



INTERNATIONAL ATOMIC ENERGY AGENCY

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IAEA-NDS-11

(Rev. 5)

ENDL-84

The Evaluated Nuclear Data Library
of the Lawrence Livermore National Laboratory
in the ENDF-5 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-5 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
Rev. Sept. 1990 (H.D. Lemmel)

IAEA NUCLEAR DATA SECTION, P.O. BOX 100, A-1400 VIENNA

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-5 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-5 format

The Lawrence Livermore National Laboratory Evaluated Nuclear Data Library which is originally in Livermore's ENDL format, is now also available in the ENDF-5 format. The ENDL format is more general than the ENDF-5 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-5 format. Evaluations which appear in the ENDL library in the ENDL format and not in the ENDF-5 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-5 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. For the ENDL-82 library which is in "ENDL Transmittal Format" see the document IAEA-NDS-54.

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: 33-As-74 and -75, 39-Y-88 and -89, 72-Hf, 83-Bi-209, 93-Np-235, -236, and -238.

ENDF-5 Format

The ENDF-5 format is described in detail in the document IAEA-NDS-75 Rev. 1. 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-5 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	E	A	MAT NO.	SPECIFICATION	Z	E	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	Bi	-	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	7850
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

Notes: For 1-H-2 and 4-Be-9 see the earlier library ENDL-82.

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

27-Co-59g	Mat. No: 7835	Lab: LIVERMORE
	Date:	Author: R.J.HOWERTON
	Ref: UCLL-5400, VOL. 15	Card Images: 4713
	File Type	Reaction Type
		Q-Value

1-H

1-H

2-He

2-He

28-N

1-H - 1g	Mat.No: 7801 Date: 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. <q> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Photon prod.Mult 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: 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. <q> : <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: 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,p) 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. <q> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Photon prod.Mult 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: 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. <q> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	

28-N1- 58g	Mat.No: 7837 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 4460
File Type	Reaction Type	Q-Value

3-L1- 6g

Mat.No: 7806 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 868

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') cross section 2.18000+ 6 Ev (n,n') Level (n,g) radiative capture cross section (n,p) cross section (n,t) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-2.18000+ 6 -3.69800+ 6 -1.46000+ 6 -2.18000+ 6 7.26000+ 6 -2.73000+ 6 4.79000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section (n,n') cross section 2.18000+ 6 Ev (n,n') Level	-1.46000+ 6 -2.18000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') 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

3-L1- 7g

Mat.No: 7807 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 602

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') 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. <g> : <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,p) 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

33-As- 74g

Mat.No: 8301 Lab: LIVERMORE

4-8e-7g	Mat.No: 7808 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 273
File Type	Reaction Type	O-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,p) cross section (n,a) cross section	1.65000+ 6 1.89920+ 7
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
	Elastic scattering cross section	

5-B - 10g	Mat.No: 7810 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 969
File Type	Reaction Type	O-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'd2a) 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	-7.17000+ 5 -8.15800+ 6 -6.02000+ 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	<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 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'd2a) cross section (n,n') to the continuum	-8.15800+ 6 -6.02000+ 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: UCRL-5400, VOL. 15 Author: R.J.HOWERION
 Ref: 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,p) 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>	-2.14000+ 6 -1.14600+ 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.Multplicities(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,p) 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,p) 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,p) 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: UCRL-5400, VOL. 15 Author: R.J.HOWERION
 Ref: 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,p) 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>	-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.Multplicities(from neut.reactions)	(n,g) radiative capture cross section (n,p) cross section (n,d) 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,p) cross section (n,d) 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,p) cross section (n,d) cross section	4.94600+ 6 -1.25800+ 7 -1.37200+ 7

40-Zr- 0g

Mat. No: 7841 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERION
 Ref: Card Images: 2271

7-N - 14g

Mat.No: 7813

Date:

Ref: UCRL-5400, VOL. 15

Lab: LIVERMORE

Author: R.J.HOWERTON

Card images: 2946

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') cross section 2.31300+ 6 Ev (n,n') Level 3.94500+ 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> 5.46840+ 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,d) Level 9.01000+ 6 Ev (n,d) Level 9.23580+ 6 Ev (n,d) Level (n,p) continuum excited state 8.45500+ 6 Ev (n,t) Level (n,t) continuum excited state 2.28270+ 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 6.95070+ 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 9.08270+ 6 Ev (n,a) Level 9.34210+ 5 Ev (n,a) Level (n,a) continuum Elastic scattering cross section 2.31300+ 6 Ev (n,n') Level 3.94500+ 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 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 -1.95500+ 7 -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 -5.46840+ 6 -6.09800+ 6 -6.53000+ 6 -6.71140+ 6 6.26000+ 5 -8.41200+ 6 -9.01000+ 6 -9.23580+ 6 8.45500+ 6 -8.45500+ 6 -4.01600+ 6 -2.28270+ 6 -4.60270+ 6 -5.17670+ 6 -6.90070+ 6 -6.95070+ 6 -7.45370+ 6 -8.15370+ 6 -8.72370+ 6 -9.08270+ 6 -9.34210+ 5 -1.58000+ 5 -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 -1.05500+ 7 -7.55000+ 6 1.08300+ 7 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 3.94500+ 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 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 -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 -1.05500+ 7 -7.55000+ 6 1.08300+ 7 1.08300+ 7 1.08300+ 7 1.08300+ 7
Energy dist. of secondary neutrons	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	-1.05500+ 7 -7.55000+ 6 1.08300+ 7 1.08300+ 7 1.08300+ 7 1.08300+ 7 1.08300+ 7
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)	1.08300+ 7
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	1.08300+ 7 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 1.08300+ 7

