



INTERNATIONAL ATOMIC ENERGY AGENCY

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IAEA-NDS- 11

(Rev. 4)

ENDL-84

The Lawrence Livermore National Laboratory
Evaluated Nuclear Data Library
in
the ENDF-V Format

Contents and Documentation

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Abstract

This document summarizes the contents of the evaluated nuclear data library (ENDL) by the Lawrence Livermore National Laboratory, USA, converted to ENDF-V format. The library contains evaluated data for all significant neutron reactions in the energy range from 10^{-4} eV to 20 MeV for 94 elements or isotopes. The entire library or selective retrievals from it can be obtained on magnetic tape, free of charge, from the IAEA Nuclear Data Section.

May 1985

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24-Cr-00	IMA1 N11 7830	Lab: LIVERMORE
Date:	UCRL-5400, VOL. 15	Author: R.J. HOWERTON
Ref:		Card Images: 1753
File Type	Reaction Type	Q-Value

ENDL-84

This library contains the Evaluated Nuclear Data Library (ENDL) of the Lawrence Livermore National Laboratory as of 1984. The library has been converted to the ENDF-V format by R.J. Howerton, Lawrence Livermore National Laboratory. The library contains evaluated neutron cross sections and differential data and neutron induced photon production data for 94 materials and includes a total of 231348 records. All evaluations are complete, covering all relevant reactions for incident energies from 10^{-4} eV to 20 MeV. For the actual contents of any given evaluation see the enclosed summary listings. All cross sections are represented in tabulated linearly interpolable form; resonance parameters are not used.

ENDL vs. ENDF-V format

The Lawrence Livermore National Laboratory Evaluated Nuclear Data Library is now available in Livermore's ENDL format and in the ENDF-V format. The ENDL format is more general than the ENDF-V format in terms of the forms in which nuclear data can be represented in the ENDL format. As such it is not possible to accurately translate the entire ENDL library to the ENDF-V format. Evaluations which appear in the ENDL library in the ENDL format and not in the ENDF-V format include ^2H and ^9Be which use a double differential representation of the secondary energy-angle distribution in the ENDL format, which is not allowed in the ENDF-V format.

Since the contents of the two libraries are not identical the ENDL-84 library does not supersede the ENDL-82 library; they rather complement each other for use in a variety of applications.

ENDL-84 vs. ENDL-78

Since the last version of the ENDL in the ENDF format (i.e. ENDL-78) nine new evaluations have been added to the library, namely: ^{74}As , ^{75}As , ^{88}Y , ^{89}Y , ^{72}Hf , ^{209}Bi , ^{235}Np , ^{236}Np and ^{238}Np .

ENDF-V Format

The ENDF-V format is described in R. Kinsey: Data formats and procedures for the evaluated nuclear data file ENDF, BNL-NCS-50496 (ENDF-102), 2nd edition, dated October 1979, also available as microfiche IAEA-NDS-10/102, with a Supplement by B.A. Magurno dated November 1983. For a quick reference to the ENDF/B format file (MF) numbers and reaction (MT) numbers see document IAEA-NDS-10.

CONTENTS AND DOCUMENTATION

A documentation of the library contents and summary of evaluation is given in

R.J. Howerton, M.G. MacGregor, Lawrence Livermore Laboratory Report UCRL-50400 Vol. 15, "The LLL Evaluated Nuclear Data Library (ENDL)". See in particular

Part B, Rev.1 (October 1978): Graphs of Cross-Sections from the Library.

Part D, Rev.1 (May 1978): Descriptions of Individual Evaluations for Z=0-98.

Vol.16, Rev.2 (July 1978): Tabular and graphical presentation of 175 neutron group constants derived from the LLL Evaluated Neutron Data Library (ENDL).

For the evaluation of fission neutron yields see also:

R.J. Howerton, Nucl. Sci. and Eng. 62, 438 (1977).

Cross-reference: Also available are the LLNL Evaluated Neutron Activation Cross-Section Library of 1982 (see IAEA-NDS-55) and the LLNL Evaluated Charged-Particle Data Library of 1982 (see IAEA-NDS-56), both in ENDL Transmittal format.

SUMMARY DOCUMENTATION

The following pages summarize the contents of this library by first presenting a table containing a one line summary for each evaluation. This table is followed by detailed tables containing a one line summary for each reaction or data type within each evaluation. In the detailed table for each evaluation the evaluation year (DATE) has been left blank. The ENDL library is periodically reviewed and distributed by R.J. Howerton. All evaluations in the library should be considered to have been reviewed and either found satisfactory, or updated to improve them by the date of distribution. As such the evaluations in this library should be considered to be up to date as of their distribution date 1984.

ACKNOWLEDGEMENTS

The Nuclear Data Section of the IAEA and D.E. Cullen in particular wish to thank R.J. Howerton, Lawrence Livermore National Laboratory for investing the time and effort required to translate ENDL to the ENDF-V format and for making this library available to the IAEA Nuclear Data Section.

LIST OF MATERIALS AND MAT NUMBERS

If not otherwise specified, the evaluations include all neutron cross-sections and differential data and neutron induced photon production data. For further details see the following pages.

Z	E1	A	MAT NO.	SPECIFICATION	Z	E1	A	MAT NO.	
1	H	-	1	7801	67	Ho	-	165	7854
1	H	-	3	7803	72	Hf	-	0	8305
2	He	-	3	7804	73	Ta	-	181	7855
2	He	-	4	7805	74	W	-	0	7856
3	Li	-	6	7806	75	Re	-	185	7858
3	Li	-	7	7807	75	Re	-	187	7859
4	Be	-	7	7808	78	Pt	-	0	7860
5	B	-	10	7810	79	Au	-	197	7861
5	B	-	11	7811	82	Pb	-	0	7862
6	C	-	12	7812	83	B1	-	209	8306
7	N	-	14	7813	90	Th	-	231	7863
8	O	-	16	7814	90	Th	-	232	7864
9	F	-	19	7815	90	Th	-	233	7865
11	Na	-	23	7816	92	U	-	233	7866
12	Mg	-	0	7817	92	U	-	234	7867
13	Al	-	27	7819	92	U	-	235	7868
14	Si	-	0	7820	92	U	-	236	7869
15	P	-	31	7821	92	U	-	237	7870
16	S	-	32	7822	92	U	-	238	7871
17	Cl	-	0	7823	92	U	-	239	7872
18	Ar	-	0	7824	92	U	-	240	7873
19	K	-	0	7825	93	Np	-	235	8307
20	Ca	-	0	7826	93	Np	-	236	8308
22	Ti	-	0	7828	93	Np	-	237	7874
23	V	-	51	7829	93	Np	-	238	8309
24	Cr	-	0	7830	94	Pu	-	238	7875
25	Mn	-	55	7831	94	Pu	-	239	7876
26	Fe	-	0	7832	94	Pu	-	240	7877
27	Co	-	59	7835	94	Pu	-	241	7878
28	Ni	-	0	7836	94	Pu	-	242	7880
28	Ni	-	58	7837	94	Pu	-	243	7881
29	Cu	-	0	7838	95	Am	-	241	7882
31	Ga	-	0	7840	95	Am	-	242m	7883
33	As	-	74	8301	95	Am	-	243	7884
33	As	-	75	8302	96	Cm	-	242	7885
39	Y	-	88	8303	96	Cm	-	243	7886
39	Y	-	89	8304	96	Cm	-	244	7887
40	Zr	-	0	7841	96	Cm	-	245	7888
41	Nb	-	93	7843	96	Cm	-	246	7889
42	Mo	-	0	7844	96	Cm	-	247	7890
47	Ag	-	107	7845	96	Cm	-	248	7891
47	Ag	-	109	7846	97	Bk	-	249	7892
48	Cd	-	0	7847	98	Cf	-	249	7893
50	Sn	-	0	7850	98	Cf	-	250	7894
56	Ba	-	138	7851	98	Cf	-	251	7895
63	Eu	-	0	7852	98	Cf	-	252	7896
64	Gd	-	0	7853		Fiss. Prod			7897

Note: MAT=7897 is a crude representation of a "typical" fission product which should be used with care.

1-H - 1g	Mat.No: 7801 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 383	
	File Type	Reaction Type	Q-Value
	General Information	Descriptive data and Dictionary	
	Resonance parameter data	Resonance information	
	Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section (n,g) radiative capture cross section	2.22470+ 6
		<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
	Angular dist. of secondary neutrons	Elastic scattering cross section	
	Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	2.22470+ 6
	Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	2.22470+ 6
	Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	2.22470+ 6
1-H - 3g	Mat.No: 7803 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 383	
	File Type	Reaction Type	Q-Value
	General Information	Descriptive data and Dictionary	
	Resonance parameter data	Resonance information	
	Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section direct (n,2n) cross section	-6.26000+ 6
		<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
	Angular dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section	-6.26000+ 6
	Energy dist. of secondary neutrons	direct (n,2n) cross section	-6.26000+ 6
2-He- 3g	Mat.No: 7804 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 319	
	File Type	Reaction Type	Q-Value
	General Information	Descriptive data and Dictionary	
	Resonance parameter data	Resonance information	
	Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section (n,g) radiative capture cross section (n,d) cross section (n,d) cross section	2.05780+ 7 7.60000+ 5 -3.27000+ 6
		<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
	Angular dist. of secondary neutrons	Elastic scattering cross section	
	Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	2.05780+ 7
	Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	2.05780+ 7
	Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	2.05780+ 7
2-He- 4g	Mat.No: 7805 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 350	
	File Type	Reaction Type	Q-Value
	General Information	Descriptive data and Dictionary	
	Resonance parameter data	Resonance information	
	Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section	
		<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
	Angular dist. of secondary neutrons	Elastic scattering cross section	
3-L1- 6g	Mat.No: 7806 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 858	
	File Type	Reaction Type	Q-Value
	General Information	Descriptive data and Dictionary	
	Resonance parameter data	Resonance information	
	Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n,g) cross section 2.18000+ 6 Ev (n,n') Level (n,g) radiative capture cross section (n,d) cross section (n,t) cross section	-2.18000+ 6 -3.69800+ 6 -1.46000+ 6 -2.18000+ 6 7.26000+ 6 -2.73000+ 6 4.79000+ 6
		<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
	Angular dist. of secondary neutrons	Elastic scattering cross section (n,n,d) cross section 2.18000+ 6 Ev (n,n') Level	-1.45000+ 6 -2.16000+ 6
	Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n,d) cross section	-3.69800+ 6 -1.46000+ 6
	Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.26000+ 6
	Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	7.26000+ 6
	Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	7.26000+ 6

File Type	Reaction Type	Q-Value
3-1- 7g	Mat. No: 7837 Date: UCRL-5400, VOL. 15 Ref: Author: R. J. HOWERTON Card Images: 602	Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 602
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') cross section 4.77400+ 5 Ev (n,n') Level (n,g) radiative capture cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <Q> : <ee>/<2e>	-4.77400+ 5 -7.26000+ 6 -2.47000+ 6 -4.77400+ 5 2.03000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section (n,n') cross section 4.77400+ 5 Ev (n,n') Level	-2.47000+ 6 -4.77400+ 5
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') cross section	-7.26000+ 6 -2.47000+ 6
Photon prod. Multiplicities(from neut.reactions)	4.77400+ 5 Ev (n,n') Level (n,g) radiative capture cross section	-4.77400+ 5 2.03000+ 6
Angular dist. of Photons (from neut.reactions)	4.77400+ 5 Ev (n,n') Level (n,g) radiative capture cross section	-4.77400+ 5 2.03000+ 6
Energy dist. of Photons (from neut.reactions)	4.77400+ 5 Ev (n,n') Level (n,g) radiative capture cross section	-4.77400+ 5 2.03000+ 6

File Type	Reaction Type	Q-Value
4-Be- 7g	Mat. No: 7808 Date: UCRL-5400, VOL. 15 Ref: Author: R. J. HOWERTON Card Images: 273	Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 273
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section (n,n) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <Q> : <ee>/<2e>	1.65000+ 6 1.89920+ 7
Angular dist. of secondary neutrons	Elastic scattering cross section	

