0 WGH= 0.24 ± 0.09 GNO= 0.24 ± 0.09	JENDL-3.2 BNL-325 LIOU+74
2353.0 2353.0 ± 0.6 2353.0 ± 0.6	1 1)	0.5	12.0 A 12 ± 3	100.0	10.71	GT = 112.0 WGH= 0.24 ± 0.06 GNO= 0.25 ± 0.06	JENDL-3.2 BNL-325 LIOU+74
2376.0 2376.0 ± 0.6 2376.0 ± 0.6	0 0	0.5	2100.0 A 2100 ±200	100.0	95.45	GT = 2200.0 WGH= 43.08 ± 4.10 GNO= 43.0 ± 4.0	JENDL-3.2 BNL-325 LIOU+74
2411.0 2410.6 ± 0.7 2410.6 ± 0.7	1 1)	0.5	34.0 A 34 ± 6	100.0	25.37	GT = 134.0 WGH= 0.69 ± 0.12 GNO= 0.69 ± 0.12	JENDL-3.2 BNL-325 LIOU+74
2477.0 2476.8 ± 0.7 2476.8 ± 0.7	0 0	0.5	80.0 A 59 ±10	100.0	37.5	GT = 160.0 WGH= 1.2 ± 0.20 GNO= 1.2 ± 0.2	JENDL-3.2 BNL-325 LIOU+74
2492.0	1	0.5	49.0	100.0	32.89	GT = 149.0	JENDL-3.2

CD-110

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2492.0 ± 0.7 2492.0 ± 0.7	1)		A 49 ± 8			WGH- 0.98 ± 0.16 GNO- 0.98 ± 0.16	BNL-325 LIDU+74
2723.0 2723.2 ± 4.0 2723.2 ± 4.0	1 1)	0.5	16.0 A 16 ± 8	100.0	13.79	GT - 116.0 WGH- 0.31 ± 0.11 GNO- 0.31 ± 0.12	JENDL-3.2 BNL-325 LIDU+74
2740.0 2739.7 ± 0.8 2739.7 ± 0.8	0 0	0.5	58.0 A 57 ±10	100.0	36.71	GT - 158.0 WGH- 1.09 ± 0.19 GNO- 1.1 ± 0.2	JENDL-3.2 BNL-325 LIDU+74
3042.0 3042.2 ± 0.9 3042.2 ± 0.9	0 0	0.5	1500.0 A1500 ±200	100.0	93.75	GT - 1500.0 WGH- 27.20 ± 3.63 GNO- 27.0 ± 4.0	JENDL-3.2 BNL-325 LIDU+74
3112.0 3105.7 ± 1.0 3105.7 ± 1.0 3112.0	0 0 0	0.5	130.0 A134 ±20 A134.0 ±20.0)	65.0 65.0 ± 7.0	43.78 44.0 ± 2.0	GT - 196.0 WGH- 2.40 ± 0.35 GNO- 2.4 ± 0.4	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3162.0 3153.1 ± 1.0 3153.1 ± 1.0 3162.0	1 1) 1)	1.5	73.0 A 74 ±14 A 74.0 ±14.0)	73.0	73.0 73.0 ± 3.0	GT - 146.0 WGH- 1.32 ± 0.24 GNO- 1.3 ± 0.3 W - 2.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3193.0 3183.7 ± 5.0 3183.7 ± 5.0 3193.0	1 1) 1)	1.5	22.0 A 22 ± 8 A 22.0 ± 8.0)	35.0	27.02 27.0 ± 1.0	GT - 57.0 WGH- 0.39 ± 0.15 GNO- 0.39 ± 0.14	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3382.0 3375.1 ± 1.1 3375.1 ± 1.1 3382.0	0 0 0	0.5	220.0 A220 ±40 A220.0 ±40.0)	105.0 105.0 ±12.0	71.08 71.0 ± 3.0	GT - 325.0 WGH- 3.79 ± 0.69 GNO- 3.8 ± 0.7	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3388.0 3388.0	1	0.5	38.0	84.0	28.16 26.0 ± 1.0	GT - 122.0	JENDL-3.2 MUSGROVE+78
3504.0 3498.4 ± 1.1 3498.4 ± 1.1 3504.0	0 0 0)	0.5	95.0 A 95 ±18 A 95.0 ±18.0)	90.0 90.0 ±25.0	46.22 46.0 ± 2.0	GT - 185.0 WGH- 1.61 ± 0.30 GNO- 1.6 ± 0.3	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3646.0 3636.4 ± 1.2 3636.4 ± 1.2 3646.0	0 0 1)	0.5	110.0 A110 ±15 A110.0 ±18.0)	210.0 100.0 ±20.0	72.19 71.0 ± 3.0	GT - 320.0 WGH- 1.82 ± 0.25 GNO- 1.8 ± 0.3 W - 2.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3678.0 3667.8 ± 2.4 3667.8 ± 2.4 3678.0	1 1)	0.5	67.0 A 67 ±12 A 67.0 ±12.0)	16.0	12.92 13.0 ± 1.0	GT - 83.0 WGH- 1.11 ± 0.20 GNO- 1.1 ± 0.2	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3712.0 3702.1 ± 1.2 3702.1 ± 1.2 3712.0	0 0 1)	0.5	100.0 A103 ±20 A103.0 ±20.0)	240.0 120.0 ±20.0	70.59 72.0 ± 3.0	GT - 340.0 WGH- 1.69 ± 0.33 GNO- 1.7 ± 0.3 W - 2.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3753.0 3744.4 ± 1.3 3744.4 ± 1.3 3753.0	0 0 0	0.5	500.0 A500 ±70 A500.0 ±70.0)	84.0 84.0 ±10.0	71.92 72.0 ± 3.0	GT - 584.0 WGH- 8.17 ± 1.14 GNO- 8.2 ± 1.1	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3816.0 3804.4 ± 6.6 3804.4 ± 6.6 3816.0	1 1) 1)	0.5	25.0 A 25 ±10 A 25.0 ±10.0)	120.0	20.69 21.0 ± 1.0	GT - 145.0 WGH- 0.41 ± 0.16 GNO- 0.41 ± 0.16	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3851.0 3851.0	1	0.5	5.3	84.0	4.985 5.0 ± 1.0	GT - 89.3	JENDL-3.2 MUSGROVE+78
3984.0 3953.5 ± 1.4 3953.5 ± 1.4 3984.0	0 0 0	0.5	1000.0 A1000 ±120 A1000.0 ±125.0)	68.0 68.0 ± 5.0	63.67 64.0 ± 3.0	GT - 1068.0 WGH- 15.90 ± 1.90 GNO- 16.0 ± 2.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
3992.0 3980.9 ± 7.0 3980.9 ± 7.0 3992.0	1 1) 1)	0.5	28.0 A 28 ±11 A 28.0 ±11.0)	60.0	19.09 19.0 ± 1.0	GT - 88.0 WGH- 0.44 ± 0.17 GNO- 0.44 ± 0.17	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4039.0 4039.0	1	0.5	23.0	84.0	18.06 18.0 ± 1.0	GT - 107.0	JENDL-3.2 MUSGROVE+78
4116.0 4099.0 ± 1.4 4099.0 ± 1.4 4116.0	1 1) 1)	0.5	56.0 A 56 ±10 A 56.0 ±10.0)	15.0	11.83 12.0 ± 1.0	GT - 71.0 WGH- 0.87 ± 0.18 GNO- 0.87 ± 0.18	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4172.0 4161.5 ± 1.5 4161.5 ± 1.5 4172.0	1 1) 1)	0.5	47.0 A 47 ±10 A 47.0 ±10.0)	49.0	23.99 24.0 ± 2.0	GT - 96.0 WGH- 0.73 ± 0.18 GNO- 0.73 ± 0.15	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4192.0 4180.7 ± 1.5 4180.7 ± 1.5 4192.0	1 1) 0)	0.5	110.0 A110 ±20 A110.0 ±20.0)	68.0 68.0 ±15.0	42.02 42.0 ± 3.0	GT - 178.0 WGH- 1.70 ± 0.31 GNO- 1.7 ± 0.3	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4254.0 4242.8 ± 1.5 4242.8 ± 1.5 4254.0	1 0 1)	0.5	33.0 A330 ±50 A330.0 ±50.0)	170.0 85.0 ±10.0	27.64 113.0 ± 6.0	GT - 203.0 WGH- 5.07 ± 0.77 GNO- 5.1 ± 0.8 W - 2.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4314.0 4304.8 ± 1.6	0	0.5	140.0 A140 ±30	71.0	47.11	GT - 211.0 WGH- 2.13 ± 0.46	JENDL-3.2 BNL-325

CD-110 3

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4304.8 ± 1.8 4314.0	0 0)		Γ^{A}140.0 ±30.0 Γ^{B}140.0 ±30.0)	71.0 ±18.0	47.0 ± 3.0	GNO- 2.1 ± 0.5	LIDU+74 MUSGROVE+78
4414.0 4402.3 ± 1.8 4402.3 ± 1.8 4414.0	0 0 0	0.5	340.0 Γ^{A}340 ±50 Γ^{B}340.0 ±50.0)	69.0 68.0 ± 4.0	57.35 57.0 ± 3.0	GT - 409.0 WGH- 5.12 ± 0.75 GNO- 5.1 ± 0.8	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4495.0 4480.0 ± 8.4 4480.0 ± 8.4 4495.0	1 1) 1)	1.5	107.0 Γ^{A}105 ±40 Γ^{B}105.0 ±40.0)	68.0 	83.15 83.0 ± 4.0	GT - 175.0 WGH- 1.57 ± 0.60 GNO- 1.6 ± 0.6 W - 2.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4531.0 4531.0	1	0.5	5.3	84.0	4.985 5.0 ± 1.0	GT - 89.3	JENDL-3.2 MUSGROVE+78
4555.0 4555.0	1	0.5	10.0	84.0	8.938 9.0 ± 1.0	GT - 94.0	JENDL-3.2 MUSGROVE+78
4673.0 4661.1 ± 1.8 4661.1 ± 1.8 4673.0	1 1) 1)	1.5	75.0 Γ^{A} 78 ±15 Γ^{B} 78.0 ±15.0)	41.0 90.0 ±50.0	53.02 53.0 ± 3.0	GT - 116.0 WGH- 1.11 ± 0.22 GNO- 1.1 ± 0.2 W - 2.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4686.0 4675.1 ± 1.8 4675.1 ± 1.8 4686.0	0 1) 0)	0.5	89.0 Γ^{A} 92 ±20 Γ^{B} 92.0 ±20.0)	69.0 68.0 ±26.0	38.87 39.0 ± 2.0	GT - 158.0 WGH- 1.35 ± 0.29 GNO- 1.3 ± 0.3	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4760.0 4747.7 ± 1.8 4747.7 ± 1.8 4760.0	0 0 1)	0.5	140.0 Γ^{A}144 ±30 Γ^{B}145.0 ±30.0)	220.0 109.0 ±50.0	85.56 87.0 ± 5.0	GT - 360.0 WGH- 2.08 ± 0.43 GNO- 2.1 ± 0.4 W - 2.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4791.0 4791.0	1	1.5	39.0	84.0	53.27 53.0 ± 3.0	GT - 123.0	JENDL-3.2 MUSGROVE+78
4852.0 4852.0	1	0.5	14.0	84.0	12.0 12.0 ± 1.0	GT - 98.0	JENDL-3.2 MUSGROVE+78
4883.0 4864.5 ± 1.9 4864.5 ± 1.9 4883.0	0 0 0)	0.5	280.0 Γ^{A}280 ±40 Γ^{B} 60.0 ±40.0)	83.0 83.0 ± 8.0	52.92 63.0 ± 4.0	GT - 343.0 WGH- 3.73 ± 0.57 GNO- 3.7 ± 0.8	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
4941.0 4941.0	1	0.5	52.0	84.0	32.12 32.0 ± 2.0	GT - 136.0	JENDL-3.2 MUSGROVE+78
4992.0 4992.0	1	0.5	8.8	84.0	7.986 8.0 ± 1.0	GT - 92.8	JENDL-3.2 MUSGROVE+78
5125.0 5125.0	1	0.5	57.0	84.0	33.95 34.0 ± 2.0	GT - 141.0	JENDL-3.2 MUSGROVE+78
5134.0 5121.4 ± 2.0 5121.4 ± 2.0 5134.0	0 0 0	0.5	720.0 Γ^{A}720 ±120 Γ^{B}720.0 ±120.0)	73.0 73.0 ± 6.0	66.28 66.0 ± 4.0	GT - 793.0 WGH- 1.01 ± 1.88 GNO- 10.0 ± 2.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
5289.0 5289.0	1 1)	1.5	61.0	84.0	70.68 71.0 ± 4.0	GT - 145.0 W - 2.0	JENDL-3.2 MUSGROVE+78
5305.0 5291.0 ± 2.1 5291.0 ± 2.1 5305.0	0 0 0	0.5	540.0 Γ^{A}540 ±80 Γ^{B}540.0 ±80.0)	61.0 61.0 ± 4.0	54.81 55.0 ± 3.0	GT - 601.0 WGH- 7.42 ± 1.10 GNO- 7.4 ± 1.1	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
5384.0 5369.9 ± 2.2 5369.9 ± 2.2 5384.0	0 0 	0.5	160.0 Γ^{A}160 ±40 Γ^{B}160.0 ±40.0)	120.0 119.0 ±40.0	68.57 69.0 ± 4.0	GT - 280.0 WGH- 2.18 ± 0.55 GNO- 2.2 ± 0.5	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
5451.0 5451.0	1	0.5	18.0	84.0	14.82 15.0 ± 1.0	GT - 102.0	JENDL-3.2 MUSGROVE+78
5560.0 5560.0	1	0.5	14.0	84.0	12.0 12.0 ± 1.0	GT - 98.0	JENDL-3.2 MUSGROVE+78
5620.0 5620.0	1	0.5	5.3	84.0	4.985 5.0 ± 1.0	GT - 89.3	JENDL-3.2 MUSGROVE+78
5709.0 5694.2 ± 2.4 5694.2 ± 2.4 5709.0	0 0 0)	0.5	310.0 Γ^{A}310 ±70 Γ^{B}310.0 ±70.0)	110.0 114.0 ±15.0	81.19 83.0 ± 5.0	GT - 420.0 WGH- 4.11 ± 0.93 GNO- 4.1 ± 0.9	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
5721.0 5721.0	1	0.5	57.0	84.0	33.96 34.0 ± 2.0	GT - 141.0	JENDL-3.2 MUSGROVE+78
5808.0 5802.8 ± 2.4 5802.8 ± 2.4 5808.0	0 0 0)	0.5	190.0 Γ^{A}190 ±50 Γ^{B}190.0 ±50.0)	75.0 76.0 ±12.0	53.77 54.0 ± 3.0	GT - 265.0 WGH- 2.49 ± 0.66 GNO- 2.5 ± 0.6	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
5819.0 5819.0	1	0.5	49.0	84.0	30.95 31.0 ± 2.0	GT - 133.0	JENDL-3.2 MUSGROVE+78
5886.0 5886.0	1	0.5	13.0	84.0	11.26 11.0 ± 1.0	GT - 97.0	JENDL-3.2 MUSGROVE+78
5990.0 5983.7 ± 2.8 5983.7 ± 2.8 5999.0	0 0 0	0.5	1300.0 Γ^{A}1300 ±200 Γ^{B}1300.0 ±200.0)	60.0 60.0 ± 4.0	57.35 57.0 ± 3.0	GT - 1360.0 WGH- 16.80 ± 2.59 GNO- 17.0 ± 3.0	JENDL-3.2 BNL-325 LIDU+74 MUSGROVE+78
6104.0	1	0.5	780.0	160.0	132.8	GT - 940.0	JENDL-3.2

CD-110 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
6089.0 ± 2.8			A810 ±150			WGH= 10.4 ± 1.92	BNL-325
6089.0 ± 2.8	0					GNO= 10.0 ± 2.0	L10U+74
8104.0	1)		(810.0 ±150.0)	79.0 ± 5.0	131.0 ± 8.0	W = 2.0	MUSGROVE+78
6257.0	1	1.5	68.0	84.0	75.16	GT = 152.0	JENDL-3.2
6257.0					75.0 ± 5.0		MUSGROVE+78
6278.0	0	0.5	230.0	66.0	51.28	GT = 296.0	JENDL-3.2
6259.0 ± 2.7			A230 ±50			WGH= 2.91 ± 0.63	BNL-325
6259.0 ± 2.7	0					GNO= 2.9 ± 0.6	L10U+74
6278.0	0)		(230.0 ±50.0)	66.0 ± 5.0	51.0 ± 3.0		MUSGROVE+78
6360.0	0	0.5	540.0	79.0	68.92	GT = 619.0	JENDL-3.2
6343.9 ± 2.8			A540 ±100			WGH= 6.78 ± 1.26	BNL-325
6343.9 ± 2.8	0					GNO= 6.8 ± 1.3	L10U+74
6360.0	0)		(540.0 ±80.0)	79.0 ± 5.0	69.0 ± 4.0		MUSGROVE+78
6405.0	1	1.5	42.0	84.0	56.0	GT = 126.0	JENDL-3.2
6405.0					56.0 ± 3.0		MUSGROVE+78
6488.0	1	0.5	200.0	120.0	75.0	GT = 320.0	JENDL-3.2
6468.9 ± 2.9			A200 ±40			WGH= 2.48 ± 0.50	BNL-325
6488.9 ± 2.9	0					GNO= 2.5 ± 0.5	L10U+74
6488.0	1)		(200.0 ±40.0)	80.0 ±20.0	75.0 ± 7.0	W = 2.0	MUSGROVE+78
6503.0	0	0.5	180.0	85.0	58.2	GT = 266.0	JENDL-3.2
6487.4 ± 2.9			A180 ±40			WGH= 2.23 ± 0.50	BNL-325
6487.4 ± 2.9	0					GNO= 2.2 ± 0.5	L10U+74
6503.0	0)		(160.0 ±40.0)	85.0 ±15.0	58.0 ± 5.0		MUSGROVE+78
6530.0	1	1.5	48.0	84.0	61.09	GT = 132.0	JENDL-3.2
6530.0					61.0 ± 5.0		MUSGROVE+78
6618.0	0	0.5	390.0	68.0	57.9	GT = 458.0	JENDL-3.2
6601.9 ± 3.0			A390 ±80			WGH= 4.80 ± 0.98	BNL-325
6601.9 ± 3.0	0					GNO= 4.8 ± 1.0	L10U+74
6618.0	0)		(390.0 ±80.0)	68.0 ± 5.0	58.0 ± 4.0		MUSGROVE+78
6650.0	1	0.5	60.0	84.0	35.0	GT = 144.0	JENDL-3.2
6650.0					35.0 ± 4.0		MUSGROVE+78
6748.0	1	0.5	10.0	84.0	8.936	GT = 94.0	JENDL-3.2
6748.0					9.0 ± 2.0		MUSGROVE+78
6885.0	1	0.5	60.0	84.0	35.0	GT = 144.0	JENDL-3.2
6885.0					35.0 ± 3.0		MUSGROVE+78
6933.0	0	0.5	1000.0	99.0	90.08	GT = 1099.0	JENDL-3.2
6913.7 ± 3.2			A1000 ±200			WGH= 12.02 ± 2.40	BNL-325
6913.7 ± 3.2	0					GNO= 12.0 ± 2.0	L10U+74
6933.0	0		(1000.0 ±200.0)	98.0 ± 6.0	90.0 ± 6.0		MUSGROVE+78
6955.0	0	0.5	240.0	107.0	74.01	GT = 347.0	JENDL-3.2
6937.3 ± 3.2			A240 ±80			WGH= 2.88 ± 0.98	BNL-325
6937.3 ± 3.2	0					GNO= 2.9 ± 1.0	L10U+74
6955.0	1		(240.0 ±80.0)	108.0 ±30.0	74.0 ± 5.0	W = 1.0	MUSGROVE+78
7084.0	0	0.5	330.0	71.0	58.43	GT = 401.0	JENDL-3.2
7083.6 ± 3.3			A330 ±70			WGH= 3.92 ± 0.83	BNL-325
7083.6 ± 3.3	0					GNO= 3.9 ± 0.8	L10U+74
7277.0	0	0.5	280.0	71.0	56.84	GT = 351.0	JENDL-3.2
7276.8 ± 3.4			A280 ±80			WGH= 3.28 ± 0.94	BNL-325
7276.8 ± 3.4	0					GNO= 3.3 ± 0.9	L10U+74
7669.0	0	0.5	1100.0	71.0	66.7	GT = 1171.0	JENDL-3.2
7669.4 ± 3.7			A1100 ±200			WGH= 12.56 ± 2.28	BNL-325
7669.4 ± 3.7	0					GNO= 13.0 ± 2.0	L10U+74
8719.0	0	0.5	1300.0	71.0	67.32	GT = 1371.0	JENDL-3.2
8718.8 ± 4.5			A1300 ±200			WGH= 13.92 ± 2.14	BNL-325
8718.8 ± 4.5	0					GNO= 14.0 ± 2.0	L10U+74
8822.0	0	0.5	2800.0	71.0	69.24	GT = 2871.0	JENDL-3.2
8822.2 ± 4.6			A2800 ±500			WGH= 29.81 ± 5.32	BNL-325
8822.2 ± 4.6	0					GNO= 30.0 ± 5.0	L10U+74
8935.0	0	0.5	530.0	71.0	62.81	GT = 601.0	JENDL-3.2
8934.5 ± 4.7			A530 ±120			WGH= 5.61 ± 1.27	BNL-325
8934.5 ± 4.7	0					GNO= 5.6 ± 1.3	L10U+74
9025.0	0	0.5	510.0	71.0	62.32	GT = 581.0	JENDL-3.2
9025.4 ± 4.7			A510 ±150			WGH= 5.37 ± 1.58	BNL-325
9025.4 ± 4.7	0					GNO= 5.4 ± 1.6	L10U+74
9146.0	0	0.5	960.0	71.0	66.11	GT = 1031.0	JENDL-3.2
9146.3 ± 4.8			A990 ±200			WGH= 10.35 ± 2.09	BNL-325
9146.3 ± 4.8	0					GNO= 10.0 ± 2.0	L10U+74
9221.0	0	0.5	920.0	71.0	65.91	GT = 991.0	JENDL-3.2
9221.0 ± 4.9			A920 ±250			WGH= 9.58 ± 2.60	BNL-325
9221.0 ± 4.9	0					GNO= 9.6 ± 2.6	L10U+74
9250.0	0	0.5	960.0	71.0	66.11	GT = 1031.0	JENDL-3.2
9250.2 ± 4.9			A1000 ±300			WGH= 10.40 ± 3.11	BNL-325
9250.2 ± 4.9	0					GNO= 10.0 ± 3.0	L10U+74
9270.0	0	0.5	1700.0	71.0	68.15	GT = 1771.0	JENDL-3.2
9269.7 ± 4.9			A1700 ±500			WGH= 17.65 ± 5.19	BNL-325
9269.7 ± 4.9	0					GNO= 18.0 ± 5.0	L10U+74
9860.0	0	0.5	2300.0	71.0	68.87	GT = 2371.0	JENDL-3.2
9895.0 ± 5.4			A2300 ±600			WGH= 23.12 ± 6.03	BNL-325
9860.0 ± 5.4	0					GNO= 23.0 ± 6.0	L10U+74

48-Cd-111

Abundance	:12.80 %
Spin-Parity	:$1/2^+$
Potential Scattering Radius	:6.5 fm
Cross Sections of 2200 m/s for Total	:29.01 b
Elastic	:5.075 b
Capture	:23.94 b
Maxwellian Average Capture Cross Section	:21.10 b
Resonance Integral of Capture	:49.79 b

Resolved resonance region (MLBW formula) : below 1.8 keV. Resonance parameters of JENDL-2[1] were modified for JENDL-3.1[2].

For JENDL-2, evaluation was made on the basis of experimental data of Liou et al.[3] and Wasson and Allen[4]. The average radiation width was assumed to be 0.102 eV[3]. Scattering radius of 6.5 fm was assumed on the basis of systematics of measured values.

For JENDL-3.1, the lowest two p-wave resonances were added according to the data by Alfimenkov et al.[5] Total spin J of some resonances was tentatively estimated with a random method. Parameters of a negative resonance were modified so as to reproduce the thermal capture and elastic scattering cross sections given by Mughabghab et al.[6]

For JENDL-3.2, the capture data measured at ORERA of ORNL were renormalized (factor=1.208)[7]. The neutron and/or radiation width were revised to reproduce the normalized capture area for each resonance above 276 eV.

References:

1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Kawai M. et al.: J. Nucl. Sci. Technol., **29**, 195 (1992).
3) Liou H.I. et al.: Phys. Rev., **C10**, 709 (1974).
4) Wasson O.A. and Allen B.J.: Phys. Rev., **C7**, 780 (1973).
5) Alfimenkov V.P. et al.: Nucl. Phys. **A397**, 93(1983).
6) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).
7) Allen B.J. et al.: Nucl. Sci. Eng., **82**, 230 (1982).

References of Table:

LIOU+74:Liou H.I. et al.: Phys. Rev., **C10**, 709 (1974).
WASSON+73:Wasson O.A. and Allen B.J.: Phys. Rev., **C7**, 780 (1973).
ALFIMENKOV+83:Alfimenkov V.P. et al.: Nucl. Phys. **A397**, 93(1983).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

CD-111 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-4.0 -4.0	0	1.0	1.2 A 1.9	202.0	0.8947	GT = 203.2 WGH= 0.95	JENDL-3.2 ALFIMENKOV+83
4.53 4.53 ± 0.03	1 1	1.0	0.0014 A 1.07-3±5-5	163.0 163	0.00105	GT = 163.0 GT = 163 ±10	JENDL-3.2 ALFIMENKOV+83
6.94 6.94 ± 0.07	1 1	2.0	0.00085 A 1.08-3±8-5	143.0 143	1.075-3	GT = 143.0 GT = 143 ±13	JENDL-3.2 ALFIMENKOV+83
27.5 27.53 ± 0.03	0 0	1.0	4.5	96.0 96.0 ±15.0	3.224	GT = 100.5 WGH= 0.65 ± 0.04	JENDL-3.2 LIOU+74
69.4 69.43 ± 0.1	0 0	0.0	0.43	102.0	0.107	GT = 102.43 WGH= 0.013± 0.002	JENDL-3.2 LIOU+74
88.1 88.11 ± 0.07	0 0	0.0	7.4	102.0	1.725	GT = 109.4 WGH= 0.2 ± 0.02	JENDL-3.2 LIOU+74
99.4 99.41 ± 0.09	0 0	1.0 1.0	13.0	92.0 92.0 ±14.0	8.543	GT = 105.0 WGH= 0.98 ± 0.05	JENDL-3.2 LIOU+74
102.9 102.93 ± 0.09	0 0	1.0	1.1	102.0	0.8182	GT = 103.1 WGH= 0.079± 0.007	JENDL-3.2 LIOU+74
114.8 114.75 ± 0.11	1 1)	2.0	0.11	102.0	0.1374	GT = 102.11 WGH= 0.013± 0.005	JENDL-3.2 LIOU+74
138.1 138.11 ± 0.14	0 0	0.0 0	31.0	96.0 96.0 ±12.0	5.858	GT = 127.0 WGH= 0.66 ± 0.04	JENDL-3.2 LIOU+74
140.8 140.78 ± 0.15	1 1)	1.0	0.25	102.0	0.187	GT = 102.25 WGH= 0.016± 0.003	JENDL-3.2 LIOU+74
164.1 164.11 ± 0.18	0 0	1.0 1.0	65.0	115.0 115.0 ±12.0	31.15	GT = 180.0 WGH= 3.8 ± 0.2	JENDL-3.2 LIOU+74
203.5 203.52 ± 0.18	1 1)	0.0	0.91	102.0	0.2255	GT = 102.91 WGH= 0.016± 0.006	JENDL-3.2 LIOU+74
208.6 208.57 ± 0.17	1 1)	2.0	0.21	102.0	0.262	GT = 102.21 WGH= 0.018± 0.006	JENDL-3.2 LIOU+74
225.1 225.05 ± 0.15	0 0	0.0	90.0	102.0	11.95	GT = 192.0 WGH= 1.5 ± 0.2	JENDL-3.2 LIOU+74
233.4 233.41 ± 0.16	0 0	1.0 1.0	75.0	120.0 120.0 ±30.0	34.62	GT = 195.0 WGH= 3.7 ± 0.3	JENDL-3.2 LIOU+74
276.0 276.0 275.56 ± 0.21	0 0 0	0.0	58.0	138.0 106.0 ±15.0	10.16 8.4	GT = 194.0 WGH= 0.51 WGH= 0.87 ± 0.09	JENDL-3.2 WASSON+73 LIOU+74
287.0 287.0 286.47 ± 0.27	1 1 1)	1.0	0.63	4.7	0.4096 0.34	GT = 4.73 WGH= 0.032 WGH= 0.028± 0.008	JENDL-3.2 WASSON+73 LIOU+74
313.0 313.0 311.38 ± 0.24	0 0 0	0.0	8.9	102.0	2.046 1.7	GT = 110.9 WGH= 0.1 WGH= 2.6 ± 0.2	JENDL-3.2 WASSON+73 LIOU+74
314.0 314.0	1 0	2.0	0.39	102.0	0.4856 0.4	GT = 102.39 WGH= 0.02	JENDL-3.2 WASSON+73
332.0 332.0 331.97 ± 0.27	0 0 0	1.0	7.2	102.0	5.044 4.2	GT = 109.2 WGH= 0.23 WGH= 0.26 ± 0.02	JENDL-3.2 WASSON+73 LIOU+74
337.0 337.0 336.66 ± 0.27	0 0 0	0.0	4.4	32.0	0.967 0.8	GT = 36.4 WGH= 0.04 WGH= 0.05 ± 0.01	JENDL-3.2 WASSON+73 LIOU+74
357.0 357.0 355.99 ± 0.29	0 0 0	1.0 1.0	44.0	120.0 96.0 ±15.0	24.15 20.0	GT = 164.0 WGH= 1.06 WGH= 1.75 ± 0.16	JENDL-3.2 WASSON+73 LIOU+74
390.0 390.0 389.02 ± 0.33	0 0 0	0.0	79.0	158.0	13.17 10.9	GT = 237.0 WGH= 0.55 WGH= 1.0 ± 0.3	JENDL-3.2 WASSON+73 LIOU+74
411.0 411.0 410.01 ± 0.36	1 1 0	2.0	1.4	2.4	1.105 0.9	GT = 3.8 WGH= 0.049 WGH= 0.084± 0.025	JENDL-3.2 WASSON+73 LIOU+74
424.0 424.0 422.66 ± 0.38	1 1 0	1.0	2.3	0.38	0.2446 0.2	GT = 2.68 WGH= 0.01 WGH= 0.083± 0.024	JENDL-3.2 WASSON+73 LIOU+74
439.0 439.0 438.31 ± 0.4	0 0 0	1.0	8.9	82.0	8.021 5.0	GT = 90.9 WGH= 0.24 WGH= 0.32 ± 0.03	JENDL-3.2 WASSON+73 LIOU+74
444.0 444.0	0 0	0.0	1.5	102.0	0.3696 0.3	GT = 103.5 WGH= 0.01	JENDL-3.2 WASSON+73
454.0 454.0	1 0	1.0	0.32	102.0	0.2392 0.2	GT = 102.32 WGH= 0.01	JENDL-3.2 WASSON+73
467.0 467.0 465.37 ± 0.58	1 1 1)	2.0	0.49	102.0	0.6096 0.5	GT = 102.49 WGH= 0.019	JENDL-3.2 WASSON+73 LIOU+74
479.0 479.0 478.01 ± 0.45	0 0 0	1.0	4.0	102.0	2.887 2.4	GT = 106.0 WGH= 0.11 WGH= 0.13 ± 0.03	JENDL-3.2 WASSON+73 LIOU+74
484.0	0	1.0	3.5	2.0	0.9545	GT = 5.5	JENDL-3.2

CD-111 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
484.0	0				0.8	WGH= 0.04	WASSON+73
484.01 ± 0.47	0					WGH= 0.12 ± 0.03	LIOU+74
485.0	1	2.0	1.2	102.0	1.483	GT = 103.2	JENDL-3.2
485.0	1				1.2	WGH= 0.049	WASSON+73
519.0	0	0.0	3.1	2.7	0.3608	GT = 5.8	JENDL-3.2
519.0	0				0.3	WGH= 0.02	WASSON+73
517.9 ± 0.33	1	)				WGH= 0.034± 0.013	LIOU+74
531.0	0	1.0	1.3	102.0	0.9527	GT = 103.3	JENDL-3.2
531.0	0				0.8	WGH= 0.03	WASSON+73
530.64 ± 0.27	1	)				WGH= 0.042± 0.017	LIOU+74
542.0	0	0.0	72.0	248.0	13.95	GT = 320.0	JENDL-3.2
542.0	0				11.5	WGH= 0.49	WASSON+73
540.27 ± 0.28	0			120.0 ±25.0		WGH= 0.77 ± 0.09	LIOU+74
545.0	0	1.0	1.3	102.0	0.9827	GT = 103.3	JENDL-3.2
545.0	0				0.8	WGH= 0.03	WASSON+73
543.4 ± 0.4	1	)				WGH= 0.041± 0.013	LIOU+74
549.0	0	0.0	16.0	102.0	3.458	GT = 118.0	JENDL-3.2
549.0	0				2.8	WGH= 0.12	WASSON+73
548.2 ± 0.28	0					WGH= 0.12 ± 0.28	LIOU+74
553.0	1	2.0	0.097	102.0	0.1211	GT = 102.1	JENDL-3.2
553.0	1				0.1	WGH= 0.005	WASSON+73
565.0	1	2.0	0.097	102.0	0.1211	GT = 102.1	JENDL-3.2
565.0	1				0.1	WGH= 0.004	WASSON+73
569.0	0	0.0	3.0	102.0	0.7288	GT = 105.0	JENDL-3.2
569.0	0				0.6	WGH= 0.03	WASSON+73
577.0	0	1.0	49.0	58.0	19.92	GT = 107.0	JENDL-3.2
577.0	0				16.6	WGH= 0.69	WASSON+73
575.92 ± 0.3	0	1.0		105.0 ±16.0		WGH= 1.54 ± 0.13	LIOU+74
584.0	0	0.0	2.0	102.0	0.4904	GT = 104.0	JENDL-3.2
584.0	0				0.4	WGH= 0.02	WASSON+73
600.0	0	1.0	2.3	4.1	1.105	GT = 6.4	JENDL-3.2
600.0	0				0.9	WGH= 0.04	WASSON+73
598.67 ± 0.32	1	)				WGH= 0.069± 0.016	LIOU+74
605.0	0	1.0	36.0	70.0	17.83	GT = 106.0	JENDL-3.2
605.0	0				14.8	WGH= 0.8	WASSON+73
603.52 ± 0.33	0	1.0		104.0 ±18.0		WGH= 1.1 ± 0.1	LIOU+74
608.0	0	0.0	0.98	102.0	0.2427	GT = 102.98	JENDL-3.2
608.0	0				0.2	WGH= 0.01	WASSON+73
624.0	0	1.0	80.0	46.0	21.9	GT = 126.0	JENDL-3.2
624.0	0				18.1	WGH= 0.72	WASSON+73
622.83 ± 0.34	0	1.0		115.0 ±15.0		WGH= 2.4 ± 0.2	LIOU+74
655.0	0	1.0	1.5	102.0	1.109	GT = 103.5	JENDL-3.2
655.0	0				0.9	WGH= 0.04	WASSON+73
672.0	0	1.0	2.1	102.0	1.543	GT = 104.1	JENDL-3.2
672.0	0				1.3	WGH= 0.05	WASSON+73
687.0	0	1.0	0.18	102.0	0.1198	GT = 102.18	JENDL-3.2
687.0	0				0.1	WGH= 0.004	WASSON+73
690.0	0	1.0	3.5	13.0	2.068	GT = 18.5	JENDL-3.2
690.0	0				1.7	WGH= 0.06	WASSON+73
688.53 ± 0.79	0					WGH= 0.1 ± 0.03	LIOU+74
708.0	0	0.0	21.0	21.0	2.625	GT = 42.0	JENDL-3.2
708.0	0				2.2	WGH= 0.08	WASSON+73
706.28 ± 0.82	0					WGH= 0.2 ± 0.06	LIOU+74
738.0	0	0.0	82.0	102.0	11.36	GT = 184.0	JENDL-3.2
738.0	0				9.4	WGH= 0.35	WASSON+73
741.0	1	2.0	0.88	102.0	1.091	GT = 102.88	JENDL-3.2
741.0	1				0.9	WGH= 0.019	WASSON+73
766.0	0	0.0	48.0	360.0	10.59	GT = 408.0	JENDL-3.2
766.0	0				8.7	WGH= 0.31	WASSON+73
764.32 ± 0.47	0					WGH= 0.43 ± 0.07	LIOU+74
785.0	0	0.0	8.4	11.0	1.191	GT = 19.4	JENDL-3.2
785.0	0				1.0	WGH= 0.04	WASSON+73
782.69 ± 0.47	1	)				WGH= 0.075± 0.029	LIOU+74
793.0	0	1.0	75.0	54.0	23.55	GT = 129.0	JENDL-3.2
793.0	0				19.4	WGH= 0.69	WASSON+73
790.43 ± 0.49	0	1.0		124.0 ±18.0		WGH= 2.0 ± 0.2	LIOU+74
811.0	0	1.0	68.0	64.0	24.73	GT = 132.0	JENDL-3.2
811.0	0				20.5	WGH= 0.72	WASSON+73
809.26 ± 0.51	0			105.0 ±30.0		WGH= 1.8 ± 0.2	LIOU+74
838.0	0	0.0	0.98	102.0	0.2427	GT = 102.98	JENDL-3.2
838.0	0				0.2	WGH= 0.007	WASSON+73
845.0	0	1.0	0.65	102.0	0.4844	GT = 102.65	JENDL-3.2
845.0	0				0.4	WGH= 0.01	WASSON+73
860.0	1	2.0	0.68	102.0	0.8444	GT = 102.68	JENDL-3.2
860.0	1				0.7	WGH= 0.013	WASSON+73
863.0	0	0.0	76.0	59.0	8.304	GT = 135.0	JENDL-3.2

