

EXFOR News (July 2017)

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 coordinated 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 published 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.Otsuka et al., [Nucl.Data.Sheets](#) **120**(2014)272.

Quantity codes

ALF	α -value ($\sigma_{\text{capt}}/\sigma_{\text{fis}}$)	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 $d\Omega_1/d\Omega_2/dE'$	NUD	Delayed fission neutron multiplicity $\bar{\nu}_d$
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	η -value $\bar{\nu}\sigma_{\text{fis}}/(\sigma_{\text{capt}} + \sigma_{\text{fis}})$	TTD	Differential thick target yield, $d/d\Omega$
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	tex	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 2

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* d,n	^3He	CS	1USATEX	2.0+04	4.9+04	Jour	PR/C.93,045808	16	D.Lattuada+	C2236

1 Hydrogen

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\alpha,x+n$	inclusive	PY	1USASRE	7.1+08	7.1+08	Jour	PR/C.21,2471	80	R.A.Cecil+	C0268

2 Helium 3

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* d,p	^4He	CS	1USATEX	3.7+04	9.7+04	Jour	PR/C.93,045808	16	D.Lattuada+	C2236

4 Beryllium 9

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{11}\text{Be},x$	^{10}Be	CSP	1USAMSU	6.6+08	6.6+08	Jour	PR/C.63,(2),024613	01	V.Maddalena+	C1986

5 Boron 10

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* p,α	^7Be	CSP	3BZLUSP	2.0+05	1.5+06	Jour	PR/C.95,035801	17	C.Spitaleri+	D0837

5 Boron 13

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $n,0$		RP	1USAMSU			Jour	PR/C.92,054320	15	B.R.Marks+	C2204
* $^9\text{Be},x$	^{13}Be	CS	1USAMSU	6.4+08	6.4+08	Jour	PR/C.92,054320	15	B.R.Marks+	C2204

6 Carbon

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

$\alpha, x+n$	inclusive	PY	1USASRE	7.1+08	7.1+08	Jour	PR/C,21,2471	80	R.A.Cecil+	C0268
$^{20}\text{Ne}, x+n$	inclusive	DAE	1USABRK	6.7+09	6.7+09	Jour	PR/C,24,2013	81	R.A.Cecil+	C0290

6 Carbon 12

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
*	n, inel	^{12}C	DAP	4ZZZDUB	1.4+07	1.4+07	Jour	PPN/L,13,(4),504	16	V.M.Bystritsky+	41615
*	$^{12}\text{C}, x$	^6Li	DA	3INDTRM	8.0+07	8.0+07	Jour	PR/C,94,051601	16	S.Manna+	D6271
*	$^{12}\text{C}, x$	^7Li	DA	3INDTRM	8.0+07	8.0+07	Jour	PR/C,94,051601	16	S.Manna+	D6271
*	$^{12}\text{C}, x$	^7Be	DA	3INDTRM	8.0+07	8.0+07	Jour	PR/C,94,051601	16	S.Manna+	D6271
*	$^{12}\text{C}, x$	^9Be	DA	3INDTRM	8.0+07	8.0+07	Jour	PR/C,94,051601	16	S.Manna+	D6271
*	$^{13}\text{C}, x$	^6Li	DA	3INDTRM	7.8+07	7.8+07	Jour	PR/C,94,051601	16	S.Manna+	D6271
*	$^{13}\text{C}, x$	^7Li	DA	3INDTRM	7.8+07	7.8+07	Jour	PR/C,94,051601	16	S.Manna+	D6271
*	$^{13}\text{C}, x$	^7Be	DA	3INDTRM	7.8+07	7.8+07	Jour	PR/C,94,051601	16	S.Manna+	D6271
*	$^{13}\text{C}, x$	^9Be	DA	3INDTRM	7.8+07	7.8+07	Jour	PR/C,94,051601	16	S.Manna+	D6271

6 Carbon 13

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
*	$\alpha, n+^8\text{Be}$	^8Be	?	1USANOT	2.8+07	2.8+07	Jour	PR/C,94,034313	16	N.Curtis+	C2239
*	$\alpha, n+\alpha$	^{12}C	?	1USANOT	2.8+07	2.8+07	Jour	PR/C,94,034313	16	N.Curtis+	C2239
*	$^{18}\text{O}, ^{15}\text{C}$	^{16}O	DAP	2ITYLNS	8.4+07	8.4+07	Jour	PR/C,95,034603	17	D.Carbone+	D0840

7 Nitrogen 14

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
*	p, γ		RP	1USATNL	2.6+05	2.6+05	Jour	PR/C,94,025803	16	S.Daigle+	C2238

8 Oxygen 16

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
*	$^3\text{He}, \text{el}$	^{16}O	DA	4KASKAZ	6.0+07	6.0+07	Jour	IMP/E,26,1750018	17	N.Burtebayev+	D0841
*	$^3\text{He}, \text{inel}$	^{16}O	DAP	4KASKAZ	6.0+07	6.0+07	Jour	IMP/E,26,1750018	17	N.Burtebayev+	D0841
*	α, el	^{16}O	DA	4KASKAZ	4.8+07	4.8+07	Jour	IMP/E,26,1750018	17	N.Burtebayev+	D0841
*	α, inel	^{16}O	DAP	4KASKAZ	4.8+07	4.8+07	Jour	IMP/E,26,1750018	17	N.Burtebayev+	D0841

8 Oxygen 17

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
*	p, γ	^{18}F	CS	3HUNDEB		1.8+06	Jour	PR/C,95,035805	17	Gy.Gyurky+	D4367

9 Fluorine 19

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{19}F	CSP	2SWDAE	1.6+07	2.2+07	Jour	SNP,23,492	76	G.A.Prokopets+	40447
n,x	^{18}O	CSP	2SWDAE	1.6+07	2.2+07	Jour	SNP,23,492	76	G.A.Prokopets+	40447
* α,p	^{22}Ne	CS	3CRORBZ	8.0+04	8.8+05	Jour	AJ,836,57	17	R.G.Pizzone+	D0839

12 Magnesium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $\alpha,inel$	^{nat}Mg	DAP	3SAFITH	2.0+08	2.0+08	Jour	PR/C,95,024319	17	P.Adsley+	D0836

13 Aluminium 27

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{27}Mg	CSP	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433
$n,x+p$	inclusive	DAE	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433
* p,el	^{27}Al	DA	3PAKQAU	2.4+06	4.0+06	Jour	CNST,27,33	16	K.Shahzad+	D0834
* d,el	^{27}Al	DA	3INDVEC	2.5+07	2.5+07	Jour	PR/C,91,054611	15	V.Srivastava+	D6258
* $d,^3\text{He}$	^{26}Mg	DAP	3INDVEC	2.5+07	2.5+07	Jour	PR/C,93,044601	16	V.Srivastava+	D6267
* $d,inel$	^{27}Al	DAP	3INDVEC	2.5+07	2.5+07	Jour	PR/C,91,054611	15	V.Srivastava+	D6258
* α,x	^{22}Na	CS	2JPNIPC	3.7+07	5.0+07	Jour	NIM/B,397,33	17	S.Takacs+	D4364
* α,x	^{24}Na	CS	2JPNIPC	3.7+07	5.0+07	Jour	NIM/B,397,33	17	S.Takacs+	D4364
* $^{12}\text{C},x$	^{24}Na	CS	3INDNSD	3.9+07	8.5+07	Jour	PR/C,91,024608	15	M.K.Sharma+	D6255
* $^{12}\text{C},x$	^{28}Mg	CS	3INDNSD	5.2+07	8.5+07	Jour	PR/C,91,024608	15	M.K.Sharma+	D6255
* $^{12}\text{C},x$	^{34}Cl	CS	3INDNSD	3.9+07	8.5+07	Jour	PR/C,91,024608	15	M.K.Sharma+	D6255
* $^{12}\text{C},x+n$	inclusive	PY	3INDTRM	1.2+08	1.2+08	Jour	NIM/A,800,29	15	V.Suman+	D6252
* $^{20}\text{Ne},x+n$	inclusive	DAE	1USABRK	6.7+09	6.7+09	Jour	PR/C,24,2013	81	R.A.Cecil+	C0290

