

Japan Charged-Particle Nuclear Reaction Data Group (JCPRG)

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Quantity code

ALF	Alpha	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	Nu
D3A	Triple differential $d\Omega_1/d\Omega_2/dE'$	NUD	Nu delayed
D3E	Triple differential $d\Omega/dE'_1/dE'_2$	NUF	Fragment neutrons
D4A	Quadruple diff. $d\Omega_1/d\Omega_2/dE'_1/dE'_2$	POL	Polarization
DA	Differential $d/d\Omega$	POD	Differential polarization
DAA	Double differential $d\Omega_1/d\Omega_2$	PY	Product yield (other than fission)
DAE	Double differential $d\Omega/dE'$	RI	Resonance integral
DAP	Partial differential $d/d\Omega$	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	Eta	TTD	Differential thick target yield, $d/d\Omega$
EVL	Evaluation	TT	Partial thick target yield

Special codes in outgoing particle field

abs	Absorption	fus	Fusion	non	Nonelastic	ths	Thermal scattering
el	Elastic	inel	Inelastic	sct	Scattering	tot	Total
f	Fission	incl	Inclusive	tcc	Total charge changing		

Special codes in incident energy field

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

1 Hydrogen 1										
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,el	^1H	DA	2SWDUPP	9.6+07		Jour	PR/C,71,024002	05	C.Johansson+	22886
\bar{p},\bar{n}	^1Nn	DA	2JPNLEP	0.0+00		Jour	PR/C,31,(5),1853	May 85	K.Nakamura+	J1617
$^{32}\text{S},tcc$		CS	2GERUSI	2.3+10		Jour	NIM/B,29,675	88	C.Brechtmann+	O1273
$^{32}\text{S},x$	Many	CS	2GERUSI	2.3+10		Jour	NIM/B,29,675	88	C.Brechtmann+	O1273
$^{36}\text{Ar},tcc$		CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271
$^{36}\text{Ar},x$	Many	CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271
$^{40}\text{Ar},tcc$		CS	2GERGSI	1.4+10		Jour	RM,39,525	05	G.Iancu+	O1271
$^{40}\text{Ar},x$	Many	CS	2GERGSI	1.4+10		Jour	RM,39,525	05	G.Iancu+	O1271

1 Hydrogen 2										
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,el	^2H	DT	4RUSLIN	7.0+08	9.9+08	Jour	YF,47,1185	88	G.N.Velichko+	O1276
$^3\text{He},p$	^4He	DA	2GERGAR	5.5+05	6.0+06	Jour	NIM/B,234,169	05	V.Kh.Alimov+	O1258
$^9\text{Li},el$	^2H	DA	2ZZZCER	2.1+07		Jour	NP/A,748,374	05	H.B.Jeppesen+	O0742
$^9\text{Li},p$	^{10}Li	DAP	2ZZZCER	2.1+07		Jour	NP/A,748,374	05	H.B.Jeppesen+	O0742
$^{18}\text{O},el$	^2H	DA	2ZZZCER	4.2+07		Jour	NP/A,748,374	05	H.B.Jeppesen+	O0742

2 Helium 4										
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\pi^+,n+X$	^1H	DA	2JPNLEP	0.0+00		Jour	PL/B,335,(3-4),330	Sep 94	T.Nagae+	J1609
$\pi^+,p+X$	^1H	DA	2JPNLEP	0.0+00		Jour	PL/B,335,(3-4),330	Sep 94	T.Nagae+	J1609
d,el	^4He	DA	2JPNKTO	7.8+06		Jour	JPJ,44,(3),704	Mar 78	T.Kambara+	E0100
d,p	incl	CS	2JPNKTO	7.8+06		Jour	JPJ,44,(3),704	Mar 78	T.Kambara+	E0100
d,p	incl	DAE	2JPNKTO	7.8+06		Jour	JPJ,44,(3),704	Mar 78	T.Kambara+	E0100
$^3\text{He},\gamma$	^7Be	CS	3ISLWZI	0.0+00	4.2+05	Jour	PRL,93,262503	04	B.S.Narasingh+	O1268

3 Lithium 6										
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
π^-, Λ	incl	DA	2JPNLEP	0.0+00		Jour	PL/B,328,(3-4),264	Jun 94	K.Tomizawa+	J1610
π^-, Λ	incl	POD	2JPNLEP	0.0+00		Jour	PL/B,328,(3-4),264	Jun 94	K.Tomizawa+	J1610

4 Beryllium 9										
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					

p,n	incl	PY	2BLGLVN	2.3+07	8.0+07	Jour	NIM/A,545,339	05	I.Tilquin+	O1279
$^{92}\text{Mo},x$	Many	CS	2GERGSI	4.6+10		Jour	EPJ/A,25,193	05	B.Fernandez-Dominguez+	O1297