CD-111 3

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
863.0	0				6.9	WGH= 0.23	WASSON+73
860.48 ± 0.55	0					WGH= 0.65 ± 0.1	LIOU+74
878.0	0	1.0	3.6	102.0	2.748	GT = 105.8	JENDL-3.2
878.0	0				2.3	WGH= 0.08	WASSON+73
880.0	0	0.0	130.0	161.0	17.98	GT = 291.0	JENDL-3.2
880.0	0				14.9	WGH= 0.5	WASSON+73
878.17 ± 0.57	0					WGH= 1.1 ± 0.1	LIOU+74
887.0	0	0.0	53.0	102.0	8.719	GT = 155.0	JENDL-3.2
887.0	0				7.2	WGH= 0.24	WASSON+73
902.0	0	1.0	1.1	102.0	0.8182	GT = 103.1	JENDL-3.2
902.0	0				0.7	WGH= 0.02	WASSON+73
906.0	0	1.0	18.0	102.0	11.47	GT = 120.0	JENDL-3.2
906.0	0				9.4	WGH= 0.31	WASSON+73
903.65 ± 0.3	0					WGH= 0.3 ± 0.07	LIOU+74
911.0	0	0.0	3.5	102.0	0.846	GT = 105.5	JENDL-3.2
911.0	0				0.7	WGH= 0.02	WASSON+73
927.0	0	1.0	3.7	36.0	2.516	GT = 39.7	JENDL-3.2
927.0	0				2.1	WGH= 0.07	WASSON+73
924.69 ± 0.62	1)					WGH= 0.092± 0.038	LIOU+74
931.0	0	1.0	3.2	30.0	2.169	GT = 33.2	JENDL-3.2
931.0	0				1.8	WGH= 0.06	WASSON+73
928.1 ± 0.62	1)					WGH= 0.079± 0.038	LIOU+74
963.0	0	0.0	4.5	102.0	1.077	GT = 106.5	JENDL-3.2
963.0	0				0.9	WGH= 0.03	WASSON+73
968.0	0	0.0	236.0	158.0	23.66	GT = 394.0	JENDL-3.2
968.0	0				19.6	WGH= 0.65	WASSON+73
965.24 ± 0.33	0					WGH= 1.9 ± 0.3	LIOU+74
972.0	0	1.0	0.98	102.0	0.728	GT = 102.98	JENDL-3.2
972.0	0				0.6	WGH= 0.02	WASSON+73
994.0	0	0.0	7.2	102.0	1.681	GT = 109.2	JENDL-3.2
994.0	0				1.4	WGH= 0.04	WASSON+73
1006.0	0	0.0	14.0	69.0	2.91	GT = 83.0	JENDL-3.2
1006.0	0				2.4	WGH= 0.08	WASSON+73
1003.1 ± 0.4	1)					WGH= 0.11 ± 0.04	LIOU+74
1019.0	0	0.0	22.0	2.1	0.4793	GT = 24.1	JENDL-3.2
1019.0	0				0.4	WGH= 0.01	WASSON+73
1018.2 ± 0.7	0					WGH= 0.17 ± 0.05	LIOU+74
1026.0	0	1.0	4.5	102.0	3.232	GT = 106.5	JENDL-3.2
1026.0	0				2.7	WGH= 0.08	WASSON+73
1023.1 ± 1.1	1)					WGH= 0.075± 0.034	LIOU+74
1038.0	1	2.0	0.88	102.0	1.091	GT = 102.88	JENDL-3.2
1038.0	1				0.9	WGH= 0.012	WASSON+73
1044.0	0	1.0	48.0	18.0	9.703	GT = 64.0	JENDL-3.2
1044.0	0				8.1	WGH= 0.29	WASSON+73
1042.0 ± 0.4	0					WGH= 1.08 ± 0.12	LIOU+74
1051.0	0	0.0	77.0	102.0	10.97	GT = 179.0	JENDL-3.2
1051.0	0				9.1	WGH= 0.28	WASSON+73
1056.9 ± 0.8	1)					WGH= 0.086± 0.043	LIOU+74
1060.0	0	0.0	5.6	102.0	1.327	GT = 107.6	JENDL-3.2
1060.0	0				1.1	WGH= 0.03	WASSON+73
1071.0	0	1.0	19.0	2.0	1.357	GT = 21.0	JENDL-3.2
1071.0	1				1.1	WGH= 0.002	WASSON+73
1067.7 ± 0.4	0					WGH= 0.44 ± 0.09	LIOU+74
1085.0	0	0.0	8.0	3.5	0.8087	GT = 11.5	JENDL-3.2
1085.0	0				0.5	WGH= 0.02	WASSON+73
1082.1 ± 1.0	1)					WGH= 0.061± 0.03	LIOU+74
1100.0	1	0.0	10.0	102.0	2.277	GT = 112.0	JENDL-3.2
1100.0	1				1.9	WGH= 0.003	WASSON+73
1118.0	0	0.0	2.0	102.0	0.4904	GT = 104.0	JENDL-3.2
1118.0	0				0.4	WGH= 0.01	WASSON+73
1141.0	0	0.0	22.0	6.2	1.209	GT = 28.2	JENDL-3.2
1141.0	0				1.0	WGH= 0.03	WASSON+73
1138.9 ± 0.8	0					WGH= 0.16 ± 0.08	LIOU+74
1152.0	0	0.0	35.0	31.0	4.11	GT = 66.0	JENDL-3.2
1152.0	0				3.4	WGH= 0.1	WASSON+73
1148.8 ± 0.4	0					WGH= 0.26 ± 0.09	LIOU+74
1160.0	0	0.0	9.9	17.0	1.564	GT = 26.9	JENDL-3.2
1160.0	0				1.3	WGH= 0.04	WASSON+73
1157.1 ± 0.9	1)					WGH= 0.073± 0.038	LIOU+74
1175.0	0	1.0	7.3	1.1	0.717	GT = 8.4	JENDL-3.2
1175.0	0				0.6	WGH= 0.02	WASSON+73
1174.4 ± 0.5	0					WGH= 0.16 ± 0.08	LIOU+74
1194.0	0	0.0	5.1	102.0	1.214	GT = 107.1	JENDL-3.2
1194.0	0				1.0	WGH= 0.03	WASSON+73
1206.0	0	1.0	6.9	1.3	0.8204	GT = 8.2	JENDL-3.2
1205.0	0				0.7	WGH= 0.02	WASSON+73
1202.2 ± 0.5	0					WGH= 0.15 ± 0.06	LIOU+74

CD-111 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
1220.0	0	1.0	149.0	49.0	27.66	GT = 198.0	JENDL-3.2
1220.0	0				22.8	WGH= 0.65	WASSON+73
1216.8 ± 0.5	0					WGH= 3.2 ± 0.4	LIOU+74
1223.0	1	1.0	6.1	28.0	3.757	GT = 34.1	JENDL-3.2
1223.0	1				3.1	WGH= 0.032	WASSON+73
1221.0 ± 0.5	0					WGH= 0.13 ± 0.07	LIOU+74
1240.0	0	1.0	12.0	21.0	5.727	GT = 33.0	JENDL-3.2
1240.0	0				4.8	WGH= 0.14	WASSON+73
1237.2 ± 0.5	0					WGH= 0.28 ± 0.09	LIOU+74
1256.0	0	1.0	208.0	53.0	31.68	GT = 261.0	JENDL-3.2
1256.0	0				26.3	WGH= 0.74	WASSON+73
1252.1 ± 0.5	0	1.0		65.0 ±25.0		WGH= 4.4 ± 0.4	LIOU+74
1265.0	0	1.0	29.0	75.0	15.69	GT = 104.0	JENDL-3.2
1265.0	0				13.1	WGH= 0.37	WASSON+73
1261.6 ± 0.5	0					WGH= 0.82 ± 0.08	LIOU+74
1293.0	0	0.0	40.0	180.0	8.182	GT = 220.0	JENDL-3.2
1293.0	0				6.8	WGH= 0.19	WASSON+73
1289.4 ± 0.5	0					WGH= 0.28 ± 0.07	LIOU+74
1312.0	0	1.0	23.0	102.0	14.08	GT = 125.0	JENDL-3.2
1312.0	0				11.6	WGH= 0.32	WASSON+73
1307.6 ± 0.5	0					WGH= 0.3 ± 0.11	LIOU+74
1341.0	0	1.0	25.0	102.0	15.06	GT = 127.0	JENDL-3.2
1341.0	0				12.5	WGH= 0.34	WASSON+73
1354.0	0	1.0	2.6	102.0	1.902	GT = 104.6	JENDL-3.2
1354.0	0				1.6	WGH= 0.04	WASSON+73
1366.0	1	2.0	1.6	102.0	1.969	GT = 103.6	JENDL-3.2
1366.0	0				1.6	WGH= 0.04	WASSON+73
1376.0	0	0.0	88.0	120.0	10.85	GT = 188.0	JENDL-3.2
1376.0	0				9.0	WGH= 0.24	WASSON+73
1371.2 ± 0.6	0					WGH= 0.48 ± 0.11	LIOU+74
1390.0	0	0.0	8.4	102.0	1.94	GT = 110.4	JENDL-3.2
1390.0	0				1.6	WGH= 0.04	WASSON+73
1403.0	0	1.0	60.0	81.0	25.85	GT = 141.0	JENDL-3.2
1403.0	0				21.4	WGH= 0.57	WASSON+73
1399.1 ± 0.3	0					WGH= 1.2 ± 0.2	LIOU+74
1407.0	0	1.0	90.0	27.0	15.58	GT = 117.0	JENDL-3.2
1407.0	0				12.9	WGH= 0.34	WASSON+73
1403.2 ± 0.3	0					WGH= 1.8 ± 0.3	LIOU+74
1427.0	1	2.0	1.1	102.0	1.36	GT = 103.1	JENDL-3.2
1427.0	0				1.1	WGH= 0.03	WASSON+73
1428.0	1	1.0	4.7	102.0	3.37	GT = 106.7	JENDL-3.2
1428.0	0				2.8	WGH= 0.07	WASSON+73
1453.0	0	0.0	72.0	59.0	8.107	GT = 131.0	JENDL-3.2
1453.0	0				6.7	WGH= 0.16	WASSON+73
1448.6 ± 0.6	0					WGH= 0.47 ± 0.16	LIOU+74
1468.0	0	0.0	444.0	7.9	1.94	GT = 451.9	JENDL-3.2
1468.0	0				1.6	WGH= 0.04	WASSON+73
1467.7 ± 0.6	0					WGH= 2.9 ± 0.5	LIOU+74
1495.0	1	0.0	5.1	102.0	1.214	GT = 107.1	JENDL-3.2
1495.0	0				1.0	WGH= 0.03	WASSON+73
1513.0	1	0.0	19.0	1.6	0.3689	GT = 20.6	JENDL-3.2
1513.0	0				0.3	WGH= 0.008	WASSON+73
1511.1 ± 0.7	1	)				WGH= 0.12 ± 0.08	LIOU+74
1528.0	0	1.0	952.0	102.0	69.1	GT = 1054.0	JENDL-3.2
1528.0	0				57.2	WGH= 1.46	WASSON+73
1522.3 ± 0.3	0					WGH= 0.67 ± 0.1	LIOU+74
1542.0	1	0.0	17.0	102.0	3.643	GT = 119.0	JENDL-3.2
1542.0	0				3.0	WGH= 0.08	WASSON+73
1555.0	1	2.0	0.39	102.0	0.4856	GT = 102.39	JENDL-3.2
1555.0	0				0.4	WGH= 0.01	WASSON+73
1570.0	0	0.0	190.0	50.0	9.896	GT = 240.0	JENDL-3.2
1570.0	0				8.2	WGH= 0.2	WASSON+73
1566.5 ± 0.5	0					WGH= 1.2 ± 0.4	LIOU+74
1586.0	0	0.0	605.0	272.0	46.91	GT = 877.0	JENDL-3.2
1586.0	0				38.8	WGH= 0.97	WASSON+73
1581.7 ± 0.4	0	0		75.0 ±30.0		WGH= 3.8 ± 0.5	LIOU+74
1602.0	0	1.0	107.0	61.0	29.14	GT = 168.0	JENDL-3.2
1602.0	0				24.0	WGH= 0.6	WASSON+73
1596.9 ± 0.4	0					WGH= 2.0 ± 0.3	LIOU+74
1622.0	0	1.0	188.0	27.0	17.71	GT = 215.0	JENDL-3.2
1622.0	0				14.6	WGH= 0.36	WASSON+73
1617.4 ± 0.4	0					WGH= 3.5 ± 0.6	LIOU+74
1637.0	0	1.0	226.0	73.0	41.38	GT = 299.0	JENDL-3.2
1637.0	0				34.2	WGH= 0.85	WASSON+73
1630.9 ± 0.4	0					WGH= 4.2 ± 1.0	LIOU+74
1660.0	0	0.0	325.0	196.0	30.57	GT = 521.0	JENDL-3.2
1660.0	0				25.3	WGH= 0.62	WASSON+73
1654.2 ± 0.4	0					WGH= 2.0 ± 0.2	LIOU+74

CD-111

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
1670.0	1	2.0	3.2	102.0	3.878	GT = 105.2	JENDL-3.2
1670.0	0				3.2	WGH= 0.08	WASSON+73
1693.0	1	2.0	1.8	102.0	2.211	GT = 103.8	JENDL-3.2
1693.0	0				1.8	WGH= 0.04	WASSON+73
1705.0	1	0.0	11.0	102.0	2.482	GT = 113.0	JENDL-3.2
1705.0	0				2.1	WGH= 0.05	WASSON+73
1708.0	1	2.0	7.0	102.0	8.168	GT = 109.0	JENDL-3.2
1708.0	0				6.8	WGH= 0.15	WASSON+73
1698.5 * 0.7	1	)				WGH= 0.1 * 0.05	LIOU+74
1748.0	0	0.0	1120.0	157.0	38.33	GT = 1287.0	JENDL-3.2
1748.0	0				30.0	WGH= 0.72	WASSON+73
1742.3 * 0.4	0					WGH= 6.7 * 1.0	LIOU+74
1771.0	0	1.0	15.0	83.0	9.528	GT = 98.0	JENDL-3.2
1771.0	0				7.7	WGH= 0.18	WASSON+73
1766.5 * 0.8	0					WGH= 0.26 * 0.07	LIOU+74
1781.0	1	2.0	1.5	102.0	1.848	GT = 103.5	JENDL-3.2
1781.0	0				1.5	WGH= 0.03	WASSON+73
1793.0	0	1.0	225.0	62.0	38.45	GT = 287.0	JENDL-3.2
1793.0	0				30.3	WGH= 0.72	WASSON+73
1787.0 * 0.4	0					WGH= 4.0 * 0.7	LIOU+74
1796.0	1	1.0	10.0	9.2	3.594	GT = 19.2	JENDL-3.2
1795.0	0				3.0	WGH= 0.07	WASSON+73
1791.1 * 0.8	1	)				WGH= 0.18 * 0.09	LIOU+74
1826.0	0	1.0	142.0	82.0	38.99	GT = 224.0	JENDL-3.2
1826.0	0				32.3	WGH= 0.76	WASSON+73
1820.5 * 0.4	0					WGH= 2.5 * 0.5	LIOU+74
1832.0	0	1.0	106.0	102.0	38.99	GT = 208.0	JENDL-3.2
1832.0	0				32.3	WGH= 0.76	WASSON+73
1825.6 * 0.9	0					WGH= 0.87 * 0.42	LIOU+74
1876.0	1	0.0	12.0	102.0	2.684	GT = 114.0	JENDL-3.2
1876.0	0				2.3	WGH= 0.05	WASSON+73
1889.0	0	0.0	400.0	283.0	41.43	GT = 583.0	JENDL-3.2
1889.0	0				34.3	WGH= 0.79	WASSON+73
1883.8 * 0.5	0					WGH= 2.3 * 0.3	LIOU+74
1925.0	1	0.0	32.0	102.0	5.09	GT = 134.0	JENDL-3.2
1925.0	0				5.1	WGH= 0.12	WASSON+73
1940.0	0	0.0	440.0	428.0	54.11	GT = 856.0	JENDL-3.2
1940.0	0				44.8	WGH= 1.02	WASSON+73
1934.1 * 0.5	0					WGH= 2.5 * 0.5	LIOU+74
1958.0	1	0.0	32.0	102.0	5.09	GT = 134.0	JENDL-3.2
1958.0	0				5.0	WGH= 0.11	WASSON+73
1984.0	1	1.0	7.1	102.0	4.978	GT = 109.1	JENDL-3.2
1984.0	0				4.1	WGH= 0.09	WASSON+73
2011.0	1	0.0	4.5	102.0	1.077	GT = 106.5	JENDL-3.2
2011.0	0				0.9	WGH= 0.02	WASSON+73
2029.0	0	1.0	78.0	113.0	34.61	GT = 191.0	JENDL-3.2
2029.0	0				28.6	WGH= 0.63	WASSON+73
2022.7 * 0.5	0					WGH= 1.3 * 0.2	LIOU+74
2050.0	1	2.0	4.0	102.0	4.811	GT = 106.0	JENDL-3.2
2050.0	0				4.0	WGH= 0.09	WASSON+73
2071.0	1	1.0	0.81	102.0	0.6027	GT = 102.81	JENDL-3.2
2071.0	0				0.5	WGH= 0.01	WASSON+73
2090.0	0	1.0	32.0	40.0	13.33	GT = 72.0	JENDL-3.2
2090.0	0				11.1	WGH= 0.24	WASSON+73
2082.8 * 1.1	0					WGH= 0.53 * 0.35	LIOU+74
2095.0	1	2.0	3.1	102.0	3.761	GT = 105.1	JENDL-3.2
2095.0	0				3.1	WGH= 0.07	WASSON+73
2111.0	1	1.0	8.7	102.0	6.012	GT = 110.7	JENDL-3.2
2111.0	0				5.0	WGH= 0.11	WASSON+73
2117.0	0	1.0	21.0	102.0	13.06	GT = 123.0	JENDL-3.2
2117.0	0				10.7	WGH= 0.23	WASSON+73
2110.7 * 1.1	0					WGH= 0.28 * 0.15	LIOU+74
2125.0	0	1.0	8.0	8.9	2.779	GT = 14.9	JENDL-3.2
2125.0	0				2.3	WGH= 0.05	WASSON+73
2118.6 * 1.1	0					WGH= 0.13 * 0.07	LIOU+74
2145.0	0	0.0	144.0	4350.0	34.85	GT = 4494.0	JENDL-3.2
2145.0	0				28.9	WGH= 0.62	WASSON+73
2138.3 * 1.1	0					WGH= 0.78 * 0.39	LIOU+74
2149.0	0	1.0	117.0	200.0	55.36	GT = 317.0	JENDL-3.2
2149.0	0				45.8	WGH= 0.99	WASSON+73
2144.0 * 1.1	0					WGH= 1.9 * 0.4	LIOU+74
2164.0	0	0.0	101.0	102.0	12.69	GT = 203.0	JENDL-3.2
2164.0	0				10.5	WGH= 0.23	WASSON+73
2158.2 * 1.1	0					WGH= 0.26 * 0.15	LIOU+74
2179.0	0	0.0	85.0	102.0	11.59	GT = 187.0	JENDL-3.2
2179.0	0				9.8	WGH= 0.21	WASSON+73
2172.0 * 1.1	0					WGH= 0.24 * 0.13	LIOU+74

48-Cd-112

Abundance	:24.13 %
Spin-Parity	:0^+
Potential Scattering Radius	:6.5 fm
Cross Sections of 2200 m/s for Total	:9.220 b
Elastic	:7.019 b
Capture	:2.192 b
Maxwellian Average Capture Cross Section	:1.943 b
Resonance Integral of Capture	:13.36 b

Resolved resonance region (MLBW formula) : below 7 keV. Parameters were taken from JENDL-2[1]. For JENDL-2, evaluation was made on the basis of experimental data of Liou et al.[2] and Musgrove et al.[3] The average radiation width of s-wave resonances was assumed to be 0.1 eV[2] below 2.0 keV, and to be 0.077 eV above 2.0 keV. For p-wave ones, the average width of 0.096 eV[3] was assumed. A negative resonance was added so as to reproduce the thermal capture and scattering cross sections given by Mughabghab et al.[4]

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1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Liou H.I. et al.: Phys. Rev., **C10**, 709 (1974).
3) Musgrove A.R. de L. et al.: J. Phys. G, **4**, 771 (1978).
4) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).

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LIOU+74:Liou H.I. et al.: Phys. Rev., **C10**, 709 (1974).
MUSGROVE+78:Musgrove A.R. de L. et al.: J. Phys. G, **4**, 771 (1978).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

CD-112 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-125.0	0	0.5	870.0	100.0	89.69	GT = 970.0	JENDL-3.2
66.8 66.77 ± 0.09 66.77 ± 0.09	0 0	0.5	7.4 A 7.0 ± 0.6	80.0 85 ±20	6.773	GT = 87.4 WGH= 0.86 ± 0.07 GNO= 0.91 ± 0.07	JENDL-3.2 BNL-325 LIOU+74
82.6 82.57 ± 0.09 82.57 ± 0.09	1 1)	0.5	0.082 A 0.08 ± 0.02	96.0	0.08193	GT = 96.082 WGH= 0.009± 0.002 GNO= 0.009± 0.002	JENDL-3.2 BNL-325 LIOU+74
83.2 83.24 ± 0.07 83.24 ± 0.07	1 1)	0.5	0.37 A 0.37 ± 0.03	96.0	0.3686	GT = 96.37 WGH= 0.041± 0.003 GNO= 0.041± 0.003	JENDL-3.2 BNL-325 LIOU+74
226.5 226.46 ± 0.15 226.46 ± 0.15	0 0	0.5	21.0 A 21 ± 2	100.0 115 ±20	17.36	GT = 121.0 WGH= 1.40 ± 0.13 GNO= 1.4 ± 0.1	JENDL-3.2 BNL-325 LIOU+74
443.0 442.97 ± 0.41 442.97 ± 0.41	0 0	0.5	67.0 A 67 ± 5	100.0 105 ±15	40.12	GT = 167.0 WGH= 3.15 ± 0.24 GNO= 3.2 ± 0.2	JENDL-3.2 BNL-325 LIOU+74
452.7 452.68 ± 0.27 452.68 ± 0.27	1 1)	0.5	3.4 A 3.4 ± 0.3	96.0	3.284	GT = 99.4 WGH= 0.16 ± 0.01 GNO= 0.16 ± 0.01	JENDL-3.2 BNL-325 LIOU+74
565.8 565.76 ± 0.30 565.76 ± 0.3	1 1)	0.5	2.6 A 2.6 ± 0.3	96.0	2.531	GT = 98.6 WGH= 0.11 ± 0.01 GNO= 0.11 ± 0.01	JENDL-3.2 BNL-325 LIOU+74
737.3 737.28 ± 0.44 737.28 ± 0.44	0 0	0.5	320.0 A300 ±30	80.0 100 ±25	64.0	GT = 400.0 WGH= 11.06 ± 1.11 GNO= 11.8 ± 1.1	JENDL-3.2 BNL-325 LIOU+74
810.8 810.81 ± 0.65 810.81 ± 0.65	1 1)	0.5	3.1 A 3.0 ± 0.6	96.0	3.003	GT = 99.1 WGH= 0.11 ± 0.02 GNO= 0.11 ± 0.02	JENDL-3.2 BNL-325 LIOU+74
884.5 884.47 ± 0.57 884.47 ± 0.57	1 1)	0.5	5.9 A 6.0 ± 1.0	96.0	5.558	GT = 101.9 WGH= 0.20 ± 0.03 GNO= 0.2 ± 0.03	JENDL-3.2 BNL-325 LIOU+74
894.5 894.50 ± 0.30 894.5 ± 0.3	1 1)	0.5	6.6 A 6.7 ± 1.0	98.0	6.175	GT = 102.8 WGH= 0.22 ± 0.03 GNO= 0.22 ± 0.03	JENDL-3.2 BNL-325 LIOU+74
908.7 908.73 ± 0.30 908.73 ± 0.3	0 0	0.5	250.0 A250 ±20	80.0 105 ±30	60.61	GT = 330.0 WGH= 8.29 ± 0.88 GNO= 8.3 ± 0.7	JENDL-3.2 BNL-325 LIOU+74
1053.0 1052.5 ± 0.4 1052.5 ± 0.4	1 1)	0.5	13.0 A 13 ± 2	96.0	11.45	GT = 109.0 WGH= 0.40 ± 0.06 GNO= 0.4 ± 0.06	JENDL-3.2 BNL-325 LIOU+74
1102.0 1101.5 ± 0.4 1101.5 ± 0.4	1 1)	0.5	6.0 A 6.1 ± 1.5	96.0	5.547	GT = 102.0 WGH= 0.18 ± 0.04 GNO= 0.18 ± 0.05	JENDL-3.2 BNL-325 LIOU+74
1115.0 1115.4 ± 0.4 1115.4 ± 0.4	0 0	0.5	700.0 A710 ±70	90.0	79.75	GT = 790.0 WGH= 21.3 ± 2.1 GNO= 21.0 ± 2.0	JENDL-3.2 BNL-325 LIOU+74
1207.0 1207.3 ± 0.5 1207.3 ± 0.5	1 1)	0.5	14.0 A 14 ± 3	96.0	12.22	GT = 110.0 WGH= 0.40 ± 0.08 GNO= 0.4 ± 0.09	JENDL-3.2 BNL-325 LIOU+74
1337.0 1337.3 ± 0.5 1337.3 ± 0.5	0 0	0.5	36.0 A 36 ± 5	100.0	26.47	GT = 136.0 WGH= 0.98 ± 0.1 GNO= 0.98 ± 0.14	JENDL-3.2 BNL-325 LIOU+74
1423.0 1423.3 ± 0.6 1423.3 ± 0.6	0 0	0.5	680.0 A690 ±70	100.0	87.18	GT = 760.0 WGH= 18.2 ± 1.9 GNO= 18.0 ± 2.0	JENDL-3.2 BNL-325 LIOU+74
1640.0 1640.1 ± 0.4 1640.1 ± 0.4	1 1)	0.5	8.5 A 8.7 ± 1.8	96.0	7.809	GT = 104.5 WGH= 0.21 ± 0.04 GNO= 0.21 ± 0.04	JENDL-3.2 BNL-325 LIOU+74
1706.0 1706.0 ± 0.4 1706.0 ± 0.4	0 0	0.5	290.0 A290 ±30	100.0	74.36	GT = 390.0 WGH= 7.02 ± 0.73 GNO= 7.0 ± 0.7	JENDL-3.2 BNL-325 LIOU+74
1814.0 1814.4 ± 0.4 1814.4 ± 0.4	1 1)	0.5	19.0 A 19 ± 4	96.0	15.86	GT = 115.0 WGH= 0.45 ± 0.09 GNO= 0.45 ± 0.09	JENDL-3.2 BNL-325 LIOU+74
1943.0 1942.5 ± 0.5 1942.5 ± 0.5	0 0	0.5	46.0 A 46 ± 8	100.0	31.51	GT = 146.0 WGH= 1.04 ± 0.14 GNO= 1.04 ± 0.14	JENDL-3.2 BNL-325 LIOU+74
2036.0 2035.5 ± 0.5 2035.5 ± 0.5	0 0	0.5	1500.0 A1500 ±150	77.0	73.24	GT = 1577.0 WGH= 33.24 ± 3.32 GNO= 33.0 ± 3.0	JENDL-3.2 BNL-325 LIOU+74
2226.0 2226.2 ± 0.6 2226.2 ± 0.6	0 0	0.5	39.0 A 39 ± 6	77.0	25.89	GT = 116.0 WGH= 0.83 ± 0.13 GNO= 0.83 ± 0.13	JENDL-3.2 BNL-325 LIOU+74
2337.0 2336.5 ± 0.6 2336.5 ± 0.6	0 0	0.5	750.0 A750 ±70	77.0	69.83	GT = 827.0 WGH= 15.5 ± 1.4 GNO= 15.5 ± 1.5	JENDL-3.2 BNL-325 LIOU+74
2457.0 2456.5 ± 0.7 2456.6 ± 0.7	1 1)	0.5	17.0 A 17 ± 3	96.0	14.44	GT = 113.0 WGH= 0.34 ± 0.06 GNO= 0.34 ± 0.06	JENDL-3.2 BNL-325 LIOU+74
2574.0	0	0.5	1700.0	77.0	73.66	GT = 1777.0	JENDL-3.2

CD-112 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2573.7 ± 0.7			A 1700 ±170			WGH- 33.50 ± 3.35	BNL-325
2573.7 ± 0.7	0					GNO- 34.0 ± 3.0	LIDU+74
2684.0	0	0.5	1600.0	55.0	53.17	GT - 1655.0	JENDL-3.2
2684.8 ± 0.8			A 1600 ±200			WGH- 30.88 ± 3.86	BNL-325
2684.8 ± 0.8	0					GNO- 31.0 ± 4.0	LIDU+74
2684.0	0		(1600.0 ±200.0)	55.0 ± 4.0	53.0 ± 3.0		MUSGROVE+78
2696.0	1	0.5	24.0	96.0	19.2	GT - 120.0	JENDL-3.2
2696.0					19.0 ± 1.0		MUSGROVE+78
2817.0	1	1.5	23.0	96.0	37.11	GT - 119.0	JENDL-3.2
2813.4 ± 0.8			A 19 ± 4			WGH- 0.36 ± 0.08	BNL-325
2813.4 ± 0.8	( )					GNO- 0.36 ± 0.08	LIDU+74
2817.0			(19.0 ± 4.0)		37.0 ± 2.0		MUSGROVE+78
2943.0	0	0.5	58.0	76.0	32.9	GT - 134.0	JENDL-3.2
2817.5 ± 0.8			A 56 ±10			WGH- 1.06 ± 0.19	BNL-325
2817.5 ± 0.8	0					GNO- 1.1 ± 0.2	LIDU+74
2943.0			(56.0 ±10.0)		33.0 ± 2.0		MUSGROVE+78
2952.0	0	0.5	230.0	85.0	62.08	GT - 315.0	JENDL-3.2
2951.5 ± 0.9			A 230 ±30			WGH- 4.23 ± 0.55	BNL-325
2951.5 ± 0.9	0					GNO- 4.2 ± 0.6	LIDU+74
2952.0	0		(230.0 ±30.0)	85.0 ± 5.0	62.0 ± 3.0		MUSGROVE+78
3006.0	1	0.5	21.0	98.0	17.23	GT - 117.0	JENDL-3.2
3005.8 ± 1.8			A 21 ± 6			WGH- 0.38 ± 0.11	BNL-325
3005.8 ± 1.8	1)					GNO- 0.38 ± 0.11	LIDU+74
3104.0	0	0.5	490.0	86.0	73.18	GT - 576.0	JENDL-3.2
3103.8 ± 1.8			A 490 ±60			WGH- 8.80 ± 1.08	BNL-325
3103.8 ± 1.8	0					GNO- 8.8 ± 1.1	LIDU+74
3104.0	0		(490.0 ±60.0)	86.0 ± 4.0	73.0 ± 4.0		MUSGROVE+78
3139.0	1	0.5	12.0	96.0	10.87	GT - 108.0	JENDL-3.2
3139.0					11.0 ± 1.0		MUSGROVE+78
3154.0	0	0.5	110.0	130.0	59.58	GT - 240.0	JENDL-3.2
3153.6 ± 1.0			A 105 ±15			WGH- 1.87 ± 0.27	BNL-325
3153.6 ± 1.0	0					GNO- 1.9 ± 0.3	LIDU+74
3154.0	1)		(105.0 ±15.0)		58.0 ± 3.0	W - 2.0	MUSGROVE+78
3226.0	1	0.5	47.0	32.0	19.04	GT - 79.0	JENDL-3.2
3224.7 ± 1.0			A 47 ± 8			WGH- 0.83 ± 0.14	BNL-325
3224.7 ± 1.0	1)					GNO- 0.83 ± 0.14	LIDU+74
3226.0			(47.0 ± 8.0)		19.0 ± 1.0		MUSGROVE+78
3243.0	1	0.5	5.3	98.0	5.023	GT - 101.3	JENDL-3.2
3243.0					5.0 ± 1.0		MUSGROVE+78
3291.0	1	0.5	46.0	39.0	21.11	GT - 85.0	JENDL-3.2
3289.8 ± 1.0			A 46 ± 9			WGH- 0.80 ± 0.16	BNL-325
3289.8 ± 1.0	1)					GNO- 0.8 ± 0.16	LIDU+74
3291.0			(46.0 ± 9.0)		21.0 ± 1.0		MUSGROVE+78
3308.0	0	0.5	160.0	80.0	53.33	GT - 240.0	JENDL-3.2
3306.9 ± 1.0			A 155 ±25			WGH- 2.69 ± 0.43	BNL-325
3306.9 ± 1.0	0					GNO- 2.7 ± 0.4	LIDU+74
3308.0	0		(155.0 ±25.0)	80.0 ±10.0	53.0 ± 3.0		MUSGROVE+78
3321.0	0	0.5	140.0	150.0	72.41	GT - 290.0	JENDL-3.2
3320.5 ± 1.1			A 140 ±20			WGH- 2.42 ± 0.35	BNL-325
3320.5 ± 1.1	0					GNO- 2.4 ± 0.3	LIDU+74
3321.0	1)		(140.0 ±20.0)		71.0 ± 4.0	W - 2.0	MUSGROVE+78
3404.0	1	1.5	15.0	98.0	25.95	GT - 111.0	JENDL-3.2
3404.3 ± 1.1			A 25 ± 6			WGH- 0.43 ± 0.10	BNL-325
3404.3 ± 1.1	1)					GNO- 0.43 ± 0.1	LIDU+74
3404.0			(25.0 ± 8.0)		26.0 ± 8.0		MUSGROVE+78
3493.0	0	0.5	140.0	85.0	52.89	GT - 225.0	JENDL-3.2
3491.9 ± 1.2			A 140 ±20			WGH- 2.37 ± 0.34	BNL-325
3491.9 ± 1.2	0					GNO- 2.4 ± 0.3	LIDU+74
3493.0	0		(140.0 ±20.0)	84.0 ±12.0	53.0 ± 3.0		MUSGROVE+78
3709.0	1	0.5	40.0	96.0	28.24	GT - 136.0	JENDL-3.2
3709.0			(47.0 ±12.0)		28.0 ± 2.0		MUSGROVE+78
3710.1 ± 1.2			A 47 ±12			WGH- 0.77 ± 0.20	BNL-325
3710.1 ± 1.2	1)					GNO- 0.77 ± 0.2	LIDU+74
3713.0	1	1.5	34.0	96.0	50.22	GT - 130.0	JENDL-3.2
3713.0			(47.0 ±12.0)		50.0 ± 4.0		MUSGROVE+78
3777.0	0	0.5	220.0	240.0	114.8	GT - 450.0	JENDL-3.2
3776.6 ± 1.3			A 220 ±30			WGH- 3.60 ± 0.49	BNL-325
3776.6 ± 1.3	0					GNO- 3.6 ± 0.5	LIDU+74
3777.0	1)		(220.0 ±30.0)	125.0 ±25.0	116.0 ± 6.0	W - 2.0	MUSGROVE+78
3862.0	1	0.5	55.0	120.0	37.71	GT - 175.0	JENDL-3.2
3861.9 ± 1.3			A 55 ±10			WGH- 0.89 ± 0.16	BNL-325
3861.9 ± 1.3	1)					GNO- 0.89 ± 0.16	LIDU+74
3862.0			(55.0 ±10.0)		38.0 ± 2.0		MUSGROVE+78
3886.0	1	1.5	56.0	96.0	70.74	GT - 152.0	JENDL-3.2
3885.7 ± 1.3			A 69 ±14			WGH- 1.11 ± 0.22	BNL-325
3885.7 ± 1.3	1 1					GNO- 1.1 ± 0.2	LIDU+74
3886.0	1 1		(69.0 ±14.0)		71.0 ± 4.0	W - 2.0	MUSGROVE+78
3907.0	1	0.5	25.0	96.0	19.83	GT - 121.0	JENDL-3.2
3907.0					20.0 ± 1.0		MUSGROVE+78
4089.0	1	0.5	11.0	96.0	9.869	GT - 107.0	JENDL-3.2
4089.0					10.0 ± 1.0		MUSGROVE+78
4108.0	0	0.5	210.0	180.0	90.81	GT - 370.0	JENDL-3.2

CD-112

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
4106.9 ± 1.4			A 210 ±30			WGH= 3.28 ± 0.47	BNL-325
4106.9 ± 1.4	0					GNO= 3.3 ± 0.5	L10U+74
4108.0	1)		A 210.0 ±30.0)	79.0 ±12.0	90.0 ± 5.0	W = 2.0	MUSGROVE+78
4153.0	1	0.5	34.0	38.0	17.94	GT = 72.0	JENDL-3.2
4152.7 ± 1.5			A 34 ± 8			WGH= 0.53 ± 0.12	BNL-325
4152.7 ± 1.5	1)					GNO= 0.53 ± 0.12	L10U+74
4153.0			A 34.0 ± 8.0)		18.0 ± 1.0		MUSGROVE+78
4180.0	1	0.5	25.0	96.0	19.83	GT = 121.0	JENDL-3.2
4180.0					20.0 ± 1.0		MUSGROVE+78
4200.0	0	0.5	100.0	82.0	45.05	GT = 182.0	JENDL-3.2
4200.0 ± 1.5			A 100 ±20			WGH= 1.54 ± 0.31	BNL-325
4200.0 ± 1.5	0					GNO= 1.54 ± 0.31	L10U+74
4200.0	0)		A 100.0 ±20.0)	81.0 ±25.0	45.0 ± 3.0		MUSGROVE+78
4258.0	1	0.5	46.0	27.0	17.01	GT = 73.0	JENDL-3.2
4263.3 ± 1.5			A 46 ±12			WGH= 0.70 ± 0.18	BNL-325
4263.3 ± 1.5	1)					GNO= 0.7 ± 0.18	L10U+74
4258.0			A 46.0 ±12.0)		17.0 ± 1.0		MUSGROVE+78
4394.0	1	0.5	93.0	130.0	54.22	GT = 223.0	JENDL-3.2
4392.7 ± 1.5			A 92 ±20			WGH= 1.39 ± 0.30	BNL-325
4392.7 ± 1.8	1)					GNO= 1.4 ± 0.3	L10U+74
4394.0			A 91.0 ±20.0)		54.0 ± 3.0		MUSGROVE+78
4477.0	1	0.5	55.0	96.0	34.97	GT = 151.0	JENDL-3.2
4477.0					35.0 ± 2.0		MUSGROVE+78
4487.0	1	1.5	47.0	170.0	73.84	GT = 217.0	JENDL-3.2
4486.7 ± 1.7			A 97 ±24			WGH= 1.45 ± 0.36	BNL-325
4486.7 ± 1.7	1)					GNO= 1.4 ± 0.4	L10U+74
4487.0	1)		A 97.0 ±24.0)		74.0 ± 4.0	W = 2.0	MUSGROVE+78
4519.0	1	0.5	7.6	96.0	7.042	GT = 103.8	JENDL-3.2
4519.0					7.0 ± 1.0		MUSGROVE+78
4558.0	0	0.5	1700.0	83.0	79.14	GT = 1783.0	JENDL-3.2
4558.3 ± 1.7			A 1700 ±200			WGH= 25.18 ± 2.96	BNL-325
4558.3 ± 1.7	0					GNO= 25.0 ± 3.0	L10U+74
4558.0	0		A 1700.0 ±200.0)	83.0 ± 5.0	79.0 ± 5.0		MUSGROVE+78
4571.0	1	1.5	36.0	96.0	52.36	GT = 132.0	JENDL-3.2
4571.0					52.0 ± 3.0555		MUSGROVE+78
4798.0	0	0.5	120.0	98.0	53.94	GT = 218.0	JENDL-3.2
4798.3 ± 1.8			A 125 ±25			WGH= 1.80 ± 0.36	BNL-325
4798.3 ± 1.8	0					GNO= 1.8 ± 0.4	L10U+74
4798.0	0)		A 125.0 ±25.0)	98.0 ±25.0	55.0 ± 3.0		MUSGROVE+78
4855.0	1	0.5	91.0	98.0	47.19	GT = 189.0	JENDL-3.2
4854.3 ± 1.9			A 92 ±20			WGH= 1.32 ± 0.29	BNL-325
4854.3 ± 1.9	1)					GNO= 1.3 ± 0.3	L10U+74
4855.0	1)		A 92.0 ±20.0)	100.0 ±25.0	47.0 ± 3.0	W = 1.0	MUSGROVE+78
4907.0	0	0.5	91.0	84.0	43.88	GT = 175.0	JENDL-3.2
4907.5 ± 1.9			A 940 ±120			WGH= 13.4 ± 1.71	BNL-325
4907.5 ± 1.9	0					GNO= 13.0 ± 2.0	L10U+74
4907.0	0		A 940.0 ±120.0)	84.0 ± 5.0	77.0 ± 4.0		MUSGROVE+78
4918.0	1	0.5	48.0	96.0	32.0	GT = 144.0	JENDL-3.2
4918.0					32.0 ± 2.0		MUSGROVE+78
5003.0	0	0.5	240.0	210.0	112.0	GT = 450.0	JENDL-3.2
5001.1 ± 2.0			A 240 ±50			WGH= 3.39 ± 0.70	BNL-325
5001.1 ± 2.0	0					GNO= 3.4 ± 0.7	L10U+74
5003.0	1)		A 240.0 ±50.0)	107.0 ±30.0	113.0 ± 6.0	W = 2.0	MUSGROVE+78
5117.0	1	0.5	42.0	96.0	28.22	GT = 138.0	JENDL-3.2
5117.0					29.0 ± 2.0		MUSGROVE+78
5137.0	0	0.5	210.0	250.0	114.1	GT = 460.0	JENDL-3.2
5136.5 ± 2.0			A 210 ±40			WGH= 2.93 ± 0.56	BNL-325
5136.5 ± 2.0	0					GNO= 2.9 ± 0.6	L10U+74
5137.0	1)		A 210.0 ±40.0)	124.0 ±40.0	113.0 ± 6.0	W = 2.0	MUSGROVE+78
5238.0	0	0.5	160.0	94.0	59.21	GT = 254.0	JENDL-3.2
5236.6 ± 2.1			A 160 ±30			WGH= 2.21 ± 0.42	BNL-325
5236.6 ± 2.1	0					GNO= 2.2 ± 0.4	L10U+74
5238.0	0)		A 160.0 ±30.0)	94.0 ±16.0	59.0 ± 3.0		MUSGROVE+78
5288.0	1	1.5	47.0	230.0	78.05	GT = 277.0	JENDL-3.2
5285.8 ± 2.1			A 91 ±25			WGH= 1.25 ± 0.34	BNL-325
5285.8 ± 2.1	1)					GNO= 1.3 ± 0.3	L10U+74
5288.0	1)		A 91.0 ±25.0)		78.0 ± 4.0	W = 2.0	MUSGROVE+78
5433.0	1	0.5	6.4	96.0	6.0	GT = 102.4	JENDL-3.2
5433.0					6.0 ± 1.0		MUSGROVE+78
5554.0	1	0.5	89.0	140.0	54.41	GT = 229.0	JENDL-3.2
5552.2 ± 2.3			A 88 ±18			WGH= 1.18 ± 0.24	BNL-325
5552.2 ± 2.3	1)					GNO= 1.2 ± 0.2	L10U+74
5554.0	1)		A 88.0 ±18.0)		55.0 ± 3.0	W = 2.0	MUSGROVE+78
5575.0	0	0.5	750.0	78.0	70.55	GT = 828.0	JENDL-3.2
5574.9 ± 2.3			A 750 ±100			WGH= 10.00 ± 1.33	BNL-325
5574.9 ± 2.3	0					GNO= 10.0 ± 1.0	L10U+74
5575.0	0		A 750.0 ±100.0)	79.0 ± 4.0	71.0 ± 4.0		MUSGROVE+78
5587.0	1	0.5	44.0	96.0	30.17	GT = 140.0	JENDL-3.2
5587.0					30.0 ± 2.0		MUSGROVE+78
5673.0	1	0.5	11.0	96.0	9.859	GT = 107.0	JENDL-3.2
5673.0					10.0 ± 1.0		MUSGROVE+78
5685.0	0	0.5	980.0	82.0	75.87	GT = 1062.0	JENDL-3.2

