

Nuclear Reaction Data Center (JCPRG)

EXFOR : Recent Compilation (Added in August 2007)

EXFOR is a world-wide database for experimental neutron induced, charged-particle induced and photonuclear reaction compiled by Nuclear Reaction Data Centres Network coordinated by IAEA Nuclear Data Section. This list gives newly compiled data to EXFOR. *This list consists of tables titled by target nuclide.*

Retrieval service is available at:

<http://www.jcprg.org/exfor/>

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	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)

1 Hydrogen 1											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
π^- ,x+n	inclusive	CS	2SWTPSI	3.9+07	2.5+08	Jour	PL/B,639,424	06	J.Breitschopf+	A0749	
d,el	^1H	DA	1USAWIS	1.0+07	1.0+07	Jour	NP/A,464,223	87	J.Sowinski+	C1285	
d,el	^1H	POD	1USATNL	2.1+05	2.0+06	Rept	TUNL-36,34	97	C.R.Brune+	C1560	
d,x+d	inclusive	DA	2SWDUPP	1.0+09	1.0+09	Jour	PR/C,69,014003	04	R.Bilger+	O1318	
d,x+ η	inclusive	DA	2SWDUPP	1.0+09	1.0+09	Jour	PR/C,69,014003	04	R.Bilger+	O1318	
d,x+p	inclusive	DA	2SWDUPP	1.0+09	1.0+09	Jour	PR/C,69,014003	04	R.Bilger+	O1318	
^8He ,t	^6He	DAP	2FR GAN	1.3+08	1.3+08	Jour	PL/B,619,82	05	F.Skaza+	D0359	
^{10}C ,el	^1H	DA	2BLGLVN	7.0+05	2.8+06	Jour	PR/C,73,014319	06	E.Casarejos+	O1513	

1 Hydrogen 2											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
p,el	^2H	POD	1USATNL	4.3+05	4.3+05	Rept	TUNL-36,34	97	C.R.Brune+	C1560	
p,x+ η	inclusive	CS	2SWDUPP	9.3+08	1.1+09	Jour	PR/C,69,014003	04	R.Bilger+	O1318	
d,el	^2H	DA	1USAINU	2.3+08	2.3+08	Jour	PR/C,75,054001	07	A.M.Micherdzinska+	C1556	
d,el	^2H	POD	1USAINU	2.3+08	2.3+08	Jour	PR/C,75,054001	07	A.M.Micherdzinska+	C1556	
^{56}Fe ,x	Many	CS	2GERGSI	7.8+09	3.9+10	Jour	PR/C,75,044603	07	C.Villagrasa+	O1507	
^{238}U ,fis	Many	CS	2GERGSI	2.4+11	2.4+11	Jour	PR/C,75,014602	07	J.Pereira+	O1504	

1 Hydrogen 3											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
α ,n+d	^4He	?	4UKRIJD	6.7+07	6.7+07	Jour	UFZ,49,(1),16	04	O.K.Gorpinich+	D5025	

2 Helium 3											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
α ,el	^3He	DA	1USAMRD	1.4+08	1.4+08	Jour	PR/C,21,799	80	P.G.Roos+	C1566	
α ,el	^3He	DA	4UKRIJI	5.6+07	9.6+07	Jour	YF,44,867	86	A.M.Yasnogorodsky+	F0845	
α ,el	^3He	POD	4UKRIJI	6.0+07	9.5+07	Jour	YF,44,867	86	A.M.Yasnogorodsky+	F0845	
α ,p+d	^4He	?	4UKRIJD	2.7+07	2.7+07	Jour	UFZ,50,(4),327	05	O.K.Gorpinich+	D5024	
α ,p+d	^4He	?	4UKRIJD	2.7+07	2.7+07	Jour	IZV,67,(11),1583	03	O.K.Gorpinich+	D5030	

2 Helium 4											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
^3He ,el	^4He	DA	1USAMRD	2.0+08	2.0+08	Jour	PR/C,21,799	80	P.G.Roos+	C1566	

3 Lithium 6

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
d,el	${}^6\text{Li}$	DA	4UKRIJD	5.0+07	5.0+07	Jour	NP/A,602,211	96	A.T.Rudchik+	D5027
d,n	${}^7\text{Be}$	DAP	4UKRIJD	5.0+07	5.0+07	Jour	NP/A,602,211	96	A.T.Rudchik+	D5027
d,p	${}^7\text{Li}$	DAP	4UKRIJD	5.0+07	5.0+07	Jour	NP/A,602,211	96	A.T.Rudchik+	D5027
${}^3\text{He},t$	${}^6\text{Be}$	DA	4RUSKUR	1.9+07	3.9+07	Jour	NP/A,505,215	89	O.V.Bochkarev+	F0823