8-O - 16g

Mat.No: 7814

Date:

Ref: UCRL-5400, VOL. 15

Lab: LIVERMORE

Author: R.J.HOWERTON

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 7.10000+ 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,p) ground state 9.63600+ 6 Ev (n,p) Level 9.63600+ 6 Ev (n,p) Level 9.63600+ 6 Ev (n,p) Level (n,pp) 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 7.10000+ 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 -1.56000+ 7 -7.15000+ 6 -1.21200+ 6 -6.10000+ 6 -7.00000+ 6 -8.88000+ 6 -1.11000+ 7 -9.80000+ 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 -1.56000+ 7 -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 -1.56000+ 7 -7.15000+ 6 -1.21200+ 6 -1.56000+ 7 -7.15000+ 6 -1.21200+ 6 -1.56000+ 7
Angular dist. of secondary neutrons	Elastic scattering cross section 7.10000+ 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 -7.00000+ 6 -8.88000+ 6 -1.11000+ 7 -1.56000+ 7 -7.15000+ 6 -1.21200+ 6 -1.56000+ 7 -7.15000+ 6 -1.21200+ 6 -1.56000+ 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 Non elastic cross section(total-elastic) Non elastic cross section(total-elastic) Non elastic cross section(total-elastic)	-1.56000+ 7 -7.15000+ 6 -1.21200+ 6 -1.56000+ 7 -7.15000+ 6 -1.21200+ 6 -1.56000+ 7
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	1.56000+ 7
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	1.56000+ 7
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	1.56000+ 7

File Type	Reaction Type	Q-value
9-F - 19g	Mat. No: 7815 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J. HOWE RATION Card Images: 3496
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 (n,n') 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 (n,n') to the continuum (n,g) radiative capture cross section (n,d) 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>	-1.10000+ 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 -7.55700+ 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') cross section (n,n') 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	Q-value
47-Ag-109g	Mat. No: 7846 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J. HOWE RATION Card Images: 2163

11-

12-

56

11-Na- 230	Mat.No: 7816 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 20AA	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 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 <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>		-4.39200+ 5 -1.24340+ 7 -1.04980+ 7 -8.79400+ 6 -4.39200+ 5 6.97000+ 6 -3.59700+ 6 -3.85000+ 6		
Angular dist. of secondary neutrons	Elastic scattering cross section 4.39200+ 5 Ev (n,n') Level		-4.39200+ 5		
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		-1.24340+ 7 -1.04980+ 7 -8.79400+ 6		
Photon prod.Multplicities(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		

12-Mg- 00	Mat.No: 7817 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1294	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 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 <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>		-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	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		-1.37000+ 6 -1.61000+ 6 -1.63000+ 6		
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') to the continuum		-7.32400+ 6		
Photon prod.Multplicities(from neut.reactions)	(n,g) radiative capture cross section		9.09200+ 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		9.09200+ 6		
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section		9.09200+ 6		

56-Ba-138g	Mat.No: 7851 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1025	File Type	Reaction Type	Q-Value
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File Type	Reaction Type	Q-Value
13-A1- 27g	Mat.No: 7819 Date: 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,d) cross section (n,p) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	-8.43000+ 5 -1.30570+ 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 -1.02840+ 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	-1.30570+ 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-S1- 0g	Mat.No: 7820 Date: 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,d) cross section (n,p) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	-1.27300+ 6 -8.47400+ 6 -1.15860+ 7 -1.27300+ 6 -1.77870+ 6 8.47400+ 6 -2.86300+ 6 -9.36200+ 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 -1.15860+ 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

15-P - 31g

Mat. No: 7821
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 871

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') 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 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') cross section (n,n') to the continuum	-1.23060+ 7 -7.29600+ 6
Photon prod.Mult 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

16-S - 32g

Mat. No: 7822
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 891

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') cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,l) cross section (n,a) cross section	-1.50430+ 7 -8.86500+ 6 8.64200+ 6 -9.26200+ 6 -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') cross section (n,n') to the continuum	-1.50430+ 7 -8.86500+ 6
Photon prod.Mult 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

17-C1- 0g

Mat. No: 7823
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 1947

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') cross section (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-1.26470+ 7 -6.95900+ 6 -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') cross section (n,n') to the continuum	-1.26470+ 7 -6.95900+ 6 -6.37100+ 6
Photon prod.Mult 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

73-7a-181g

Mat. No: 7855
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 3939

File Type	Reaction Type	Q-value
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18-Ar-0g	Mat.No: 7824 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 653
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	-9.87000+ 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	
Photon prod.Mult multiplicities(from neut.reactions)	direct (n,2n) cross section (n,n') to the continuum	-9.87000+ 6
Photon prod.cross sections(from neut.reactions)	(n,g) radiative capture cross section	6.10000+ 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	6.10000+ 6

19-K-0g	Mat.No: 7825 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1398
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 (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	
Photon prod.Mult multiplicities(from neut.reactions)	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.cross sections(from neut.reactions)	(n,g) radiative capture cross section	7.80000+ 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	7.80000+ 6