CD-112 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
5686.0 ± 2.4			A 950 ±150			WGH- 12.59 ± 2.00	BNL-325
5686.0 ± 2.4	0					GNO- 13.0 ± 2.0	LIDU+74
5686.0	0		† 950.0 ±150.0)	83.0 ± 5.0	76.0 ± 4.0		MUSGROVE+78
5737.0	1	0.5	91.0	110.0	49.8	GT - 201.0	JENDL-3.2
5734.4 ± 2.4			A 93 ±25			WGH- 1.23 ± 0.33	BNL-325
5734.4 ± 2.4	)	)				GNO- 1.2 ± 0.3	LIDU+74
5737.0	1	)	† 93.0 ±25.0)		50.0 ± 3.0	W - 2.0	MUSGROVE+78
5750.0	1	0.5	58.0	96.0	36.16	GT - 154.0	JENDL-3.2
5750.0					36.0 ± 2.0		MUSGROVE+78
5948.0	1	0.5	620.0	70.0	62.9	GT - 690.0	JENDL-3.2
5948.3 ± 2.5			A 620 ±120			WGH- 8.04 ± 1.56	BNL-325
5948.3 ± 2.5	0					GNO- 8.0 ± 1.6	LIDU+74
5948.0	0		† 620.0 ±120.0)	71.0 ± 5.0	63.0 ± 4.0		MUSGROVE+78
6085.0	0	0.5	1600.0	71.0	67.98	GT - 1671.0	JENDL-3.2
6085.1 ± 2.8			A 1600 ±300			WGH- 20.51 ± 3.85	BNL-325
6085.1 ± 2.8	0					GNO- 21.0 ± 4.0	LIDU+74
6085.0	0		† 1600.0 ±300.0)	71.0 ± 4.0	68.0 ± 4.0		MUSGROVE+78
6115.0	0	0.5	150.0	170.0	82.42	GT - 330.0	JENDL-3.2
6112.4 ± 2.8			A 150 ±30			WGH- 2.05 ± 0.38	BNL-325
6112.4 ± 2.8	0					GNO- 2.0 ± 0.4	LIDU+74
6115.0	1)		† 180.0 ±30.0)	82.0 ±25.0	81.0 ± 4.0	W - 2.0	MUSGROVE+78
6218.0	1	0.5	75.0	96.0	42.11	GT - 171.0	JENDL-3.2
6218.0					42.0 ± 3.0		MUSGROVE+78
6360.0	0	0.5	520.0	66.0	60.14	GT - 588.0	JENDL-3.2
6359.1 ± 2.8			A 520 ±120			WGH- 6.52 ± 1.50	BNL-325
6359.1 ± 2.8	0					GNO- 6.5 ± 1.5	LIDU+74
6360.0	0		† 520.0 ±120.0)	66.0 ± 5.0	60.0 ± 4.0		MUSGROVE+78
6435.0	0	0.5	210.0	170.0	93.95	GT - 380.0	JENDL-3.2
6433.4 ± 2.8			A 210 ±50			WGH- 2.62 ± 0.62	BNL-325
6433.4 ± 2.8	0					GNO- 2.6 ± 0.6	LIDU+74
6435.0	1)		† 210.0 ±50.0)	87.0 ±30.0	85.0 ± 8.0	W - 2.0	MUSGROVE+78
6530.0	0	0.5	320.0	260.0	143.4	GT - 580.0	JENDL-3.2
6529.1 ± 2.9			A 320 ±60			WGH- 3.96 ± 0.74	BNL-325
6529.1 ± 2.9	0					GNO- 4.0 ± 0.7	LIDU+74
6530.0	1)		† 320.0 ±60.0)	130.0 ±30.0	144.0 ± 8.0	W - 2.0	MUSGROVE+78
6578.0	0	0.5	2400.0	84.0	81.18	GT - 2484.0	JENDL-3.2
6577.0 ± 2.9			A 2400 ±300			WGH- 29.59 ± 3.70	BNL-325
6577.0 ± 2.9	0					GNO- 30.0 ± 4.0	LIDU+74
6578.0	0		† 2400.0 ±300.0)	84.0 ± 5.0	81.0 ± 5.0		MUSGROVE+78
6618.0	1	1.5	46.0	96.0	52.2	GT - 142.0	JENDL-3.2
6618.0					52.0 ± 4.0		MUSGROVE+78
6808.0	1	0.5	75.0	96.0	42.11	GT - 171.0	JENDL-3.2
6808.0					42.0 ± 3.0		MUSGROVE+78
6878.0	1	1.5	70.0	4800.0	138.0	GT - 4870.0	JENDL-3.2
6874.5 ± 3.1			A 140 ±40			WGH- 1.69 ± 0.48	BNL-325
6874.5 ± 3.1	1)					GNO- 1.7 ± 0.5	LIDU+74
6878.0	1)		† 140.0 ±40.0)		138.0 ± 8.0	W - 2.0	MUSGROVE+78
6922.0	0	0.5	390.0	190.0	127.8	GT - 580.0	JENDL-3.2
6920.0 ± 3.2			A 390 ±100			WGH- 4.69 ± 1.20	BNL-325
6920.0 ± 3.2	0					GNO- 4.7 ± 1.2	LIDU+74
6922.0	1)		† 390.0 ±100.0)	96.0 ±20.0	129.0 ± 7.0	W - 2.0	MUSGROVE+78
6940.0	0	0.5	220.0	130.0	81.71	GT - 350.0	JENDL-3.2
6937.3 ± 3.2			A 220 ±60			WGH- 2.64 ± 0.72	BNL-325
6937.3 ± 3.2	0					GNO- 2.6 ± 0.7	LIDU+74
6940.0	1)		† 220.0 ±60.0)	133.0 ±40.0	83.0 ± 5.0	W - 1.0	MUSGROVE+78
6975.0	0	0.5	2900.0	84.0	81.54	GT - 2984.0	JENDL-3.2
6975.5 ± 3.2			A 2900 ±400			WGH- 34.72 ± 4.79	BNL-325
6975.5 ± 3.2	0					GNO- 35.0 ± 5.0	LIDU+74
6975.0	0		† 2900.0 ±400.0)	84.0 ± 5.0	82.0 ± 5.0		MUSGROVE+78
7168.0	0	0.5	400.0	77.0	64.57	GT - 477.0	JENDL-3.2
7167.8 ± 3.3			A 400 ±80			WGH- 4.73 ± 0.95	BNL-325
7167.8 ± 3.3	0					GNO- 4.7 ± 0.9	LIDU+74
7640.0	0	0.5	170.0	77.0	53.0	GT - 247.0	JENDL-3.2
7640.0 ± 3.7			A 170 ±50			WGH- 1.95 ± 0.57	BNL-325
7640.0 ± 3.7	0					GNO- 1.9 ± 0.6	LIDU+74
8008.0	0	0.5	440.0	77.0	65.53	GT - 517.0	JENDL-3.2
8007.5 ± 3.9			A 440 ±120			WGH- 4.92 ± 1.34	BNL-325
8007.5 ± 3.9	0					GNO- 4.9 ± 1.3	LIDU+74
8029.0	0	0.5	480.0	77.0	66.36	GT - 557.0	JENDL-3.2
8029.2 ± 3.9			A 480 ±100			WGH- 5.36 ± 1.12	BNL-325
8029.2 ± 3.9	0					GNO- 5.4 ± 1.1	LIDU+74
8248.0	0	0.5	1600.0	77.0	73.45	GT - 1677.0	JENDL-3.2
8248.3 ± 4.1			A 1600 ±300			WGH- 17.62 ± 3.30	BNL-325
8248.3 ± 4.1	0					GNO- 18.0 ± 3.0	LIDU+74
8377.0	0	0.5	730.0	77.0	69.65	GT - 807.0	JENDL-3.2
8377.0 ± 4.2			A 730 ±160			WGH- 7.98 ± 1.75	BNL-325
8377.0 ± 4.2	0					GNO- 8.0 ± 1.7	LIDU+74
8519.0	0	0.5	540.0	77.0	67.39	GT - 617.0	JENDL-3.2
8519.4 ± 4.3			A 540 ±150			WGH- 5.85 ± 1.62	BNL-325
8519.4 ± 4.3	0					GNO- 5.9 ± 1.6	LIDU+74
8537.0	0	0.5	760.0	77.0	69.92	GT - 837.0	JENDL-3.2
8536.7 ± 4.3			A 760 ±200			WGH- 8.23 ± 2.16	BNL-325

CD-112 5

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
8536.7 ± 4.3	0					GNO= 8.2 ± 2.2	LIOU+74
8666.0 8665.5 ± 4.4 8665.5 ± 4.4	0 0	0.5	350.0 A350 ±90	77.0	83.11	GT = 427.0 WGH= 3.76 ± 0.97 GNO= 3.8 ± 1.0	JENDL-3.2 BNL-325 LIOU+74
9042.0 9041.9 ± 4.7 9041.9 ± 4.7	0 0	0.5	400.0 A400 ±100	77.0	64.57	GT = 477.0 WGH= 4.21 ± 1.05 GNO= 4.2 ± 1.1	JENDL-3.2 BNL-325 LIOU+74
9154.0 9153.5 ± 4.8 9153.5 ± 4.8	0 0	0.5	2000.0 A2000 ±400	77.0	74.15	GT = 2077.0 WGH= 20.90 ± 4.18 GNO= 21.0 ± 4.0	JENDL-3.2 BNL-325 LIOU+74
9226.0 9225.9 ± 4.9 9225.9 ± 4.9	0 0	0.5	550.0 A550 ±140	77.0	67.54	GT = 627.0 WGH= 5.73 ± 1.46 GNO= 5.7 ± 1.5	JENDL-3.2 BNL-325 LIOU+74
9570.1 ± 5.1 9570.1 ± 5.1	 0		A1100 ±200			WGH= 11.24 ± 2.04 GNO= 11.0 ± 2.0	BNL-325 LIOU+74
9738.0 9738.9 ± 5.3 9738.9 ± 5.3	0 0	0.5	370.0 A370 ±100	77.0	63.74	GT = 447.0 WGH= 3.75 ± 1.01 GNO= 3.7 ± 1.0	JENDL-3.2 BNL-325 LIOU+74
10043 10043 ± 6 10043.0± 6.0	0 0	0.5	630.0 A630 ±180	77.0	68.61	GT = 707.0 WGH= 6.29 ± 1.80 GNO= 6.3 ± 1.8	JENDL-3.2 BNL-325 LIOU+74
10262 10262 ± 6 10262.0± 6.0	0 0	0.5	940.0 A940 ±300	77.0	71.17	GT = 1017.0 WGH= 9.28 ± 2.96 GNO= 9.3 ± 3.0	JENDL-3.2 BNL-325 LIOU+74
10464 10464 ± 6 10464.0± 6.0	0 0	0.5	390.0 A390 ±120	77.0	64.3	GT = 467.0 WGH= 3.81 ± 1.17 GNO= 3.8 ± 1.2	JENDL-3.2 BNL-325 LIOU+74
10582 10582 ± 6 10582.0± 6.0	0 0	0.5	610.0 A810 ±200	77.0	68.37	GT = 687.0 WGH= 5.92 ± 1.94 GNO= 5.9 ± 1.9	JENDL-3.2 BNL-325 LIOU+74
10678 10678 ± 6 10678.0± 6.0	0 0	0.5	3300.0 A3300 ±900	77.0	75.24	GT = 3377.0 WGH= 31.94 ± 8.71 GNO= 32.0 ± 9.0	JENDL-3.2 BNL-325 LIOU+74
10899 10899 ± 6 10899.0± 6.0	0 0	0.5	2500.0 A2500 ±600	77.0	74.7	GT = 2577.0 WGH= 23.95 ± 5.75 GNO= 24.0 ± 6.0	JENDL-3.2 BNL-325 LIOU+74
11081 11018 ± 7 11018.0± 7.0	0 0	0.5	510.0 A510 ±200	77.0	66.9	GT = 587.0 WGH= 4.86 ± 1.91 GNO= 4.9 ± 1.9	JENDL-3.2 BNL-325 LIOU+74
11153 11153 ± 7 11153.0± 7.0	0 0	0.5	860.0 A860 ±250	77.0	70.67	GT = 937.0 WGH= 8.14 ± 2.37 GNO= 8.1 ± 2.4	JENDL-3.2 BNL-325 LIOU+74
11280 11280 ± 7 11280.0± 7.0	0 0	0.5	800.0 A800 ±250	77.0	70.24	GT = 877.0 WGH= 7.53 ± 2.35 GNO= 7.5 ± 2.4	JENDL-3.2 BNL-325 LIOU+74
11322 11322 ± 7 11322.0± 7.0	0 0	0.5	530.0 A530 ±200	77.0	67.23	GT = 607.0 WGH= 4.98 ± 1.88 GNO= 5.0 ± 1.9	JENDL-3.2 BNL-325 LIOU+74
11455 11455 ± 7 11455.0± 7.0	0 0	0.5	2100.0 A2100 ±600	77.0	74.28	GT = 2177.0 WGH= 19.58 ± 5.60 GNO= 20.0 ± 6.0	JENDL-3.2 BNL-325 LIOU+74

48-Cd-113

Abundance	:12.22 %
Spin-Parity	:$1/2^+$
Potential Scattering Radius	:6.5 fm
Cross Sections of 2200 m/s for Total	:20,670 b
Elastic	:25.47 b
Capture	:20,650 b
Maxwellian Average Capture Cross Section	:24,390 b
Resonance Integral of Capture	:393.6 b

Resolved resonance region (MLBW formula) : below 1.0 keV. For JENDL-2[1], evaluation was made on the basis of the data measured by Liou et al.[2] The average radiation width of 0.101 eV[2] was assumed for s-wave levels. For JENDL-3.1[3], total spin J of some resonances was tentatively estimated with a random number method.

References:
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2) Liou H.I. et al.: Phys. Rev., **C10**, 709 (1974).
3) Kawai M. et al.: J. Nucl. Sci. Technol., **29**, 195 (1992).

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KING+69:King T.I. and Block R.C.:Nucl. Phys., **A138**, 556(1969).
LIOU+74:Liou H.I. et al.: Phys. Rev., **C10**, 709 (1974).
JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

CD-113 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
0.178	0	1.0	0.65	114.0	GT = 114.65	JENDL-3.2
0.1776± 0.0006		1	0.968± 0.020	114 ± 1	WGO= 2.28 ± 0.02	BNL-325
0.178± 0.002	0				WGH= 1.16 ± 0.05	LIOU+74
18.4	0	1.0	0.17	95.0	GT = 95.17	JENDL-3.2
18.40 ± 0.03		1	0.28 ± 0.02		WGO= 0.0653± 0.0047	BNL-325
18.4 ± 0.03	0			95.0 ±20.0	WGH= 0.03 ± 0.002	LIOU+74
56.3 ± 0.2			0.2 ± 0.1		WGO= 0.270± 0.014	BNL-325
63.68	0	1.0	3.5	85.0	GT = 88.5	JENDL-3.2
63.68 ± 0.09		1	4.8 ± 0.4	100 ±20	WGO= 0.600± 0.050	BNL-325
63.68 ± 0.09	0			85.0 ±15.0	WGH= 0.33 ± 0.03	LIOU+74
84.82	0	1.0	31.0	105.0	GT = 136.0	JENDL-3.2
84.82 ± 0.07		1	45 ± 4	113 ±10	WGO= 4.88 ± 0.43	BNL-325
84.82 ± 0.07	0	1		105.0 ±15.0	WGH= 2.5 ± 0.2	LIOU+74
108.3	0	1.0	11.0	93.0	GT = 104.0	JENDL-3.2
108.30 ± 0.10		1	16.4 ± 1.2	90 ±12	WGO= 1.57 ± 0.115	BNL-325
108.3 ± 0.1	0	1		93.0 ±12.0	WGH= 0.77 ± 0.06	LIOU+74
143.08	0	1.0	2.867	101.0	GT = 103.87	JENDL-3.2
143.08 ± 0.15			5.2 ± 0.4		WGO= 0.433± 0.0334	BNL-325
143.08 ± 0.15	0				WGH= 0.18 ± 0.02	LIOU+74
158.72	0	0.0	26.0	90.0	GT = 116.0	JENDL-3.2
158.72 ± 0.17			14.0 ± 1.0		WGO= 1.03 ± 0.08	BNL-325
158.72 ± 0.17	0			90.0 ±20.0	WGH= 0.53 ± 0.04	LIOU+74
192.82	0	0.0	172.0	110.0	GT = 282.0	JENDL-3.2
192.82 ± 0.14		0	92 ± 6	110 ±15	WGO= 6.62 ± 0.43	BNL-325
193.0		0	188.0		GT = 337.0	KING+69
192.82 ± 0.14	0	0		110.0 ±15.0	WGH= 3.1 ± 0.2	LIOU+74
215.16	0	1.0	29.0	110.0	GT = 139.0	JENDL-3.2
215.16 ± 0.28		1	40 ± 4	97 ±14	WGO= 2.72 ± 0.27	BNL-325
215.0		(1.0)	25.0		GT = 150.0	KING+69
215.16 ± 0.28	0	1		110.0 ±16.0	WGH= 1.5 ± 0.14	LIOU+74
232.0		1.0	70.0		GT = 225.0	KING+69
261.03	0	1.0	34.7	110.0	GT = 144.7	JENDL-3.2
261.03 ± 0.19		1	54 ± 4	97 ±12	WGO= 3.34 ± 0.25	BNL-325
261.03 ± 0.19	0	1		110.0 ±15.0	WGH= 1.61 ± 0.12	LIOU+74
269.06	0	0.0	76.1	96.0	GT = 172.1	JENDL-3.2
269.26 ± 0.20		0	35 ± 4	100 ±16	WGO= 2.14 ± 0.24	BNL-325
269.26 ± 0.2	0	0		96.0 ±20.0	WGH= 1.16 ± 0.06	LIOU+74
291.56	0	0.0	17.8	101.0	GT = 118.8	JENDL-3.2
291.56 ± 0.22			10.0 ± 0.8		WGO= 0.585± 0.047	BNL-325
291.56 ± 0.22	0				WGH= 0.26 ± 0.02	LIOU+74
414.03	0	1.0	122.0	100.0	GT = 222.0	JENDL-3.2
414.03 ± 0.37		1	195 ±18	103 ±15	WGO= 9.58 ± 0.885	BNL-325
414.03 ± 0.37	0	1		100.0 ±16.0	WGH= 4.5 ± 0.3	LIOU+74
431.94	0	0.0	92.0	100.0	GT = 192.0	JENDL-3.2
431.94 ± 0.39		1	47 ± 6		WGO= 2.26 ± 0.29	BNL-325
431.94 ± 0.39	0			100.0 ±20.0	WGH= 1.1 ± 0.1	LIOU+74
500.89	0	1.0	54.0	100.0	GT = 154.0	JENDL-3.2
500.89 ± 0.25		1	86 ± 6	108 ±20	WGO= 3.84 ± 0.27	BNL-325
500.89 ± 0.25	0	1		100.0 ±20.0	WGH= 1.8 ± 0.1	LIOU+74
524.66	0	1.0	37.0	115.0	GT = 152.0	JENDL-3.2
524.66 ± 0.26		1	56 ± 6	102 ±25	WGO= 2.45 ± 0.26	BNL-325
524.66 ± 0.26	0	1		115.0 ±25.0	WGH= 1.2 ± 0.1	LIOU+74
551.59	0	1.0	100.0	115.0	GT = 215.0	JENDL-3.2
551.59 ± 0.29		1	165 ±15	95 ±20	WGO= 7.03 ± 0.64	BNL-325
551.59 ± 0.29	0	1		115.0 ±18.0	WGH= 3.2 ± 0.3	LIOU+74
634.89	0	0.0	350.0	92.0	GT = 442.0	JENDL-3.2
634.89 ± 0.35		0	170 ±18	170 ±50	WGO= 6.75 ± 0.71	BNL-325
634.89 ± 0.35	0	0		92.0 ±30.0	WGH= 3.5 ± 0.3	LIOU+74
723.45	0	0.0	68.0	86.0	GT = 154.0	JENDL-3.2
723.45 ± 0.43			40 ± 4		WGO= 1.48 ± 0.15	BNL-325
723.45 ± 0.43	0			86.0 ±20.0	WGH= 0.63 ± 0.07	LIOU+74
841.45	0	1.0	73.33	101.0	GT = 174.33	JENDL-3.2
841.45 ± 0.54			112 ±18		WGO= 3.84 ± 0.62	BNL-325
841.45 ± 0.54	0				WGH= 1.9 ± 0.2	LIOU+74
851.43	0	1.0	467.0	125.0	GT = 592.0	JENDL-3.2
851.43 ± 0.55		1	720 ±80	115 ±30	WGO= 24.67 ± 2.74	BNL-325
851.43 ± 0.55	0	1		125.0 ±30.0	WGH= 12.0 ± 1.0	LIOU+74
1088.6	0	0.0	184.0	101.0	GT = 285.0	JENDL-3.2

CD-113 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1088.6 ± 0.4			B 92 ±14		WGO= 2.79 ± 0.424	BNL-325
1088.6 ± 0.4	0				WGH= 1.4 ± 0.2	LIOU+74
1120.0	0	0.0	400.0	101.0	GT = 501.0	JENDL-3.2
1120.0 ± 0.4			B 200 ±60		WGO= 5.98 ± 1.79	BNL-325
1120.0 ± 0.4	0				WGH= 3.0 ± 0.7	LIOU+74
1267.3	0	1.0	199.0	95.0	GT = 294.0	JENDL-3.2
1267.3 ± 0.5	1		B 300 ±40	95 ±25	WGO= 8.43 ± 1.12	BNL-325
1267.3 ± 0.5	0	1		95.0 ±25.0	WGH= 4.2 ± 0.6	LIOU+74
1310.2	0	0.0	116.0	101.0	GT = 217.0	JENDL-3.2
1310.2 ± 0.5			B 58 ±18		WGO= 1.60 ± 0.497	BNL-325
1310.2 ± 0.5	0				WGH= 0.8 ± 0.2	LIOU+74
1318.1	0	0.0	304.0	101.0	GT = 405.0	JENDL-3.2
1364.0	0	1.0	172.0	90.0	GT = 262.0	JENDL-3.2
1318.1 ± 0.5			B 150 ±50		WGO= 4.13 ± 1.38	BNL-325
1364.0 ± 0.6	0	1		90.0 ±30.0	WGH= 3.5 ± 0.5	LIOU+74
1364.0 ± 0.6		1	B 260 ±40	90 ±30	WGO= 7.04 ± 1.08	BNL-325
1381.1 ± 0.5	0				WGH= 2.1 ± 0.7	LIOU+74
1628.0	0	0.0	220.0	101.0	GT = 321.0	JENDL-3.2
1628.0 ± 0.4			B 110 ±36		WGO= 2.73 ± 0.89	BNL-325
1628.0 ± 0.4	0				WGH= 1.4 ± 0.4	LIOU+74
1645.6	0	1.0	44.0	101.0	GT = 145.0	JENDL-3.2
1645.6 ± 0.4			B 66 ±14		WGO= 1.53 ± 0.35	BNL-325
1645.6 ± 0.4	0				WGH= 0.81 ± 0.17	LIOU+74
1659.7	0	1.0	60.0	101.0	GT = 161.0	JENDL-3.2
1659.7 ± 0.4			B 90 ±18		WGO= 2.21 ± 0.44	BNL-325
1659.7 ± 0.4	0				WGH= 1.1 ± 0.2	LIOU+74
1866.9	0	0.0	112.0	101.0	GT = 213.0	JENDL-3.2
1866.9 ± 0.5			B 56 ±12		WGO= 1.30 ± 0.28	BNL-325
1866.9 ± 0.5	0				WGH= 0.65 ± 0.14	LIOU+74
1908.2	0	0.0	316.0	101.0	GT = 417.0	JENDL-3.2
1908.2 ± 0.5			B 158 ±30		WGO= 3.62 ± 0.69	BNL-325
1908.2 ± 0.5	0				WGH= 1.8 ± 0.3	LIOU+74
1963.3	0	0.0	248.0	101.0	GT = 349.0	JENDL-3.2
1963.3 ± 1.0			B 124 ±50		WGO= 2.80 ± 1.13	BNL-325
1963.3 ± 1.0	0				WGH= 1.4 ± 0.5	LIOU+74
2053.2	0	0.0	308.0	101.0	GT = 409.0	JENDL-3.2
2053.2 ± 0.5			B 152 ±40		WGO= 3.36 ± 0.88	BNL-325
2053.2 ± 0.5	0				WGH= 1.7 ± 0.4	LIOU+74
2114.6	0	0.0	140.0	101.0	GT = 241.0	JENDL-3.2
2114.6 ± 0.6			B 70 ±28		WGO= 1.52 ± 0.61	BNL-325
2114.6 ± 0.6	0				WGH= 0.76 ± 0.26	LIOU+74
2200.0	0	0.0	244.0	101.0	GT = 345.0	JENDL-3.2
2200.0 ± 0.6			B 122 ±36		WGO= 2.60 ± 0.77	BNL-325
2200.0 ± 0.6	0				WGH= 1.3 ± 0.4	LIOU+74
2241.2	0	1.0	60.0	101.0	GT = 161.0	JENDL-3.2
2241.2 ± 0.6			B 90 ±30		WGO= 1.90 ± 0.63	BNL-325
2241.2 ± 0.6	0				WGH= 0.95 ± 0.3	LIOU+74

48-Cd-114

Abundance	:28.73 %
Spin-Parity	:0^+
Potential Scattering Radius	:7.5 fm
Cross Sections of 2200 m/s for Total	:6.240 b
Elastic	:5.900 b
Capture	:0.3404 b
Maxwellian Average Capture Cross Section	:0.3018 b
Resonance Integral of Capture	:16.95 b

Resolved resonance region (MLBW formula) : below 8 keV. For JENDL-2[1], evaluation was made on the basis of experimental data of Liou et al.[2] and Musgrove et al.[3] The average radiation width of s-wave resonances was assumed to be 0.11 eV[2] below 2.0 keV, and to be 0.053 eV above 2.0 keV. For p-wave ones, the average width of 0.082 eV[3] was assumed.

For JENDL-3.1[4], parameters of a negative resonance and scattering radius were modified so as to reproduce the thermal capture and elastic scattering cross sections given by Mughabghab et al.[5]

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1) Aoki T. et al.: Proc. Int. Conf. on Nuclear Data for Basic and Applied Science, Santa Fe, Vol. 2, p.1627 (1985).
2) Liou H.I. et al.: Phys. Rev., **C10**, 709 (1974).
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JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

CD-114 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-225.0	0	0.5	100.0	55.0	35.48	GT = 155.0	JENDL-3.2
56.4 56.40 ± 0.05 56.4 ± 0.05	1 1)	0.5	0.08 A 0.078± 0.015	82.0	0.07992	GT = 82.08 WGH= 0.0103± 0.001 GNO= 0.01 ± 0.002	JENDL-3.2 BNL-325 LIOU+74
120.1 120.10 ± 0.15 120.1 ± 0.15	0 0	0.5	55.0 A 50 ± 3	85.0 95 ±15	34.83	GT = 150.0 WGH= 4.57 ± 0.27 GNO= 4.3 ± 0.3	JENDL-3.2 BNL-325 LIOU+74
227.1 227.07 ± 0.15 227.07 ± 0.15	0 0	0.5	3.2 A 3.1 ± 0.5	110.0	3.11	GT = 113.2 WGH= 0.21 ± 0.03 GNO= 0.21 ± 0.03	JENDL-3.2 BNL-325 LIOU+74
392.2 392.27 ± 0.34 392.24 ± 0.34	0 0	0.5	830.0 A840 ±50	110.0	97.13	GT = 940.0 WGH= 42.41 ± 2.52 GNO= 42.0 ± 3.0	JENDL-3.2 BNL-325 LIOU+74
567.8 567.78 ± 0.38 567.78 ± 0.38	1 1)	0.5	2.1 A 2.1 ± 0.3	82.0	2.048	GT = 84.1 WGH= 0.68 ± 0.13 GNO= 0.088± 0.013	JENDL-3.2 BNL-325 LIOU+74
670.7 670.68 ± 0.38 670.68 ± 0.38	0 0	0.5	360.0 A360 ±30	110.0 130 ±30	84.26	GT = 470.0 WGH= 13.90 ± 1.16 GNO= 14.0 ± 1.0	JENDL-3.2 BNL-325 LIOU+74
752.2 752.19 ± 0.45 752.19 ± 0.45	0 0	0.5	370.0 A370 ±30	110.0 110 ±25	84.79	GT = 480.0 WGH= 13.49 ± 1.09 GNO= 13.5 ± 1.1	JENDL-3.2 BNL-325 LIOU+74
962.1 962.13 ± 0.33 962.13 ± 0.33	1 1)	0.5	170.0 A 17 ± 3	82.0	55.32	GT = 252.0 WGH= 0.55 ± 0.10 GNO= 0.55 ± 0.1	JENDL-3.2 BNL-325 LIOU+74
1038.0 1037.9 ± 0.9 1037.9 ± 0.9	1 1)	0.5	4.8 A 4.0 ± 1.2	110.0	4.599	GT = 114.8 WGH= 0.12 ± 0.04 GNO= 0.15 ± 0.05	JENDL-3.2 BNL-325 LIOU+74
1100.0 1099.7 ± 0.4 1099.7 ± 0.4	0 0	0.5	250.0 A250 ±20	110.0	76.39	GT = 360.0 WGH= 7.54 ± 0.60 GNO= 7.5 ± 0.6	JENDL-3.2 BNL-325 LIOU+74
1327.0 1326.5 ± 0.3 1326.5 ± 0.3	0 0	0.5	31.0 A 31 ± 3	110.0	24.18	GT = 141.0 WGH= 0.85 ± 0.08 GNO= 0.85 ± 0.08	JENDL-3.2 BNL-325 LIOU+74
1426.0 1425.7 ± 0.8 1425.7 ± 0.8	0 0	0.5	1800.0 A1800 ±200	110.0	103.7	GT = 1910.0 WGH= 47.67 ± 5.29 GNO= 48.0 ± 5.0	JENDL-3.2 BNL-325 LIOU+74
1475.0 1475.3 ± 0.3 1475.3 ± 0.3	0 0	0.5	42.0 A 42 ± 4	110.0	30.39	GT = 152.0 WGH= 1.09 ± 0.10 GNO= 1.1 ± 0.1	JENDL-3.2 BNL-325 LIOU+74
1485.0 1485.3 ± 0.8 1485.3 ± 0.8	1 1)	0.5	12.0 A 12 ± 3	82.0	10.47	GT = 94.0 WGH= 0.31 ± 0.08 GNO= 0.31 ± 0.08	JENDL-3.2 BNL-325 LIOU+74
1604.0 1604.3 ± 0.4 1604.3 ± 0.4	1 1)	0.5	28.0 A 28 ± 4	82.0	20.87	GT = 110.0 WGH= 0.70 ± 0.10 GNO= 0.7 ± 0.1	JENDL-3.2 BNL-325 LIOU+74
1637.0 1637.3 ± 1.9 1637.3 ± 1.9	1 1)	0.5	20.0 A 20 ± 7	82.0	16.08	GT = 102.0 WGH= 0.49 ± 0.17 GNO= 0.49 ± 0.17	JENDL-3.2 BNL-325 LIOU+74
1690.0 1690.0 ± 0.7 1690.0 ± 0.7	1 1)	0.5	15.0 A 15 ± 3	82.0	12.68	GT = 97.0 WGH= 0.35 ± 0.07 GNO= 0.36 ± 0.07	JENDL-3.2 BNL-325 LIOU+74
1921.0 1921.1 ± 0.5 1921.1 ± 0.5	0 0	0.5	490.0 A490 ±60	110.0	89.83	GT = 600.0 WGH= 11.18 ± 1.37 GNO= 11.2 ± 1.4	JENDL-3.2 BNL-325 LIOU+74
1965.0 1964.9 ± 0.5 1964.9 ± 0.5	1 1)	0.5	37.0 A 37 ± 7	82.0	25.5	GT = 119.0 WGH= 0.84 ± 0.16 GNO= 0.83 ± 0.16	JENDL-3.2 BNL-325 LIOU+74
2133.0 2132.8 ± 0.8 2132.8 ± 0.8	0 0	0.5	310.0 A310 ±40	53.0	45.28	GT = 363.0 WGH= 6.71 ± 0.87 GNO= 6.7 ± 0.9	JENDL-3.2 BNL-325 LIOU+74
2267.0 2267.3 ± 0.8 2267.3 ± 0.8	1 1)	0.5	22.0 A 22 ± 4	82.0	17.35	GT = 104.0 WGH= 0.46 ± 0.08 GNO= 0.46 ± 0.08	JENDL-3.2 BNL-325 LIOU+74
2284.0 2284.2 ± 0.8 2284.2 ± 0.8	0 0	0.5	67.0 A 68 ±10	53.0	29.59	GT = 120.0 WGH= 1.42 ± 0.21 GNO= 1.4 ± 0.2	JENDL-3.2 BNL-325 LIOU+74
2513.0 2512.9 ± 0.7 2512.9 ± 0.7	1 1)	0.5	56.0 A 56 ± 8	82.0	33.28	GT = 138.0 WGH= 1.12 ± 0.16 GNO= 1.12 ± 0.16	JENDL-3.2 BNL-325 LIOU+74
2590.0 2589.3 ± 3.7 2589.3 ± 3.7 2590.0	1 1)	1.5	22.0 A 45 ±17 A 45.0 ±17.0)	82.0	32.48 33.0 ± 2.0	GT = 84.0 WGH= 0.88 ± 0.33 GNO= 0.88 ± 0.33	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
2636.0 2635.9 ± 0.8 2635.9 ± 0.8 2636.0	0 0	0.5	72.0 A 72 ±14 A 72.0 ±14.0)	72.0	36.0 36.0 ± 2.0	GT = 144.0 WGH= 1.40 ± 0.27 GNO= 1.4 ± 0.3	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
2678.0 2678.3 ± 0.8	0	0.5	1500.0 A1500 ±200	59.0	56.77	GT = 1559.0 WGH= 28.98 ± 3.86	JENDL-3.2 BNL-325

CD-114

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
2678.3 ± 0.8 2678.0	0 0		A1500.0 ±200.0)	59.0 ± 4.0	57.0 ± 4.0	GNO- 29.0 ± 4.0	LIOU+74 MUSGROVE+78
2803.0 2804.0 ± 0.8 2804.0 ± 0.8 2803.0	0 0 0	0.5	350.0 A350 ±50 A350.0 ±50.0)	50.0 50.0 ± 8.0	43.75 44.0 ± 3.0	GT = 400.0 WGH- 8.51 ± 0.94 GNO- 8.5 ± 0.9	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
2850.0 2849.3 ± 0.9 2849.3 ± 0.9 2850.0	1 1) 	0.5	40.0 A 40 ± 8 A 40.0 ± 8.0)	49.0 	22.02 22.0 ± 1.0	GT = 89.0 WGH- 0.75 ± 0.15 GNO- 0.75 ± 0.15	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
2957.0 2955.6 ± 4.5 2955.6 ± 4.5 2957.0	1 1) 	1.5	30.0 A 81 ±24 A 81.0 ±24.0)	58.0 	39.55 40.0 ± 3.0	GT = 88.0 WGH- 1.12 ± 0.44 GNO- 1.12 ± 0.44	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
3028.0 3027.1 ± 0.9 3027.1 ± 0.9 3028.0	1 1) 	1.5	24.0 A 49 ±10 A 49.0 ±10.0)	55.0 	33.42 34.0 ± 2.0	GT = 79.0 WGH- 0.89 ± 0.18 GNO- 0.89 ± 0.18	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
3155.0 3155.0	1	0.5	55.0	82.0	32.92 33.0 ± 2.0	GT = 137.0	JENDL-3.2 MUSGROVE+78
3177.0 3178.0 ± 1.0 3178.0 ± 1.0 3177.0	0 0 0	0.5	3400.0 A3400 ±500 A3400.0 ±500.0)	58.0 58.0 ± 4.0	57.03 57.0 ± 3.0	GT = 3458.0 WGH- 60.31 ± 8.87 GNO- 60.0 ± 9.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
3306.0 3305.4 ± 2.1 3305.4 ± 2.1 3306.0	1 1) 	0.5	86.0 A 86 ±24 A 86.0 ±24.0)	90.0 	43.98 44.0 ± 3.0	GT = 176.0 WGH- 1.50 ± 0.42 GNO- 1.5 ± 0.4	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
3335.0 3333.6 ± 1.1 3333.6 ± 1.1 3335.0	0 0 1)	0.5	330.0 A330 ±50 A330.0 ±50.0)	140.0 89.0 ± 5.0	98.3 97.0 ± 6.0	GT = 470.0 WGH- 5.72 ± 0.87 GNO- 5.7 ± 0.9 W - 2.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
3571.0 3571.0	1	0.5	3.1	82.0	2.987 3.0 ± 1.0	GT = 85.1	JENDL-3.2 MUSGROVE+78
3700.0 3698.4 ± 6.3 3698.4 ± 6.3 3700.0	0 0 	0.5	53.0 A 53 ±23 A 53.0 ±23.0)	100.0 	34.64 35.0 ± 2.0	GT = 153.0 WGH- 0.87 ± 0.38 GNO- 0.87 ± 0.38	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
3772.0 3772.0	1	0.5	13.0	82.0	11.22 11.0 ± 1.0	GT = 95.0	JENDL-3.2 MUSGROVE+78
3820.0 3819.5 ± 1.3 3819.5 ± 1.3 3820.0	0 0 0	0.5	99.0 A970 ±130 A970.0 ±130.0)	58.0 58.0 ± 5.0	36.57 55.0 ± 3.0	GT = 157.0 WGH- 15.69 ± 2.10 GNO- 16.0 ± 2.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
4053.0 4053.0	1	0.5	18.0	82.0	14.76 15.0 ± 1.0	GT = 100.0	JENDL-3.2 MUSGROVE+78
4132.0 4132.0	1	0.5	4.2	82.0	3.995 4.0 ± 1.0	GT = 86.2	JENDL-3.2 MUSGROVE+78
4258.0 4258.0 ± 1.5 4258.0 ± 1.5 4258.0	0 0 0	0.5	2100.0 A2100 ±300 A2100.0 ±300.0)	63.0 63.0 ± 4.0	61.17 61.0 ± 4.0	GT = 2163.0 WGH- 32.18 ± 4.60 GNO- 32.0 ± 5.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
4348.0 4348.0	1	0.5	23.0	82.0	17.96 18.0 ± 1.0	GT = 105.0	JENDL-3.2 MUSGROVE+78
4416.0 4418.4 ± 3.2 4418.4 ± 3.2 4416.0	0 0 1)	0.5	120.0 A120 ±30 A120.0 ±30.0)	80.0 80.0 ±25.0	48.0 48.0 ± 3.0	GT = 200.0 WGH- 1.81 ± 0.45 GNO- 1.8 ± 0.5 W - 1.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
4515.0 4515.0	1	0.5	47.0	82.0	29.88 30.0 ± 2.0	GT = 129.0	JENDL-3.2 MUSGROVE+78
4540.0 4540.0	1	0.5	11.0	82.0	9.699 10.0 ± 1.0	GT = 93.0	JENDL-3.2 MUSGROVE+78
4583.0 4582.8 ± 1.7 4582.8 ± 1.7 4583.0	0 0 0)	0.5	260.0 A260 ±60 A260.0 ±60.0)	52.0 51.0 ± 5.0	43.33 43.0 ± 3.0	GT = 312.0 WGH- 3.84 ± 0.89 GNO- 3.8 ± 0.9	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
4648.0 4645.5 ± 1.7 4645.5 ± 1.7 4648.0	0 0 1)	0.5	190.0 A190 ±50 A190.0 ±50.0)	100.0 51.0 ±12.0	65.52 66.0 ± 4.0	GT = 290.0 WGH- 2.79 ± 0.74 GNO- 2.8 ± 0.7 W - 2.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
4693.0 4691.8 ± 1.8 4691.8 ± 1.8 4693.0	0 0 0	0.5	320.0 A320 ±50 A320.0 ±50.0)	50.0 50.0 ± 4.0	43.24 43.0 ± 3.0	GT = 370.0 WGH- 4.67 ± 0.73 GNO- 4.7 ± 0.7	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
4856.0 4856.0	1	1.5	44.0	82.0	57.27 57.0 ± 3.0	GT = 126.0	JENDL-3.2 MUSGROVE+78
5046.0 5048.0	1	1.5	25.0	82.0	38.32 38.0 ± 2.0	GT = 107.0	JENDL-3.2 MUSGROVE+78
5128.0 5128.0	1	1.5	23.0	82.0	35.92 36.0 ± 2.0	GT = 105.0	JENDL-3.2 MUSGROVE+78
5171.0	1	1.5	29.0	82.0	42.85	GT = 111.0	JENDL-3.2