File Type	Reaction Type	Q-Value
5 B - 10g	Mat. No: 7810 Date: UCRL-5400, VOL. 15 Ref: Author: R. J. HOWERTON Card Images: 369	Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 369
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n) cross section 7.17000+ 5 Ev (n,n') Level 1.74000+ 6 Ev (n,n') Level 2.15400+ 6 Ev (n,n') Level 3.59000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,a) cross section (n,12a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <Q> : <ee>/<2e>	-7.17000+ 5 -8.15800+ 6 -8.02000+ 6 -7.17000+ 5 -1.74000+ 6 -2.15400+ 6 -3.59000+ 6 1.14500+ 7 2.80000+ 6 3.30000+ 5
Angular dist. of secondary neutrons	Elastic scattering cross section 7.17000+ 5 Ev (n,n') Level 1.74000+ 6 Ev (n,n') Level 2.15400+ 6 Ev (n,n') Level 3.59000+ 6 Ev (n,n') Level	-7.17000+ 5 -1.74000+ 6 -2.15400+ 6 -3.59000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n) cross section (n,n') to the continuum	-8.15800+ 6 -8.02000+ 6
Photon prod. Multiplicities(from neut.reactions)	7.17000+ 5 Ev (n,n') Level 1.74000+ 6 Ev (n,n') Level 2.15400+ 6 Ev (n,n') Level 3.59000+ 6 Ev (n,n') Level (n,n) to the continuum (n,g) radiative capture cross section (n,a) cross section	-7.17000+ 5 -1.74000+ 6 -2.15400+ 6 -3.59000+ 6 1.14500+ 7 2.80000+ 6
Angular dist. of Photons (from neut.reactions)	7.17000+ 5 Ev (n,n') Level 1.74000+ 6 Ev (n,n') Level 2.15400+ 6 Ev (n,n') Level 3.59000+ 6 Ev (n,n') Level (n,n) to the continuum (n,g) radiative capture cross section (n,a) cross section	-7.17000+ 5 -1.74000+ 6 -2.15400+ 6 -3.59000+ 6 1.14500+ 7 2.80000+ 6
Energy dist. of Photons (from neut.reactions)	7.17000+ 5 Ev (n,n') Level 1.74000+ 6 Ev (n,n') Level 2.15400+ 6 Ev (n,n') Level 3.59000+ 6 Ev (n,n') Level (n,n) to the continuum (n,g) radiative capture cross section (n,a) cross section	-7.17000+ 5 -1.74000+ 6 -2.15400+ 6 -3.59000+ 6 1.14500+ 7 2.80000+ 6

5 B - 11g Mat.No: 7811 Lab: LIVERMORE
 Date: Author: R.J.HOWERTON
 Ref: UCRL-5400, VOL. 15 Card Images: 630

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <p> : <ee>/<2e>	-2.14000+ 6 -1.14000+ 7 -2.14000+ 6 -4.46000+ 6 -5.03000+ 6 3.37000+ 6 -1.07200+ 7 -9.56000+ 6 -6.64000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level	-2.14000+ 6 -4.46000+ 6 -5.03000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') to the continuum	-1.14600+ 7
Photon prod.Multiplicities(from neut.reactions)	direct (n,2n) cross section 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section	-1.14600+ 7 -2.14000+ 6 -4.46000+ 6 -5.03000+ 6 3.37000+ 6 -1.07200+ 7 -6.64000+ 6
Angular dist. of Photons (from neut.reactions)	direct (n,2n) cross section 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section	-1.14600+ 7 -2.14000+ 6 -4.46000+ 6 -5.03000+ 6 3.37000+ 6 -1.07200+ 7 -6.64000+ 6
Energy dist. of Photons (from neut.reactions)	direct (n,2n) cross section 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section	-1.14600+ 7 -2.14000+ 6 -4.46000+ 6 -5.03000+ 6 3.37000+ 6 -1.07200+ 7 -6.64000+ 6

6-C - 12g Mat.No: 7812 Lab: LIVERMORE
 Date: Author: R.J.HOWERTON
 Ref: UCRL-5400, VOL. 15 Card Images: 752

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) (n,n'3a) cross section 4.43000+ 6 Ev (n,n') Level 7.65000+ 6 Ev (n,n') Level 9.63000+ 6 Ev (n,n') Level 1.01000+ 7 Ev (n,n') Level 1.08400+ 7 Ev (n,n') Level 1.18200+ 7 Ev (n,n') Level (n,g) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <p> : <ee>/<2e>	-4.43000+ 6 -7.36000+ 6 -4.43000+ 6 -7.65000+ 6 -9.63000+ 6 -1.01000+ 7 -1.08400+ 7 -1.18200+ 7 4.94600+ 6 -1.25800+ 7 -1.37200+ 7 -5.70000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 4.43000+ 6 Ev (n,n') Level 7.65000+ 6 Ev (n,n') Level 9.63000+ 6 Ev (n,n') Level 1.01000+ 7 Ev (n,n') Level 1.08400+ 7 Ev (n,n') Level 1.18200+ 7 Ev (n,n') Level	-4.43000+ 6 -7.65000+ 6 -9.63000+ 6 -1.01000+ 7 -1.08400+ 7 -1.18200+ 7
Energy dist. of secondary neutrons	(n,n'3a) cross section	-7.36000+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section (n,d) cross section (n,t) cross section	4.94600+ 6 -1.25800+ 7 -1.37200+ 7
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section (n,d) cross section (n,t) cross section	4.94600+ 6 -1.25800+ 7 -1.37200+ 7
Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section (n,d) cross section (n,t) cross section	4.94600+ 6 -1.25800+ 7 -1.37200+ 7

7-4 - 140

Mat. No. 7813
Date: UCRL-5400, VOL. 15
Ref:Lab: LIVERMORE
Author: R.J. HOWERSON
Card Images: 2846

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n,p) cross section 2.31300* 6 Ev (n,n') Level 1.94500* 6 Ev (n,n') Level 4.91300* 6 Ev (n,n') Level 5.10600* 6 Ev (n,n') Level 5.69100* 6 Ev (n,n') Level 5.83400* 6 Ev (n,n') Level 6.19800* 6 Ev (n,n') Level 6.44400* 6 Ev (n,n') Level 7.02800* 6 Ev (n,n') Level 7.96600* 6 Ev (n,n') Level (n,g) radiative capture cross section <u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e> 5.46800* 6 Ev (n,p) Level 6.09800* 6 Ev (n,p) Level 6.53000* 6 Ev (n,p) Level 6.71140* 6 Ev (n,p) Level (n,p) continuum excited state 8.41200* 6 Ev (n,p) Level 9.01000* 6 Ev (n,p) Level 9.23580* 6 Ev (n,p) Level (n,d) continuum excited state 8.45500* 6 Ev (n,t) Level (n,t) continuum excited state 2.20270* 6 Ev (n,a) Level 4.60270* 6 Ev (n,a) Level 5.17670* 6 Ev (n,a) Level 6.90070* 6 Ev (n,a) Level 6.95700* 6 Ev (n,a) Level 7.45370* 6 Ev (n,a) Level 8.15370* 6 Ev (n,a) Level 8.72370* 6 Ev (n,a) Level 9.08700* 6 Ev (n,a) Level 9.34210* 6 Ev (n,a) Level (n,a) continuum Elastic scattering cross section 2.31300* 6 Ev (n,n') Level 3.64500* 6 Ev (n,n') Level 4.91300* 6 Ev (n,n') Level 5.10600* 6 Ev (n,n') Level 5.69100* 6 Ev (n,n') Level 5.83400* 6 Ev (n,n') Level 6.19800* 6 Ev (n,n') Level 6.44400* 6 Ev (n,n') Level 7.02800* 6 Ev (n,n') Level 7.96600* 6 Ev (n,n') Level direct (n,2n) cross section (n,n,p) cross section (n,g) radiative capture cross section Non elastic cross section(total-elastic) Non elastic cross section(total-elastic) (n,g) radiative capture cross section Non elastic cross section(total-elastic) (n,g) radiative capture cross section	-2.31300+ 6 -1.94500+ 6 -7.55000+ 6 -2.31300+ 6 -3.94500+ 6 -4.91300+ 6 -5.10600+ 6 -5.69100+ 6 -5.83400+ 6 -6.19800+ 6 -6.44400+ 6 -7.02800+ 6 -7.96600+ 6 1.08300+ 7 -5.46800+ 6 -6.09800+ 6 -6.53000+ 6 -6.71140+ 6 -8.41200+ 6 -9.01000+ 6 -9.23580+ 6 -8.45500+ 6 -4.01600+ 6 -2.20270+ 6 -4.60270+ 6 -5.17670+ 6 -6.90070+ 6 -6.95700+ 6 -7.45370+ 6 -8.15370+ 6 -8.72370+ 6 -9.08700+ 6 -9.34210+ 6 -1.58000+ 5 -2.31300+ 6 -3.64500+ 6 -4.91300+ 6 -5.10600+ 6 -5.69100+ 6 -5.83400+ 6 -6.19800+ 6 -6.44400+ 6 -7.02800+ 6 -7.96600+ 6 -1.05500+ 7 -7.55000+ 6 1.08300+ 7 1.08300+ 7 1.08300+ 7
Angular dist. of secondary neutrons	Elastic scattering cross section 2.31300* 6 Ev (n,n') Level 3.64500* 6 Ev (n,n') Level 4.91300* 6 Ev (n,n') Level 5.10600* 6 Ev (n,n') Level 5.69100* 6 Ev (n,n') Level 5.83400* 6 Ev (n,n') Level 6.19800* 6 Ev (n,n') Level 6.44400* 6 Ev (n,n') Level 7.02800* 6 Ev (n,n') Level 7.96600* 6 Ev (n,n') Level	-2.31300+ 6 -3.64500+ 6 -4.91300+ 6 -5.10600+ 6 -5.69100+ 6 -5.83400+ 6 -6.19800+ 6 -6.44400+ 6 -7.02800+ 6 -7.96600+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n,p) cross section	-1.05500+ 7 -7.55000+ 6
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	1.08300+ 7
Photon prod. cross sections (from neut. reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	1.08300+ 7
Energy dist. of Photons (from neut. reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	1.08300+ 7

8-0 - 160

Mat. No. 7814
Date: UCRL-5400, VOL. 15
Ref:Lab: LIVERMORE
Author: R.J. HOWERSON
Card Images: 1227

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n'a) cross section (n,n,p) cross section 6.10000* 6 Ev (n,n') Level 7.00000* 6 Ev (n,n') Level 8.88000* 6 Ev (n,n') Level 1.11000* 7 Ev (n,n') Level (n,n') to the continuum (n,d) cross section <u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e> (n,p0) ground state 9.63600* 6 Ev (n,p) Level 9.63600* 6 Ev (n,p) Level 9.63600* 6 Ev (n,p) Level (n,a0) ground state 2.21500* 6 Ev (n,a) Level 2.21500* 6 Ev (n,a) Level 2.21500* 6 Ev (n,a) Level Elastic scattering cross section 6.10000* 6 Ev (n,n') Level 7.00000* 6 Ev (n,n') Level 8.88000* 6 Ev (n,n') Level 1.11000* 7 Ev (n,n') Level direct (n,2n) cross section (n,n'a) cross section (n,n,p) cross section (n,n') to the continuum Non elastic cross section(total-elastic) Non elastic cross section(total-elastic) Non elastic cross section(total-elastic)	-6.10000+ 6 -1.94500+ 7 -7.15000+ 6 -6.10000+ 6 -7.00000+ 6 -8.88000+ 6 -1.11000+ 7 -9.89000+ 6 -9.63600+ 6 -9.63600+ 6 -9.63600+ 6 -2.21500+ 6 -2.21500+ 6 -2.21500+ 6 -6.10000+ 6 -7.00000+ 6 -8.88000+ 6 -1.11000+ 7 -1.56700+ 7 -7.15000+ 6 -7.15000+ 6 -7.15000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 6.10000* 6 Ev (n,n') Level 7.00000* 6 Ev (n,n') Level 8.88000* 6 Ev (n,n') Level 1.11000* 7 Ev (n,n') Level	-6.10000+ 6 -7.00000+ 6 -8.88000+ 6 -1.11000+ 7
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n'a) cross section (n,n,p) cross section (n,n') to the continuum	-1.56700+ 7 -7.15000+ 6 -7.15000+ 6 -7.15000+ 7
Photon prod. cross sections (from neut. reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut. reactions)	Non elastic cross section(total-elastic)	

9-F - 10g

Mat. No: 7815
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R. J. HOWERTON
Card Images: 3496

