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IAEA-NDS-0011

Rev. 5

ENDL-84

The Evaluated Nuclear Data Library
of the Lawrence Livermore National Laboratory
in the ENDF-5 Format

Contents and Documentation

by
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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 KeV 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)

Revised by P.K. McLaughlin IAEA/NDS Jan. 2005

The file was revised to conform with ENDF/B format standards.. The merged file was corrected for format errors and processed through the code CHECKR to ensure, as far as possible, format compatibility.

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Note:

The IAEA-NDS-reports should not be considered as formal publications. When a nuclear data library is sent out by the IAEA Nuclear Data Section, it will be accompanied by an IAEA-NDS-report which should give the data user all necessary documentation on contents, format and origin of the data library.

IAEA-NDS-reports are updated whenever there is additional information of relevance to the users of the data library.

For citations care should be taken that credit is given to the author of the data library and/or to the data center which issued the data library. The editor of the IAEA-NDS-report is usually not the author of the data library.

Neither the originator of the data libraries nor the IAEA assume any liability for their correctness or for any damages resulting from their use.

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Citation guidelines:

ENDL-84

This library contains the Evaluated Nuclear Data Library (ENDL) of the Lawrence Livermore National Laboratory as of 198". 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-7" 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 ENOF/B format file (KF) numbers and reaction (KT) numbers see document IAEA-NOS-10.

CONTENTS AND DOCUMENTATION

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

R.J. Howerton. H.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 2=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 ~ate 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	E1	A	MAT NO.	SPECIFICATION	Z	E1	A	MAT NO.	
1	H	-	1	7801	67	Ho	-	165	7854
1	H	-	3	7803	72	Hf	-	0	8305
2	He	-	3	7804	73	Ta	-	181	7855
2	He	-	4	7805	74	W	-	0	7856
3	Li	-	6	7806	75	Re	-	185	7858
3	Li	-	7	7807	75	Re	-	187	7859
4	Be	-	7	7808	78	Pt	-	0	7860
5	B	-	10	7810	79	Au	-	197	7861
5	B	-	11	7811	82	Pb	-	0	7862
6	C	-	12	7812	83	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	7880
28	Ni	-	58	7837	94	Pu	-	243	7881
29	Cu	-	0	7838	95	Am	-	241	7882
31	Ga	-	0	7840	95	Am	-	242m	7883
33	As	-	74	8301	95	Am	-	243	7884
33	As	-	75	8302	96	Cm	-	242	7885
39	Y	-	88	8303	96	Cm	-	243	7886
39	Y	-	89	8304	96	Cm	-	244	7887
40	Zr	-	0	7841	96	Cm	-	245	7888
41	Nb	-	93	7843	96	Cm	-	246	7889
42	Mo	-	0	7844	96	Cm	-	247	7890
47	Ag	-	107	7845	96	Cm	-	248	7891
47	Ag	-	109	7846	97	Bk	-	249	7892
48	Cd	-	0	7847	98	Cf	-	249	7893
50	Sn	-	0	7850	98	Cf	-	250	7894
56	Ba	-	138	7851	98	Cf	-	251	7895
63	Eu	-	0	7852	98	Cf	-	252	7896
64	Gd	-	0	7853	Fiss. Prod			7897	

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.

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
	Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
	Photon prod.Multplicities(from neut.reactions)	Elastic scattering cross section	
	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
	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	-6.26000+ 6
		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
	Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
	Photon prod.Multplicities(from neut.reactions)	Elastic scattering cross section	
	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	
	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	

3-L1- 6g	Mat.No: 7806 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON 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,d) cross section (n,t) cross section	-2.18000+ 6 -3.69800+ 6 -1.46000+ 6 -2.18000+ 6 -1.46000+ 6 7.26000+ 6 -2.73000+ 6 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 (n,n'd) cross section 2.18000+ 6 Ev (n,n') Level	-1.46000+ 6 -2.18000+ 6
			Photon prod.Multplcitties(from neut.reactions)	direct (n,2n) cross section (n,n'd) cross section	-3.69800+ 6 -1.46000+ 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 (n,g) radiative capture cross section	7.26000+ 6 7.26000+ 6
3-L1- 7g	Mat.No: 7807 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON 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't) cross section 4.77400+ 5 Ev (n,n') Level (n,g) radiative capture cross section	-4.77400+ 5 -7.26000+ 6 -2.47000+ 6 -4.77400+ 5 2.03000+ 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 (n,n't) cross section 4.77400+ 5 Ev (n,n') Level	-2.47000+ 6 -4.77400+ 5
			Photon prod.Multplcitties(from neut.reactions)	direct (n,2n) cross section (n,n't) cross section	-7.26000+ 6 -2.47000+ 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

4-Bc- 7g	Mat.No: 7808 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 273	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,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. <q> : <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	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'd2a) cross section 7.17000+ 6 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,q) radiative capture cross section (n,a) cross section (n,t2a) 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. <q> : <ee>/<2e> 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.Multipliicities(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,q) 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,q) 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,q) 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

File Type	Reaction Type	Q-Value
5-B - 11g Mat.No: 7811 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 630		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total Inelastic cross section(sum of MT=51to91) direct (n,2n) cross section 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section	-2.14000+ 6 -1.14600+ 7 -2.14000+ 6 -4.46000+ 6 -5.03000+ 6 3.37000+ 6 -1.07200+ 7 -0.56000+ 6 -6.64000+ 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 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level direct (n,2n) cross section (n,n') to the continuum	-2.14000+ 6 -4.46000+ 6 -5.03000+ 6 -1.14600+ 7
Photon prod.Multiplicities(from neut.reactions)	direct (n,2n) cross section 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section	-1.14600+ 7 -2.14000+ 6 -4.46000+ 6 -5.03000+ 6 3.37000+ 6 -1.07200+ 7 -6.64000+ 6
Angular dist. of Photons (from neut.reactions)	direct (n,2n) cross section 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section	-1.14600+ 7 -2.14000+ 6 -4.46000+ 6 -5.03000+ 6 3.37000+ 6 -1.07200+ 7 -6.64000+ 6
Energy dist. of Photons (from neut.reactions)	direct (n,2n) cross section 2.14000+ 6 Ev (n,n') Level 4.46000+ 6 Ev (n,n') Level 5.03000+ 6 Ev (n,n') Level (n,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section	-1.14600+ 7 -2.14000+ 6 -4.46000+ 6 -5.03000+ 6 3.37000+ 6 -1.07200+ 7 -6.64000+ 6

File Type	Reaction Type	Q-Value
6-C - 12g Mat.No: 7812 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 752		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total Inelastic cross section(sum of MT=51to91) (n,n' ^{3a}) cross section 4.43000+ 6 Ev (n,n') Level 7.65000+ 6 Ev (n,n') Level 9.63000+ 6 Ev (n,n') Level 1.01000+ 7 Ev (n,n') Level 1.08400+ 7 Ev (n,n') Level 1.18200+ 7 Ev (n,n') Level (n,g) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section	-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	<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 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,n' ^{3a}) cross section	-4.43000+ 6 -7.65000+ 6 -9.63000+ 6 -1.01000+ 7 -1.08400+ 7 -1.18200+ 7 -7.36000+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section (n,d) cross section (n,t) cross section	4.94600+ 6 -1.25800+ 7 -1.37200+ 7
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section (n,d) cross section (n,t) cross section	4.94600+ 6 -1.25800+ 7 -1.37200+ 7
Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section (n,d) cross section (n,t) cross section	4.94600+ 6 -1.25800+ 7 -1.37200+ 7

7-N - 14g	Mat.No: 7813 Date: UCRL-5400, VOL. 15 Ref:	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 8.41700+ 6 Ev (n,d) Level 9.01000+ 6 Ev (n,d) Level 9.23580+ 6 Ev (n,d) Level (n,d) 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		-2.31200+ 6 -1.05500+ 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 -8.41700+ 6 -9.01000+ 6 -9.23580+ 6 -5.32600+ 6 -8.45500+ 6 -4.01600+ 6 -2.28270+ 6 -4.60270+ 6 -5.17670+ 6 -6.90070+ 6 -6.95070+ 6 -6.95370+ 6 -7.45370+ 6 -8.15370+ 6 -8.72370+ 6 -9.08270+ 6 -9.34210+ 5 -1.58000+ 5		
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				-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
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') cross section				-1.05500+ 7 -7.55000+ 6
Photon prod.Multilicities(from neut.reactions)	(n,g) radiative capture cross section				1.08300+ 7
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)				
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section				1.08300+ 7
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section				1.08300+ 7
8-0 - 16g	Mat.No: 7814 Date: UCRL-5400, VOL. 15 Ref:	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') cross section (n,n') cross section 6.10000+ 6 Ev (n,n') Level 7.00000+ 6 Ev (n,n') Level 8.88000+ 6 Ev (n,n') Level 1.11000+ 7 Ev (n,n') Level (n,n') to the continuum (n,d) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e> (n,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,ao) ground state 2.21500+ 6 Ev (n,a) Level 2.21500+ 6 Ev (n,a) Level 2.21500+ 6 Ev (n,a) Level		-6.10000+ 6 -1.56700+ 7 -7.15000+ 6 -1.21200+ 7 -6.10000+ 6 -7.00000+ 6 -8.88000+ 6 -1.11000+ 7 -9.89000+ 6 -9.63600+ 6 -9.63600+ 6 -9.63600+ 6 -9.63600+ 6 -2.21500+ 6 -2.21500+ 6 -2.21500+ 6 -2.21500+ 6		
Angular dist. of secondary neutrons	Elastic scattering cross section 6.10000+ 6 Ev (n,n') Level 7.00000+ 6 Ev (n,n') Level 8.88000+ 6 Ev (n,n') Level 1.11000+ 7 Ev (n,n') Level				-6.10000+ 6 -7.00000+ 6 -8.88000+ 6 -1.11000+ 7
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') cross section (n,n') cross section (n,n') to the continuum				-1.56700+ 7 -7.15000+ 6 -1.21200+ 7
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)				
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)				
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)				