CD-114 3

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
5171.0					43.0 ± 2.0		MUSGROVE+78
5294.0 5294.0	1	0.5	7.8	82.0	8.955 7.0 ± 1.0	GT = 89.6	JENDL-3.2 MUSGROVE+78
5357.0 5357.0 ± 2.2 5357.0 ± 2.2 5357.0	0 0 0	0.5	430.0 A430 ±90 F430.0 ±90.0)	51.0 51.0 ± 4.0	45.59 46.0 ± 3.0	GT = 481.0 WGH= 5.88 ± 1.23 GNO= 5.9 ± 1.2	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
5482.0 5482.0	1	1.5	28.0	82.0	41.75 42.0 ± 2.0	GT = 110.0	JENDL-3.2 MUSGROVE+78
5516.0 5515.0 ± 2.3 5515.0 ± 2.3 5516.0	0 0 0	0.5	680.0 A680 ±100 F680.0 ±100.0)	50.0 51.0 ± 4.0	46.58 47.0 ± 3.0	GT = 730.0 WGH= 9.16 ± 1.35 GNO= 9.2 ± 1.3	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
5689.0 5689.0	1 1	1.5	130.0	82.0	100.6 (1010)± 8.0	GT = 212.0 W = 2.0	JENDL-3.2 MUSGROVE+78
5931.0 5931.0	1 1	1.5	130.0	82.0	106.0 (1050)± 8.0	GT = 232.0 W = 2.0	JENDL-3.2 MUSGROVE+78
6017.0 6017.0	1	1.5	60.0	82.0	69.3 69.0 ± 4.0	GT = 142.0	JENDL-3.2 MUSGROVE+78
6045.0 6042.4 ± 2.8 6042.4 ± 2.8 6045.0	0 0 1)	0.5	580.0 A580 ±90 F580.0 ±90.0)	180.0 89.0 ± 8.0	137.4 136.0 ± 7.0	GT = 760.0 WGH= 7.46 ± 1.18 GNO= 7.5 ± 1.2 W = 2.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
6223.0 6223.0	1	0.5	14.0	82.0	11.96 12.0 ± 1.0	GT = 96.0	JENDL-3.2 MUSGROVE+78
6408.0 6406.6 ± 2.8 6406.6 ± 2.8 6408.0	0 0 0	0.5	770.0 A770 ±150 F770.0 ±150.0)	47.0 47.0 ± 3.0	44.3 44.0 ± 2.0	GT = 817.0 WGH= 9.62 ± 1.87 GNO= 9.6 ± 1.9	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
6428.0 6428.0	1	1.5	27.0	82.0	40.82 41.0 ± 2.0	GT = 109.0	JENDL-3.2 MUSGROVE+78
6543.0 6543.0	1	0.5	13.0	82.0	11.22 11.0 ± 1.0	GT = 95.0	JENDL-3.2 MUSGROVE+78
6620.0 6620.0	1	1.5	21.0	82.0	33.44 34.0 ± 2.0	GT = 103.0	JENDL-3.2 MUSGROVE+78
6675.0 6675.0	1	0.5	20.0	82.0	16.08 16.0 ± 1.0	GT = 102.0	JENDL-3.2 MUSGROVE+78
6745.0 6745.0	1	0.5	21.0	82.0	16.72 17.0 ± 1.0	GT = 103.0	JENDL-3.2 MUSGROVE+78
6828.0 6828.0	1	1.5	24.0	82.0	37.13 38.0 ± 2.0	GT = 106.0	JENDL-3.2 MUSGROVE+78
6865.0 6865.0	1	1.5	47.0	82.0	59.75 60.0 ± 4.0	GT = 129.0	JENDL-3.2 MUSGROVE+78
7030.0 7030.0	1	1.5	36.0	82.0	50.03 50.0 ± 3.0	GT = 118.0	JENDL-3.2 MUSGROVE+78
7068.0 7068.0	1	1.5	60.0	82.0	69.3 69.0 ± 4.0	GT = 142.0	JENDL-3.2 MUSGROVE+78
7205.0 7202.6 ± 3.4 7202.6 ± 3.4 7205.0	0 0 1	0.5	1200.0 A1200 ±200 F1200.0 ±200.0)	200.0 102.0 ± 7.0	171.4 174.0 ±10.0	GT = 1400.0 WGH= 14 ±14 ± 2.36 GNO= 14.0 ± 2.0 W = 2.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
7280.0 7280.0	1	1.5	27.0	82.0	40.82 41.0 ± 2.0	GT = 109.0	JENDL-3.2 MUSGROVE+78
7358.0 7358.0	1	0.5	42.0	82.0	27.77 28.0 ± 2.0	GT = 124.0	JENDL-3.2 MUSGROVE+78
7398.0 7393.8 ± 3.5 7393.8 ± 3.5 7398.0	0 0 1)	0.5	420.0 A420 ±70 F420.0 ±70.0)	83.0 82.0 ± 8.0	89.3 89.0 ± 4.0	GT = 503.0 WGH= 4.68 ± 0.81 GNO= 4.9 ± 0.8 W = 1.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
7498.0 7495.8 ± 3.6 7495.8 ± 3.6 7498.0	0 0 1)	0.5	1200.0 A1200 ±300 F1200.0 ±300.0)	150.0 78.0 ± 7.0	133.3 134.0 ± 8.0	GT = 1350.0 WGH= 13.86 ± 3.47 GNO= 14.0 ± 3.0 W = 2.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
7548.0 7548.0	1	0.5	40.0	82.0	26.89 27.0 ± 2.0	GT = 122.0	JENDL-3.2 MUSGROVE+78
7663.0 7662.0 ± 3.7 7662.0 ± 3.7 7663.0	0 0 1)	0.5	490.0 A490 ±120 F490.0 ±120.0)	180.0 90.0 ±12.0	131.6 132.0 ± 8.0	GT = 870.0 WGH= 5.80 ± 1.37 GNO= 5.6 ± 1.4 W = 2.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
7813.0 7813.0	1	1.5	22.0	82.0	34.69 35.0 ± 3.0	GT = 104.0	JENDL-3.2 MUSGROVE+78
7840.0 7837.6 ± 3.8 7837.6 ± 3.8 7840.0	0 0 0	0.5	1600.0 A1600 ±400 F1600.0 ±400.0)	52.0 52.0 ± 3.0	50.36 50.0 ± 3.0	GT = 1652.0 WGH= 18.07 ± 4.52 GNO= 18.0 ± 5.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
8369.0	0	0.5	1400.0	53.0	51.07	GT = 1453.0	JENDL-3.2

CD-114 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
8368.6 ± 4.2 8368.6 ± 4.2	0		A1400 ±400			WGH= 15.30 ± 4.37 GNO= 15.0 ± 4.0	BNL-325 LIBU+74
8946.0 8946.0 ± 4.6 8946.0 ± 4.6	0 0	0.5	880.0 A880 ±250	53.0	49.99	GT = 933.0 WGH= 9.30 ± 2.64 GNO= 9.3 ± 2.6	JENDL-3.2 BNL-325 LIBU+74
9262.0 9262.4 ± 4.9 9262.4 ± 4.9	0 0	0.5	7800.0 A7800 ±1400	53.0	52.64	GT = 7853.0 WGH= 81.05 ±14.55 GNO= 81.0 ±15.0	JENDL-3.2 BNL-325 LIBU+74
9958.0 9958.3 ± 5.5 9958.3 ± 5.5	0 0	0.5	950.0 A950 ±170	53.0	50.2	GT = 1003.0 WGH= 9.52 ± 1.70 GNO= 9.5 ± 1.7	JENDL-3.2 BNL-325 LIBU+74
10088 10088 ± 6 10088.0± 6.0	0 0	0.5	1300.0 A1300 ±300	53.0	50.92	GT = 1353.0 WGH= 12.94 ± 2.99 GNO= 13.0 ± 3.0	JENDL-3.2 BNL-325 LIBU+74

48-Cd-116

Abundance	:7.49 %
Spin-Parity	:0^+
Potential Scattering Radius	:6.5 fm
Cross Sections of 2200 m/s for Total	:6.063 b
Elastic	:5.983 b
Capture	:0.7484 b
Maxwellian Average Capture Cross Section	:0.6635 b
Resonance Integral of Capture	:1.743 b

Resolved resonance region (MLBW formula) : below 9 keV. Parameters were taken from JENDL-2[1]. Evaluation for JENDL-2 was made on the basis of experimental data of Liou et al.[2] and Musgrove et al.[3] The average radiative capture width was assumed to be 0.047 eV for s-wave levels and 0.085 eV for p-wave ones[3]. A negative resonance was added so as to reproduce the thermal capture and scattering cross sections given by Mughabghab et al.[4]

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2) Liou H.I. et al.: Phys. Rev., **C10**, 709 (1974).
3) Musgrove A.R. de L. et al.: J. Phys. G, **4**, 771 (1978).
4) Mughabghab S.F. et al.: "Neutron Cross Sections, Vol. I, Part A", Academic Press (1981).

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CD-116 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WNS (MILLI-EV)	MISCELLANEOUS	REFERENCE
-550.0	0	0.5	3000.0	37.0	38.55	GT = 3037.0	JENDL-3.2
28.97	0	0.5	0.056	47.0	0.05593	GT = 47.056	JENDL-3.2
28.97 ± 0.05			A 0.056± 0.007			WGH= 0.010± 0.001	BNL-325
28.97 ± 0.05	0					GNO= 0.01 ± 0.001	LIDU+74
676.4	0	0.5	22.0	47.0	14.99	GT = 69.0	JENDL-3.2
676.41 ± 0.39			A 22 ± 2			WGH= 0.85 ± 0.08	BNL-325
676.41 ± 0.39	0					GNO= 0.85 ± 0.08	LIDU+74
889.0	0	0.5	49.0	125.0	35.2	GT = 174.0	JENDL-3.2
888.96 ± 0.29			A 49 ± 5	125 ±30		WGH= 1.64 ± 0.17	BNL-325
888.96 ± 0.29	0					GNO= 1.64 ± 0.17	LIDU+74
1048.0	0	0.5	430.0	47.0	42.37	GT = 477.0	JENDL-3.2
1048.3 ± 0.4			A430 ±40			WGH= 13.28 ± 1.24	BNL-325
1048.3 ± 0.4	0					GNO= 13.3 ± 1.2	LIDU+74
1122.0	0	0.5	19.0	47.0	13.53	GT = 66.0	JENDL-3.2
1122.4 ± 1.1			A 19 ± 6			WGH= 0.57 ± 0.18	BNL-325
1122.4 ± 1.1	0					GNO= 0.57 ± 0.18	LIDU+74
1384.0	0	0.5	120.0	47.0	33.77	GT = 167.0	JENDL-3.2
1384.1 ± 0.3			A120 ±10			WGH= 3.23 ± 0.27	BNL-325
1384.1 ± 0.3	0					GNO= 3.2 ± 0.3	LIDU+74
1567.0	0	0.5	95.0	47.0	31.44	GT = 142.0	JENDL-3.2
1566.5 ± 0.4			A 95 ±15			WGH= 2.40 ± 0.38	BNL-325
1566.5 ± 0.4	0					GNO= 2.4 ± 0.4	LIDU+74
1858.0	0	0.5	77.0	47.0	29.19	GT = 124.0	JENDL-3.2
1857.7 ± 0.5			A 77 ±15			WGH= 1.79 ± 0.35	BNL-325
1857.7 ± 0.5	0					GNO= 1.8 ± 0.4	LIDU+74
1969.0	0	0.5	230.0	47.0	39.03	GT = 277.0	JENDL-3.2
1968.5 ± 0.5			A230 ±40			WGH= 5.18 ± 0.90	BNL-325
1968.5 ± 0.5	0					GNO= 5.2 ± 0.9	LIDU+74
2362.0	0	0.5	1400.0	47.0	45.47	GT = 1447.0	JENDL-3.2
2361.5 ± 0.8			A1400 ±200			WGH= 28.81 ± 4.12	BNL-325
2361.5 ± 0.8	0					GNO= 29.0 ± 4.0	LIDU+74
2541.0	0	0.5	24.0	47.0	15.89	GT = 71.0	JENDL-3.2
2541.2 ± 0.7			A 24 ± 7			WGH= 0.48 ± 0.14	BNL-325
2541.2 ± 0.7	0					GNO= 0.48 ± 0.14	LIDU+74
2652.0	0	0.5	230.0	150.0	90.79	GT = 380.0	JENDL-3.2
2651.8 ± 0.8			A230 ±50			WGH= 4.47 ± 0.97	BNL-325
2651.8 ± 0.8	0					GNO= 4.5 ± 1.0	LIDU+74
2652.0	1)		F230.0 ±50.0)	75.0 ±20.0	92.0 ± 4.0	W = 2.0	MUSGROVE+78
3053.0	1	1.5	11.0	85.0	19.48	GT = 96.0	JENDL-3.2
3053.0					20.0 ± 1.0		MUSGROVE+78
3109.0	1	0.5	10.0	85.0	8.947	GT = 95.0	JENDL-3.2
3109.0					10.0 ± 1.0		MUSGROVE+78
3265.0					15.0 ± 1.0		MUSGROVE+78
3358.0	0	0.5	240.0	65.0	51.15	GT = 305.0	JENDL-3.2
3358.0 ± 1.1			A240 ±40			WGH= 4.14 ± 0.69	BNL-325
3358.0 ± 1.1	0					GNO= 4.1 ± 0.7	LIDU+74
3358.0	0		F240.0 ±40.0)	65.0 ± 4.0	51.0 ± 3.0		MUSGROVE+78
3652.0	0	0.5	670.0	51.0	47.39	GT = 721.0	JENDL-3.2
3652.6 ± 1.2			A670 ±100			WGH= 11.09 ± 1.66	BNL-325
3652.6 ± 1.2	0					GNO= 11.1 ± 1.7	LIDU+74
3652.0	0		F670.0 ±100.0)	50.0 ± 3.0	47.0 ± 3.0		MUSGROVE+78
3684.0	1	1.5	20.0	85.0	32.38	GT = 105.0	JENDL-3.2
3684.0					32.0 ± 2.0		MUSGROVE+78
4208.0	0	0.5	140.0	120.0	64.62	GT = 260.0	JENDL-3.2
4208.7 ± 1.5			A140 ±40			WGH= 2.16 ± 6.17	BNL-325
4208.7 ± 1.5	0					GNO= 2.2 ± 0.6	LIDU+74
4208.0	1)		F140.0 ±40.0)	81.0 ±20.0	65.0 ± 4.0	W = 2.0	MUSGROVE+78
4228.0	1	1.5	25.0	85.0	38.84	GT = 110.0	JENDL-3.2
4228.0					39.0 ± 2.0		MUSGROVE+78
4615.0	0	0.5	170.0	150.0	79.69	GT = 320.0	JENDL-3.2
4615.3 ± 1.7			A170 ±50			WGH= 2.50 ± 0.74	BNL-325
4615.3 ± 1.7	0					GNO= 2.5 ± 0.7	LIDU+74
4615.0	1)		F170.0 ±50.0)	75.0 ±40.0	60.0 ± 4.0	W = 2.0	MUSGROVE+78
4758.0	1	1.5	35.0	85.0	49.56	GT = 120.0	JENDL-3.2
4758.0					50.0 ± 3.0		MUSGROVE+78
4843.0	1	1.5	33.0	85.0	47.54	GT = 118.0	JENDL-3.2
4843.0					48.0 ± 3.0		MUSGROVE+78
4874.0	0	0.5	750.0	43.0	40.87	GT = 793.0	JENDL-3.2
4873.8 ± 1.9			A750 ±180			WGH= 10.74 ± 2.58	BNL-325
4873.8 ± 1.9	0					GNO= 10.7 ± 2.6	LIDU+74
4874.0	0		F750.0 ±150.0)	44.0 ± 4.0	41.0 ± 3.0		MUSGROVE+78
4983.0	1	1.5	26.0	85.0	39.82	GT = 111.0	JENDL-3.2
4983.0					40.0 ± 3.0		MUSGROVE+78
5075.0	0	0.5	640.0	94.0	81.96	GT = 734.0	JENDL-3.2
5072.5 ± 2.0			A640 ±120			WGH= 8.99 ± 1.68	BNL-325
5072.5 ± 2.0	0					GNO= 9.0 ± 1.7	LIDU+74
5075.0	1)		F640.0 ±120.0)	94.0 ± 8.0	82.0 ± 4.0	W = 1.0	MUSGROVE+78
5300.0	0	0.5	1600.0	37.0	36.18	GT = 1637.0	JENDL-3.2
5300.5 ± 2.2			A1600 ±400			WGH= 21.98 ± 5.49	BNL-325

CO-116

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	WWS (MILLI-EV)	MISCELLANEOUS	REFERENCE
5300.5 ± 2.2 5300.0	0 0		(1600.0 ±400.0)	37.0 ± 3.0	36.0 ± 2.0	GNO= 22.0 ± 5.0	LIOU+74 MUSGROVE+78
5624.0 5624.0	1 1)	1.5	66.0	85.0	74.3 74.0 ± 4.0	GT = 151.0 W = 2.0	JENDL-3.2 MUSGROVE+78
5909.0 5909.0	1	0.5	13.0	85.0	11.28 11.0 ± 1.0	GT = 98.0	JENDL-3.2 MUSGROVE+78
5957.0 5957.0	1	1.5	45.0	85.0	58.85 59.0 ± 4.0	GT = 130.0	JENDL-3.2 MUSGROVE+78
5995.0 5995.0	1 1)	1.5	160.0	85.0	111.0 110.0 ± 6.0	GT = 245.0 W = 2.0	JENDL-3.2 MUSGROVE+78
6350.0 6350.0	1	1.5	41.0	85.0	55.32 55.0 ± 4.0	GT = 126.0	JENDL-3.2 MUSGROVE+78
6455.0 6455.0	1	0.5	24.0	85.0	18.72 19.0 ± 2.0	GT = 109.0	JENDL-3.2 MUSGROVE+78
6558.0 6558.0	1	1.5	70.0	85.0	76.77 77.0 ± 4.0	GT = 155.0	JENDL-3.2 MUSGROVE+78
6670.0 6670.0	1	0.5	18.0	85.0	14.85 15.0 ± 2.0	GT = 103.0	JENDL-3.2 MUSGROVE+78
7005.0 7005.0	1	1.5	42.0	85.0	56.22 28.0 ± 2.0	GT = 127.0	JENDL-3.2 MUSGROVE+78
7055.0 7055.0	1	1.5	54.0	85.0	66.04 66.0 ± 4.0	GT = 139.0	JENDL-3.2 MUSGROVE+78
7350.0 7347.1 ± 3.5 7347.1 ± 3.5 7350.0	0 0 1)	0.5	1500.0 A1500 ±400 (1500.0 ±400.0)	180.0 80.0 ± 5.0	144.6 144.0 ± 8.0	GT = 1660.0 WGH= 17.50 ± 4.67 GNO= 17.5 ± 4.7 W = 2.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78
7693.0 7693.0	1	0.5	18.0	85.0	14.85 15.0 ± 2.0	GT = 103.0	JENDL-3.2 MUSGROVE+78
7913.0 7913.0	1 1)	1.5	120.0	85.0	99.51 100.0 ± 6.0	GT = 205.0 W = 2.0	JENDL-3.2 MUSGROVE+78
8030.0 8030.0	1	0.5	33.0	85.0	23.77 24.0 ± 4.0	GT = 118.0	JENDL-3.2 MUSGROVE+78
8123.0 8123.0	1	1.5	44.0	85.0	57.98 58.0 ± 4.0	GT = 129.0	JENDL-3.2 MUSGROVE+78
8163.0 8163.0	1	1.5	53.0	85.0	65.29 65.0 ± 4.0	GT = 138.0	JENDL-3.2 MUSGROVE+78
8478.0 8478.0	1	1.5	28.0	85.0	39.82 40.0 ± 3.0	GT = 111.0	JENDL-3.2 MUSGROVE+78
8530.0 8530.0	1 1)	1.5	110.0	85.0	95.9 97.0 ± 6.0	GT = 195.0 W = 2.0	JENDL-3.2 MUSGROVE+78
8560.0 8560.0	1	0.5	46.0	85.0	29.85 30.0 ± 3.0	GT = 131.0	JENDL-3.2 MUSGROVE+78
8825.0 8822.2 ± 4.8 8822.2 ± 4.8 8825.0	0 0 0	0.5	3600.0 A3600 ±900 (3600.0 ±900.0)	45.0 44.0 ± 5.0	44.44 44.0 ± 5.0	GT = 3645.0 WGH= 38.33 ± 9.58 GNO= 38.0 ± 9.0	JENDL-3.2 BNL-325 LIOU+74 MUSGROVE+78

49-In-113

Abundance	:4.3 %	
Spin-Parity		:$9/2^+$
Potential Scattering Radius		:6.1 fm
Cross Sections of 2200 m/s for Total		:15.75 b
	Elastic	:3.678 b
	Capture	:12.07 b
Maxwellian Average Capture Cross Section		:10.83 b
Resonance Integral of Capture		:325.1 b

Resolved resonance region (MLBW formula) : below 830 eV. Resonance parameters were based on Mughabghab et al.[1] Total spin J of some resonances was tentatively estimated with a random number method. Neutron orbital angular momentum ℓ of some resonances was estimated with a method of Bollinger and Thomas[2]. Averaged radiation width and scattering radius were taken from Mughabghab et al.

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IN-113 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1.8 1.82 ± 0.01	0	5.0	0.2227 * 0.16 ± 0.07	78.0	GT = 78.223 GT = 82.0 ± 6.0	JENDL-3.2 87ANUFRIEV+
4.7 4.7 ± 0.03 4.72 ± 0.02	0	5.0	0.1055 * 0.12 ± 0.01	75.0	GT = 75.106 WGH= 0.032± 0.005 GT = 70.0	JENDL-3.2 74HACKEN+ 87ANUFRIEV+
14.6 14.65 ± 0.04 14.75 ± 0.04	0	5.0	6.727 * 7.6 ± 0.02	60.0	GT = 66.727 WGH= 0.75 ± 0.25 GT = 60.0	JENDL-3.2 74HACKEN+ 87ANUFRIEV+
21.55 21.55 ± 0.01 21.65 ± 0.06	0	5.0	2.545 * 3.2 ± 0.2	75.0	GT = 77.545 WGH= 0.3 ± 0.02 GT = 70.0	JENDL-3.2 74HACKEN+ 87ANUFRIEV+
24.99 24.99 ± 0.01 25.11 ± 0.06	0	4.0	10.33 * 9.4 ± 0.4	80.0 80.0 ± 5.0	GT = 90.33 WGH= 0.93 ± 0.02 GT = 80.0	JENDL-3.2 74HACKEN+ 87ANUFRIEV+
26.78 ± 0.02					WGH= 0.02 ± 0.005	74HACKEN+
32.24 32.24 ± 0.02 32.34 ± 0.08	0	5.0	7.091 * 7.4 ± 0.6	72.0 72.0 ±10.0	GT = 79.091 WGH= 0.67 ± 0.04 GT = 72.0	JENDL-3.2 74HACKEN+ 87ANUFRIEV+
44.71 44.71 ± 0.03	0	4.0	2.222	75.0	GT = 77.222 WGH= 0.15 ± 0.02	JENDL-3.2 74HACKEN+
45.38 45.38 ± 0.04	0	5.0	1.536	75.0	GT = 76.536 WGH= 0.125± 0.005	JENDL-3.2 74HACKEN+
70.29 70.29 ± 0.04	0	4.0	8.444	75.0	GT = 83.444 WGH= 0.45 ± 0.03	JENDL-3.2 74HACKEN+
91.59 91.59 ± 0.04	0	4.0	33.44	75.0	GT = 108.44 WGH= 1.57 ± 0.55	JENDL-3.2 74HACKEN+
93.0 93.0 ± 0.05	0	5.0	3.855	75.0	GT = 78.855 WGH= 0.22 ± 0.02	JENDL-3.2 74HACKEN+
103.95 103.95 ± 0.05	0	5.0	27.27	70.0 70.0 ± 5.0	GT = 97.27 WGH= 1.5 ± 0.1	JENDL-3.2 74HACKEN+
123.4 123.4 ± 0.1	0	4.0	12.33	75.0	GT = 87.33 WGH= 0.5 ± 0.1	JENDL-3.2 74HACKEN+
203.4 203.4 ± 0.2	0	5.0	34.55	75.0	GT = 109.55 WGH= 1.33 ± 0.07	JENDL-3.2 74HACKEN+
228.5 228.5 ± 0.2	0	5.0	32.73	75.0	GT = 107.73 WGH= 1.2 ± 0.3	JENDL-3.2 74HACKEN+
234.5 234.5 ± 0.2	0	5.0	11.82	75.0	GT = 86.82 WGH= 0.42 ± 0.04	JENDL-3.2 74HACKEN+
236.1 236.1 ± 0.2	0	5.0	6.364	75.0	GT = 81.364 WGH= 0.22 ± 0.06	JENDL-3.2 74HACKEN+
239.3 239.3 ± 0.2	0	5.0	5.364	75.0	GT = 80.364 WGH= 0.19 ± 0.06	JENDL-3.2 74HACKEN+
241.7 241.7 ± 0.2	0	5.0	15.0	75.0	GT = 90.0 WGH= 0.53 ± 0.06	JENDL-3.2 74HACKEN+
270.5 270.5 ± 0.1	0	4.0	9.889	75.0	GT = 84.889 WGH= 0.27 ± 0.04	JENDL-3.2 74HACKEN+
276.8 276.8 ± 0.1	0	5.0	3.0	75.0	GT = 78.0 WGH= 0.1 ± 0.04	JENDL-3.2 74HACKEN+
304.3 304.3 ± 0.1	0	5.0	11.45	75.0	GT = 86.45 WGH= 0.36 ± 0.04	JENDL-3.2 74HACKEN+
313.9 313.9 ± 0.2	0	5.0	6.455	75.0	GT = 81.455 WGH= 0.2 ± 0.05	JENDL-3.2 74HACKEN+
325.8 325.8 ± 0.2	0	4.0	12.89	75.0	GT = 87.89 WGH= 0.32 ± 0.06	JENDL-3.2 74HACKEN+
441.4 441.4 ± 0.3	0	5.0	12.64	75.0	GT = 87.64 WGH= 0.33 ± 0.04	JENDL-3.2 74HACKEN+
511.6 511.6 ± 0.3	0	5.0	35.82	75.0	GT = 110.82 WGH= 0.87 ± 0.1	JENDL-3.2 74HACKEN+
544.8 544.8 ± 0.3	0	4.0	93.33	75.0	GT = 168.33 WGH= 1.8 ± 0.1	JENDL-3.2 74HACKEN+
555.4 555.4 ± 0.4	0	4.0	26.22	75.0	GT = 101.22 WGH= 0.5 ± 0.05	JENDL-3.2 74HACKEN+
582.9	0	5.0	100.9	75.0	GT = 175.9	JENDL-3.2

IN-113 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
582.9 ± 0.4					WGH= 2.3 ± 0.1	74HACKEN+
593.0 593.0 ± 0.4	0	4.0	46.0	75.0	GT = 121.0 WGH= 0.85 ± 0.05	JENDL-3.2 74HACKEN+
625.5 625.5 ± 0.4	0	4.0	77.78	75.0	GT = 152.78 WGH= 1.4 ± 0.1	JENDL-3.2 74HACKEN+
660.8 660.8 ± 0.5	0	4.0	82.22	75.0	GT = 157.22 WGH= 1.44 ± 0.09	JENDL-3.2 74HACKEN+
714.6 714.6 ± 0.5	0	4.0	101.1	75.0	GT = 176.1 WGH= 1.7 ± 0.2	JENDL-3.2 74HACKEN+
769.9 769.9 ± 0.6	0	5.0	65.45	75.0	GT = 140.45 WGH= 1.3 ± 0.1	JENDL-3.2 74HACKEN+
777.6 777.6 ± 0.6	0	4.0	35.33	75.0	GT = 110.33 WGH= 0.57 ± 0.05	JENDL-3.2 74HACKEN+
785.3 785.3 ± 0.6	0	5.0	37.27	75.0	GT = 112.27 WGH= 0.73 ± 0.05	JENDL-3.2 74HACKEN+
809.4 809.4 ± 0.6	0	4.0	42.33	75.0	GT = 117.33 WGH= 0.67 ± 0.05	JENDL-3.2 74HACKEN+
912.0 912.0 ± 0.4	0	4.0	200.0	75.0	GT = 275.0 WGH= 3.0 ± 0.4	JENDL-3.2 74HACKEN+
1064.6 1064.6 ± 0.5	0	4.0	51.11	75.0	GT = 126.11 WGH= 0.7 ± 0.1	JENDL-3.2 74HACKEN+
1230.0 1230.0 ± 0.6	0	5.0	100.0	75.0	GT = 175.0 WGH= 1.6 ± 0.2	JENDL-3.2 74HACKEN+
1254.6 1254.6 ± 0.6	0	4.0	133.3	75.0	GT = 208.3 WGH= 1.7 ± 0.2	JENDL-3.2 74HACKEN+
1729.7 1729.7 ± 1.0	0	4.0	46.67	75.0	GT = 121.67 WGH= 0.5 ± 0.1	JENDL-3.2 74HACKEN+
1761.9 1761.9 ± 1.0	0	5.0	114.5	75.0	GT = 189.5 WGH= 1.5 ± 0.3	JENDL-3.2 74HACKEN+
1872.9 1872.9 ± 1.1	0	4.0	177.8	75.0	GT = 252.8 WGH= 1.8 ± 0.3	JENDL-3.2 74HACKEN+
1885.2 1885.2 ± 1.1	0	5.0	39.09	75.0	GT = 114.09 WGH= 0.5 ± 0.1	JENDL-3.2 74HACKEN+
1911.8 1911.8 ± 1.1	0	4.0	110.8	75.0	GT = 185.8 WGH= 1.14 ± 0.22	JENDL-3.2 74HACKEN+
1974.0 1974.0 ± 1.2	0	4.0	84.89	75.0	GT = 159.89 WGH= 0.86 ± 0.25	JENDL-3.2 74HACKEN+
1988.4 1988.4 ± 1.2	0	4.0	55.44	75.0	GT = 130.44 WGH= 0.56 ± 0.2	JENDL-3.2 74HACKEN+
1996.0 1996.0 ± 1.2	0	4.0	59.56	75.0	GT = 134.56 WGH= 0.6 ± 0.2	JENDL-3.2 74HACKEN+

49-In-115

Abundance	:95.7 %
Spin-Parity	:$9/2^+$
Potential Scattering Radius	:6.55 fm
Cross Sections of 2200 m/s for Total	:203.5 b
Elastic	:2.526 b
Capture	:201.0 b
Maxwellian Average Capture Cross Section	:181.6 b
Resonance Integral of Capture	:3,208 b

Resolved resonance region (MLBW formula) : below 2 keV. Resonance parameters of JENDL-2 were modified as follows:

For JENDL-2[1], parameters were taken from the experiment by Hacken et al.[2] Angular momentum ℓ and spin J were based on the measurement of Corvi and Stefanon[3]. The average radiation width of 0.085 eV was deduced[2] and applied to the levels whose radiation width was unknown.

For JENDL-3.1[4], total spin J of some resonances was tentatively estimated with a random number method.

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3) Corvi F. and Stefanon M.: Nucl. Phys., **A233**, 185 (1974).
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JENDL-3.2:Nakagawa T. et al.:J. Nucl. Sci. Technol. **32**, 1259(1995).

IN-115 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1.46 1.45	0	5.0 5.0	2.98	72.0	GT - 74.98	JENDL-3.2 74CORVI+
3.82 3.86 3.85 ± 0.01	0 0	4.0 4.0	0.38	81.0	GT - 81.38 WGH- 0.086± 0.008	JENDL-3.2 74CORVI+ 74HACKEN+
9.07 9.12 9.04 ± 0.03	0 0	5.0 5.0	1.5	80.0	GT - 81.5 WGH- 0.27 ± 0.03	JENDL-3.2 74CORVI+ 74HACKEN+
12.04 12.1 12.02 ± 0.04	0 0	4.0 4.0	0.12	140.0	GT - 140.12 WGH- 0.016± 0.001	JENDL-3.2 74CORVI+ 74HACKEN+
22.73 22.77 22.73 ± 0.01	0 0 1	5.0 5.0	0.94	81.0 81.0 ±5.060+$ ± 0.02	GT - 81.94 WGH- 0.107± 0.004 WGH- 0.0003± 0.0002	JENDL-3.2 74CORVI+ 74HACKEN+
29.7	1	3.0	4.286-3	85.0	GT - 85.004	JENDL-3.2
39.6 39.63 39.6 ± 0.03	0 0	5.0 5.0	3.6	76.0 76.0 ± 5.0	GT - 79.6 WGH- 0.33 ± 0.02	JENDL-3.2 74CORVI+ 74HACKEN+
46.36 46.41 46.36 ± 0.04	0 0	4.0 4.0	0.28	85.0	GT - 85.28 WGH- 0.018± 0.001	JENDL-3.2 74CORVI+ 74HACKEN+
48.14 48.17 48.14 ± 0.04	0 0 0	5.0 5.0	0.6	90.0 90.0 ±5.010+$ ± 0.03 95.0 ±1-	GT - 90.6 WGH- 0.036± 0.007 WGH- 0.047± 0.006	JENDL-3.2 74CORVI+ 74HACKEN+
63.0 62.99	0	4.0 4.0	0.87	95.0	GT - 95.87	JENDL-3.2 74CORVI+
69.5 69.49 ± 0.03	0 0	4.0	0.4444	85.0	GT - 85.444 WGH- 0.024± 0.006	JENDL-3.2 74HACKEN+
73.08 73.08 ± 0.04	1 1	4.0	0.01333	85.0	GT - 85.013 WGH- 0.0007± 0.0004	JENDL-3.2 74HACKEN+
80.87 80.91 80.87 ± 0.04	0 0	4.0 4.0	1.7	70.0 70.0 ±10.0	GT - 71.7 WGH- 0.083± 0.006	JENDL-3.2 74CORVI+ 74HACKEN+
83.28 83.34 83.28 ± 0.04	0 0	5.0 5.0	6.0	73.0 73.0 ± 5.0	GT - 79.0 WGH- 0.36 ± 0.04	JENDL-3.2 74CORVI+ 74HACKEN+
86.36 86.36 ± 0.04	1 1	6.0	0.04615	85.0	GT - 85.046 WGH- 0.003± 0.002	JENDL-3.2 74HACKEN+
94.34 94.4 94.34 ± 0.05	0 0	5.0 5.0	2.6	90.0 90.0 ±10.0	GT - 92.6 WGH- 0.15 ± 0.02	JENDL-3.2 74CORVI+ 74HACKEN+
100.83 100.83 ± 0.05	1 1	5.0	0.03636	85.0	GT - 85.036 WGH- 0.002± 0.001	JENDL-3.2 74HACKEN+
110.9 110.9 ± 0.06	1 1	3.0	0.05714	85.0	GT - 85.057 WGH- 0.002± 0.001	JENDL-3.2 74HACKEN+
114.43 114.43 ± 0.06	0 0	5.0	0.1	85.0	GT - 85.1 WGH- 0.005± 0.001	JENDL-3.2 74HACKEN+
120.71 120.71 ± 0.07	1 1	6.0	0.01538	85.0	GT - 85.015 WGH- 0.001± 0.001	JENDL-3.2 74HACKEN+
123.6 123.6 ± 0.07	1 1	4.0	0.02222	85.0	GT - 85.022 WGH- 0.001± 0.001	JENDL-3.2 74HACKEN+
125.88 126.03 125.88 ± 0.08	0 0 0	4.0 4.0	4.2	65.0 65.0 ±2.002+$ ± 0.08 180.0 ±5L	GT - 69.2 WGH- 0.17 ± 0.01 WGH- 0.23 ± 0.04	JENDL-3.2 74CORVI+ 74HACKEN+
132.81 132.98	0	5.0 5.0	4.8	180.0	GT - 184.8	JENDL-3.2 74CORVI+
144.04 144.04 ± 0.09	0 0	5.0	0.1273	85.0	GT - 85.127 WGH- 0.006± 0.001	JENDL-3.2 74HACKEN+
145.76 145.76 ± 0.09	1 1	6.0	0.04615	85.0	GT - 85.046 WGH- 0.0025± 0.0013	JENDL-3.2 74HACKEN+
150.29	0	5.0	4.2	85.0	GT - 89.2	JENDL-3.2

IN-115 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
150.34		5.0				74CORVI+
150.3 ± 0.1	0			85.0 ±10.0	WGH- 0.19 ± 0.01	74HACKEN+
158.6	1	6.0	0.1538	85.0	GT - 85.154	JENDL-3.2
158.6 ± 0.1	1				WGH- 0.006± 0.004	74HACKEN+
162.4	1	4.0	0.1444	85.0	GT - 85.144	JENDL-3.2
162.4 ± 0.1	1				WGH- 0.005± 0.003	74HACKEN+
164.7	0	4.0	20.0	82.0	GT - 102.0	JENDL-3.2
164.75		4.0				74CORVI+
164.7 ± 0.1	0			82.0 ±10.0	WGH- 0.7 ± 0.04	74HACKEN+
168.1	0	5.0	1.9	85.0	GT - 86.9	JENDL-3.2
168.23		5.0				74CORVI+
168.1 ± 0.1	0				WGH- 0.081± 0.004	74HACKEN+
174.1	0	4.0	0.2222	85.0	GT - 85.222	JENDL-3.2
174.1 ± 0.1	0				WGH- 0.008± 0.004	74HACKEN+
177.9	0	4.0	3.2	80.0	GT - 83.2	JENDL-3.2
178.0		4.0				74CORVI+
177.9 ± 0.1	0			80.0 ±20.0	WGH- 0.11 ± 0.02	74HACKEN+
187.0	0	4.0	22.0	100.0	GT - 122.0	JENDL-3.2
186.91		4.0				74CORVI+
187.0 ± 0.1	0			100.0 ±20.0	WGH- 0.73 ± 0.07	74HACKEN+
192.2	1	4.0	0.05556	85.0	GT - 85.056	JENDL-3.2
192.2 ± 0.2	1				WGH- 0.0017± 0.0009	74HACKEN+
194.5	1	5.0	0.1	85.0	GT - 85.1	JENDL-3.2
194.5 ± 0.2	1				WGH- 0.004± 0.002	74HACKEN+
198.8	1	6.0	0.05385	85.0	GT - 85.054	JENDL-3.2
198.8 ± 0.2	1				WGH- 0.0026± 0.0015	74HACKEN+
205.6	0	5.0	23.0	85.0	GT - 108.0	JENDL-3.2
205.65		5.0				74CORVI+
205.6 ± 0.2	0				WGH- 0.8 ± 0.2	74HACKEN+
211.9	0	5.0	0.4545	85.0	GT - 85.454	JENDL-3.2
211.9 ± 0.2	0				WGH- 0.017± 0.003	74HACKEN+
214.1	1	4.0	0.2	85.0	GT - 85.2	JENDL-3.2
214.1 ± 0.2	1				WGH- 0.006± 0.001	74HACKEN+
224.0	0	5.0	29.0	60.0	GT - 89.0	JENDL-3.2
224.12		5.0				74CORVI+
224.0 ± 0.2	0			60.0 ±15.0	WGH- 1.07 ± 0.2	74HACKEN+
226.8	0	4.0	1.444	85.0	GT - 86.444	JENDL-3.2
226.8 ± 0.2	0				WGH- 0.044± 0.026	74HACKEN+
246.7	1	5.0	0.1818	85.0	GT - 85.182	JENDL-3.2
246.7 ± 0.2	1				WGH- 0.006± 0.004	74HACKEN+
250.2	0	5.0	54.55	85.0	GT - 139.55	JENDL-3.2
250.2						74CORVI+
250.2 ± 0.2	0			85.0 ±10.0	WGH- 1.9 ± 0.1	74HACKEN+
267.0	0	5.0	3.6	85.0	GT - 88.6	JENDL-3.2
267.07		5.0				74CORVI+
267.0 ± 0.1	0				WGH- 0.12 ± 0.01	74HACKEN+
282.3	1	5.0	0.1818	85.0	GT - 85.182	JENDL-3.2
282.3 ± 0.1	1				WGH- 0.006± 0.003	74HACKEN+
288.9	0	4.0	22.0	85.0	GT - 107.0	JENDL-3.2
289.1		4.0				74CORVI+
288.9 ± 0.1	0				WGH- 0.59 ± 0.06	74HACKEN+
294.3	0	4.0	50.0	85.0	GT - 135.0	JENDL-3.2
294.75		4.0				74CORVI+
294.3 ± 0.1	0				WGH- 1.3 ± 0.3	74HACKEN+
302.8	1	3.0	0.1429	85.0	GT - 85.143	JENDL-3.2
302.5 ± 0.1	1				WGH- 0.003± 0.001	74HACKEN+
304.3	1	5.0	0.1	85.0	GT - 85.1	JENDL-3.2
304.3 ± 0.1	1				WGH- 0.003± 0.002	74HACKEN+
308.4	1	5.0	0.1273	85.0	GT - 85.127	JENDL-3.2
308.4 ± 0.1	1				WGH- 0.004± 0.002	74HACKEN+
319.5	0	4.0	17.0	85.0	GT - 102.0	JENDL-3.2
319.6		4.0				74CORVI+
319.5 ± 0.2	0				WGH- 0.42 ± 0.03	74HACKEN+
329.6	1	6.0	0.1538	85.0	GT - 85.154	JENDL-3.2
329.6 ± 0.2	1				WGH- 0.006± 0.003	74HACKEN+