6 Carbon

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{32}\text{S},\text{tcc}$		CS	2GERUSI	2.3+10		Jour	NIM/B,29,675	88	C.Brechtmann+	O1273
$^{32}\text{S},x$	Many	CS	2GERUSI	2.3+10		Jour	NIM/B,29,675	88	C.Brechtmann+	O1273
$^{32}\text{S},\text{tcc}$		CS	2GERUSI	2.3+10		Jour	NIM/B,29,675	88	C.Brechtmann+	O1273
$^{32}\text{S},x$	Many	CS	2GERUSI	2.3+10		Jour	NIM/B,29,675	88	C.Brechtmann+	O1273

6 Carbon 12

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
π^+,K^+	incl	CSP	2JPNLEP	0.0+00		Jour	PRL,74,(2),224	Jan 95	T.Hasegawa+	J1601
π^+,K^+	incl	DAE	2JPNLEP	0.0+00		Jour	PRL,74,(2),224	Jan 95	T.Hasegawa+	J1601
p,d	^{11}C	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
p,el	^{12}C	DA	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
p,inel	^{12}C	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
\bar{p},x	^1An	DA	2JPNLEP	0.0+00		Jour	PR/C,31,(5),1853	May 85	K.Nakamura+	J1617
\bar{p},x	^1An	?	2JPNLEP	0.0+00		Jour	PR/C,31,(5),1853	May 85	K.Nakamura+	J1617
$^{36}\text{Ar},\text{tcc}$		CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271
$^{36}\text{Ar},x$	Many	CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271
$^{40}\text{Ar},\text{tcc}$		CS	2GERGSI	1.4+10		Jour	RM,39,525	05	G.Iancu+	O1271
$^{40}\text{Ar},x$	Many	CS	2GERGSI	1.4+10		Jour	RM,39,525	05	G.Iancu+	O1271

6 Carbon 14

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{15}C	CS	2GERKFK	Maxwl	5.0+05	Jour	NP/A,758,787	05	R.Reifarh+	22895

7 Nitrogen 14

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ	^{15}O	CS	2ITYLGS	0.0+00		Jour	EPJ/A,25,455	05	G.Imbriani+	O1195
p,γ	^{15}O	CSP	2ITYLGS	0.0+00	3.7+05	Jour	EPJ/A,25,455	05	G.Imbriani+	O1195
p,γ	^{15}O	DAP	2ITYLGS	2.1+05	3.6+05	Jour	EPJ/A,25,455	05	G.Imbriani+	O1195
d,α	^{12}C	DAP	2UK ALD	1.4+06		Jour	NP,26,203	61	W.M.Jones+	O0827
d,p	^{15}N	DAP	2UK ALD	1.4+06	2.4+06	Jour	NP,26,203	61	W.M.Jones+	O0827

12 Magnesium 24

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,d</i>	²³ Mg	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
<i>p,el</i>	²⁴ Mg	DA	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
<i>p,inel</i>	²⁴ Mg	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120

13 Aluminium 27

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,el</i>	²⁷ Al	DA	2SF HLS	1.0+06	2.4+06	Jour	NIM/B,40/41,790	89	E.Rauhala	O0880
³⁶ Ar,tcc		CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271
³⁶ Ar,x	Many	CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271
⁴⁰ Ar,tcc		CS	2GERGSI	1.4+10		Jour	RM,39,525	05	G.Iancu+	O1271
⁴⁰ Ar,x	Many	CS	2GERGSI	1.4+10		Jour	RM,39,525	05	G.Iancu+	O1271

14 Silicon 28

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,d</i>	²⁷ Si	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
<i>p,el</i>	²⁸ Si	DA	4RUSLIN	1.0+09		Jour	YF,22,902	75	G.D.Alkhazov+	O1255
<i>p,el</i>	²⁸ Si	DA	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
<i>p,inel</i>	²⁸ Si	DAP	4RUSLIN	1.0+09		Jour	YF,22,902	75	G.D.Alkhazov+	O1255
<i>p,inel</i>	²⁸ Si	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
²⁸ Si,el	²⁸ Si	DA	2JPNTSU	7.6+07	1.3+08	Jour	PR/C,33,(1),176	Jan 86	Y.Nagashima+	E1435
²⁸ Si,fus		CS	2JPNTSU	3.0+07	6.6+07	Jour	PR/C,33,(1),176	Jan 86	Y.Nagashima+	E1435

14 Silicon 30

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
³² S,fus		CS	2JPNTSU	3.6+07	6.1+07	Jour	PR/C,33,(1),176	Jan 86	Y.Nagashima+	E1435

16 Sulphur 32

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,el</i>	³² S	DA	4RUSLIN	1.0+09		Jour	YF,22,902	75	G.D.Alkhazov+	O1255
<i>p,inel</i>	³² S	DAP	4RUSLIN	1.0+09		Jour	YF,22,902	75	G.D.Alkhazov+	O1255