File Type	Reaction Type	Q-Value
9-F - 199		
Mat. No: 7815	Lab: LIVERMORE	
Date:	Author: R.J.HWERTON	
Ref: UCRL-5400, VOL. 15	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)	-1.10000+ 5
	direct (n,2n) cross section	-1.04310+ 7
	(n,n') cross section	-4.87800+ 6
	(n,n') cross section	-7.99300+ 6
	1.10000+ 5 Ev (n,n') Level	-1.10000+ 5
	1.97000+ 5 Ev (n,n') Level	-1.97000+ 5
	1.41700+ 6 Ev (n,n') Level	-1.41700+ 6
	1.45800+ 6 Ev (n,n') Level	-1.45800+ 6
	1.55400+ 6 Ev (n,n') Level	-1.55400+ 6
	2.78000+ 6 Ev (n,n') Level	-2.78000+ 6
	3.90700+ 6 Ev (n,n') Level	-3.90700+ 6
	3.99800+ 6 Ev (n,n') Level	-3.99800+ 6
	4.03200+ 6 Ev (n,n') Level	-4.03200+ 6
	4.37800+ 6 Ev (n,n') Level	-4.37800+ 6
	4.55500+ 6 Ev (n,n') Level	-4.55500+ 6
	4.55700+ 6 Ev (n,n') Level	-4.55700+ 6
	4.64800+ 6 Ev (n,n') Level	-4.64800+ 6
	4.68300+ 6 Ev (n,n') Level	-4.68300+ 6
	5.10600+ 6 Ev (n,n') Level	-5.10600+ 6
	5.34000+ 6 Ev (n,n') Level	-5.34000+ 6
	5.42800+ 6 Ev (n,n') Level	-5.42800+ 6
	5.46400+ 6 Ev (n,n') Level	-5.46400+ 6
	5.49900+ 6 Ev (n,n') Level	-5.49900+ 6
	5.54000+ 6 Ev (n,n') Level	-5.54000+ 6
	5.63000+ 6 Ev (n,n') Level	-5.63000+ 6
	(n,n') to the continuum	
	(n,d) radiative capture cross section	6.60000+ 6
	(n,d) cross section	-4.03600+ 6
	(n,d) cross section	-5.76800+ 6
	(n,t) cross section	-7.55700+ 6
	(n,a) cross section	-1.52300+ 6
	<u> Lab:average elastic scattering cosine.	
	<e>:average log energy decrement for elastic scat.	
	<e> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
	1.10000+ 5 Ev (n,n') Level	-1.10000+ 5
	1.97000+ 5 Ev (n,n') Level	-1.97000+ 5
	1.41700+ 6 Ev (n,n') Level	-1.41700+ 6
	1.45800+ 6 Ev (n,n') Level	-1.45800+ 6
	1.55400+ 6 Ev (n,n') Level	-1.55400+ 6
	2.78000+ 6 Ev (n,n') Level	-2.78000+ 6
	3.90700+ 6 Ev (n,n') Level	-3.90700+ 6
	3.99800+ 6 Ev (n,n') Level	-3.99800+ 6
	4.03200+ 6 Ev (n,n') Level	-4.03200+ 6
	4.37800+ 6 Ev (n,n') Level	-4.37800+ 6
	4.55500+ 6 Ev (n,n') Level	-4.55500+ 6
	4.55700+ 6 Ev (n,n') Level	-4.55700+ 6
	4.64800+ 6 Ev (n,n') Level	-4.64800+ 6
	4.68300+ 6 Ev (n,n') Level	-4.68300+ 6
	5.10600+ 6 Ev (n,n') Level	-5.10600+ 6
	5.34000+ 6 Ev (n,n') Level	-5.34000+ 6
	5.42800+ 6 Ev (n,n') Level	-5.42800+ 6
	5.46400+ 6 Ev (n,n') Level	-5.46400+ 6
	5.49900+ 6 Ev (n,n') Level	-5.49900+ 6
	5.54000+ 6 Ev (n,n') Level	-5.54000+ 6
	5.63000+ 6 Ev (n,n') Level	-5.63000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section	-1.04310+ 7
	(n,n') cross section	-4.87800+ 6
	(n,n') cross section	-7.99300+ 6
	(n,n') to the continuum	
Photon prod.Multiplicities(from neut.reactions)	(n,d) 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,d) radiative capture cross section	6.60000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	(n,d) radiative capture cross section	6.60000+ 6

11-Na- 23g	Mat.No: 7816 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 208A
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') cross section 4.39200+ 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>	-4.39200+ 5 -1.24340+ 7 -1.04980+ 7 -8.79400+ 6 -4.39200+ 5 6.97000+ 6 -3.59700+ 6 -3.88000+ 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') cross section (n,n') cross section (n,n') to the continuum (n,g) radiative capture cross section	-1.24340+ 7 -1.04980+ 7 -8.79400+ 6 6.97000+ 6
Photon prod.Mult multiplicities(from neut.reactions)	Non elastic cross section(total-elastic)	
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.97000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.97000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.97000+ 6
12-Mg- 0g	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,d) 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 -1.83000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-7.32400+ 6 9.09200+ 6
Photon prod.Mult multiplicities(from neut.reactions)	Non elastic cross section(total-elastic)	
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	9.09200+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	9.09200+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	9.09200+ 6

File Type	Reaction Type	Q-Value
13-A1- 27g	Mat.No: 7819 Date: 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	-8.43000+ 5
	(n,n,p) cross section	-1.30570+ 7
	8.43000+ 5 Ev (n,n') Level	-8.27100+ 6
	1.01300+ 6 Ev (n,n') Level	-8.43000+ 5
	2.21000+ 6 Ev (n,n') Level	-1.01300+ 6
	2.73200+ 6 Ev (n,n') Level	-2.21000+ 6
	2.98000+ 6 Ev (n,n') Level	-2.73200+ 6
	3.00100+ 6 Ev (n,n') Level	-2.98000+ 6
	3.67800+ 6 Ev (n,n') Level	-3.00100+ 6
	3.95600+ 6 Ev (n,n') Level	-3.67800+ 6
	4.05500+ 6 Ev (n,n') Level	-3.95600+ 6
	4.40900+ 6 Ev (n,n') Level	-4.05500+ 6
	4.50800+ 6 Ev (n,n') Level	-4.40900+ 6
	4.58000+ 6 Ev (n,n') Level	-4.50800+ 6
	4.81100+ 6 Ev (n,n') Level	-4.58000+ 6
	(n,n') to the continuum	-4.81100+ 6
	(n,g) radiative capture cross section	7.73000+ 6
	(n,d) cross section	-1.82780+ 6
	(n,l) cross section	-6.04600+ 6
	(n,a) cross section	-1.08840+ 7
	<u> Lab:average elastic scattering cosine.	-3.13160+ 6
	<e> average log energy decrement for elastic scat.	
	<q> : <ee>/<2e>	
Angular dist. of secondary neutrons	Elastic scattering cross section	
	8.43000+ 5 Ev (n,n') Level	-8.43000+ 5
	1.01300+ 6 Ev (n,n') Level	-1.01300+ 6
	2.21000+ 6 Ev (n,n') Level	-2.21000+ 6
	2.73200+ 6 Ev (n,n') Level	-2.73200+ 6
	2.98000+ 6 Ev (n,n') Level	-2.98000+ 6
	3.00100+ 6 Ev (n,n') Level	-3.00100+ 6
	3.67800+ 6 Ev (n,n') Level	-3.67800+ 6
	3.95600+ 6 Ev (n,n') Level	-3.95600+ 6
	4.05500+ 6 Ev (n,n') Level	-4.05500+ 6
	4.40900+ 6 Ev (n,n') Level	-4.40900+ 6
	4.50800+ 6 Ev (n,n') Level	-4.50800+ 6
	4.58000+ 6 Ev (n,n') Level	-4.58000+ 6
	4.81100+ 6 Ev (n,n') Level	-4.81100+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section	-1.30570+ 7
	(n,n,p) cross section	-8.27100+ 6
	(n,n') to the continuum	
	(n,g) radiative capture cross section	7.73000+ 6
Photon prod.Multplicities(from neut.reactions)	Non elastic cross section(total-elastic)	
Photon prod.cross sections(from neut.reactions)	(n,g) radiative capture cross section	7.73000+ 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	7.73000+ 6
	Non elastic cross section(total-elastic)	7.73000+ 6
	(n,g) radiative capture cross section	7.73000+ 6
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	-1.27300+ 6
	(n,n,p) cross section	-8.47400+ 6
	1.27300+ 6 Ev (n,n') Level	-1.15860+ 7
	1.77870+ 6 Ev (n,n') Level	-1.27300+ 6
	(n,n') to the continuum	-1.77870+ 6
	(n,g) radiative capture cross section	8.47400+ 6
	(n,d) cross section	-3.86000+ 6
	(n,l) cross section	-9.36700+ 6
	(n,a) cross section	-2.65400+ 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	
	1.27300+ 6 Ev (n,n') Level	-1.27300+ 6
	1.77870+ 6 Ev (n,n') Level	-1.77870+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section	-1.27300+ 6
	(n,n,p) cross section	-8.47400+ 6
	(n,n') to the continuum	-1.15860+ 7
	(n,g) radiative capture cross section	8.47400+ 6
Photon prod.Multplicities(from neut.reactions)	Non elastic cross section(total-elastic)	
Photon prod.cross sections(from neut.reactions)	(n,g) radiative capture cross section	8.47400+ 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	8.47400+ 6
	Non elastic cross section(total-elastic)	8.47400+ 6
	(n,g) radiative capture cross section	8.47400+ 6