20-Ca-0g	Mat.No: 7826 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1671
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 (n,n') to the continuum (n,g) radiative capture cross section (n,p) cross section (n,a) cross section	-1.00300+ 7 -7.24000+ 6 -8.34000+ 6 8.36000+ 6 -5.50000+ 5 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	
Photon prod.Mult multiplicities(from neut.reactions)	direct (n,2n) cross section (n,n'a) cross section (n,n'p) cross section (n,n') to the continuum	-1.00300+ 7 -7.24000+ 6 -8.34000+ 6
Photon prod.cross sections(from neut.reactions)	(n,g) radiative capture cross section	8.36000+ 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	8.36000+ 6

75-Re-187g	Mat.No: 7859	Lab: LIVERMORE Author: R.J.HOWERTON
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22-11- 0g	Mat.No: 7828 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1593
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 9.87000+ 5 Ev (n,n') Level (n,n') to the continuum (n,p) 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. <q> : <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.Multplicities(from neut.reactions)	(n,p) 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)	Non elastic cross section(total-elastic) (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
23-V - 51g	Mat.No: 7829 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3307
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 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,p) radiative capture cross section (n,d) 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. <q> : <ee>/<2e>	-3.20100+ 5 -1.10520+ 7 -1.02930+ 7 -8.05200+ 6 -3.20100+ 5 -9.29000+ 5 -1.60900+ 6 -1.81300+ 6 -2.40900+ 6 -2.67500+ 6 -3.08000+ 6 7.30400+ 6 -1.67000+ 6 -5.62700+ 6 -1.05180+ 7 -2.06000+ 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'a) cross section (n,n'p) cross section (n,n') to the continuum	-1.10520+ 7 -1.02930+ 7 -8.05200+ 6
Photon prod.Multplicities(from neut.reactions)	(n,p) 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,g) 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
(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=51tc91) direct (n,2n) cross section (n,n' α) 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,d) 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' α) 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

File Type	Reaction Type	Q-Value
25-Mn- 55g	Mat.No: 7831 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON 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') cross section (n,n') to the continuum (n,p) radiative capture cross section (n,d) cross section (n,a) cross section	-1.02300+ 7 -8.06800+ 6 -1.02300+ 7 -8.06800+ 6 7.27000+ 6 -1.81000+ 6 -6.30000+ 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') cross section (n,n') to the continuum	-1.02300+ 7 -8.06800+ 6
Photon prod.Multilicities(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

File Type	Reaction Type	Q-Value
26-Fe- 0g	Mat.No: 7832 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON 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	-8.45000+ 5 -1.12000+ 7 -8.45000+ 5 7.84500+ 6 -1.91000+ 6 3.20000+ 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 8.45000+ 5 Ev (n,n') Level direct (n,2n) cross section (n,n') to the continuum	-8.45000+ 5 -1.12000+ 7
Photon prod.Multilicities(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

27-Co- 59g	Mat.No: 7835 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 4713	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		-1.09900+ 6
		1.09900+ 6 Ev (n,n') Level		-1.04610+ 7
		1.19000+ 6 Ev (n,n') Level		-1.09900+ 6
		1.29100+ 6 Ev (n,n') Level		-1.19000+ 6
		1.46000+ 6 Ev (n,n') Level		-1.29100+ 6
		1.74400+ 6 Ev (n,n') Level		-1.46000+ 6
		2.07000+ 6 Ev (n,n') Level		-1.74400+ 6
		2.16000+ 6 Ev (n,n') Level		-2.07000+ 6
		2.35000+ 6 Ev (n,n') Level		-2.16000+ 6
		2.50000+ 6 Ev (n,n') Level		-2.35000+ 6
		(n,n') to the continuum		-2.50000+ 6
		(n,g) radiative capture cross section		7.49000+ 6
		(n,p) cross section		-7.83000+ 5
		(n,d) cross section		-5.14500+ 6
		(n,t) cross section		-8.93000+ 6
		(n,3) cross section		3.20080+ 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			
		1.09900+ 6 Ev (n,n') Level		-1.09900+ 6
		1.19000+ 6 Ev (n,n') Level		-1.19000+ 6
		1.29100+ 6 Ev (n,n') Level		-1.29100+ 6
		1.46000+ 6 Ev (n,n') Level		-1.46000+ 6
		1.74400+ 6 Ev (n,n') Level		-1.74400+ 6
		2.07000+ 6 Ev (n,n') Level		-2.07000+ 6
		2.16000+ 6 Ev (n,n') Level		-2.16000+ 6
		2.35000+ 6 Ev (n,n') Level		-2.35000+ 6
		2.50000+ 6 Ev (n,n') Level		-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

