EXFOR News (July 2015)

New experimental data available from Nuclear Reaction Data Centres

EXFOR [1] is a world-wide data library for experimental neutron, charged-particle and photon induced reaction data compiled by the International Network of the Nuclear Reaction Data Centres (NRDC)[a] co-ordinated by the IAEA Nuclear Data Section. Regularly updated web retrieval databases are available at IAEA-NDS as well as NNDC, NEADB, JAEA, JCPRG and CDFE.

This News lists newly created EXFOR entries as well as revised EXFOR entries where new data subentries are added. Entries from articles pubslished in past 10 years are flagged by asterisks (*). Please send an email to N.Otsuka (NRDC Coordinator n.otsuka@iaea.org) for inclusion in the EXFOR News distribution list as well as any question on EXFOR.

[1] N.Otuka et al., Nucl.Data.Sheets **120**(2014)272.

Quantity codes

ALF	α-value ($\sigma_{\rm capt}/\sigma_{\rm fis}$)	FY	Fission product yield
AMP	Length or amplitude	INT	Cross section integral over incident energy
CHG	Fragment charge	KE	Kinetic energy
CS	Cross section	KER	Kerma factor
CSN	Differential with respect to number of particles	MLT	Multiplicity
CSP	Partial cross section	NQ	Nuclear quantity
CST	Temperature dependent cross section	NU	Fission neutron multiplicity $\bar{\nu}$
D3A	Triple differential dΩ_1/dΩ_2/dE'	NUD	Delayed fission neutron multiplicity $\bar{\nu}_d$
D3E	Triple differential dΩ/dE'_1/dE'_2	NUF	Fragment neutrons
D4A	Quadruple diff. dΩ_1/dΩ_2/dE'_1/dE'_2	POL	Polarization
DA	Differential d/dΩ	POD	Differential polarization
DAA	Double differential dΩ_1/dΩ_2	PY	Product yield (other than fission)
DAE	Double differential dΩ/dE'	RI	Resonance integral
DAP	Partial differential d/dΩ	RP	Resonance parameter
DAT	Temperature-dependent Legendre coefficient	RR	Reaction rate
DE	Differential d/dE'	SIF	Self indication
DEP	Energy spectrum for specific group	SPC	Gamma spectrum
DP	Diff. by linear momentum of outgoing part.	TSL	Thermal scattering
DT	Diff. by 4-momentum transfer squared	TT	Thick target yield
ETA	η-value $\bar{\nu}\sigma_{\rm fis}/(\sigma_{\rm capt}+\sigma_{\rm fis})$	TTD	Differential thick target yield, d/dΩ
EVL	Evaluation	TTP	Partial thick target yield

Special codes in outgoing particle field

abs	Absorption	fus	Fusion	sct	Scattering	tot	Total
el	Elastic	inel	Inelastic	tcx	Total charge changing		
fis	Fission	non	Nonelastic	ths	Thermal scattering		

Special codes in incident energy field

Fast	Fast reactor spectrum average	Maxw	Maxwellian spectrum average
Fiss	Fission spectrum average	Spont	Spontaneous (for fission)

[a] NNDC (USA), NEADB (France), NDS (Austria), CJD (Russia), CNDC (China), ATOMKI (Hungary), NDPCI (India), JAEA (Japan), JCPRG (Japan), KAERI (Korea), CDFE (Russia), CNPD (Russia), UkrNDC (Ukraine)

1 Hydrogen 1

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{8}Li,non		?	2JPNIRS	3.3+08	8.4+08	Jour	PR/C,90,044321	14	G.W.Fan+	E2479
*	^{14}Be,non		?	2JPNIPC	5.7+08	1.1+09	Jour	NP/A,929,83	14	T.Moriguchi+	E2474
*	^{24}O,n+X	^{22}O	DE	2JPNIPC	1.5+09	1.5+09	Jour	PL/B,739,19	14	K.Tshoo+	E2468
*	^{24}O,x	^{23}O	CSP	2JPNIPC	1.5+09	1.5+09	Jour	PL/B,739,19	14	K.Tshoo+	E2468
*	^{24}O,x	^{23}O	DP	2JPNIPC	1.5+09	1.5+09	Jour	PL/B,739,19	14	K.Tshoo+	E2468