15-P - 31g	Mat.No: 7821 Date: Ref: UCRL-5400, VOL. 15	Lab: 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=511to91) 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	-1.23060+ 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. <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	-1.23060+ 7 -7.29600+ 6
			Photon prod.Multiplicities(from neut.reactions)	(n,q) 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,q) radiative capture cross section	7.93700+ 6
			Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	7.93700+ 6
16-S - 32g	Mat.No: 7822 Date: Ref: UCRL-5400, VOL. 15	Lab: 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=511to91) 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,t) cross section (n,a) cross section	-1.50430+ 7 -8.86500+ 6 8.64200+ 6 -9.26000+ 5 -1.26900+ 7 1.52500+ 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	-1.50430+ 7 -8.86500+ 6
			Photon prod.Multiplicities(from neut.reactions)	(n,q) 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,q) radiative capture cross section	8.64200+ 6
			Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	8.64200+ 6
17-C1- 0g	Mat.No: 7823 Date: Ref: UCRL-5400, VOL. 15	Lab: 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=511to91) 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	-1.26470+ 7 -6.99900+ 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. <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	-1.26470+ 7 -6.99900+ 6 -6.37100+ 6
			Photon prod.Multiplicities(from neut.reactions)	(n,q) 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,q) radiative capture cross section	8.57900+ 6
			Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	8.57900+ 6

18-Ar- 0g	Mat. No: 7824 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 653
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+ 6
	(n,n') to the continuum	
	(n,g) radiative capture cross section	6.10000+ 6
	(n,p) cross section	-6.72000+ 6
	(n,a) cross section	-2.49000+ 6
	<Q> 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	-9.87000+ 6
	(n,n') to the continuum	
Photon prod.Mult multiplicities(from neut.reactions)	(n,g) radiative capture cross section	6.10000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	6.10000+ 6
	Non elastic cross section(total-elastic)	
	(n,g) radiative capture cross section	6.10000+ 6

18-K - 0g	Mat. No: 7825 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1398
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials)	
	Elastic scattering cross section	
	Total inelastic cross section(sum of MT=51to91)	
	direct (n,2n) cross section	-1.30750+ 7
	(n,n'a) cross section	-7.21700+ 6
	(n,n'd) cross section	-6.38000+ 6
	(n,n') to the continuum	
	(n,g) radiative capture cross section	7.80000+ 6
	(n,p) cross section	2.17000+ 5
	(n,a) cross section	1.36200+ 6
	<Q> 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	-1.30750+ 7
	(n,n'a) cross section	-7.21700+ 6
	(n,n'd) cross section	-6.38000+ 6
	(n,n') to the continuum	
Photon prod.Mult multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.80000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	7.80000+ 6
	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
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	-1.00300+ 7
	(n,n'a) cross section	-7.64000+ 6
	(n,n'd) cross section	-8.34000+ 6
	(n,n') to the continuum	
	(n,g) radiative capture cross section	8.36000+ 6
	(n,p) cross section	-5.50000+ 5
	(n,a) cross section	1.80000+ 6
	<Q> 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	-1.00300+ 7
	(n,n'a) cross section	-7.64000+ 6
	(n,n'd) cross section	-8.34000+ 6
	(n,n') to the continuum	
Photon prod.Mult multiplicities(from neut.reactions)	(n,g) radiative capture cross section	8.36000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	8.36000+ 6
	Non elastic cross section(total-elastic)	
	(n,g) radiative capture cross section	8.36000+ 6

22-T1- 0g	Mat.No: 7828 Date: 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,g) radiative capture cross section (n,p) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <x>: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,g) radiative capture cross section	8.24000+ 6
			Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
			Angular dist. of Photons (from neut.reactions)	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 - 510	Mat.No: 7829 Date: 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,g) radiative capture cross section (n,p) cross section (n,d) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <x>: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 -5.82700+ 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,g) radiative capture cross section	7.30400+ 6
			Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
			Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,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

24-Cr- 0g

Mat.No: 7830
 Date:
 Ref: UCRL-5400, VOL. 15

Lab: LIVERMORE
 Author: R.J.HOWERTON
 Card Images: 1753

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)	-5.62000+ 5
	direct (n,2n) cross section	-7.94050+ 6
	(n,n') cross section	-1.05050+ 7
	5.62000+ 5 Ev (n,n') Level	-5.62000+ 5
	7.90000+ 5 Ev (n,n') Level	-7.90000+ 5
	9.95000+ 5 Ev (n,n') Level	-9.95000+ 5
	1.42000+ 6 Ev (n,n') Level	-1.42000+ 6
	1.83000+ 6 Ev (n,n') Level	-1.83000+ 6
	2.35000+ 6 Ev (n,n') Level	-2.35000+ 6
	2.64800+ 6 Ev (n,n') Level	-2.64800+ 6
	2.94000+ 6 Ev (n,n') Level	-2.94000+ 6
	(n,n') to the continuum	
	(n,q) radiative capture cross section	9.25000+ 6
	(n,p) cross section	-3.16000+ 6
	(n,a) cross section	-1.21000+ 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	
	5.62000+ 5 Ev (n,n') Level	-5.62000+ 5
	7.90000+ 5 Ev (n,n') Level	-7.90000+ 5
	9.95000+ 5 Ev (n,n') Level	-9.95000+ 5
	1.42000+ 6 Ev (n,n') Level	-1.42000+ 6
	1.83000+ 6 Ev (n,n') Level	-1.83000+ 6
	2.35000+ 6 Ev (n,n') Level	-2.35000+ 6
	2.64800+ 6 Ev (n,n') Level	-2.64800+ 6
	2.94000+ 6 Ev (n,n') Level	-2.94000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section	-7.94050+ 6
	(n,n') cross section	-1.05050+ 7
	(n,n') to the continuum	
	(n,q) radiative capture cross section	9.25000+ 6
Photon prod.Multiplicities(from neut.reactions)	Non elastic cross section(total-elastic)	
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	(n,q) radiative capture cross section	9.25000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	(n,q) radiative capture cross section	9.25000+ 6