14 Silicon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $\alpha,inel$	^{nat}Si	DAP	3SAFITH	2.0+08	2.0+08	Jour	PR/C,95,024319	17	P.Adsley+	D0836

14 Silicon 28

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,x+p$	inclusive	DAE	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433

15 Phosphorus 31

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,x+p$	inclusive	DAE	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433

17 Chlorine 35

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{35}S	CSP	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433
$n,x+p$	inclusive	DAE	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433

19 Potassium 39

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{39}Ar	CSP	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433
$n,x+p$	inclusive	DAE	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433

22 Titanium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	$^3\text{He},x$	^{44}Sc	CS	2JPNIRS	1.2+07	6.8+07	Jour	ARI,119,94	17	F.Szelecsenyi+	D4360
*	$^3\text{He},x$	^{46}Sc	CS	2JPNIRS	1.2+07	6.8+07	Jour	ARI,119,94	17	F.Szelecsenyi+	D4360
*	$^3\text{He},x$	^{47}Sc	CS	2JPNIRS	1.2+07	6.8+07	Jour	ARI,119,94	17	F.Szelecsenyi+	D4360
*	$^3\text{He},x$	^{48}Sc	CS	2JPNIRS	2.0+07	6.8+07	Jour	ARI,119,94	17	F.Szelecsenyi+	D4360
*	$^3\text{He},x$	^{48}V	CS	2JPNIRS	1.2+07	6.8+07	Jour	ARI,119,94	17	F.Szelecsenyi+	D4360
*	$^3\text{He},x$	^{48}Cr	CS	2JPNIRS	1.2+07	6.5+07	Jour	ARI,119,94	17	F.Szelecsenyi+	D4360
*	α,x	^{51}Cr	CS	2JPNIPC	5.0+06	5.1+07	Jour	NIM/B,397,33	17	S.Takacs+	D4364

22 Titanium 46

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	$^{124}\text{Sn},\text{fus}$	CS	1USAORL		1.2+08	1.5+08	Jour	PR/C,94,024616	16	J.F.Liang+	C2240

22 Titanium 50

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	$^{124}\text{Sn},\text{fus}$	CS	1USAORL		1.2+08	1.6+08	Jour	PR/C,94,024616	16	J.F.Liang+	C2240

24 Chromium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{nat}Cr	CSP	4RUSFEI	2.3+06	2.3+06	Jour	SJA,3,869	57	O.A.Salnikov	40372

24 Chromium 50

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,x+\alpha$	inclusive	DA	4UKRKFT	1.5+07	1.5+07	Rept	YK-11,9	73	G.P.Dolya+	40416

24 Chromium 52

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{52}V	DAP	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433
$n,x+\alpha$	inclusive	DA	4UKRKFT	1.5+07	1.5+07	Rept	YK-11,9	73	G.P.Dolya+	40416
$n,x+p$	inclusive	DAE	4RUSTIL	1.4+07	1.4+07	Jour	SJA,39,736	75	D.V.Aleksandrov+	40433

24 Chromium 53

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,x+\alpha$	inclusive	DA	4UKRKFT	1.5+07	1.5+07	Rept	YK-11,9	73	G.P.Dolya+	40416

24 Chromium 54

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,x+\alpha$	inclusive	DA	4UKRKFT	1.5+07	1.5+07	Rept	YK-11,9	73	G.P.Dolya+	40416

25 Manganese 55

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,γ	^{56}Mn	CS	3INDTRM	1.1+06	4.1+06	Jour	RCA,104,749	16	V.Vansola+	33100

26 Iron

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{nat}Fe	CSP	4RUSFEI	2.3+06	2.3+06	Jour	SJA,3,869	57	O.A.Salnikov	40372
* p,x	^{48}V	CS	1USALAS	3.6+07	9.0+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243

*	<i>p,x</i>	⁴⁸ Cr	CS	1USALAS	4.8+07	9.0+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵¹ Cr	CS	1USALAS	3.5+07	9.0+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵² Mn	CS	1USALAS	3.5+07	9.0+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵⁴ Mn	CS	1USALAS	3.5+07	9.0+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵² Fe	CS	1USALAS	3.5+07	9.0+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵⁵ Co	CS	1USALAS	3.5+07	9.0+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵⁶ Co	CS	1USALAS	3.5+07	9.0+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
	<i>α,x+n</i>	inclusive	PY	1USASRE	7.1+08	7.1+08	Jour	PR/C,21,2471	80	R.A.Cecil+	C0268

26 Iron 55

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
					Min	Max					
*	<i>n,x+p</i>	inclusive	CS	3INDTRM	7.9+06	2.0+07	Jour	PR/C,93,021602	16	B.Pandey+	33099

26 Iron 56

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
					Min	Max					
*	<i>n,el</i>	⁵⁶ Fe	CS	1USAKTY	4.0+06	5.9+06	Jour	NP/A,	17	A.P.D.Ramirez+	14462
*	<i>n,el</i>	⁵⁶ Fe	DA	1USAKTY	1.3+06	8.0+06	Jour	NP/A,	17	A.P.D.Ramirez+	14462
*	<i>n,inel</i>	⁵⁶ Fe	CSP	1USAKTY	4.5+06	4.5+06	Jour	NP/A,	17	A.P.D.Ramirez+	14462
*	<i>n,inel</i>	⁵⁶ Fe	DAP	1USAKTY	1.5+06	8.0+06	Jour	NP/A,	17	A.P.D.Ramirez+	14462
*	¹² C,x	Many	DA	3INDNSD	6.0+07	6.0+07	Jour	PRM,86,97	16	B.J.Roy+	D6274
*	¹² C,x	⁸ Be	DAP	3INDNSD	6.0+07	6.0+07	Jour	PRM,86,97	16	B.J.Roy+	D6274

28 Nickel 58

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
					Min	Max					
*	<i>n,p</i>	⁵⁸ Co	CS	3INDTRM	5.9+06	1.6+07	Jour	NSE,179,423	15	B.S.Shivashankar+	33094
*	¹² C,el	⁵⁸ Ni	DA	3INDNSD	6.0+07	6.0+07	Jour	PRM,86,97	16	B.J.Roy+	D6274
*	¹² C,non		CS	3INDNSD	6.0+07	6.0+07	Jour	PRM,86,97	16	B.J.Roy+	D6274
*	¹² C,x	Many	DA	3INDNSD	6.0+07	6.0+07	Jour	PRM,86,97	16	B.J.Roy+	D6274
*	¹² C,x	⁸ Be	DAP	3INDNSD	4.5+07	6.0+07	Jour	PRM,86,97	16	B.J.Roy+	D6274