IN-115 3

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
336.7 336.7 ± 0.2	1 1	6.0	0.1538	85.0	GT = 85.154 WGH= 0.006± 0.003	JENDL-3.2 74HACKEN+
339.8 339.8 ± 0.2	0 0	5.0	1.727	85.0	GT = 86.727 WGH= 0.052± 0.003	JENDL-3.2 74HACKEN+
345.2 345.2 ± 0.2	1 1	4.0	0.3333	85.0	GT = 85.333 WGH= 0.008± 0.004	JENDL-3.2 74HACKEN+
354.1 354.05 354.1 ± 0.2	0 0	5.0 5.0	6.4	85.0	GT = 91.4 WGH= 0.17 ± 0.05	JENDL-3.2 74CORVI+ 74HACKEN+
362.1 362.5 362.1 ± 0.2	0 0	4.0 4.0	12.0	85.0	GT = 97.0 WGH= 0.29 ± 0.01	JENDL-3.2 74CORVI+ 74HACKEN+
366.9 366.9 ± 0.2	1 1	5.0	0.3636	85.0	GT = 85.364 WGH= 0.009± 0.003	JENDL-3.2 74HACKEN+
370.9 371.3 370.9 ± 0.2	0 0	5.0 5.0	6.9	85.0	GT = 91.9 WGH= 0.18 ± 0.01	JENDL-3.2 74CORVI+ 74HACKEN+
379.1 379.1 ± 0.2	0 0	4.0	0.6667	85.0	GT = 85.667 WGH= 0.016± 0.003	JENDL-3.2 74HACKEN+
383.0 383.0 ± 0.2	0 0	4.0	1.333	85.0	GT = 86.333 WGH= 0.03 ± 0.01	JENDL-3.2 74HACKEN+
384.2 384.2 ± 0.2	0 0	5.0	5.364	85.0	GT = 90.364 WGH= 0.15 ± 0.02	JENDL-3.2 74HACKEN+
402.3 402.6 402.3 ± 0.2	0 0	5.0 5.0	29.0	85.0	GT = 114.0 WGH= 0.78 ± 0.18	JENDL-3.2 74CORVI+ 74HACKEN+
411.6 411.9 411.6 ± 0.2	0 0	4.0 4.0	35.0	85.0	GT = 120.0 WGH= 0.77 ± 0.15	JENDL-3.2 74CORVI+ 74HACKEN+
423.0 422.9 423.0 ± 0.2	0 0	5.0 5.0	9.4	85.0	GT = 94.4 WGH= 0.25 ± 0.03	JENDL-3.2 74CORVI+ 74HACKEN+
431.2 431.2 ± 0.3	1 1	4.0	0.2222	85.0	GT = 85.222 WGH= 0.005± 0.003	JENDL-3.2 74HACKEN+
437.2 437.2 ± 0.3	0 0	4.0	1.222	85.0	GT = 86.222 WGH= 0.025± 0.002	JENDL-3.2 74HACKEN+
448.9 448.9 ± 0.3	0 0	5.0	11.82	85.0	GT = 96.82 WGH= 0.3 ± 0.05	JENDL-3.2 74HACKEN+
453.9 453.9 ± 0.3	0 0	4.0	23.33	85.0	GT = 108.33 WGH= 0.49 ± 0.1	JENDL-3.2 74HACKEN+
456.8 456.8 ± 0.3	0 0	5.0	17.27	85.0	GT = 102.27 WGH= 0.45 ± 0.05	JENDL-3.2 74HACKEN+
469.6 469.6 ± 0.3	0 0	4.0	5.778	85.0	GT = 90.778 WGH= 0.12 ± 0.02	JENDL-3.2 74HACKEN+
473.6 473.6 ± 0.3	1 1	3.0	0.8571	85.0	GT = 85.857 WGH= 0.013± 0.007	JENDL-3.2 74HACKEN+
477.6 477.6 ± 0.3	0 0	5.0	2.909	85.0	GT = 87.909 WGH= 0.072± 0.005	JENDL-3.2 74HACKEN+
488.0 488.0 ± 0.3	1 1	3.0	1.0	85.0	GT = 86.0 WGH= 0.015± 0.005	JENDL-3.2 74HACKEN+
493.7 493.7 ± 0.3	1 1	3.0	0.7143	85.0	GT = 85.714 WGH= 0.011± 0.005	JENDL-3.2 74HACKEN+
498.2 498.2 ± 0.3	0 0	5.0	2.727	85.0	GT = 87.727 WGH= 0.066± 0.005	JENDL-3.2 74HACKEN+
501.9 501.9 ± 0.3	0 0	4.0	1.111	85.0	GT = 86.111 WGH= 0.023± 0.008	JENDL-3.2 74HACKEN+
503.7 503.7 ± 0.3	0 0	5.0	22.73	85.0	GT = 107.73 WGH= 0.56 ± 0.09	JENDL-3.2 74HACKEN+
506.2 506.2 ± 0.3	0 0	4.0	1.222	85.0	GT = 86.222 WGH= 0.024± 0.012	JENDL-3.2 74HACKEN+
513.1 513.1 ± 0.3	0 0	5.0	0.1636	85.0	GT = 85.164 WGH= 0.004± 0.002	JENDL-3.2 74HACKEN+
515.4	0	5.0	3.091	85.0	GT = 88.091	JENDL-3.2

IN-115 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
515.4 ± 0.3	0				WGH= 0.074± 0.005	74HACKEN+
525.5	0	5.0	12.73	85.0	GT = 97.73	JENDL-3.2
525.5 ± 0.3	0				WGH= 0.31 ± 0.05	74HACKEN+
530.1	0	4.0	1.022	85.0	GT = 86.022	JENDL-3.2
530.1 ± 0.3	0				WGH= 0.02 ± 0.002	74HACKEN+
547.9	0	4.0	6.0	85.0	GT = 91.0	JENDL-3.2
547.9 ± 0.3	0				WGH= 0.116± 0.005	74HACKEN+
551.1	0	5.0	1.455	85.0	GT = 86.455	JENDL-3.2
551.1 ± 0.4	0				WGH= 0.035± 0.002	74HACKEN+
559.7	0	5.0	0.5455	85.0	GT = 85.545	JENDL-3.2
559.7 ± 0.4	0				WGH= 0.013± 0.007	74HACKEN+
562.6	0	4.0	1.056	85.0	GT = 86.056	JENDL-3.2
562.6 ± 0.4	0				WGH= 0.02 ± 0.002	74HACKEN+
569.6	0	4.0	0.5556	85.0	GT = 85.556	JENDL-3.2
569.6 ± 0.4	0				WGH= 0.011± 0.006	74HACKEN+
571.9	0	4.0	38.89	85.0	GT = 123.89	JENDL-3.2
571.9 ± 0.4	0				WGH= 0.74 ± 0.05	74HACKEN+
580.2	0	5.0	7.0	85.0	GT = 92.0	JENDL-3.2
580.2 ± 0.4	0				WGH= 0.16 ± 0.01	74HACKEN+
589.1	0	4.0	7.556	85.0	GT = 92.556	JENDL-3.2
589.1 ± 0.4	0				WGH= 0.14 ± 0.01	74HACKEN+
602.2	0	4.0	2.333	85.0	GT = 87.333	JENDL-3.2
602.2 ± 0.4	0				WGH= 0.043± 0.009	74HACKEN+
610.0	0	5.0	0.7636	85.0	GT = 85.764	JENDL-3.2
610.0 ± 0.4	0				WGH= 0.017± 0.001	74HACKEN+
614.1	0	4.0	42.22	85.0	GT = 127.22	JENDL-3.2
614.1 ± 0.4	0				WGH= 0.76 ± 0.04	74HACKEN+
619.6	0	4.0	18.89	85.0	GT = 103.89	JENDL-3.2
619.6 ± 0.4	0				WGH= 0.34 ± 0.03	74HACKEN+
643.9	0	5.0	4.364	85.0	GT = 89.364	JENDL-3.2
643.9 ± 0.5	0				WGH= 0.095± 0.005	74HACKEN+
647.1	0	4.0	4.111	85.0	GT = 89.111	JENDL-3.2
647.1 ± 0.5	0				WGH= 0.073± 0.004	74HACKEN+
654.8	0	5.0	8.182	85.0	GT = 93.182	JENDL-3.2
654.8 ± 0.5	0				WGH= 0.175± 0.007	74HACKEN+
674.0	0	5.0	10.0	85.0	GT = 95.0	JENDL-3.2
674.0 ± 0.5	0				WGH= 0.217± 0.005	74HACKEN+
683.2	0	5.0	2.909	85.0	GT = 87.909	JENDL-3.2
683.2 ± 0.5	0				WGH= 0.06 ± 0.005	74HACKEN+
694.6	0	4.0	4.667	85.0	GT = 89.667	JENDL-3.2
694.6 ± 0.5	0				WGH= 0.079± 0.004	74HACKEN+
699.1	0	5.0	1.091	85.0	GT = 86.091	JENDL-3.2
699.1 ± 0.5	0				WGH= 0.023± 0.012	74HACKEN+
704.8	0	4.0	2.556	85.0	GT = 87.556	JENDL-3.2
704.8 ± 0.5	0				WGH= 0.043± 0.004	74HACKEN+
707.8	0	5.0	5.364	85.0	GT = 90.364	JENDL-3.2
707.8 ± 0.5	0				WGH= 0.11 ± 0.02	74HACKEN+
719.8	0	4.0	3.444	85.0	GT = 88.444	JENDL-3.2
719.8 ± 0.5	0				WGH= 0.058± 0.005	74HACKEN+
724.1	0	4.0	1.111	85.0	GT = 86.111	JENDL-3.2
724.1 ± 0.5	0				WGH= 0.018± 0.009	74HACKEN+
727.8	0	4.0	3.778	85.0	GT = 88.778	JENDL-3.2
727.8 ± 0.5	0				WGH= 0.062± 0.004	74HACKEN+
733.3	0	4.0	13.33	85.0	GT = 98.33	JENDL-3.2
733.3 ± 0.5	0				WGH= 0.228± 0.005	74HACKEN+
752.7	0	4.0	2.556	85.0	GT = 87.556	JENDL-3.2
752.7 ± 0.5	0				WGH= 0.042± 0.004	74HACKEN+
760.1	0	4.0	1.222	85.0	GT = 86.222	JENDL-3.2
760.1 ± 0.6	0				WGH= 0.02 ± 0.01	74HACKEN+
774.0	0	4.0	23.33	85.0	GT = 108.33	JENDL-3.2
774.0 ± 0.6	0				WGH= 0.38 ± 0.04	74HACKEN+

IN-115

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
783.5 783.5 ± 0.6	0 0	5.0	14.55	85.0	GT = 99.55 WGH= 0.284± 0.007	JENDL-3.2 74HACKEN+
789.6 789.6 ± 0.6	0 0	5.0	15.45	85.0	GT = 100.45 WGH= 0.3 ± 0.02	JENDL-3.2 74HACKEN+
795.1 795.1 ± 0.6	0 0	4.0	6.222	85.0	GT = 91.222 WGH= 0.1 ± 0.07	JENDL-3.2 74HACKEN+
800.6 800.6 ± 0.6	0 0	4.0	1.0	85.0	GT = 86.0 WGH= 0.015± 0.08	JENDL-3.2 74HACKEN+
812.6 812.6 ± 0.6	0 0	5.0	0.4545	85.0	GT = 85.454 WGH= 0.009± 0.005	JENDL-3.2 74HACKEN+
815.7 815.7 ± 0.6	0 0	4.0	3.778	85.0	GT = 88.778 WGH= 0.059± 0.011	JENDL-3.2 74HACKEN+
819.4 819.4 ± 0.3	0 0	4.0	10.0	85.0	GT = 95.0 WGH= 0.15 ± 0.02	JENDL-3.2 74HACKEN+
829.8 829.8 ± 0.3	0 0	5.0	10.0	85.0	GT = 95.0 WGH= 0.19 ± 0.01	JENDL-3.2 74HACKEN+
836.7 836.7 ± 0.3	0 0	4.0	20.0	85.0	GT = 105.0 WGH= 0.31 ± 0.02	JENDL-3.2 74HACKEN+
853.5 853.5 ± 0.3	0 0	5.0	52.73	85.0	GT = 137.73 WGH= 1.0 ± 0.07	JENDL-3.2 74HACKEN+
861.1 861.1 ± 0.3	0 0	4.0	25.56	85.0	GT = 110.56 WGH= 0.39 ± 0.07	JENDL-3.2 74HACKEN+
863.9 863.9 ± 0.3	0 0	4.0	21.11	85.0	GT = 106.11 WGH= 0.32 ± 0.07	JENDL-3.2 74HACKEN+
869.4 869.4 ± 0.4	0 0	5.0	1.455	85.0	GT = 86.455 WGH= 0.027± 0.014	JENDL-3.2 74HACKEN+
875.1 875.1 ± 0.4	0 0	4.0	7.667	85.0	GT = 92.667 WGH= 0.117± 0.007	JENDL-3.2 74HACKEN+
882.6 882.6 ± 0.4	0 0	4.0	0.8889	85.0	GT = 85.889 WGH= 0.013± 0.007	JENDL-3.2 74HACKEN+
891.6 891.6 ± 0.4	0 0	4.0	17.78	85.0	GT = 102.78 WGH= 0.266± 0.007	JENDL-3.2 74HACKEN+
899.0 899.0 ± 0.4	0 0	5.0	3.182	85.0	GT = 88.182 WGH= 0.059± 0.008	JENDL-3.2 74HACKEN+
906.8 906.8 ± 0.4	0 0	5.0	0.5455	85.0	GT = 85.545 WGH= 0.01 ± 0.005	JENDL-3.2 74HACKEN+
913.9 913.9 ± 0.4	0 0	4.0	15.56	85.0	GT = 100.56 WGH= 0.23 ± 0.01	JENDL-3.2 74HACKEN+
923.4 923.4 ± 0.4	0 0	5.0	5.545	85.0	GT = 90.545 WGH= 0.1 ± 0.03	JENDL-3.2 74HACKEN+
931.9 931.9 ± 0.4	0 0	4.0	2.222	85.0	GT = 87.222 WGH= 0.037± 0.02	JENDL-3.2 74HACKEN+
943.7 943.7 ± 0.4	0 0	5.0	1.0	85.0	GT = 86.0 WGH= 0.018± 0.009	JENDL-3.2 74HACKEN+
948.1 948.1 ± 0.4	0 0	5.0	47.27	85.0	GT = 132.27 WGH= 0.85 ± 0.05	JENDL-3.2 74HACKEN+
956.6 956.6 ± 0.4	0 0	5.0	29.09	85.0	GT = 114.09 WGH= 0.51 ± 0.03	JENDL-3.2 74HACKEN+
973.8 973.8 ± 0.4	0 0	4.0	1.444	85.0	GT = 86.444 WGH= 0.02 ± 0.01	JENDL-3.2 74HACKEN+
978.0 978.0 ± 0.4	0 0	5.0	32.73	85.0	GT = 117.73 WGH= 0.58 ± 0.03	JENDL-3.2 74HACKEN+
981.8 981.8 ± 0.4	0 0	5.0	2.636	85.0	GT = 87.636 WGH= 0.046± 0.007	JENDL-3.2 74HACKEN+
998.0 998.0 ± 0.4	0 0	4.0	37.78	85.0	GT = 122.78 WGH= 0.53 ± 0.03	JENDL-3.2 74HACKEN+
1007.0 1007.1 ± 0.4	0 0	5.0	0.7273	85.0	GT = 85.727 WGH= 0.013± 0.007	JENDL-3.2 74HACKEN+
1020.0 1019.5 ± 0.4	0 0	5.0	0.8182	85.0	GT = 85.818 WGH= 0.014± 0.007	JENDL-3.2 74HACKEN+
1036.0	0	5.0	6.364	85.0	GT = 91.364	JENDL-3.2

IN-115 6

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1035.7 ± 0.5	0				WGH- 0.11 ± 0.02	74HACKEN+
1043.0	0	5.0	47.27	85.0	GT - 132.27	JENDL-3.2
1043.0 ± 0.5	0				WGH- 0.81 ± 0.06	74HACKEN+
1049.0	0	4.0	5.889	85.0	GT - 90.889	JENDL-3.2
1049.1 ± 0.5	0				WGH- 0.081± 0.01	74HACKEN+
1055.0	0	5.0	0.9091	85.0	GT - 85.909	JENDL-3.2
1055.1 ± 0.5	0				WGH- 0.016± 0.008	74HACKEN+
1060.0	0	5.0	11.82	85.0	GT - 96.82	JENDL-3.2
1060.3 ± 0.5	0				WGH- 0.2 ± 0.01	74HACKEN+
1075.0	0	5.0	31.82	85.0	GT - 116.82	JENDL-3.2
1075.1 ± 0.5	0				WGH- 0.54 ± 0.06	74HACKEN+
1086.0	0	4.0	37.78	85.0	GT - 122.78	JENDL-3.2
1085.8 ± 0.5	0				WGH- 0.51 ± 0.03	74HACKEN+
1104.0	0	4.0	1.444	85.0	GT - 86.444	JENDL-3.2
1103.7 ± 0.5	0				WGH- 0.02 ± 0.01	74HACKEN+
1112.0	0	5.0	11.82	85.0	GT - 96.82	JENDL-3.2
1111.7 ± 0.5	0				WGH- 0.197± 0.009	74HACKEN+
1140.0	0	5.0	17.27	85.0	GT - 102.27	JENDL-3.2
1140.2 ± 0.5	0				WGH- 0.28 ± 0.01	74HACKEN+
1170.0	0	5.0	14.55	85.0	GT - 99.55	JENDL-3.2
1170.3 ± 0.5	0				WGH- 0.24 ± 0.03	74HACKEN+
1180.0	0	5.0	17.27	85.0	GT - 102.27	JENDL-3.2
1179.7 ± 0.6	0				WGH- 0.28 ± 0.01	74HACKEN+
1188.0	0	4.0	3.333	85.0	GT - 88.333	JENDL-3.2
1188.0 ± 0.6	0				WGH- 0.044± 0.02	74HACKEN+
1191.0	0	4.0	3.667	85.0	GT - 88.667	JENDL-3.2
1190.8 ± 0.6	0				WGH- 0.048± 0.006	74HACKEN+
1199.0	0	4.0	0.8889	85.0	GT - 85.889	JENDL-3.2
1199.3 ± 0.6	0				WGH- 0.012± 0.006	74HACKEN+
1213.0	0	4.0	53.33	85.0	GT - 138.33	JENDL-3.2
1213.1 ± 0.6	0				WGH- 0.69 ± 0.09	74HACKEN+
1217.0	0	4.0	11.11	85.0	GT - 96.11	JENDL-3.2
1216.6 ± 0.6	0				WGH- 0.14 ± 0.07	74HACKEN+
1224.0	0	4.0	44.44	85.0	GT - 129.44	JENDL-3.2
1224.2 ± 0.6	0				WGH- 0.57 ± 0.06	74HACKEN+
1238.0	0	4.0	1.667	85.0	GT - 86.667	JENDL-3.2
1237.8 ± 0.6	0				WGH- 0.021± 0.01	74HACKEN+
1243.0	0	4.0	23.33	85.0	GT - 108.33	JENDL-3.2
1243.1 ± 0.6	0				WGH- 0.3 ± 0.03	74HACKEN+
1270.0	0	4.0	4.444	85.0	GT - 89.444	JENDL-3.2
1270.1 ± 0.6	0				WGH- 0.05 ± 0.03	74HACKEN+
1277.0	0	4.0	6.667	85.0	GT - 91.667	JENDL-3.2
1276.8 ± 0.6	0				WGH- 0.077± 0.035	74HACKEN+
1281.0	0	5.0	15.45	85.0	GT - 100.45	JENDL-3.2
1281.2 ± 0.6	0				WGH- 0.23 ± 0.01	74HACKEN+
1305.0	0	5.0	1.818	85.0	GT - 86.818	JENDL-3.2
1304.7 ± 0.6	0				WGH- 0.025± 0.013	74HACKEN+
1309.0	0	5.0	12.73	85.0	GT - 97.73	JENDL-3.2
1309.3 ± 0.6	0				WGH- 0.196± 0.009	74HACKEN+
1325.0	0	4.0	13.33	85.0	GT - 98.33	JENDL-3.2
1325.0 ± 0.6	0				WGH- 0.16 ± 0.06	74HACKEN+
1331.0	0	5.0	11.82	85.0	GT - 96.82	JENDL-3.2
1330.9 ± 0.7	0				WGH- 0.18 ± 0.01	74HACKEN+
1334.0	0	4.0	8.889	85.0	GT - 93.889	JENDL-3.2
1334.3 ± 0.7	0				WGH- 0.11 ± 0.01	74HACKEN+
1342.0	0	4.0	9.0	85.0	GT - 94.0	JENDL-3.2
1342.3 ± 0.7	0				WGH- 0.11 ± 0.01	74HACKEN+
1346.0	0	4.0	15.56	85.0	GT - 100.56	JENDL-3.2
1346.0 ± 0.7	0				WGH- 0.19 ± 0.01	74HACKEN+
1350.0	0	5.0	26.36	85.0	GT - 111.36	JENDL-3.2
1349.8 ± 0.7	0				WGH- 0.4 ± 0.06	74HACKEN+

IN-115 7

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1358.0 1357.9 ± 0.7	0 0	5.0	6.636	85.0	GT = 91.636 WGH= 0.099± 0.009	JENDL-3.2 74HACKEN+
1368.0 1367.6 ± 0.7	0 0	4.0	1.778	85.0	GT = 86.778 WGH= 0.022± 0.01	JENDL-3.2 74HACKEN+
1372.0 1372.4 ± 0.7	0 0	5.0	2.727	85.0	GT = 87.727 WGH= 0.038± 0.02	JENDL-3.2 74HACKEN+
1389.0 1389.3 ± 0.7	0 0	4.0	11.11	85.0	GT = 96.11 WGH= 0.14 ± 0.01	JENDL-3.2 74HACKEN+
1398.0 1397.9 ± 0.7	0 0	4.0	14.44	85.0	GT = 99.44 WGH= 0.17 ± 0.02	JENDL-3.2 74HACKEN+
1402.0 1402.1 ± 0.7	0 0	4.0	8.333	85.0	GT = 93.333 WGH= 0.1 ± 0.01	JENDL-3.2 74HACKEN+
1416.0 1415.9 ± 0.7	0 0	4.0	27.78	85.0	GT = 112.78 WGH= 0.33 ± 0.03	JENDL-3.2 74HACKEN+
1421.0 1421.0 ± 0.7	0 0	4.0	3.333	85.0	GT = 88.333 WGH= 0.043± 0.02	JENDL-3.2 74HACKEN+
1431.0 1430.8 ± 0.8	0 0	5.0	8.273	85.0	GT = 93.273 WGH= 0.12 ± 0.01	JENDL-3.2 74HACKEN+
1442.0 1441.8 ± 0.8	0 0	4.0	3.222	85.0	GT = 88.222 WGH= 0.038± 0.007	JENDL-3.2 74HACKEN+
1449.0 1448.6 ± 0.8	0 0	5.0	2.818	85.0	GT = 87.818 WGH= 0.041± 0.008	JENDL-3.2 74HACKEN+
1461.0 1460.7 ± 0.8	0 0	5.0	1.818	85.0	GT = 86.818 WGH= 0.029± 0.015	JENDL-3.2 74HACKEN+
1468.0 1468.4 ± 0.8	0 0	4.0	32.22	85.0	GT = 117.22 WGH= 0.38 ± 0.06	JENDL-3.2 74HACKEN+
1480.0 1480.0 ± 0.8	0 0	5.0	6.273	85.0	GT = 91.273 WGH= 0.09 ± 0.01	JENDL-3.2 74HACKEN+
1485.0 1484.7 ± 0.8	0 0	4.0	0.5556	85.0	GT = 85.556 WGH= 0.007± 0.004	JENDL-3.2 74HACKEN+
1493.0 1492.6 ± 0.8	0 0	4.0	4.444	85.0	GT = 89.444 WGH= 0.056± 0.025	JENDL-3.2 74HACKEN+
1521.0 1520.6 ± 0.8	0 0	4.0	48.89	85.0	GT = 133.89 WGH= 0.56 ± 0.04	JENDL-3.2 74HACKEN+
1546.0 1546.1 ± 0.8	0 0	4.0	31.11	85.0	GT = 116.11 WGH= 0.35 ± 0.04	JENDL-3.2 74HACKEN+
1554.0 1554.4 ± 0.8	0 0	5.0	9.091	85.0	GT = 94.091 WGH= 0.12 ± 0.06	JENDL-3.2 74HACKEN+
1563.0 1562.9 ± 0.8	0 0	4.0	5.556	85.0	GT = 90.556 WGH= 0.063± 0.03	JENDL-3.2 74HACKEN+
1567.0 1567.1 ± 0.9	0 0	4.0	23.33	85.0	GT = 108.33 WGH= 0.26 ± 0.03	JENDL-3.2 74HACKEN+
1580.0 1579.9 ± 0.9	0 0	5.0	2.727	85.0	GT = 87.727 WGH= 0.038± 0.015	JENDL-3.2 74HACKEN+
1596.0 1595.5 ± 0.9	0 0	4.0	34.44	85.0	GT = 119.44 WGH= 0.39 ± 0.04	JENDL-3.2 74HACKEN+
1614.0 1614.0 ± 0.9	0 0	5.0	34.55	85.0	GT = 119.55 WGH= 0.47 ± 0.05	JENDL-3.2 74HACKEN+
1619.0 1619.3 ± 0.9	0 0	4.0	211.1	85.0	GT = 296.1 WGH= 2.34 ± 0.26	JENDL-3.2 74HACKEN+
1641.0 1640.9 ± 0.9	0 0	4.0	51.11	85.0	GT = 136.11 WGH= 0.57 ± 0.03	JENDL-3.2 74HACKEN+
1646.0 1646.4 ± 0.9	0 0	5.0	1.818	85.0	GT = 86.818 WGH= 0.03 ± 0.15	JENDL-3.2 74HACKEN+
1655.0 1654.7 ± 0.9	0 0	4.0	2.222	85.0	GT = 87.222 WGH= 0.029± 0.15	JENDL-3.2 74HACKEN+
1664.0 1663.9 ± 0.9	0 0	4.0	122.2	85.0	GT = 207.2 WGH= 1.35 ± 0.2	JENDL-3.2 74HACKEN+
1676.0 1676.3 ± 0.9	0 0	4.0	2.889	85.0	GT = 87.889 WGH= 0.032± 0.01	JENDL-3.2 74HACKEN+
1679.0	0	5.0	10.91	85.0	GT = 95.91	JENDL-3.2

IN-115 8

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1678.6 ± 0.9	0				WGH= 0.15 ± 0.03	74HACKEN+
1689.0	0	5.0	136.4	85.0	GT = 221.4	JENDL-3.2
1688.6 ± 1.0	0				WGH= 1.83 ± 0.17	74HACKEN+
1693.0	0	4.0	6.667	85.0	GT = 91.667	JENDL-3.2
1693.3 ± 1.0	0				WGH= 0.073± 0.035	74HACKEN+
1705.0	0	4.0	2.222	85.0	GT = 87.222	JENDL-3.2
1704.6 ± 1.0	0				WGH= 0.024± 0.012	74HACKEN+
1712.0	0	5.0	47.27	85.0	GT = 132.27	JENDL-3.2
1711.6 ± 1.0	0				WGH= 0.63 ± 0.07	74HACKEN+
1723.0	0	5.0	7.273	85.0	GT = 92.273	JENDL-3.2
1723.3 ± 1.0	0				WGH= 0.096± 0.024	74HACKEN+
1736.0	0	4.0	66.67	85.0	GT = 151.67	JENDL-3.2
1736.1 ± 1.0	0				WGH= 0.72 ± 0.12	74HACKEN+
1740.0	0	5.0	8.182	85.0	GT = 93.182	JENDL-3.2
1739.6 ± 1.0	0				WGH= 0.11 ± 0.04	74HACKEN+
1764.0	0	5.0	5.455	85.0	GT = 90.455	JENDL-3.2
1764.2 ± 1.0	0				WGH= 0.071± 0.025	74HACKEN+
1781.0	0	5.0	5.455	85.0	GT = 90.455	JENDL-3.2
1780.5 ± 1.0	0				WGH= 0.071± 0.007	74HACKEN+
1790.0	0	4.0	3.333	85.0	GT = 88.333	JENDL-3.2
1789.8 ± 1.0	0				WGH= 0.035± 0.012	74HACKEN+
1797.0	0	5.0	40.0	85.0	GT = 125.0	JENDL-3.2
1797.1 ± 1.0	0				WGH= 0.52 ± 0.05	74HACKEN+
1809.0	0	4.0	4.444	85.0	GT = 89.444	JENDL-3.2
1808.6 ± 1.0	0				WGH= 0.047± 0.007	74HACKEN+
1814.0	0	5.0	2.364	85.0	GT = 87.364	JENDL-3.2
1813.9 ± 1.0	0				WGH= 0.031± 0.009	74HACKEN+
1827.0	0	4.0	3.333	85.0	GT = 88.333	JENDL-3.2
1826.7 ± 1.0	0				WGH= 0.035± 0.012	74HACKEN+
1831.0	0	5.0	4.182	85.0	GT = 89.182	JENDL-3.2
1830.9 ± 1.1	0				WGH= 0.054± 0.005	74HACKEN+
1844.0	0	4.0	8.889	85.0	GT = 93.889	JENDL-3.2
1843.9 ± 1.1	0				WGH= 0.093± 0.023	74HACKEN+
1856.0	0	4.0	55.56	85.0	GT = 140.56	JENDL-3.2
1855.6 ± 1.1	0				WGH= 0.58 ± 0.06	74HACKEN+
1866.0	0	5.0	11.82	85.0	GT = 96.82	JENDL-3.2
1865.8 ± 1.1	0				WGH= 0.15 ± 0.02	74HACKEN+
1878.0	0	4.0	7.778	85.0	GT = 92.778	JENDL-3.2
1877.9 ± 1.1	0				WGH= 0.076± 0.015	74HACKEN+
1891.0	0	5.0	136.4	85.0	GT = 221.4	JENDL-3.2
1891.4 ± 1.1	0				WGH= 1.72 ± 0.23	74HACKEN+
1904.0	0	5.0	12.73	85.0	GT = 97.73	JENDL-3.2
1904.4 ± 1.1	0				WGH= 0.16 ± 0.02	74HACKEN+
1919.0	0	5.0	36.36	85.0	GT = 121.36	JENDL-3.2
1919.3 ± 1.1	0				WGH= 0.46 ± 0.05	74HACKEN+
1926.0	0	5.0	2.727	85.0	GT = 87.727	JENDL-3.2
1925.6 ± 1.1	0				WGH= 0.032± 0.013	74HACKEN+
1940.0	0	5.0	18.18	85.0	GT = 103.18	JENDL-3.2
1939.6 ± 1.2	0				WGH= 0.23 ± 0.02	74HACKEN+
1948.0	0	5.0	32.73	85.0	GT = 117.73	JENDL-3.2
1948.4 ± 1.2	0				WGH= 0.41 ± 0.02	74HACKEN+
1960.0	0	5.0	36.36	85.0	GT = 121.36	JENDL-3.2
1959.6 ± 1.2	0				WGH= 0.45 ± 0.09	74HACKEN+
1969.0	0	5.0	18.18	85.0	GT = 103.18	JENDL-3.2
1968.6 ± 1.2	0				WGH= 0.22 ± 0.05	74HACKEN+
1982.0	0	5.0	36.36	85.0	GT = 121.36	JENDL-3.2
1981.8 ± 1.2	0				WGH= 0.45 ± 0.05	74HACKEN+
1993.0	0	5.0	1.818	85.0	GT = 86.818	JENDL-3.2
1992.7 ± 1.2	0				WGH= 0.027± 0.014	74HACKEN+
2004.0	0	5.0	16.36	85.0	GT = 101.36	JENDL-3.2
2003.7 ± 1.2	0				WGH= 0.2 ± 0.04	74HACKEN+

51-Sb-121

Abundance	:57.36 %	
Spin-Parity	:$5/2^+$	
Potential Scattering Radius		:6.0 fm
Cross Sections of 2200 m/s for Total		:9.590 b
	Elastic	:3.590 b
	Capture	:5.991 b
Maxwellian Average Capture Cross Section		:5.329 b
Resonance Integral of Capture		:214.0 b

Resolved resonance region (MLBW formula) : below 2 keV. Resonance parameters of JENDL-2[1] were revised except for radiation widths.

Evaluation of JENDL-2 was made on the basis of the data measured by Bolotin and Chrien[2], Wynchank et al.[3], Muradjan et al.[4], Adamchuk et al.[5] and Ohkubo et al.[6] Neutron orbital angular momentum ℓ and total spin J were based on the data by Bhat et al.[7] and Cauvin et al.[8] The average radiation width of 0.089 eV was deduced and applied to the levels whose radiation width was unknown.

After that, new experimental data for neutron widths and total spin J were published by Ohkubo et al.[9] and Beliaev et al.[10], respectively.

Evaluation of JENDL-3.1[11] was performed on the basis of the new data for the neutron widths and spin J and JENDL-2 for the radiation widths. Total spin J of some resonances was tentatively estimated with a random number method. Neutron orbital angular momentum ℓ was estimated with a method of Bollinger and Thomas[12]. Scattering radius of 6.0 fm was assumed from the systmatics of measured values for neighboring nuclide.