16 Sulphur 34

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,el</i>	³⁴ S	DA	4RUSLIN	1.0+09		Jour	YF,22,902	75	G.D.Alkhazov+	O1255
<i>p,inel</i>	³⁴ S	DAP	4RUSLIN	1.0+09		Jour	YF,22,902	75	G.D.Alkhazov+	O1255

19 Potassium 39

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>d,n</i>	⁴⁰ Ca	DAP	2GERBER	6.0+06		Jour	NP/A,129,545	69	H.Fuchs+	O1278

20 Calcium 40

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,d</i>	³⁹ Ca	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
<i>p,el</i>	⁴⁰ Ca	DA	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
<i>p,inel</i>	⁴⁰ Ca	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
¹⁶ O,fus		CS	2JPNTSU	4.3+07	7.1+07	Jour	PR/C,33,(1),176	Jan 86	Y.Nagashima+	E1435

22 Titanium

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,el</i>	^{nat} Ti	DA	2SF HLS	1.0+06	2.6+06	Jour	NIM/B,40/41,790	89	E.Rauhala	O0880

24 Chromium 50

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,d</i>	⁴⁹ Cr	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
<i>p,el</i>	⁵⁰ Cr	DA	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
<i>p,inel</i>	⁵⁰ Cr	DAP	2JPNTOK	5.2+07		Jour	JPJ,48,(6),1812	Jun 80	H.Ohnuma+	E0120
¹² C,el	⁵⁰ Cr	DA	2JPNTSU	6.5+07	1.4+08	Jour	PR/C,33,(1),176	Jan 86	Y.Nagashima+	E1435
¹² C,fus		CS	2JPNTSU	5.2+07	1.1+08	Jour	PR/C,33,(1),176	Jan 86	Y.Nagashima+	E1435

28 Nickel

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,x	⁵⁶ Co	CS	3INDVEC	3.3+07	4.8+07	Jour	IMP/E,14,611	05	N.L.Singh+	O1287
α,x	⁵⁸ Co	CS	3INDVEC	3.3+07	4.8+07	Jour	IMP/E,14,611	05	N.L.Singh+	O1287
α,x	⁵⁶ Ni	CS	3INDVEC	3.6+07	4.8+07	Jour	IMP/E,14,611	05	N.L.Singh+	O1287
α,x	⁵⁷ Ni	CS	3INDVEC	2.5+07	4.8+07	Jour	IMP/E,14,611	05	N.L.Singh+	O1287

α, x	^{61}Cu	CS	3INDVEC	2.2+07	4.8+07	Jour	IMP/E,14,611	05	N.L.Singh+	O1287
α, x	^{62}Zn	CS	3INDVEC	2.2+07	4.8+07	Jour	IMP/E,14,611	05	N.L.Singh+	O1287

28 Nickel 61

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n, γ	^{62}Ni	CS	2JPNTIT	8.0+03	3.7+04	Jour	AJ/L,623,153	Apr 05	A.Tomyo+	22894

28 Nickel 62

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n, γ	^{63}Ni	CS	2JPNTIT	Maxwl	9.0+04	Jour	AJ/L,623,153	Apr 05	A.Tomyo+	22894

29 Copper

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{36}\text{Ar}, tcc$		CS	2GERGSI	1.2+10		Jour	RM,39,525	05	G.Iancu+	O1271
$^{36}\text{Ar}, x$	Many	CS	2GERGSI	1.2+10		Jour	RM,39,525	05	G.Iancu+	O1271
$^{40}\text{Ar}, tcc$		CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271
$^{40}\text{Ar}, x$	Many	CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271

29 Copper 63

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n, 2n$	^{62}Cu	CS	2GERPTB	1.4+07	1.1+07	Conf	2004SANTA,,609	Oct 04	W.Mannhart+	22902
n, γ	^{64}Cu	CS	2GERPTB	9.5+06		Conf	2004SANTA,,609	Oct 04	W.Mannhart+	22902

29 Copper 65

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n, 2n$	^{64}Cu	CS	2GERPTB	1.4+07	1.0+07	Conf	2004SANTA,,609	Oct 04	W.Mannhart+	22902

30 Zinc 64

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n, 2n$	^{63}Zn	CS	2GERPTB	1.4+07	1.2+07	Conf	2004SANTA,,609	Oct 04	W.Mannhart+	22902
n, p	^{64}Cu	CS	2GERPTB	1.4+07	8.5+06	Conf	2004SANTA,,609	Oct 04	W.Mannhart+	22902

34 Selenium 74

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,el</i>	⁷⁴ Se	DA	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193
<i>p,inel</i>	⁷⁴ Se	DAP	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193

34 Selenium 76

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,el</i>	⁷⁶ Se	DA	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193
<i>p,inel</i>	⁷⁶ Se	DAP	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193

34 Selenium 78

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,el</i>	⁷⁸ Se	DA	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193
<i>p,inel</i>	⁷⁸ Se	DAP	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193