3 Lithium 7

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	${}^7\text{Li}$	DAP	1USATNC	1.0+06	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125
d,α	${}^5\text{He}$	DAE	4UKRIJD	3.7+07	3.7+07	Jour	ZNJD,,(2),16	06	Yu.Pavlenko+	D5029
$d,d+t$	${}^4\text{He}$?	4UKRIJD	3.7+07	3.7+07	Jour	ZNJD,,(2),16	06	Yu.Pavlenko+	D5029
$d,{}^3\text{He}$	${}^6\text{He}$	DAE	4UKRIJD	3.7+07	3.7+07	Jour	ZNJD,,(2),16	06	Yu.Pavlenko+	D5029
${}^7\text{Be},el$	${}^7\text{Li}$	DA	3INDNSD	8.9+06	9.9+06	Jour	PR/C,72,044602	05	S.Barua+	A0707
${}^{14}\text{N},{}^6\text{Li}$	${}^{15}\text{N}$	DA	4UKRIJD	1.1+08	1.1+08	Jour	NP/A,700,(1-2),25	02	A.T.Rudchik+	D5026
${}^{14}\text{N},el$	${}^7\text{Li}$	DA	4UKRIJD	1.1+08	1.1+08	Jour	NP/A,700,(1-2),25	02	A.T.Rudchik+	D5026
${}^{14}\text{N},inel$	${}^7\text{Li}$	DAP	4UKRIJD	1.1+08	1.1+08	Jour	NP/A,700,(1-2),25	02	A.T.Rudchik+	D5026

4 Beryllium 9

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	${}^8\text{Be}$	CSP	4RUSLEB	1.4+07	1.4+07	Jour	ZET,40,(5),1244	May 61	S.A.Myachkova+	40790
n,α	${}^6\text{He}$	CS	4RUSLEB	1.4+07	1.4+07	Jour	ZET,40,(5),1244	May 61	S.A.Myachkova+	40790
$n,inel$	${}^9\text{Be}$	DAP	4RUSLEB	1.4+07	1.4+07	Jour	ZET,40,(5),1244	May 61	S.A.Myachkova+	40790
n,t	${}^7\text{Li}$	CS	4RUSLEB	1.4+07	1.4+07	Jour	ZET,40,(5),1244	May 61	S.A.Myachkova+	40790
n,t	${}^7\text{Li}$	CSP	1USATNC	1.5+07	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125
n,t	${}^7\text{Li}$	DAP	1USATNC	1.5+07	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125
n,tot		CS	4RUSKUR	3.2+06	4.5+06	Book	NEJTRONFIZ,,298	Apr 61	Yu.G.Zubov+	41227
$p,p+\alpha$	${}^5\text{He}$?	1USAINU	1.5+08	1.5+08	Jour	PR/C,31,1662	85	C.W.Wang+	C1559
${}^3\text{He},d$	${}^{10}\text{B}$	DAP	4UZ UZB	2.2+07	3.2+07	Jour	YF,59,454	96	S.V.Artemov+	F0821
${}^{48}\text{Ca},x$	Many	CS	1USAMSU	6.8+09	6.8+09	Jour	PR/C,75,064613	07	O.B.Tarasov+	C1568

5 Boron 10

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	${}^{10}\text{Be}$	DAE	1USALAS	7.0+07	2.4+08	Jour	PR/C,75,034611	07	D.S.Sorenson+	14139
n,p	${}^{10}\text{Be}$	DAP	1USALAS	7.0+07	1.2+08	Jour	PR/C,75,034611	07	D.S.Sorenson+	14139
d,α	${}^8\text{Be}$	DAP	2GRCATH	8.9+05	2.0+06	Priv	Kokkoris	06	M.Kokkoris+	D0439
d,p	${}^{11}\text{B}$	DAP	2GRCATH	8.9+05	2.0+06	Priv	Kokkoris	06	M.Kokkoris+	D0439