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SB-121 1

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
6.217	0	3.0	1.8607	87.0	GT = 88.881	JENDL-3.2
6.24 ± 0.03		3	' 2.1 ± 0.1	88 ± 3	WGO= 0.84 ± 0.04	BNL-325
6.233		3.0	2.6 ± 0.5		GT = 60.0 ±10.0	ASAMI+68
6.24			' 2.0 ± 0.1		WGO= 0.8	MURADJANA+68
6.24					WGO= 0.8	MURADJANB+68
6.24		3.0				BAHT+70
6.24	0				WGO= 0.8 ± 0.04	ADAMCHUK+71
6.24		3.0				CAUVIN+71
6.24		3.0				BELIAEV+83
6.217± 0.01					WGH= 0.44 ± 0.4	OHKUBO+93
15.37	0	2.0	8.4682	90.0	GT = 98.468	JENDL-3.2
15.41 ± 0.06		2	' 6.9 ± 0.4	95 ±10	WGO= 1.75 ± 0.10	BNL-325
15.43		2.0	7.5 ± 0.5		GT = 100.0 ±15.0	ASAMI+68
15.4			' 6.9 ± 0.414			MURADJANA+68
15.4					WGO= 1.76	MURADJANB+68
15.4		2.0				BAHT+70
15.4	0				WGO= 1.76 ± 0.1056	ADAMCHUK+71
15.4		2.0				CAUVIN+71
15.41		2.0				BELIAEV+83
15.37 ± 0.02					WGH= 0.9 ± 0.09	OHKUBO+93
29.58	0	3.0	4.1956	86.0	GT = 90.196	JENDL-3.2
29.65 ± 0.05		3	' 5.1 ± 0.4	85 ±10	WGO= 0.94 ± 0.09	BNL-325
29.6			5.5 ± 0.3		GT = 90.0 ±20.0	ASAMI+68
29.55			' 7.3 ± 1.46			MURADJANA+68
29.55					WGO= 1.34	MURADJANB+68
29.7		3.0				BAHT+70
29.55	0				WGO= 1.2 ± 0.24	ADAMCHUK+71
29.7		3.0				CAUVIN+71
29.65		3.0				BELIAEV+83
29.58 ± 0.02					WGH= 0.45 ± 0.05	OHKUBO+93
37.9	1	4.0	0.01067	89.0	GT = 89.011	JENDL-3.2
37.77 ± 0.15			' 0.017± 0.003		WGO= 0.0028± 0.0005	BNL-325
37.9					WAG= 0.0095± 0.001	ASAMI+68
37.77			' 0.013± 0.0039			MURADJANA+68
37.77					WGO= 0.0021	MURADJANB+68
37.77					WGO= 0.0021±0.00063	ADAMCHUK+71
37.90 ± 0.05					WGH= 0.0013± 0.003	OHKUBO+93
47.13					WGO= 0.01 ± 0.002	ADAMCHUK+71
53.54	0	2.0	2.8098	88.0	GT = 90.81	JENDL-3.2
53.55 ± 0.15		2	' 2.0 ± 0.2		WGO= 0.27 ± 0.03	BNL-325
53.6			1.9 ± 0.2		GT = 95.0 ±10.0	ASAMI+68
53.5			' 2.1 ± 0.063			MURADJANA+68
53.5					WGO= 0.29	MURADJANB+68
53.5		2.0				BAHT+70
53.5	0				WGO= 0.275± 0.011	ADAMCHUK+71
53.5		2.0				CAUVIN+71
53.55		2.0				BELIAEV+83
53.54 ± 0.03					WGH= 0.16 ± 0.02	OHKUBO+93
55.0	1	2.0	0.03738	89.0	GT = 89.037	JENDL-3.2
55.1 ± 0.2			' 0.04 ± 0.01	88 ±15	WGO= 0.0054± 0.0013	BNL-325
55.2					WAG= 0.018± 0.002	ASAMI+68
55.01			' 0.05 ± 0.01			MURADJANA+68
55.01					WGO= 0.0067	MURADJANB+68
55.01					WGO= 0.0067±0.00134	ADAMCHUK+71
55.00 ± 0.05					WGH= 0.0021± 0.003	OHKUBO+93
64.45	0	3.0	0.64683	89.0	GT = 89.647	JENDL-3.2
64.5			0.65 ± 0.05		GT = 90.0 ±10.0	ASAMI+68
64.4			' 0.65 ± 0.0975			MURADJANA+68
64.4					WGO= 0.081	MURADJANB+68
64.5		3.0				BAHT+70
64.4					WGO= 0.084±0.00336	ADAMCHUK+71
64.5		3.0				CAUVIN+71
64.5		3.0				BELIAEV+83
64.45 ± 0.04					WGH= 0.047± 0.005	OHKUBO+93
73.77	0	2.0	8.6577	99.0	GT = 107.66	JENDL-3.2
73.8 ± 0.1		2	' 7.5 ± 0.5	99 ±10	WGO= 0.87 ± 0.06	BNL-325
73.8			7.8 ± 0.5		GT = 95.0 ±10.0	ASAMI+68
73.73			' 7.0 ± 1.05			MURADJANA+68
73.73					WGO= 0.38	MURADJANB+68
73.8		2.0				BAHT+70
73.73	0				WGO= 0.82 ± 0.0492	ADAMCHUK+71
73.8		2.0				CAUVIN+71
73.8		2.0				BELIAEV+83
73.77 ± 0.05					WGH= 0.42 ± 0.04	OHKUBO+93
89.58	0	2.0	12.27	89.0	GT = 101.27	JENDL-3.2
89.6 ± 0.1		(3)	' 7.0 ± 1.0		WGO= 0.74 ± 0.11	BNL-325
89.7					WAG= 8.5 ± 2.0	ASAMI+68
89.63			' 6.0 ± 0.9			MURADJANA+68
89.63					WGO= 0.63	MURADJANB+68
89.63					WGO= 1.0 ± 0.25	ADAMCHUK+71
89.58 ± 0.07					WGH= 0.54 ± 0.06	OHKUBO+93
90.0		(3.0)				CAUVIN+71

SB-121 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
90.28	0	3.0	4.072	89.0	GT = 93.072	JENDL-3.2
90.3 ± 0.1			4.4 ± 0.7		WGO= 0.46 ± 0.07	BNL-325
90.4					WAG= 1.9 ± 0.6	ASAMI+68
90.11			5.0 ± 0.75			MURADJANA+68
90.11					WGO= 0.53	MURADJANB+68
90.11					WGO= 0.58 ± 0.145	ADAMCHUK+71
90.28 ± 0.07					WGH= 0.25 ± 0.03	OHKUBO+93
111.33	0	2.0	3.7985	89.0	GT = 92.799	JENDL-3.2
111.4 ± 0.1	2		2.8 ± 0.3		WGO= 0.27 ± 0.2	BNL-325
111.4			2.8 ± 0.3			ASAMI+68
111.4			2.8 ± 0.42			MURADJANA+68
111.4					WGO= 0.26	MURADJANB+68
111.4		2.0				BAHT+70
111.4	0				WGO= 0.275±0.01375	ADAMCHUK+71
111.0		2.0				CAUVIN+71
111.4		2.0				BELIAEV+83
111.33 ± 0.04					WGH= 0.15 ± 0.02	OHKUBO+93
126.6	0	3.0	25.075	85.0	GT = 110.07	JENDL-3.2
126.8 ± 0.1	3		27 ± 3	85 ±15	WGO= 2.4 ± 0.2	BNL-325
126.7			30.0 ± 3.0		GT = 120.0 ±20.0	ASAMI+68
126.6			23.0 ± 4.6			MURADJANA+68
126.6					WGO= 2.04	MURADJANB+68
126.8		3.0				BAHT+70
126.6	0				WGO= 2.4 ± 0.36	ADAMCHUK+71
127.0		3.0				CAUVIN+71
126.8		3.0				BELIAEV+83
126.60 ± 0.05					WGH= 1.30 ± 0.10	OHKUBO+93
131.77	0	3.0	7.8714	89.0	GT = 95.871	JENDL-3.2
131.9 ± 0.1	3		10.5 ± 1.0		WGO= 0.91 ± 0.09	BNL-325
131.9			11.0 ± 1.0			ASAMI+68
131.9			9.5 ± 1.425			MURADJANA+68
131.9					WGO= 0.83	MURADJANB+68
131.9	0				WGO= 0.92 ± 0.0644	ADAMCHUK+71
132.0		3.0				CAUVIN+71
131.9		3.0				BELIAEV+83
131.77 ± 0.05					WGH= 0.40 ± 0.04	OHKUBO+93
144.13	0	2.0	16.423	94.0	GT = 110.42	JENDL-3.2
144.3 ± 0.1	2		13 ± 1	94 ±15	WGO= 1.1 ± 0.1	BNL-325
144.3			15.0 ± 1.5		GT = 100.0 ±10.0	ASAMI+68
144.4			10.0 ± 1.5			MURADJANA+68
144.4					WGO= 0.83	MURADJANB+68
144.4	0				WGO= 1.15 ± 0.1725	ADAMCHUK+71
144.0		2.0				CAUVIN+71
144.3		2.0				BELIAEV+83
144.13 ± 0.06					WGH= 0.57 ± 0.06	OHKUBO+93
149.68	0	3.0	23.07	97.0	GT = 120.07	JENDL-3.2
149.9 ± 0.1	3		28 ± 1	100 ±15	WGO= 2.29 ± 0.08	BNL-325
149.9			26.0 ± 3.0		GT = 100.0 ±10.0	ASAMI+68
149.8			30.0 ± 4.5			MURADJANA+68
149.8					WGO= 2.44	MURADJANB+68
149.8	0				WGO= 2.42 ± 0.0968	ADAMCHUK+71
150.0		3.0				CAUVIN+71
149.9		3.0				BELIAEV+83
149.68 ± 0.06					WGH= 1.10 ± 0.10	OHKUBO+93
157.1	1	1.0	0.26	89.0	GT = 89.26	JENDL-3.2
158.8					WGO= 0.0087±0.00261	ADAMCHUK+71
160.4	0	2.0	2.0365	89.0	GT = 91.037	JENDL-3.2
160.6 ± 0.1	(2)		1.5 ± 0.3		WGO= 0.12 ± 0.02	BNL-325
160.7			1.2 ± 0.1			ASAMI+68
160.7			1.5 ± 0.3			MURADJANA+68
160.7					WGO= 0.12	MURADJANB+68
160.7					WGO= 0.125±0.00875	ADAMCHUK+71
160.0	(2.0)					CAUVIN+71
160.6		2.0				BELIAEV+83
160.40 ± 0.07					WGH= 0.067± 0.01	OHKUBO+93
166.85	0	2.0	17.67	99.0	GT = 116.67	JENDL-3.2
167.1 ± 0.1	2		15 ± 2	90 ±30	WGO= 1.16 ± 0.15	BNL-325
167.1			15.0 ± 1.5			ASAMI+68
167.0			13.0 ± 1.95			MURADJANA+68
167.0					WGO= 1.01	MURADJANB+68
167.0	0				WGO= 1.43 ± 0.143	ADAMCHUK+71
167.0		2.0				CAUVIN+71
167.1		2.0				BELIAEV+83
166.85 ± 0.07					WGH= 0.57 ± 0.06	OHKUBO+93
176.6	1	4.0	0.08	89.0	GT = 89.08	JENDL-3.2
176.6 ± 0.1			0.08 ± 0.02		WGO= 0.006± 0.002	BNL-325
176.7					WAG= 0.21 ± 0.02	ASAMI+68
177.7			0.07 ± 0.0175			MURADJANA+68
177.7					WGO= 0.0053	MURADJANB+68
177.7					WGO= 0.006± 0.0015	ADAMCHUK+71
184.45	0	3.0	0.2328	89.0	GT = 89.233	JENDL-3.2

SB-121

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
184.7 ± 0.1			▮ 0.18 ± 0.02		WGO- 0.13 ± 0.02	BNL-325
184.8					WAG- 0.1 ± 0.01	ASAMI+68
185.0			▮ 0.18 ± 0.036			MURADJANA+68
185.0					WGO- 0.013	MURADJANB+68
185.0					WGO- 0.014± 0.0028	ADAMCHUK+71
184.45 ± 0.1					WGH- 0.01 ± 0.003	OHKUBO+93
192.17	0	3.0	1.6635	89.0	GT - 90.663	JENDL-3.2
192.3 ± 0.1			▮ 1.3 ± 0.2		WGO- 0.094± 0.014	BNL-325
192.3			▮ 1.3 ± 0.195			MURADJANA+68
192.3					WGO- 0.094	MURADJANB+68
192.3					WGO- 0.12 ± 0.024	ADAMCHUK+71
192.3		3.0				BELIAEV+83
192.17 ± 0.10					WGH- 0.07 ± 0.01	OHKUBO+93
200.5					WGO- 0.00035±1.05 -4	ADAMCHUK+71
213.81	0	2.0	2.0	89.0	GT - 91.0	JENDL-3.2
214.0 ± 0.1			▮ 1.4 ± 0.2		WGO- 0.096± 0.014	BNL-325
214.0					WAG- 0.8 ± 0.1	ASAMI+68
214.2			▮ 1.2 ± 0.18			MURADJANA+68
214.2					WGO- 0.082	MURADJANB+68
214.2					WGO- 0.086± 0.0086	ADAMCHUK+71
213.81 ± 0.11					WGH- 0.057± 0.01	OHKUBO+93
222.42	0	3.0	4.8578	143.0	GT - 147.88	JENDL-3.2
222.6 ± 0.1	3		▮ 4.0 ± 0.2	143 ±20	WGO- 0.27 ± 0.04	BNL-325
222.8					WAG- 2.7 ± 0.25	ASAMI+68
222.7			▮ 4.0 ± 0.6			MURADJANA+68
222.7					WGO- 2.69	MURADJANB+68
222.7	0				WGO- 0.35 ± 0.035	ADAMCHUK+71
223.0		3.0				CAUVIN+71
222.6		3.0				BELIAEV+83
222.42 ± 0.11					WGH- 0.19 ± 0.02	OHKUBO+93
228.7	1	3.0	0.078	89.0	GT - 89.078	JENDL-3.2
228.7					WGO- 0.006± 0.0018	ADAMCHUK+71
230.38	0	2.0	1.275	89.0	GT - 90.275	JENDL-3.2
230.6 ± 0.1			▮ 0.8 ± 0.2		WGO- 0.053± 0.013	BNL-325
230.9					WAG- 0.45 ± 0.05	ASAMI+68
230.7			▮ 1.0 ± 0.2			MURADJANA+68
230.7					WGO- 0.066	MURADJANB+68
230.7					WGO- 0.064± 0.0064	ADAMCHUK+71
230.38 ± 0.15					WGH- 0.035± 0.01	OHKUBO+93
236.4	1	4.0	0.03067	89.0	GT - 89.031	JENDL-3.2
236.4					WGO- 0.003± 0.0012	ADAMCHUK+71
245.8	0	2.0	0.5644	89.0	GT - 89.564	JENDL-3.2
245.9 ± 0.1			▮ 0.29 ± 0.05		WGO- 0.019± 0.003	BNL-325
246.2					WAG- 0.125± 0.015	ASAMI+68
246.8			▮ 0.35 ± 0.105			MURADJANA+68
246.6					WGO- 0.022	MURADJANB+68
246.6					WGO- 0.02 ± 0.006	ADAMCHUK+71
245.8 ± 0.15					WGH- 0.015± 0.005	OHKUBO+93
248.8	0	2.0	0.3786	89.0	GT - 89.379	JENDL-3.2
248.8 ± 0.1			▮ 0.28 ± 0.06		WGO- 0.018± 0.004	BNL-325
249.4					WAG- 0.125± 0.015	ASAMI+68
249.8			▮ 0.4 ± 0.12			MURADJANA+68
249.6					WGO- 0.025	MURADJANB+68
249.6					WGO- 0.02 ± 0.006	ADAMCHUK+71
248.8 ± 0.15					WGH- 0.010± 0.003	OHKUBO+93
261.5	1	3.0	0.2218	89.0	GT - 89.222	JENDL-3.2
261.6 ± 0.2			▮ 0.2 ± 0.1		WGO- 0.012± 0.006	BNL-325
262.3			▮ 0.2 ± 0.1			MURADJANA+68
262.3					WGO- 0.012	MURADJANB+68
262.3					WGO- 0.012± 0.0036	ADAMCHUK+71
261.5 ± 0.16					WGH- 0.008± 0.003	OHKUBO+93
265.7	1	4.0	0.1087	89.0	GT - 89.109	JENDL-3.2
265.8 ± 0.2			▮ 0.2 ± 0.1		WGO- 0.012± 0.006	BNL-325
266.4			▮ 0.2 ± 0.1			MURADJANA+68
266.4					WGO- 0.012	MURADJANB+68
266.4					WGO- 0.014± 0.0042	ADAMCHUK+71
265.7 ± 0.16					WGH- 0.005± 0.003	OHKUBO+93
269.9	0	2.0	0.3943	89.0	GT - 89.394	JENDL-3.2
270.1 ± 0.2			▮ 0.3 ± 0.1		WGO- 0.018± 0.006	BNL-325
270.5			▮ 0.3 ± 0.09			MURADJANA+68
270.5					WGO- 0.018	MURADJANB+68
270.5					WGO- 0.016± 0.004	ADAMCHUK+71
269.9 ± 0.16					WGH- 0.01 ± 0.003	OHKUBO+93
274.6	0	3.0	0.2841	89.0	GT - 89.284	JENDL-3.2
274.9 ± 0.2			▮ 0.28 ± 0.07		WGO- 0.017± 0.004	BNL-325
274.8			▮ 0.28 ± 0.042			MURADJANA+68
274.8					WGO- 0.017	MURADJANB+68
274.8					WGO- 0.017± 0.0034	ADAMCHUK+71

SB-121 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
274.6 ± 0.17					WGH- 0.01 ± 0.003	OHKUBO+93
282.7	1	3.0	0.1029	89.0	GT = 89.103	JENDL-3.2
282.7					WGO- 0.007± 0.0035	ADAMCHUK+71
286.09	0	3.0	13.918	119.0	GT = 132.92	JENDL-3.2
286.4 ± 0.2	3		11.0 ± 0.7	119 ±25	WGO- 0.65 ± 0.04	BNL-325
287.2			12.6 ± 0.63			MURADJANA+68
287.2					WGO- 0.75	MURADJANB+68
287.2	0				WGO- 0.83 ± 0.083	ADAMCHUK+71
286.0		3.0				CAUVIN+71
286.4		3.0				BELIAEV+83
286.09 ± 0.18					WGH- 0.48 ± 0.05	OHKUBO+93
293.7	1	3.0	0.1029	89.0	GT = 89.103	JENDL-3.2
293.7 ± 0.2			0.13 ± 0.05		WGO- 0.008± 0.003	BNL-325
293.7			0.1 ± 0.03			MURADJANA+68
293.7					WGO- 0.0058	MURADJANB+68
293.7					WGO- 0.006± 0.0018	ADAMCHUK+71
308.98	0	3.0	2.863	89.0	GT = 91.863	JENDL-3.2
307.0					WGO- 0.015± 0.0045	ADAMCHUK+71
309.3	0	2.0	3.24	89.0	GT = 92.24	JENDL-3.2
309.3 ± 0.2			2.6 ± 0.9		WGO- 0.15 ± 0.05	BNL-325
310.2			3.7 ± 0.37			MURADJANA+68
310.2					WGO- 0.21	MURADJANB+68
310.2					WGO- 0.195± 0.0195	ADAMCHUK+71
309.3		2.0				BELIAEV+83
308.98 ± 0.20					WGH- 0.095± 0.01	OHKUBO+93
320.0	0	2.0	0.8586	89.0	GT = 89.859	JENDL-3.2
320.5 ± 0.2			0.50 ± 0.12		WGO- 0.028± 0.007	BNL-325
321.2			0.6 ±0.18330			MURADJANA+68
321.2					WGO- 0.034	MURADJANB+68
321.2					WGO- 0.032± 0.008	ADAMCHUK+71
320.0 ± 0.20					WGH- 0.02 ± 0.005	OHKUBO+93
330.78	0	2.0	3.928	89.0	GT = 92.928	JENDL-3.2
331.4 ± 0.2			2.7 ± 0.4		WGO- 0.15 ± 0.02	BNL-325
332.1			2.5 ± 0.15			MURADJANA+68
332.1					WGO- 0.14	MURADJANB+68
332.1					WGO- 0.141±0.00705	ADAMCHUK+71
330.78 ± 0.21					WGH- 0.09 ± 0.01	OHKUBO+93
338.3	0	2.0	12.801	89.0	GT = 101.8	JENDL-3.2
338.5 ± 0.2	(2)		8.3 ± 0.9		WGO- 0.45 ± 0.05	BNL-325
339.5			8.0 ± 0.4			MURADJANA+68
339.5					WGO- 0.44	MURADJANB+68
338.0					WGO- 0.18 ± 0.072	ADAMCHUK+71
339.0	(2.0)					CAUVIN+71
338.5	2.0					BELIAEV+83
338.30 ± 0.22					WGH- 0.29 ± 0.03	OHKUBO+93
343.8	0	2.0	5.34	89.0	GT = 94.34	JENDL-3.2
339.5					WGO- 0.52 ± 0.052	ADAMCHUK+71
343.8 ± 0.25					WGH- 0.12 ± 0.01	OHKUBO+93
347.8	1	2.0	0.4476	89.0	GT = 89.448	JENDL-3.2
347.2 ± 0.2			0.16 ± 0.05		WGO- 0.0086± 0.0024	BNL-325
348.1			0.15 ± 0.075			MURADJANA+68
348.1					WGO- 0.008	MURADJANB+68
348.1					WGO- 0.009± 0.0018	ADAMCHUK+71
347.8 ± 0.20					WGH- 0.01 ± 0.005	OHKUBO+93
355.7	1	1.0	0.5281	89.0	GT = 89.528	JENDL-3.2
355.8 ± 0.2			0.24 ± 0.06		WGO- 0.013± 0.003	BNL-325
356.3			0.25 ± 0.0625			MURADJANA+68
356.3					WGO- 0.013	MURADJANB+68
356.3					WGO- 0.013±0.00325	ADAMCHUK+71
355.7 ± 0.20					WGH- 0.007± 0.003	OHKUBO+93
367.5	0	2.0	0.6901	89.0	GT = 89.69	JENDL-3.2
367.1 ± 0.2			0.32 ± 0.02		WGO- 0.017± 0.004	BNL-325
368.8			0.4 ± 0.12			MURADJANA+68
368.8					WGO- 0.021	MURADJANB+68
368.8					WGO- 0.019±0.00475	ADAMCHUK+71
367.5 ± 0.20					WGH- 0.015± 0.005	OHKUBO+93
392.57	0	3.0	27.852	89.0	GT = 118.85	JENDL-3.2
392.8 ± 0.2			20 ± 2		WGO- 1.0 ± 0.2	BNL-325
393.9			22.0 ± 1.1			MURADJANA+68
393.9					WGO- 1.11	MURADJANB+68
393.9	0				WGO- 1.3 ± 0.13	ADAMCHUK+71
392.8		3.0				BELIAEV+83
392.57 ± 0.28					WGH- 0.82 ± 0.10	OHKUBO+93
405.5	0	3.0	2.071	89.0	GT = 91.071	JENDL-3.2
405.7 ± 0.3			1.2 ± 0.2		WGO- 0.060± 0.007	BNL-325
407.1			1.2 ± 0.24			MURADJANA+68
407.1					WGO- 0.059	MURADJANB+68

SB-121

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
407.1 405.50 ± 0.50					WGO- 0.07 ± 0.0105 WGH- 0.06 ± 0.02	ADAMCHUK+71 OHKUBO+93
414.4 414.6 ± 0.3 416.1 416.1 416.1 414.4 ± 0.20	0	2.0	0.9771 0.08 ± 0.18 0.7 ± 0.21	89.0	GT - 89.977 WGO- 0.03 ± 0.01 WGO- 0.034 WGO- 0.038± 0.0076 WGH- 0.02 ± 0.005	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
420.92 421.4 ± 0.3 422.2 422.2 422.2 421.0 421.4 420.92 ± 0.31	0 3 0	3.0 3.0 3.0	12.31 9.0 ± 1.0 10.0 ± 1.0	89.0	GT - 101.31 WGO- 0.44 ± 0.05 WGO- 0.49 WGO- 0.54 ± 0.0432 WGH- 0.35 ± 0.05	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 CAUVIN+71 BELIAEV+83 OHKUBO+93
432.6 432.6 ± 1.2 432.6 432.6 432.6	1	4.0	0.1333 0.2 ± 0.1 0.2 ± 0.1	89.0	GT - 89.133 WGO- 0.0096± 0.0048 WGO- 0.0096 WGO- 0.0096± 0.0048	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71
443.08 443.5 ± 0.3 444.9 444.9 444.9 443.08 ± 0.34	0	3.0	30.67 42 ±21 25.0 ± 5.0	89.0	GT - 119.67 WGO- 2.0 ± 1.0 WGO- 1.18 WGO- 2.1 ± 0.525 WGH- 0.85 ± 0.09	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
447.25 447.6 ± 0.3 448.8 448.8 448.8 447.25 ± 0.34	0	3.0	28.28 32 ± 8 25.0 ± 7.5	89.0	GT - 117.28 WGO- 1.5 ± 0.3 WGO- 1.18 WGO- 1.68 ± 0.252 WGH- 0.78 ± 0.08	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
450.1 450.2 ± 0.3 451.8 451.8 451.8 450.10 ± 0.35	0	3.0	24.73 36 ± 9 18.0 ± 4.8	89.0	GT - 113.73 WGO- 1.7 ± 0.4 WGO- 0.75 WGO- 2.1 ± 0.315 WGH- 0.68 ± 0.07	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
453.55 453.8 ± 0.3 455.5 455.5 455.5 453.55 ± 0.35	0	2.0	196.8 156 ±21 160.0 ±32.0	89.0	GT - 285.8 WGO- 7.3 ± 1.0 WGO- 7.48 WGO- 7.0 ± 1.05 WGH- 3.85 ± 0.40	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
461.5 463.6 ± 1.2 463.6 463.6 463.6 461.5 ± 0.25	1	1.0	0.8593 1.9 ± 0.6 1.8 ± 0.54	89.0	GT - 89.859 WGO- 0.089± 0.027 WGO- 0.094 WGO- 0.084± 0.0252 WGH- 0.01 ± 0.01	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
469.6 470.1 ± 0.3 471.3 471.3 471.3 470.1 469.60 ± 0.19	0 0	3.0 3.0	9.2872 12.5 ± 1.3 13.7 ± 0.822	89.0	GT - 98.287 WGO- 0.58 ± 0.06 WGO- 0.63 WGO- 0.53 ± 0.0795 WGH- 0.25 ± 0.03	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 BELIAEV+83 OHKUBO+93
476.6 476.6 ± 1.2 476.6 476.6 476.6	1	4.0	0.4087 0.60 ± 0.15 0.6 ± 0.15	89.0	GT - 89.407 WGO- 0.028± 0.007 WGO- 0.028 WGO- 0.028± 0.0084	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71
481.6 481.6 ± 0.3 483.3 483.3 483.3	0	3.0	1.286 1.5 ± 0.5 1.5 ± 0.45	89.0	GT - 90.286 WGO- 0.068± 0.020 WGO- 0.058 WGO- 0.068± 0.0204	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71
496.54 497.0 ± 0.3 499.2 499.2 499.2 496.54 ± 0.20	0	2.0	8.557 6.7 ± 0.9 7.5 ± 1.125	89.0	GT - 97.557 WGO- 0.30 ± 0.04 WGO- 0.34 WGO- 0.38 ± 0.057 WGH- 0.16 ± 0.02	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
499.9 500.0 ± 0.3 502.1 502.1	0	3.0	1.533 0.80 ± 0.33 1.3 ± 0.325	89.0	GT - 90.533 WGO- 0.036± 0.015 WGO- 0.058	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68

SB-121 6

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
502.1 499.9 ± 0.20					WGO- 0.058± 0.0174 WGH- 0.04 ± 0.007	ADAMCHUK+71 OHKUBO+93
507.3 507.1 ± 0.3 510.8 510.8 510.8 507.3 ± 0.20	0	3.0	1.544 0.47 ± 0.24 0.7 ± 0.21	89.0	GT - 90.544 WGO- 0.021± 0.010 WGO- 0.031 WGO- 0.031± 0.0093 WGH- 0.04 ± 0.007	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
534.85 535.1 ± 0.4 535.9 535.9 535.9 535.1 534.85 ± 0.22	0 0 3.0	3.0	6.7398 6.1 ± 0.7 7.8 ± 0.78	89.0	GT - 95.74 WGO- 0.35 ± 0.03 WGO- 0.34 WGO- 0.38 ± 0.038 WGH- 0.17 ± 0.02	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 BELIAEV+83 OHKUBO+93
542.62 543.2 ± 0.4 544.7 544.7 544.7 543.2 542.62 ± 0.23	0 0 2.0	2.0	117.4 102 ± 9 95.0 ± 4.75	89.0	GT - 206.4 WGO- 4.4 ± 0.4 WGO- 4.08 WGO- 4.6 ± 0.368 WGH- 2.10 ± 0.21	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 BELIAEV+83 OHKUBO+93
551.2 551.2 ± 1.5 551.2 551.2 551.2	1	4.0	0.5333 0.79 ± 0.39 0.8 ± 0.4	89.0	GT - 89.533 WGO- 0.034± 0.017 WGO- 0.034 WGO- 0.034± 0.0136	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71
558.29 558.9 ± 0.4 560.4 560.4 560.4 558.9 558.29 ± 0.24	0 0 3.0	3.0	19.443 19.4 ± 6.6 19.0 ± 0.95	89.0	GT - 108.44 WGO- 0.82 ± 0.28 WGO- 0.8 WGO- 1.0 ± 0.2 WGH- 0.48 ± 0.05	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 BELIAEV+83 OHKUBO+93
563.31 563.5 ± 0.4 565.4 565.4 565.4 563.31 ± 0.50	0 	3.0	2.034 1.2 ± 0.2 1.9 ± 0.38	89.0	GT - 91.034 WGO- 0.05 ± 0.01 WGO- 0.08 WGO- 0.07 ± 0.014 WGH- 0.05 ± 0.01	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
579.8 580.0 ± 0.4 582.1 582.1 582.1 579.8 ± 0.20	0 	2.0	1.734 0.48 ± 0.14 1.2 ± 0.6	89.0	GT - 90.734 WGO- 0.020± 0.006 WGO- 0.05 WGO- 0.04 ± 0.012 WGH- 0.03 ± 0.007	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
587.0 589.1	1	2.0	0.756	89.0	GT - 89.756 WGO- 0.024± 0.0072	JENDL-3.2 ADAMCHUK+71
598.62 599.0 ± 0.4 601.3 601.3 601.3 598.62 ± 0.26	0 	3.0	5.033 4.9 ± 1.0 4.2 ± 0.63	89.0	GT - 94.033 WGO- 0.20 ± 0.04 WGO- 0.17 WGO- 0.19 ± 0.0285 WGH- 0.12 ± 0.01	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
605.22 605.6 ± 0.5 607.5 607.5 607.5 605.6 605.22 ± 0.27	0 0 3.0	3.0	57.356 57 ±10 55.0 ± 2.75	89.0	GT - 146.36 WGO- 2.3 ± 0.4 WGO- 2.24 WGO- 2.5 ± 0.15 WGH- 1.36 ± 0.15	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 BELIAEV+83 OHKUBO+93
613.04 613.5 ± 0.5 615.2 615.2 615.2 613.04 ± 0.28	0 	3.0	9.338 11.9 ± 1.2 13.0 ± 1.04	89.0	GT - 98.338 WGO- 0.48 ± 0.05 WGO- 0.52 WGO- 0.52 ± 0.026 WGH- 0.22 ± 0.02	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
630.15 630.8 ± 0.4 632.5 632.5 632.5 630.8 630.15 ± 0.29	0 0 2.0	2.0	48.197 32.7 ± 2.8 40.0 ± 2.0	89.0	GT - 137.2 WGO- 1.30 ± 0.11 WGO- 1.59 WGO- 1.4 ± 0.21 WGH- 0.80 ± 0.08	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 BELIAEV+83 OHKUBO+93
644.0 ± 0.5 647.9 647.9 647.9			0.25 ± 0.15 1.0 ± 0.4		WGO- 0.010± 0.006 WGO- 0.039 WGO- 0.03 ± 0.009	BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71

SB-121

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
660.57 661.2 ± 0.5 662.9 662.9 662.9 661.2 660.57 ± 0.31	0	3.0	24.23 30.3 ± 2.1 32.0 ± 1.92	89.0	GT = 113.23 WGO- 1.18 ± 0.08 WGO- 1.24 WGO- 1.08 ± 0.0756 WGH- 0.55 ± 0.06	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 BELIAEV+83 OHKUBO+93
661.2	0	3.0	24.0	89.0	GT = 113.0	JENDL-3.2
670.35 671.1 ± 0.5 672.8 672.8 672.8 670.35 ± 0.31	0	3.0	28.85 36 ± 5 36.0 ± 3.6	89.0	GT = 117.85 WGO- 1.4 ± 0.2 WGO- 1.39 WGO- 1.42 ± 0.142 WGH- 0.85 ± 0.07	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
675.38 675.8 ± 0.5 678.3 678.9 678.3 675.38 ± 0.32	0	2.0	19.98 16 ± 3 23.0 ± 3.45	89.0	GT = 108.98 WGO- 0.60 ± 0.11 WGO- 0.88 WGO- 0.76 ± 0.114 WGH- 0.32 ± 0.03	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
697.0 700.0	1	2.0	0.564	89.0	GT = 89.564 WGO- 0.03 ± 0.024	JENDL-3.2 ADAMCHUK+71
709.87 710.5 ± 0.6 712.1 712.1 712.1 709.87 ± 0.35	0	3.0	16.9 16.0 ± 1.5 18.0 ± 1.8	89.0	GT = 105.9 WGO- 0.60 ± 0.06 WGO- 0.67 WGO- 0.7 ± 0.07 WGH- 0.37 ± 0.04	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
714.4 715.2 ± 0.6 715.8 715.8 715.8 714.40 ± 0.50	0	3.0	3.207 1.9 ± 0.8 2.6 ± 0.84	89.0	GT = 92.207 WGO- 0.07 ± 0.03 WGO- 0.11 WGO- 0.09 ± 0.027 WGH- 0.07 ± 0.02	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
718.22 718.6 ± 0.6 720.7 720.7 720.7 718.22 ± 0.36	0	2.0	43.09 38 ± 3 34.0 ± 3.4	89.0	GT = 132.09 WGO- 1.4 ± 0.1 WGO- 1.27 WGO- 1.2 ± 0.18 WGH- 0.87 ± 0.07	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
727.8 731.9	1	2.0	0.576	89.0	GT = 89.576 WGO- 0.018± 0.0072	JENDL-3.2 ADAMCHUK+71
734.8 735.3 ± 0.6 737.6 737.6 737.6 734.80 ± 0.50	0	3.0	3.253 5.4 ± 1.1 4.4 ± 0.66	89.0	GT = 92.253 WGO- 0.20 ± 0.04 WGO- 0.16 WGO- 0.16 ± 0.024 WGH- 0.07 ± 0.02	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
754.0 754.0	1	3.0	0.2057	89.0	GT = 89.206 WGO- 0.01 ± 0.005	JENDL-3.2 ADAMCHUK+71
762.6 763.0	1	2.0	0.588	89.0	GT = 89.588 WGO- 0.02 ± 0.01	JENDL-3.2 ADAMCHUK+71
771.8 772.3 ± 0.6 774.7 774.7 774.7 771.60 ± 0.39	0	3.0	52.38 81 ± 8 76.0 ± 5.32	89.0	GT = 141.38 WGO- 2.9 ± 0.3 WGO- 2.73 WGO- 2.8 ± 0.28 WGH- 1.10 ± 0.10	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
789.2 789.7 ± 0.8 792.0 792.0 792.0 789.20 ± 0.41	0	3.0	18.3 23 ± 4 24.0 ± 4.8	89.0	GT = 107.3 WGO- 0.81 ± 0.15 WGO- 0.85 WGO- 0.86 ± 0.172 WGH- 0.38 ± 0.04	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
794.41 795.2 ± 0.6 797.7 797.7 797.7 794.41 ± 0.41	0	2.0	54.12 42 ± 8 30.0 ± 9.0	89.0	GT = 143.12 WGO- 1.5 ± 0.3 WGO- 1.06 WGO- 1.9 ± 0.38 WGH- 0.80 ± 0.08	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
799.41 800.2 ± 0.7 803.5 803.5 803.5 799.41 ± 0.41	0	3.0	58.16 93 ± 4 100.0 ±30.0	89.0	GT = 147.16 WGO- 3.3 ± 0.5 WGO- 3.53 WGO- 3.3 ± 0.66 WGH- 1.20 ± 0.12	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93

SB-121 8

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
802.9	0	2.0	81.61	89.0	GT = 170.61	JENDL-3.2
803.5 ± 0.7			' 88 ±14		WGO- 3.1 ± 0.5	BNL-325
805.0			' 120.0 ±36.0			MURADJANA+68
805.0					WGO- 4.23	MURADJANB+68
805.0					WGO- 2.5 ± 0.75	ADAMCHUK+71
802.90 ± 0.41					WGH- 1.20 ± 0.12	OHKUBO+93
837.75	0	2.0	34.04	89.0	GT = 123.04	JENDL-3.2
839.2 ± 0.7			' 24 ± 2		WGO- 0.83 ± 0.08	BNL-325
841.0			' 27.0 ± 2.7			MURADJANA+68
841.0					WGO- 0.93	MURADJANB+68
841.0	0				WGO- 0.83 ± 0.083	ADAMCHUK+71
837.75 ± 0.45					WGH- 0.49 ± 0.05	OHKUBO+93
858.47	0	3.0	11.55	89.0	GT = 100.55	JENDL-3.2
859.2 ± 0.7			' 11.7 ± 1.5		WGO- 0.40 ± 0.05	BNL-325
861.5			' 14.0 ± 1.4			MURADJANA+68
861.5					WGO- 0.48	MURADJANB+68
861.5					WGO- 0.52 ±7.799-2	ADAMCHUK+71
858.47 ± 0.48					WGH- 0.23 ± 0.02	OHKUBO+93
865.2	1	3.0	0.48	89.0	GT = 89.48	JENDL-3.2
867.0					WGO- 0.02 ± 0.008	ADAMCHUK+71
889.1	0	2.0	16.46	89.0	GT = 105.46	JENDL-3.2
889.8 ± 0.7			' 8.9 ± 0.9		WGO- 0.23 ± 0.03	BNL-325
892.1			' 7.0 ± 1.4			MURADJANA+68
892.1					WGO- 0.23	MURADJANB+68
892.1					WGO- 0.25 ± 0.05	ADAMCHUK+71
889.10 ± 0.48					WGH- 0.23 ± 0.02	OHKUBO+93
910.75	0	3.0	16.56	89.0	GT = 105.56	JENDL-3.2
911.5 ± 0.7			' 11.5 ± 3.0		WGO- 0.38 ± 0.10	BNL-325
913.7			' 8.4 ± 2.52			MURADJANA+68
913.7					WGO- 0.28	MURADJANB+68
913.7					WGO- 0.5 ± 0.15	ADAMCHUK+71
910.75 ± 0.50					WGH- 0.32 ± 0.03	OHKUBO+93
916.17	0	3.0	109.0	89.0	GT = 198.0	JENDL-3.2
917.0 ± 0.8			' 115 ±21		WGO- 3.8 ± 0.7	BNL-325
919.0			' 160.0 ±40.0			MURADJANA+68
919.0					WGO- 5.28	MURADJANB+68
919.0	0				WGO- 4.2 ± 0.84	ADAMCHUK+71
916.17 ± 0.51					WGH- 2.10 ± 0.21	OHKUBO+93
935.07	0	2.0	5.871	89.0	GT = 94.871	JENDL-3.2
936.2 ± 0.8			' 4.3 ± 1.2		WGO- 0.14 ± 0.04	BNL-325
938.8			' 4.8 ± 0.96			MURADJANA+68
938.8					WGO- 0.16	MURADJANB+68
938.8					WGO- 0.13 ± 0.0325	ADAMCHUK+71
935.07 ± 0.52					WGH- 0.08 ± 0.01	OHKUBO+93
946.6	0	3.0	42.19	89.0	GT = 131.19	JENDL-3.2
947.5 ± 0.8			' 46 ± 8		WGO- 1.5 ± 0.2	BNL-325
949.8			' 47.0 ± 4.7			MURADJANA+68
949.8					WGO- 1.53	MURADJANB+68
949.8	0				WGO- 1.4 ± 0.14	ADAMCHUK+71
946.60 ± 0.53					WGH- 0.80 ± 0.08	OHKUBO+93
961.39	0	3.0	34.55	89.0	GT = 123.55	JENDL-3.2
962.4 ± 0.8			' 40 ± 8		WGO- 1.3 ± 0.2	BNL-325
964.9			' 38.0 ± 3.8			MURADJANA+68
964.9					WGO- 1.22	MURADJANB+68
964.9	0				WGO- 1.35 ± 0.135	ADAMCHUK+71
961.39 ± 0.54					WGH- 0.65 ± 0.07	OHKUBO+93
992.77	0	2.0	151.2	89.0	GT = 240.2	JENDL-3.2
993.5 ± 0.8			' 120 ±10		WGO- 0.8 ± 0.3	BNL-325
996.2			' 130.0 ±10.4			MURADJANA+68
996.2					WGO- 4.12	MURADJANB+68
996.2					WGO- 4.2 ± 0.42	ADAMCHUK+71
992.77 ± 0.57					WGH- 2.00 ± 0.20	OHKUBO+93
1011.7	0	3.0	20.72	89.0	GT = 109.72	JENDL-3.2
1012.7 ± 0.9			' 27 ± 3		WGO- 0.84 ± 0.09	BNL-325
1016.0			' 32.0 ± 3.2			MURADJANA+68
1016.0					WGO- 1.0	MURADJANB+68
1016.0					WGO- 1.0 ± 0.15	ADAMCHUK+71
1011.74± 0.58					WGH- 0.38 ± 0.04	OHKUBO+93
1035.3	0	2.0	6.178	89.0	GT = 95.178	JENDL-3.2
1036.4 ± 0.9			' 6.5 ± 1.6		WGO- 0.20 ± 0.05	BNL-325
1040.0			' 6.4 ± 1.6			MURADJANA+68
1040.0					WGO- 0.2	MURADJANB+68
1040.0					WGO- 0.2 ± 0.05	ADAMCHUK+71
1035.3 ± 0.61					WGH- 0.08 ± 0.01	OHKUBO+93
1045.9	0	2.0	7.762	89.0	GT = 96.762	JENDL-3.2
1048 ± 4			' 9.7 ± 1.9		WGO- 0.30 ± 0.06	BNL-325
1048.0			' 10.0 ± 2.0			MURADJANA+68
1048.0					WGO- 0.31	MURADJANB+68

SB-121

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1048.0 1045.9 ± 0.62					WGO- 0.3 ± 0.06 WGH- 0.10 ± 0.01	ADAMCHUK+71 OHKUBO+93
1083.8 1084.5 ± 1.0 1088.0 1088.0 1088.0 1083.8 ± 0.65	0 	3.0	25.96 31 ± 3 32.0 ± 3.2	89.0	GT = 114.96 WGO- 0.93 ± 0.09 WGO- 0.97 WGO- 0.88 ± 0.088 WGH- 0.46 ± 0.05	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1109.9 1110.9 ± 1.0 1113.0 1113.0 1113.0 1109.9 ± 0.67	0 0	2.0	142.3 127 ±18 120.0 ±18.0	89.0	GT = 231.3 WGO- 3.8 ± 0.5 WGO- 3.8 WGO- 3.8 ± 0.36 WGH- 1.78 ± 0.18	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1123.5 1123.5 ± 1.0 1125.0 1125.0 1125.0	0 	3.0	3.686 6.0 ± 1.3 8.0 ± 2.4	89.0	GT = 92.686 WGO- 0.18 ± 0.04 WGO- 0.24 WGO- 0.2 ± 0.06	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71
1144.3 1145.0 ± 1.1 1147.0 1147.0 1147.0 1144.3 ± 0.71	0 	2.0	18.24 13.1 ± 3.4 18.0 ± 3.6	89.0	GT = 105.24 WGO- 0.39 ± 0.10 WGO- 0.53 WGO- 0.45 ± 0.1125 WGH- 0.20 ± 0.02	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1179.8 1180.5 ± 1.1 1180.0 1179.8 ± 1.00	0 	3.0	41.21 96 ±38	89.0	GT = 130.21 WGO- 2.8 ± 1.1 WGO- 2.8 ± 1.12 WGH- 0.70 ± 0.15	JENDL-3.2 BNL-325 ADAMCHUK+71 OHKUBO+93
1185.0 1185.0			278.0 ±22.24		WGO- 8.08	MURADJANA+68 MURADJANB+68
1182.7 1183.7 ± 1.1 1183.0 1182.7 ± 1.00	0 	3.0	47.18 110 ±38	89.0	GT = 136.18 WGO- 3.2 ± 1.1 WGO- 2.8 ± 1.12 WGH- 0.80 ± 0.15	JENDL-3.2 BNL-325 ADAMCHUK+71 OHKUBO+93
1200.8 1201.7 ± 1.2 1205.0 1205.0 1205.0 1200.8 ± 0.78	0 0	2.0	75.68 64 ± 7 72.0 ± 7.2	89.0	GT = 164.68 WGO- 1.85 ± 0.20 WGO- 2.08 WGO- 1.9 ± 0.285 WGH- 0.91 ± 0.10	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1219.3 1220.0 ± 1.2 1222.0 1222.0 1222.0 1219.3 ± 0.78	0 	3.0	25.74 31 ± 5 39.0 ± 3.9	89.0	GT = 114.74 WGO- 0.9 ± 0.1 WGO- 1.12 WGO- 0.95 ± 0.19 WGH- 0.43 ± 0.05	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1249.5 1250.0 ± 1.2 1255.0 1255.0 1255.0 1249.5 ± 0.80	0 	2.0	81.44 61 ± 6 66.0 ± 6.6	89.0	GT = 170.44 WGO- 1.73 ± 0.17 WGO- 1.86 WGO- 2.8 ± 0.84 WGH- 0.96 ± 0.10	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1260.5 1260.5 ± 1.2 1262.0 1262.0 1262.0	0 	2.0	13.2 12 ± 3 15.0 ± 6.0	89.0	GT = 102.2 WGO- 0.32 ± 0.07 WGO- 0.42 WGO- 0.35 ± 0.07	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71
1308.5 1307.5 ± 1.3 1311.0 1311.0 1311.0 1308.5 ± 0.85	0 0	2.0	126.7 104 ±10 110.0 ±11.0	89.0	GT = 215.7 WGO- 2.88 ± 0.29 WGO- 3.04 WGO- 2.98 ± 0.298 WGH- 1.46 ± 0.15	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1327.8 1329.2 ± 1.3 1332.0 1332.0 1327.8 ± 0.88	0 	2.0	27.99 33 ± 4 33.0 ± 4.95	89.0	GT = 116.99 WGO- 0.90 ± 0.10 WGO- 0.9 WGH- 0.32 ± 0.04	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1345.5 1347.2 ± 1.3 1351.0 1351.0 1345.5 ± 0.88	0 	3.0	16.98 21 ± 3 20.0 ± 6.0	89.0	GT = 105.98 WGO- 0.58 ± 0.08 WGO- 0.54 WGH- 0.27 ± 0.03	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1363.9 1364.9 ± 1.7	0 	2.0	156.0 119 ± 6	89.0	GT = 245.0 WGO- 3.22 ± 0.17	JENDL-3.2 BNL-325

