EXFOR News (April 2020)

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, 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 the NRDC Coordinator (n.otsuka@iaea.org) for inclusion in the EXFOR News distribution list as well as any question on EXFOR.

[1] N. Otuka, E. Dupont, V. Semkova, B. Pritychenko et al., Nucl.Data.Sheets **120**(2014)272.

Quantity codes

ALF	α-value ($\sigma_{\rm capt}/\sigma_{\rm fis}$)	KE	Kinetic energy
AMP	Length or amplitude	INT	Cross section integral over incident energy
CHG	Fragment charge	KER	Kerma factor
CS	Cross section	MAS	Fragment mass
CSP	Partial cross section	MFQ	Differential fission neutron multiplicity
CST	Temperature dependent cross section	MLT	Multiplicity
D3A	Triple differential $\mathrm{d}\Omega_1/\mathrm{d}\Omega_2/\mathrm{d}E'$	NQ	Nuclear quantity
D3E	Triple differential $\mathrm{d}\Omega/\mathrm{d}E'_1/\mathrm{d}E'_2$	NU	Fission neutron multiplicity $\bar{\nu}$
D4A	Quadruple diff. $\mathrm{d}\Omega_1/\mathrm{d}\Omega_2/\mathrm{d}E'_1/\mathrm{d}E'_2$	NUD	Delayed fission neutron multiplicity $\bar{\nu_d}$
DA	Differential $\mathrm{d}/\mathrm{d}\Omega$	POL	Polarization
DAA	Double differential $\mathrm{d}\Omega_1/\mathrm{d}\Omega_2$	POD	Differential polarization
DAE	Double differential $\mathrm{d}\Omega/\mathrm{d}E'$	PY	Product yield (other than fission)
DAP	Partial differential $\mathrm{d}/\mathrm{d}\Omega$	RI	Resonance integral
DAT	Temperature-dependent Legendre coefficient	RP	Resonance parameter
DE	Differential $\mathrm{d}/\mathrm{d}E'$	RR	Reaction rate
DEP	Energy spectrum for specific group	SIF	Self indication
DP	Diff. by linear momentum of outgoing part.	SPC	Gamma spectrum
DT	Diff. by 4-momentum transfer squared	TSL	Thermal scattering
ETA	η-value = $\bar{\nu}\sigma_{\rm fis}/(\sigma_{\rm capt}+\sigma_{\rm fis})$	TT	Thick target yield
EVL	Evaluation	TTD	Differential thick target yield, $\mathrm{d}/\mathrm{d}\Omega$
FY	Fission product yield	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 #
*	^{6}He,el	^{1}H	?	3BZLUSP			Rept	AIP-1625,187	14	R.Pampacondori+	D0966
*	^{10}Be,el	^{1}H	?	3CPRIMP			Jour	PR/C,91,044302	15	Y.D.Liu+	S0194
*	^{11}Be,d	^{10}Be	?	2JPNOSA	3.0+08	3.0+08	Jour	CPL,35,082501	18	Yingjiang+	S0092

1 Hydrogen 2

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	γ,n	^{1}H	DA	4UKRKFT	3.5+07	1.0+08	Jour	JEL,50,244	89	V.B.Ganenko+	G4083
	γ,n	^{1}H	POD	4UKRKFT	3.8+08	7.0+08	Jour	JEL,31,270	80	A.S.Bratashevskii+	G4077
	γ,n	^{1}H	POD	4UKRKFT	4.0+08	5.0+08	Jour	JEL,35,605	82	A.S.Bratashevsky+	G4085
	γ,n	^{1}H	POD	4UKRKFT	6.0+08	1.0+09	Jour	JEL,34,389	81	A.S.Bratashevsky+	G4084
	γ,n	^{1}H	POD	4UKRKFT	7.5+08	1.1+09	Jour	JEL,36,216	82	A.S.Bratashevskii+	G4078
	γ,n	^{1}H	?	4UKRKFT	4.0+08	5.0+08	Jour	JEL,35,605	82	A.S.Bratashevsky+	G4085
	γ,n	^{1}H	?	4UKRKFT	4.7+07	2.6+08	Jour	JEL,46,272	87	V.B.Ganenko+	G4080
*	p,γ	^{3}He	CS	3SLNIJS	9.7+04	2.1+05	Jour	EPJ/A,55,137	19	I.Tisma+	D0969
*	p,γ	^{3}He	DA	3SLNIJS	4.7+04	2.1+05	Jour	EPJ/A,55,137	19	I.Tisma+	D0969
*	^{3}He,p	^{4}He	DA	3CPRBJG	7.5+05	3.6+06	Jour	NIM/B,412,81	17	J.P.Zhu+	S0089
*	^{12}C,el	^{2}H	DA	3CPRFUD	3.3+06	8.9+06	Jour	NIM/B,412,54	17	Yiming Duan+	S0088

2 Helium 3

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	α,γ	^{7}Be	CS	3HUNDEB	2.5+06	4.4+06	Jour	PR/C,99,055804	19	T.Szucs+	D4400
	α,p	^{6}Li	DAP	4UKRIJD	2.2+07	2.6+07	Jour	JEL,32,427	80	O.F.Nemets+	D5176
	α,x+d	inclusive	DAE	4UKRIJD	1.4+07	1.4+07	Jour	JEL,35,666	82	O.F.Nemets+	D5178

2 Helium 4

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	γ,n	^{3}He	CS	4UKRKFT	2.7+07	5.2+07	Jour	JEL,17,253	73	Yu.M.Arkatov+	G4076
	γ,n	^{3}He	?	4UKRKFT	2.7+07	6.4+07	Jour	JEL,9,384	69	Yu.M.Arkatov+	G4074
	γ,p	^{3}H	CS	4UKRKFT	2.0+07	5.1+07	Jour	JEL,17,253	73	Yu.M.Arkatov+	G4076
	γ,p	^{3}H	POD	4UKRKFT	1.2+08	2.5+08	Jour	JEL,48,258	88	V.B.Ganenko+	G4081
*	γ,p	^{3}H	POD	4UKRKFT	2.0+07	4.0+07	Jour	VAT/I,,(3/121),21	19	A.A.Peretiatko+	G4072
	γ,p	^{3}H	POD	4UKRKFT	2.3+07	4.0+07	Jour	JEL,9,384	69	Yu.M.Arkatov+	G4074
*	γ,p	^{3}H	POD	4UKRKFT	2.3+07	4.3+07	Jour	VAT/I,,(3/121),21	19	A.A.Peretiatko+	G4072
	γ,p	^{3}H	POD	4UKRKFT	2.5+07	4.0+07	Jour	JEL,9,384	69	Yu.M.Arkatov+	G4074
	γ,p	^{3}H	?	4UKRKFT	2.2+07	6.0+07	Jour	JEL,9,384	69	Yu.M.Arkatov+	G4074