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n a) cross section (n,n p) cross section 1.10000* 5 Ev (n,n) Level 1.97000* 5 Lv (n,n) Level 1.41700* 6 Ev (n,n) Level 1.45800* 6 Ev (n,n) Level 1.55400* 6 Ev (n,n) Level 2.78000* 6 Ev (n,n) Level 3.90700* 6 Ev (n,n) Level 3.99800* 6 Ev (n,n) Level 4.03200* 6 Ev (n,n) Level 4.37800* 6 Ev (n,n) Level 4.55500* 6 Ev (n,n) Level 4.55700* 6 Ev (n,n) Level 4.64800* 6 Ev (n,n) Level 4.68300* 6 Ev (n,n) Level 5.10600* 6 Ev (n,n) Level 5.34000* 6 Ev (n,n) Level 5.42800* 6 Ev (n,n) Level 5.46400* 6 Ev (n,n) Level 5.49900* 6 Ev (n,n) Level 5.54000* 6 Ev (n,n) Level 5.63000* 6 Ev (n,n) Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,d) cross section (n,l) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e> average log energy decrement for elastic scat. <g> <ee>/<2e>	-1.10000+ 5 -1.04310+ 7 -4.87800+ 6 -7.99300+ 6 1.10000+ 5 -1.97000+ 5 -1.41700+ 6 -1.45800+ 6 -1.55400+ 6 -2.78000+ 6 -3.90700+ 6 -3.99800+ 6 -4.03200+ 6 -4.37800+ 6 -4.55500+ 6 -4.55700+ 6 -4.64800+ 6 -4.68300+ 6 -5.10600+ 6 -5.34000+ 6 -5.42800+ 6 -5.46400+ 6 -5.49900+ 6 -5.54000+ 6 -5.63000+ 6 6.60000+ 6 -4.03600+ 6 -5.76800+ 6 -7.95700+ 6 -1.52300+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 1.10000* 5 Ev (n,n) Level 1.97000* 5 Ev (n,n) Level 1.41700* 6 Ev (n,n) Level 1.45800* 6 Ev (n,n) Level 1.55400* 6 Ev (n,n) Level 2.78000* 6 Ev (n,n) Level 3.90700* 6 Ev (n,n) Level 3.99800* 6 Ev (n,n) Level 4.03200* 6 Ev (n,n) Level 4.37800* 6 Ev (n,n) Level 4.55500* 6 Ev (n,n) Level 4.55700* 6 Ev (n,n) Level 4.64800* 6 Ev (n,n) Level 4.68300* 6 Ev (n,n) Level 5.10600* 6 Ev (n,n) Level 5.34000* 6 Ev (n,n) Level 5.42800* 6 Ev (n,n) Level 5.46400* 6 Ev (n,n) Level 5.49900* 6 Ev (n,n) Level 5.54000* 6 Ev (n,n) Level 5.63000* 6 Ev (n,n) Level	-1.10000+ 5 -1.97000+ 5 -1.41700+ 6 -1.45800+ 6 -1.55400+ 6 -2.78000+ 6 -3.90700+ 6 -3.99800+ 6 -4.03200+ 6 -4.37800+ 6 -4.55500+ 6 -4.55700+ 6 -4.64800+ 6 -4.68300+ 6 -5.10600+ 6 -5.34000+ 6 -5.42800+ 6 -5.46400+ 6 -5.49900+ 6 -5.54000+ 6 -5.63000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n a) cross section (n,n p) cross section (n,n') to the continuum	-1.04310+ 7 -4.87800+ 6 -7.99300+ 6
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	6.60000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	6.60000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	6.60000+ 6

File Type	Reaction Type	U-value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') cross section (n,n') cross section 4.39200+ 5 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-4.39270+ 5 -1.24340+ 7 -1.24340+ 7 -1.04980+ 7 -8.79400+ 5 -4.39200+ 5 6.97000+ 6 -4.53700+ 6 -3.88000+ 6
Angular dist. of secondary neutrons	<u> Lab.average elastic scattering cosine. <v> average log energy decrement for elastic scat. <w> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section 4.39200+ 5 Ev (n,n') Level direct (n,2n) cross section (n,n') cross section (n,n') cross section (n,n') to the continuum (n,g) radiative capture cross section	-4.39200+ 5 -1.24340+ 7 -1.04980+ 7 -8.79400+ 5 6.97000+ 6
Photon prod.Multiplicities(from neut.reactions)	Non elastic cross section(total-elastic)	
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.97000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.97000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.97000+ 6

File Type	Reaction Type	U-value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section 1.37000+ 6 Ev (n,n') Level 1.61000+ 6 Ev (n,n') Level 1.83000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-1.37000+ 6 -7.32400+ 6 -1.37000+ 6 -1.61000+ 6 -1.83000+ 6 9.09200+ 6 -3.02000+ 6 -2.55000+ 6
Angular dist. of secondary neutrons	<u> Lab.average elastic scattering cosine <v> average log energy decrement for elastic scat <w> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section 1.37000+ 6 Ev (n,n') Level 1.61000+ 6 Ev (n,n') Level 1.83000+ 6 Ev (n,n') Level direct (n,2n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-1.37000+ 6 -1.61000+ 6 -1.83000+ 6 -7.32400+ 6 9.09200+ 6
Photon prod.Multiplicities(from neut.reactions)	Non elastic cross section(total-elastic)	
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	9.09200+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	9.09200+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	9.09200+ 6

File Type	Reaction Type	Q-Value
13 A1- 27g	Mat No: 7819 Date: UCRL-5400 VOL. 15 Ref: UCRL-5400 VOL. 15	Lab: LIVERMORE Author: R.J. HOWERTON Card Images: 3549
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') cross section 8.43000+ 5 Ev (n,n') Level 1.01300+ 6 Ev (n,n') Level 2.21000+ 6 Ev (n,n') Level 2.73200+ 6 Ev (n,n') Level 2.98000+ 6 Ev (n,n') Level 3.00100+ 6 Ev (n,n') Level 3.67800+ 6 Ev (n,n') Level 3.95600+ 6 Ev (n,n') Level 4.05500+ 6 Ev (n,n') Level 4.40900+ 6 Ev (n,n') Level 4.50800+ 6 Ev (n,n') Level 4.58000+ 6 Ev (n,n') Level 4.81100+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,d) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-8.43000+ 5 -1.39570+ 7 -8.27100+ 6 -8.43000+ 5 -1.01300+ 6 -2.21000+ 6 -2.73200+ 6 -2.98000+ 6 -3.00100+ 6 -3.67800+ 6 -3.95600+ 6 -4.05500+ 6 -4.40900+ 6 -4.50800+ 6 -4.58000+ 6 -4.81100+ 6 7.73000+ 6 -1.82780+ 6 -6.04600+ 6 -1.08540+ 7 -3.13160+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 8.43000+ 5 Ev (n,n') Level 1.01300+ 6 Ev (n,n') Level 2.21000+ 6 Ev (n,n') Level 2.73200+ 6 Ev (n,n') Level 2.98000+ 6 Ev (n,n') Level 3.00100+ 6 Ev (n,n') Level 3.67800+ 6 Ev (n,n') Level 3.95600+ 6 Ev (n,n') Level 4.05500+ 6 Ev (n,n') Level 4.40900+ 6 Ev (n,n') Level 4.50800+ 6 Ev (n,n') Level 4.58000+ 6 Ev (n,n') Level 4.81100+ 6 Ev (n,n') Level	-8.43000+ 5 -1.01300+ 6 -2.21000+ 6 -2.73200+ 6 -2.98000+ 6 -3.00100+ 6 -3.67800+ 6 -3.95600+ 6 -4.05500+ 6 -4.40900+ 6 -4.50800+ 6 -4.58000+ 6 -4.81100+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') cross section (n,n') to the continuum	-1.39570+ 7 -8.27100+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.73000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.73000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.73000+ 6

File Type	Reaction Type	Q-Value
14-51- 0g	Mat No: 7820 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J. HOWERTON Card Images: 1990
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') cross section 1.27300+ 6 Ev (n,n') Level 1.77870+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,d) cross section (n,t) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-1.27300+ 6 -8.47400+ 6 -1.15650+ 7 -1.27300+ 6 -1.77870+ 6 8.47400+ 6 -2.85300+ 6 -5.36200+ 6 -2.65400+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 1.27300+ 6 Ev (n,n') Level 1.77870+ 6 Ev (n,n') Level	-1.27300+ 6 -1.77870+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') cross section (n,n') to the continuum	-8.47400+ 6 -1.15650+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	8.47400+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.47400+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.47400+ 6

File Type	Reaction Type	Q-Value
15-P - 31g	Mat. No: 7821 Date: UCRL-5400, VOL 15 Ref: UCRL-5400, VOL 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 871
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n,p) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-1.23060+ 7 -7.29600+ 6 -1.23060+ 7 -7.29600+ 6 7.93700+ 6 -7.08000+ 5 -1.94400+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n,p) cross section (n,n') to the continuum	-1.23060+ 7 -7.29600+ 6
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	7.93700+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	7.93700+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	7.93700+ 6

File Type	Reaction Type	Q-Value
16-S - 32g	Mat. No: 7822 Date: UCRL-5400, VOL 15 Ref: UCRL-5400, VOL 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 891
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n,p) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,t) cross section (n,a) cross section	-1.50430+ 7 -8.86500+ 6 -1.50430+ 7 -8.86500+ 6 8.64200+ 6 -8.26000+ 5 -1.26000+ 7 1.52500+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n,p) cross section (n,n') to the continuum	-1.50430+ 7 -8.86500+ 6
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	8.64200+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	8.64200+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	8.64200+ 6

File Type	Reaction Type	Q value
17-C1- 0g	Mat. No: 7823 Date: UCRL-5400, VOL 15 Ref: UCRL-5400, VOL 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1947
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n,p) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-1.26470+ 7 -6.99900+ 6 -6.37100+ 6 -1.26470+ 7 -6.37100+ 6 8.57900+ 6 6.15000+ 5 9.38000+ 5
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n,p) cross section (n,n') to the continuum	-1.26470+ 7 -6.99900+ 6 -6.37100+ 6
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	8.57900+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	8.57900+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	8.57900+ 6

File Type	Reaction Type	Q-Value
18-Ar- 0g Mat. No: 7824 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 853		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-9.87000+ 6 6.10000+ 6 -6.72000+ 6 -2.49000+ 6
Angular dist. of secondary neutrons	<U> Lab:average elastic scattering cosine. <E> average log energy decrement for elastic scat. <Q> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n') to the continuum	-9.87000+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	6.10000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	6.10000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.10000+ 6

File Type	Reaction Type	Q-Value
18-K - 0g Mat. No: 7825 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 1398		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n'a) cross section (n,n'p) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-1.30750+ 7 -7.21700+ 6 -6.38000+ 6 7.80000+ 6 2.17000+ 5 1.36200+ 6
Angular dist. of secondary neutrons	<U> Lab:average elastic scattering cosine. <E> average log energy decrement for elastic scat. <Q> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n'a) cross section (n,n'p) cross section (n,n') to the continuum	-1.30750+ 7 -7.21700+ 6 -6.38000+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.80000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	7.80000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.80000+ 6

File Type	Reaction Type	Q-Value
20-Ca- 0g Mat. No: 7826 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 1671		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n'a) cross section (n,n'p) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-1.00300+ 7 -7.14000+ 6 -8.34000+ 6 8.36000+ 6 -5.30000+ 6 1.60000+ 6
Angular dist. of secondary neutrons	<U> Lab:average elastic scattering cosine. <E> average log energy decrement for elastic scat. <Q> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n'a) cross section (n,n'p) cross section (n,n') to the continuum	-1.00300+ 7 -7.14000+ 6 -8.34000+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	8.36000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	8.36000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.36000+ 6

File Type	Reaction Type	Q-Value
82-Pb- 0g Mat. No: 7862 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 1036		

F

File Type	Reaction Type	Q-Value
22-11-09 Mat No: 7c28 Date: Ref: UCRL-5400, VOL. 15 Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1593		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section 9.87000+ 5 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-9.87000+ 5 -1.16300+ 7 -9.87000+ 5 8.24000+ 6 -3.21000+ 6 -2.03000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 9.87000+ 5 Ev (n,n') Level	-9.87000+ 5
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') to the continuum	-1.16300+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	8.24000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	8.24000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.24000+ 6