S8-121 10

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1367.0 1367.0 1383.9 ± 0.89			*135.0 ±13.5		 WGO- 3.65 WGH- 1.76 ± 0.18	MURADJANA+68 MURADJANB+68 OHKUBO+93
1435.8 1436.6 ± 0.8 1441.0 1441.0 1435.8 ± 0.98	0	3.0	71.45 * 64 ±15 * 93.0 ± 9.3	89.0	GT = 160.45 WGO- 1.7 ± 0.4 WGO- 2.45 WGH- 1.10 ± 0.11	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1451.6 1451.6 ± 0.8 1455.0 1455.0	0	3.0	10.29 * 12 ± 3 * 12.0 ± 3.0	89.0	GT = 99.29 WGO- 0.31 ± 0.07 WGO- 0.32	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68
1483.3 1483.5 ± 0.8 1487.0 1487.0 1483.3 ± 1.05	0	2.0	120.2 * 77 ± 8 * 82.0 ± 8.2	89.0	GT = 209.2 WGO- 2.0 ± 0.2 WGO- 2.12 WGH- 1.30 ± 0.13	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1520.5 1521.4 ± 0.9 1524.0 1524.0 1520.5 ± 1.5	0	3.0	13.37 * 11 ± 3 * 16.0 ± 4.8	89.0	GT = 102.37 WGO- 0.28 ± 0.07 WGO- 0.41 WGH- 0.20 ± 0.07	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1528.6 1529.6 ± 0.9 1533.0 1533.0 1528.6 ± 1.5	0	3.0	13.4 * 9 ± 3 * 12.0 ± 3.6	89.0	GT = 102.4 WGO- 0.24 ± 0.07 WGO- 0.31 WGH- 0.2 ± 0.07	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1552.9 1555.0 ± 0.9 1559.0 1559.0 1552.9 ± 1.1	0	2.0	32.16 * 15 ± 3 * 15.0 ± 4.5	89.0	GT = 121.16 WGO- 0.37 ± 0.07 WGO- 0.38 WGH- 0.34 ± 0.04	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1572.0 1574.8 ± 0.9 1579.0 1579.0 1572.0 ± 1.1	0	2.0	18.08 * 11 ± 3 * 19.0 ± 5.7	89.0	GT = 107.08 WGO- 0.28 ± 0.07 WGO- 0.48 WGH- 0.19 ± 0.02	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1593.4 1595.0 ± 0.9 1599.0 1599.0 1593.4 ± 1.2	0	3.0	108.1 *100 ±18 *120.0 ±18.0	89.0	GT = 197.1 WGO- 2.5 ± 0.4 WGO- 3.0 WGH- 1.58 ± 0.16	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1638.4 1640.0 ± 1.0 1645.0 1645.0 1638.4 ± 1.2	0	2.0	41.77 * 28 ± 6 * 35.0 ± 7.0	89.0	GT = 130.77 WGO- 0.70 ± 0.14 WGO- 0.86 WGH- 0.43 ± 0.05	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1697.3 1698.8 ± 1.0 1701.0 1701.0 1697.3 ± 1.3	0	2.0	101.8 * 71 ±11 * 73.0 ±10.95	89.0	GT = 190.8 WGO- 1.7 ± 0.3 WGO- 1.77 WGH- 1.03 ± 0.10	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1721.5 1721.5 ± 1.3	0	3.0	19.2	89.0	GT = 108.2 WGH- 0.27 ± 0.03	JENDL-3.2 OHKUBO+93
1729 ± 2 1729.0 1729.0			* 57 ±17 * 64.0 ±19.2		WGO- 1.4 ± 0.4 WGO- 1.54	BNL-325 MURADJANA+68 MURADJANB+68
1741.0 1741.0 ± 1.0 1743.0 1743.0	0	2.0	10.92 * 10 ± 3 * 24.0 ± 8.4	89.0	GT = 99.92 WGO- 0.24 ± 0.07 WGO- 0.57	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68
1773.8 1776.0 ± 1.1 1770.0 1770.0 1773.8 ± 1.4	0	2.0	89.96 * 90 ±23 * 97.0 ±24.25	89.0	GT = 178.96 WGO- 2.1 ± 0.5 WGO- 2.3 WGH- 0.89 ± 0.09	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1788.2 1788.2 ± 1.4	0	2.0	24.36	89.0	GT = 113.36 WGH- 0.24 ± 0.02	JENDL-3.2 OHKUBO+93
1796.6 1798.7 ± 1.1 1804.0 1804.0 1796.6 ± 1.4	0	3.0	69.76 *170 ±50 *173.0 ±51.9	89.0	GT = 158.76 WGO- 4.0 ± 1.2 WGO- 4.07 WGH- 0.96 ± 0.10	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1818.5	0	2.0	57.31	89.0	GT = 146.31	JENDL-3.2

SB-121 11

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1818.5					WGH= 0.56 ± 0.10	OHKUBO+93
1822.5 1824.0 ± 1.2 1829.0 1829.0 1822.5	0	3.0	54.18 180 ±45 185.0 ±46.25	89.0	GT = 143.16 WGO= 4.2 ± 1.1 WGO= 4.33 WGH= 0.74 ± 0.10	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1843.3 1844.0 ± 1.2 1849.0 1849.0 1843.3	0	2.0	11.33 35 ± 9 39.0 ± 9.75	89.0	GT = 100.33 WGO= 0.81 ± 0.20 WGO= 0.91 WGH= 0.11 ± 0.02	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1891.1 1891.1	0	3.0	46.22	89.0	GT = 135.22 WGH= 0.82 ± 0.08	JENDL-3.2 OHKUBO+93
1901.6 1903.0 ± 1.3 1906.0 1906.0 1901.6	0	2.0	261.6 130 ±30 345.0 ±103.5	89.0	GT = 350.6 WGO= 3.0 ± 0.7 WGO= 7.9 WGH= 2.50 ± 0.30	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1915.5 1917.0 ± 1.3 1922.0 1922.0 1915.5 ± 1.5	0	3.0	53.02 70 ±18 108.0 ±32.4	89.0	GT = 152.02 WGO= 1.6 ± 0.4 WGO= 2.46 WGH= 0.84 ± 0.12	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1976.4 1978.0 ± 1.3 1982.0 1982.0 1976.4	0	3.0	121.9 134 ±18 137.0 ±34.25	89.0	GT = 210.9 WGO= 3.0 ± 0.4 WGO= 3.08 WGH= 1.60 ± 0.20	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1998.5 2000.0 ± 1.4 2005.0 2005.0 1998.5	0	2.0	208.1 214 ±54 220.0 ±55.0	89.0	GT = 297.1 WGO= 4.8 ± 1.2 WGO= 4.91 WGH= 1.94 ± 0.30	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2032.0 2035.0 ± 1.4 2039.0 2039.0 2032.0	0	3.0	44.05 65 ±16 65.0 ±16.25	89.0	GT = 133.05 WGO= 1.4 ± 0.4 WGO= 1.44 WGH= 0.57 ± 0.09	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2081.4 2081.4	0	3.0	23.46	89.0	GT = 112.46 WGH= 0.30 ± 0.05	JENDL-3.2 OHKUBO+93
2105.6 2107.0 ± 1.5 2112.0 2112.0 2105.6	0	2.0	82.6 92 ±18 67.0 ±23.45	89.0	GT = 171.6 WGO= 2.0 ± 0.4 WGO= 1.46 WGH= 0.75 ± 0.15	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2114.7 2114.7	0	3.0	47.3	89.0	GT = 136.3 WGH= 0.60 ± 0.09	JENDL-3.2 OHKUBO+93
2124 ± 3 2124.0 2124.0			59 ±21 68.0 ±23.8		WGO= 1.3 ± 0.5 WGO= 1.48	BNL-325 MURADJANA+68 MURADJANB+68
2145.2 2145.2	0	2.0	116.7	89.0	GT = 205.7 WGH= 1.05 ± 0.15	JENDL-3.2 OHKUBO+93
2153.0 ± 1.5 2156.0 2156.0			110 ±33 146.0 ±51.1		WGO= 2.4 ± 0.7 WGO= 3.15	BNL-325 MURADJANA+68 MURADJANB+68
2186.0 2186	0	3.0	12.02	89.0	GT = 101.02 WGH= 0.15 ± 0.05	JENDL-3.2 OHKUBO+93
2200.7 2200.7	0	3.0	25.73	89.0	GT = 114.73 WGH= 0.32 ± 0.05	JENDL-3.2 OHKUBO+93
2219.8 2219.8	0	3.0	40.38	89.0	GT = 129.38 WGH= 0.50 ± 0.08	JENDL-3.2 OHKUBO+93
2253.2 2253.2	0	3.0	76.49	89.0	GT = 165.49 WGH= 0.94 ± 0.15	JENDL-3.2 OHKUBO+93
2266.1 2268.0 ± 1.5 2268.0 2268.0 2266.1	0	2.0	41.13 48 ±24 140.0 ±56.0	89.0	GT = 130.13 WGO= 1.0 ± 0.5 WGO= 2.94 WGH= 0.36 ± 0.06	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2275 ± 3 2275.0 2275.0			105 ±42 110.0 ±44.0		WGO= 2.2 ± 0.9 WGO= 2.31	BNL-325 MURADJANA+68 MURADJANB+68

SB-121

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
2303.0 2310 ± 3 2310.0 2310.0 2303.0	0	3.0	92.14 *120 ±30 *170.0 ±42.5	89.0	GT = 181.14 WGO= 2.5 ± 0.6 WGO= 3.53 WGH= 1.12 ± 0.16	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2364.0 2368.0 ± 1.6 2367.0 2367.0 2364.0	0	3.0	115.0 *107 ±20 *150.0 ±45.0	89.0	GT = 204.0 WGO= 2.2 ± 0.4 WGO= 3.08 WGH= 1.38 ± 0.20	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2390.0 2394.0 ± 1.6 2397.0 2397.0 2390	0	2.0	174.8 * 78 ±10 *290.0 ±72.5	89.0	GT = 263.8 WGO= 1.6 ± 0.2 WGO= 5.92 WGH= 1.49 ± 0.22	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2433.2 2438.0 ± 1.7 2442.0 2442.0 2433.2	0	2.0	99.44 * 69 ±10 *115.0 ±34.5	89.0	GT = 188.44 WGO= 1.4 ± 0.2 WGO= 2.33 WGH= 0.84 ± 0.12	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2460.0 2460.0	0	2.0	42.65	89.0	GT = 131.85 WGH= 0.38 ± 0.05	JENDL-3.2 OHKUBO+93
2524.7 2526.0 ± 1.8 2533.0 2533.0 2524.7	0	2.0	501.7 *347 ±85 *420.0 ±168.0	89.0	GT = 590.7 WGO= 6.9 ± 1.7 WGO= 8.35 WGH= 4.16 ± 0.60	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2557.0 2557.0	0	2.0	99.52	89.0	GT = 188.52 WGH= 0.82 ± 0.10	JENDL-3.2 OHKUBO+93
2572.0 2572	0	2.0	24.34	89.0	GT = 113.34 WGH= 0.20 ± 0.05	JENDL-3.2 OHKUBO+93
2581.0 2581	0	2.0	36.58	89.0	GT = 125.58 WGH= 0.30 ± 0.08	JENDL-3.2 OHKUBO+93
2600.0 2600	0	2.0	55.07	89.0	GT = 144.07 WGH= 0.45 ± 0.10	JENDL-3.2 OHKUBO+93
2620.0 2620	0	2.0	41.77	89.0	GT = 130.77 WGH= 0.34 ± 0.10	JENDL-3.2 OHKUBO+93
2684.0 2684 ± 2.5	0	2.0	120.8	89.0	GT = 209.8 WGH= 0.97 ± 0.20	JENDL-3.2 OHKUBO+93
2714.0 2714	0	3.0	26.79	89.0	GT = 115.79 WGH= 0.30 ± 0.10	JENDL-3.2 OHKUBO+93
2765.0 2765	0	3.0	88.51	89.0	GT = 157.51 WGH= 0.76 ± 0.20	JENDL-3.2 OHKUBO+93
2802.0 2802	0	2.0	20.33	89.0	GT = 109.33 WGH= 0.16 ± 0.10	JENDL-3.2 OHKUBO+93
2828.0 2828	0	3.0	34.64	89.0	GT = 123.64 WGH= 0.38 ± 0.10	JENDL-3.2 OHKUBO+93
2848.0 2848	0	3.0	100.6	89.0	GT = 189.6 WGH= 1.10 ± 0.20	JENDL-3.2 OHKUBO+93
2872.0 2872	0	3.0	55.12	89.0	GT = 144.12 WGH= 0.60 ± 0.15	JENDL-3.2 OHKUBO+93
2881.0 2881	0	3.0	46.01	89.0	GT = 135.01 WGH= 0.50 ± 0.15	JENDL-3.2 OHKUBO+93
2913.0 2913	0	2.0	310.9	89.0	GT = 399.9 WGH= 2.40 ± 0.20	JENDL-3.2 OHKUBO+93
2972.0 2972	0	3.0	44.86	89.0	GT = 133.86 WGH= 0.48 ± 0.15	JENDL-3.2 OHKUBO+93
2994.0 2994	0	3.0	236.4	89.0	GT = 325.4 WGH= 2.52 ± 0.30	JENDL-3.2 OHKUBO+93
3023.0 3023	0	3.0	28.28	89.0	GT = 117.28 WGH= 0.30 ± 0.10	JENDL-3.2 OHKUBO+93
3123.0 3123	0	3.0	19.16	89.0	GT = 108.16 WGH= 0.20 ± 0.10	JENDL-3.2 OHKUBO+93
3172.0 3172	0	3.0	31.86	89.0	GT = 120.86 WGH= 0.33 ± 0.10	JENDL-3.2 OHKUBO+93
3222.0	0	3.0	19.46	89.0	GT = 108.46	JENDL-3.2

SB-121

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
3222					WGH= 0.20 ± 0.10	OHKUBO+93
3242.0 3242	0	3.0	35.14	89.0	GT = 124.14 WGH= 0.36 ± 0.10	JENDL-3.2 OHKUBO+93
3262.0 3262	0	3.0	132.2	89.0	GT = 221.2 WGH= 1.35 ± 0.30	JENDL-3.2 OHKUBO+93
3345					WGH= 1.49 ± 0.30	OHKUBO+93
3345.0	0	2.0	206.8	89.0	GT = 295.8	JENDL-3.2
3365.0 3365	0	2.0	52.9	89.0	GT = 141.9 WGH= 0.38 ± 0.10	JENDL-3.2 OHKUBO+93
3386.0 3386	0	3.0	37.91	89.0	GT = 128.91 WGH= 0.38 ± 0.10	JENDL-3.2 OHKUBO+93
3468.0 3468	0	2.0	121.5	89.0	GT = 210.5 WGH= 0.86 ± 0.20	JENDL-3.2 OHKUBO+93
3514.0 3514	0	3.0	128.0	89.0	GT = 217.0 WGH= 1.26 ± 0.30	JENDL-3.2 OHKUBO+93
3552.0 3552	0	3.0	204.3	89.0	GT = 293.3 WGH= 2.00 ± 0.50	JENDL-3.2 OHKUBO+93
3562.0 3562	0	2.0	143.2	89.0	GT = 232.2 WGH= 1.00 ± 0.30	JENDL-3.2 OHKUBO+93
3653.0 3653	0	3.0	103.6	89.0	GT = 192.6 WGH= 1.00 ± 0.20	JENDL-3.2 OHKUBO+93
3706.0 3706	0	3.0	146.1	89.0	GT = 235.1 WGH= 1.40 ± 0.30	JENDL-3.2 OHKUBO+93
3785.0 3785	0	3.0	42.19	89.0	GT = 131.19 WGH= 0.40 ± 0.15	JENDL-3.2 OHKUBO+93
3837.0 3837	0	3.0	185.8	89.0	GT = 274.8 WGH= 1.75 ± 0.30	JENDL-3.2 OHKUBO+93
3859.0 3859	0	2.0	101.4	89.0	GT = 190.4 WGH= 0.68 ± 0.15	JENDL-3.2 OHKUBO+93
3911.0 3911	0	3.0	48.24	89.0	GT = 137.24 WGH= 0.45 ± 0.10	JENDL-3.2 OHKUBO+93
3933.0 3933	0	2.0	100.8	89.0	GT = 189.8 WGH= 0.67 ± 0.15	JENDL-3.2 OHKUBO+93
3968.0 3968	0	2.0	151.2	89.0	GT = 240.2 WGH= 1.00 ± 0.50	JENDL-3.2 OHKUBO+93
3977.0 3977	0	3.0	216.2	89.0	GT = 305.2 WGH= 2.00 ± 0.50	JENDL-3.2 OHKUBO+93
4007.0 4007	0	3.0	72.71	89.0	GT = 161.71 WGH= 0.67 ± 0.20	JENDL-3.2 OHKUBO+93
4115.0 4115	0	3.0	272.7	89.0	GT = 361.7 WGH= 2.48 ± 0.40	JENDL-3.2 OHKUBO+93
4144.0 4144	0	2.0	132.9	89.0	GT = 221.9 WGH= 0.86 ± 0.15	JENDL-3.2 OHKUBO+93
4208.0 4208	0	3.0	73.39	89.0	GT = 162.39 WGH= 0.66 ± 0.20	JENDL-3.2 OHKUBO+93
4233.0 4233	0	2.0	121.8	89.0	GT = 210.8 WGH= 0.78 ± 0.20	JENDL-3.2 OHKUBO+93
4279.0 4279	0	3.0	349.9	89.0	GT = 438.9 WGH= 3.12 ± 0.60	JENDL-3.2 OHKUBO+93
4357.0 4357	0	3.0	127.9	89.0	GT = 216.9 WGH= 1.13 ± 0.20	JENDL-3.2 OHKUBO+93
4458.0 4458	0	2.0	128.2	89.0	GT = 217.2 WGH= 0.80 ± 0.15	JENDL-3.2 OHKUBO+93
4497.0 4497	0	2.0	112.7	89.0	GT = 201.7 WGH= 0.70 ± 0.15	JENDL-3.2 OHKUBO+93
4508.0 4508	0	2.0	402.8	89.0	GT = 491.8 WGH= 2.50 ± 0.50	JENDL-3.2 OHKUBO+93
4563.0 4563	0	2.0	113.5	89.0	GT = 202.5 WGH= 0.70 ± 0.20	JENDL-3.2 OHKUBO+93
4745.0	0	3.0	118.1	89.0	GT = 207.1	JENDL-3.2

SB-121 14

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
4745					WGH= 1.00 ± 0.50	OHKUBO+93
4760.0 4760	0	3.0	295.7	89.0	GT = 384.7 WGH= 2.50 ± 0.70	JENDL-3.2 OHKUBO+93
4862.0 4862	0	3.0	102.8	89.0	GT = 191.8 WGH= 0.86 ± 0.20	JENDL-3.2 OHKUBO+93
5079.0 5079	0	3.0	507.0	89.0	GT = 596.0 WGH= 4.15 ± 0.80	JENDL-3.2 OHKUBO+93
5227.0 5227	0	3.0	157.4	89.0	GT = 246.4 WGH= 1.27 ± 0.30	JENDL-3.2 OHKUBO+93
5277.0 5277	0	3.0	290.2	89.0	GT = 379.2 WGH= 2.33 ± 0.40	JENDL-3.2 OHKUBO+93
5350.0 5350	0	3.0	329.8	89.0	GT = 418.8 WGH= 2.63 ± 0.50	JENDL-3.2 OHKUBO+93

51-Sb-123

Abundance	:42.79 %
Spin-Parity	:$7/2^+$
Potential Scattering Radius	:6.0 fm
Cross Sections of 2200 m/s for Total	:8.086 b
Elastic	:3.899 b
Capture	:4.187 b
Maxwellian Average Capture Cross Section	:3.712 b
Resonance Integral of Capture	:122.4 b

Resolved resonance region (MLBW formula) : below 2.5 keV. Resonance parameters of JENDL-2[1] were revised except for radiation widths. Evaluation for JENDL-2 was made on the basis of the data measured by Stolvy and Harvey[2], Bolotin and Chrien[3], Wynchank et al.[4], Muradjan et al.[5], Adamchuk et al.[6], Ohkubo et al.[7] and Ohkubo[8]. Angular momentum ℓ and spin J were based on the data by Bhat et al.[9] and Cauvin et al.[10]. The average radiation width of 0.098 eV was deduced and applied to the levels whose radiation width was unknown. Negative resonance was added so as to reproduce the thermal capture cross section given by Mughabghab et al.[11]

After the evaluation for JENDL-2, new experimental data of neutron widths were published by Ohkubo et al.[12] Evaluation of JENDL-3.1[13] was made on the basis of the new experimental data for the neutron widths and previous ones for the radiation width. Total spin J of some resonances was tentatively estimated with a random number method. Neutron orbital angular momentum ℓ was estimated with a method of Bollinger and Thomas[14]. Scattering radius of 6.0 fm was assumed from the systematics of measured values for neighboring nuclide. Parameters of a negative resonance were also modified so as to reproduce the thermal capture cross section[11].

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SB-123

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
-17.0	0	4.0	8.5	101.0	GT = 109.5	JENDL-3.2
21.37 21.4 ± 0.1 21.4 21.0 21.0 21.4 21.4 21.4 21.37 ± 0.024	0 0	4.0 4 4.0 4.0	26.71 30 ± 3 30.0 ± 3.0 30.0 ± 6.0	79.0 100 ±10	GT = 105.71 WGO= 6.5 ± 0.7 GT = 120.0 ±20.0 WGO= 6.48 WGO= 5.35 ± 0.508 WGH= 3.2500± 0.0	JENDL-3.2 BNL-325 ASAMI+68 MURADJANA+68 MURADJANB+68 BAHT+70 ADAMCHUK+71 CAUVIN+71 OHKUBO+93
50.5 50.5 ± 0.1 50.5 50.5 50.5 50.5 50.5 50.6 50.500± 0.041	0 0	3.0 3 3.0 3.0	3.411 3.0 ± 0.3 2.8 ± 0.2 5.3 ± 0.795	87.0 87 ±20	GT = 90.411 WGO= 0.42 ± 0.04 GT = 90.0 ±10.0 WGO= 0.75 WGO= 0.39 ± 0.0234 WGH= 0.2100± 0.0	JENDL-3.2 BNL-325 ASAMI+68 MURADJANA+68 MURADJANB+68 BAHT+70 ADAMCHUK+71 CAUVIN+71 OHKUBO+93
87.0					WGO= 0.003± 0.003	ADAMCHUK+71
76.7 76.7 ± 0.1 76.7 76.7 76.7 76.7 76.7 76.7 76.700± 0.055	0 0	3.0 4 3.0 4.0	6.506 5.7 ± 0.4 5.3 ± 0.4 7.6 ± 0.76	106.0 107 ±15	GT = 112.51 WGO= 0.85 ± 0.05 GT = 70.0 ±10.0 WGO= 0.87 WGO= 0.68 ± 0.068 WGH= 0.3250± 0.0	JENDL-3.2 BNL-325 ASAMI+68 MURADJANA+68 MURADJANB+68 BAHT+70 ADAMCHUK+71 CAUVIN+71 OHKUBO+93
104.88 105.0 ± 0.1 104.9 104.9 104.9 105.0 104.9 105.0 104.880± 0.070	0 0	4.0 3 3.0 3.0	40.05 53 ± 5 48.0 ± 5.0 43.0 ± 6.45	75.0 78 ±15	GT = 115.05 WGO= 5.16 ± 0.52 GT = 130.0 ±20.0 WGO= 4.2 WGO= 4.15 ± 0.2075 WGH= 2.2000± 0.0	JENDL-3.2 BNL-325 ASAMI+68 MURADJANA+68 MURADJANB+68 BAHT+70 ADAMCHUK+71 CAUVIN+71 OHKUBO+93
130.85 131.0 131.0 131.0 130.850± 0.083	0	3.0	1.203 1.1 ± 0.22	98.0	GT = 99.203 WGO= 0.098 WGO= 0.104± 0.0104 WGH= 0.0460± 0.0	JENDL-3.2 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
176.4 ± 0.1 167.0 167.0 176.3			0.28 ± 0.05 0.15 ± 0.075		WGO= 0.021± 0.004 WGO= 0.012 WGO= 0.021± 0.0042	BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71
176.2 176.3 176.3 176.200± 0.107	0	4.0	0.3304 0.28 ± 0.056	98.0	GT = 98.33 WGO= 0.021 WGH= 0.0140± 0.0	JENDL-3.2 MURADJANA+68 MURADJANB+68 OHKUBO+93
185.9 186.1 ± 0.1 186.2 186.5 186.5 186.5 185.900± 0.113	1	2.0	0.5672 0.32 ± 0.06 0.32 ±8.399-2	98.0	GT = 98.567 WGO= 0.023± 0.004 WAG= 0.1 ± 0.01 WGO= 0.023 WGO= 0.023± 0.0046 WGH= 0.0130± 0.0	JENDL-3.2 BNL-325 ASAMI+68 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
191.8 191.8 ± 0.1 191.9 191.8 191.8 191.8 192.0 191.600± 0.118	0 0	3.0 3 3.0	21.51 23 ± 3 24.0 ± 3.0 19.0 ± 3.8	98.0 90 ±10	GT = 119.51 WGO= 1.66 ± 0.22 GT = 110.0 ±10.0 WGO= 1.37 WGO= 1.42 ± 0.142 WGH= 0.6800± 0.0	JENDL-3.2 BNL-325 ASAMI+68 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 CAUVIN+71 OHKUBO+93
197.5 197.8 ± 0.1 198.0 198.0 198.0 198.0 197.500± 0.119	0	4.0	0.4497 0.39 ± 0.03 0.3 ± 0.09	98.0	GT = 98.45 WGO= 0.028± 0.002 WAG= 0.185± 0.02 WGO= 0.021 WGO= 0.34 ± 0.102 WGH= 0.0180± 0.0	JENDL-3.2 BNL-325 ASAMI+68 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
218.45 218.6 ± 0.1 218.8 219.0 219.0 219.0	0	4.0	3.941 4.1 ± 0.4 3.8 ± 0.76	98.0	GT = 101.94 WGO= 0.28 ± 0.03 WAG= 2.15 ± 0.2 WGO= 0.26 WGO= 0.3 ± 0.03	JENDL-3.2 BNL-325 ASAMI+68 MURADJANA+68 MURADJANB+68 ADAMCHUK+71

SB-123 2

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
218.450± 0.131					WGH= 0.1500± 0.0	OHKUBO+93
225.0	1	5.0	0.2838	98.0	GT = 98.284	JENDL-3.2
225.1 ± 0.1			▮ 0.28 ± 0.04		WGO= 0.019± 0.003	BNL-325
225.1					WAG= 0.12 ± 0.015	ASAMI+68
225.8			▮ 0.32 ± 0.048			MURADJANA+68
225.8					WGO= 0.021	MURADJANB+68
225.8					WGO= 0.21 ± 0.0525	ADAMCHUK+71
225.000± 0.135					WGH= 0.0130± 0.0	OHKUBO+93
236.4			▮ 0.3 ± 0.045			MURADJANA+68
236.4					WGO= 0.02	MURADJANB+68
236.4					WGO= 0.02 ± 0.005	ADAMCHUK+71
240.35	0	3.0	22.68	122.0	GT = 144.68	JENDL-3.2
240.6 ± 0.1	4		▮ 18 ± 3	122 ±20	WGO= 1.16 ± 0.19	BNL-325
240.6					WAG= 8.5 ± 1.0	ASAMI+68
241.0			▮ 14.0 ± 1.4			MURADJANA+68
241.0					WGO= 0.9	MURADJANB+68
241.0					WGO= 1.3 ± 0.104	ADAMCHUK+71
240.0		4.0				CAUVIN+71
240.350± 0.144					WGH= 0.6400± 0.0	OHKUBO+93
295.43	0	3.0	1.964	98.0	GT = 99.964	JENDL-3.2
295.9 ± 0.1			▮ 1.6 ± 0.2		WGO= 0.090± 0.014	BNL-325
296.7			▮ 1.5 ± 0.3			MURADJANA+68
296.7					WGO= 0.087	MURADJANB+68
296.7					WGO= 0.087± 0.0174	ADAMCHUK+71
295.430± 0.177					WGH= 0.0500± 0.0	OHKUBO+93
298.9	0	4.0	20.29	120.0	GT = 140.29	JENDL-3.2
299.3 ± 0.2	4		▮ 25.9 ± 2.4	120 ±20	WGO= 1.50 ± 0.14	BNL-325
300.0			▮ 24.0 ± 1.68			MURADJANA+68
300.0					WGO= 1.4	MURADJANB+68
300.0	0				WGO= 1.39 ± 0.0834	ADAMCHUK+71
299.0		4.0				CAUVIN+71
298.900± 0.179					WGH= 0.6600± 0.0	OHKUBO+93
302.4	1	2.0	0.6678	98.0	GT = 98.668	JENDL-3.2
302.400± 0.181					WGH= 0.0120± 0.0	OHKUBO+93
317.0					WGO= 0.03 ± 0.018	ADAMCHUK+71
323.2	0	3.0	43.15	98.0	GT = 141.15	JENDL-3.2
323.7 ± 0.2			▮ 33.8 ± 3.4		WGO= 1.87 ± 0.19	BNL-325
324.4			▮ 32.0 ± 3.2			MURADJANA+68
324.4					WGO= 1.78	MURADJANB+68
324.4	0				WGO= 1.87 ± 0.0935	ADAMCHUK+71
323.200± 0.194					WGH= 1.0500± 0.0	OHKUBO+93
331.4	0	4.0	0.9778	98.0	GT = 98.978	JENDL-3.2
331.4 ± 0.2			▮ 1.1 ± 0.3		WGO= 0.062± 0.030	BNL-325
332.1			▮ 0.9 ± 0.27			MURADJANA+68
332.1					WGO= 0.049	MURADJANB+68
332.1					WGO= 0.062± 0.0155	ADAMCHUK+71
343.8	1	4.0	0.5274	98.0	GT = 98.527	JENDL-3.2
339.0 ± 0.2			▮ 0.63 ± 0.21		WGO= 0.034± 0.011	BNL-325
341.5			▮ 0.5 ± 0.15			MURADJANA+68
341.5					WGO= 0.027	MURADJANB+68
341.5					WGO= 0.034± 0.0102	ADAMCHUK+71
343.800± 0.206					WGH= 0.0160± 0.0	OHKUBO+93
350.85	0	4.0	5.994	98.0	GT = 103.99	JENDL-3.2
351.2 ± 0.2			▮ 6.4 ± 0.6		WGO= 0.34 ± 0.03	BNL-325
351.5			▮ 6.5 ± 0.39			MURADJANA+68
351.5					WGO= 0.35	MURADJANB+68
351.5					WGO= 0.332±0.01992	ADAMCHUK+71
350.850± 0.211					WGH= 0.1800± 0.0	OHKUBO+93
373.2	0	4.0	1.477	98.0	GT = 99.477	JENDL-3.2
373.0 ± 0.2			▮ 1.4 ± 0.2		WGO= 0.07 ± 0.01	BNL-325
374.2			▮ 1.7 ± 0.17			MURADJANA+68
374.2					WGO= 0.088	MURADJANB+68
374.2					WGO= 0.105± 0.021	ADAMCHUK+71
373.200± 0.228					WGH= 0.0430± 0.0	OHKUBO+93
392.8	0	3.0	2.629	98.0	GT = 100.63	JENDL-3.2
392.8 ± 0.2			▮ 2.3 ± 0.4		WGO= 0.12 ± 0.02	BNL-325
392.9			▮ 2.4 ± 0.48			MURADJANA+68
392.9					WGO= 0.12	MURADJANB+68
392.9					WGO= 0.116± 0.0232	ADAMCHUK+71
394.28	0	4.0	23.3	98.0	GT = 121.3	JENDL-3.2
395.0 ± 0.2			▮ 25.8 ± 2.0		WGO= 1.3 ± 0.1	BNL-325
395.9			▮ 29.0 ± 1.45			MURADJANA+68
393.9					WGO= 1.46	MURADJANB+68
395.9					WGO= 1.9 ± 0.285	ADAMCHUK+71
394.260± 0.240					WGH= 0.6600± 0.0	OHKUBO+93
413.7	1	2.0	1.432	98.0	GT = 99.432	JENDL-3.2

SB-123

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
414.6 ± 0.3			0.63 ± 0.13		WGO- 0.031± 0.06	BNL-325
415.4			0.7 ± 0.14			MURADJANA+68
415.4					WGO- 0.034	MURADJANB+68
415.4					WGO- 0.07 ± 0.021	ADAMCHUK+71
413.700± 0.253					WGH- 0.0220± 0.0	OHKUBO+93
427.6					WGO- 0.015± 0.012	ADAMCHUK+71
471.07	0	4.0	4.051	98.0	GT - 102.05	JENDL-3.2
470.9 ± 0.3			4.3 ± 0.4		WGO- 0.20 ± 0.02	BNL-325
472.6			4.6 ± 0.23			MURADJANA+68
472.6					WGO- 0.21	MURADJANB+68
472.6					WGO- 0.194±0.01164	ADAMCHUK+71
471.070± 0.292					WGH- 0.1050± 0.0	OHKUBO+93
481.31	0	4.0	12.48	98.0	GT - 110.48	JENDL-3.2
481.6 ± 0.3			11.5 ± 1.2		WGO- 0.52 ± 0.05	BNL-325
483.3			12.5 ± 0.625			MURADJANA+68
483.3					WGO- 0.57	MURADJANB+68
483.3	0				WGO- 0.56 ± 0.056	ADAMCHUK+71
481.310± 0.300					WGH- 0.3200± 0.0	OHKUBO+93
490.6	1	4.0	0.63	98.0	GT - 98.63	JENDL-3.2
492.9			0.9 ± 0.225			MURADJANA+68
492.9					WGO- 0.041	MURADJANB+68
492.9					WGO- 0.043±0.01075	ADAMCHUK+71
490.600± 0.306					WGH- 0.0160± 0.0	OHKUBO+93
519.5	1	5.0	0.8288	98.0	GT - 98.829	JENDL-3.2
520.0 ± 0.4			0.93 ± 0.20		WGO- 0.041± 0.009	BNL-325
522.6			1.1 ± 0.33			MURADJANA+68
522.6					WGO- 0.048	MURADJANB+68
522.6					WGO- 0.043± 0.0129	ADAMCHUK+71
519.500± 0.330					WGH- 0.0250± 0.0	OHKUBO+93
532.4	0	3.0	13.71	98.0	GT - 111.71	JENDL-3.2
533.1 ± 0.4			11.5 ± 1.2		WGO- 0.50 ± 0.05	BNL-325
533.5			14.0 ± 0.7			MURADJANA+68
533.5					WGO- 0.61	MURADJANB+68
533.5	0				WGO- 0.556± 0.2224	ADAMCHUK+71
532.400± 0.340					WGH- 0.2600± 0.0	OHKUBO+93
550.5	1	3.0	0.6435	98.0	GT - 98.643	JENDL-3.2
551.9					WGO- 0.03 ± 0.012	ADAMCHUK+71
550.500± 0.350					WGH- 0.0120± 0.0	OHKUBO+93
570.5	0	4.0	26.33	98.0	GT - 124.33	JENDL-3.2
571.1 ± 0.4			26 ± 3		WGO- 1.1 ± 0.1	BNL-325
572.4			28.0 ± 1.68			MURADJANA+68
395.9					WGO- 1.46	MURADJANB+68
572.4	0				WGO- 1.67 ± 0.334	ADAMCHUK+71
570.500± 0.370					WGH- 0.6200± 0.0	OHKUBO+93
592.0	1	5.0	0.637	98.0	GT - 98.637	JENDL-3.2
592.000± 0.380					WGH- 0.0180± 0.0	OHKUBO+93
598.5	0	4.0	8.698	98.0	GT - 106.7	JENDL-3.2
599.0 ± 0.4			8.8 ± 0.9		WGO- 0.36 ± 0.04	BNL-325
600.9			9.0 ± 0.9			MURADJANA+68
600.9					WGO- 0.37	MURADJANB+68
600.9					WGO- 0.39 ±7.799-2	ADAMCHUK+71
598.500± 0.390					WGH- 0.2000± 0.0	OHKUBO+93
627.5	0	4.0	24.94	98.0	GT - 122.94	JENDL-3.2
627.6 ± 0.5			27 ± 3		WGO- 1.1 ± 0.1	BNL-325
629.4			28.0 ± 2.8			MURADJANA+68
629.4					WGO- 1.12	MURADJANB+68
629.4	0				WGO- 1.3 ± 0.26	ADAMCHUK+71
627.500± 0.410					WGH- 0.5600± 0.0	OHKUBO+93
644.3	1	2.0	3.249	98.0	GT - 101.25	JENDL-3.2
644.0 ± 0.5			1.4 ± 0.4		WGO- 0.054± 0.016	BNL-325
645.8			1.6 ± 0.48			MURADJANA+68
645.8					WGO- 0.063	MURADJANB+68
645.8					WGO- 0.054± 0.0162	ADAMCHUK+71
644.300± 0.420					WGH- 0.0400± 0.0	OHKUBO+93
658.7	0	4.0	17.34	98.0	GT - 115.34	JENDL-3.2
659.1 ± 0.5			18.5 ± 1.9		WGO- 0.72 ± 0.07	BNL-325
660.7			20.0 ± 1.4			MURADJANA+68
660.7					WGO- 0.78	MURADJANB+68
660.7					WGO- 0.75 ± 0.075	ADAMCHUK+71
658.700± 0.430					WGH- 0.3800± 0.0	OHKUBO+93
690.9	0	4.0	4.673	98.0	GT - 102.67	JENDL-3.2
691.5 ± 0.5			3.4 ± 0.9		WGO- 0.13 ± 0.03	BNL-325
693.2			3.2 ± 0.8			MURADJANA+68
693.2					WGO- 0.12	MURADJANB+68
693.2					WGO- 0.15 ± 0.03	ADAMCHUK+71
690.900± 0.460					WGH- 0.1000± 0.0	OHKUBO+93
702.8 ± 2.0			0.9 ± 0.5		WGO- 0.034± 0.017	BNL-325