3 Lithium 6

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	γ,x+p	inclusive	POD	4UKRKFT	6.0+07	3.0+08	Jour	JEL,46,272	87	V.B.Ganenko+	G4080
	^{3}He,non		CS	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+α	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+d	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+d	inclusive	DAE	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+^{3}He	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+p	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+p	inclusive	DAE	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+t	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185

3 Lithium 7

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	γ,x+p	inclusive	POD	4UKRKFT		8.1+08	Jour	JEL,11,101	70	S.G.Tonapetyan+	G4075
	^{3}He,non		CS	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+α	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+d	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+d	inclusive	DAE	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+^{3}He	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+p	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+p	inclusive	DAE	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185
	^{3}He,x+t	inclusive	DA	4UKRIJD	9.3+07	9.3+07	Jour	BAS,58,1910	94	V.N.Domnikov+	D5185

3 Lithium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{7}Be	TT	3EGYCAI	1.4+07	1.4+07	Jour	ARI,155,108947	20	M.Al-Abyad+	D0963

4 Beryllium 9

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{7}Be,el	^{9}Be	DA	3BZLUSP	2.3+07	2.3+07	Jour	PR/C,99,064617	19	U.Umbelino+	D0964
	^{12}C,^{10}B	^{11}B	DAP	4UKRIJD	6.5+07	6.5+07	Jour	NP/A,677,61	00	A.T.Rudchik+	D5183
	^{12}C,el	^{9}Be	DA	4UKRIJD	6.5+07	6.5+07	Jour	NP/A,662,44	00	A.T.Rudchik+	D5182
	^{12}C,inel	^{9}Be	DAP	4UKRIJD	6.5+07	6.5+07	Jour	NP/A,662,44	00	A.T.Rudchik+	D5182

4 Beryllium 10

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

*	p,0		RP	3CPRIMP			Jour	PR/C,91,044302	15	Y.D.Liu+	S0194

6 Carbon 12

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	γ,p	^{11}B	DAP	2SWDLND	4.1+07	7.4+07	Jour	VAT/I,,(3/121),26	19	D.D.Burdeinyi+	G4073
*	γ,p	^{11}B	POD	2SWDLND	4.1+07	5.3+07	Jour	VAT/I,,(3/121),26	19	D.D.Burdeinyi+	G4073
	γ,x+p	inclusive	POD	4UKRKFT		9.3+08	Jour	JEL,11,101	70	S.G.Tonapetyan+	G4075
	d,^{6}Li	^{8}Be	DAP	4UKRIJD	1.3+07	1.3+07	Jour	JEL,38,36	83	A.A.Shvedov+	D5179
	d,^{6}Li	^{8}Be	DAP	4UKRIJD	1.3+07	1.4+07	Jour	JEL,34,601	81	V.N.Dobrikov+	D5177
*	^{11}B,^{7}Li	^{16}O	DAP	3CPRAEP	5.0+07	5.0+07	Jour	PR/C,99,025805	19	Y.P.Shen+	S0213
*	^{11}B,el	^{12}C	DA	3CPRAEP	5.0+07	5.0+07	Jour	PR/C,99,025805	19	Y.P.Shen+	S0213
*	^{13}C,fus		CS	3RUMBUC	2.3+06	5.3+06	Jour	PL/B,801,135170	20	N.T.Zhang+	D0970
*	^{13}C,p	^{24}Na	CS	3RUMBUC	2.3+06	5.3+06	Jour	PL/B,801,135170	20	N.T.Zhang+	D0970
*	^{15}N,^{14}C	^{13}N	DAP	3POLWWA	8.1+07	8.1+07	Jour	NP/A,992,121638	19	A.T.Rudchik+	D5184

6 Carbon 15

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	^{18}O,x	^{13}C	CS	3CPRIMP	4.3+09	4.3+09	Jour	PR/C,99,024605	19	Y.Z.Sun+	S0188

6 Carbon 16

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	^{18}O,x	^{14}C	CS	3CPRIMP	4.3+09	4.3+09	Jour	PR/C,99,024605	19	Y.Z.Sun+	S0188

7 Nitrogen 14

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	p,γ		RP	3HUNDEB	2.8+05	1.1+06	Jour	PR/C,100,015805	19	Gy.Gyurky+	D4405
	α,el	^{14}N	DA	1USARIC	2.7+06	4.9+06	Jour	PR,112,547	58	E.Kashy+	C1032

8 Oxygen 16

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	p,inel	^{16}O	CSP	3RUMBUC	6.8+06	1.6+07	Jour	PR/C,101,024604	20	M.Boromiza+	D0974

8 Oxygen 17

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,0		RP	1USACAL			Jour	PR,125,347	62	R.E.Brown	C2404
	p,α	^{14}N	DA	1USACAL	5.1+05	1.6+06	Jour	PR,125,347	62	R.E.Brown	C2404
	d,p	^{18}O	DAP	1USAPEN	1.0+07	1.0+07	Jour	PL,10,93	64	P.Hewka+	C2405

8 Oxygen 18

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{3}He,d	^{19}F	DAP	3CZRUJF	2.5+07	2.5+07	Jour	EPJ/A,55,114	19	V.Burjan+	D0956
*	^{3}He,el	^{18}O	DA	3CZRUJF	2.5+07	2.5+07	Jour	EPJ/A,55,114	19	V.Burjan+	D0956

11 Sodium 23

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,γ	^{24}Na	CS	3HUNDEB	1.3+07	1.5+07	Jour	NP/A,95,229	67	J.Csikai+	30067

12 Magnesium 24

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{24}Na	CS	3CZRUJV	Fiss		Jour	ARI,155,108937	20	M.Schulc+	31806

13 Aluminium 27

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,α	^{24}Na	CS	3CZRUJV	Fiss		Jour	ARI,155,108937	20	M.Schulc+	31806
*	d,^{3}He	^{26}Mg	DAP	3INDVEC	2.5+07	2.5+07	Jour	IMP/E,26,1750064	17	V.Srivastava+	D6370
*	α,x+α	inclusive	DAE	4KASKAZ	2.9+07	2.9+07	Jour	BAS,83,1183	19	T.K.Zholdybayev+	D8005
*	α,x+α	inclusive	DE	4KASKAZ	2.9+07	2.9+07	Jour	BAS,83,1183	19	T.K.Zholdybayev+	D8005
*	α,x+p	inclusive	DAE	4KASKAZ	2.9+07	2.9+07	Jour	BAS,83,1183	19	T.K.Zholdybayev+	D8005
*	α,x+p	inclusive	DE	4KASKAZ	2.9+07	2.9+07	Jour	BAS,83,1183	19	T.K.Zholdybayev+	D8005
*	^{16}O,el	^{27}Al	DA	2ITYLNS	2.4+08	2.4+08	Jour	PR/C,100,014604	19	L.M.Fonseca+	D8008
*	^{16}O,inel	^{27}Al	DAP	2ITYLNS	2.4+08	2.4+08	Jour	PR/C,100,014604	19	L.M.Fonseca+	D8008