28-N1- 0g	Mat.No: 7836 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3922	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		-1.17200+ 6
		(n,n'a) cross section		-7.81950+ 6
		(n,n,p) cross section		-6.29500+ 6
		1.17200+ 6 Ev (n,n') Level		-8.17720+ 6
		1.33300+ 6 Ev (n,n') Level		-1.17200+ 6
		1.45400+ 6 Ev (n,n') Level		-1.33300+ 6
		2.15800+ 6 Ev (n,n') Level		-1.45400+ 6
		2.28600+ 6 Ev (n,n') Level		-2.15800+ 6
		2.45900+ 6 Ev (n,n') Level		-2.28600+ 6
		2.50600+ 6 Ev (n,n') Level		-2.45900+ 6
		2.62500+ 6 Ev (n,n') Level		-2.50600+ 6
		2.77500+ 6 Ev (n,n') Level		-2.62500+ 6
		2.96000+ 6 Ev (n,n') Level		-2.77500+ 6
		3.27000+ 6 Ev (n,n') Level		-2.96000+ 6
		3.62800+ 6 Ev (n,n') Level		-3.27000+ 6
		(n,n') to the continuum		-3.62800+ 6
		(n,g) radiative capture cross section		8.60000+ 6
		(n,p) cross section		3.94700+ 5
		(n,d) cross section		-5.95200+ 6
		(n,a) cross section		2.89020+ 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			
		direct (n,2n) cross section		-7.81950+ 6
		(n,n'a) cross section		-6.29500+ 6
		(n,n,p) cross section		-8.17720+ 6
		1.17200+ 6 Ev (n,n') Level		-1.17200+ 6
		1.33300+ 6 Ev (n,n') Level		-1.33300+ 6
		1.45400+ 6 Ev (n,n') Level		-1.45400+ 6
		2.15800+ 6 Ev (n,n') Level		-2.15800+ 6
		2.28600+ 6 Ev (n,n') Level		-2.28600+ 6
		2.45900+ 6 Ev (n,n') Level		-2.45900+ 6
		2.50600+ 6 Ev (n,n') Level		-2.50600+ 6
		2.62500+ 6 Ev (n,n') Level		-2.62500+ 6
		2.77500+ 6 Ev (n,n') Level		-2.77500+ 6
		2.96000+ 6 Ev (n,n') Level		-2.96000+ 6
		3.27000+ 6 Ev (n,n') Level		-3.27000+ 6
		3.62800+ 6 Ev (n,n') Level		-3.62800+ 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			-7.81950+ 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

28-N1-

29-Cu-

31-Ga-

Mat.No: 7837	Lab: LIVERMORE	Author: R.J.HOWERTON	Card Images: 4460
28-Ni- 58g	Date: UCRL-5400, VOL. 15		
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') 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. <q> : <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)	Non elastic cross section(total-elastic) (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	

Mat.No: 7838	Lab: LIVERMORE	Author: R.J.HOWERTON	Card Images: 1367
29-Cu- 0g	Date: UCRL-5400, VOL. 15		
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'g) 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 7.2000+ 5 1.72000+ 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	-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)	Non elastic cross section(total-elastic) (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	

Mat.No: 7840	Lab: LIVERMORE	Author: R.J.HOWERTON	Card Images: 1017
31-Ga- 0g	Date: UCRL-5400, VOL. 15		
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	-9.30000+ 6 6.97000+ 6 -1.30000+ 5 2.58000+ 5	
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	-9.30000+ 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)	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	

33-As- 74g

Mat.No: 8301
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOVERTON
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	-7.98200+ 6 -1.87710+ 7 1.02460+ 7 3.34500+ 6 4.92900+ 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	-7.98200+ 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)	(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	-7.98200+ 6 -1.87710+ 7 1.02460+ 7 3.34500+ 6 4.92900+ 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	-7.98200+ 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)	(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

Mat.No: 6302
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOVERTON
Card Images: 6063

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,n) cross section (n,a) cross section	-1.02460+ 7 -1.82280+ 7 7.32500+ 6 -3.95000+ 5 1.20400+ 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	-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)	(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

File Type	Reaction Type	Q-Value
39-Y - 88g	Mat.No: 8303 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1875
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
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	-9.36300+ 6
Photon prod.Multplicities(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

File Type	Reaction Type	Q-Value
39-Y - 89g	Mat.No: 8304 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 5592
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 -7.10300+ 5 6.89000+ 5
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 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
Photon prod.Multplicities(from neut.reactions)	direct (n,2n) cross section (n,n') to the continuum	-1.14690+ 7
Photon prod.cross sections(from neut.reactions)	(n,g) radiative capture cross section	6.85700+ 6
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

40-Zr- 0g	Mat.No: 7841 Date: UCRL-5400, VOL. 15 Ref:	Lab: LIVERMORE Author: R.J.HOWERION Card Images: 2271	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 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,p) cross section <U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>			-9.19800+ 5 -7.20000+ 6 -1.49500+ 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	

41-Nb- 93g	Mat.No: 7843 Date: UCRL-5400, VOL. 15 Ref:	Lab: LIVERMORE Author: R.J.HOWERION Card Images: 6024	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 2.99000+ 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 1.07000+ 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 2.15900+ 6 Ev (n,n') Level 2.33500+ 6 Ev (n,n') Level 2.51900+ 6 Ev (n,n') Level (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. <q> : <ee>/<2e>			-2.99000+ 4 -8.82600+ 6 -1.67180+ 7 -2.99000+ 4 -7.40000+ 5 -8.10000+ 5 -9.59000+ 5 -1.07000+ 6 -1.31500+ 6 -1.48840+ 6 -1.67400+ 6 -1.94700+ 6 -2.15900+ 6 -2.33500+ 6 -2.51900+ 6 7.23000+ 6 7.19000+ 5 4.91400+ 6	
Angular dist. of secondary neutrons	Elastic scattering cross section 2.99000+ 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 1.07000+ 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 2.15900+ 6 Ev (n,n') Level 2.33500+ 6 Ev (n,n') Level 2.51900+ 6 Ev (n,n') Level			-2.99000+ 4 -7.40000+ 5 -8.10000+ 5 -9.59000+ 5 -1.07000+ 6 -1.31500+ 6 -1.48840+ 6 -1.67400+ 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	

photon prod.cross sections(from neut.reactions)
 Angular dist. of Photons (from neut.reactions)
 Energy dist. of Photons (from neut.reactions)