28 Nickel 64

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
					Min	Max					
*	⁶ Li,sect	⁶⁴ Ni	DAP	3INDTRM	9.9+06	1.8+07	Jour	PR/C,91,034615	15	Md.Moinshaikh+	D6257
*	⁷ Li,2n	⁶⁹ Ga	CS	3INDTRM	1.1+07	2.5+07	Jour	PR/C,93,044616	16	Md.Moinshaikh+	D6268
*	⁷ Li,3n	⁶⁸ Ga	CS	3INDTRM	1.1+07	2.5+07	Jour	PR/C,93,044616	16	Md.Moinshaikh+	D6268
*	⁷ Li,el	⁶⁴ Ni	DA	3INDTRM	1.2+07	2.6+07	Jour	NP/A,953,80	16	Md.Moinshaikh+	D6265
*	⁷ Li,non		CS	3INDTRM	1.2+07	2.6+07	Jour	NP/A,953,80	16	Md.Moinshaikh+	D6265
*	⁷ Li,x	⁶⁵ Cu	CS	3INDTRM	1.2+07	2.5+07	Jour	PR/C,93,044616	16	Md.Moinshaikh+	D6268
*	⁷ Li,x	⁶⁶ Cu	CS	3INDTRM	1.1+07	2.5+07	Jour	PR/C,93,044616	16	Md.Moinshaikh+	D6268
*	⁷ Li,x	⁶⁸ Zn	CS	3INDTRM	1.3+07	2.5+07	Jour	PR/C,93,044616	16	Md.Moinshaikh+	D6268

* ⁷Li,x ⁶⁹Zn CS 3INDTRM 1.2+07 2.5+07 Jour [PR/C,93,044616](#) 16 Md.Moinshaikh+ [D6268](#)

29 Copper

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>p,x</i>	⁵² Mn	CS	1USALAS	7.9+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵⁴ Mn	CS	1USALAS	3.5+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵⁵ Co	CS	1USALAS	6.9+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵⁷ Co	CS	1USALAS	3.5+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵⁸ Co	CS	1USALAS	3.5+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁶⁰ Co	CS	1USALAS	3.5+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵⁶ Ni	CS	1USALAS	5.9+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁵⁷ Ni	CS	1USALAS	4.8+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁶¹ Cu	CS	1USALAS	3.5+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>p,x</i>	⁶⁴ Cu	CS	1USALAS	3.5+07	8.9+07	Jour	NIM/B,386,44	16	S.A.Graves+	C2243
*	<i>α,x</i>	⁶⁵ Zn	CS	2JPNIPC	8.0+06	4.8+07	Jour	NIM/B,397,33	17	S.Takacs+	D4364
*	<i>α,x</i>	⁶⁶ Ga	CS	2JPNIPC	1.3+07	4.8+07	Jour	NIM/B,397,33	17	S.Takacs+	D4364
*	<i>α,x</i>	⁶⁷ Ga	CS	2JPNIPC	1.3+07	4.8+07	Jour	NIM/B,397,33	17	S.Takacs+	D4364
	²⁰ Ne,x	Many	CS	1USABRK	4.2+09	7.5+09	Jour	PR/C,26,2016	82	K.H.Hicks+	C0332
	²⁰ Ne,x+n	inclusive	DAE	1USABRK	6.7+09	6.7+09	Jour	PR/C,24,2013	81	R.A.Cecil+	C0290
	⁴⁰ Ar,x	Many	CS	1USABRK	8.0+10	8.0+10	Jour	PR/C,17,1632	78	J.B.Cumming+	C0238

29 Copper 63

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>n,γ</i>	⁶⁴ Cu	CS	1USALAS	Maxwl	6.9+05	Jour	PR/C,95,015808	17	M.Weigand+	14467
*	<i>n,γ</i>	⁶⁴ Cu	RR	1USALAS	Maxwl		Jour	PR/C,95,015808	17	M.Weigand+	14467

30 Zinc 64

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>n,γ</i>	⁶⁵ Zn	CS	1USAORU	Maxwl		Jour	ARI,121,28	17	K.S.Krane	14468
*	<i>n,γ</i>	⁶⁵ Zn	RI	1USAORU		5.0-01	Jour	ARI,121,28	17	K.S.Krane	14468
*	<i>α,el</i>	⁶⁴ Zn	DA	3HUNDEB	1.1+07	1.5+07	Jour	PR/C,94,055807	16	A.Ornelas+	D4366
*	<i>α,γ</i>	⁶⁸ Ge	CS	3HUNDEB	1.5+07	1.5+07	Jour	PR/C,94,055807	16	A.Ornelas+	D4366
*	<i>α,inel</i>	⁶⁴ Zn	CSP	3HUNDEB	1.1+07	1.5+07	Jour	PR/C,94,055807	16	A.Ornelas+	D4366
*	<i>α,inel</i>	⁶⁴ Zn	DAP	3HUNDEB	1.1+07	1.5+07	Jour	PR/C,94,055807	16	A.Ornelas+	D4366
*	<i>α,n</i>	⁶⁷ Ge	CS	3HUNDEB	1.5+07	1.5+07	Jour	PR/C,94,055807	16	A.Ornelas+	D4366
*	<i>α,p</i>	⁶⁷ Ga	CS	3HUNDEB	1.5+07	1.5+07	Jour	PR/C,94,055807	16	A.Ornelas+	D4366

30 Zinc 68

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>n,γ</i>	⁶⁹ Zn	CS	1USAORU	Maxwl		Jour	ARI,121,28	17	K.S.Krane	14468

* n,γ ^{69}Zn RI IUSAORU 5.0-01 Jour [ARI,121,28](#) 17 K.S.Krane 14468

30 Zinc 70

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,γ	^{71}Zn	CS	IUSAORU	Maxwl		Jour	ARI,121,28	17	K.S.Krane	14468
* n,γ	^{71}Zn	RI	IUSAORU		5.0-01	Jour	ARI,121,28	17	K.S.Krane	14468

32 Germanium 76

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,inel	^{76}Ge	CSP	IUSAQTY	2.8+06	3.6+06	Jour	PR/C.95,014327	17	S.Mukhopadhyay+	14466
* n,inel	^{76}Ge	DAP	IUSAQTY	3.0+06	3.0+06	Jour	PR/C.95,014327	17	S.Mukhopadhyay+	14466

38 Strontium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* d,x	^{81}Rb	CS	2BLGLVN	3.8+07	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{82}Rb	CS	2BLGLVN	3.3+07	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{83}Rb	CS	2BLGLVN	2.5+07	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{84}Rb	CS	2BLGLVN	1.5+07	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{86}Rb	CS	2BLGLVN	3.6+07	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{82}Sr	CS	2BLGLVN	4.4+07	4.8+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{83}Sr	CS	2BLGLVN	3.3+07	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{85}Sr	CS	2BLGLVN	9.8+06	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{87}Sr	CS	2BLGLVN	3.2+06	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{85}Y	CS	2BLGLVN	1.2+07	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{86}Y	CS	2BLGLVN	1.2+07	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{87}Y	CS	2BLGLVN	5.4+05	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371
* d,x	^{88}Y	CS	2BLGLVN	5.4+05	5.0+07	Jour	ARI,127,16	17	F.Tarkanyi+	D4371

39 Yttrium 89

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{12}\text{C},3n$	^{98}Rh	TT	3INDTRM	4.2+07	7.4+07	Jour	RCA,103,7	15	M.Maiti+	D6260
* $^{12}\text{C},4n$	^{97}Rh	?	3INDTRM	4.9+07	7.4+07	Jour	RCA,103,7	15	M.Maiti+	D6260
* $^{12}\text{C},x$	^{93}Mo	TT	3INDTRM	6.1+07	7.4+07	Jour	RCA,103,7	15	M.Maiti+	D6260
* $^{12}\text{C},x$	^{93}Tc	TT	3INDTRM	6.9+07	7.4+07	Jour	RCA,103,7	15	M.Maiti+	D6260
* $^{12}\text{C},x$	^{94}Tc	TT	3INDTRM	5.6+07	7.4+07	Jour	RCA,103,7	15	M.Maiti+	D6260
* $^{12}\text{C},x$	^{95}Tc	TT	3INDTRM	4.2+07	7.4+07	Jour	RCA,103,7	15	M.Maiti+	D6260
* $^{12}\text{C},x$	^{97}Ru	TT	3INDTRM	4.2+07	7.4+07	Jour	RCA,103,7	15	M.Maiti+	D6260
* $^{12}\text{C},x$	^{97}Rh	TT	3INDTRM	4.9+07	7.4+07	Jour	RCA,103,7	15	M.Maiti+	D6260