14 Silicon 28

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,inel	^{28}Si	CSP	3RUMBUC	4.3+06	1.6+07	Jour	PR/C,101,024604	20	M.Boromiza+	D0974
*	^{13}C,^{12}C	^{29}Si	DAP	3BZLUSP	3.0+07	3.4+07	Jour	PR/C,101,014611	20	R.Linares+	D0972

*	^{13}C,el	^{28}Si	DA	3BZLUSP	2.5+07	3.4+07	Jour	PR/C,101,014611	20	R.Linares+	D0972
*	^{13}C,inel	^{28}Si	DAP	3BZLUSP	3.0+07	3.4+07	Jour	PR/C,101,014611	20	R.Linares+	D0972
*	^{16}O,el	^{28}Si	DA	2ITYLNS	2.4+08	2.4+08	Jour	PR/C,100,014604	19	L.M.Fonseca+	D8008
*	^{16}O,inel	^{28}Si	DAP	2ITYLNS	2.4+08	2.4+08	Jour	PR/C,100,014604	19	L.M.Fonseca+	D8008

22 Titanium

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	^{3}He,x	^{48}V	CS	3CZRUJF	1.4+07	4.7+07	Jour	ARI,156,108988	20	O.Lebeda+	D0965
*	^{3}He,x	^{48}Cr	CS	3CZRUJF	1.4+07	4.7+07	Jour	ARI,156,108988	20	O.Lebeda+	D0965

22 Titanium 46

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,p	^{46}Sc	CS	3CZRUJV	Fiss		Jour	ARI,155,108937	20	M.Schulc+	31806

22 Titanium 47

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,p	^{47}Sc	CS	3CZRUJV	Fiss		Jour	ARI,155,108937	20	M.Schulc+	31806

22 Titanium 48

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,p	^{48}Sc	CS	3CZRUJV	Fiss		Jour	ARI,155,108937	20	M.Schulc+	31806

25 Manganese 55

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
	n,γ	^{56}Mn	CS	3HUNDEB	1.3+07	1.5+07	Jour	NP/A,95,229	67	J.Csikai+	30067
	p,4n	^{52}Fe	TT	4RUSFVE	3.6+07	1.0+08	Jour	RCA,54,57	91	N.G.Zaitseva+	A0918
*	d,p	^{56}Mn	CS	3CZRUJF	3.1+06	1.9+07	Jour	PR/C,101,024605	20	M.Avrigeanu+	D0973
*	d,x	^{51}Cr	CS	3CZRUJF	1.8+07	1.9+07	Jour	PR/C,101,024605	20	M.Avrigeanu+	D0973
*	d,x	^{54}Mn	CS	3CZRUJF	7.2+06	1.9+07	Jour	PR/C,101,024605	20	M.Avrigeanu+	D0973

27 Cobalt 59

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

*	n,2n	^{58}Co	CS	3INDTRM	1.2+07	1.6+07	Jour	RCA,106,877	18	S.S.Yerraguntla+	33117
*	n,γ	^{60}Co	CS	3ISLSOR	Maxwl		Jour	PR/C,100,065804	19	L.Weissman+	31817
*	n,γ	^{60}Co	?	3ISLSOR			Jour	PR/C,100,065804	19	L.Weissman+	31817
	p,x	^{52}Fe	TT	4RUSFVE	6.4+07	1.0+08	Jour	RCA,54,57	91	N.G.Zaitseva+	A0918
*	α,x+α	inclusive	DAE	4KASKAZ	2.9+07	2.9+07	Jour	BAS,83,1183	19	T.K.Zholdybayev+	D8005
*	α,x+α	inclusive	DE	4KASKAZ	2.9+07	2.9+07	Jour	BAS,83,1183	19	T.K.Zholdybayev+	D8005
*	α,x+p	inclusive	DAE	4KASKAZ	2.9+07	2.9+07	Jour	BAS,83,1183	19	T.K.Zholdybayev+	D8005
*	α,x+p	inclusive	DE	4KASKAZ	2.9+07	2.9+07	Jour	BAS,83,1183	19	T.K.Zholdybayev+	D8005

28 Nickel 58

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{57}Ni	CS	3CZRUJV	Fiss		Jour	ARI,155,108937	20	M.Schulc+	31806
*	n,p	^{58}Co	CS	3CZRUJV	Fiss		Jour	ARI,155,108937	20	M.Schulc+	31806

28 Nickel 60

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{60}Co	CS	3CZRUJV	Fiss		Jour	ARI,155,108937	20	M.Schulc+	31806

28 Nickel 64

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{58}Ni,fus		CS	2ITYPAD	8.7+07	1.0+08	Jour	PR/C,100,044619	19	A.M.Stefanini+	D8006

29 Copper

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	d,x	^{63}Zn	CS	3CZRUJF	9.0+06	1.9+07	Jour	NIM/B,461,105	19	O.Lebeda+	D0968

29 Copper 63

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,α	^{60}Co	CS	3CZRUJV	Fiss		Jour	ARI,155,108937	20	M.Schulc+	31806
*	n,γ	^{64}Cu	CS	3ISLSOR	Maxwl		Jour	PR/C,100,065804	19	L.Weissman+	31817
*	n,γ	^{64}Cu	?	3ISLSOR			Jour	PR/C,100,065804	19	L.Weissman+	31817

29 Copper 65

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{66}Cu	CS	3ISLSOR	Maxwl		Jour	PR/C,100,065804	19	L.Weissman+	31817
*	n,γ	^{66}Cu	?	3ISLSOR			Jour	PR/C,100,065804	19	L.Weissman+	31817

30 Zinc 68

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,n	^{71}Ge	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

30 Zinc 70

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	$\alpha,3n$	^{71}Ge	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

32 Germanium 76

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{20}Ne,el	^{76}Ge	DA	2ITYLNS	3.1+08	3.1+08	Jour	PR/C,100,034620	19	A.Spatafora+	D8001
*	^{20}Ne,inel	^{76}Ge	DAP	2ITYLNS	3.1+08	3.1+08	Jour	PR/C,100,034620	19	A.Spatafora+	D8001

33 Arsenic 75

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,inel	^{75}As	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

35 Bromine

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,x	^{77}Kr	TT	4RUSFVE	2.2+07	1.0+08	Jour	RCA,54,57	91	N.G.Zaitseva+	A0918

37 Rubidium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,x	^{82}Sr	TT	4RUSFVE	3.6+07	1.0+08	Jour	RCA,54,57	91	N.G.Zaitseva+	A0918

37 Rubidium 85

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{84}Rb	CS	3CPRNPC			Jour	RCA,106,709	18	Junhua Luo+	32782
	α,n	^{88}Y	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