Non elastic cross section(total-elastic)
 Non elastic cross section(total-elastic)
 Non elastic cross section(total-elastic)

42-Mo-00	Mat.No: 7844 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1233	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,p) radiative capture cross section		-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,3n) cross section (n,n') to the continuum (n,p) radiative capture cross section		-7.80000+ 6 -1.48000+ 7 8.75000+ 6	
Photon prod.Multplicities(from neut.reactions)	Non elastic cross section(total-elastic)			
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-1070	Mat.No: 7845 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2086	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 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,p) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section		-9.30000+ 6 -9.53100+ 6 -1.74600+ 7 -9.30000+ 4 -1.19860+ 5 -3.25000+ 5 -4.23000+ 5 -7.62800+ 5 -9.22000+ 5 7.26900+ 6 1.47500+ 6 -3.57000+ 6 -6.87300+ 6 4.18200+ 6	
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,3n) cross section (n,n') to the continuum (n,p) radiative capture cross section		-9.53100+ 6 -1.74600+ 7 7.26900+ 6	
Photon prod.Multplicities(from neut.reactions)	Non elastic cross section(total-elastic)			
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-1

48-Co

50-Sn

47-Ag-109g

Mat.No: 7846
Date: UCRL-5400, VOL. 15
Ref: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=51to91) 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)	(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: UCRL-5400, VOL. 15
Ref: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=51to91) 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+ 5 -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)	(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: UCRL-5400, VOL. 15
Ref:Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 1139

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 <U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-9.33000+ 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	-9.33000+ 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)	(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

56-Ba-138g	Mat.No: 7851 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1025	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,d) cross section (n,a) cross section	-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.Multplicities(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	

63-Eu- 0g	Mat.No: 7852 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1074	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	-8.27000+ 6 -1.49000+ 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 -1.49000+ 7	
Photon prod.Multplicities(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	

64-Ga- 0g	Mat.No: 7853 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1223	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	-6.37000+ 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.Multplicities(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
Mat. No: 7854 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 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=51to91) 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
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	-7.99000+ 6 -1.46700+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	6.24000+ 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	6.24000+ 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
Mat. No: 8305 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 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=51to91) 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	-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	<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 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 direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-9.30000+ 4 -3.07000+ 5 -6.30000+ 5 -1.05000+ 6 -7.10000+ 6 -1.38900+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.18000+ 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) (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

73-Ta-181g

Mat.No: 7855

Date:

Ref: UCRL-5400, VOL. 15

Lab: LIVERMORE

Author: R.J.HOWERTON

Card Images: 3939

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=511091) 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 <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	-1.36100+ 5 -7.03000+ 5 -1.42200+ 5 -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	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
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-7.63000+ 6 -1.42200+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	6.07000+ 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	8.07000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.07000+ 6

74-W - 0g

Mat.No: 7856

Date:

Ref: UCRL-5400, VOL. 15

Lab: LIVERMORE

Author: R.J.HOWERTON

Card Images: 3170

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=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. <g> : <ee>/<2e>	-7.46000+ 6 -1.30900+ 7 5.83000+ 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	-7.46000+ 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

75-Re-185g

Mat.No: 7858

Date:

Ref: UCRL-5400, VOL. 15

Lab: LIVERMORE

Author: R.J.HOWERTON

Card Images: 2691

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=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. <g> : <ee>/<2e>	-7.81000+ 6 -1.44700+ 7 6.17800+ 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	-7.81000+ 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
75-Re-187g	Mat.No: 7859 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2567
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	-7.32000+ 6 -1.35600+ 7 5.87300+ 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	-7.32000+ 6 -1.35600+ 7
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)	5.87300+ 6
Angular dist. of Photons (from neut.reactions)	(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

File Type	Reaction Type	Q-Value
78-Pt- 0g	Mat.No: 7860 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1931
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	-6.07000+ 6 -1.39000+ 7 7.72000+ 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,3n) cross section (n,n') to the continuum	-6.07000+ 6 -1.39000+ 7
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)	7.72000+ 6
Angular dist. of Photons (from neut.reactions)	(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

File Type	Reaction Type	Q-Value
79-Au-197g	Mat.No: 7861 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3550
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	-8.06000+ 6 -1.47500+ 7 6.51000+ 6 4.00000+ 4 7.03000+ 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	-8.06000+ 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)	6.51000+ 6
Angular dist. of Photons (from neut.reactions)	(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
82-Pb-0g	Mat.No: 7862 Date: UCR-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1936
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+ 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	-6.59000+ 6 -1.41110+ 7
Photon prod.Mult 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)	(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

File Type	Reaction Type	Q-Value
83-81-209g	Mat.No: 8306 Date: UCR-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2966
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+ 5 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.Mult 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)	(n,g) radiative capture cross section	4.60000+ 6

90-Th-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
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	-5.12000+ 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. <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	-5.12000+ 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

90-Th-232g	Mat.No: 7864 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 6472
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	-6.34000+ 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. <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	-6.34000+ 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