34 Selenium 80

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,el</i>	⁸⁰ Se	DA	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193
<i>p,inel</i>	⁸⁰ Se	DAP	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193

34 Selenium 82

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,el</i>	⁸² Se	DA	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193
<i>p,inel</i>	⁸² Se	DAP	2JPNOSA	6.5+07		Jour	PR/C,33,(1),71	86	K.Ogino	E1193

40 Zirconium 91

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,γ</i>	⁹² Zr	CS	2JPNITIT	1.5+04	5.5+05	Jour	NST,42,333	05	K.Ohgama+	22897
<i>n,γ</i>	⁹² Zr	MLT	2JPNITIT	4.8+04	5.5+05	Jour	NST,42,333	05	K.Ohgama+	22897

40 Zirconium 92

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,γ</i>	⁹³ Zr	CS	2JPNTIT	1.5+04	5.5+05	Jour	NST,42,333	05	K.Ohgama+	22897
<i>n,γ</i>	⁹³ Zr	MLT	2JPNTIT	4.8+04	5.5+05	Jour	NST,42,333	05	K.Ohgama+	22897

40 Zirconium 94

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>d,p</i>	⁹⁵ Zr	DAP	2GERMUN	2.2+07		Jour	PR/C,68,048802	03	K.Sonnabend+	O1283

42 Molybdenum 92

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,2n</i>	⁹¹ Mo	CS	4RUSRI	1.4+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,2n</i>	⁹¹ Mo	CS	2ZZZGEL	1.6+07	2.0+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889
<i>n,α</i>	⁸⁹ Zr	CS	4RUSRI	1.3+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,α</i>	⁸⁹ Zr	CS	2ZZZGEL	1.6+07	2.0+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889
<i>n,p</i>	⁹² Nb	CS	4RUSRI	1.3+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,p</i>	⁹² Nb	CS	2ZZZGEL	1.6+07	2.0+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889
<i>n,x</i>	⁹¹ Nb	CS	4RUSRI	1.3+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456

42 Molybdenum 94

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,2n</i>	⁹³ Mo	CS	4RUSRI	1.4+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,2n</i>	⁹³ Mo	CS	2ZZZGEL	1.6+07	2.0+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889

42 Molybdenum 95

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,p</i>	⁹⁵ Nb	CS	4RUSRI	1.3+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,p</i>	⁹⁵ Nb	CS	2ZZZGEL	1.7+07	2.0+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889

42 Molybdenum 96

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,p</i>	⁹⁶ Nb	CS	4RUSRI	1.3+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,p</i>	⁹⁶ Nb	CS	2ZZZGEL	1.6+07	2.1+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889
<i>n,x</i>	⁹⁵ Nb	CS	2ZZZGEL	1.6+07	2.1+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889

42 Molybdenum 97

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,p</i>	⁹⁷ Nb	CS	4RUSRI	1.3+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,p</i>	⁹⁷ Nb	CS	2ZZZGEL	1.6+07	2.1+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889
<i>n,x</i>	⁹⁶ Nb	CS	2ZZZGEL	1.6+07	2.1+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889

42 Molybdenum 98

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,α</i>	⁹⁵ Zr	CS	4RUSRI	1.3+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,p</i>	⁹⁸ Nb	CS	4RUSRI	1.3+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,p</i>	⁹⁸ Nb	CS	2ZZZGEL	1.6+07	2.0+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889
<i>n,x</i>	⁹⁷ Nb	CS	2ZZZGEL	1.6+07	2.1+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889

42 Molybdenum 100

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,2n</i>	⁹⁹ Mo	CS	4RUSRI	1.3+07	1.5+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,2n</i>	⁹⁹ Mo	CS	2ZZZGEL	1.6+07	2.0+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889
<i>n,α</i>	⁹⁷ Zr	CS	4RUSRI	1.4+07		Jour	PR/C,71,044617	Apr 05	P.Reimer+	41456
<i>n,α</i>	⁹⁷ Zr	CS	2ZZZGEL	1.6+07	2.0+07	Jour	PR/C,71,044617	Apr 05	P.Reimer+	22889

46 Palladium

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>α,x</i>	¹⁰³ Ag	CS	2BLGVUB	3.7+07	1.2+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259
<i>α,x</i>	¹⁰⁴ Ag	CS	2BLGVUB	3.7+07	2.0+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259
<i>α,x</i>	¹⁰⁵ Ag	CS	2BLGVUB	3.7+07	2.3+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259
<i>α,x</i>	¹⁰⁶ Ag	CS	2BLGVUB	3.7+07	2.3+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259
<i>α,x</i>	¹¹⁰ Ag	CS	2BLGVUB	3.7+07	2.3+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259
<i>α,x</i>	¹¹¹ Ag	CS	2BLGVUB	3.7+07	2.3+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259
<i>α,x</i>	¹¹² Ag	CS	2BLGVUB	3.7+07	3.1+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259
<i>α,x</i>	¹⁰⁴ Cd	CS	2BLGVUB	3.7+07	2.0+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259
<i>α,x</i>	¹⁰⁵ Cd	CS	2BLGVUB	3.7+07	1.8+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259
<i>α,x</i>	¹¹¹ Cd	CS	2BLGVUB	3.7+07	1.2+07	Jour	NIM/B,229,321	05	A.Hermanne+	O1259