41 Niobium 93

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
*	<i>p,n</i>	⁹³ Mo	CS	3INDVEC	7.2+06	1.2+07	Jour	IJP,86,913	12	I.A.Rizvi+	D6250
*	<i>p,x</i>	⁸⁹ Zr	CS	3INDVEC	1.2+07	1.2+07	Jour	IJP,86,913	12	I.A.Rizvi+	D6250
*	<i>p,x</i>	⁹² Nb	CS	3INDVEC	1.2+07	1.2+07	Jour	IJP,86,913	12	I.A.Rizvi+	D6250
*	<i>α,2n</i>	⁹⁵ Tc	CS	3INDVEC	1.6+07	3.9+07	Jour	NP/A,935,65	15	K.Kim+	D6253
*	<i>α,3n</i>	⁹⁴ Tc	CS	3INDVEC	2.7+07	3.9+07	Jour	NP/A,935,65	15	K.Kim+	D6253
*	<i>α,4n</i>	⁹³ Tc	CS	3INDVEC	3.6+07	3.9+07	Jour	NP/A,935,65	15	K.Kim+	D6253
*	<i>α,n</i>	⁹⁶ Tc	CS	3INDVEC	8.9+06	3.9+07	Jour	NP/A,935,65	15	K.Kim+	D6253
*	<i>α,x</i>	⁹¹ Nb	CS	3INDVEC	3.2+07	3.9+07	Jour	KPS,67,1474	15	M.Shahid+	D6251
*	<i>α,x</i>	⁹² Nb	CS	3INDVEC	1.9+07	3.9+07	Jour	KPS,67,1474	15	M.Shahid+	D6251
*	<i>α,x</i>	⁹⁵ Nb	CS	3INDVEC	3.0+07	3.9+07	Jour	KPS,67,1474	15	M.Shahid+	D6251
*	<i>α,x</i>	⁹³ Mo	CS	3INDVEC	3.5+07	3.9+07	Jour	KPS,67,1474	15	M.Shahid+	D6251
*	⁷ Li, ⁶ Li	⁹⁴ Nb	CSP	3INDTRM	2.4+07	3.0+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269
*	⁷ Li, ⁶ Li	⁹⁴ Nb	DAP	3INDTRM	2.4+07	3.0+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269
*	⁷ Li, ³ⁿ	⁹⁷ Ru	CS	3INDTRM	2.0+07	4.5+07	Jour	PR/C,94,044603	16	D.Kumar+	D6270
*	⁷ Li, ⁸ Be	⁹² Zr	CSP	3INDTRM	2.4+07	3.0+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269
*	⁷ Li, ⁸ Be	⁹² Zr	DAP	3INDTRM	2.4+07	3.0+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269
*	⁷ Li, ⁵ⁿ	⁹⁵ Ru	CS	3INDTRM	3.8+07	4.5+07	Jour	PR/C,94,044603	16	D.Kumar+	D6270
*	⁷ Li,el	⁹³ Nb	DA	3INDTRM	2.8+07	2.8+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269
*	⁷ Li,inel	⁹³ Nb	CSP	3INDTRM	2.8+07	2.8+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269
*	⁷ Li,inel	⁹³ Nb	DAP	3INDTRM	2.8+07	2.8+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269
*	⁷ Li,t+α	⁹³ Nb	?	3INDTRM	2.8+07	2.8+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269
*	⁷ Li,x	⁹³ Mo	CS	3INDTRM	2.8+07	4.5+07	Jour	PR/C,94,044603	16	D.Kumar+	D6270
*	⁷ Li,x	⁹⁵ Tc	CS	3INDTRM	2.8+07	4.5+07	Jour	PR/C,94,044603	16	D.Kumar+	D6270
*	⁷ Li,x	⁹⁶ Tc	CS	3INDTRM	2.0+07	4.5+07	Jour	PR/C,94,044603	16	D.Kumar+	D6270
*	⁷ Li,x+α	inclusive	CS	3INDTRM	2.4+07	3.0+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269
*	⁷ Li,x+α	inclusive	DA	3INDTRM	2.8+07	2.8+07	Jour	PR/C,93,061602	16	S.K.Pandit+	D6269

42 Molybdenum

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
*	<i>α,x</i>	⁸⁸ Zr	CS	2BLGVUB	1.6+07	3.8+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368
*	<i>α,x</i>	⁸⁸ Zr	CS	2BLGVUB	1.8+07	3.7+07	Jour	NIM/B,285,125	12	F.Ditroi+	D4269
*	<i>α,x</i>	⁹⁰ Nb	CS	2BLGVUB	2.4+07	3.9+07	Jour	NIM/B,285,125	12	F.Ditroi+	D4269
*	<i>α,x</i>	⁹⁰ Nb	CS	2BLGVUB	3.9+07	3.9+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368
*	<i>α,x</i>	⁹³ Mo	CS	2BLGVUB	2.6+07	3.9+07	Jour	NIM/B,285,125	12	F.Ditroi+	D4269
*	<i>α,x</i>	⁹³ Mo	CS	2BLGVUB	2.9+07	3.9+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368
*	<i>α,x</i>	⁹⁹ Mo	CS	2BLGVUB	2.4+07	3.9+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368
*	<i>α,x</i>	⁹⁹ Mo	CS	2BLGVUB	2.9+07	3.9+07	Jour	NIM/B,285,125	12	F.Ditroi+	D4269
*	<i>α,x</i>	⁹³ Tc	CS	2BLGVUB	2.9+07	3.9+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368
*	<i>α,x</i>	⁹³ Tc	CS	2BLGVUB	3.0+07	3.9+07	Jour	NIM/B,285,125	12	F.Ditroi+	D4269
*	<i>α,x</i>	⁹³ Tc	CS	2BLGVUB	3.7+07	3.9+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368
*	<i>α,x</i>	⁹⁴ Tc	CS	2BLGVUB	1.8+07	3.9+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368
*	<i>α,x</i>	⁹⁴ Tc	CS	2BLGVUB	2.0+07	3.9+07	Jour	NIM/B,285,125	12	F.Ditroi+	D4269
*	<i>α,x</i>	⁹⁵ Tc	CS	2BLGVUB	1.1+07	3.9+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368
*	<i>α,x</i>	⁹⁵ Tc	CS	2BLGVUB	1.4+07	3.9+07	Jour	NIM/B,285,125	12	F.Ditroi+	D4269
*	<i>α,x</i>	⁹⁶ Tc	CS	2BLGVUB	2.0+07	3.9+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368
*	<i>α,x</i>	⁹⁶ Tc	CS	2BLGVUB	2.2+07	3.9+07	Jour	NIM/B,285,125	12	F.Ditroi+	D4269
*	<i>α,x</i>	⁹⁹ Tc	CS	2BLGVUB	1.8+07	3.9+07	Jour	NIM/B,285,125	12	F.Ditroi+	D4269
*	<i>α,x</i>	⁹⁹ Tc	CS	2BLGVUB	1.8+07	3.9+07	Jour	NIM/B,399,83	17	F.Tarkanyi+	D4368