Mat. No:	Date:	Ref:	Lab:	Author:	Card Images:
25-Mn- 55g	7831	UCRL-5400, VOL. 15	LIVERMORE	R.J.HOWERTON	1173
File Type	Reaction Type				
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,d) cross section (n,a) 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 (n,n') cross section (n,n') to the continuum (n,g) radiative capture cross section Non elastic cross section(total-elastic)				
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section Non elastic cross section(total-elastic)				
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section				
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section				
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section				
Q-Value					
	-1.02300+ 7				
	-8.06800+ 6				
	7.27000+ 6				
	-1.81000+ 6				
	-6.30000+ 5				
	-1.02300+ 7				
	-8.06800+ 6				
	7.27000+ 6				
	7.27000+ 6				
	7.27000+ 6				
26-Fe- 0g	7832	UCRL-5400, VOL. 15	LIVERMORE	R.J.HOWERTON	2496
File Type	Reaction Type				
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,d) cross section (n,a) 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	8.45000+ 5 Ev (n,n') Level direct (n,2n) cross section (n,n') to the continuum (n,g) radiative capture cross section Non elastic cross section(total-elastic)				
Photon prod.Multiplicities(from neut.reactions)	(n,g) radiative capture cross section Non elastic cross section(total-elastic)				
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section				
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section				
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section				
Q-Value					
	-8.45000+ 5				
	-1.12000+ 7				
	-8.45000+ 5				
	7.84500+ 6				
	-1.91000+ 6				
	3.20000+ 5				
	-8.45000+ 5				
	-1.12000+ 7				
	7.84500+ 6				
	7.84500+ 6				
	7.84500+ 6				

File Type	Reaction Type	Q-Value
27-Co- 59g	Mat.No: 7835 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 4713
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section 1.09900+ 6 Ev (n,n') Level 1.19000+ 6 Ev (n,n') Level 1.29100+ 6 Ev (n,n') Level 1.46000+ 6 Ev (n,n') Level 1.74400+ 6 Ev (n,n') Level 2.07000+ 6 Ev (n,n') Level 2.16000+ 6 Ev (n,n') Level 2.35000+ 6 Ev (n,n') Level 2.50000+ 6 Ev (n,n') Level (n,n') to the continuum (n,q) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	-1.09900+ 6 -1.04610+ 7 -1.09900+ 6 -1.19000+ 6 -1.29100+ 6 -1.46000+ 6 -1.74400+ 6 -2.07000+ 6 -2.16000+ 6 -2.35000+ 6 -2.50000+ 6 7.49000+ 6 -7.83000+ 5 -5.14500+ 6 -6.93000+ 6 3.20080+ 5
Angular dist. of secondary neutrons	Elastic scattering cross section 1.09900+ 6 Ev (n,n') Level 1.19000+ 6 Ev (n,n') Level 1.29100+ 6 Ev (n,n') Level 1.46000+ 6 Ev (n,n') Level 1.74400+ 6 Ev (n,n') Level 2.07000+ 6 Ev (n,n') Level 2.16000+ 6 Ev (n,n') Level 2.35000+ 6 Ev (n,n') Level 2.50000+ 6 Ev (n,n') Level	-1.09900+ 6 -1.19000+ 6 -1.29100+ 6 -1.46000+ 6 -1.74400+ 6 -2.07000+ 6 -2.16000+ 6 -2.35000+ 6 -2.50000+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n') to the continuum	-1.04610+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,q) 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,q) radiative capture cross section	7.49000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	7.49000+ 6
28-Ni- 00	Mat.No: 7836 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3922
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,n'a) cross section (n,n'b) cross section 1.17200+ 6 Ev (n,n') Level 1.33300+ 6 Ev (n,n') Level 1.45400+ 6 Ev (n,n') Level 2.15800+ 6 Ev (n,n') Level 2.28600+ 6 Ev (n,n') Level 2.45900+ 6 Ev (n,n') Level 2.50600+ 6 Ev (n,n') Level 2.62500+ 6 Ev (n,n') Level 2.77500+ 6 Ev (n,n') Level 2.96000+ 6 Ev (n,n') Level 3.27000+ 6 Ev (n,n') Level 3.62800+ 6 Ev (n,n') Level (n,n') to the continuum (n,q) radiative capture cross section (n,d) cross section (n,t) cross section (n,a) cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	-1.17200+ 6 -7.81950+ 6 -6.29500+ 6 -8.17720+ 6 -1.17200+ 6 -1.33300+ 6 -1.45400+ 6 -2.15800+ 6 -2.28600+ 6 -2.45900+ 6 -2.50600+ 6 -2.62500+ 6 -2.77500+ 6 -2.96000+ 6 -3.27000+ 6 -3.62800+ 6 8.60000+ 6 3.94700+ 5 -5.95200+ 6 2.89020+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,n'a) cross section (n,n'b) cross section 1.17200+ 6 Ev (n,n') Level 1.33300+ 6 Ev (n,n') Level 1.45400+ 6 Ev (n,n') Level 2.15800+ 6 Ev (n,n') Level 2.28600+ 6 Ev (n,n') Level 2.45900+ 6 Ev (n,n') Level 2.50600+ 6 Ev (n,n') Level 2.62500+ 6 Ev (n,n') Level 2.77500+ 6 Ev (n,n') Level 2.96000+ 6 Ev (n,n') Level 3.27000+ 6 Ev (n,n') Level 3.62800+ 6 Ev (n,n') Level	-7.81950+ 6 -6.29500+ 6 -8.17720+ 6 -1.17200+ 6 -1.33300+ 6 -1.45400+ 6 -2.15800+ 6 -2.28600+ 6 -2.45900+ 6 -2.50600+ 6 -2.62500+ 6 -2.77500+ 6 -2.96000+ 6 -3.27000+ 6 -3.62800+ 6
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,n'a) cross section (n,n'b) cross section (n,n') to the continuum (n,q) radiative capture cross section	-7.81950+ 6 -6.29500+ 6 -8.17720+ 6 8.60000+ 6
Photon prod.Multiplicities(from neut.reactions)	(n,q) 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,q) radiative capture cross section	8.60000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	8.60000+ 6

28-Ni- 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
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 -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.Multplicities(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
29-Cu- 0g	Mat.No: 7838 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1367
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	-9.91000+ 6 -5.77000+ 6 -6.12000+ 6 7.75000+ 6 7.20000+ 5 1.72000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <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	-9.91000+ 6 -5.77000+ 6 -6.12000+ 6
Photon prod.Multplicities(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
31-Ga- 0g	Mat.No: 7840 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1017
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+ 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	-9.30000+ 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

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

33-As- 75g	Mat.No: 8302 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 6083	File Type	Reaction Type	Q-Value
General Information	Resonance parameter data		Neutron cross sections	Descriptive data and Dictionary Resonance Information	
Angular dist. of secondary neutrons	Energy dist. of secondary neutrons		Photon prod.Multplicities(from neut.reactions)	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 <Q> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <Q> : <ee>/<2e>	-1.02460+ 7 -1.82280+ 7 7.32800+ 6 -3.95000+ 5 1.20400+ 6
Photon prod.cross sections(from neut.reactions)	Angular dist. of Photons (from neut.reactions)		Energy dist. of Photons (from neut.reactions)	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-1.02460+ 7 -1.82280+ 7 7.32800+ 6
General Information	Resonance parameter data		Neutron cross sections	Descriptive data and Dictionary Resonance Information	
Angular dist. of secondary neutrons	Energy dist. of secondary neutrons		Photon prod.Multplicities(from neut.reactions)	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 <Q> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <Q> : <ee>/<2e>	-1.02460+ 7 -1.82280+ 7 7.32800+ 6 -3.95000+ 5 1.20400+ 6
Photon prod.cross sections(from neut.reactions)	Angular dist. of Photons (from neut.reactions)		Energy dist. of Photons (from neut.reactions)	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-1.02460+ 7 -1.82280+ 7 7.32800+ 6

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

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

File Type	Reaction Type	Q-Value
40-Zr- 90	Mat.No: 7841 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2271
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT-51to91) direct (n,2n) cross section (n,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,d) cross section	-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	<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 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 direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-9.19800+ 5 -1.21000+ 6 -1.30000+ 6 -1.38000+ 6 -1.48000+ 6 -1.66000+ 6 -1.75000+ 6 -1.85940+ 6 -7.20000+ 6 -1.49500+ 7
Photon prod.Mult 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: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 6024
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT-51to91) direct (n,2n) cross section (n,3n) cross section 2.90000+ 4 Ev (n,n') Level 7.40000+ 5 Ev (n,n') Level 8.10000+ 5 Ev (n,n') Level 9.59000+ 5 Ev (n,n') Level 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,n') to the continuum (n,g) radiative capture cross section (n,d) cross section (n,a) cross section	-2.90000+ 4 -8.82600+ 6 -1.67180+ 7 -2.90000+ 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	<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 2.90000+ 4 Ev (n,n') Level 7.40000+ 5 Ev (n,n') Level 8.10000+ 5 Ev (n,n') Level 9.59000+ 5 Ev (n,n') Level 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 direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-2.90000+ 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 -8.82600+ 6 -1.67180+ 7
Photon prod.Mult 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