File Type	Reaction Type	Q-Value
23-V - 51g Mat No: 7629 Date: Ref: UCRL-5400, VOL. 15 Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3307		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') cross section (n,n') cross section 3.20100+ 5 Ev (n,n') Level 9.29000+ 5 Ev (n,n') Level 1.60900+ 6 Ev (n,n') Level 1.81300+ 6 Ev (n,n') Level 2.40900+ 6 Ev (n,n') Level 2.67500+ 6 Ev (n,n') Level 3.08000+ 6 Ev (n,n') Level (n,n') to the continuum (n,d) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-3.20100+ 5 -1.10120+ 7 -1.02930+ 7 -8.05200+ 6 -9.29000+ 5 -1.60900+ 6 -1.81300+ 6 -2.40900+ 6 -2.67500+ 6 -3.08000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 3.20100+ 5 Ev (n,n') Level 9.29000+ 5 Ev (n,n') Level 1.60900+ 6 Ev (n,n') Level 1.81300+ 6 Ev (n,n') Level 2.40900+ 6 Ev (n,n') Level 2.67500+ 6 Ev (n,n') Level 3.08000+ 6 Ev (n,n') Level	-3.20100+ 5 -9.29000+ 5 -1.60900+ 6 -1.81300+ 6 -2.40900+ 6 -2.67500+ 6 -3.08000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') cross section (n,n') cross section (n,n') to the continuum	-1.10120+ 7 -1.02930+ 7 -8.05200+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.30400+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,d) radiative capture cross section	7.30400+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.30400+ 6

File Type	Reaction Type	Q-Value
90-TN-231g Mat No: 7863 Date: Ref: UCRL-5400, VOL. 15 Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1886		

File Type	Reaction Type	Q-Value
24-Cr-0g Mat. No: 7830 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERION Ref: UCRL-5400, VOL. 15 Card Images: 1753		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n,p) cross section 5.62000+ 5 Ev (n,n') Level 7.90000+ 5 Ev (n,n') Level 9.95000+ 5 Ev (n,n') Level 1.42000+ 6 Ev (n,n') Level 1.83000+ 6 Ev (n,n') Level 2.35000+ 6 Ev (n,n') Level 2.64800+ 6 Ev (n,n') Level 2.94000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-5.62000+ 5 -7.94050+ 6 -1.05050+ 7 -5.62000+ 5 -7.90000+ 5 -9.95000+ 5 -1.42000+ 6 -1.83000+ 6 -2.35000+ 6 -2.64800+ 6 -2.94000+ 6 9.25000+ 6 -3.16000+ 6 -1.21000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 5.62000+ 5 Ev (n,n') Level 7.90000+ 5 Ev (n,n') Level 9.95000+ 5 Ev (n,n') Level 1.42000+ 6 Ev (n,n') Level 1.83000+ 6 Ev (n,n') Level 2.35000+ 6 Ev (n,n') Level 2.64800+ 6 Ev (n,n') Level 2.94000+ 6 Ev (n,n') Level	-5.62000+ 5 -7.90000+ 5 -9.95000+ 5 -1.42000+ 6 -1.83000+ 6 -2.35000+ 6 -2.64800+ 6 -2.94000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n,p) cross section (n,n') to the continuum	-7.94050+ 6 -1.05050+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	9.25000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	9.25000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	9.25000+ 6
25-Mn-55g Mat. No: 7831 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERION Ref: UCRL-5400, VOL. 15 Card Images: 1173		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n,p) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-1.02300+ 7 -8.06800+ 6 7.27000+ 6 -1.81000+ 6 -6.30000+ 5
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n,p) cross section (n,n') to the continuum	-1.02300+ 7 -8.06800+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.27000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.27000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.27000+ 6
26-Fe-0g Mat. No: 7832 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERION Ref: UCRL-5400, VOL. 15 Card Images: 2496		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section 8.45000+ 5 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-8.45000+ 5 -1.12000+ 7 -8.45000+ 5 7.84500+ 6 -1.91000+ 6 3.20000+ 5
Angular dist. of secondary neutrons	Elastic scattering cross section 8.45000+ 5 Ev (n,n') Level	-8.45000+ 5
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') to the continuum	-1.12000+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.84500+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.84500+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.84500+ 6

File Type	Reaction Type	Q-Value
27-Co-59g	Mat. No: 7835 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 471j
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section 1.09900+ 6 Ev (n,n') Level 1.19000+ 6 Ev (n,n') Level 1.29100+ 6 Ev (n,n') Level 1.46000+ 6 Ev (n,n') Level 1.74400+ 6 Ev (n,n') Level 2.07000+ 6 Ev (n,n') Level 2.16000+ 6 Ev (n,n') Level 2.35000+ 6 Ev (n,n') Level 2.50000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-1.09900+ 6 -1.04610+ 7 -1.09900+ 6 -1.19000+ 6 -1.29100+ 6 -1.46000+ 6 -1.74400+ 6 -2.07000+ 6 -2.16000+ 6 -2.35000+ 6 -2.50000+ 6 7.49000+ 6 -7.82000+ 6 -5.14500+ 6 -6.93000+ 6 3.20080+ 5
Angular dist. of secondary neutrons	Elastic scattering cross section 1.09900+ 6 Ev (n,n') Level 1.19000+ 6 Ev (n,n') Level 1.29100+ 6 Ev (n,n') Level 1.46000+ 6 Ev (n,n') Level 1.74400+ 6 Ev (n,n') Level 2.07000+ 6 Ev (n,n') Level 2.16000+ 6 Ev (n,n') Level 2.35000+ 6 Ev (n,n') Level 2.50000+ 6 Ev (n,n') Level	-1.09900+ 6 -1.19000+ 6 -1.29100+ 6 -1.46000+ 6 -1.74400+ 6 -2.07000+ 6 -2.16000+ 6 -2.35000+ 6 -2.50000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') to the continuum	-1.04610+ 7
Photon prod. Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.49000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.49000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.49000+ 6

File Type	Reaction Type	Q-value
28-Ni-0g	Mat. No: 7836 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3922
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n'a) cross section (n,n'b) cross section (n,n'p) cross section 1.17200+ 6 Ev (n,n') Level 1.33300+ 6 Ev (n,n') Level 1.45400+ 6 Ev (n,n') Level 2.15800+ 6 Ev (n,n') Level 2.28600+ 6 Ev (n,n') Level 2.45900+ 6 Ev (n,n') Level 2.50600+ 6 Ev (n,n') Level 2.62500+ 6 Ev (n,n') Level 2.77500+ 6 Ev (n,n') Level 2.96000+ 6 Ev (n,n') Level 3.27000+ 6 Ev (n,n') Level 3.62800+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-1.17200+ 6 -7.81950+ 6 -6.29500+ 6 -8.17720+ 6 -8.17720+ 6 -8.17720+ 6 -1.17200+ 6 -1.33300+ 6 -1.45400+ 6 -2.15800+ 6 -2.28600+ 6 -2.45900+ 6 -2.50600+ 6 -2.62500+ 6 -2.77500+ 6 -2.96000+ 6 -3.27000+ 6 -3.62800+ 6 8.60000+ 6 3.94700+ 6 -5.95200+ 6 2.89020+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n'a) cross section (n,n'b) cross section 1.17200+ 6 Ev (n,n') Level 1.33300+ 6 Ev (n,n') Level 1.45400+ 6 Ev (n,n') Level 2.15800+ 6 Ev (n,n') Level 2.28600+ 6 Ev (n,n') Level 2.45900+ 6 Ev (n,n') Level 2.50600+ 6 Ev (n,n') Level 2.62500+ 6 Ev (n,n') Level 2.77500+ 6 Ev (n,n') Level 2.96000+ 6 Ev (n,n') Level 3.27000+ 6 Ev (n,n') Level 3.62800+ 6 Ev (n,n') Level	-7.81950+ 6 -6.29500+ 6 -8.17720+ 6 -1.17200+ 6 -1.33300+ 6 -1.45400+ 6 -2.15800+ 6 -2.28600+ 6 -2.45900+ 6 -2.50600+ 6 -2.62500+ 6 -2.77500+ 6 -2.96000+ 6 -3.27000+ 6 -3.62800+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n'a) cross section (n,n'b) cross section (n,n') to the continuum	-7.81950+ 6 -6.29500+ 6 -8.17720+ 6
Photon prod. Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	8.60000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.60000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.60000+ 6

File Type	Reaction Type	Q-Value
Mat. No: 7837 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 446C		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,d) cross section (n,a) cross section	-1.21800+ 7 -8.18000+ 6 8.52000+ 6 4.00000+ 5 -5.95000+ 6 2.89000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n') cross section (n,n') to the continuum	-1.21800+ 7 -8.18000+ 6
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	8.52000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	(n,g) radiative capture cross section	8.52000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	8.52000+ 6

File Type	Reaction Type	Q-Value
Mat. No: 7838 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 1367		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-9.91000+ 6 -5.77000+ 6 -6.12000+ 6 7.75000+ 6 7.20000+ 5 1.72000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n') cross section (n,n') to the continuum	-9.91000+ 6 -5.77000+ 6 -6.12000+ 6
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	7.75000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	(n,g) radiative capture cross section	7.75000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	7.75000+ 6

File Type	Reaction Type	Q-Value
Mat. No: 7840 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 1017		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-9.30000+ 6 6.97000+ 6 -1.30000+ 5 2.58000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n') to the continuum	-9.30000+ 6
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	6.97000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	(n,g) radiative capture cross section	6.97000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	6.97000+ 6

33-As- 74g	#31 No. 8301 Date: UCRL-5400, VOL. 15 Ref:	Lab: LIVERMORE Author: R.J.HOWERTON Card images: 12073	File Type	Reaction Type	Q value
General Information			Descriptive data and Dictionary		
Resonance parameter data			Resonance information		
Neutron cross sections			Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e> average log energy decrement for elastic scat. <g> : <ee>/<2e>	-7.98200+ 6 -1.87710+ 7 1.02460+ 7 3.34500+ 6 4.92900+ 6	
Angular dist. of secondary neutrons			Elastic scattering cross section		
Energy dist. of secondary neutrons			direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-7.98200+ 6 -1.87710+ 7	
Photon prod.Multplicities(from neut.reactions)			(n,g) radiative capture cross section	1.02460+ 7	
Photon prod.cross sections(from neut.reactions)			Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)			Non elastic cross section(total-elastic) (n,g) radiative capture cross section	1.02460+ 7	
Energy dist. of Photons (from neut.reactions)			Non elastic cross section(total-elastic) (n,g) radiative capture cross section	1.02460+ 7	
General Information			Descriptive data and Dictionary		
Resonance parameter data			Resonance information		
Neutron cross sections			Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e> average log energy decrement for elastic scat. <g> : <ee>/<2e>	-7.98200+ 6 -1.87710+ 7 1.02460+ 7 3.34500+ 6 4.92900+ 6	
Angular dist. of secondary neutrons			Elastic scattering cross section		
Energy dist. of secondary neutrons			direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-7.98200+ 6 -1.87710+ 7	
Photon prod.Multplicities(from neut.reactions)			(n,g) radiative capture cross section	1.02460+ 7	
Photon prod.cross sections(from neut.reactions)			Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)			Non elastic cross section(total-elastic) (n,g) radiative capture cross section	1.02460+ 7	
Energy dist. of Photons (from neut.reactions)			Non elastic cross section(total-elastic) (n,g) radiative capture cross section	1.02460+ 7	

33-As- 75g	#31 No 6332 Date: UCRL-5400, VOL. 15 Ref:	Lab: LIVERMORE Author: R.J.HOWERTON Card images: 6083	File Type	Reaction Type	Q value
General Information			Descriptive data and Dictionary		
Resonance parameter data			Resonance information		
Neutron cross sections			Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e> average log energy decrement for elastic scat. <g> : <ee>/<2e>	-1.02460+ 7 -1.82280+ 7 7.32800+ 6 -3.95900+ 5 1.20400+ 6	
Angular dist. of secondary neutrons			Elastic scattering cross section		
Energy dist. of secondary neutrons			direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-1.02460+ 7 -1.82280+ 7	
Photon prod.Multplicities(from neut.reactions)			(n,g) radiative capture cross section	7.32800+ 6	
Photon prod.cross sections(from neut.reactions)			Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)			Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.32800+ 6	
Energy dist. of Photons (from neut.reactions)			Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.32800+ 6	