47 Silver

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

³⁶ Ar,tcc		CS	2GERGSI	1.2+10		Jour	RM,39,525	05	G.Iancu+	O1271
³⁶ Ar,x	Many	CS	2GERGSI	1.2+10		Jour	RM,39,525	05	G.Iancu+	O1271
⁴⁰ Ar,tcc		CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271
⁴⁰ Ar,x	Many	CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271

48 Cadmium 114

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\alpha,2n$	¹¹⁶ Sn	CS	3INDVEC	3.5+07	5.5+07	Jour	PR/C,71,034605	05	J.Pal+	O1254
$\alpha,3n$	¹¹⁵ Sn	CS	3INDVEC	3.5+07	5.5+07	Jour	PR/C,71,034605	05	J.Pal+	O1254
$\alpha,4n$	¹¹⁴ Sn	CS	3INDVEC	3.5+07	5.5+07	Jour	PR/C,71,034605	05	J.Pal+	O1254
$\alpha,5n$	¹¹³ Sn	CS	3INDVEC	5.0+07	5.5+07	Jour	PR/C,71,034605	05	J.Pal+	O1254

55 Cesium 133

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$d,2n$	¹³³ Ba	CS	3ARGCNE	1.4+07	2.8+07	Jour	JIN,28,5	66	A.Mocoroa+	O1253
d,p	¹³⁴ Cs	CS	3ARGCNE	9.4+06	2.7+07	Jour	JIN,28,5	66	A.Mocoroa+	O1253

56 Barium 138

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	¹³⁹ Ba	CS	2GERKFK	Maxwl		Jour	PR/C,71,025803	Feb 05	M.Heil+	22885

57 Lanthanum 139

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$d,4n$	¹³⁷ Ce	CS	3ARGCNE	1.9+07	2.8+07	Jour	NP,26,108	61	H.Vignau+	O1205

58 Cerium 140

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
³ He,x	¹³⁹ Ce	CS	2GERJUL	3.5+07	1.6+07	Jour	RCA,93,553	05	K.Hilgers+	O1352
³ He,x	¹³⁹ Nd	CS	2GERJUL	3.5+07	2.8+07	Jour	RCA,93,553	05	K.Hilgers+	O1352
³ He,x	¹⁴⁰ Nd	CS	2GERJUL	3.5+07	1.6+07	Jour	RCA,93,553	05	K.Hilgers+	O1352
³ He,x	¹⁴¹ Nd	CS	2GERJUL	3.5+07	1.5+07	Jour	RCA,93,553	05	K.Hilgers+	O1352

59 Praesodymium 141

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,2n$	^{140}Nd	CS	2GERJUL	4.5+07	1.1+07	Jour	RCA,93,553	05	K.Hilgers+	O1352
$p,3n$	^{139}Nd	CS	2GERJUL	4.5+07	2.1+07	Jour	RCA,93,553	05	K.Hilgers+	O1352
p,n	^{141}Nd	CS	2GERJUL	1.7+07	8.0+06	Jour	RCA,93,553	05	K.Hilgers+	O1352
p,x	^{139}Ce	CS	2GERJUL	4.5+07	2.4+07	Jour	RCA,93,553	05	K.Hilgers+	O1352

62 Samarium 151

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{152}Sm	CS	2AUSTHV	Maxwl	8.5+05	Jour	NP/A,758,533	05	S.Marrone+	22893

65 Terbium 159

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\alpha,2n$	^{161}Ho	CS	3ARGCNE	5.5+07	2.5+07	Jour	JRN/L,137,29	89	O.Bonesso+	O1267
$\alpha,3n$	^{160}Ho	CS	3ARGCNE	5.5+07	3.0+07	Jour	JRN/L,137,29	89	O.Bonesso+	O1267
$\alpha,4n$	^{159}Ho	CS	3ARGCNE	5.5+07	4.0+07	Jour	JRN/L,137,29	89	O.Bonesso+	O1267
$\alpha,5n$	^{158}Ho	CS	3ARGCNE	5.5+07	4.4+07	Jour	JRN/L,137,29	89	O.Bonesso+	O1267

66 Dysprosium 164

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2\gamma$	^{165}Dy	SPC	4ZZZDUB	2.5-02		Jour	IZV,48,(5),891	May 84	Yu.P.Popov+	41457

73 Tantalum 181

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,f		CS	2SWDUPP	6.7+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882
n,f		?	2SWDUPP	6.7+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882
$\alpha,2n$	^{183}Re	CS	3INDVEC	1.9+07	3.9+07	Jour	PRM,50,173	98	M.Ismail	O1266
α,n	^{184}Re	CS	3INDVEC	0.0+00		Jour	PRM,50,173	98	M.Ismail	O1266