File Type	Reaction Type	Q-Value
90-Th-233g Mat.No: 7865 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 1901		
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)	-4.78000+ 6
	direct (n,2n) cross section	-1.12200+ 7
	(n,3n) cross section	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	-1.63400+ 7
	(n,n') cross section	
	(n,n') to the continuum	
	(n,g) radiative capture cross section	6.18000+ 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	-4.78000+ 6
	(n,3n) cross section	-1.12200+ 7
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,n') cross section	-1.63400+ 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	6.18000+ 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)	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	6.18000+ 6
	(n,g) radiative capture cross section	
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)	6.18000+ 6
	(n,g) radiative capture cross section	

File Type	Reaction Type	Q-Value
92-U -233g Mat.No: 7866 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 3815		
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)	-5.90000+ 6
	direct (n,2n) cross section	-1.31800+ 7
	(n,3n) cross section	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	6.84000+ 6
	(n,n') 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>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-5.90000+ 6
	(n,3n) cross section	-1.31800+ 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	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)	1.80000+ 8
	Total fission cross section(sum of MT=19to21,38)	6.84000+ 6
	(n,g) radiative capture cross section	
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)	6.84000+ 6
	(n,g) radiative capture cross section	

File Type	Reaction Type	Q Value
92-U -234g	Mat.No: 7867 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card images: 1629
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,q) radiative capture cross section	-6.84000+ 6 -1.25900+ 7 1.80000+ 8 5.31000+ 6
Angular dist. of secondary neutrons	<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <eb>/<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	-6.84000+ 6 -1.25900+ 7 1.80000+ 8
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 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) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 5.31000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 5.31000+ 6

File Type	Reaction Type	Q-Value
92-U -235g	Mat.No: 7868 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card images: 3244
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,q) radiative capture cross section	-5.23000+ 6 -1.20000+ 7 1.80000+ 8 -1.78900+ 7 6.55000+ 6
Angular dist. of secondary neutrons	<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <eb>/<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	-5.23000+ 6 -1.20000+ 7 1.80000+ 8 -1.78900+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 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) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 6.55000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 6.55000+ 6

File Type	Reaction Type	Q-Value
92-U -236g Mat.No: 7869 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOVERTON Ref: Card Images: 1503		
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,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	Elastic scattering cross section	
Energy dist. of secondary neutrons	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.Mult 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 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOVERTON Ref: Card Images: 1517		
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,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	Elastic scattering cross section	
Energy dist. of secondary neutrons	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.Mult 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

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

Lab: LIVERMORE
 Author: R.J. MONTGOMERY
 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 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 4.50000+ 4 Ev (n,n') Level 1.48000+ 5 gmV (n,n') Level 3.08000+ 5 Ev (n,n') Level 6.80000+ 5 mmV (n,n') Level 7.32000+ 5 mmV (n,n') Level 8.27000+ 5 mmV (n,n') Level 9.30000+ 5 mmV (n,n') Level 9.67000+ 5 mmV (n,n') Level 1.00000+ 6 mmV (n,n') Level 1.04100+ 6 mmV (n,n') Level 1.06000+ 6 mmV (n,n') Level 1.12000+ 6 Ev (n,n') Level 1.16000+ 6 mmV (n,n') Level 1.22000+ 6 mmV (n,n') Level 1.27000+ 6 mmV (n,n') Level 1.30000+ 6 Ev (n,n') Level 1.36000+ 6 mmV (n,n') Level 1.41000+ 6 mmV (n,n') Level 1.43700+ 6 mmV (n,n') Level 1.47000+ 6 Ev (n,n') Level 1.62500+ 6 Ev (n,n') Level 1.87500+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section	-4.50000+ 4 -6.04000+ 6 -1.14500+ 7 1.80000+ 8 -1.78200+ 7 -4.50000+ 4 -1.48000+ 5 -3.08000+ 5 -6.80000+ 5 -7.32000+ 5 -8.27000+ 5 -9.30000+ 5 -9.67000+ 5 -1.00000+ 6 -1.04100+ 6 -1.06000+ 6 -1.12000+ 6 -1.16000+ 6 -1.22000+ 6 -1.27000+ 6 -1.30000+ 6 -1.36000+ 6 -1.41000+ 6 -1.43700+ 5 -1.47000+ 5 -1.62500+ 6 -1.87500+ 6 4.80000+ 6
Angular dist. of secondary neutrons	<U> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <q> : <ee>/<2e> Elastic scattering cross section 4.50000+ 4 Ev (n,n') Level 1.48000+ 5 Ev (n,n') Level 3.08000+ 5 Ev (n,n') Level 6.80000+ 5 Ev (n,n') Level 7.32000+ 5 Ev (n,n') Level 8.27000+ 5 Ev (n,n') Level 9.30000+ 5 Ev (n,n') Level 9.67000+ 5 Ev (n,n') Level 1.00000+ 6 Ev (n,n') Level 1.04100+ 6 Ev (n,n') Level 1.06000+ 6 Ev (n,n') Level 1.12000+ 6 Ev (n,n') Level 1.16000+ 6 Ev (n,n') Level 1.22000+ 6 Ev (n,n') Level 1.27000+ 6 Ev (n,n') Level 1.30000+ 6 Ev (n,n') Level 1.36000+ 6 Ev (n,n') Level 1.41000+ 6 Ev (n,n') Level 1.43700+ 6 Ev (n,n') Level 1.47000+ 6 Ev (n,n') Level 1.62500+ 6 Ev (n,n') Level 1.87500+ 6 Ev (n,n') Level	-4.50000+ 4 -1.48000+ 5 -3.08000+ 5 -6.80000+ 5 -7.32000+ 5 -8.27000+ 5 -9.30000+ 5 -9.67000+ 5 -1.00000+ 6 -1.04100+ 6 -1.06000+ 6 -1.12000+ 6 -1.16000+ 6 -1.22000+ 6 -1.27000+ 6 -1.30000+ 6 -1.36000+ 6 -1.41000+ 6 -1.43700+ 6 -1.47000+ 6 -1.62500+ 6 -1.87500+ 6
Energy dist. of secondary neutrons	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	-6.04000+ 6 -1.14500+ 7 1.80000+ 8 -1.78200+ 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 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) (n,g) radiative capture cross section	1.80000+ 8 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) (n,g) radiative capture cross section	1.80000+ 8 4.80000+ 6