1 Hydrogen 2

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,π^-+p	^{1}H	POD	4RUSSIB	3.0+08	9.0+08	Jour	YF,78,(1),1	15	V.V.Gauzshtein+	M0910

1 Hydrogen 3

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,el	^{3}H	DA	4UKRIJD	6.8+06	6.8+06	Jour	UFZ,22,(12),2056	77	A.E.Borzakovskiy+	A1122
α,el	^{3}H	DA	4UKRIJD	2.7+07	2.7+07	Jour	UFZ,22,(12),2056	77	A.E.Borzakovskiy+	A1122

3 Lithium

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,x+n	inclusive	DA	4RUSFEI	2.2+07	2.2+07	Jour	AE,24,(1),66	68	V.K.Daruga+	A0897
d,x+n	inclusive	DA	4RUSFEI	2.1+07	2.1+07	Jour	AE,24,(1),66	68	V.K.Daruga+	A0897
α,x+n	inclusive	DA	4RUSFEI	4.2+07	4.2+07	Jour	AE,24,(1),66	68	V.K.Daruga+	A0897

3 Lithium 6

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,el	^{6}Li	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
n,x+n	inclusive	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
n,x+n	inclusive	DAE	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928

3 Lithium 7

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #

	n,el	^{7}Li	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
	n,x+n	inclusive	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
	n,x+n	inclusive	DAE	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928

4 Beryllium 9

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{8}Li,non		CS	2JPNIRS	3.3+08	8.4+08	Jour	PR/C,90,044321	14	G.W.Fan+	E2479

5 Boron 10

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,el	^{10}B	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
	n,x+n	inclusive	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
	n,x+n	inclusive	DAE	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928

5 Boron 11

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,el	^{11}B	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
	n,x+n	inclusive	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
	n,x+n	inclusive	DAE	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928

6 Carbon

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,el	^{nat}C	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
	n,inel	^{nat}C	DAP	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
	n,x+n	inclusive	DA	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
	n,x+n	inclusive	DAE	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928

6 Carbon 12

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,inel	^{12}C	CSP	1USALAS	1.4+07	1.4+07	Rept	LA-11367-MS	88	M.Drosg+	12928
*	^{8}Li,non		CS	2JPNIRS	3.3+08	8.4+08	Jour	PR/C,90,044321	14	G.W.Fan+	E2479
*	^{14}Be,non		?	2JPNIPC	5.9+08	1.0+09	Jour	NP/A,929,83	14	T.Moriguchi+	E2474
*	^{24}Mg,inel	^{12}C	?	2JPNIPC	5.8+09	5.8+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{24}Mg,non		?	2JPNIPC	5.8+09	5.8+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{25}Mg,inel	^{12}C	?	2JPNIPC	6.0+09	6.0+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{25}Mg,non		?	2JPNIPC	6.0+09	6.0+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471

*	^{26}Mg,inel	^{12}C	?	2JPNIPC	6.2+09	6.2+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{26}Mg,non		?	2JPNIPC	6.2+09	6.2+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{27}Mg,inel	^{12}C	?	2JPNIPC	6.5+09	6.5+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{27}Mg,non		?	2JPNIPC	6.5+09	6.5+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{28}Mg,inel	^{12}C	?	2JPNIPC	6.7+09	6.7+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{28}Mg,non		?	2JPNIPC	6.7+09	6.7+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{29}Mg,inel	^{12}C	?	2JPNIPC	7.0+09	7.0+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{29}Mg,non		?	2JPNIPC	7.0+09	7.0+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{30}Mg,inel	^{12}C	?	2JPNIPC	7.2+09	7.2+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{30}Mg,non		?	2JPNIPC	7.2+09	7.2+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{31}Mg,inel	^{12}C	?	2JPNIPC	7.4+09	7.4+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{31}Mg,non		?	2JPNIPC	7.4+09	7.4+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{32}Mg,inel	^{12}C	?	2JPNIPC	7.7+09	7.7+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{32}Mg,non		?	2JPNIPC	7.7+09	7.7+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{33}Mg,inel	^{12}C	?	2JPNIPC	7.9+09	7.9+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{33}Mg,non		?	2JPNIPC	7.9+09	7.9+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{34}Mg,inel	^{12}C	?	2JPNIPC	8.2+09	8.2+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{34}Mg,non		?	2JPNIPC	8.2+09	8.2+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{35}Mg,inel	^{12}C	?	2JPNIPC	8.4+09	8.4+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{35}Mg,non		?	2JPNIPC	8.4+09	8.4+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{36}Mg,inel	^{12}C	?	2JPNIPC	8.6+09	8.6+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{36}Mg,non		?	2JPNIPC	8.6+09	8.6+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{37}Mg,inel	^{12}C	?	2JPNIPC	8.9+09	8.9+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{37}Mg,non		?	2JPNIPC	8.9+09	8.9+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{38}Mg,inel	^{12}C	?	2JPNIPC	9.1+09	9.1+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471
*	^{38}Mg,non		?	2JPNIPC	9.1+09	9.1+09	Jour	PR/C,90,061305	14	M.Takechi+	E2471