74 Tungsten

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,f		CS	2SWDUPP	4.6+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882
n,f		?	2SWDUPP	4.6+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882

75 Rhenium 185

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α, x	^{184}Re	CS	3INDVEC	0.0+00		Jour	PRM,50,173	98	M.Ismail	O1266

76 Osmium 192

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n, 3n$	^{190}Os	?	2BLGLVN	2.0+07		Jour	ARI,57,637	02	S.Mirzadeh+	22735
$n, 3n+p$	^{189}Re	CS	2BLGLVN	2.0+07		Jour	ARI,57,637	02	S.Mirzadeh+	22735
n, α	^{189}W	CS	2BLGLVN	2.0+07		Jour	ARI,57,637	02	S.Mirzadeh+	22735
n, x	^{189}Re	CS	2BLGLVN	2.0+07		Jour	ARI,57,637	02	S.Mirzadeh+	22735
p, n	^{192}Ir	CS	2GERJUL	1.9+07	6.4+06	Jour	ARI,63,93	05	K.Hilgers+	O1274

77 Irirdium 191

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\alpha, 2n$	^{193}Au	CS	3INDVEC	3.5+07	2.0+07	Jour	PRM,50,173	98	M.Ismail	O1266
$\alpha, 3n$	^{192}Au	CS	3INDVEC	4.8+07	2.8+07	Jour	PRM,50,173	98	M.Ismail	O1266
α, n	^{194}Au	CS	3INDVEC	3.1+07	1.6+07	Jour	PRM,50,173	98	M.Ismail	O1266

77 Irirdium 193

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\alpha, 2n$	^{195}Au	CS	3INDVEC	4.8+07	2.0+07	Jour	PRM,50,173	98	M.Ismail	O1266
$\alpha, 3n$	^{194}Au	CS	3INDVEC	4.8+07	2.5+07	Jour	PRM,50,173	98	M.Ismail	O1266
$\alpha, 4n$	^{193}Au	CS	3INDVEC	4.8+07	3.5+07	Jour	PRM,50,173	98	M.Ismail	O1266
α, x	^{192}Ir	CS	3INDVEC	4.8+07	2.0+07	Jour	PRM,50,173	98	M.Ismail	O1266

79 Gold 179

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p, f		?	3IRNIRN	3.0+07		Jour	NST,38,901	01	H.Noshad+	O1269

79 Gold 197

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n, f		CS	2SWDUPP	3.4+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882

<i>n,f</i>	?	2SWDUPP	3.4+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882	
<i>p,f</i>	CS	3IRNIRN	3.0+07		Jour	NST,38,901	01	H.Noshad+	O1269	
<i>p,f</i>	DA	3IRNIRN	3.0+07		Jour	NST,38,901	01	H.Noshad+	O1269	
<i>p,f</i>	?	3IRNIRN	3.0+07		Jour	NST,38,901	01	H.Noshad+	O1269	
<i>p,f</i>	Many	FY	3IRNIRN	3.0+07	Jour	NST,38,901	01	H.Noshad+	O1269	
<i>d,p</i>	¹⁹⁸ Au	CS	3ARGCNE	1.0+07	2.7+07	Jour	NP,88,344	66	S.J.Nassiff+	O0826
$\alpha,2n$	¹⁹⁹ Tl	CS	3INDVEC	5.2+07	1.7+07	Jour	PRM,50,173	98	M.Ismail	O1266
$\alpha,3n$	¹⁹⁸ Tl	CS	3INDVEC	0.0+00		Jour	PRM,50,173	98	M.Ismail	O1266
$\alpha,4n$	¹⁹⁷ Tl	CS	3INDVEC	5.2+07	4.1+07	Jour	PRM,50,173	98	M.Ismail	O1266
α,n	²⁰⁰ Tl	CS	3INDVEC	5.2+07	1.5+07	Jour	PRM,50,173	98	M.Ismail	O1266
α,x	¹⁹⁷ Hg	CS	3INDVEC	5.2+07	3.6+07	Jour	PRM,50,173	98	M.Ismail	O1266

80 Mercury

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,x</i>	²⁰⁰ Tl	TT	3BZLIPE	1.3+07	1.9+07	Conf	91VILLIG,,73	91	L.Fernandes+	O1264

81 Thallium 205

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,f</i>		CS	2BLGLVN	3.3+07	6.0+07	Conf	2004SANTA,,684	04	I.V.Ryzhov+	22903