Mat. No.	Date	Ref.	Lab.	Author	Card Images
42-Mo-0g	7844	UCRL-5400, VOL. 15	LIVERMORE	R.J. HOWERTON	1233
File Type	Reaction Type	Q-Value			
General Information	Descriptive data and Dictionary				
Resonance parameter data	Resonance Information				
Neutron cross sections	Total cross section(sum of partials)				
	Elastic scattering cross section				
	Total inelastic cross section(sum of MT=51to91)				
	direct (n,2n) cross section	-7.80000+ 6			
	(n,3n) cross section	-1.48000+ 7			
	(n,n') to the continuum				
	(n,q) radiative capture cross section	8.75000+ 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	-7.80000+ 6			
	(n,3n) cross section	-1.48000+ 7			
	(n,n') to the continuum				
Photon prod.Multiplicities(from neut.reactions)	(n,q) radiative capture cross section	8.75000+ 6			
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)				
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)				
Energy dist. of Photons (from neut.reactions)	(n,q) radiative capture cross section	8.75000+ 6			
	Non elastic cross section(total-elastic)				
	(n,q) radiative capture cross section	8.75000+ 6			
47-Ag-107g	7845	UCRL-5400, VOL. 15	LIVERMORE	R.J. HOWERTON	2086
File Type	Reaction Type	Q-Value			
General Information	Descriptive data and Dictionary				
Resonance parameter data	Resonance Information				
Neutron cross sections	Total cross section(sum of partials)				
	Elastic scattering cross section				
	Total inelastic cross section(sum of MT=51to91)				
	direct (n,2n) cross section	-9.30000+ 4			
	(n,3n) cross section	-9.53100+ 6			
	9.30000+ 4 Ev (n,n') Level	-1.74600+ 7			
	1.19860+ 5 Ev (n,n') Level	-9.30000+ 4			
	3.25000+ 5 Ev (n,n') Level	-1.19860+ 5			
	4.23000+ 5 Ev (n,n') Level	-3.25000+ 5			
	7.62800+ 5 Ev (n,n') Level	-4.23000+ 5			
	9.22000+ 5 Ev (n,n') Level	-7.62800+ 5			
	(n,n') to the continuum	-9.22000+ 5			
	(n,q) radiative capture cross section	7.26900+ 6			
	(n,d) cross section	7.47500+ 5			
	(n,t) cross section	-3.57000+ 6			
	(n,a) cross section	-6.87300+ 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				
	9.30000+ 4 Ev (n,n') Level	-9.30000+ 4			
	1.19860+ 5 Ev (n,n') Level	-1.19860+ 5			
	3.25000+ 5 Ev (n,n') Level	-3.25000+ 5			
	4.23000+ 5 Ev (n,n') Level	-4.23000+ 5			
	7.62800+ 5 Ev (n,n') Level	-7.62800+ 5			
	9.22000+ 5 Ev (n,n') Level	-9.22000+ 5			
Energy dist. of secondary neutrons	direct (n,2n) cross section	-9.53100+ 6			
	(n,3n) cross section	-1.74600+ 7			
	(n,n') to the continuum				
Photon prod.Multiplicities(from neut.reactions)	(n,q) radiative capture cross section	7.26900+ 6			
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)				
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)				
Energy dist. of Photons (from neut.reactions)	(n,q) radiative capture cross section	7.26900+ 6			
	Non elastic cross section(total-elastic)				
	(n,q) radiative capture cross section	7.26900+ 6			

File Type	Reaction Type	Q-Value
<p>47-Ag-109g Mat.No: 7846 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 2163</p>		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section 0.79990+ 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,q) radiative capture cross section (n,p) cross section (n,a) cross section	-8.79290+ 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	<U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e> Elastic scattering cross section 0.79990+ 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,q) radiative capture cross section	6.80570+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	6.80570+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	6.80570+ 6
<p>48-Cd- 00 Mat.No: 7847 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 1578</p>		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,q) radiative capture cross section	-8.62000+ 6 -1.61500+ 7 9.04000+ 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	
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-8.62000+ 6 -1.61500+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,q) radiative capture cross section	9.04000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	9.04000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	9.04000+ 6
<p>50-Sn- 00 Mat.No: 7850 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 1139</p>		
General Information	Descriptive data and Dictionary	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,q) radiative capture cross section	-9.30000+ 6 -1.50000+ 7 9.35000+ 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	
Energy dist. of secondary neutrons	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-9.30000+ 6 -1.50000+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,q) radiative capture cross section	9.35000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	9.35000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	9.35000+ 6

Mat.No: 7851	Lab: LIVERMORE	Ref: UCRL-5400, VOL. 15	Author: R.J.HOWERTON	Card Images: 1025
File Type	Reaction Type	Q-Value		
56-Ba-138g	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		-8.57000+6
		(n,3n) cross section		-1.55200+7
		(n,n') to the continuum		
		(n,g) radiative capture cross section		4.71000+6
		(n,p) cross section		-4.04000+6
		(n,a) cross section		3.87000+6
		<u> Lab:average elastic scattering cosine.		
		<e>:average log energy decrement for elastic scat.		
		<g> : <ee>/<2e>		
	Angular dist. of secondary neutrons	Elastic scattering cross section		
	Energy dist. of secondary neutrons	direct (n,2n) cross section		-8.57000+6
		(n,3n) cross section		-1.55200+7
		(n,n') to the continuum		
		(n,g) radiative capture cross section		4.71000+6
	Photon prod.Mult multiplicities(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)	(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	Lab: LIVERMORE	Ref: UCRL-5400, VOL. 15	Author: R.J.HOWERTON
	Date: UCRL-5400, VOL. 15	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			-8.27000+6
	(n,3n) cross section			-1.49000+7
	(n,n') to the continuum			
	(n,g) radiative capture cross section			6.26000+6
	<u> Lab:average elastic scattering cosine.			
	<e>:average log energy decrement for elastic scat.			
	<g> : <ee>/<2e>			
Angular dist. of secondary neutrons	Elastic scattering cross section			
Energy dist. of secondary neutrons	direct (n,2n) cross section			-8.27000+6
	(n,3n) cross section			-1.49000+7
	(n,n') to the continuum			
	(n,g) radiative capture cross section			6.26000+6
Photon prod.Mult multiplicities(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)	(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-Gd- 0g	Mat.No: 7853	Lab: LIVERMORE	Ref: UCRL-5400, VOL. 15	Author: R.J.HOWERTON
	Date: UCRL-5400, VOL. 15	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			-6.37000+6
	(n,3n) cross section			-1.34000+7
	(n,n') to the continuum			
	(n,g) radiative capture cross section			8.04000+6
	<u> Lab:average elastic scattering cosine.			
	<e>:average log energy decrement for elastic scat.			
	<g> : <ee>/<2e>			
Angular dist. of secondary neutrons	Elastic scattering cross section			
Energy dist. of secondary neutrons	direct (n,2n) cross section			-6.37000+6
	(n,3n) cross section			-1.34000+7
	(n,n') to the continuum			
	(n,g) radiative capture cross section			8.04000+6
Photon prod.Mult multiplicities(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)	(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

67-Ho-165g	Mat.No: 7854 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 5966
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	-7.99000+ 6 -1.46700+ 7 6.24000+ 6
Angular dist. of secondary neutrons	<Q> 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 (n,n') to the continuum (n,g) radiative capture cross section	-7.99000+ 6 -1.46700+ 7 6.24000+ 6
Photon prod.Multiplicittes(from neut.reactions)	Non elastic cross section(total-elastic)	6.24000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.24000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.24000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	6.24000+ 6
72-Hf- 0g	Mat.No: 8305 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 8853
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 9.30000+ 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	<Q> 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 9.30000+ 4 Ev (n,n') Level 3.07000+ 5 Ev (n,n') Level 6.30000+ 5 Ev (n,n') Level 1.05000+ 6 Ev (n,n') Level	-9.30000+ 4 -3.07000+ 5 -6.30000+ 5 -1.05000+ 6
Photon prod.Multiplicitties(from neut.reactions)	direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-7.10000+ 6 -1.38900+ 7 7.18000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	7.18000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.18000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,g) radiative capture cross section	7.18000+ 6

73-Ta-181g	Mat.No: 7855 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3939		
General Information	Resonance parameter data	Neutron cross sections	Descriptive data and Dictionary Resonance Information 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,q) 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>	Q-Value -1.36100+5 -7.63000+6 -1.42200+7 -1.36100+5 -1.58600+5 -3.01500+5 -3.37500+5 -4.82200+5 -4.95000+5 -6.20000+5 -7.20000+5 -9.25000+5 6.07000+6 -2.39000+5
Angular dist. of secondary neutrons			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 (n,q) radiative capture cross section	-7.63000+6 -1.42200+7 6.07000+6
Photon prod.Multplicities(from neut.reactions)			(n,q) 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,p) radiative capture cross section	6.07000+6
Energy dist. of Photons (from neut.reactions)			Non elastic cross section(total-elastic) (n,q) 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		
General Information	Resonance parameter data	Neutron cross sections	Descriptive data and Dictionary Resonance Information 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,q) radiative capture cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	Q-Value -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.Multplicities(from neut.reactions)			(n,q) 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,q) radiative capture cross section	5.83000+6
Energy dist. of Photons (from neut.reactions)			Non elastic cross section(total-elastic) (n,q) 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		
General Information	Resonance parameter data	Neutron cross sections	Descriptive data and Dictionary Resonance Information 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,q) radiative capture cross section <u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	Q-Value -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.Multplicities(from neut.reactions)			(n,q) 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,q) radiative capture cross section	6.17800+6
Energy dist. of Photons (from neut.reactions)			Non elastic cross section(total-elastic) (n,q) radiative capture cross section	6.17800+6