37 Rubidium 87

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{86}Rb	CS	3CPRNPC			Jour	RCA,106,709	18	Junhua Luo+	32782
	α,3n	^{88}Y	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

38 Strontium 86

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,x	^{88}Y	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

38 Strontium 87

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,x	^{88}Y	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

39 Yttrium 89

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,2n	^{87}Y	CS	3KORPUE		6.5+07	Jour	KPS,67,1482	15	M.Zaman+	G3135
*	γ,3n	^{86}Y	CS	3KORPUE		6.5+07	Jour	KPS,67,1482	15	M.Zaman+	G3135
*	γ,4n	^{85}Y	CS	3KORPUE		6.5+07	Jour	KPS,67,1482	15	M.Zaman+	G3135
*	γ,n	^{88}Y	CS	3KORPUE		6.5+07	Jour	KPS,67,1482	15	M.Zaman+	G3135
	α,3n	^{90}Nb	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186
	α,n+α	^{88}Y	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

40 Zirconium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{88}Y	CS	3SAFITH	1.4+07	6.6+07	Jour	NIM/B,343,173	15	F.Szelecsenyi+	D4317

41 Niobium 93

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{94}Nb	CS	1USAORU	Maxwl		Jour	PR/C,100,034613	19	K.S.Krane	14602
*	n,γ	^{94}Nb	RI	1USAORU		5.0-01	Jour	PR/C,100,034613	19	K.S.Krane	14602

42 Molybdenum

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{92}Nb	CS	3HUNDEB	8.0+06	1.7+07	Jour	RCA,108,1	20	A.Elbinawi+	D4407
*	p,x	^{95}Nb	CS	3HUNDEB	1.0+07	1.7+07	Jour	RCA,108,1	20	A.Elbinawi+	D4407
*	p,x	^{99}Mo	CS	3POLIFJ	1.9+07	2.6+07	Jour	APP/B,50,1583	19	A.A.Ahmed+	D0971
*	p,x	^{93}Tc	CS	3HUNDEB	6.6+06	1.7+07	Jour	RCA,108,1	20	A.Elbinawi+	D4407
*	p,x	^{94}Tc	CS	3POLIFJ	1.9+07	2.6+07	Jour	APP/B,50,1583	19	A.A.Ahmed+	D0971
*	p,x	^{94}Tc	CS	3HUNDEB	6.6+06	1.7+07	Jour	RCA,108,1	20	A.Elbinawi+	D4407
*	p,x	^{95}Tc	CS	3POLIFJ	1.9+07	2.6+07	Jour	APP/B,50,1583	19	A.A.Ahmed+	D0971
*	p,x	^{95}Tc	CS	3HUNDEB	4.0+06	1.7+07	Jour	RCA,108,1	20	A.Elbinawi+	D4407
*	p,x	^{96}Tc	CS	3POLIFJ	1.9+07	2.6+07	Jour	APP/B,50,1583	19	A.A.Ahmed+	D0971
*	p,x	^{96}Tc	CS	3HUNDEB	4.0+06	1.7+07	Jour	RCA,108,1	20	A.Elbinawi+	D4407
*	p,x	^{99}Tc	CS	3POLIFJ	1.9+07	2.6+07	Jour	APP/B,50,1583	19	A.A.Ahmed+	D0971
*	p,x	^{99}Tc	CS	3HUNDEB	8.0+06	1.7+07	Jour	RCA,108,1	20	A.Elbinawi+	D4407

44 Ruthenium 96

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{97}Ru	CS	3INDMNP	2.5-02	2.5-02	Jour	ARI,153,108819	19	P.Panikkath	33134
*	n,γ	^{97}Ru	RI	3INDMNP		5.0-01	Jour	ARI,153,108819	19	P.Panikkath	33134

44 Ruthenium 102

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{103}Ru	CS	3INDMNP	2.5-02	2.5-02	Jour	ARI,153,108819	19	P.Panikkath	33134
*	n,γ	^{103}Ru	RI	3INDMNP		5.0-02	Jour	ARI,153,108819	19	P.Panikkath	33134

44 Ruthenium 104

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{105}Ru	CS	3INDMNP	2.5-02	2.5-02	Jour	ARI,153,108819	19	P.Panikkath	33134
*	n,γ	^{105}Ru	RI	3INDMNP		5.0-01	Jour	ARI,153,108819	19	P.Panikkath	33134

45 Rhodium 103

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,γ	^{104}Rh	CS	3HUNDEB	1.3+07	1.5+07	Jour	NP/A,95,229	67	J.Csikai+	30067

47 Silver 107

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	$\alpha,2n$	^{109}In	CS	4UKRKFT	2.5+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

50 Tin 116

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	$\alpha,3n$	^{117}Te	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

51 Antimony 123

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	$n,2n$	^{122}Sb	CS	3CPRNPC		1.5+07	Jour	ARI,140,115	18	Junhua Luo+	32780

52 Tellurium 130

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	$\alpha,2n$	^{132}Xe	CS	4UKRKFT	2.5+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

53 Iodine 127

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,x+n	inclusive	CS	4RUSMOS	8.9+06	3.1+07	Jour	YF,83,2	20	S.S.Belyshev+	M0978
	$p,5n$	^{123}Xe	TT	4RUSFVE	4.8+07	1.0+08	Jour	RCA,54,57	91	N.G.Zaitseva+	A0918

54 Xenon 126

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,γ	^{127}Xe	CS	3DDRROS	2.5-02	2.5-02	Jour	NP,73,91	65	G.Winter+	31819

54 Xenon 129

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,2n	^{127}Xe	CS	4RUSMOS	1.7+07	3.1+07	Jour	YF,83,2	20	S.S.Belyshev+	M0978
*	γ,2n	^{127}Xe	INT	4RUSMOS		3.1+07	Jour	YF,83,2	20	S.S.Belyshev+	M0978
*	γ,3n	^{126}Xe	CS	4RUSMOS	2.5+07	3.1+07	Jour	YF,83,2	20	S.S.Belyshev+	M0978
*	γ,3n	^{126}Xe	INT	4RUSMOS		3.1+07	Jour	YF,83,2	20	S.S.Belyshev+	M0978
*	γ,n	^{128}Xe	CS	4RUSMOS	8.9+06	3.1+07	Jour	YF,83,2	20	S.S.Belyshev+	M0978
*	γ,n	^{128}Xe	INT	4RUSMOS		3.1+07	Jour	YF,83,2	20	S.S.Belyshev+	M0978
*	γ,x+n	inclusive	CS	4RUSMOS	8.9+06	3.1+07	Jour	YF,83,2	20	S.S.Belyshev+	M0978
*	γ,x+n	inclusive	INT	4RUSMOS		3.1+07	Jour	YF,83,2	20	S.S.Belyshev+	M0978