82 Lead

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,f</i>		CS	4RUSLIN	3.0+07	2.0+08	Conf	2001DUBNA,,288	May 01	O.A.Shcherbakov+	41455
<i>n,f</i>		CS	2BLGLVN	3.3+07	6.0+07	Conf	2004SANTA,,684	04	I.V.Ryzhov+	22903
<i>n,f</i>		CS	2SWDUPP	3.4+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882
<i>n,f</i>	?		4RUSLIN	3.0+07	2.0+08	Conf	2001DUBNA,,288	May 01	O.A.Shcherbakov+	41455
<i>n,f</i>	?		2SWDUPP	3.4+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882
<i>p,n</i>	incl	PY	2BLGLVN	6.5+07	7.5+07	Jour	NIM/A,545,339	05	I.Tilquin+	O1279
³⁶ Ar,tcc		CS	2GERGSI	1.1+10		Jour	RM,39,525	05	G.Iancu+	O1271
³⁶ Ar,x	Many	CS	2GERGSI	1.1+10		Jour	RM,39,525	05	G.Iancu+	O1271
⁴⁰ Ar,tcc		CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271
⁴⁰ Ar,x	Many	CS	2GERGSI	1.3+10		Jour	RM,39,525	05	G.Iancu+	O1271

82 Lead 208

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,f</i>		CS	2BLGLVN	3.3+07	6.0+07	Conf	2004SANTA,,684	04	I.V.Ryzhov+	22903
<i>n,f</i>		CS	2SWDUPP	3.4+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882
<i>n,f</i>	?		2SWDUPP	3.4+07	1.7+08	Jour	PR/C,70,054603	04	A.N.Smirnov+	22882
<i>n,γ</i>	²⁰⁹ Pb	CS	2GERKFK	Maxwl		Jour	PR/C,70,065803	Dec 04	U.Ratzel+	22883

83

Bismuth

209

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,α	incl	?	2BLGLVN	3.4+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,d	incl	CSP	2BLGLVN	2.8+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,d	incl	DAE	2BLGLVN	2.8+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,d	incl	DAP	2BLGLVN	2.8+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,d	incl	DE	2BLGLVN	2.8+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,f		CS	4RUSLIN	3.0+07	2.0+08	Conf	2001DUBNA,,288		May 01	O.A.Shcherbakov+	41455
n,f		CS	2BLGLVN	3.3+07	6.0+07	Conf	2004SANTA,,684		04	I.V.Ryzhov+	22903
n,f		CS	2SWDUPP	3.4+07	1.7+08	Jour	PR/C,70,054603		04	A.N.Smirnov+	22882
n,f		?	4RUSLIN	3.0+07	2.0+08	Conf	2001DUBNA,,288		May 01	O.A.Shcherbakov+	41455
n,f		?	2SWDUPP	3.4+07	1.7+08	Jour	PR/C,70,054603		04	A.N.Smirnov+	22882
n,γ	^{210}Bi	CS	2GERKFK	Maxwl		Jour	PR/C,70,065803		Dec 04	U.Ratzel+	22883
n,p	incl	CSP	2BLGLVN	2.8+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,p	incl	DAE	2BLGLVN	2.8+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,p	incl	DAP	2BLGLVN	2.8+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,p	incl	DE	2BLGLVN	2.8+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,t	incl	CSP	2BLGLVN	3.4+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,t	incl	DAE	2BLGLVN	3.4+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,t	incl	DAP	2BLGLVN	3.4+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
n,t	incl	DE	2BLGLVN	3.4+07	6.3+07	Jour	NP/A,726,210		03	E.Raeymackers+	22880
$p,3n$	^{207}Po	CS	2JPNTOK	1.8+07	5.2+07	Jour	NP/A,230,(1),98		Sep 74	K.Miyano+	E0056
$p,4n$	^{206}Po	CS	2JPNTOK	2.6+07	5.2+07	Jour	NP/A,230,(1),98		Sep 74	K.Miyano+	E0056
p,f		CS	3IRNIRN	3.0+07		Jour	NST,38,901		01	H.Noshad+	O1269
p,f		DA	3IRNIRN	3.0+07		Jour	NST,38,901		01	H.Noshad+	O1269
p,f		?	3IRNIRN	3.0+07		Jour	NST,38,901		01	H.Noshad+	O1269
p,f	Many	FY	3IRNIRN	3.0+07		Jour	NST,38,901		01	H.Noshad+	O1269
p,x	^{206}Bi	CS	2JPNTOK	3.1+07	5.2+07	Jour	NP/A,230,(1),98		Sep 74	K.Miyano+	E0056
$\alpha,2n$	^{211}At	CS	2BLGVUB	2.1+07	4.0+07	Jour	ARI,63,1		05	A.Hermanne+	O1272
$\alpha,2n$	^{211}At	TT	3CZRUJF	3.0+07		Jour	ARI,63,49		05	O.Lebeda+	O1275
$\alpha,3n$	^{210}At	CS	2BLGVUB	4.0+07	3.1+07	Jour	ARI,63,1		05	A.Hermanne+	O1272
$\alpha,3n$	^{210}At	CS	3INDTRM	5.6+07	5.9+07	Jour	RCA,57,7		92	S.S.Rattan+	O1300
$\alpha,4n$	^{209}At	CS	3INDTRM	5.6+07	5.9+07	Jour	RCA,57,7		92	S.S.Rattan+	O1300
$\alpha,5n$	^{208}At	CS	3INDTRM	5.6+07	5.9+07	Jour	RCA,57,7		92	S.S.Rattan+	O1300
$\alpha,6n$	^{207}At	CS	3INDTRM	5.6+07	5.9+07	Jour	RCA,57,7		92	S.S.Rattan+	O1300
α,x	^{210}Po	CS	2BLGVUB	4.0+07	2.7+07	Jour	ARI,63,1		05	A.Hermanne+	O1272