*	α, X	^{94}Ru	CS	2BLGVUB	1.8+07	3.9+07	Jour	NIM/B.285,125	12	F.Ditroi+	D4269
*	α, X	^{95}Ru	CS	2BLGVUB	1.1+07	3.9+07	Jour	NIM/B.399,83	17	F.Tarkanyi+	D4368
*	α, X	^{95}Ru	CS	2BLGVUB	8.0+06	3.9+07	Jour	NIM/B.285,125	12	F.Ditroi+	D4269
*	α, X	^{97}Ru	CS	2BLGVUB	1.1+07	3.9+07	Jour	NIM/B.285,125	12	F.Ditroi+	D4269
*	α, X	^{97}Ru	CS	2BLGVUB	1.1+07	3.9+07	Jour	NIM/B.399,83	17	F.Tarkanyi+	D4368
*	α, X	^{103}Ru	CS	2BLGVUB	1.1+07	3.9+07	Jour	NIM/B.285,125	12	F.Ditroi+	D4269
*	α, X	^{103}Ru	CS	2BLGVUB	1.1+07	3.9+07	Jour	NIM/B.399,83	17	F.Tarkanyi+	D4368

44 Ruthenium 102

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{102}Ru	CSP	4RUSLEB	4.8+05	8.6+05	Jour	BAS,40,(4),95	76	E.S.Konobeevskii+	40456

44 Ruthenium 104

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{104}Ru	CSP	4RUSLEB	3.7+05	8.1+05	Jour	BAS,40,(4),95	76	E.S.Konobeevskii+	40456

45 Rhodium 103

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	$n,2n$	^{102}Rh	CS	1USALAS	8.7+06	6.9+07	Jour	PR/C.94,044608	16	N.Fotiades+	14461
*	$n,2n$	^{102}Rh	CSP	1USALAS	9.2+06	5.9+07	Jour	PR/C.94,044608	16	N.Fotiades+	14461
*	$n,3n$	^{101}Rh	CS	1USALAS	1.6+07	3.3+07	Jour	PR/C.94,044608	16	N.Fotiades+	14461
*	$n,3n$	^{101}Rh	CSP	1USALAS	1.8+07	8.3+07	Jour	PR/C.94,044608	16	N.Fotiades+	14461
*	$n,inel$	^{103}Rh	CS	1USALAS	7.8+05	2.0+07	Jour	PR/C.94,044608	16	N.Fotiades+	14461
*	$n,inel$	^{103}Rh	CSP	1USALAS	7.8+05	1.8+07	Jour	PR/C.94,044608	16	N.Fotiades+	14461

46 Palladium 104

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{104}Pd	CSP	4RUSLEB	5.6+05	9.5+05	Jour	BAS,40,(4),95	76	E.S.Konobeevskii+	40456

46 Palladium 106

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{106}Pd	CSP	4RUSLEB	5.2+05	9.7+05	Jour	BAS,40,(4),95	76	E.S.Konobeevskii+	40456

46 Palladium 108

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,inel	¹⁰⁸ Pd	CSP	4RUSLEB	4.3+05	9.5+05	Jour	BAS,40,(4),95	76	E.S.Konobeevskii+	40456

46 Palladium 110

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,inel	¹¹⁰ Pd	CSP	4RUSLEB	3.7+05	9.0+05	Jour	BAS,40,(4),95	76	E.S.Konobeevskii+	40456

47 Silver

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p</i> ,x	Many	CS	1USABRK	3.0+11	3.0+11	Jour	PR/C,19,2288	79	N.T.Porile+	C0263
* <i>d</i> ,x	¹⁰¹ Rh	CS	2BLGVUB	3.3+07	4.9+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
* <i>d</i> ,x	¹⁰⁵ Rh	CS	2BLGVUB	3.3+07	4.9+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
* <i>d</i> ,x	¹⁰¹ Pd	CS	2BLGVUB	4.4+07	4.9+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
* <i>d</i> ,x	¹⁰⁴ Ag	CS	2BLGVUB	3.9+07	4.9+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
* <i>d</i> ,x	¹⁰⁵ Ag	CS	2BLGVUB	3.3+07	4.9+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
* <i>d</i> ,x	¹⁰⁶ Ag	CS	2BLGVUB	3.3+07	4.9+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
* <i>d</i> ,x	¹⁰⁸ Ag	CS	2BLGVUB	3.3+07	4.7+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
* <i>d</i> ,x	¹¹⁰ Ag	CS	2BLGVUB	3.3+07	4.9+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
* <i>d</i> ,x	¹⁰⁴ Cd	CS	2BLGVUB	4.4+07	4.9+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
* <i>d</i> ,x	¹⁰⁵ Cd	CS	2BLGVUB	3.3+07	4.9+07	Jour	ARI,120,60	17	F.Ditroi+	D4361
¹² C,x	Many	CS	1USABRK	2.5+10	2.5+10	Jour	PR/C,19,2288	79	N.T.Porile+	C0263

47 Silver 109

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* <i>n</i> ,2 <i>n</i>	¹⁰⁸ Ag	CS	1USALAS	8.2+06	6.9+07	Jour	PR/C,94,044608	16	N.Fotiades+	14461
* <i>n</i> ,2 <i>n</i>	¹⁰⁸ Ag	CSP	1USALAS	8.7+06	5.9+07	Jour	PR/C,94,044608	16	N.Fotiades+	14461
* <i>n</i> ,3 <i>n</i>	¹⁰⁷ Ag	CS	1USALAS	1.6+07	3.3+07	Jour	PR/C,94,044608	16	N.Fotiades+	14461
* <i>n</i> ,3 <i>n</i>	¹⁰⁷ Ag	CSP	1USALAS	1.6+07	6.9+07	Jour	PR/C,94,044608	16	N.Fotiades+	14461
* <i>n</i> ,inel	¹⁰⁹ Ag	CS	1USALAS	1.1+06	2.0+07	Jour	PR/C,94,044608	16	N.Fotiades+	14461
* <i>n</i> ,inel	¹⁰⁹ Ag	CSP	1USALAS	1.1+06	2.0+07	Jour	PR/C,94,044608	16	N.Fotiades+	14461

48 Cadmium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* α ,x	¹¹¹ Cd	CS	2JPNIPC	2.1+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
* α ,x	¹¹⁵ Cd	CS	2JPNIPC	1.6+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
* α ,x	¹⁰⁸ In	CS	2JPNIPC	2.1+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
* α ,x	¹⁰⁹ In	CS	2JPNIPC	1.6+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359

*	α, x	^{110}In	CS	2JPNIPC	1.6+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
*	α, x	^{111}In	CS	2JPNIPC	1.6+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
*	α, x	^{113}In	CS	2JPNIPC	1.4+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
*	α, x	^{114}In	CS	2JPNIPC	1.6+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
*	α, x	^{115}In	CS	2JPNIPC	1.4+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
*	α, x	^{116}In	CS	2JPNIPC	1.9+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
*	α, x	^{117}In	CS	2JPNIPC	1.4+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
*	α, x	^{110}Sn	CS	2JPNIPC	1.4+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
*	α, x	^{113}Sn	CS	2JPNIPC	1.6+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359
*	α, x	^{117}Sn	CS	2JPNIPC	1.6+07	5.1+07	Jour	ARI,118,266	16	F.Ditroi+	D4359

49 Indium 115

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	n, γ	^{116}In	CS	3INDTRM	1.1+06	4.1+06	Jour	KPS,67,441	15	B.M.Lawriniang+	33092

50 Tin

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	n, abs		RI	4RUSRUS	4.9-01	2.0+06	Jour	SJA,3,1387	57	V.B.Klimentov+	40368
*	d, x	^{110}In	CS	2BLGLVN	4.2+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{111}In	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{113}In	CS	2BLGLVN	4.2+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{114}In	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{115}In	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{110}Sn	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{113}Sn	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{117}Sn	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{116}Sb	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{117}Sb	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{118}Sb	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{120}Sb	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{122}Sb	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362
*	d, x	^{124}Sb	CS	2BLGLVN	3.4+07	5.0+07	Jour	NIM/B,391,1	17	A.Hermanne+	D4362