		(n,t) cross section	4.79000+ 6
		<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	
Angular dist. of secondary neutrons		Elastic scattering cross section (n,n') cross section 2.18000+ 6 Ev (n,n') Level	-1.45000+ 6 -2.16000+ 6
Energy dist. of secondary neutrons		direct (n,2n) cross section (n,n') cross section	-3.69800+ 6 -1.44000+ 6
Photon prod.Multiplicities(from neut.reactions)		(n,g) radiative capture cross section	7.26000+ 6
Angular dist. of Photons (from neut.reactions)		(n,g) radiative capture cross section	7.26000+ 6
Energy dist. of Photons (from neut.reactions)		(n,g) radiative capture cross section	7.26000+ 6

39-Y - 88g	Mat.No: 8303 Date: Ref: UCRL-5400, VOL 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1875
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-9.36300+ 6 1.14690+ 7 4.39500+ 6 3.50700+ 6
	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') to the continuum	-9.36300+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	1.14690+ 7
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	1.14690+ 7
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	1.14690+ 7

39-Y - 89g	Mat.No: 8304 Date: Ref: UCRL-5400, VOL 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 5592
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section 9.09200+ 5 Ev (n,n') Level 1.50700+ 6 Ev (n,n') Level 1.74450+ 6 Ev (n,n') Level 2.22400+ 6 Ev (n,n') Level 2.56700+ 6 Ev (n,n') Level 2.88900+ 6 Ev (n,n') Level 3.10400+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-9.09200+ 5 -1.14690+ 7 -9.09200+ 5 -1.50700+ 6 -1.74450+ 6 -2.22400+ 6 -2.56700+ 6 -2.88900+ 6 -3.10400+ 6 6.85700+ 6 -7.10000+ 5 6.89000+ 5
	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section 9.09200+ 5 Ev (n,n') Level 1.50700+ 6 Ev (n,n') Level 1.74450+ 6 Ev (n,n') Level 2.22400+ 6 Ev (n,n') Level 2.56700+ 6 Ev (n,n') Level 2.88900+ 6 Ev (n,n') Level	-9.09200+ 5 -1.50700+ 6 -1.74450+ 6 -2.22400+ 6 -2.56700+ 6 -2.88900+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') to the continuum	-1.14690+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	6.85700+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.85700+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.85700+ 6

File type	Reaction type	Q-value
40-Zr-02	Mat No: 764 Date: UCR-5400, VOL. 15 Ref: Lab: LIVERMORE Author: R.J. HOWERTON Card Images: 2271	
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n) cross section 9.19800+ 5 Ev (n,n) Level 1.21000+ 6 Ev (n,n) Level 1.30000+ 6 Ev (n,n) Level 1.38000+ 6 Ev (n,n) Level 1.48000+ 6 Ev (n,n) Level 1.66000+ 6 Ev (n,n) Level 1.75000+ 6 Ev (n,n) Level 1.85940+ 6 Ev (n,n) Level (n,n) to the continuum (n,g) radiative capture cross section (n,d) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-9.19800+ 5 -7.20000+ 6 -9.19800+ 5 -7.20000+ 6 -1.48000+ 7 -9.19800+ 5 -1.21000+ 6 -1.30000+ 6 -1.38000+ 6 -1.48000+ 6 -1.66000+ 6 -1.75000+ 6 -1.85940+ 6 8.68000+ 6 -7.63000+ 5
Angular dist. of secondary neutrons	Elastic scattering cross section 9.19800+ 5 Ev (n,n) Level 1.21000+ 6 Ev (n,n) Level 1.30000+ 6 Ev (n,n) Level 1.38000+ 6 Ev (n,n) Level 1.48000+ 6 Ev (n,n) Level 1.66000+ 6 Ev (n,n) Level 1.75000+ 6 Ev (n,n) Level 1.85940+ 6 Ev (n,n) Level	-9.19800+ 5 -1.21000+ 6 -1.30000+ 6 -1.38000+ 6 -1.48000+ 6 -1.66000+ 6 -1.75000+ 6 -1.85940+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n) to the continuum	-7.20000+ 6 -1.49500+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	8.68000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.68000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.68000+ 6

File type	Reaction type	Q-value
41-Nd-93g	Mat No: 7843 Date: UCR-5400, VOL. 15 Ref: Lab: LIVERMORE Author: R.J. HOWERTON Card Images: 6024	
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section 2.90000+ 4 Ev (n,n) Level 7.40000+ 5 Ev (n,n) Level 8.10000+ 5 Ev (n,n) Level 9.59000+ 5 Ev (n,n) Level 9.59000+ 5 Ev (n,n) Level 9.57000+ 6 Ev (n,n) Level 1.31500+ 6 Ev (n,n) Level 1.48840+ 6 Ev (n,n) Level 1.67400+ 6 Ev (n,n) Level 1.94700+ 6 Ev (n,n) Level 1.94700+ 6 Ev (n,n) Level 2.15900+ 6 Ev (n,n) Level 2.33500+ 6 Ev (n,n) Level 2.51900+ 6 Ev (n,n) Level (n,n) to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-2.90000+ 4 -8.82600+ 6 -1.67180+ 7 -2.90000+ 4 -7.40000+ 5 -8.10000+ 5 -9.59000+ 5 -9.59000+ 5 -1.07000+ 6 -1.07000+ 6 -1.31500+ 6 -1.48840+ 6 -1.67400+ 6 -1.94700+ 6 -1.94700+ 6 -2.15900+ 6 -2.33500+ 6 -2.33500+ 6 -2.51900+ 6 7.23000+ 6 7.15000+ 5 4.91400+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 2.90000+ 4 Ev (n,n) Level 7.40000+ 5 Ev (n,n) Level 8.10000+ 5 Ev (n,n) Level 9.59000+ 5 Ev (n,n) Level 9.59000+ 5 Ev (n,n) Level 9.57000+ 6 Ev (n,n) Level 1.31500+ 6 Ev (n,n) Level 1.48840+ 6 Ev (n,n) Level 1.67400+ 6 Ev (n,n) Level 1.94700+ 6 Ev (n,n) Level 1.94700+ 6 Ev (n,n) Level 2.15900+ 6 Ev (n,n) Level 2.33500+ 6 Ev (n,n) Level 2.51900+ 6 Ev (n,n) Level	-2.90000+ 4 -7.40000+ 5 -8.10000+ 5 -9.59000+ 5 -9.59000+ 5 -1.07000+ 6 -1.31500+ 6 -1.48840+ 6 -1.67400+ 6 -1.94700+ 6 -1.94700+ 6 -2.15900+ 6 -2.33500+ 6 -2.51900+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n) to the continuum	-8.82600+ 6 -1.67180+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.23000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.23000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.23000+ 6

42-Mo-0g	Mat No: 7844 Date: UCRL-5400, VOL. 15 Ref:	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1233	File Type	Reaction Type	Q-Value
			General Information	Descriptive data and Dictionary	
			Resonance parameter data	Resonance Information	
			Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,2n) cross section (n,n') to the continuum (n,g) radiative capture cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-7.80000+ 6 -1.48000+ 7 8.75000+ 6
			Angular dist. of secondary neutrons	Elastic scattering cross section	
			Energy dist. of secondary neutrons	direct (n,2n) cross section (n,2n) cross section (n,n') to the continuum	-7.80000+ 6 -1.48000+ 7
			Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	8.75000+ 6
			Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
			Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.75000+ 6
			Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.75000+ 6

47-Ag-107g	Mat No: 7845 Date: UCRL-5400, VOL. 15 Ref:	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2086	File Type	Reaction Type	Q-Value
			General Information	Descriptive data and Dictionary	
			Resonance parameter data	Resonance Information	
			Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,2n) cross section 9.30000+ 4 Ev (n,n') Level 1.19860+ 5 Ev (n,n') Level 3.25000+ 5 Ev (n,n') Level 4.23000+ 5 Ev (n,n') Level 7.62800+ 5 Ev (n,n') Level 9.22000+ 5 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,d) cross section (n,i) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-9.30000+ 4 -9.53100+ 6 -1.74600+ 7 -9.30000+ 4 -1.19860+ 5 -3.25000+ 5 -4.23000+ 5 -7.62800+ 5 -9.22000+ 5
			Angular dist. of secondary neutrons	Elastic scattering cross section 9.30000+ 4 Ev (n,n') Level 1.19860+ 5 Ev (n,n') Level 3.25000+ 5 Ev (n,n') Level 4.23000+ 5 Ev (n,n') Level 7.62800+ 5 Ev (n,n') Level 9.22000+ 5 Ev (n,n') Level	-9.30000+ 4 -1.19860+ 5 -3.25000+ 5 -4.23000+ 5 -7.62800+ 5 -9.22000+ 5
			Energy dist. of secondary neutrons	direct (n,2n) cross section (n,2n) cross section (n,n') to the continuum	-9.53100+ 6 -1.74600+ 7
			Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.26900+ 6
			Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
			Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.26900+ 6
			Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.26900+ 6

Energy dist. of secondary neutrons	8.88000+ 6 Ev (n,n') Level 1.11000+ 7 Ev (n,n') Level	-1.56700+ 7 -8.88000+ 6 -1.11000+ 7
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	

47-Ag-109g	Mat. No: 7846 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2163
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51 to 91) direct (n,2n) cross section (n,3n) cross section 8.79990+ 4 Ev (n,n') Level 1.32990+ 5 Ev (n,n') Level 3.10990+ 5 Ev (n,n') Level 4.14990+ 5 Ev (n,n') Level 7.01990+ 5 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section <u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	-8.79990+ 4 -9.18180+ 6 -1.64600+ 7 -8.79990+ 4 -1.32990+ 5 -3.10990+ 5 -4.14990+ 5 -7.01990+ 5 6.80570+ 6 -3.33500+ 5 3.28800+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 8.79990+ 4 Ev (n,n') Level 1.32990+ 5 Ev (n,n') Level 3.10990+ 5 Ev (n,n') Level 4.14990+ 5 Ev (n,n') Level 7.01990+ 5 Ev (n,n') Level	-8.79990+ 4 -1.32990+ 5 -3.10990+ 5 -4.14990+ 5 -7.01990+ 5
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-9.18180+ 6 -1.64600+ 7
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	6.80570+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	6.80570+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	6.80570+ 6

48-Cd-0g	Mat. No: 7847 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1578
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51 to 91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section <u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	-8.62000+ 6 -1.61500+ 7 9.04000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-8.62000+ 6 -1.61500+ 7
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	9.04000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	9.04000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	9.04000+ 6

50-Sn-0g	Mat. No: 7850 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1129
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51 to 91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section <u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	-9.30000+ 6 -1.50000+ 7 9.35000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-9.30000+ 6 -1.50000+ 7
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	9.35000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	9.35000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	9.35000+ 6

File Type	Reaction Type	Q-Value
Mat.No: 7851 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 1025		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section (n,D) cross section (n,a) cross section	-8.57000+ 6 -1.55200+ 7 -8.57000+ 6 -1.55200+ 7 4.71000+ 6 -4.04000+ 6 3.87000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-8.57000+ 6 -1.55200+ 7
Photon prod.Mult multiplicities(from neut.reactions)	(n,g) radiative capture cross section	4.71000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	4.71000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	4.71000+ 6

File Type	Reaction Type	Q-Value
Mat.No: 7852 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 1074		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-8.27000+ 6 -1.49300+ 7 -8.27000+ 6 -1.49300+ 7 6.26000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-8.27000+ 6 -1.49300+ 7
Photon prod.Mult multiplicities(from neut.reactions)	(n,g) radiative capture cross section	6.26000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.26000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.26000+ 6

File Type	Reaction Type	Q-Value
Mat.No: 7853 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 1223		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-6.37000+ 6 -1.34000+ 7 -6.37000+ 6 -1.34000+ 7 8.04000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-6.37000+ 6 -1.34000+ 7
Photon prod.Mult multiplicities(from neut.reactions)	(n,g) radiative capture cross section	8.04000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.04000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.04000+ 6