5 Boron 11

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{11}B	DAP	1USATNC	3.5+06	4.8+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
p,α	^8Be	CS	2ITYLNS	2.4+04	9.7+05	Jour	PR/C,69,055806	04	C.Spitaleri+	O1317
p,α	^8Be	DA	2ITYLNS	5.0+05	9.0+05	Jour	PR/C,69,055806	04	C.Spitaleri+	O1317
p,el	^{11}B	DA	3BZLIPE	1.3+07	1.3+07	Jour	NP/A,458,397	86	M.S.Hussein+	F0826
p,n	^{11}C	DAP	3BZLIPE	1.4+07	1.4+07	Jour	NP/A,458,397	86	M.S.Hussein+	F0826
$^3\text{He},d$	^{12}C	DAP	4UZ UZB	2.2+07	3.2+07	Jour	YF,59,454	96	S.V.Artemov+	F0821

6 Carbon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,tot		CS	4UKRIJD	4.4+02	1.4+05	Conf	2007NICE,,30(#228)	07	O.Gritzay+	32216

6 Carbon 12

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ	^{13}N	CSP	3SAFNAC	4.1+07	5.4+07	Jour	NP/A,575,317	94	A.Zucchiatti+	F0811
p,γ	^{13}N	DAP	3SAFNAC	4.0+07	5.2+07	Jour	NP/A,575,317	94	A.Zucchiatti+	F0811
$p,inel$	^{12}C	CSP	3SAFNAC	4.1+07	5.5+07	Jour	NP/A,575,317	94	A.Zucchiatti+	F0811
$^3\text{He},d$	^{13}N	DAP	4UZ UZB	2.5+07	3.4+07	Jour	YF,59,454	96	S.V.Artemov+	F0821
$^3\text{He},el$	^{12}C	DA	4ZZZDUB	7.2+07	7.2+07	Jour	NP/A,542,208	92	A.S.Dem'Yanova+	F0846
$^3\text{He},inel$	^{12}C	DAP	4ZZZDUB	7.2+07	7.2+07	Jour	NP/A,542,208	92	A.S.Dem'Yanova+	F0846
$^6\text{Li},el$	^{12}C	DA	4RUSKUR	9.0+07	9.0+07	Jour	YF,34,312	81	Yu.A.Glukhov+	A0750
$^6\text{Li},inel$	^{12}C	DAP	4RUSKUR	9.0+07	9.0+07	Jour	YF,34,312	81	Yu.A.Glukhov+	A0750
$^{27}\text{Al},x$	Many	DAE	3SAFITH	3.5+08	3.5+08	Conf	2004SANTA,,1642	04	S.V.Fortsch+	D0358
$^{27}\text{Al},x$	^9Be	DAE	3SAFITH	3.5+08	3.5+08	Conf	2004SANTA,,1642	04	S.V.Fortsch+	D0358

6 Carbon 13

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,n	^{13}N	POD	1USAKNT	1.4+08	1.4+08	Jour	NP/A,687,32	01	J.W.Watson+	C1558
$^3\text{He},d$	^{14}N	DAP	4UZ UZB	2.2+07	3.4+07	Jour	YF,59,454	96	S.V.Artemov+	F0821

6 Carbon 14

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^6\text{Li},^6\text{He}$	^{14}N	DAP	4RUSKUR	9.3+07	9.3+07	Jour	NP/A,639,599	98	S.B.Sakuta+	D5028

7 Nitrogen 14

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α	^{11}B	CS	4RUSFEI	5.6+06	7.0+06	Jour	AE,101,(4),307	Oct 06	V.Ya.Khryachkov+	41492
n,α	^{11}B	CSP	4RUSFEI	5.6+06	7.0+06	Jour	AE,101,(4),307	Oct 06	V.Ya.Khryachkov+	41492
n,t	^{12}C	CS	4RUSFEI	5.8+06	7.0+06	Jour	AE,101,(4),307	Oct 06	V.Ya.Khryachkov+	41492
d,α	^{12}C	DAP	4RUSMOS	1.1+07	1.6+07	Jour	BAS,63,829	99	A.V.Ignatenko+	F0836
$^3\text{He},d$	^{15}O	DAP	4UZ UZB	2.2+07	2.2+07	Jour	YF,59,454	96	S.V.Artemov+	F0821