55 Caesium 133

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,6n	^{128}Ba	TT	4RUSFVE	4.3+07	1.0+08	Jour	RCA,54,57	91	N.G.Zaitseva+	A0918
	α,n	^{136}La	CS	4UKRKFT	1.6+07	1.6+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

56 Barium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,x	^{138}Ce	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

59 Praseodymium 141

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,γ	^{142}Pr	CS	3HUNDEB	1.3+07	1.5+07	Jour	NP/A,95,229	67	J.Csikai+	30067
	α,3n	^{142}Pm	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

61 Promethium 147

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{148}Pm	CS	3ISLSOR			Jour	PL/B,797,134809	19	C.Guerrero+	31815

62 Samarium 147

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,α	^{144}Nd	DAE	3POLIBJ	1.4+07	1.4+07	Prog	INDC(SEC)-42,193	74	L.Glowacka+	30298
	n,α	^{144}Nd	DAE	3POLIPJ	1.8+07	1.8+07	Prog	INR-1464,1	73	L.Glowacka+	30261

62 Samarium 149

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,α	^{146}Nd	DAE	3POLIBJ	1.4+07	1.4+07	Prog	INDC(SEC)-42,193	74	L.Glowacka+	30298
	n,α	^{146}Nd	DAE	3POLIPJ	1.8+07	1.8+07	Prog	INR-1464,1	73	L.Glowacka+	30261

62 Samarium 154

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	$\alpha,3n$	^{155}Gd	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

63 Europium 151

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,α	^{148}Pm	DAE	3POLIBJ	1.4+07	1.4+07	Prog	INDC(SEC)-42,193	74	L.Glowacka+	30298

63 Europium 153

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,x	^{155}Gd	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

67 Holmium 165

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,γ	^{166}Ho	CS	3HUNDEB	1.3+07	1.5+07	Jour	NP/A,95,229	67	J.Csikai+	30067
*	^{3}He,2n	^{166}Tm	CS	3CZRUJF	1.5+07	4.6+07	Jour	ARI,156,108988	20	O.Lebeda+	D0965
*	^{3}He,3n	^{165}Tm	CS	3CZRUJF	1.5+07	4.6+07	Jour	ARI,156,108988	20	O.Lebeda+	D0965
*	^{3}He,5n	^{163}Tm	CS	3CZRUJF	3.1+07	4.6+07	Jour	ARI,156,108988	20	O.Lebeda+	D0965
*	^{13}C,3n	^{175}Ta	CS	3INDNSD	5.7+07	8.3+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,4n	^{174}Ta	CS	3INDNSD	5.7+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,5n	^{173}Ta	CS	3INDNSD	6.1+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,6n	^{172}Ta	CS	3INDNSD	7.0+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,x	^{166}Tm	CS	3INDNSD	7.4+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,x	^{167}Tm	CS	3INDNSD	7.0+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,x	^{169}Yb	CS	3INDNSD	6.6+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,x	^{169}Lu	CS	3INDNSD	7.0+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,x	^{170}Lu	CS	3INDNSD	6.6+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,x	^{171}Lu	CS	3INDNSD	5.7+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,x	^{172}Lu	CS	3INDNSD	5.7+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332
*	^{13}C,x	^{173}Hf	CS	3INDNSD	6.1+07	8.7+07	Jour	NP/A,970,208	18	S.A.Tali+	D6332

70 Ytterbium 171

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,α	^{168}Er	DAE	3POLIBJ	1.4+07	1.4+07	Prog	INDC(SEC)-42,193	74	L.Glowacka+	30298
	n,α	^{168}Er	DAE	3POLIPJ	1.8+07	1.8+07	Prog	INDC(SEC)-42,193	74	L.Glowacka+	30299

70 Ytterbium 173

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,α	^{170}Er	DAE	3POLIBJ	1.4+07	1.4+07	Prog	INDC(SEC)-42,193	74	L.Glowacka+	30298
	n,α	^{170}Er	DAE	3POLIPJ	1.8+07	1.8+07	Prog	INDC(SEC)-42,193	74	L.Glowacka+	30299

70 Ytterbium 174

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{175}Yb	CS	3BANSAV	3.3-02	5.4-02	Jour	RPC,166,108471	20	M.M.Zaved+	31814

71 Lutetium 175

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	$\alpha,2n$	^{177}Ta	CS	4UKRIJD	2.6+07	2.6+07	Jour	PAN,79,1381	16	I.N.Vishnevsky+	D5180
	$\alpha,3n$	^{176}Ta	CSP	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

71 Lutetium 176

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,γ	^{177}Lu	CS	3DDRROS	2.5-02	2.5-02	Jour	NP,70,415	65	C.Heiser+	31818
*	α,p	^{179}Hf	CS	4UKRIJD	2.6+07	2.6+07	Jour	PAN,79,1381	16	I.N.Vishnevsky+	D5180

72 Hafnium 178

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{179}Hf	CS	4UKRIJD	2.5-02	2.5-02	Jour	NIM/B,438,20	19	V.A.Zheltonozhsky+	32249

72 Hafnium 179

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,3n	^{180}W	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

72 Hafnium 180

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{179}Hf	CS	4UKRIEP		1.5+07	Jour	NIM/B,456,116	19	V.A.Zheltonozhsky+	G4087
*	γ,n	^{179}Hf	CS	4UKRIEP		1.8+07	Jour	PAN,79,1381	16	I.N.Vishnevsky+	G4086
*	γ,n	^{179}Hf	CS	4UKRKFT		3.7+07	Jour	NIM/B,438,20	19	V.A.Zheltonozhsky+	G4088
	α,4n	^{180}W	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

73 Tantalum 181

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,x	^{179}Hf	CS	4UKRKFT		3.7+07	Jour	NIM/B,438,20	19	V.A.Zheltonozhsky+	G4088
	α,2n	^{183}Re	CSP	4UKRKFT	2.5+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186
	^{56}Fe,fis		CS	1USABRK	2.8+09	5.6+09	Jour	PR/C,45,677	92	M.Begemann-Blaich+	C2414

75 Rhenium 185

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,2n	^{187}Ir	CSP	4UKRKFT	2.5+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

75 Rhenium 187

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,2n	^{189}Ir	CSP	4UKRKFT	2.5+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186
	α,3n	^{188}Ir	CSP	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

77 Iridium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	d,x	^{191}Os	CS	2BLGLVN	1.7+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{187}Ir	CS	2BLGLVN	4.3+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{188}Ir	CS	2BLGLVN	3.7+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{189}Ir	CS	2BLGLVN	3.0+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{190}Ir	CS	2BLGLVN	1.7+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{192}Ir	CS	2BLGLVN	1.7+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401