50 Tin 112

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	$^6\text{Li}, ^5\text{Li}$	^{113}Sn	CSP	3INDTRM	2.2+07	3.0+07	Jour	PR/C,94,061602	16	D.Chattopadhyay+	D6272
*	$^6\text{Li}, ^5\text{Li}$	^{113}Sn	DAP	3INDTRM	2.2+07	3.0+07	Jour	PR/C,94,061602	16	D.Chattopadhyay+	D6272
*	$^6\text{Li}, ^8\text{Be}$	^{110}In	CSP	3INDTRM	2.2+07	3.0+07	Jour	PR/C,94,061602	16	D.Chattopadhyay+	D6272
*	$^6\text{Li}, ^8\text{Be}$	^{110}In	DAP	3INDTRM	2.2+07	3.0+07	Jour	PR/C,94,061602	16	D.Chattopadhyay+	D6272
*	$^6\text{Li}, d+\alpha$	^{112}Sn	CSP	3INDTRM	2.2+07	3.0+07	Jour	PR/C,94,061602	16	D.Chattopadhyay+	D6272
*	$^6\text{Li}, d+\alpha$	^{112}Sn	?	3INDTRM	2.2+07	3.0+07	Jour	PR/C,94,061602	16	D.Chattopadhyay+	D6272
*	$^6\text{Li}, e$	^{112}Sn	DA	3INDTRM	2.2+07	3.0+07	Jour	PR/C,94,061602	16	D.Chattopadhyay+	D6272
*	$^6\text{Li}, \text{inel}$	^{112}Sn	CSP	3INDTRM	3.0+07	3.0+07	Jour	PR/C,94,061602	16	D.Chattopadhyay+	D6272
*	$^6\text{Li}, \text{inel}$	^{112}Sn	DAP	3INDTRM	3.0+07	3.0+07	Jour	PR/C,94,061602	16	D.Chattopadhyay+	D6272

* ${}^6\text{Li},x+\alpha$ inclusive CS 3INDTRM 2.2+07 3.0+07 Jour [PR/C.94,061602](#) 16 D.Chattopadhyay+ [D6272](#)

50 Tin 124

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* ${}^{46}\text{Ti},\text{fus}$?		3AULCBR	1.2+08	1.4+08	Jour	PR/C.94,024616	16	J.F.Liang+	C2240
* ${}^{50}\text{Ti},\text{fus}$?		3AULCBR	1.2+08	1.2+08	Jour	PR/C.94,024616	16	J.F.Liang+	C2240

54 Xenon 124

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* α,γ	${}^{128}\text{Ba}$	CS	3HUNDEB	1.0+07	1.4+07	Jour	PR/C.94,045801	16	Z.Halasz+	D4365
* α,n	${}^{127}\text{Ba}$	CS	3HUNDEB	1.2+07	1.4+07	Jour	PR/C.94,045801	16	Z.Halasz+	D4365

54 Xenon 134

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,inel	${}^{134}\text{Xe}$	CSP	1USAKTY	2.5+06	4.2+06	Jour	PR/C.95,014325	17	E.E.Peters+	14465

54 Xenon 136

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,γ	${}^{137}\text{Xe}$	CS	1USALAS	2.4-02	2.6-02	Jour	PR/C.94,034617	16	J.B.Albert+	14460
* n,γ	${}^{137}\text{Xe}$?	1USALAS			Jour	PR/C.94,034617	16	J.B.Albert+	14460
* n,inel	${}^{136}\text{Xe}$	CSP	1USAKTY	2.5+06	4.5+06	Jour	PR/C.95,014325	17	E.E.Peters+	14465

56 Barium 138

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,γ	${}^{139}\text{Ba}$	CS	3INDMNP	2.5-02	2.5-02	Jour	EPJ/A.52,276	16	P.Panikkath+	33097
* n,γ	${}^{139}\text{Ba}$	RI	3INDMNP		5.5-01	Jour	EPJ/A.52,276	16	P.Panikkath+	33097

59 Praseodymium 141

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,γ	${}^{142}\text{Pr}$	CS	3INDMNP	2.5-02	2.5-02	Jour	EPJ/A.52,276	16	P.Panikkath+	33097
* n,γ	${}^{142}\text{Pr}$	RI	3INDMNP		5.5-01	Jour	EPJ/A.52,276	16	P.Panikkath+	33097

60 Neodymium 145

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,abs		RI	4RUSNIR	2.5-02	2.5-02	Jour	SJA,47,851	79	V.A.Anufriev+	40495
<i>n</i> ,tot		CS	4RUSNIR	2.5-02	2.5-02	Jour	SJA,47,851	79	V.A.Anufriev+	40495

60 Neodymium 150

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* <i>p</i> ,2 <i>n</i>	¹⁴⁹ Pm	CS	3INDVEC	7.9+06	1.5+07	Jour	PR/C,91,024617	15	D.Banerjee+	D6256
* <i>p</i> , <i>n</i>	¹⁵⁰ Pm	CS	3INDVEC	7.1+06	1.5+07	Jour	PR/C,91,024617	15	D.Banerjee+	D6256
* <i>p</i> , <i>x</i>	¹⁴⁹ Nd	CS	3INDVEC	1.2+07	1.5+07	Jour	PR/C,91,024617	15	D.Banerjee+	D6256

65 Terbium 159

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* <i>p</i> ,3 <i>n</i>	¹⁵⁷ Dy	CS	2BLGLVN	1.5+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> ,5 <i>n</i>	¹⁵⁵ Dy	CS	2BLGLVN	3.5+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> ,7 <i>n</i>	¹⁵³ Dy	CS	2BLGLVN	5.8+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> , <i>n</i>	¹⁵⁹ Dy	CS	2BLGLVN	5.8+06	5.6+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> , <i>x</i>	¹⁵¹ Gd	CS	2BLGLVN	4.0+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> , <i>x</i>	¹⁵³ Gd	CS	2BLGLVN	1.5+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> , <i>x</i>	¹⁵² Tb	CS	2BLGLVN	5.8+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> , <i>x</i>	¹⁵³ Tb	CS	2BLGLVN	5.6+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> , <i>x</i>	¹⁵⁴ Tb	CS	2BLGLVN	5.0+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> , <i>x</i>	¹⁵⁵ Tb	CS	2BLGLVN	3.4+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> , <i>x</i>	¹⁵⁶ Tb	CS	2BLGLVN	2.9+07	6.5+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* <i>p</i> , <i>x</i>	¹⁵⁸ Tb	CS	2BLGLVN	2.0+07	5.6+07	Jour	ARI,127,7	17	F.Tarkanyi+	D4370
* ⁷ Li,el	¹⁵⁹ Tb	DA	3INDTRM	2.4+07	4.4+07	Jour	PR/C,91,054614	15	D.Patel+	D6259
* ¹⁹ F,4 <i>n</i>	¹⁷⁴ W	CS	3INDNSD	8.0+07	1.0+08	Jour	PR/C,94,014613	16	M.Shuaib+	D6276
* ¹⁹ F,5 <i>n</i>	¹⁷³ W	CS	3INDNSD	8.3+07	1.1+08	Jour	PR/C,94,014613	16	M.Shuaib+	D6276
* ¹⁹ F,6 <i>n</i>	¹⁷² W	CS	3INDNSD	9.8+07	1.1+08	Jour	PR/C,94,014613	16	M.Shuaib+	D6276
* ¹⁹ F, <i>x</i>	¹⁷³ Ta	CS	3INDNSD	8.3+07	1.1+08	Jour	PR/C,94,014613	16	M.Shuaib+	D6276