SB-123 4

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
702.6			▮ 1.0 ± 0.5			MURADJANA+68
702.6					WGO- 0.038	MURADJANB+68
702.6					WGO- 0.034± 0.017	ADAMCHUK+71
717.9	0	3.0	9.186	98.0	GT - 107.19	JENDL-3.2
719.4 ± 2.5			▮ 4.4 ± 1.3		WGO- 0.16 ± 0.05	BNL-325
719.4			▮ 4.0 ± 1.2			MURADJANA+68
719.4					WGO- 0.15	MURADJANB+68
719.4					WGO- 0.21 ± 0.0525	ADAMCHUK+71
717.900± 0.480					WGH- 0.1500± 0.0	OHKUBO+93
746.5	0	4.0	136.0	98.0	GT - 234.0	JENDL-3.2
747.4 ± 0.6			▮169 ±27		WGO- 6.2 ± 1.0	BNL-325
749.8			▮150.0 ±15.0			MURADJANA+68
749.8					WGO- 5.49	MURADJANB+68
749.8	0				WGO- 7.1 ± 0.71	ADAMCHUK+71
746.500± 0.510					WGH- 2.8000± 0.0	OHKUBO+93
753.8	1	3.0	0.9413	98.0	GT - 98.941	JENDL-3.2
753.600± 0.510					WGH- 0.0150± 0.0	OHKUBO+93
785.4	1	5.0	0.6522	98.0	GT - 98.652	JENDL-3.2
785.400± 0.540					WGH- 0.0160± 0.0	OHKUBO+93
794.5	1	4.0	1.604	98.0	GT - 99.604	JENDL-3.2
794.500± 0.550					WGH- 0.0320± 0.0	OHKUBO+93
815.0	0	4.0	27.91	98.0	GT - 125.91	JENDL-3.2
815.5 ± 0.7			▮ 29 ± 6		WGO- 1.0 ± 0.2	BNL-325
818.2			▮ 25.0 ± 2.5			MURADJANA+68
818.2					WGO- 0.87	MURADJANB+68
818.2					WGO- 1.55 ± 0.155	ADAMCHUK+71
815.000± 0.560					WGH- 0.5500± 0.0	OHKUBO+93
839.0	0	3.0	119.2	98.0	GT - 217.2	JENDL-3.2
839.2 ± 0.7			▮ 93 ± 9		WGO- 3.2 ± 0.3	BNL-325
842.6			▮ 90.0 ± 6.3			MURADJANA+68
842.6					WGO- 3.1	MURADJANB+68
842.6					WGO- 3.4 ± 0.34	ADAMCHUK+71
839.000± 0.580					WGH- 1.8000± 0.0	OHKUBO+93
853.5	1	5.0	0.6374	98.0	GT - 98.637	JENDL-3.2
853.500± 0.600					WGH- 0.0150± 0.0	OHKUBO+93
871.4	0	3.0	215.9	98.0	GT - 313.9	JENDL-3.2
872.0 ± 0.7			▮207 ±30		WGO- 7.0 ± 1.0	BNL-325
874.6			▮170.0 ±13.6			MURADJANA+68
874.6					WGO- 5.74	MURADJANB+68
874.6	0				WGO- 7.8 ± 0.78	ADAMCHUK+71
871.400± 0.610					WGH- 3.2000± 0.0	OHKUBO+93
884.4	0	3.0	95.16	98.0	GT - 193.16	JENDL-3.2
885.2 ± 0.7			▮ 85 ± 9		WGO- 2.85 ± 0.29	BNL-325
887.9			▮ 87.0 ± 6.96			MURADJANA+68
887.9					WGO- 2.92	MURADJANB+68
887.9	0				WGO- 2.9 ± 0.145	ADAMCHUK+71
884.400± 0.630					WGH- 1.4000± 0.0	OHKUBO+93
893.5	0	4.0	0.9778	98.0	GT - 98.978	JENDL-3.2
893.5 ± 0.7			▮ 2.1 ± 0.9		WGO- 0.07 ± 0.03	BNL-325
896.3			▮ 2.8 ± 0.7			MURADJANA+68
896.3					WGO- 0.094	MURADJANB+68
896.3					WGO- 0.097±0.02425	ADAMCHUK+71
909.2	0	3.0	28.26	98.0	GT - 128.26	JENDL-3.2
910.8 ± 0.7			▮ 21 ± 2		WGO- 0.69 ± 0.07	BNL-325
911.9			▮ 24.0 ± 2.4			MURADJANA+68
911.9					WGO- 0.79	MURADJANB+68
911.9					WGO- 0.9 ± 0.18	ADAMCHUK+71
909.200± 0.650					WGH- 0.4100± 0.0	OHKUBO+93
929.0	0	4.0	13.55	98.0	GT - 111.55	JENDL-3.2
933.3			▮ 19 ± 2		WGO- 0.62 ± 0.06	BNL-325
936.3			▮ 22.0 ± 2.2			MURADJANA+68
936.3					WGO- 0.72	MURADJANB+68
933.3					WGO- 0.58 ± 0.058	ADAMCHUK+71
929.000± 0.670					WGH- 0.2500± 0.0	OHKUBO+93
967.8	0	4.0	23.23	98.0	GT - 121.23	JENDL-3.2
968.7 ± 0.8			▮ 35 ± 4		WGO- 1.12 ± 0.11	BNL-325
970.7			▮ 39.0 ± 3.12			MURADJANA+68
970.7					WGO- 1.25	MURADJANB+68
970.7	0				WGO- 1.12 ± 0.0896	ADAMCHUK+71
967.800± 0.700					WGH- 0.4200± 0.0	OHKUBO+93
976.7	0	3.0	7.143	98.0	GT - 105.14	JENDL-3.2
977.5 ± 0.8			▮ 5.0 ± 0.6		WGO- 0.16 ± 0.02	BNL-325
980.4			▮ 5.0 ± 3.0			MURADJANA+68
980.4					WGO- 0.16	MURADJANB+68
980.4					WGO- 0.16 ± 0.048	ADAMCHUK+71
976.700± 0.710					WGH- 0.1000± 0.0	OHKUBO+93

S8-123

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
987.7 988.3 ± 0.8 990.2 990.2 990.2 987.700± 0.720	0 0	4.0	68.16 ▮ 68 ± 8 ▮ 87.0 ± 8.7	98.0	GT = 166.16 WGO= 2.8 ± 0.3 WGO= 2.76 WGO= 2.64 ± 0.264 WGH= 1.2200± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1025.2 1026.3 ± 0.9 1031.0 1031.0 1031.0 1.025+3± 0.760	0	4.0	18.22 ▮ 13 ± 3 ▮ 14.0 ± 4.2	98.0	GT = 118.22 WGO= 0.42 ± 0.09 WGO= 0.44 WGO= 0.44 ± 0.11 WGH= 0.3200± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1034.9 1.034+3± 0.760	1	5.0	1.283	98.0	GT = 99.283 WGH= 0.0270± 0.0	JENDL-3.2 OHKUBO+93
1047.9 1048.4 ± 1.0 1050.0 1050.0 1050.0 1.047+3± 0.780	0	3.0	55.49 ▮ 58 ± 6 ▮ 62.0 ± 4.34	98.0	GT = 153.49 WGO= 1.8 ± 0.2 WGO= 1.91 WGO= 1.79 ± 0.179 WGH= 0.7500± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1064.4 1.064+3± 0.790	1	4.0	1.566	98.0	GT = 99.566 WGH= 0.0270± 0.0	JENDL-3.2 OHKUBO+93
1083.3 1084.5 ± 1.0 1086.0 1086.0 1086.0 1.083+3± 0.810	0	3.0	15.8 ▮ 12 ± 4 ▮ 12.0 ± 3.6	98.0	GT = 113.8 WGO= 0.36 ± 0.11 WGO= 0.36 WGO= 0.36 ± 0.072 WGH= 0.2100± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1094 ± 4 1094.0 1094.0 1094.0			▮ 6 ± 2 ▮ 8.0 ± 1.8		WGO= 0.18 ± 0.06 WGO= 0.18 WGO= 0.18 ± 0.054	BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71
1109.3 1110.9 ± 1.0 1113.0 1113.0 1113.0 1.109+3± 0.840	0	3.0	20.55 ▮ 24 ± 6 ▮ 19.0 ± 4.75	98.0	GT = 118.55 WGO= 0.72 ± 0.18 WGO= 0.57 WGO= 0.72 ± 0.18 WGH= 0.2700± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1116.6 1117.5 ± 1.0 1120.0 1120.0 1120.0 1.116+3± 0.840	0	3.0	53.46 ▮ 60 ±13 ▮ 84.0 ± 8.4	98.0	GT = 151.46 WGO= 1.8 ± 0.4 WGO= 2.51 WGO= 2.36 ± 0.236 WGH= 0.7000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1120.7 1.120+3± 0.850	1	4.0	1.488	98.0	GT = 99.488 WGH= 0.0250± 0.0	JENDL-3.2 OHKUBO+93
1124.8 1.124+3± 0.850	1	4.0	2.027	98.0	GT = 100.03 WGH= 0.0340± 0.0	JENDL-3.2 OHKUBO+93
1164.7 1165.0 ± 1.1 1168.0 1168.0 1168.0 1.164+3± 0.890	0	4.0	78.87 ▮ 88 ± 5 ▮ 90.0 ± 6.3	98.0	GT = 176.87 WGO= 2.57 ± 0.14 WGO= 2.63 WGO= 2.33 ± 0.1398 WGH= 1.3000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1220.7 1.220+3± 0.950	1	4.0	1.863	98.0	GT = 99.863 WGH= 0.0300± 0.0	JENDL-3.2 OHKUBO+93
1228 ± 3 1228.0 1228.0 1228.0			▮ 6 ± 2 ▮ 8.0 ± 2.4		WGO= 0.17 ± 0.07 WGO= 0.17 WGO= 0.17 ± 0.0595	BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71
1234.0 1239 ± 3 1239.0 1239.0 1239.0 1.234+3± 0.960	1	4.0	1.561 ▮ 5 ± 2 ▮ 5.0 ± 2.0	98.0	GT = 99.561 WGO= 0.14 ± 0.06 WGO= 0.14 WGO= 0.14 ± 0.049 WGH= 0.0250± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1248.4 1250.5 ± 1.2 1253.0 1253.0 1253.0 1.248+3± 0.980	0	4.0	31.41 ▮ 41 ± 8 ▮ 41.0 ± 4.1	98.0	GT = 129.41 WGO= 1.16 ± 0.22 WGO= 1.16 WGO= 1.03 ± 0.1545 WGH= 0.5000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1261.0 1.261+3± 0.990	1	5.0	2.066	98.0	GT = 100.07 WGH= 0.0400± 0.0	JENDL-3.2 OHKUBO+93
1272.2	0	4.0	60.87	98.0	GT = 158.87	JENDL-3.2

SB-123 6

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1273.2 ± 1.3 1276.0 1276.0 1276.0 1.272+3± 1.000			' 50 ± 7 ' 48.0 ± 3.84		WGO- 1.4 ± 0.2 WGO- 1.34 WGO- 1.3 ± 0.13 WGH- 0.9500± 0.0	BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1293.5 1.293+3± 1.020	1	5.0	1.622	98.0	GT - 99.622 WGH- 0.0310± 0.0	JENDL-3.2 OHKUBO+93
1308.4 1307.5 ± 1.3 1311.0 1311.0 1311.0 1.308+3± 1.040	0	4.0	30.87 ' 28 ± 4 ' 30.0 ± 3.6	98.0	GT - 128.87 WGO- 0.78 ± 0.12 WGO- 0.83 WGO- 0.78 ± 0.117 WGH- 0.4800± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1328.8 1329.2 ± 1.3 1333.0 1333.0 1333.0 1.328+3± 1.060	0	4.0	14.91 ' 19 ± 6 ' 30.0 ± 6.0	98.0	GT - 112.91 WGO- 0.52 ± 0.16 WGO- 0.55 WGO- 0.52 ± 0.156 WGH- 0.2300± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1335.0 1335.0 ± 1.20	1	2.0	5.846	98.0	GT - 103.85 WGH- 0.05	JENDL-3.2 OHKUBO+93
1358.0 1358.0 ± 1.20	1	2.0	5.896	98.0	GT - 103.9 WGH- 0.05	JENDL-3.2 OHKUBO+93
1384.5 1385.3 ± 0.7 1387.0 1387.0 1387.0 1.384+3± 1.120	0	3.0	27.22 ' 18 ± 2 ' 20.0 ± 2.0	98.0	GT - 125.22 WGO- 0.50 ± 0.05 WGO- 0.54 WGO- 0.49 ± 0.098 WGH- 0.3200± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 ADAMCHUK+71 OHKUBO+93
1419.5 1407 ± 3 1407.0 1407.0 1.419+3± 1.180	1	5.0	3.727 ' 5 ± 3 ' 5.0 ± 2.5	98.0	GT - 101.73 WGO- 0.13 ± 0.07 WGO- 0.13 WGH- 0.0680± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1458.3 1458 ± 3 1458.0 1458.0 1.456+3± 1.200	0	4.0	7.463 ' 8 ± 3 ' 10.0 ± 4.0	98.0	GT - 105.46 WGO- 0.2 ± 0.1 WGO- 0.26 WGH- 0.1100± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1482.0 1483.5 ± 0.8 1487.0 1487.0 1.482+3± 1.230	0	4.0	188.2 '170 ±43 '170.0 ±42.5	98.0	GT - 286.2 WGO- 4.4 ± 1.1 WGO- 4.4 WGH- 2.7500± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1489.8 1491.0 ± 0.8 1.489+3± 1.240	0	3.0	105.9 ' 62 ±19	98.0	GT - 203.9 WGO- 1.6 ± 0.5 WGH- 1.2000± 0.0	JENDL-3.2 BNL-325 OHKUBO+93
1495.0 1495.0			'280.0 ±70.0		 WGO- 7.24	MURADJANA+68 MURADJANB+68
1493.0 1494.0 ± 0.8 1.493+3± 1.240	0	3.0	48.58 ' 46 ±19	98.0	GT - 146.58 WGO- 1.2 ± 0.5 WGH- 0.5500± 0.0	JENDL-3.2 BNL-325 OHKUBO+93
1567.0 1571 ± 4 1571.0 1571.0 1.567+3± 1.320	0	3.0	9.048 ' 8.7 ± 1.7 ' 7.0 ± 1.75	98.0	GT - 107.05 WGO- 0.17 ± 0.04 WGO- 0.18 WGH- 0.1000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1598.8 1599.8 ± 0.9 1603.0 1603.0 1.598+3± 1.360	0	3.0	42.04 ' 20 ± 3 ' 25.0 ± 3.75	98.0	GT - 140.04 WGO- 0.55 ± 0.07 WGO- 0.63 WGH- 0.4600± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1618.2 1619.5 ± 1.0 1624.0 1624.0 1.618+3± 1.380	0	4.0	114.4 '116 ±12 '125.0 ± 8.75	98.0	GT - 212.4 WGO- 2.87 ± 0.29 WGO- 3.11 WGH- 1.6000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1646.5 1648.2 ± 1.0 1653.0 1653.0 1.646+3± 1.420	0	3.0	48.23 ' 41 ± 4 ' 44.0 ± 4.4	98.0	GT - 146.23 WGO- 1.0 ± 0.1 WGO- 1.08 WGH- 0.5200± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1670.2 1671.5 ± 1.0	0	3.0	15.88 ' 6.5 ± 1.2	98.0	GT - 113.88 WGO- 0.16 ± 0.03	JENDL-3.2 BNL-325

SB-123

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
1675.0 1675.0 1.670+3± 1.440			# 6.0 ± 0.9		 WGO- 0.15 WGH- 0.1700± 0.0	MURADJANA+68 MURADJANB+68 OHKUBO+93
1697.0 1698.9 ± 1.0 1701.0 1701.0 1.697+3± 1.480	0	3.0	226.0 #157 ±16 #182.0 ±11.34	98.0	GT = 324.0 WGO- 3.82 ± 0.38 WGO- 3.93 WGH- 2.4000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1709.2 1.709+3± 1.490	1	2.0	6.615	98.0	GT = 104.61 WGH- 0.0500± 0.0	JENDL-3.2 OHKUBO+93
1731.3 1.731+3± 1.520	0	3.0	9.511	98.0	GT = 107.51 WGH- 0.1000± 0.0	JENDL-3.2 OHKUBO+93
1740.0 1740 ± 3 1740.0 1740.0 1.740+3± 1.530	0	3.0	9.534 # 4 ± 2 # 4.0 ± 1.6	98.0	GT = 107.53 WGO- 0.095± 0.048 WGO- 0.098 WGH- 0.1000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1781.0 1783.0 ± 1.1 1785.0 1785.0 1.781+3± 1.580	0	3.0	86.82 # 80 ±25 # 47.0 ±14.1	98.0	GT = 184.82 WGO- 1.9 ± 0.6 WGO- 1.11 WGH- 0.9000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1794.7 1796.7 ± 1.1 1800.0 1800.0 1.794+3± 1.590	0	4.0	306.8 #270 ±40 #266.0 ±39.9	98.0	GT = 406.8 WGO- 6.3 ± 0.9 WGO- 6.27 WGH- 4.1000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1826.5 1.826+3± 1.630	0	4.0	18.99	98.0	GT = 116.99 WGH- 0.2500± 0.0	JENDL-3.2 OHKUBO+93
1858.9 1860.0 ± 1.2 1864.0 1864.0 1.858+3± 1.670	0	4.0	184.8 #120 ±13 #140.0 ±28.0	98.0	GT = 262.8 WGO- 2.8 ± 0.3 WGO- 3.25 WGH- 2.1500± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1869.2 1871.0 ± 1.2 1874.0 1874.0 1.869+3± 1.690	0	4.0	134.5 #160 ±20 #190.0 ±38.0	98.0	GT = 232.5 WGO- 3.7 ± 0.5 WGO- 4.39 WGH- 1.7500± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1900.0 1900 ± 3 1900.0 1900.0	0	4.0	5.333 # 6 ± 3 # 6.0 ± 3.0	98.0	GT = 103.33 WGO- 0.14 ± 0.07 WGO- 0.14	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68
1930.3 1932.0 ± 1.3 1938.0 1938.0 1.930+3± 1.760	0	4.0	50.77 # 66 ± 9 # 80.0 ±12.0	98.0	GT = 148.77 WGO- 1.5 ± 0.2 WGO- 1.82 WGH- 0.6500± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1964.0 1965.0 ± 1.3 1971.0 1971.0 1.964+3± 1.800	0	4.0	10.24 # 11 ± 3 # 16.0 ± 3.2	98.0	GT = 108.24 WGO- 0.25 ± 0.12 WGO- 0.36 WGH- 0.1300± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
1999.5 2000.0 ± 1.4 2005.0 2005.0 1.999+3± 1.850	0	4.0	318.0 #360 ±36 #360.0 ±28.8	98.0	GT = 418.0 WGO- 8.03 ± 0.80 WGO- 8.05 WGH- 4.0000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2034.2 2035.0 ± 1.4 2039.0 2039.0 2.034+3± 1.890	0	4.0	12.83 # 10 ± 6 # 10.0 ± 6.0	98.0	GT = 110.83 WGO- 0.22 ± 0.13 WGO- 0.22 WGH- 0.1600± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2083.6 2.083+3± 1.960	1	3.0	10.43	98.0	GT = 108.43 WGH- 0.1000± 0.0	JENDL-3.2 OHKUBO+93
2105.4 2107.0 ± 1.5 2112.0 2112.0 2.105+3± 1.990	0	3.0	73.42 #106 ±14 #103.0 ±15.45	98.0	GT = 171.42 WGO- 2.3 ± 0.3 WGO- 2.24 WGH- 0.7000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2113.4 2.113+3± 2.000	0	4.0	16.35	98.0	GT = 114.35 WGH- 0.2000± 0.0	JENDL-3.2 OHKUBO+93
2144.7	0	3.0	63.51	98.0	GT = 161.51	JENDL-3.2

SB-123 8

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
2143 ± 3 2143.0 2143.0 2.144+3± 2.040			#155 ±23 #170.0 ±25.5		WGO= 3.4 ± 0.5 WGO= 3.88 WGH= 0.6000± 0.0	BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2151.1 2148.0 ± 1.5 2156.0 2156.0 2.151+3± 2.050	0	4.0	115.4 #280 ±28 #320.0 ±32.0	98.0	GT = 213.4 WGO= 6.1 ± 0.6 WGO= 6.9 WGH= 1.4000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2163.4 2.163+3± 2.060	0	4.0	24.81	98.0	GT = 122.81 WGH= 0.3000± 0.0	JENDL-3.2 OHKUBO+93
2169.5 2172.0 ± 1.5 2175.0 2175.0 2.169+3± 2.070	0	3.0	85.17 #102 ±14 #130.0 ±19.5	98.0	GT = 183.17 WGO= 2.2 ± 0.3 WGO= 2.79 WGH= 0.8000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2191.8 2.191+3± 2.100	0	3.0	16.05	98.0	GT = 114.05 WGH= 0.15 ± 0.0	JENDL-3.2 OHKUBO+93
2195.5 2195.50± 2.10	0	3.0	16.06	98.0	GT = 114.06 WGH= 0.15	JENDL-3.2 OHKUBO+93
2202.3 2204.0 ± 1.5 2207.0 2207.0 2.202+3± 2.110	0	3.0	39.69 # 61 ±23 # 97.0 ±14.55	98.0	GT = 137.69 WGO= 1.3 ± 0.5 WGO= 2.07 WGH= 0.3700± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2234.5 2237.0 ± 1.5 2241.0 2241.0 2.234+3± 2.160	0	4.0	176.5 #200 ±20 #215.0 ±21.5	98.0	GT = 274.5 WGO= 4.2 ± 0.4 WGO= 4.55 WGH= 2.1000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2258.8 2.258+3± 2.190	1	3.0	10.86	98.0	GT = 108.86 WGH= 0.1000± 0.0	JENDL-3.2 OHKUBO+93
2271.5 2274 ± 1.5 2282.0 2282.0 2.271+3± 2.210	0	4.0	22.88 # 47 ± 9 # 49.0 ± 7.35	98.0	GT = 120.88 WGO= 1.0 ± 0.2 WGO= 1.03 WGH= 0.2700± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2304.5 2.304+3± 2.250	0	4.0	29.87	98.0	GT = 127.87 WGH= 0.3500± 0.0	JENDL-3.2 OHKUBO+93
2312.8 2315 ± 1.8 2317.0 2317.0 2.312+3± 2.260	0	4.0	37.62 # 98 ±15 #106.0 ±15.9	98.0	GT = 135.62 WGO= 2.0 ± 0.3 WGO= 2.2 WGH= 0.4400± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2353.6 2357.0 ± 1.8 2360.0 2360.0 2.353+3± 2.320	0	4.0	94.87 #112 ±44 #170.0 ±25.5	98.0	GT = 192.87 WGO= 2.3 ± 0.9 WGO= 3.51 WGH= 1.1000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2365.5 2.365+3± 2.340	0	4.0	31.99	98.0	GT = 129.99 WGH= 0.3700± 0.0	JENDL-3.2 OHKUBO+93
2384.3 2384.0 ± 1.8 2390.0 2390.0 2.384+3± 2.360	0	4.0	29.51 # 58 ±17 # 60.0 ±18.0	98.0	GT = 127.51 WGO= 1.2 ± 0.3 WGO= 1.23 WGH= 0.3400± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2441.5 2444.0 ± 1.8 2450.0 2450.0 2.441+3± 2.440	0	4.0	26.35 # 34 ± 9 # 34.0 ± 8.5	98.0	GT = 124.35 WGO= 0.69 ± 0.17 WGO= 0.69 WGH= 0.3000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2469.0 2.469+3± 2.480	0	3.0	34.07	98.0	GT = 132.07 WGH= 0.3000± 0.0	JENDL-3.2 OHKUBO+93
2478.3 2479 ± 1.7 2489.0 2489.0 2.478+3± 2.490	0	3.0	125.2 # 60 ±25 # 54.0 ±16.2	98.0	GT = 223.2 WGO= 1.2 ± 0.2 WGO= 1.08 WGH= 1.1000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2536.7 2.536+3± 2.580	0	4.0	26.86	98.0	GT = 124.86 WGH= 0.3000± 0.0	JENDL-3.2 OHKUBO+93
2549.5 2.549+3± 2.600	0	3.0	23.08	98.0	GT = 121.08 WGH= 0.2000± 0.0	JENDL-3.2 OHKUBO+93

SB-123 9

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
2566.3 2.566+3± 2.620	0	4.0	27.02	98.0	GT = 125.02 WGH= 0.3000± 0.0	JENDL-3.2 OHKUBO+93
2586.4 2.586+3± 2.650	0	4.0	18.08	98.0	GT = 116.08 WGH= 0.2000± 0.0	JENDL-3.2 OHKUBO+93
2627.7 2.627+3± 2.710	0	3.0	17.58	98.0	GT = 115.58 WGH= 0.1500± 0.0	JENDL-3.2 OHKUBO+93
2650.0 2665 ± 3 2655.0 2655.0 2.650+3± 2.740	0	4.0	34.78 § 50 ±15 § 50.0 ±15.0	98.0	GT = 132.78 WGO= 1.0 ± 0.3 WGO= 0.97 WGH= 0.3800± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2689.0 2.689+3± 2.800	0	3.0	35.58	98.0	GT = 133.58 WGH= 0.3000± 0.0	JENDL-3.2 OHKUBO+93
2702.1 2708 ± 2 2708.0 2708.0 2.702+3± 2.820	0	3.0	166.3 §360 ±72 §370.0 ±74.0	98.0	GT = 254.3 WGO= 6.9 ± 1.4 WGO= 7.12 WGH= 1.4000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2715.5 2.715+3± 2.840	0	4.0	27.79	98.0	GT = 125.79 WGH= 0.3000± 0.0	JENDL-3.2 OHKUBO+93
2739.2 2.739+3± 2.870	0	3.0	23.93	98.0	GT = 121.93 WGH= 0.2000± 0.0	JENDL-3.2 OHKUBO+93
2769.0 2.769+3± 2.920	0	3.0	24.06	98.0	GT = 122.06 WGH= 0.2000± 0.0	JENDL-3.2 OHKUBO+93
2773.5 2.773+3± 2.920	0	3.0	24.07	98.0	GT = 122.07 WGH= 0.2000± 0.0	JENDL-3.2 OHKUBO+93
2783.0 2782 2782.0 2782.0 2.783+3± 2.940	0	3.0	24.12 § 40 ±12 § 40.0 ±12.0	98.0	GT = 122.12 WGO= 0.76 ± 0.22 WGO= 0.76 WGH= 0.2000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2823.0 2.823+3± 3.000	0	4.0	85.96	98.0	GT = 183.96 WGH= 0.9100± 0.0	JENDL-3.2 OHKUBO+93
2834.5 2839 2839.0 2839.0 2.834+3± 3.010	0	4.0	48.27 §120 ±30 §130.0 ±32.5	98.0	GT = 146.27 WGO= 2.2 ± 0.8 WGO= 2.44 WGH= 0.5100± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2866.0 2866 ± 3.1	0	3.0	24.47	98.0	GT = 122.47 WGH= 0.2	JENDL-3.2 OHKUBO+93
2892.0 2907 2907.0 2907.0 2.892+3± 3.100	0	3.0	184.4 § 52 ±16 § 52.0 ±15.6	98.0	GT = 282.4 WGO= 0.96 ± 0.29 WGO= 0.96 WGH= 1.5000± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
2917.5 2.917+3± 3.140	0	3.0	55.56	98.0	GT = 153.56 WGH= 0.4500± 0.0	JENDL-3.2 OHKUBO+93
2940.5 2.940+3± 3.170	0	4.0	28.92	98.0	GT = 126.92 WGH= 0.3000± 0.0	JENDL-3.2 OHKUBO+93
2957.5 2.957+3± 3.200	0	3.0	24.86	98.0	GT = 122.86 WGH= 0.2000± 0.0	JENDL-3.2 OHKUBO+93
2970.0 2.970+3± 3.200	0	3.0	43.6	98.0	GT = 141.6 WGH= 0.3500± 0.0	JENDL-3.2 OHKUBO+93
2999.5 2.999+3± 3.300	0	3.0	53.83	98.0	GT = 151.83 WGH= 0.43 ± 0.0	JENDL-3.2 OHKUBO+93
3016.2 3020 3020.0 3020.0 3.016+3± 3.300	0	3.0	238.5 §310 ±78 §320.0 ±80.0	98.0	GT = 338.5 WGO= 5.7 ± 1.4 WGO= 5.82 WGH= 1.90 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
3051.0 3.051+3± 3.300	0	3.0	37.88	98.0	GT = 135.88 WGH= 0.3 ± 0.0	JENDL-3.2 OHKUBO+93
3064.0 3.064+3± 3.400	0	3.0	25.3	98.0	GT = 123.3 WGH= 0.2 ± 0.0	JENDL-3.2 OHKUBO+93
3077.0 3.077+3± 3.400	0	4.0	59.17	98.0	GT = 157.17 WGH= 0.6 ± 0.0	JENDL-3.2 OHKUBO+93
3118.4	0	3.0	197.8	98.0	GT = 295.8	JENDL-3.2

SB-123 10

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
3128 3128.0 3128.0 3.118+3± 3.400			P130 ±33 P145.0 ±36.25		WGO- 2.3 ± 0.6 WGO- 2.59 WGH- 1.5500± 0.0	BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
3144.0 3.144+3± 3.500	0	4.0	19.94	98.0	GT - 117.94 WGH- 0.2 ± 0.0	JENDL-3.2 OHKUBO+93
3158.0 3.158+3± 3.500	0	3.0	25.69	98.0	GT - 123.69 WGH- 0.2 ± 0.0	JENDL-3.2 OHKUBO+93
3198.0 3.198+3± 3.600	0	3.0	142.2	98.0	GT - 240.2 WGH- 1.10 ± 0.0	JENDL-3.2 OHKUBO+93
3232.5 3243 3243.0 3243.0 3.232+3± 3.600	0	3.0	136.5 P190 ±76 P200.0 ±80.0	98.0	GT - 234.5 WGO- 3.3 ± 1.3 WGO- 3.51 WGH- 1.05 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
3252.8 3266 3266.0 3266.0 3.252+3± 3.700	0	3.0	352.0 P194 ±78 P200.0 ±80.0	98.0	GT - 450.0 WGO- 3.4 ± 1.4 WGO- 3.5 WGH- 2.70 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
3304.3 3314 3314.0 3314.0 3.304+3± 3.700	0	3.0	295.6 P280 ±42 P290.0 ±43.5	98.0	GT - 393.6 WGO- 4.8 ± 0.7 WGO- 5.04 WGH- 2.25 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
3348.0 3.348+3± 3.800	0	4.0	20.57	98.0	GT - 118.57 WGH- 0.20 ± 0.0	JENDL-3.2 OHKUBO+93
3366.0 3370 3370.0 3370.0 3.366+3± 3.800	0	4.0	87.04 P150 ±75 P150.0 ±75.0	98.0	GT - 165.04 WGO- 2.6 ± 1.3 WGO- 2.58 WGH- 0.65 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
3395.0 3401 3401.0 3401.0 3.395+3± 3.900	0	4.0	145.0 P200 ±80 P200.0 ±80.0	98.0	GT - 243.0 WGO- 3.4 ± 1.4 WGO- 3.43 WGH- 1.40 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
3405.0 3.405+3± 3.900	0	3.0	26.68	98.0	GT - 124.68 WGH- 0.2 ± 0.0	JENDL-3.2 OHKUBO+93
3442.0 3.442+3± 4.000	0	3.0	67.05	98.0	GT - 165.05 WGH- 0.5 ± 0.0	JENDL-3.2 OHKUBO+93
3516.9 3530 3530.0 3530.0 3.516+3± 4.100	0	3.0	122.0 P 67 ±20 P 70.0 ±21.0	98.0	GT - 220.0 WGO- 1.1 ± 0.3 WGO- 1.18 WGH- 0.90 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
3534.0 3.534+3± 4.100	0	3.0	27.18	98.0	GT - 125.18 WGH- 0.20 ± 0.0	JENDL-3.2 OHKUBO+93
3575.0 3.575+3± 4.200	0	3.0	27.33	98.0	GT - 125.33 WGH- 0.20 ± 0.0	JENDL-3.2 OHKUBO+93
3610.0	1	3.0	20.6	98.0	GT - 118.6	JENDL-3.2
3638.0	0	3.0	55.15	98.0	GT - 153.15	JENDL-3.2
3656.0	1	4.0	16.12	98.0	GT - 114.12	JENDL-3.2
3680.2 3696 3696.0 3696.0 3.680+3± 4.400	0	3.0	152.5 P280 ±84 P290.0 ±87.0	98.0	GT - 250.5 WGO- 4.6 ± 1.4 WGO- 4.79 WGH- 1.10 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
3692.0 3.692+3± 4.400	0	3.0	69.44	98.0	GT - 167.44 WGH- 0.50 ± 0.0	JENDL-3.2 OHKUBO+93
3748.0 3.748+3± 4.500	0	4.0	32.65	98.0	GT - 130.65 WGH- 0.30 ± 0.0	JENDL-3.2 OHKUBO+93
3778.0 3.778+3± 4.500	0	4.0	32.78	98.0	GT - 130.78 WGH- 0.30 ± 0.0	JENDL-3.2 OHKUBO+93
3805.0 3.805+3± 4.600	0	3.0	77.55	98.0	GT - 175.55 WGH- 0.55 ± 0.0	JENDL-3.2 OHKUBO+93
3840.0 3.840+3± 4.600	0	4.0	33.05	98.0	GT - 131.05 WGH- 0.3 ± 0.0	JENDL-3.2 OHKUBO+93

SB-123

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
3880.0 3.880+3± 4.700	0	3.0	121.0	98.0	GT = 219.0 WGH= 0.85 ± 0.0	JENDL-3.2 OHKUBO+93
3929.0 3.929+3± 4.800	0	3.0	42.98	98.0	GT = 140.98 WGH= 0.3 ± 0.0	JENDL-3.2 OHKUBO+93
3947.0 3.947+3± 4.800	0	3.0	43.08	98.0	GT = 141.08 WGH= 0.3 ± 0.0	JENDL-3.2 OHKUBO+93
3976.8 3984 3984.0 3984.0 3.976+3± 4.900	0	4.0	338.3 *390 ±195 *400.0 ±200.0	98.0	GT = 434.3 WGO= 6.2 ± 3.1 WGO= 6.34 WGH= 3.00 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
4018.0 4.018+3± 5.000	0	4.0	22.54	98.0	GT = 120.54 WGH= 0.2 ± 0.0	JENDL-3.2 OHKUBO+93
4034.0 4.034+3± 5.000	0	4.0	39.52	98.0	GT = 137.52 WGH= 0.35 ± 0.0	JENDL-3.2 OHKUBO+93
4055.0 4.055+3± 5.000	1	3.0	21.83	98.0	GT = 119.83 WGH= 0.15 ± 0.0	JENDL-3.2 OHKUBO+93
4070.0 4.070+3± 5.000	1	3.0	21.87	98.0	GT = 119.87 WGH= 0.15 ± 0.0	JENDL-3.2 OHKUBO+93
4104.0 4.104+3± 5.100	0	4.0	142.4	98.0	GT = 240.4 WGH= 1.25 ± 0.0	JENDL-3.2 OHKUBO+93
4146.0 4166 4166.0 4166.0 4.146+3± 5.200	0	4.0	480.6 *1800 ±1440 *1800.0 ±1440.0	98.0	GT = 578.8 WGO= 28 ±22 WGO= 27.9 WGH= 4.20 ± 0.0	JENDL-3.2 BNL-325 MURADJANA+68 MURADJANB+68 OHKUBO+93
4160.6 4.160+3± 5.200	0	3.0	383.3	98.0	GT = 481.3 WGH= 2.80 ± 0.0	JENDL-3.2 OHKUBO+93
4217.0 4.217+3± 5.300	0	4.0	69.27	98.0	GT = 167.27 WGH= 0.60 ± 0.0	JENDL-3.2 OHKUBO+93
4276.0 4.276+3± 5.400	0	4.0	34.88	98.0	GT = 132.88 WGH= 0.30 ± 0.0	JENDL-3.2 OHKUBO+93
4306.0 4.306+3± 5.500	0	3.0	37.5	98.0	GT = 135.5 WGH= 0.25 ± 0.0	JENDL-3.2 OHKUBO+93
4345.0 4.345+3± 5.500	0	4.0	46.87	98.0	GT = 144.87 WGH= 0.4 ± 0.0	JENDL-3.2 OHKUBO+93
4376.0 4.376+3± 5.600	0	3.0	90.72	98.0	GT = 188.72 WGH= 0.6 ± 0.0	JENDL-3.2 OHKUBO+93
4401.0 4.401+3± 5.700	0	4.0	35.38	98.0	GT = 133.38 WGH= 0.3 ± 0.0	JENDL-3.2 OHKUBO+93
4424.0 4.424+3± 5.700	0	3.0	45.61	98.0	GT = 143.61 WGH= 0.3 ± 0.0	JENDL-3.2 OHKUBO+93
4454.0 4.454+3± 5.700	0	4.0	130.5	98.0	GT = 228.5 WGH= 1.1 ± 0.0	JENDL-3.2 OHKUBO+93
4485.0 4.485+3± 5.800	0	4.0	47.62	98.0	GT = 145.62 WGH= 0.40 ± 0.0	JENDL-3.2 OHKUBO+93
4573.0 4.573+3± 6.000	1	3.0	30.91	98.0	GT = 128.91 WGH= 0.20 ± 0.0	JENDL-3.2 OHKUBO+93
4616.0 4.616+3± 6.100	0	4.0	96.63	98.0	GT = 194.63 WGH= 0.80 ± 0.0	JENDL-3.2 OHKUBO+93
4650.0 4.650+3± 6.100	0	4.0	36.37	98.0	GT = 134.37 WGH= 0.30 ± 0.0	JENDL-3.2 OHKUBO+93
4679.0 4.679+3± 6.200	0	4.0	36.48	98.0	GT = 134.48 WGH= 0.30 ± 0.0	JENDL-3.2 OHKUBO+93
4691.0 4.691+3± 6.200	0	3.0	297.4	98.0	GT = 395.4 WGH= 1.90 ± 0.0	JENDL-3.2 OHKUBO+93
4711.0 4.711+3± 6.200	1	3.0	31.38	98.0	GT = 129.38 WGH= 0.20 ± 0.0	JENDL-3.2 OHKUBO+93
4777.0 4.777+3± 6.400	0	3.0	331.8	98.0	GT = 429.8 WGH= 2.10 ± 0.0	JENDL-3.2 OHKUBO+93
4869.0 4.869+3± 6.500	0	4.0	111.6	98.0	GT = 209.6 WGH= 0.90 ± 0.0	JENDL-3.2 OHKUBO+93
4944.0	0	4.0	137.5	98.0	GT = 235.5	JENDL-3.2

SB-123 12

ENERGY (EV)	L	J	NEUTRON WIDTH (MILLI-EV)	GAMMA WIDTH (MILLI-EV)	MISCELLANEOUS	REFERENCE
4.944+3± 6.700					WGH= 1.10 ± 0.0	OHKUBO+93
4980.0 4.980+3± 6.800	0	3.0	112.9	98.0	GT = 210.9 WGH= 0.70 ± 0.0	JENDL-3.2 OHKUBO+93
5005.0 5.005+3± 6.800	0	4.0	37.73	98.0	GT = 135.73 WGH= 0.30 ± 0.0	JENDL-3.2 OHKUBO+93
5033.0 5.033+3± 6.900	0	4.0	189.2	98.0	GT = 287.2 WGH= 1.50 ± 0.0	JENDL-3.2 OHKUBO+93
5060.0 5.060+3± 6.900	0	3.0	162.6	98.0	GT = 260.6 WGH= 1.00 ± 0.0	JENDL-3.2 OHKUBO+93
5141.0 5.141+3± 7.100	0	3.0	98.33	98.0	GT = 196.33 WGH= 0.60 ± 0.0	JENDL-3.2 OHKUBO+93
5215.0 5.215+3± 7.200	0	3.0	214.6	98.0	GT = 312.6 WGH= 1.30 ± 0.0	JENDL-3.2 OHKUBO+93
5270.0 5.270+3± 7.300	0	3.0	149.3	98.0	GT = 247.3 WGH= 0.90 ± 0.0	JENDL-3.2 OHKUBO+93
5320.0 5.320+3± 7.400	0	3.0	83.36	98.0	GT = 181.36 WGH= 0.50 ± 0.0	JENDL-3.2 OHKUBO+93
5347.0 5.347+3± 7.500	0	3.0	100.3	98.0	GT = 198.3 WGH= 0.60 ± 0.0	JENDL-3.2 OHKUBO+93
3.810+3± 4.300					WGH= 0.15 ± 0.0	OHKUBO+93
3.838+3± 4.300					WGH= 0.40 ± 0.0	OHKUBO+93
3656.0 ± 4.5					WGH= 0.15	OHKUBO+93

4. Conclusions

The resonance parameters have been evaluated for 22 FP nuclides on the basis of the measured data. The method of the evaluation and results of the evaluation are presented in this report. The system REPSTOR was used to manipulate and revise vast amount of the resonance parameter. The evaluated values are compared with the measured data using the REPSTOR system for vast amount of data. The comparison shows how the resonance parameters have been evaluated and is very useful as a handbook for users of the resonance parameters.

Acknowledgments

This work has been performed as one of the activities of the Fission Product Nuclear Data Working Group of Japanese Nuclear Data committee of JAERI. Mr. T. Nakagawa helped us by developing useful computer programs and gave us useful advice for the use of the computer. We would like to appreciate Dr. M. Mizumoto for a careful reading of the manuscript for many useful suggestions and comments.

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