*	d,x	^{194}Ir	CS	2BLGLVN	1.7+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{187}Pt	CS	2BLGLVN	4.3+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{188}Pt	CS	2BLGLVN	3.3+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{189}Pt	CS	2BLGLVN	2.2+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{191}Pt	CS	2BLGLVN	1.7+07	5.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401
*	d,x	^{193}Pt	CS	2BLGLVN	2.0+07	2.0+07	Jour	NIM/B,458,105	19	F.Tarkanyi+	D4401

77 Iridium 191

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
	α,3n	^{192}Au	CSP	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

77 Iridium 193

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
	n,γ	^{194}Ir	CS	3DDRROS	2.5-02	2.5-02	Jour	NP/A,115,213	68	C.Heiser+	31820
	α,3n	^{194}Au	CSP	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

78 Platinum

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	d,x	^{188}Ir	CS	2BLGLVN	4.2+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{189}Ir	CS	2BLGLVN	3.7+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{190}Ir	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{192}Ir	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{194}Ir	CS	2BLGLVN	4.0+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{189}Pt	CS	2BLGLVN	4.4+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{191}Pt	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{193}Pt	CS	2BLGLVN	3.7+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{195}Pt	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{197}Pt	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{191}Au	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{192}Au	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{193}Au	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{194}Au	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{195}Au	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{196}Au	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{198}Au	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404
*	d,x	^{199}Au	CS	2BLGLVN	3.5+07	4.8+07	Jour	JRN,321,747	19	F.Tarkanyi+	D4404

79 Gold 197

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	p,3n	^{195}Hg	CS	3CZRUJF	1.7+07	3.5+07	Jour	NIM/B,458,118	19	J.Cervenak+	D0967

*	p,n	^{197}Hg	CS	3CZRUJF	6.4+06	3.5+07	Jour	NIM/B,458,118	19	J.Cervenak+	D0967
*	p,x	^{194}Au	CS	3CZRUJF	2.3+07	3.5+07	Jour	NIM/B,458,118	19	J.Cervenak+	D0967
*	p,x	^{196}Au	CS	3CZRUJF	1.3+07	3.5+07	Jour	NIM/B,458,118	19	J.Cervenak+	D0967
*	d,2n	^{197}Hg	CS	3CZRUJF	8.3+06	2.0+07	Jour	NIM/B,461,105	19	O.Lebeda+	D0968
*	d,x	^{196}Au	CS	3CZRUJF	8.3+06	2.0+07	Jour	NIM/B,461,105	19	O.Lebeda+	D0968
*	d,x	^{198}Au	CS	3CZRUJF	8.3+06	2.0+07	Jour	NIM/B,461,105	19	O.Lebeda+	D0968
*	α,2n	^{199}Tl	CS	3HUNDEB	1.7+07	2.0+07	Jour	PR/C,100,065803	19	T.Szucs+	D4406
	α,2n	^{199}Tl	CSP	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186
*	α,γ	^{201}Tl	CS	3HUNDEB	1.4+07	2.0+07	Jour	PR/C,100,065803	19	T.Szucs+	D4406
*	α,n	^{200}Tl	CS	3HUNDEB	1.4+07	2.0+07	Jour	PR/C,100,065803	19	T.Szucs+	D4406
	^{56}Fe,fis		CS	1USABRK	2.8+09	5.6+09	Jour	PR/C,45,677	92	M.Begemann-Blaich+	C2414
	^{56}Fe,fis	Many	DA	1USABRK	2.8+09	5.6+09	Jour	PR/C,46,1404	92	T.C.Sangster+	C2416
	^{56}Fe,fis	^{27}Al	DA	1USABRK	2.8+09	5.6+09	Jour	PR/C,46,1404	92	T.C.Sangster+	C2416
	^{56}Fe,fis	^{31}P	DA	1USABRK	2.8+09	5.6+09	Jour	PR/C,46,1404	92	T.C.Sangster+	C2416
	^{93}Nb,fis		CS	1USABRK	4.6+09	9.3+09	Jour	PR/C,45,677	92	M.Begemann-Blaich+	C2414

80 Mercury 196

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,2n	^{195}Hg	CS	3CPRNPC	1.4+07	1.5+07	Jour	PR/C,98,014619	18	Junhua Luo+	32781

80 Mercury 198

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,2n	^{197}Hg	CS	3CPRNPC	1.4+07	1.5+07	Jour	PR/C,98,014619	18	Junhua Luo+	32781

80 Mercury 204

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
	α,3n	^{205}Pb	CSP	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186
	^{18}O,x	^{211}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
	^{18}O,x	^{212}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
	^{18}O,x	^{213}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
	^{18}O,x	^{214}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417

81 Thallium 203

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
	α,3n	^{204}Bi	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

81 Thallium 205

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,3n	^{206}Bi	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186
	^{18}O,x	^{211}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
	^{18}O,x	^{212}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
	^{18}O,x	^{213}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
	^{18}O,x	^{214}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417

82 Lead

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,x	^{198}Pb	CS	3KORPUE		7.0+07	Jour	EPJ/A,52,339	16	H.Naik+	G3134
*	γ,x	^{199}Pb	CS	3KORPUE		7.0+07	Jour	EPJ/A,52,339	16	H.Naik+	G3134
*	γ,x	^{200}Pb	CS	3KORPUE		7.0+07	Jour	EPJ/A,52,339	16	H.Naik+	G3134
*	γ,x	^{201}Pb	CS	3KORPUE		7.0+07	Jour	EPJ/A,52,339	16	H.Naik+	G3134
*	γ,x	^{202}Pb	CS	3KORPUE		7.0+07	Jour	EPJ/A,52,339	16	H.Naik+	G3134
*	γ,x	^{203}Pb	CS	3KORPUE		7.0+07	Jour	EPJ/A,52,339	16	H.Naik+	G3134
*	γ,x	^{204}Pb	CS	3KORPUE		7.0+07	Jour	EPJ/A,52,339	16	H.Naik+	G3134
*	p,x+n	inclusive	PY	3CPRIMP	2.5+08	2.5+08	Jour	NIM/B,342,87	15	L.Chen+	S0226
*	^{7}Be,el	^{nat}Pb	DA	3CPRIMP	1.3+08	1.3+08	Jour	PR/C,98,044608	18	Y.Y.Yang+	S0206
*	^{8}B,el	^{nat}Pb	DA	3CPRIMP	1.8+08	1.8+08	Jour	PR/C,98,044608	18	Y.Y.Yang+	S0206
*	^{9}C,el	^{nat}Pb	DA	3CPRIMP	2.3+08	2.3+08	Jour	PR/C,98,044608	18	Y.Y.Yang+	S0206
*	^{12}C,x+n	inclusive	PY	3CPRIMP	4.8+09	4.8+09	Jour	CPL,34,122502	17	Fei Ma+	S0091

82 Lead 204

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	α,3n	^{205}Po	CS	4UKRKFT	3.8+07	3.8+07	Jour	YF,32,620	80	K.S.Goncharov+	D5186