69 Thulium 169

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* ²⁸ Si,fis		CS	3INDNSD	1.1+08	1.2+08	Jour	PR/C,94,044607	16	T.Banerjee+	D6277
* ²⁸ Si,fis		DA	3INDNSD	1.3+08	1.4+08	Jour	PR/C,94,044607	16	T.Banerjee+	D6277

70 Ytterbium 174

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{16}\text{O}_{\text{fus}}$		CS	3INDNSD	5.9+07	9.5+07	Jour	PR/C.93,054622	16	T.Rajbongshi+	D6275

70 Ytterbium 176

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{16}\text{O}_{\text{fus}}$		CS	3INDNSD	5.9+07	9.5+07	Jour	PR/C.93,054622	16	T.Rajbongshi+	D6275
* $^{28}\text{Si}_{\text{fis}}$		CS	3INDNSD	1.1+08	1.2+08	Jour	PR/C.94,044607	16	T.Banerjee+	D6277
* $^{28}\text{Si}_{\text{fis}}$		DA	3INDNSD	1.3+08	1.4+08	Jour	PR/C.94,044607	16	T.Banerjee+	D6277

71 Lutetium 175

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{28}\text{Si}_{\text{fis}}$		CS	3INDNSD	1.1+08	1.2+08	Jour	PR/C.94,044607	16	T.Banerjee+	D6277
* $^{28}\text{Si}_{\text{fis}}$		DA	3INDNSD	1.3+08	1.4+08	Jour	PR/C.94,044607	16	T.Banerjee+	D6277

71 Lutetium 176

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,γ	^{177}Lu	CS	1USALAS	8.5+00	1.0+05	Jour	PR/C.94,054612	16	D.Denis-Petit+	14455

72 Hafnium 180

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{28}\text{Si}_{\text{fis}}$		CS	3INDNSD	1.2+08	1.3+08	Jour	PR/C.94,044607	16	T.Banerjee+	D6277
* $^{28}\text{Si}_{\text{fis}}$		DA	3INDNSD	1.3+08	1.4+08	Jour	PR/C.94,044607	16	T.Banerjee+	D6277

73 Tantalum 181

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{28}\text{Si}_{\text{fis}}$		CS	3INDNSD	1.2+08	1.3+08	Jour	PR/C.94,044607	16	T.Banerjee+	D6277
* $^{28}\text{Si}_{\text{fis}}$		DA	3INDNSD	1.4+08	1.5+08	Jour	PR/C.94,044607	16	T.Banerjee+	D6277

74 Tungsten

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>p,x</i>	¹⁷⁷ Lu	CS	2BLGLVN	3.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁷⁵ Hf	CS	2BLGLVN	5.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁷⁵ Ta	CS	2BLGLVN	5.9+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁷⁶ Ta	CS	2BLGLVN	6.1+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁷⁷ Ta	CS	2BLGLVN	4.6+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁸⁰ Ta	CS	2BLGLVN	3.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁸² Ta	CS	2BLGLVN	5.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁸³ Ta	CS	2BLGLVN	3.5+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁷⁸ W	CS	2BLGLVN	3.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁸¹ Re	CS	2BLGLVN	3.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁸² Re	CS	2BLGLVN	3.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁸³ Re	CS	2BLGLVN	3.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁸⁴ Re	CS	2BLGLVN	3.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363
*	<i>p,x</i>	¹⁸⁶ Re	CS	2BLGLVN	3.2+07	6.5+07	Jour	NIM/B,391,27	17	F.Tarkanyi+	D4363

74 Tungsten 182

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	²⁸ Si,fis	CS	3INDNSD		1.2+08	1.3+08	Jour	PR/C,94,044607	16	T.Banerjee+	D6277
*	²⁸ Si,fis	DA	3INDNSD		1.4+08	1.5+08	Jour	PR/C,94,044607	16	T.Banerjee+	D6277

74 Tungsten 186

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>d,2n</i>	¹⁸⁶ Re	TT	1USAWAU	1.5+07	2.4+07	Jour	ARI,115,197	16	E.R.Balkin+	C2242

78 Platinum 194

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	¹⁸ O,fis	CS	3INDNSD		7.2+07	8.0+07	Jour	JP/G,42,095105	15	P.V.Laveen+	D6261
*	¹⁸ O,fis	DA	3INDNSD		7.8+07	8.7+07	Jour	JP/G,42,095105	15	P.V.Laveen+	D6261
*	¹⁸ O,fus	CS	3INDNSD		7.1+07	9.6+07	Jour	JP/G,42,095105	15	P.V.Laveen+	D6261

78 Platinum 198

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	⁷ Li,fus	CS	3INDTRM		2.0+07	4.3+07	Jour	PL/B,755,332	16	A.Shrivastava+	D6266
*	¹² C,fus	CS	3INDTRM		4.7+07	6.9+07	Jour	PL/B,755,332	16	A.Shrivastava+	D6266
*	¹⁶ O,fus	CS	3INDNSD		7.8+07	1.1+08	Jour	PR/C,91,044621	15	R.Sandal+	D6263
*	¹⁸ O,fus	CS	3INDNSD		7.8+07	1.1+08	Jour	PR/C,91,044621	15	R.Sandal+	D6263

79 Gold 197

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
* n,γ	¹⁹⁸ Au	CS	3INDTRM	1.1+06	4.1+06	Jour	RCA,103,817	15	V.Vansola+	33096
* d,x	¹⁸⁹ Ir	CS	2BLGLVN	3.7+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹⁰ Ir	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹² Ir	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹⁴ Ir	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁸⁸ Pt	CS	2BLGLVN	4.9+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁸⁹ Pt	CS	2BLGLVN	4.6+07	4.8+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹¹ Pt	CS	2BLGLVN	2.2+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹⁵ Pt	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹⁷ Pt	CS	2BLGLVN	2.3+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹¹ Au	CS	2BLGLVN	3.4+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹² Au	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹³ Au	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹⁴ Au	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹⁵ Au	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹⁶ Au	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹⁸ Au	CS	2BLGLVN	2.1+07	3.7+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
* d,x	¹⁹⁹ Au	CS	2BLGLVN	2.1+07	4.9+07	Jour	NIM/B.401,56	17	F.Ditroi+	D4369
α,fis		CS	3INDVEC	5.5+07	5.5+07	Jour	PRM,39,85	92	R.K.Jain+	D6248

82 Lead

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
n,inel	^{nat} Pb	CSP	4RUSFEI	2.3+06	2.3+06	Jour	SJA,3,869	57	O.A.Salnikov	40372
$\alpha,x+n$	inclusive	PY	1USASRE	6.4+08	7.1+08	Jour	PR/C,21,2471	80	R.A.Cecil+	C0268

82 Lead 206

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
* ¹⁶ O,el	²⁰⁶ Pb	DA	3INDTRM	7.9+07	7.9+07	Jour	NP/A,940,167	15	A.Parmar+	D6262
* ¹⁸ O, ¹⁴ N	²¹⁰ Bi	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264
* ¹⁸ O, ¹⁵ N	²⁰⁹ Bi	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264
* ¹⁸ O, ¹⁶ N	²⁰⁸ Bi	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264
* ¹⁸ O, ¹⁷ N	²⁰⁷ Bi	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264
* ¹⁸ O, ¹⁶ O	²⁰⁸ Pb	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264
* ¹⁸ O, ¹⁶ O	²⁰⁸ Pb	DAP	3INDTRM	7.9+07	7.9+07	Jour	NP/A,940,167	15	A.Parmar+	D6262
* ¹⁸ O, ¹⁷ O	²⁰⁷ Pb	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264
* ¹⁸ O, ¹⁹ O	²⁰⁵ Pb	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264
* ¹⁸ O, ²⁰ O	²⁰⁴ Pb	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264
* ¹⁸ O,el	²⁰⁶ Pb	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264
* ¹⁸ O,x	Many	DA	3INDTRM	1.4+08	1.4+08	Jour	PR/C,92,024603	15	Sonika+	D6264