11 Sodium 23

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,el	^{23}Na	DA	1USAKTY	1.5+06	4.5+06	Jour	EPJ/C,66,03091	14	J.R.Vanhoy+	14403
*	n,inel	^{23}Na	CSP	1USAKTY	1.5+03	4.0+06	Jour	EPJ/C,66,03091	14	J.R.Vanhoy+	14403
*	n,inel	^{23}Na	DAP	1USAKTY	1.5+06	4.5+06	Jour	EPJ/C,66,03091	14	J.R.Vanhoy+	14403

12 Magnesium

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
t,x	^{24}Na	CS	2JPNIPC	9.7+06	1.9+07	Jour	ARI,26,17	75	T.Nozaki+	E2464
t,x	^{28}Mg	CS	2JPNIPC	2.6+06	1.9+07	Jour	ARI,26,17	75	T.Nozaki+	E2464
α,x	^{24}Na	CS	2JPNIPC	2.2+07	4.0+07	Jour	ARI,26,17	75	T.Nozaki+	E2464
α,x	^{28}Mg	CS	2JPNIPC	2.2+07	4.0+07	Jour	ARI,26,17	75	T.Nozaki+	E2464

13 Aluminium 27

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
t,x	^{24}Na	CS	2JPNIPC	1.6+07	2.3+07	Jour	ARI,26,17	75	T.Nozaki+	E2464
t,x	^{28}Mg	CS	2JPNIPC	5.9+06	2.3+07	Jour	ARI,26,17	75	T.Nozaki+	E2464

	α,x	^{28}Mg	CS	2JPNIPC	3.3+07	4.4+07	Jour	ARI,26,17	75	T.Nozaki+	E2464
*	^{8}Li,non		CS	2JPNIRS	3.3+08	8.4+08	Jour	PR/C,90,044321	14	G.W.Fan+	E2479
	^{20}Ne,x+α	inclusive	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+^{3}He	inclusive	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+t	inclusive	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151

14 Silicon

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	^{3}He,x	^{22}Na	CS	4UKRIJD	3.6+07	9.0+07	Jour	UFZ,38,(12),1773	93	O.N.Vysotskiy+	A0618
	^{3}He,x	^{24}Na	CS	4UKRIJD	3.7+07	9.1+07	Jour	UFZ,38,(12),1773	93	O.N.Vysotskiy+	A0618
	α,x	^{22}Na	CS	4UKRIJD	5.0+07	9.4+07	Jour	UFZ,38,(12),1773	93	O.N.Vysotskiy+	A0618
	α,x	^{24}Na	CS	4UKRIJD	4.9+07	9.5+07	Jour	UFZ,38,(12),1773	93	O.N.Vysotskiy+	A0618
	α,x	^{28}Mg	CS	4UKRIJD	5.8+07	9.4+07	Jour	UFZ,38,(12),1773	93	O.N.Vysotskiy+	A0618

40 Zirconium 94

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{95}Zr	CS	1USAORU	2.5-02	2.5-02	Jour	ARI,94,60	14	K.S.Krane	14407
*	n,γ	^{95}Zr	RI	1USAORU		5.0-01	Jour	ARI,94,60	14	K.S.Krane	14407