File Type	Reaction Type	Q-Value
67-Ho-165g	Mat. No: 70 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 5966
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=511091) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	-7.99000+ 6 -1.46700+ 7 6.24000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-7.99000+ 6 -1.46700+ 7 6.24000+ 6
Photon prod.Multiplicities(from neut.reactions)	Non elastic cross section(total-elastic)	
Photon prod.cross sections(from neut.reactions)	(n,g) radiative capture cross section	6.24000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.24000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.24000+ 6

File Type	Reaction Type	Q-Value
72-Hf-0g	Mat.No. 8305 Date Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 8853
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=511091) direct (n,2n) cross section (n,3n) cross section 9.30000+ 4 Ev (n,n') Level 3.07000+ 5 Ev (n,n') Level 6.30000+ 5 Ev (n,n') Level 1.05000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	-9.30000+ 4 -7.10000+ 6 -1.38900+ 7 -9.30000+ 4 -3.07000+ 5 -6.30000+ 5 -1.05000+ 6 7.18000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section 9.30000+ 4 Ev (n,n') Level 3.07000+ 5 Ev (n,n') Level 6.30000+ 5 Ev (n,n') Level 1.05000+ 6 Ev (n,n') Level	-9.30000+ 4 -3.07000+ 5 -6.30000+ 5 -1.05000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-7.10000+ 6 -1.38900+ 7 7.18000+ 6
Photon prod.Multiplicities(from neut.reactions)	Non elastic cross section(total-elastic)	
Photon prod.cross sections(from neut.reactions)	(n,g) radiative capture cross section	7.18000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.18000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.18000+ 6

File type	Reaction type	Q-value
<p>73-Ta-181g Mat.No. 7855 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 3939</p>		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section 1.36100+ 5 Ev (n,n') Level 1.58600+ 5 Ev (n,n') Level 3.01500+ 5 Ev (n,n') Level 3.37500+ 5 Ev (n,n') Level 4.82200+ 5 Ev (n,n') Level 4.95000+ 5 Ev (n,n') Level 6.20000+ 5 Ev (n,n') Level 7.20000+ 5 Ev (n,n') Level 9.25000+ 5 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section	-1.36100+ 5 -7.63000+ 6 -1.42200+ 7 -1.36100+ 5 -1.58600+ 5 -3.01500+ 5 -3.37500+ 5 -4.82200+ 5 -4.95000+ 5 -6.20000+ 5 -7.20000+ 5 -9.25000+ 5 6.07000+ 6 -2.39000+ 5
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section 1.36100+ 5 Ev (n,n') Level 1.58600+ 5 Ev (n,n') Level 3.01500+ 5 Ev (n,n') Level 3.37500+ 5 Ev (n,n') Level 4.82200+ 5 Ev (n,n') Level 4.95000+ 5 Ev (n,n') Level 6.20000+ 5 Ev (n,n') Level 7.20000+ 5 Ev (n,n') Level 9.25000+ 5 Ev (n,n') Level	-1.36100+ 5 -1.58600+ 5 -3.01500+ 5 -3.37500+ 5 -4.82200+ 5 -4.95000+ 5 -6.20000+ 5 -7.20000+ 5 -9.25000+ 5
Photon prod.Multiplicities(from neut.reactions)	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-7.63000+ 6 -1.42200+ 7
Photon prod.cross sections(from neut.reactions)	(n,g) radiative capture cross section	6.07000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.07000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.07000+ 6
<p>74-W - 0g Mat.No. 7856 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 3170</p>		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-7.46000+ 6 -1.30900+ 7 5.83000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-7.46000+ 6 -1.30900+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	5.83000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	5.83000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	5.83000+ 6
<p>75-Re-185g Mat.No. 7658 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 2691</p>		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-7.81000+ 6 -1.44700+ 7 6.17800+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-7.81000+ 6 -1.44700+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	6.17800+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.17800+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.17800+ 6

File Type	Reaction Type	Q-Value
Angular dist. of secondary neutrons	Scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-1.26470+ 7
	(n,n ₂) cross section	-6.99900+ 6
	(n,n ₃) cross section	-6.37100+ 6
	(n,n ₃) to the continuum	
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	8.57900+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
	(n,g) radiative capture cross section	8.57900+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
	(n,g) radiative capture cross section	8.57900+ 6

75-Re-187g Mat. No: 7859 Lab: LIVERMORE
Date: UCRL-5400, VOL. 15 Author: R.J. HOWERTON
Ref: Card Images: 2567

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section (sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section (sum of MT=51 to 91)	
	direct (n,2n) cross section	-7.32000+ 6
	(n,3n) cross section	-1.35600+ 7
	(n,n ₃) to the continuum	
	(n,g) radiative capture cross section	5.87300+ 6
	<u> Lab: average elastic scattering cosine.	
	<e>: average log energy decrement for elastic scat.	
	<g> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-7.32000+ 6
	(n,3n) cross section	-1.35600+ 7
	(n,n ₃) to the continuum	
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	5.87300+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
	(n,g) radiative capture cross section	5.87300+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
	(n,g) radiative capture cross section	5.87300+ 6

78-Pi-0g Mat. No: 7860 Lab: LIVERMORE
Date: UCRL-5400, VOL. 15 Author: R.J. HOWERTON
Ref: Card Images: 1931

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section (sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section (sum of MT=51 to 91)	
	direct (n,2n) cross section	-6.07000+ 6
	(n,3n) cross section	-1.39000+ 7
	(n,n ₃) to the continuum	
	(n,g) radiative capture cross section	7.72000+ 6
	<u> Lab: average elastic scattering cosine.	
	<e>: average log energy decrement for elastic scat.	
	<g> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-6.07000+ 6
	(n,3n) cross section	-1.39000+ 7
	(n,n ₃) to the continuum	
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	7.72000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
	(n,g) radiative capture cross section	7.72000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
	(n,g) radiative capture cross section	7.72000+ 6

79-Au-197g Mat. No: 7861 Lab: LIVERMORE
Date: UCRL-5400, VOL. 15 Author: R.J. HOWERTON
Ref: Card Images: 3550

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section (sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section (sum of MT=51 to 91)	
	direct (n,2n) cross section	-8.06000+ 6
	(n,3n) cross section	-1.47500+ 7
	(n,n ₃) to the continuum	
	(n,g) radiative capture cross section	6.51000+ 6
	(n,d) cross section	4.00000+ 4
	(n,a) cross section	7.03000+ 6
	<u> Lab: average elastic scattering cosine.	
	<e>: average log energy decrement for elastic scat.	
	<g> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-8.06000+ 6
	(n,3n) cross section	-1.47500+ 7
	(n,n ₃) to the continuum	
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	6.51000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
	(n,g) radiative capture cross section	6.51000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
	(n,g) radiative capture cross section	6.51000+ 6

Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	8.36000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	(n,g) radiative capture cross section	8.36000+ 6

82-Pd-09	Mat.No: 7862 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1036
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-6.59000+ 6 -1.41110+ 7 7.35000+ 8
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-6.59000+ 6 -1.41110+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.35000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.35000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.35000+ 6

83-Bi-209g	Mat.No: 8306 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2966
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n'a) cross section 8.96600+ 5 Ev (n,n') Level 1.60850+ 6 Ev (n,n') Level 2.55900+ 6 Ev (n,n') Level 2.74200+ 6 Ev (n,n') Level 3.00000+ 6 Ev (n,n') Level 3.12100+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-8.96600+ 5 -7.46000+ 6 -1.43540+ 7 3.14400+ 6 -8.96600+ 5 -1.60850+ 6 -2.55900+ 6 -2.74200+ 6 -3.00000+ 6 -3.12100+ 6 4.60000+ 6 1.30000+ 6 9.63000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section 8.96600+ 5 Ev (n,n') Level 1.60850+ 6 Ev (n,n') Level 2.55900+ 6 Ev (n,n') Level 2.74200+ 6 Ev (n,n') Level 3.00000+ 6 Ev (n,n') Level 3.12100+ 6 Ev (n,n') Level	-8.96600+ 5 -1.60850+ 6 -2.55900+ 6 -2.74200+ 6 -3.00000+ 6 -3.12100+ 6
Photon prod.Multiplicities(from neut.reactions)	direct (n,2n) cross section (n,3n) cross section (n,n'a) cross section (n,n') to the continuum	-7.46000+ 6 -1.43540+ 7 3.14400+ 6
Photon prod.cross sections(from neut.reactions)	(n,g) radiative capture cross section	4.60000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	4.60000+ 6

File Type	Reaction Type	O Value
90-Tn-231g	Mat No: 7863 Date: Ref: UCRL-5400, VOL. 15	LAB: LIVERMORE Author: R.J.HOWERTON Card Images: 1886
General Information	Descriptive data and Dictionary <C> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-5.12000+ 6 -1.19100+ 7 1.80000+ 8 -1.71500+ 7 6.43000+ 6
Angular dist. of secondary neutrons	<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.12000+ 6 -1.19100+ 7 1.80000+ 8 -1.71500+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.43000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.43000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.43000+ 6

File Type	Reaction Type	O Value
90-Tn-232g	Mat No: 7864 Date: Ref: UCRL-5400, VOL. 15	LAB: LIVERMORE Author: R.J.HOWERTON Card Images: 6472
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-6.34000+ 6 -1.15600+ 7 1.70000+ 8 -1.83500+ 7 4.79000+ 6
Angular dist. of secondary neutrons	<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-6.34000+ 6 -1.15600+ 7 1.70000+ 8 -1.83500+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.70000+ 8 4.79000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.70000+ 8 4.79000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.70000+ 8 4.79000+ 6

Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	7.84500+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	7.84500+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	7.84500+ 6

File Type	Reaction Type	Q-Value
90-Th-233g	Mat. No: 7865 Date: UCRL-5400, VOL. 15 Ref: Author: R.J. HOWERTON Card Images: 1301	Lab: LIVERMORE
General Information	Descriptive data and Dictionary <v> : average total (prompt+delayed) neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-4.78000+ 6 -1.12200+ 7 1.80000+ 8 -1.63400+ 7 6.18000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-4.78000+ 6 -1.12200+ 7 1.80000+ 8 -1.63400+ 7
Photon prod. Multiplicities (from neut. reactions)	Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.18000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.18000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.18000+ 6

File Type	Reaction Type	Q-Value
92-U -233g	Mat. No: 7866 Date: UCRL-5400, VOL. 15 Ref: Author: R.J. HOWERTON Card Images: 3615	Lab: LIVERMORE
General Information	Descriptive data and Dictionary <v> : average total (prompt+delayed) neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-5.90000+ 6 -1.31800+ 7 1.80000+ 8 6.84000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum	-5.90000+ 6 -1.31800+ 7 1.80000+ 8
Photon prod. Multiplicities (from neut. reactions)	Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.84000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.84000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.84000+ 6

Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	8.60000+ 6
Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	8.60000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	8.60000+ 6
	(n,g) radiative capture cross section	8.60000+ 6

92-U -234g Mat.No: 7867 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 1629

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
	<v> : average total(prompt+delayed)neutrons/fission	
	Delayed neutrons from fission	
	Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section(sum of MT=51to91)	-6.84000+ 6
	direct (n,2n) cross section	-1.25900+ 7
	(n,3n) cross section	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,n') to the continuum	
	(n,g) radiative capture cross section	5.31000+ 6
	<U> Lab:average elastic scattering cosine.	
	<e>:average log energy decrement for elastic scat.	
	<g> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-6.84000+ 6
	(n,3n) cross section	-1.25900+ 7
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,n') to the continuum	
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,g) radiative capture cross section	5.31000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,g) radiative capture cross section	5.31000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,g) radiative capture cross section	5.31000+ 6

92-U -235g Mat.No: 7868 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 3244

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
	<v> : average total(prompt+delayed)neutrons/fission	
	Delayed neutrons from fission	
	Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section(sum of MT=51to91)	-5.23000+ 6
	direct (n,2n) cross section	-1.20000+ 7
	(n,3n) cross section	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,4n) cross section	-1.78900+ 7
	(n,n') to the continuum	
	(n,g) radiative capture cross section	6.55000+ 6
	<U> Lab:average elastic scattering cosine.	
	<e>:average log energy decrement for elastic scat.	
	<g> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-5.23000+ 6
	(n,3n) cross section	-1.20000+ 7
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,4n) cross section	-1.78900+ 7
	(n,n') to the continuum	
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,g) radiative capture cross section	6.55000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,g) radiative capture cross section	6.55000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,g) radiative capture cross section	6.55000+ 6

Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	6.97000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	6.97000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	6.97000+ 6

92-U -236g	Mat. No: 7869 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 1583
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary <v> : average total (prompt+delayed) neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-6.55000+ 6 -1.18500+ 7 1.80000+ 8 5.12000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum	-6.55000+ 6 -1.18500+ 7 1.80000+ 8
Photon prod. Multiplicities (from neut. reactions)	Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 5.12000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 5.12000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 5.12000+ 6

92-U -237g	Mat. No: 7870 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 1517
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary <v> : average total (prompt+delayed) neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-5.12000+ 6 -1.16700+ 7 1.80000+ 8 6.14000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum	-5.12000+ 6 -1.16700+ 7 1.80000+ 8
Photon prod. Multiplicities (from neut. reactions)	Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.14000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.14000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.14000+ 6

92-U-2380

Mat. No: 7871
Date:
Ref: UCL-5400, VOL. 15

Lab: LIVERMORRE
Author: R.J. HUNTERTON
Card Images: 3455

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
	<v> : average total(prompt+delayed)neutrons/fission	
	Delayed neutrons from fission	
	Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials)	
	Elastic scattering cross section	-4.50000+ 4
	Total inelastic cross section(sum of MT=51to91)	-6.04000+ 6
	direct (n,2n) cross section	-1.14500+ 7
	(n,3n) cross section	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	-1.78200+ 7
	(n,4n) cross section	-4.50000+ 4
	4.50000+ 4 Ev (n,n') Level	-1.48000+ 5
	1.48000+ 5 Ev (n,n') Level	-3.08000+ 5
	3.08000+ 5 Ev (n,n') Level	-6.80000+ 5
	6.80000+ 5 Ev (n,n') Level	-7.32000+ 5
	7.32000+ 5 Ev (n,n') Level	-8.27000+ 5
	8.27000+ 5 Ev (n,n') Level	-9.30000+ 5
	9.30000+ 5 Ev (n,n') Level	-9.67000+ 5
	9.67000+ 5 Ev (n,n') Level	-1.00000+ 6
	1.00000+ 6 Ev (n,n') Level	-1.04100+ 6
	1.04100+ 6 Ev (n,n') Level	-1.06000+ 6
	1.06000+ 6 Ev (n,n') Level	-1.12000+ 6
	1.12000+ 6 Ev (n,n') Level	-1.16000+ 6
	1.16000+ 6 Ev (n,n') Level	-1.22000+ 6
	1.22000+ 6 Ev (n,n') Level	-1.27000+ 6
	1.27000+ 6 Ev (n,n') Level	-1.30000+ 6
	1.30000+ 6 Ev (n,n') Level	-1.36000+ 6
	1.36000+ 6 Ev (n,n') Level	-1.41000+ 6
	1.41000+ 6 Ev (n,n') Level	-1.43700+ 6
	1.43700+ 6 Ev (n,n') Level	-1.47000+ 6
	1.47000+ 6 Ev (n,n') Level	-1.62500+ 6
	1.62500+ 6 Ev (n,n') Level	-1.87500+ 6
	1.87500+ 6 Ev (n,n') Level	
	(n,n') to the continuum	
	(n,g) radiative capture cross section	4.80000+ 6
	<U> Lab:average elastic scattering cosine.	
	<E>:average log energy decrement for elastic scat.	
	<Q> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
	4.50000+ 4 Ev (n,n') Level	-4.50000+ 4
	1.48000+ 5 Ev (n,n') Level	-1.48000+ 5
	3.08000+ 5 Ev (n,n') Level	-3.08000+ 5
	6.80000+ 5 Ev (n,n') Level	-6.80000+ 5
	7.32000+ 5 Ev (n,n') Level	-7.32000+ 5
	8.27000+ 5 Ev (n,n') Level	-8.27000+ 5
	9.30000+ 5 Ev (n,n') Level	-9.30000+ 5
	9.67000+ 5 Ev (n,n') Level	-9.67000+ 5
	1.00000+ 6 Ev (n,n') Level	-1.00000+ 6
	1.04100+ 6 Ev (n,n') Level	-1.04100+ 6
	1.06000+ 6 Ev (n,n') Level	-1.06000+ 6
	1.12000+ 6 Ev (n,n') Level	-1.12000+ 6
	1.16000+ 6 Ev (n,n') Level	-1.16000+ 6
	1.22000+ 6 Ev (n,n') Level	-1.22000+ 6
	1.27000+ 6 Ev (n,n') Level	-1.27000+ 6
	1.30000+ 6 Ev (n,n') Level	-1.30000+ 6
	1.36000+ 6 Ev (n,n') Level	-1.36000+ 6
	1.41000+ 6 Ev (n,n') Level	-1.41000+ 6
	1.43700+ 6 Ev (n,n') Level	-1.43700+ 6
	1.47000+ 6 Ev (n,n') Level	-1.47000+ 6
	1.62500+ 6 Ev (n,n') Level	-1.62500+ 6
	1.87500+ 6 Ev (n,n') Level	-1.87500+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section	-6.04000+ 6
	(n,3n) cross section	-1.14500+ 7
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,4n) cross section	-1.78200+ 7
	(n,n') to the continuum	
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,g) radiative capture cross section	4.80000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,g) radiative capture cross section	4.80000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,g) radiative capture cross section	4.80000+ 6

File Type	Reaction Type	Q-Value
82-U -239g Mat No: 7572 Date: Ref: UCRL-5400, VOL. 15 Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 1601		
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,p) radiative capture cross section	-4.80000+ 6 -1.09500+ 7 -1.80000+ 8 -1.60700+ 7 5.93000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-4.80000+ 6 -1.09500+ 7 1.80000+ 8 -1.60700+ 7
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	1.80000+ 8 5.93000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	1.80000+ 8 5.93000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	1.80000+ 8 5.93000+ 6

File Type	Reaction Type	Q-Value
82-U -240g Mat No: 7673 Date: Ref: UCRL-5400, VOL. 15 Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 1606		
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,p) radiative capture cross section	-5.93000+ 6 -1.07400+ 7 1.80000+ 8 -1.68800+ 7 6.08000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.93000+ 6 -1.07400+ 7 1.80000+ 8 -1.68800+ 7
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	1.80000+ 8 6.08000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	1.80000+ 8 6.08000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	1.80000+ 8 6.08000+ 6

Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	7.23000+ 8
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.23000+ 8
	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.23000+ 6

File Type	Reaction Type	Q-Value
93-Np-235g Mat. No: 8307 Date: UCR-5400, VOL. 15 Ref: UCR-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1586	
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-6.88300+ 6 -1.31140+ 7 1.80000+ 8 5.68500+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <q> : <e0>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum	-6.88300+ 6 -1.31140+ 7 1.80000+ 8
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 5.68500+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 5.68500+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 5.68500+ 6

File Type	Reaction Type	Q-Value
93-Np-236g Mat. No: 8308 Date: UCR-5400, VOL. 15 Ref: UCR-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1488	
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-5.68500+ 6 -1.26680+ 7 1.80000+ 8 6.62800+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <q> : <e0>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum	-5.68500+ 6 -1.26680+ 7 1.80000+ 8
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.62800+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.62800+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.62800+ 6

File Type	Reaction Type	Q-Value
93-Np-237g	Met. No: 7874 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2531
General Information	Descriptive data and Dictionary <v> :average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-6.53700+ 6 -1.23100+ 7 1.80000+ 8 5.48000+ 6
Angular dist. of secondary neutrons	<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum	-6.53700+ 6 -1.23100+ 7 1.80000+ 8
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.90000+ 8 5.48000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 5.48000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 5.48000+ 6

File Type	Reaction Type	Q-Value
93-Np-238g	Met. No: 8309 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1509
General Information	Descriptive data and Dictionary <v> :average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-5.48800+ 6 -1.21160+ 7 1.80000+ 8 6.21800+ 6
Angular dist. of secondary neutrons	<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum	-5.48800+ 6 -1.21160+ 7 1.80000+ 8
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.21800+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.21800+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.21800+ 6

Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-9.30000+ 6 -1.50000+ 7
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	9.35000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	9.35000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	9.35000+ 6

File Type	Reaction Type	Q-Value
94-Pu-238g Mat No: 7875 Date: Ref: UCRL-5400, VOL. 15 Lab: LIVERMORE Author: R.J. HOWERTON Card Images: 2296		
General Information	Descriptive data and Dictionary <v> : average total (prompt+delayed) neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-7.00000+ 6 -1.25000+ 7 1.86000+ 8 5.66000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum	-7.00000+ 6 -1.25000+ 7 1.86000+ 8
Photon prod. Multiplicities (from neut. reactions)	Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 5.66000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 5.66000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 5.66000+ 6

File Type	Reaction Type	Q-Value
94-Pu-239g Mat No: 7876 Date: Ref: UCRL-5400, VOL. 15 Lab: LIVERMORE Author: R.J. HOWERTON Card Images: 3662		
General Information	Descriptive data and Dictionary <v> : average total (prompt+delayed) neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n) cross section 5.70000+ 4 Ev (n,n') Level 7.60000+ 4 Ev (n,n') Level 1.64000+ 5 Ev (n,n') Level 2.86000+ 5 Ev (n,n') Level 3.31000+ 5 Ev (n,n') Level 3.90000+ 5 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section	-5.70000+ 4 -5.61000+ 6 -1.25100+ 7 -1.25100+ 7 1.86000+ 8 -1.85500+ 7 -5.70000+ 4 -7.60000+ 4 -1.64000+ 5 -2.86000+ 5 -3.31000+ 5 -3.90000+ 5 6.53000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section 5.70000+ 4 Ev (n,n') Level 7.60000+ 4 Ev (n,n') Level 1.64000+ 5 Ev (n,n') Level 2.86000+ 5 Ev (n,n') Level 3.31000+ 5 Ev (n,n') Level 3.90000+ 5 Ev (n,n') Level (n,n') to the continuum	-5.70000+ 4 -7.60000+ 4 -1.64000+ 5 -2.86000+ 5 -3.31000+ 5 -3.90000+ 5
Photon prod. Multiplicities (from neut. reactions)	direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n) cross section (n,n') to the continuum	-5.61000+ 6 -1.25100+ 7 1.86000+ 8 -1.85500+ 7
Photon prod. cross sections (from neut. reactions)	Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 6.53000+ 6
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic)	
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 6.53000+ 6

Photon prod.Multipli.cities(from neut.reactions)	(n,g) radiative capture cross section	8.04000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	8.04000+ 6

File Type	Reaction Type	Q-Value
Mat.No: 7877 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 5212		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) 4.50000+ 4 Ev (n,n') Level 1.42000+ 5 Ev (n,n') Level 2.96000+ 5 Ev (n,n') Level 5.99000+ 5 Ev (n,n') Level 8.90000+ 5 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section	-4.50000+ 4 -6.53000+ 6 -1.21900+ 7 1.86000+ 8 -4.50000+ 4 -1.42000+ 5 -2.96000+ 5 -5.99000+ 5 -8.90000+ 5 5.24000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section 4.50000+ 4 Ev (n,n') Level 1.42000+ 5 Ev (n,n') Level 2.96000+ 5 Ev (n,n') Level 5.99000+ 5 Ev (n,n') Level 8.90000+ 5 Ev (n,n') Level	-4.50000+ 4 -1.42000+ 5 -2.96000+ 5 -5.99000+ 5 -8.90000+ 5
Photon prod.Multipli.cities(from neut.reactions)	direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum	-6.53000+ 6 -1.21900+ 7 1.86000+ 8
Photon prod.cross sections(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 5.24000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 5.24000+ 6

File Type	Reaction Type	Q-Value
Mat.No: 7878 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 1622		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-5.24000+ 6 -1.17800+ 7 1.86000+ 8 -1.74300+ 7 6.30000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section	
Photon prod.Multipli.cities(from neut.reactions)	direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.24000+ 6 -1.17800+ 7 1.86000+ 8 -1.74300+ 7
Photon prod.cross sections(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 6.30000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 6.30000+ 6

94-Pu-242g Mat No. 7880 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R. J. HOWERTON
 Ref: Card Images: 3197