Mat. No:	Lab:	Author:	Card Images:
75-Re-187g	LIVERMORE	R. J. HOWERTON	2567
Date: UCRL-5400, VOL. 15			
Ref: 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	-7.32000+ 6	
	(n,3n) cross section	-1.35600+ 7	
	(n,n') to the continuum		
	(n,g) radiative capture cross section	5.87300+ 6	
	<u> Lab:average elastic scattering cosine.		
	<e>:average log energy decrement for elastic scat.		
	<q> : <ee>/<2e>		
Angular dist. of secondary neutrons	Elastic scattering cross section		
Energy dist. of secondary neutrons	direct (n,2n) cross section	-7.32000+ 6	
	(n,3n) cross section	-1.35600+ 7	
	(n,n') to the continuum		
Photon prod. Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	5.87300+ 6	
Photon prod. cross sections(from neut.reactions)	Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)		
Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	5.87300+ 6	
	Non elastic cross section(total-elastic)		
	(n,g) radiative capture cross section	5.87300+ 6	
78-Pt- 0g	LIVERMORE	R. J. HOWERTON	1931
Date: UCRL-5400, VOL. 15			
Ref: 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	-6.07000+ 6	
	(n,3n) cross section	-1.39000+ 7	
	(n,n') to the continuum		
	(n,g) radiative capture cross section	7.72000+ 6	
	<u> Lab:average elastic scattering cosine.		
	<e>:average log energy decrement for elastic scat.		
	<q> : <ee>/<2e>		
Angular dist. of secondary neutrons	Elastic scattering cross section		
Energy dist. of secondary neutrons	direct (n,2n) cross section	-6.07000+ 6	
	(n,3n) cross section	-1.39000+ 7	
	(n,n') to the continuum		
Photon prod. Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	7.72000+ 6	
Photon prod. cross sections(from neut.reactions)	Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)		
Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	7.72000+ 6	
	Non elastic cross section(total-elastic)		
	(n,g) radiative capture cross section	7.72000+ 6	
79-Au-197g	LIVERMORE	R. J. HOWERTON	3550
Date: UCRL-5400, VOL. 15			
Ref: 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	-8.06000+ 6	
	(n,3n) cross section	-1.47500+ 7	
	(n,n') to the continuum		
	(n,g) radiative capture cross section	6.51000+ 6	
	(n,d) cross section	4.00000+ 4	
	(n,a) cross section	7.03000+ 6	
	<u> Lab:average elastic scattering cosine.		
	<e>:average log energy decrement for elastic scat.		
	<q> : <ee>/<2e>		
Angular dist. of secondary neutrons	Elastic scattering cross section		
Energy dist. of secondary neutrons	direct (n,2n) cross section	-8.06000+ 6	
	(n,3n) cross section	-1.47500+ 7	
	(n,n') to the continuum		
Photon prod. Multiplicities(from neut.reactions)	(n,g) radiative capture cross section	6.51000+ 6	
Photon prod. cross sections(from neut.reactions)	Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)		
Energy dist. of Photons (from neut.reactions)	(n,g) radiative capture cross section	6.51000+ 6	
	Non elastic cross section(total-elastic)		
	(n,g) radiative capture cross section	6.51000+ 6	

82-Pb-0g			
Mat.No: 7862	Lab: LIVERMORE	Date: UCRL-5400, VOL. 15	
Date:	Author: R.J.HOWERTON	Ref: UCRL-5400, VOL. 15	
	Card Images: 1036		
File Type	Reaction Type	Q-Value	
General Information	Descriptive data and Dictionary		
Resonance parameter data	Resonance Information		
Neutron cross sections	Total cross section(sum of partials)		
	Elastic scattering cross section		
	Total inelastic cross section(sum of MT=51to91)		
	direct (n,2n) cross section	-6.59000+ 6	
	(n,3n) cross section	-1.41110+ 7	
	(n,n') to the continuum		
	(n,q) radiative capture cross section	7.35000+ 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	-6.59000+ 6	
	(n,3n) cross section	-1.41110+ 7	
	(n,n') to the continuum		
	(n,q) radiative capture cross section	7.35000+ 6	
Photon prod.Multiplicities(from neut.reactions)	Non elastic cross section(total-elastic)		
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)	(n,q) radiative capture cross section	7.35000+ 6	
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)		
	(n,q) radiative capture cross section	7.35000+ 6	
83-B1-209g			
Mat.No: 8306	Lab: LIVERMORE	Date: UCRL-5400, VOL. 15	
Date:	Author: R.J.HOWERTON	Ref: UCRL-5400, VOL. 15	
	Card Images: 2966		
File Type	Reaction Type	Q-Value	
General Information	Descriptive data and Dictionary		
Resonance parameter data	Resonance Information		
Neutron cross sections	Total cross section(sum of partials)		
	Elastic scattering cross section		
	Total inelastic cross section(sum of MT=51to91)		
	direct (n,2n) cross section	-8.96600+ 5	
	(n,3n) cross section	-7.46000+ 6	
	(n,n'a) cross section	-1.43540+ 7	
	8.96600+ 5 Ev (n,n') Level	3.14400+ 6	
	1.60850+ 6 Ev (n,n') Level	-8.96600+ 5	
	2.55900+ 6 Ev (n,n') Level	-1.60850+ 6	
	2.74200+ 6 Ev (n,n') Level	-2.55900+ 6	
	3.00000+ 6 Ev (n,n') Level	-2.74200+ 6	
	3.12100+ 6 Ev (n,n') Level	-3.00000+ 6	
	(n,n') to the continuum	-3.12100+ 6	
	(n,q) radiative capture cross section	4.60000+ 6	
	(n,p) cross section	1.30000+ 5	
	(n,a) cross section	9.63000+ 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		
	8.96600+ 5 Ev (n,n') Level	-8.96600+ 5	
	1.60850+ 6 Ev (n,n') Level	-1.60850+ 6	
	2.55900+ 6 Ev (n,n') Level	-2.55900+ 6	
	2.74200+ 6 Ev (n,n') Level	-2.74200+ 6	
	3.00000+ 6 Ev (n,n') Level	-3.00000+ 6	
	3.12100+ 6 Ev (n,n') Level	-3.12100+ 6	
Energy dist. of secondary neutrons	direct (n,2n) cross section	-8.96600+ 5	
	(n,3n) cross section	-7.46000+ 6	
	(n,n'a) cross section	-1.43540+ 7	
	(n,n') to the continuum	3.14400+ 6	
	(n,q) radiative capture cross section	4.60000+ 6	
Photon prod.Multiplicities(from neut.reactions)	Non elastic cross section(total-elastic)		
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)		
Angular dist. of Photons (from neut.reactions)	(n,q) radiative capture cross section	4.60000+ 6	
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)		
	(n,q) 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,q) 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,q) 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,q) 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,q) 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,q) 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,q) 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,q) 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,q) radiative capture cross section	1.70000+ 8 4.79000+ 6

File Type	Reaction Type	Q-Value
90-Th-233g	Mat.No: 7865 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON 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) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,g) radiative capture cross section	-4.78000+ 6 -1.12200+ 7 1.80000+ 8 -1.63400+ 7 6.18000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-4.78000+ 6 -1.12200+ 7 1.80000+ 8 -1.63400+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.18000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.18000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.18000+ 6
92-U -233g	Mat.No: 7866 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3615
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) to the continuum (n,g) radiative capture cross section	-5.90000+ 6 -1.31800+ 7 1.80000+ 8 6.84000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum	-5.90000+ 6 -1.31800+ 7 1.80000+ 8
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.84000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.84000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	1.80000+ 8 6.84000+ 6

Mat. No: 7867 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1629	File Type	Reaction Type	Q-Value
92-U -234g		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. <v>:average log energy decrement for elastic scat. <w> : <w>/<w>	
		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
92-U -235g		Mat. No: 7868 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3244	File Type
		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. <v>:average log energy decrement for elastic scat. <w> : <w>/<w>	
		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

92-U -236g	Mat.No: 7869 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1583
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary <v> :average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-6.55000+ 6 -1.18500+ 7 1.80000+ 8 5.12000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <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	-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 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1517
File Type	Reaction Type	Q-Value
General Information	Descriptive data and Dictionary <v> :average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum (n,g) radiative capture cross section	-5.12000+ 6 -1.16700+ 7 1.80000+ 8 6.14000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <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	-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