82 Lead 208

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{40}\text{Ar,sct}$	^{208}Pb	DA	2ITYPAD	2.6+08	2.6+08	Jour	PR/C,94,064616	16	T.Mijatovic+	D0816
* $^{40}\text{Ar,x}$	Many	CS	2ITYPAD	2.6+08	2.6+08	Jour	PR/C,94,064616	16	T.Mijatovic+	D0816
* $^{40}\text{Ar,x}$	Many	DA	2ITYPAD	2.6+08	2.6+08	Jour	PR/C,94,064616	16	T.Mijatovic+	D0816

90 Thorium 232

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
* $n,2n$	^{231}Th	CS	3INDTRM	1.5+07	1.5+07	Jour	JRN,303,2497	15	H.Naik+	33091	
* n,fis	Many	FY	3INDTRM	5.4+06	1.3+07	Jour	NP/A,952,100	16	H.Naik+	33098	
* n,fis		FY	3INDTRM	5.4+06	1.3+07	Jour	NP/A,952,100	16	H.Naik+	33098	
* n,γ	^{233}Th	CS	3INDTRM	2.4+06	1.5+07	Jour	JRN,303,2497	15	H.Naik+	33091	
* $p,3n$	^{230}Pa	CS	1USALAS	4.4+07	1.9+08	Jour	RCA,104,291	16	V.Radchenko+	C2241	
* $p,5n$	^{228}Pa	CS	1USALAS	4.4+07	9.1+07	Jour	RCA,104,291	16	V.Radchenko+	C2241	
* p,n	^{232}Pa	CS	1USALAS	4.4+07	1.9+08	Jour	RCA,104,291	16	V.Radchenko+	C2241	
	α,fis		CS	3INDVEC	4.0+07	7.0+07	Jour	PRM,45,519	95	R.K.Jain+	D6249
	α,fis		DA	3INDVEC	4.0+07	7.0+07	Jour	PRM,45,519	95	R.K.Jain+	D6249
* $^{10}\text{B,non}$		CS	3INDTRM	4.9+07	6.5+07	Jour	PR/C,94,064610	16	S.Dubey+	D6273	
* $^{10}\text{B,sct}$	^{232}Th	DAP	3INDTRM	4.9+07	6.5+07	Jour	PR/C,94,064610	16	S.Dubey+	D6273	
* $^{11}\text{B,non}$		CS	3INDTRM	5.2+07	6.5+07	Jour	PR/C,94,064610	16	S.Dubey+	D6273	
* $^{11}\text{B,sct}$	^{232}Th	DAP	3INDTRM	5.2+07	6.5+07	Jour	PR/C,94,064610	16	S.Dubey+	D6273	

92 Uranium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{20}\text{Ne,x+n}$	inclusive	DAE	1USABRK	6.7+09	6.7+09	Jour	PR/C,24,2013	81	R.A.Cecil+	C0290

92 Uranium 233

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	n,fis		DA	4RUSFEI	8.0+04	7.5+05	Jour	SNP,4,713	67	V.G.Nesterov+	40366
	n,fis		NU	4RUSRI	1.5+07	1.5+07	Jour	SJA,5,885	58	A.N.Protopopov+	40399
	n,fis		?	4RUSKUR			Jour	SJA,2,9	57	G.A.Dorofeev+	40355
	n,fis		?	4RUSFEI	1.5+03	2.3+03	Jour	SJA,38,49	75	V.G.Dvukhsherstnov+	40321
	n,fis		?	4RUSFEI	2.4+04	7.4+06	Jour	SJA,44,262	78	B.I.Fursov+	40474

92 Uranium 235

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	n,abs		ALF	1USAANL		5.0-01	Jour	NSE,31,247	68	W.C.Redman+	14220

*	<i>n</i> ,abs		ALF	1USALAS	5.0+02	1.0+06	Jour	PRL,109,202506	12	M.Jandel+	14149
	<i>n</i> ,fis		CS	4RUSKUR	3.0+04	5.0+06	Jour	SJA,2,9	57	G.A.Dorofeev+	40355
	<i>n</i> ,fis		DA	4RUSFEI	1.2+06	1.2+06	Jour	SNP,4,713	67	V.G.Nesterov+	40366
	<i>n</i> ,fis	Many	FY	4RUSITE	2.5-02	2.5-02	Jour	SJA,3,729	57	V.K.Gorshkov+	40363
	<i>n</i> ,fis		?	4RUSKUR			Jour	SJA,2,9	57	G.A.Dorofeev+	40355
	<i>n</i> ,fis	¹⁴⁰ Ce	?	4RUSITE	2.5-02	2.5-02	Jour	SJA,3,729	57	V.K.Gorshkov+	40363

92 Uranium 238

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
					Min	Max					
*	<i>n</i> ,2 <i>n</i>	²³⁷ U	CS	3INDTRM	1.5+07	1.5+07	Jour	JRN,303,2497	15	H.Naik+	33091
*	<i>n</i> ,fis	Many	FY	1USALAS	1.5+06	1.6+07	Jour	PR/C,94,054604	16	D.L.Duke+	14463
*	<i>n</i> ,fis	Many	FY	3INDTRM	6.4+06	1.3+07	Jour	NP/A,941,16	15	H.Naik+	33093
*	<i>n</i> ,fis		FY	3INDTRM	6.4+06	1.3+07	Jour	NP/A,941,16	15	H.Naik+	33093
*	<i>n</i> ,fis	Many	FY	3INDTRM	9.4+06	1.3+07	Jour	KPS,65,18	14	S.Mukerji+	33101
*	<i>n</i> ,fis		KE	1USALAS	1.3+06	3.0+07	Jour	PR/C,94,054604	16	D.L.Duke+	14463
*	<i>n</i> , γ	²³⁹ U	CS	3INDTRM	2.4+06	1.5+07	Jour	JRN,303,2497	15	H.Naik+	33091
	α ,fis		CS	3INDVEC	4.0+07	7.0+07	Jour	PRM,45,519	95	R.K.Jain+	D6249
	α ,fis		DA	3INDVEC	4.0+07	7.0+07	Jour	PRM,45,519	95	R.K.Jain+	D6249

93 Neptunium 236

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
					Min	Max					
*	<i>n</i> ,fis		CS	3INDTRM	9.9+06	2.2+07	Jour	PR/C,91,054618	15	A.Pal+	33095

94 Plutonium 238

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
					Min	Max					
*	<i>n</i> ,fis		CS	3INDTRM	1.3+07	2.2+07	Jour	PR/C,91,054618	15	A.Pal+	33095

94 Plutonium 239

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
					Min	Max					
	<i>n</i> ,fis		CS	4ZZZDUB	1.0+01	3.0+03	Jour	SJA,46,178	79	Yu.V.Ryabov	40487
	<i>n</i> ,fis		DA	4RUSFEI	9.0+05	9.0+05	Jour	SNP,4,713	67	V.G.Nesterov+	40366
*	<i>n</i> ,fis		KE	1USALAS	5.9+05	5.0+07	Jour	PR/C,94,034611	16	K.Meierbachtol+	14459
	<i>n</i> ,fis		?	4RUSKUR			Jour	SJA,2,9	57	G.A.Dorofeev+	40355
	<i>n</i> ,fis		?	4RUSFEI	1.5+03	2.3+03	Jour	SJA,38,49	75	V.G.Dvukhshestnov+	40321

94 Plutonium 241

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,fis		?	4RUSFEI	2.4+04	7.4+06	Jour	SJA,44,262	78	B.I.Fursov+	40474