40 Zirconium 96

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{97}Zr	CS	1USAORU	2.5-02	2.5-02	Jour	ARI,94,60	14	K.S.Krane	14407
*	n,γ	^{97}Zr	RI	1USAORU		5.0-01	Jour	ARI,94,60	14	K.S.Krane	14407

42 Molybdenum

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{99}Mo	CS	1USATAM	1.0+07	3.9+07	Book	SINGH2011,,3	11	A.A.Alharbi+	C2157
*	p,x	^{94}Tc	CS	1USATAM	1.0+07	3.9+07	Book	SINGH2011,,3	11	A.A.Alharbi+	C2157
*	p,x	^{95}Tc	CS	1USATAM	8.0+06	3.9+07	Book	SINGH2011,,3	11	A.A.Alharbi+	C2157
*	p,x	^{96}Tc	CS	1USATAM	6.0+06	3.9+07	Book	SINGH2011,,3	11	A.A.Alharbi+	C2157
*	p,x	^{99}Tc	CS	1USATAM	8.0+06	3.9+07	Book	SINGH2011,,3	11	A.A.Alharbi+	C2157

42 Molybdenum 100

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,2n	^{99}Tc	CS	1CANALA	8.0+06	1.8+07	Jour	NMB,38,907	11	K.Gagnon+	C2156
*	p,x	^{99}Mo	CS	1CANALA	1.0+07	1.8+07	Jour	NMB,38,907	11	K.Gagnon+	C2156

60 Neodymium 143

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{142}Nd	CS	2JPNJSR	6.2+06	1.3+07	Jour	PR/C,91,015808	15	H.-T.Nyhus+	K2478

60 Neodymium 144

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{143}Nd	CS	2JPNJSR	7.9+06	1.3+07	Jour	PR/C,91,015808	15	H.-T.Nyhus+	K2478

60 Neodymium 145

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{144}Nd	CS	2JPNJSR	5.9+06	1.3+07	Jour	PR/C,91,015808	15	H.-T.Nyhus+	K2478

60 Neodymium 146

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{145}Nd	CS	2JPNJSR	7.6+06	1.2+07	Jour	PR/C,91,015808	15	H.-T.Nyhus+	K2478

60 Neodymium 148

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{147}Nd	CS	2JPNJSR	7.4+06	1.2+07	Jour	PR/C,91,015808	15	H.-T.Nyhus+	K2478

62 Samarium 144

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{143}Sm	CS	2JPNJSR	1.1+07	1.3+07	Jour	PR/C,90,064616	14	D.M.Filipescu+	K2472

62 Samarium 147

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{146}Sm	CS	2JPNJSR	6.5+06	1.3+07	Jour	PR/C,90,064616	14	D.M.Filipescu+	K2472

62 Samarium 148

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{147}Sm	CS	2JPNJSR	8.2+06	1.3+07	Jour	PR/C,90,064616	14	D.M.Filipescu+	K2472

62 Samarium 149

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{148}Sm	CS	2JPNJSR	6.0+06	1.3+07	Jour	PR/C,90,064616	14	D.M.Filipescu+	K2472

62 Samarium 150

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{149}Sm	CS	2JPNJSR	8.1+06	1.2+07	Jour	PR/C,90,064616	14	D.M.Filipescu+	K2472

62 Samarium 152

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{151}Sm	CS	2JPNJSR	8.3+06	1.3+07	Jour	PR/C,90,064616	14	D.M.Filipescu+	K2472

62 Samarium 154

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{153}Sm	CS	2JPNJSR	8.2+06	1.3+07	Jour	PR/C,90,064616	14	D.M.Filipescu+	K2472

68 Erbium 167

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,0		RP	1USABNL			Jour	NSE,8,183	Sep 60	H.B.Moller+	12097

78 Platinum 195

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,x	^{194}Ir	CS	4ZZZDUB		2.4+07	Jour	JRN,303,(3),1857	15	Tranducthiep+	M0909

78 Platinum 198

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{197}Pt	CS	4ZZZDUB		2.4+07	Jour	JRN,303,(3),1857	15	Tranducthiep+	M0909

79 Gold 197

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{196}Au	CS	4ZZZDUB		2.4+07	Jour	PPN/L,3,(4),223	14	Tranducthiep+	M0907