90

Thorium

232

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,f		CS	4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288		May 01	O.A.Shcherbakov+	41455
n,f		DA	2SWDUPP	2.1+07	9.5+07	Jour	NP/A,760,19		05	I.V.Ryzhov+	22898
n,f		?	4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288		May 01	O.A.Shcherbakov+	41455
p,f		NU	2SF JYV	5.0+07	6.0+07	Jour	NC/A,111,1055		98	W.H.Trzaska+	O1285

91 Protactinium 231											
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
<i>n,f</i>	CS		2ZZZGEL	7.6+00	3.5+06	Jour	ANE,32,1867		05	S.Oberstedt+	22910
92 Uranium 232											
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
<i>n,f</i>	DA		2SWDUPP	2.1+07	9.5+07	Jour	NP/A,760,19		05	I.V.Ryzhov+	22898
92 Uranium 233											
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
<i>n,f</i>	CS		4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288		May 01	O.A.Shcherbakov+	41455
<i>n,f</i>	?		4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288		May 01	O.A.Shcherbakov+	41455
92 Uranium 235											
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
<i>n,f</i>	³ H	?	2FR ILL	Maxwl		Jour	NP/A,346,(3),461		Sep 80	P.D'Hondt+	21705
<i>n,f</i>	⁴ He	?	2FR ILL	Maxwl		Jour	NP/A,346,(3),461		Sep 80	P.D'Hondt+	21705
<i>d,p+f</i>		CSP	2GERGER	9.7+06		Jour	PL/B,615,175		05	M.Csatlos+	O1290
92 Uranium 236											
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
³ He,f		DA	4KASKAZ	4.0+07	6.0+07	Jour	UFZ,33,809		88	N.I.Zaika+	O1277
92 Uranium 238											
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
<i>n,f</i>		CS	4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288		May 01	O.A.Shcherbakov+	41455
<i>n,f</i>		DA	2SWDUPP	2.1+07		Conf	2004SANTA,,800		Oct 04	A.Prokofiev+	22904
<i>n,f</i>		?	4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288		May 01	O.A.Shcherbakov+	41455
<i>p,f</i>		NU	2SF JYV	2.0+07	6.0+07	Jour	NC/A,111,1055		98	W.H.Trzaska+	O1285

93 Neptunium 237

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,f</i>	CS		4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288	May 01	O.A.Shcherbakov+	41455
<i>n,f</i>	?		4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288	May 01	O.A.Shcherbakov+	41455

94 Plutonium 236

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,f</i>	CS		4RUSKUR	3.2-01	2.9+04	Jour	AE,68,(3),193	Mar 90	E.F.Gromova+	41064

94 Plutonium 239

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,f</i>	CS		4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288	May 01	O.A.Shcherbakov+	41455
<i>n,f</i>	?		4RUSLIN	5.8+05	2.0+08	Conf	2001DUBNA,,288	May 01	O.A.Shcherbakov+	41455

95 Americium 241

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,f</i>		CS	4RUSRI	0.0+00	4.0-01	Jour	AE,23,(4),316	Oct 67	M.A.Bak+	40062
<i>n,f</i>		RI	4RUSRI	4.0-01		Jour	AE,23,(4),316	Oct 67	M.A.Bak+	40062
<i>n,γ</i>	²⁴² Am	CS	2FR ILL	Maxwl		Jour	NP/A,693,546	01	G.Fioni+	22696

95 Americium 242

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,f</i>		RI	4RUSRI	4.0-01		Jour	AE,23,(4),316	Oct 67	M.A.Bak+	40062

96 Curium 243

Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,f</i>	Many	FY	2FR ILL	Maxwl		Conf	2004SANTA,,605	Oct 04	I.Tsekanovich+	22901

98 Californium 249

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

<i>n,f</i>	Many	?	2FR ILL	Maxwl	Jour	PR/C,67,34610	Mar 03	I.Tsekhanovich+	22859		
			98	Californium			251				
Reaction	Product	Quantity	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol	Page		
<i>n,f</i>	Many	KE	2FR ILL	2.5-02		Jour	NP/A,761,173		05	S.Oberstedt+	22899
<i>n,f</i>	Many	?	2FR ILL	2.5-02		Jour	NP/A,761,173		05	S.Oberstedt+	22899