82 Lead 206

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,x	^{201}Tl	TT	4RUSFVE	4.9+07	5.7+07	Jour	RCA,54,57	91	N.G.Zaitseva+	A0918
*	^{50}Ti,2n	^{254}Rf	CS	2GERGSI			Jour	NP/A,994,121662	20	J.Khuyagbaatar+	D8007
*	^{50}Ti,n	^{255}Rf	CS	2GERGSI			Jour	NP/A,994,121662	20	J.Khuyagbaatar+	D8007

82 Lead 207

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,x	^{201}Tl	TT	4RUSFVE	5.7+07	6.8+07	Jour	RCA,54,57	91	N.G.Zaitseva+	A0918

82 Lead 208

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,4n	^{204}Pb	CS	3KORPUE		7.0+07	Jour	NIM/B,269,1417	11	H.Naik+	G3105
*	γ,5n	^{203}Pb	CS	3KORPUE		7.0+07	Jour	NIM/B,269,1417	11	H.Naik+	G3105
*	γ,6n	^{202}Pb	CS	3KORPUE		7.0+07	Jour	NIM/B,269,1417	11	H.Naik+	G3105
	n,γ	^{209}Pb	CS	3HUNDEB	1.3+07	1.5+07	Jour	NP/A,95,229	67	J.Csikai+	30067
	p,x	^{201}Tl	TT	4RUSFVE	6.8+07	7.6+07	Jour	RCA,54,57	91	N.G.Zaitseva+	A0918
	^{18}O,x	^{211}Bi	CS	1USABRK	8.6+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
	^{18}O,x	^{212}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
	^{18}O,x	^{213}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
	^{18}O,x	^{214}Bi	CS	1USABRK	8.7+07	1.9+08	Jour	PR/C,29,2160	84	K.Eskola+	C2417
*	^{50}Ti,2n	^{256}Rf	CS	2GERGSI			Jour	NP/A,994,121662	20	J.Khuyagbaatar+	D8007
*	^{50}Ti,n	^{257}Rf	CS	2GERGSI			Jour	NP/A,994,121662	20	J.Khuyagbaatar+	D8007

83 Bismuth 209

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	γ,3n	^{206}Bi	CS	3KORPUE		6.5+07	Jour	EPJ/A,41,323	09	H.Naik+	G0019
*	γ,3n	^{206}Bi	CS	3KORPUE		7.0+07	Jour	NIM/B,269,1417	11	H.Naik+	G3105
	γ,4n	^{205}Bi	CS	3KORPUE		6.5+07	Jour	EPJ/A,41,323	09	H.Naik+	G0019
*	γ,4n	^{205}Bi	CS	3KORPUE		7.0+07	Jour	NIM/B,269,1417	11	H.Naik+	G3105
*	γ,5n	^{204}Bi	CS	3KORPUE		7.0+07	Jour	NIM/B,269,1417	11	H.Naik+	G3105
*	γ,6n	^{203}Bi	CS	3KORPUE		7.0+07	Jour	NIM/B,269,1417	11	H.Naik+	G3105

90 Thorium 230

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	d,p+fis	Many	?	1USALAS	1.7+07	1.7+07	Prog	LA-9381,93	82	A.Sicre+	C2415

90 Thorium 232

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{231}Th	CS	3INDTRM	1.0+07	1.8+07	Jour	JRN,322,817	19	M.Karkera+	33136
*	n,fis		KE	1USALAS	1.1+06	3.7+07	Jour	PR/C,101,014601	20	D.Higgins+	14600
	^{56}Fe,fis		CS	1USABRK	2.8+09	5.6+09	Jour	PR/C,45,677	92	M.Begemann-Blaich+	C2414

92 Uranium 233

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		KE	1USALAS	1.2+05	3.7+07	Jour	PR/C,101,014601	20	D.Higgins+	14600

92 Uranium 234

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
γ,fis	Many	FY	2BLGGHT		2.0+07	Jour	PR/C,42,453	90	M.Verboven+	G0067
γ,fis		KE	2BLGGHT		2.0+07	Jour	PR/C,42,453	90	M.Verboven+	G0067
γ,fis	Many	KE	2BLGGHT		2.0+07	Jour	PR/C,42,453	90	M.Verboven+	G0067
γ,fis		MAS	2BLGGHT		2.0+07	Jour	PR/C,42,453	90	M.Verboven+	G0067

92 Uranium 235

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
γ,fis	Many	CHG	2BLGGHT		3.0+07	Jour	PR/C,21,237	80	E.Jacobs+	G0070
γ,fis	Many	FY	3MGLNUM		2.2+07	Conf	2005ULAANB,,30	05	N.Norov+	G0065
γ,fis	Many	FY	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis		FY	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis	Many	FY	2BLGGHT		3.0+07	Jour	PR/C,26,1356	82	D.Defrenne+	G0073
γ,fis	Many	FY	2BLGGHT		7.0+07	Jour	PR/C,21,237	80	E.Jacobs+	G0070
γ,fis		KE	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis		MAS	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis		NU	2BLGGHT		7.0+07	Jour	PR/C,21,237	80	E.Jacobs+	G0070
γ,fis	Many	?	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis	^{126}Sb	FY	2BLGGHT		7.0+07	Jour	PR/C,21,237	80	E.Jacobs+	G0070
γ,fis	^{128}Sb	FY	2BLGGHT		7.0+07	Jour	PR/C,21,237	80	E.Jacobs+	G0070
γ,fis	^{131}Te	FY	2BLGGHT		7.0+07	Jour	PR/C,21,237	80	E.Jacobs+	G0070
γ,fis	^{134}I	FY	2BLGGHT		3.0+07	Jour	PR/C,25,1546	82	H.Thierens+	G0072
n,fis	Many	FY	3CPRAEP	1.9+07	1.9+07	Prog	INDC(CPR)-56,8	01	Bao Jie+	32794
n,fis	Many	?	1USALRL	2.5-02	2.5-02	Rept	UCRL-8926	59	Y.Y.Chu	14589