80 Mercury 194

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{195}Hg	CS	1USAORU	2.5-02	2.5-02	Jour	ARI,96,83	15	S.F.Dorsett+	14408
*	n,γ	^{195}Hg	RI	1USAORU		5.0-01	Jour	ARI,96,83	15	S.F.Dorsett+	14408

92 Uranium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,x	Many	DA	1USABRK	5.0+09	5.0+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	p,x+α	inclusive	DAE	1USABRK	5.5+09	5.5+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	d,x	Many	DA	1USABRK	4.2+09	4.2+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	d,x+α	inclusive	DAE	1USABRK	4.2+09	4.2+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	α,x	Many	DA	1USABRK	8.4+09	8.4+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	α,x+α	inclusive	DAE	1USABRK	1.6+09	8.4+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	α,x+d	inclusive	DAE	1USABRK	1.6+09	1.6+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	α,x+^{3}He	inclusive	DAE	1USABRK	1.6+09	1.6+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	α,x+p	inclusive	DAE	1USABRK	1.6+09	1.6+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	α,x+t	inclusive	DAE	1USABRK	1.6+09	1.6+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{12}C,x	Many	DA	1USABRK	2.5+10	2.5+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{12}C,x+α	inclusive	DAE	1USABRK	2.5+10	2.5+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x	Many	CSP	1USABRK	5.0+09	5.0+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x	Many	DA	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x	^{6}He	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x	^{6}Li	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x	^{7}Li	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x	^{8}Li	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x	^{7}Be	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x	^{9}Be	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x	^{10}Be	DAE	1USABRK	4.2+10	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+α	inclusive	DAE	1USABRK	5.0+09	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+α	inclusive	DAP	1USABRK	8.0+09	8.0+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+d	inclusive	DAE	1USABRK	5.0+09	8.0+09	Jour	PR/C,16,629	77	J.Gosset+	C2151

	^{20}Ne,x+d	inclusive	DAP	1USABRK	8.0+09	8.0+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+^{3}He	inclusive	DAE	1USABRK	5.0+09	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+^{3}He	inclusive	DAP	1USABRK	8.0+09	8.0+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+p	inclusive	DAE	1USABRK	5.0+09	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+p	inclusive	DAP	1USABRK	8.0+09	8.0+09	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+t	inclusive	DAE	1USABRK	5.0+09	4.2+10	Jour	PR/C,16,629	77	J.Gosset+	C2151
	^{20}Ne,x+t	inclusive	DAP	1USABRK	8.0+09	8.0+09	Jour	PR/C,16,629	77	J.Gosset+	C2151

92 Uranium 238

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,fis	Many	FY	4RUSMOS		6.8+07	Jour	YF,77,(7),871	14	B.S.Ishkhanov+	M0881

94 Plutonium 236

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		CS	1USATAM	5.0+04	8.8+06	Jour	PR/C,90,014304	14	R.O.Hughes+	14396

94 Plutonium 237

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		CS	1USATAM	5.0+04	8.2+06	Jour	PR/C,90,014304	14	R.O.Hughes+	14396

94 Plutonium 238

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		CS	1USATAM	5.0+04	1.6+07	Jour	PR/C,90,014304	14	R.O.Hughes+	14396

95 Americium 240

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		CS	1USATAM	5.0+04	1.4+07	Jour	PR/C,90,034601	14	R.J.Casperson+	14397

98 Californium 252

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,fis		NUF	1USAMHG	Spont		Jour	NSE,178,250	14	S.A.Pozzi+	14405

98 Californium 256

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		FY	1USABRK	Spont		Jour	PR/C,21,972	Mar 80	D.C.Hoffman+	10923
0,fis		KE	1USABRK	Spont		Jour	PR/C,21,972	Mar 80	D.C.Hoffman+	10923

100 Fermium 246

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		KE	1USABRK	Spont		Jour	PR/C,22,1581	Oct 80	D.Hoffman+	10925

100 Fermium 248

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		KE	1USABRK	Spont		Jour	PR/C,22,1581	Oct 80	D.Hoffman+	10925

100 Fermium 258

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		KE	1USABRK	Spont		Jour	PR/C,21,972	Mar 80	D.C.Hoffman+	10923