File Type	Reaction Type	Q-Value
92-U -238g	Mat.No: 7871 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3455
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 Ev (n,n') Level 3.08000+ 5 Ev (n,n') Level 5.80000+ 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 (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 -5.80000+ 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 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 5.80000+ 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 -5.80000+ 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 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1601
General Information	Descriptive data and Dictionary <v> :average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission	
Resonance parameter data	Resonance Information	
Neutron cross sections	Total cross section(sum of partials) Elastic scattering cross section Total inelastic cross section(sum of MT=51to91) direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum (n,q) 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. <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	-4.80000+ 6 -1.09500+ 7 1.80000+ 8 -1.60700+ 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 5.93000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 5.93000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 5.93000+ 6
92-U -240g	Mat.No: 7873 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1666
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	-5.93000+ 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. <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	-5.93000+ 6 -1.07400+ 7 1.80000+ 8 -1.68800+ 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 6.08000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 6.08000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 6.08000+ 6

Mat. No: 8307 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 1586	File Type	Reaction Type	Q-Value
93-No-235g		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	-6.98300+ 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. <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	-6.98300+ 6 -1.31140+ 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 5.68500+ 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,q) 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,q) radiative capture cross section	1.80000+ 8 5.68500+ 6
93-No-236g		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	-5.68500+ 6 -1.26680+ 7 1.80000+ 8 6.62800+ 6
		Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <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
		Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.80000+ 8 6.62800+ 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,q) 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,q) radiative capture cross section	1.80000+ 8 6.62800+ 6

93-Np-237g		
Mat.No: 7874	Lab: LIVERMORE	
Date:	Author: R.J.HOWERTON	
Ref: UCRL-5400, VOL. 15	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	-6.53700+ 6
	(n,3n) cross section	-1.23100+ 7
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,n') to the continuum	
	(n,q) radiative capture cross section	5.48000+ 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	-6.53700+ 6
	(n,3n) cross section	-1.23100+ 7
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,n') to the continuum	
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,q) radiative capture cross section	5.48000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,q) radiative capture cross section	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)	1.80000+ 8
	(n,q) radiative capture cross section	5.48000+ 6
93-Np-238g		
Mat.No: 8309	Lab: LIVERMORE	
Date:	Author: R.J.HOWERTON	
Ref: UCRL-5400, VOL. 15	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	-5.48800+ 6
	(n,3n) cross section	-1.21160+ 7
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,n') to the continuum	
	(n,q) radiative capture cross section	6.21800+ 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	-5.48800+ 6
	(n,3n) cross section	-1.21160+ 7
	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,n') to the continuum	
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)	1.80000+ 8
	(n,q) radiative capture cross section	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)	1.80000+ 8
	(n,q) radiative capture cross section	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)	1.80000+ 8
	(n,q) radiative capture cross section	6.21800+ 6

File Type	Reaction Type	Q-Value
<p>94-Pu-238g Mat.No: 7875 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 2296</p>		
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,n') to the continuum (n,q) radiative capture cross section	-7.00000+ 6 -1.28500+ 7 1.85000+ 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 -1.28500+ 7 1.85000+ 8
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.85000+ 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,q) radiative capture cross section	1.85000+ 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,q) radiative capture cross section	1.85000+ 8 5.66000+ 6
<p>94-Pu-239g Mat.No: 7876 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 3662</p>		
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 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,q) radiative capture cross section	-5.70000+ 4 -5.61000+ 6 -1.25100+ 7 -1.85000+ 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
Photon prod.Mult multiplicities(from neut.reactions)	direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.61000+ 6 -1.25100+ 7 1.85000+ 8 -1.85500+ 7
Photon prod.cross sections(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.85000+ 8 6.53000+ 6
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic)	
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.85000+ 8 6.53000+ 6
	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section	1.85000+ 8 6.53000+ 6

File Type	Reaction Type	Q-Value
<p>94-Pu-240g Mat.No: 7877 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 5212</p>		
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,g) radiative capture cross section	-4.50000+ 4 -6.53000+ 6 -1.21900+ 7 1.86000+ 8 -4.50000+ 4 -1.42000+ 5 -2.96000+ 5 -5.99000+ 5 -8.90000+ 5 5.24000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <p> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section 4.50000+ 4 Ev (n,n') Level 1.42000+ 5 Ev (n,n') Level 2.96000+ 5 Ev (n,n') Level 5.99000+ 5 Ev (n,n') Level 8.90000+ 5 Ev (n,n') Level direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum	-4.50000+ 4 -1.42000+ 5 -2.96000+ 5 -5.99000+ 5 -8.90000+ 5 -6.53000+ 6 -1.21900+ 7 1.86000+ 8
Photon prod.Multplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) 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,g) 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,g) radiative capture cross section	1.86000+ 8 5.24000+ 6
<p>94-Pu-241g Mat.No: 7878 Lab: LIVERMORE Date: Author: R.J.HOWERTON Ref: UCRL-5400, VOL. 15 Card Images: 1622</p>		
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	-5.24000+ 6 -1.17800+ 7 1.86000+ 8 -1.74300+ 7 6.30000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <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,4n) cross section (n,n') to the continuum	-5.24000+ 6 -1.17800+ 7 1.86000+ 8 -1.74300+ 7
Photon prod.Multplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) 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,g) 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,g) radiative capture cross section	1.86000+ 8 6.30000+ 6

File Type	Reaction Type	Q-Value
<p>94-Pu-242g Mat.No: 7880 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 3197</p>		
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,q) radiative capture cross section <U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	-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	Elastic scattering cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-4.45000+ 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,q) 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,q) 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,q) radiative capture cross section	2.00000+ 8 5.04000+ 6
<p>94-Pu-243g Mat.No: 7881 Lab: LIVERMORE Date: UCRL-5400, VOL. 15 Author: R.J.HOWERTON Ref: Card Images: 2238</p>		
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 <U> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e>	-5.03920+ 6 -1.13330+ 7 -2.00000+ 8 -1.65810+ 7 6.02000+ 6
Angular dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-5.03920+ 6 -1.13330+ 7 -2.00000+ 8 -1.65810+ 7
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,q) 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,q) 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,q) radiative capture cross section	2.00000+ 8 6.02000+ 6

95-Am-241g		Mat.No: 7882 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3477
File Type	Reaction Type	O-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,q) radiative capture cross section	-5.93000+6 -1.26000+7 2.00000+8 -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,q) 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,q) 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,q) radiative capture cross section	2.00000+8 5.48000+6 5.48000+6	
95-Am-242m		Mat.No: 7883 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2517
File Type	Reaction Type	O-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 (n,q) 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	
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	-6.37380+ 6 -1.19010+ 7 2.00000+ 8 -1.84240+ 7 5.36000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,4n) cross section (n,n') to the continuum	-6.37380+ 6 -1.19010+ 7 2.00000+ 8 -1.84240+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.36000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.36000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.36000+ 6
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	
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	-6.97000+ 6 -1.30300+ 7 2.00000+ 8 5.70000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <g> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section Total fission cross section(sum of MT=19to21,38) (n,n') to the continuum	-6.97000+ 6 -1.30300+ 7 2.00000+ 8
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.70000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.70000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,g) radiative capture cross section	2.00000+ 8 5.70000+ 6

96-Cm-243g	Mat.No: 7886 Date: Ref: UCRL-5400, VOL. 15	Lab: 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,p) radiative capture cross section	-5.69000+ 6 -1.26600+ 7 2.00000+ 8 -1.87400+ 7 2.00000+ 8 2.00000+ 8 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,p) radiative capture cross section	2.00000+ 8 6.80000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 6.80000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 6.80000+ 6

96-Cm-244g	Mat.No: 7887 Date: Ref: UCRL-5400, VOL. 15	Lab: 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,p) radiative capture cross section	-6.80000+ 6 -1.24900+ 7 2.00000+ 8 -1.94700+ 7 2.00000+ 8 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,p) radiative capture cross section	2.00000+ 8 5.52000+ 6
Photon prod.cross sections(from neut.reactions)	Non elastic cross section(total-elastic)	
Angular dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 5.52000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,p) radiative capture cross section	2.00000+ 8 5.52000+ 6