92 Uranium 238

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
γ,fis	Many	CHG	2BLGGHT		3.0+07	Jour	PR/C,19,422	79	E.Jacobs+	G0071
γ,fis	Many	FY	2BLGGHT		2.0+07	Jour	PR/C,20,2249	79	E.Jacobs+	G0068
γ,fis	Many	FY	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis		FY	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis	Many	FY	2BLGGHT		3.0+07	Jour	PR/C,20,2249	79	E.Jacobs+	G0068
γ,fis	Many	FY	2BLGGHT		3.0+07	Jour	PR/C,26,1356	82	D.Defrenne+	G0073
γ,fis	Many	FY	2BLGGHT		7.0+07	Jour	PR/C,20,2249	79	E.Jacobs+	G0068
γ,fis	Many	FY	2BLGGHT		7.0+07	Jour	PR/C,19,422	79	E.Jacobs+	G0071
0,fis	Many	FY	1USACHI	Spont		Jour	PR,92,907	53	G.W.Wetherill	14581
γ,fis		KE	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis		KE	2BLGGHT		7.0+07	Jour	PR/C,20,2249	79	E.Jacobs+	G0068
γ,fis		MAS	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis		MAS	2BLGGHT		7.0+07	Jour	PR/C,20,2249	79	E.Jacobs+	G0068
γ,fis		NU	2BLGGHT		7.0+07	Jour	PR/C,19,422	79	E.Jacobs+	G0071
γ,fis	Many	?	2BLGGHT		2.5+07	Jour	PR/C,13,1536	76	A.Declercq+	G0069
γ,fis	Many	?	2BLGGHT		7.0+07	Jour	PR/C,20,2249	79	E.Jacobs+	G0068

	γ,fis	^{131}Te	FY	2BLGGHT		7.0+07	Jour	PR/C,19,422	79	E.Jacobs+	G0071
	γ,fis	^{132}I	FY	2BLGGHT		7.0+07	Jour	PR/C,19,422	79	E.Jacobs+	G0071
	γ,fis	^{134}I	FY	2BLGGHT		3.0+07	Jour	PR/C,25,1546	82	H.Thierens+	G0072
*	γ,fis	^{133}Xe	FY	4UKRIEP		1.8+07	Jour	YFE,20,126	19	V.O.Zheltonozhsky+	G4071
*	γ,fis	^{135}Xe	FY	4UKRIEP		1.4+07	Jour	YFE,20,126	19	V.O.Zheltonozhsky+	G4071
	n,fis	Many	CHG	1USALAS		5.0+07	Rept	LA-UR-04-3599	03	P.Casoli+	14588
*	n,fis	Many	FY	1USALAS	Fiss		Jour	NDS,163,249	20	B.D.Pierson+	14584
	n,fis	^{82}Ge	CSP	1USALAS	1.3+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{84}Se	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{90}Kr	CSP	1USALAS	1.8+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{92}Kr	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{94}Sr	CSP	1USALAS	1.3+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{96}Sr	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{98}Sr	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{98}Zr	CSP	1USALAS	1.2+06	1.2+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{100}Zr	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{102}Zr	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{104}Zr	CSP	1USALAS	1.2+06	5.5+07	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{104}Mo	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{106}Mo	CSP	1USALAS	1.3+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{116}Pd	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{118}Pd	CSP	1USALAS	5.5+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{122}Cd	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{128}Sn	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{130}Sn	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{132}Sn	CSP	1USALAS	1.7+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{128}Te	CSP	1USALAS	3.4+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{130}Te	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{132}Te	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{134}Te	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{136}Te	CSP	1USALAS	1.7+06	1.2+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{138}Te	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{132}Xe	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{136}Xe	CSP	1USALAS	1.2+06	1.2+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{138}Xe	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{140}Xe	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{142}Xe	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{138}Ba	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{142}Ba	CSP	1USALAS	1.2+06	1.2+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{144}Ba	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{146}Ba	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{148}Ba	CSP	1USALAS	1.3+06	1.2+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{146}La	CSP	1USALAS	1.2+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{146}Ce	CSP	1USALAS	1.7+06	1.1+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{148}Ce	CSP	1USALAS	1.2+06	7.0+07	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{150}Ce	CSP	1USALAS	1.7+06	5.5+07	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{152}Nd	CSP	1USALAS	1.7+06	1.2+08	Rept	LA-UR-04-3599	03	P.Casoli+	14588
	n,fis	^{154}Nd	CSP	1USALAS	1.2+06	5.4+07	Rept	LA-UR-04-3599	03	P.Casoli+	14588

94 Plutonium 239

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		NU	1USATAM	2.5+05	2.6+07	Jour	PR/C,100,064609	19	B.S.Wang+	14601

96 Curium 246

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis	Many	FY	1USAORL	Spont		Jour	PR/C,8,1018	73	F.Pleasonton+	14579
0,fis	Many	KE	1USAORL	Spont		Jour	PR/C,8,1018	73	F.Pleasonton+	14579
0,fis		MAS	1USAORL	Spont		Jour	PR/C,8,1018	73	F.Pleasonton+	14579
0,fis		?	1USAORL	Spont		Jour	PR/C,8,1018	73	F.Pleasonton+	14579

98 Californium 250

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
t,p+fis	Many	MAS	1USALAS	1.6+07	1.6+07	Jour	PR/C,23,2100	81	J.Weber+	C2418
t,p+fis	Many	?	1USALAS	1.6+07	1.6+07	Jour	PR/C,23,2100	81	J.Weber+	C2418

98 Californium 252

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis	Many	FY	1USAPTN	Spont		Jour	PR,172,1272	68	G.M.Raisbeck+	14580
0,fis		KE	1USALRL	Spont		Jour	PRL,13,438	64	Z.Fraenkel+	14578
0,fis		NU	1USALAS	Spont		Conf	73ROCH,2,191	73	J.P.Balagna+	10300
0,fis	Many	?	1USAPTN	Spont		Jour	PR,172,1272	68	G.M.Raisbeck+	14580
0,fis	Many	?	1USALAS	Spont		Jour	BAP,6,307(XA8)	61	H.E.Wegner	14585
0,fis	^{1}H	FY	1USAPTN	Spont		Jour	PR,172,1272	68	G.M.Raisbeck+	14580
0,fis	^{2}H	FY	1USAPTN	Spont		Jour	PR,172,1272	68	G.M.Raisbeck+	14580
0,fis	^{3}H	FY	1USAPTN	Spont		Jour	PR,172,1272	68	G.M.Raisbeck+	14580
0,fis	^{4}He	FY	1USALRL	Spont		Jour	PRL,13,438	64	Z.Fraenkel+	14578
0,fis	^{4}He	FY	1USAPTN	Spont		Jour	PR,172,1272	68	G.M.Raisbeck+	14580
0,fis	^{4}He	FY	1USALAS	Spont		Jour	PRL,15,298	65	S.L.Whetstonejr+	14586
0,fis	^{4}He	?	1USALRL	Spont		Jour	PRL,13,438	64	Z.Fraenkel+	14578
0,fis	^{6}He	FY	1USAPTN	Spont		Jour	PR,172,1272	68	G.M.Raisbeck+	14580
0,fis	^{6}He	FY	1USALAS	Spont		Jour	PRL,15,298	65	S.L.Whetstonejr+	14586
0,fis	^{6}He	?	1USALAS	Spont		Jour	PRL,15,298	65	S.L.Whetstonejr+	14586

100 Fermium 257

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		NU	1USALAS	Spont		Conf	73ROCH,2,191	73	J.P.Balagna+	10300