7 Nitrogen 15

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,n	^{15}O	POD	1USAKNT	1.4+08	1.4+08	Jour	NP/A,687,32	01	J.W.Watson+	C1558
α,el	^{15}N	DA	2UK OXF	4.6+06	6.8+06	Jour	NP/A,476,375	88	S.K.B.Hesmondhalgh+	F0825
α,γ		RP	2UK OXF	4.5+06	8.1+06	Jour	NP/A,476,375	88	S.K.B.Hesmondhalgh+	F0825
α,γ	^{19}F	CS	2UK OXF	4.5+06	8.1+06	Jour	NP/A,476,375	88	S.K.B.Hesmondhalgh+	F0825

8 Oxygen 16

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^3\text{He},d$	^{17}F	DAP	4UZ UZB	3.4+07	3.4+07	Jour	YF,59,454	96	S.V.Artemov+	F0821
$^{14}\text{N},^{15}\text{C}$	^{15}F	DAP	2FR GAN	4.2+08	4.2+08	Jour	NP/A,734,331	04	A.Lepine-Szily+	O1453

8 Oxygen 17

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,0$		RP	1USAORL			Jour	PR/C,75,065801	07	B.H.Moazen+	C1567

9 Fluorine 19

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{19}F	DAP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

10 Neon 20

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ		?	2SF HLS	1.2+06	1.2+06	Jour	PR/C,15,(2),579	77	J.Keinonen+	D5032

10 Neon 21										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ		?	2SF HLS	5.0+05	2.0+06	Jour	PR/C,15,(2),579	77	J.Keinonen+	D5032
p,inel		?	2SF HLS	8.1+05	2.0+06	Jour	PR/C,15,(2),579	77	J.Keinonen+	D5032

10 Neon 22										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,0$		RP	4UKRUFT			Jour	IZV,68,(2),188	04	A.N.Vodin+	D5009
$p,0$?	4UKRUFT			Jour	IZV,68,(2),188	04	A.N.Vodin+	D5009
p,γ		?	2SF HLS	1.1+06	1.9+06	Jour	NP/A,318,111	79	J.J.A.Smit+	D5034
p,γ		?	2SF HLS	1.3+06	1.3+06	Jour	PR/C,15,(2),579	77	J.Keinonen+	D5032

11 Sodium 23										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{23}Na	DAP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

12 Magnesium										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{nat}Mg	DAP	1USATNC	4.1+06	4.1+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

12 Magnesium 24										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ		?	2SF HLS	8.2+05	8.2+05	Jour	NP/A,341,345	80	J.Keinonen+	D5035

12 Magnesium 25										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ		?	2SF HLS	3.2+05	2.1+06	Jour	NP/A,341,345	80	J.Keinonen+	D5035
$^6\text{Li}, ^6\text{He}$	^{25}Al	DAP	1USASTB	3.4+07	3.4+07	Jour	NP/A,380,147	82	G.Cianguaru+	C1562
$^6\text{Li},\text{el}$	^{25}Mg	DA	1USASTB	3.4+07	3.4+07	Jour	NP/A,380,147	82	G.Cianguaru+	C1562

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Magnesium

26

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,0$?	4UKRUFT			Jour	IZV,66,(1),40	02	A.N.Vodin+	D5036
p,γ		RP	4UKRUFT	2.4+06	2.4+06	Jour	IZV,63,(5),1021	99	A.N.Vodin+	D5031
p,γ		?	2SF HLS	4.5+05	2.0+06	Jour	NP/A,341,345	80	J.Keinonen+	D5035
p,γ	^{27}Al	DAP	4UKRUFT	2.3+06	2.3+06	Jour	IZV,66,(1),40	02	A.N.Vodin+	D5036
$^6\text{Li}, ^6\text{He}$	^{26}Al	DAP	1USASTB	3.4+07	3.4+07	Jour	NP/A,380,147	82	G.Cianguaru+	C1562
$^6\text{Li},\text{el}$	^{26}Mg	DA	1USASTB	3.4+07	3.4+07	Jour	NP/A,380,147	82	G.Cianguaru+	C1562