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section 4.45000+ 4 Ev (n,n') Level 1.49000+ 5 Ev (n,n') Level 3.00000+ 5 Ev (n,n') Level 6.80000+ 5 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section	-4.45000+ 4 -6.30000+ 6 -1.15400+ 7 2.00000+ 8 -1.80700+ 7 -4.45000+ 4 -1.49000+ 5 -3.00000+ 5 -6.80000+ 5 5.04000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section 4.45000+ 4 Ev (n,n') Level 1.49000+ 5 Ev (n,n') Level 3.00000+ 5 Ev (n,n') Level 6.80000+ 5 Ev (n,n') Level	-4.45000+ 4 -1.49000+ 5 -3.00000+ 5 -6.80000+ 5
Photon prod.Mult multiplicities(from neut.reactions)	direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-6.30000+ 6 2.00000+ 8 2.00000+ 8 -1.80700+ 7
Photon prod.cross sections(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.04000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.04000+ 6

94-Pu-243g Mat No. 7881 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R. J. HOWERTON
 Ref: Card Images: 2238

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-5.03920+ 6 -1.13330+ 7 2.00000+ 8 -1.65810+ 7 6.02000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.03920+ 6 -1.13330+ 7 2.00000+ 8 -1.65810+ 7
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 6.02000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 6.02000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 6.02000+ 6

File Type	Reaction Type	Q-Value
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-7.81000+ 6
	(n,3n) cross section	-1.44700+ 7
	(n,n') to the continuum	
Photon prod.Mult multiplicities(from neut.reactions)	(n,n) radiative capture cross section	6.17800+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	6.17800+ 6
Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	6.17800+ 6

95-Am-241g Mat No: 7882 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 3477

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
	<V> :average total(prompt+delayed)neutrons/fission	
	Delayed neutrons from fission	
	Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section(sum of MT=51to91)	
	direct (n,2n) cross section	-5.93000+ 6
	(n,3n) cross section	-1.26000+ 7
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,n') to the continuum	
	(n,g) radiative capture cross section	5.48000+ 6
	(n,g) radiative capture cross section	5.48000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-5.93000+ 6
	(n,3n) cross section	-1.26000+ 7
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,n') to the continuum	
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,g) radiative capture cross section	5.48000+ 6
	(n,g) radiative capture cross section	5.48000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	2.00000+ 8
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,g) radiative capture cross section	5.48000+ 6
	(n,g) radiative capture cross section	5.48000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	2.00000+ 8
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,g) radiative capture cross section	5.48000+ 6
	(n,g) radiative capture cross section	5.48000+ 6

95-Am-242m Mat No: 7883 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 2517

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
	<V> :average total(prompt+delayed)neutrons/fission	
	Delayed neutrons from fission	
	Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section(sum of MT=51to91)	
	direct (n,2n) cross section	-5.53000+ 6
	(n,3n) cross section	-1.12500+ 7
	Total fission cross section(sum of MT=19to21,38)	1.92000+ 8
	(n,4n) cross section	-1.81300+ 7
	(n,n') to the continuum	
	(n,g) radiative capture cross section	6.38000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-5.53000+ 6
	(n,3n) cross section	-1.12500+ 7
	Total fission cross section(sum of MT=19to21,38)	1.92000+ 8
	(n,4n) cross section	-1.81300+ 7
	(n,n') to the continuum	
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)	1.92000+ 8
	(n,g) radiative capture cross section	6.38000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	1.92000+ 8
	Total fission cross section(sum of MT=19to21,38)	1.92000+ 8
	(n,g) radiative capture cross section	6.38000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	1.92000+ 8
	Total fission cross section(sum of MT=19to21,38)	1.92000+ 8
	(n,g) radiative capture cross section	6.38000+ 6

Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-8.06000+ 6 -1.47500+ 7
Photon prod. Multiplicities (from neut. reactions)	(n,g) radiative capture cross section	6.51000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	6.51000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) (n,g) radiative capture cross section	6.51000+ 6

File Type	Reaction Type	Q-Value
95-Am-243g	Mat. No: 7384 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J. HOWERTON Card Images: 4523
General Information	Descriptive data and Dictionary <v> : average total (prompt+delayed) neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-6.37380+ 6 -1.19010+ 7 2.00000+ 8 -1.84240+ 7 5.36000+ 6
Angular dist. of secondary neutrons	<u> : Lab: average elastic scattering cosine. <e> : average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-6.37380+ 6 -1.19010+ 7 2.00000+ 8 -1.84240+ 7
Photon prod. Multiplicities (from neut. reactions)	Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.36000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.36000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.36000+ 6

File Type	Reaction Type	Q-Value
96-Cm-242g	Mat. No: 7885 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J. HOWERTON Card Images: 2789
General Information	Descriptive data and Dictionary <v> : average total (prompt+delayed) neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section (sum of partials) Elastic scattering cross section Total inelastic cross section (sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-6.97000+ 6 -1.30300+ 7 2.00000+ 8 5.70000+ 6
Angular dist. of secondary neutrons	<u> : Lab: average elastic scattering cosine. <e> : average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section (sum of MT=19to21,38) (n,n') to the continuum	-6.97000+ 6 -1.30300+ 7 2.00000+ 8
Photon prod. Multiplicities (from neut. reactions)	Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.70000+ 6
Photon prod. cross sections (from neut. reactions)	Non elastic cross section (total-elastic)	
Angular dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.70000+ 6
Energy dist. of Photons (from neut. reactions)	Non elastic cross section (total-elastic) Total fission cross section (sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.70000+ 6

File Type	Reaction Type	Q-value
96 Cm-243g Mat. No: 7886 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15 Lab: LIVERMORE Author: R.J.HDWERTON Card Images: 2928		
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,p) radiative capture cross section	-5.69000+ 6 -1.26600+ 7 2.00000+ 8 -1.87400+ 7 6.80000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.69000+ 6 -1.26600+ 7 2.00000+ 8 -1.87400+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 6.80000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 6.80000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 6.80000+ 6

File Type	Reaction Type	Q-value
96 Cm-244g Mat. No: 7887 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15 Lab: LIVERMORE Author: R.J.HDWERTON Card Images: 3227		
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,p) radiative capture cross section	-6.80000+ 6 -1.24900+ 7 2.00000+ 8 -1.94700+ 7 5.52000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-6.80000+ 6 -1.24900+ 7 2.00000+ 8 -1.94700+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 5.52000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 5.52000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 5.52000+ 6

File Type	Reaction Type	Q-Value
96-Cm-245g	Mat. No. 78E: Date: Ref: UCR-5400, VOL. 15	Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 3036
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-5.52000+ 6 -1.23200+ 7 2.00000+ 8 -1.80200+ 7 6.45000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.52000+ 6 -1.23200+ 7 2.00000+ 8 -1.80200+ 7
Photon prod. Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 6.45000+ 6
Photon prod. cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 6.45000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 6.45000+ 6

File Type	Reaction Type	Q-Value
96-Cm-246g	Mat. No: 78B9 Date: Ref: UCR-5400, VOL. 15	Lab: LIVERMORE Author: R. J. HOWERTON Card Images: 2293
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-6.45000+ 6 -1.19700+ 7 2.00000+ 8 -1.87600+ 7 5.16000+ 6
Angular dist. of secondary neutrons	<u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-6.45000+ 6 -1.19700+ 7 2.00000+ 8 -1.87600+ 7
Photon prod. Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.16000+ 6
Photon prod. cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.16000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.16000+ 6

File Type	Reaction Type	Q-Value
Mat No: 7890 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 3498		
General Information	Descriptive data and Dictionary	
	<v> : average total(prompt+delayed)neutrons/fission	
	Delayed neutrons from fission	
	Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section(sum of MT=51to91)	
	direct (n,2n) cross section	-5.15000+ 6
	(n,3n) cross section	-1.16000+ 7
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,4n) cross section	-1.71000+ 7
	(n,n') to the continuum	
	(n,g) radiative capture cross section	6.21000+ 6
	<u> Lab:average elastic scattering cosine.	
	<e>:average log energy decrement for elastic scat.	
	<g> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-5.15000+ 6
	(n,3n) cross section	-1.16000+ 7
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,4n) cross section	-1.71000+ 7
	(n,n') to the continuum	
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,g) radiative capture cross section	6.21000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,g) radiative capture cross section	6.21000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,g) radiative capture cross section	6.21000+ 6

File Type	Reaction Type	Q-Value
Mat.No: 7891 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 2942		
General Information	Descriptive data and Dictionary	
	<v> : average total(prompt+delayed)neutrons/fission	
	Delayed neutrons from fission	
	Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section(sum of MT=51to91)	
	direct (n,2n) cross section	-6.20000+ 6
	(n,3n) cross section	-1.13600+ 7
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,4n) cross section	-1.78100+ 7
	(n,n') to the continuum	
	(n,g) radiative capture cross section	4.71000+ 6
	<u> Lab:average elastic scattering cosine.	
	<e>:average log energy decrement for elastic scat.	
	<g> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-6.20000+ 6
	(n,3n) cross section	-1.13600+ 7
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,4n) cross section	-1.78100+ 7
	(n,n') to the continuum	
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,g) radiative capture cross section	4.71000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,g) radiative capture cross section	4.71000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,g) radiative capture cross section	4.71000+ 6

File Type	Reaction Type	Q-Value
97-Bk-249g	Mat. No: 7892 Date: Ref: UCRL-5400, VOL 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2128
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-6.20000+ 6 -1.17800+ 7 -2.00000+ 8 -1.78000+ 7 2.00000+ 8 4.97000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-6.20000+ 6 -1.17800+ 7 2.00000+ 8 -1.78000+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 4.97000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 4.97000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 4.97000+ 6

File Type	Reaction Type	Q-Value
98-CF-249g	Mat. No: 7893 Date: Ref: UCRL-5400, VOL 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 4011
General Information	Descriptive data and Dictionary <v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-5.59000+ 6 -1.17800+ 7 2.00000+ 8 -1.85900+ 7 6.62000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.59000+ 6 -1.17800+ 7 2.00000+ 8 -1.85900+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 6.62000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 6.62000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 6.62000+ 6

98-Cf-250g	Mat.No: 7894 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HWERTON Card Images: 1992	File Type	Reaction Type	Q-value
General Information	Descriptive data and Dictionary			<v> :average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information				
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section				-6.61000+ 6 -1.22100+ 7 2.00000+ 8 -1.85900+ 7 5.11000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>				
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum				-6.61000+ 6 -1.22100+ 7 2.00000+ 8 -1.85900+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section				2.00000+ 8 5.11000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)				
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section				2.00000+ 8 5.11000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section				2.00000+ 8 5.11000+ 6

98-Cf-251g	Mat.No: 7895 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HWERTON Card Images: 2007	File Type	Reaction Type	Q-value
General Information	Descriptive data and Dictionary			<v> :average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information				
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section				-5.10000+ 6 -1.17300+ 7 2.00000+ 8 -1.73200+ 7 6.17000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>				
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum				-5.10000+ 6 -1.17300+ 7 2.00000+ 8 -1.73200+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section				2.00000+ 8 6.17000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)				
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section				2.00000+ 8 6.17000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section				2.00000+ 8 6.17000+ 6

98-CF-252g		Mat. No: 7896	Lab: LIVERMORE
		Date: UCRL-5400, VOL. 15	Author: R.J.HOWERTON
		Ref: UCRL-5400, VOL. 15	Card Images: 3049
File Type	Reaction Type	Q-Value	
General Information	Descriptive data and Dictionary		
Resonance parameter data	Resonance information		
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section		-6.17000+ 6 -1.12800+ 7 2.00000+ 8 -1.79000+ 7 4.79000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>		
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum		-6.17000+ 6 -1.12800+ 7 2.00000+ 8 -1.79000+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section		2.00000+ 8 4.79000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section		2.00000+ 8 4.79000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section		2.00000+ 8 4.79000+ 6

Fiss.Prod.		Mat.No: 7897	Lab: LIVERMORE
		Date: UCRL-5400, VOL. 15	Author: R.J.HOWERTON
		Ref: UCRL-5400, VOL. 15	Card Images: 1237
File Type	Reaction Type	Q-Value	
General Information	Descriptive data and Dictionary		
Resonance parameter data	Resonance information		
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section		-8.00000+ 6 -1.53500+ 7 8.00000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>		
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum		-8.00000+ 6 -1.53500+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section		8.00000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section		8.00000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section		8.00000+ 6