File Type	Reaction Type	Q-Value
<p>96-Cm-245g Mat.No: 7888 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15</p> <p>Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3036</p> <p>General Information</p> <p>Resonance parameter data</p> <p>Neutron cross sections</p> <p>Angular dist. of secondary neutrons</p> <p>Energy dist. of secondary neutrons</p> <p>Photon prod.Multiplicities(from neut.reactions)</p> <p>Photon prod.cross sections(from neut.reactions)</p> <p>Angular dist. of Photons (from neut.reactions)</p> <p>Energy dist. of Photons (from neut.reactions)</p>	<p>Descriptive data and Dictionary</p> <p><v> :average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission</p> <p>Resonance Information</p> <p>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</p> <p><u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e></p> <p>Elastic scattering cross section</p> <p>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</p> <p>Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p> <p>Non elastic cross section(total-elastic)</p> <p>Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p> <p>Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p>	<p>-5.52000+ 6 -1.23200+ 7 2.00000+ 8 -1.80200+ 7 6.45000+ 6 -5.52000+ 6 -1.23200+ 7 2.00000+ 8 -1.80200+ 7 2.00000+ 8 6.45000+ 6 2.00000+ 8 6.45000+ 6 2.00000+ 8 6.45000+ 6 2.00000+ 8 6.45000+ 6</p>
<p>96-Cm-246g Mat.No: 7889 Date: UCRL-5400, VOL. 15 Ref: UCRL-5400, VOL. 15</p> <p>Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2293</p> <p>General Information</p> <p>Resonance parameter data</p> <p>Neutron cross sections</p> <p>Angular dist. of secondary neutrons</p> <p>Energy dist. of secondary neutrons</p> <p>Photon prod.Multiplicities(from neut.reactions)</p> <p>Photon prod.cross sections(from neut.reactions)</p> <p>Angular dist. of Photons (from neut.reactions)</p> <p>Energy dist. of Photons (from neut.reactions)</p>	<p>Descriptive data and Dictionary</p> <p><v> :average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission</p> <p>Resonance Information</p> <p>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</p> <p><u> Lab:average elastic scattering cosine. <e>:average log energy decrement for elastic scat. <q> : <ee>/<2e></p> <p>Elastic scattering cross section</p> <p>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</p> <p>Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p> <p>Non elastic cross section(total-elastic)</p> <p>Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p> <p>Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p>	<p>-6.45000+ 6 -1.19700+ 7 2.00000+ 8 -1.87600+ 7 5.16000+ 6 -6.45000+ 6 -1.19700+ 7 2.00000+ 8 -1.87600+ 7 2.00000+ 8 5.16000+ 6 2.00000+ 8 5.16000+ 6 2.00000+ 8 5.16000+ 6</p>

96-Cm-247g	Mat.No: 7890 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 3498	File Type	Reaction Type	O-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				-5.15000+ 6
	Total fission cross section(sum of MT=19to21,38)				-1.16000+ 7
	(n,4n) cross section				2.00000+ 8
	(n,n') to the continuum				-1.71000+ 7
	(n,q) radiative capture cross section				6.21000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine.				
Energy dist. of secondary neutrons	<e>:average log energy decrement for elastic scat.				
	<q> : <ee>/<2e>				
	Elastic scattering cross section				
	direct (n,2n) cross section				
	(n,3n) cross section				-5.15000+ 6
	Total fission cross section(sum of MT=19to21,38)				-1.16000+ 7
	(n,4n) cross section				2.00000+ 8
	(n,n') to the continuum				-1.71000+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)				2.00000+ 8
Photon prod.cross sections(from neut.reactions)	(n,q) radiative capture cross section				6.21000+ 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)				2.00000+ 8
	(n,q) radiative capture cross section				6.21000+ 6
	Non elastic cross section(total-elastic)				
	Total fission cross section(sum of MT=19to21,38)				2.00000+ 8
	(n,q) radiative capture cross section				6.21000+ 6

96-Cm-248g	Mat.No: 7891 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2942	File Type	Reaction Type	O-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				-6.20000+ 6
	Total fission cross section(sum of MT=19to21,38)				-1.13600+ 7
	(n,4n) cross section				2.00000+ 8
	(n,n') to the continuum				-1.78100+ 7
	(n,q) radiative capture cross section				4.71000+ 6
Angular dist. of secondary neutrons	<u> Lab:average elastic scattering cosine.				
Energy dist. of secondary neutrons	<e>:average log energy decrement for elastic scat.				
	<q> : <ee>/<2e>				
	Elastic scattering cross section				
	direct (n,2n) cross section				
	(n,3n) cross section				-6.20000+ 6
	Total fission cross section(sum of MT=19to21,38)				-1.13600+ 7
	(n,4n) cross section				2.00000+ 8
	(n,n') to the continuum				-1.78100+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38)				2.00000+ 8
Photon prod.cross sections(from neut.reactions)	(n,q) radiative capture cross section				4.71000+ 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)				2.00000+ 8
	(n,q) radiative capture cross section				4.71000+ 6
	Non elastic cross section(total-elastic)				
	Total fission cross section(sum of MT=19to21,38)				2.00000+ 8
	(n,q) radiative capture cross section				4.71000+ 6

File Type	Reaction Type	Q-Value
<p>97-Bk-249g</p> <p>Mat. No: 7892 Date: Ref: UCRL-5400, VOL. 15</p> <p>Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2128</p> <p>General Information</p> <p>Resonance parameter data</p> <p>Neutron cross sections</p> <p>Angular dist. of secondary neutrons</p> <p>Energy dist. of secondary neutrons</p> <p>Photon prod. Multiplicities (from neut. reactions)</p> <p>Photon prod. cross sections (from neut. reactions)</p> <p>Angular dist. of Photons (from neut. reactions)</p> <p>Energy dist. of Photons (from neut. reactions)</p>	<p>Descriptive data and Dictionary</p> <p><v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission</p> <p>Resonance Information</p> <p>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</p> <p><u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <Q> : <ee>/<2e></p> <p>Elastic scattering cross section</p> <p>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</p> <p>Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p> <p>Non elastic cross section(total-elastic)</p> <p>Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p> <p>Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p>	<p>-6.20000+ 6 -1.17800+ 7 2.00000+ 8 -1.78000+ 7 4.97000+ 6 2.00000+ 8 4.97000+ 6 2.00000+ 8 4.97000+ 6 2.00000+ 8 4.97000+ 6</p>
<p>98-Cf-249g</p> <p>Mat. No: 7893 Date: Ref: UCRL-5400, VOL. 15</p> <p>Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 4011</p> <p>General Information</p> <p>Resonance parameter data</p> <p>Neutron cross sections</p> <p>Angular dist. of secondary neutrons</p> <p>Energy dist. of secondary neutrons</p> <p>Photon prod. Multiplicities (from neut. reactions)</p> <p>Photon prod. cross sections (from neut. reactions)</p> <p>Angular dist. of Photons (from neut. reactions)</p> <p>Energy dist. of Photons (from neut. reactions)</p>	<p>Descriptive data and Dictionary</p> <p><v> : average total(prompt+delayed)neutrons/fission Delayed neutrons from fission Prompt neutrons from fission</p> <p>Resonance Information</p> <p>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</p> <p><u> Lab: average elastic scattering cosine. <e>: average log energy decrement for elastic scat. <Q> : <ee>/<2e></p> <p>Elastic scattering cross section</p> <p>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</p> <p>Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p> <p>Non elastic cross section(total-elastic)</p> <p>Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p> <p>Non elastic cross section(total-elastic) Total fission cross section(sum of MT=19to21,38) (n,q) radiative capture cross section</p>	<p>-5.59000+ 6 -1.17800+ 7 2.00000+ 8 -1.85900+ 7 6.62000+ 6 2.00000+ 8 6.62000+ 6 2.00000+ 8 6.62000+ 6 2.00000+ 8 6.62000+ 6</p>

98-Cf-250g	Mat.No: 7894 Date: Ref: UCRL-5400, VOL. 15	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,q) 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. <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	-6.61000+ 6 -1.22100+ 7 2.00000+ 8 -1.85900+ 7
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) 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,q) 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,q) radiative capture cross section	2.00000+ 8 5.11000+ 6
98-Cf-251g	Mat.No: 7895 Date: Ref: UCRL-5400, VOL. 15	Lab: LIVERMORE Author: R.J.HOWERTON Card Images: 2067
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	-5.10000+ 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. <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	-5.10000+ 6 -1.17300+ 7 2.00000+ 8 -1.73200+ 7
Photon prod.Mult multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) 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,q) 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,q) 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:	<x> : 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,q) 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. <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	-6.17000+ 6 -1.12800+ 7 2.00000+ 8 -1.79000+ 7
Photon prod.Multiplicities(from neut.reactions)	Total fission cross section(sum of MT=19to21,38) (n,q) 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,q) 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,q) 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,q) 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. <q> : <ee>/<2e>	
Energy dist. of secondary neutrons	Elastic scattering cross section direct (n,2n) cross section (n,3n) cross section (n,n') to the continuum	-8.00000+ 6 -1.53500+ 7
Photon prod.Multiplicities(from neut.reactions)	(n,q) 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,q) radiative capture cross section	8.00000+ 6
Energy dist. of Photons (from neut.reactions)	Non elastic cross section(total-elastic) (n,q) radiative capture cross section	8.00000+ 6