File Type	Reaction Type	Q-Value
92-U -239g Mat.No: 7872 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 1601		
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	-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	
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,4n) cross section (n,n') to the continuum	-4.80000+ 6 -1.09500+ 7 1.80000+ 8 -1.60700+ 7
Photon prod.cross sections(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 5.93000+ 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	1.80000+ 8 5.93000+ 6

File Type	Reaction Type	Q-Value
92-U -240g Mat.No: 7873 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 1666		
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	-5.93000+ 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	
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,4n) cross section (n,n') to the continuum	-5.93000+ 6 -1.07400+ 7 1.80000+ 8 -1.68800+ 7
Photon prod.cross sections(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.08000+ 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	1.80000+ 8 6.08000+ 6

93-Np-235g

Mat.No: 8307
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 1586

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	-6.98300+ 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. <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	-6.98300+ 6 -1.31140+ 7 1.80000+ 8 5.68500+ 6
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

93-Np-236g

Mat.No: 8308
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 1488

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	-5.68500+ 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. <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	-5.68500+ 6 -1.26680+ 7 1.80000+ 8 6.62800+ 6
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

93-Np-23

93-Np-2

93-Np-237g

Mat. No: 7874 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 2531

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	-6.53700+ 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. <p> : <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.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 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

94-Pu-2

93-Np-238g

Mat. No: 8309 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 1509

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	-5.48800+ 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. <p> : <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.Mult 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

94-Pu-2

Energy dist. of Photons (from neut.reactions)

(n,g) Radiative Capture Cross Section
Non elastic cross section(total-elastic)
(n,g) radiative capture cross section

9.35000+ 6

94-Pu-238g

Mat.No: 7875
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 2296

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	-7.00000+ 6 -1.28600+ 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. <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,n') to the continuum	-7.00000+ 6 -1.28600+ 7 1.86000+ 8
Photon prod.Multilplicities(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

94-Pu-239g

Mat.No: 7876
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 3662

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 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 1.86000+ 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. <q> : <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
Energy dist. of secondary neutrons	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	-5.61000+ 6 -1.25100+ 7 1.86000+ 8 -1.85500+ 7
Photon prod.Multilplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.86000+ 8 6.53000+ 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 6.53000+ 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 6.53000+ 6

94-Pu-240g Mat.No: 7877 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 5212

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) 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,q) 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
	<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 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
Energy dist. of secondary neutrons	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.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.86000+ 8 5.24000+ 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,q) radiative capture cross section	1.86000+ 8 5.24000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.86000+ 8 5.24000+ 6

94-Pu-241g Mat.No: 7878 Lab: LIVERMORE
 Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON
 Ref: Card Images: 1622

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,q) radiative capture cross section	-5.24000+ 6 -1.17800+ 7 -1.86000+ 8 -1.74300+ 7 1.86000+ 8 6.30000+ 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,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.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.86000+ 8 6.30000+ 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,q) radiative capture cross section	1.86000+ 8 6.30000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.86000+ 8 6.30000+ 6

94-Pu-242g	Mat.No: 7880 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON 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> 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
Energy dist. of secondary neutrons	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 -1.15400+ 7 2.00000+ 8 -1.80700+ 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 5.04000+ 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) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.04000+ 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 5.04000+ 6

94-Pu-243g	Mat.No: 7881 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON 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> Elastic scattering cross section	
Energy dist. of secondary neutrons	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.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)	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
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

95-Am-241g	Mat.No: Date: Ref:	Lab: Author: Card Images:
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	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	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	
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	
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	
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	

95-Am-242m	Mat.No: Date: Ref:	Lab: Author: Card Images:
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	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	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	
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	
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	
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	

Angular dist. of Photons (from neut.reactions)
Energy dist. of Photons (from neut.reactions)

Non elastic cross section(total-elastic)
(n,g) radiative capture cross section
Non elastic cross section(total-elastic)
(n,g) radiative capture cross section

6.17800+ 6
6.17800+ 6

95-Am-241g

Mat.No: 7882
Date: UCRL-5400, VOL. 15
Ref:

Lab: LIVERMORE
Author: R.J.HOWERTON
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 (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section (n,g) radiative capture cross section	-5.93000+ 6 -1.26000+ 7 2.00000+ 8 5.48000+ 6 5.48000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum	-5.93000+ 6 -1.26000+ 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 (n,g) radiative capture cross section	2.00000+ 8 5.48000+ 6 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 (n,g) radiative capture cross section	2.00000+ 8 5.48000+ 6 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 (n,g) radiative capture cross section	2.00000+ 8 5.48000+ 6 5.48000+ 6

95-Am-242m

Mat.No: 7883
Date: UCRL-5400, VOL. 15
Ref:

Lab: LIVERMORE
Author: R.J.HOWERTON
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 (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	-5.53000+ 6 -1.12500+ 7 1.92000+ 8 -1.81300+ 7 6.38000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	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	-5.53000+ 6 -1.12500+ 7 1.92000+ 8 -1.81300+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.92000+ 8 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) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.92000+ 8 6.38000+ 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	1.92000+ 8 6.38000+ 6

File Type	Reaction Type	Q-Value
95-Am-243g Mat.No: 7884 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: 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	-6.37380+ 6
	(n,3n) cross section	-1.19010+ 7
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,4n) cross section	-1.84240+ 7
	(n,n') to the continuum	
	(n,g) radiative capture cross section	5.36000+ 6
	<u> Lab:average elastic scattering cosine.	
	<e>:average log energy decrement for elastic scat.	
	<p> : <e>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-6.37380+ 6
	(n,3n) cross section	-1.19010+ 7
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,4n) cross section	-1.84240+ 7
	(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	5.36000+ 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)	2.00000+ 8
	(n,g) radiative capture cross section	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)	2.00000+ 8
	(n,g) radiative capture cross section	5.36000+ 6

File Type	Reaction Type	Q-Value
96-Cm-242g Mat.No: 7885 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: 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	-6.97000+ 6
	(n,3n) cross section	-1.30300+ 7
	Total fission cross section(sum of MT=19to21,38)	2.00000+ 8
	(n,n') to the continuum	
	(n,g) radiative capture cross section	5.70000+ 6
	<u> Lab:average elastic scattering cosine.	
	<e>:average log energy decrement for elastic scat.	
	<p> : <e>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-6.97000+ 6
	(n,3n) cross section	-1.30300+ 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	5.70000+ 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)	2.00000+ 8
	(n,g) radiative capture cross section	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)	2.00000+ 8
	(n,g) radiative capture cross section	5.70000+ 6

96-Cm-243g

Mat.No: 7886
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 2928

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	-5.69000+ 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. <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	-5.69000+ 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,g) 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,g) 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,g) radiative capture cross section	2.00000+ 8 6.80000+ 6

96-Cm-244g

Mat.No: 7887
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 3227

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	-6.80000+ 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. <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	-6.80000+ 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,g) 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,g) 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,g) radiative capture cross section	2.00000+ 8 5.52000+ 6

96-Cm-245g

Mat.No: 7888
Date: UCRL-5400, VOL. 15
Ref:Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 3036

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	-5.52000+ 6 -1.23200+ 7 2.00000+ 8 -1.80200+ 7 -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. <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	-5.52000+ 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

96-Cm-246g

Mat.No: 7889
Date: UCRL-5400, VOL. 15
Ref:Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 2293

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	-6.45000+ 8 -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. <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	-6.45000+ 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

96-Cm-247g

Mat.No: 7890
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 3498

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	-5.15000+ 6 -1.16000+ 7 2.00000+ 8 -1.71000+ 7 2.00000+ 8 -1.71000+ 7 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 (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.15000+ 6 -1.16000+ 7 2.00000+ 8 -1.71000+ 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 6.21000+ 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) (n,g) radiative capture cross section	2.00000+ 8 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) (n,g) radiative capture cross section	2.00000+ 8 6.21000+ 6

96-Cm-248g

Mat.No: 7891
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 2942

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	-6.20000+ 6 -1.13000+ 7 2.00000+ 8 -1.78100+ 7 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 (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 -1.13000+ 7 2.00000+ 8 -1.78100+ 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 4.71000+ 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) (n,g) radiative capture cross section	2.00000+ 8 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) (n,g) radiative capture cross section	2.00000+ 8 4.71000+ 6

97-Bk-249g

Mat.No: 7892
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 2128

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,q) radiative capture cross section	-6.20000+ 6 -1.17800+ 7 2.00000+ 8 -1.78000+ 7 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,q) 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,q) 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,q) radiative capture cross section	2.00000+ 8 4.97000+ 6

98-Cf-249g

Mat.No: 7893
Date:
Ref: UCRL-5400, VOL. 15Lab: LIVERMORE
Author: R.J.HOWERTON
Card Images: 4011

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,q) 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,q) 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,q) 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,q) radiative capture cross section	2.00000+ 8 6.62000+ 6

98-Cf-

98-Cf-2

98-Cf-250g

Mat.No: 7894
Date: UCRL-5400, VOL. 15
Ref:Lab: LIVERMORE
Author: R.J.HOWERTON
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: UCRL-5400, VOL. 15
Ref:Lab: LIVERMORE
Author: R.J.HOWERTON
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

Date:

Ref: UCRL-5400, VOL. 15

Lab: LIVERMORE

Author: R.J.HOWERTON

Card Images: 3049

File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary	
Resonance parameter data:	<v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Neutron cross sections	Resonance information 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.Mult 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

Date:

Ref: UCRL-5400, VOL. 15

Lab: LIVERMORE

Author: R.J.HOWERTON

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.Mult 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