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Aluminium

27

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^6\text{He},\text{el}$	^{27}Al	DA	3BZLUSP	9.5+06	1.3+07	Jour	PL/B,647,30	07	E.A.Benjamim+	D0440
$^6\text{He},\text{non}$		CS	3BZLUSP	9.5+06	1.3+07	Jour	PL/B,647,30	07	E.A.Benjamim+	D0440
$^6\text{Li}, ^6\text{He}$	^{27}Si	DAP	1USASTB	3.4+07	3.4+07	Jour	NP/A,380,147	82	G.Cianguaru+	C1562
$^6\text{Li},\text{el}$	^{27}Al	DA	1USASTB	3.4+07	3.4+07	Jour	NP/A,380,147	82	G.Cianguaru+	C1562
$^6\text{Li},\text{non}$		CS	3BZLUSP	7.0+06	1.2+07	Jour	PL/B,647,30	07	E.A.Benjamim+	D0440
$^7\text{Li},\text{non}$		CS	3BZLUSP	6.0+06	1.8+07	Jour	PL/B,647,30	07	E.A.Benjamim+	D0440
$^7\text{Li},x+n$	inclusive	PY	3INDTRM	2.2+07	4.6+07	Jour	NIM/A,534,518	04	C.Sunil+	A0422
$^9\text{Be},\text{non}$		CS	3BZLUSP	1.2+07	3.2+07	Jour	PL/B,647,30	07	E.A.Benjamim+	D0440
$^{11}\text{B},x+n$	inclusive	PY	3INDTRM	4.2+07	7.2+07	Jour	NIM/A,534,518	04	C.Sunil+	A0422
$^{12}\text{C},x$	Many	DAE	3SAFITH	1.6+08	1.6+08	Conf	2004SANTA,,1642	04	S.V.Fortsch+	D0358
$^{12}\text{C},x$	^9Be	DAE	3SAFITH	1.6+08	1.6+08	Conf	2004SANTA,,1642	04	S.V.Fortsch+	D0358
$^{12}\text{C},x+n$	inclusive	PY	3INDTRM	4.2+07	8.4+07	Jour	NIM/A,534,518	04	C.Sunil+	A0422
$^{16}\text{O},\text{non}$		CS	3BZLUSP	3.0+07	4.6+07	Jour	PL/B,647,30	07	E.A.Benjamim+	D0440
$^{19}\text{F},x+n$	inclusive	PY	3INDTRM	4.5+07	1.0+08	Jour	NIM/A,534,518	04	C.Sunil+	A0422

14

Silicon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{nat}Si	DAP	1USATNC	1.5+07	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125

14

Silicon

28

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ		?	2SF HLS	3.7+05	2.1+06	Jour	NP/A,313,251	79	M.Riihonen+	D5033
$^6\text{Li},\text{el}$	^{28}Si	DA	4RUSKUR	6.0+07	9.0+07	Jour	YF,34,312	81	Yu.A.Glukhov+	A0750

14

Silicon

29

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{29}Si	DAP	1USATNC	4.1+06	4.1+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

p,γ ? 2SF HLS 4.2+05 4.2+05 Jour NP/A,313,251 79 M.Riihonen+ D5033

14 Silicon 30

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,0$?	4UKRUFT			Jour	IZV,66,(1),40	02	A.N.Vodin+	D5036
p,γ		?	2SF HLS	5.0+05	9.8+05	Jour	NP/A,313,251	79	M.Riihonen+	D5033
p,γ	^{31}P	DAP	4UKRUFT	2.2+06	2.2+06	Jour	IZV,66,(1),40	02	A.N.Vodin+	D5036

16 Sulphur

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{nat}S	DAP	1USATNC	1.5+07	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125

16 Sulphur 32

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$d,^3\text{He}$	^{31}P	DAP	1USATNL	1.6+07	1.6+07	Jour	NP/A,526,36	91	C.M.Bhat+	C1557

16 Sulphur 33

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,0$		RP	1USATNL			Jour	PR/C,40,1959	89	J.R.Vanhoy+	C1561

16 Sulphur 34

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,0$?	4UKRUFT			Jour	IZV,66,(1),40	02	A.N.Vodin+	D5036
p,γ	^{35}Cl	DAP	4UKRUFT	1.2+06	1.2+06	Jour	IZV,66,(1),40	02	A.N.Vodin+	D5036
α,γ	^{38}Ar	CS	3AULAML	2.8+06	5.8+06	Jour	NP/A,552,363	94	A.F.Scott+	F0824
α,γ	^{38}Ar	RR	3AULAML			Jour	NP/A,552,363	94	A.F.Scott+	F0824
α,n	^{37}Ar	CS	3AULAML	5.3+06	9.9+06	Jour	NP/A,552,363	94	A.F.Scott+	F0824
α,n	^{37}Ar	RR	3AULAML			Jour	NP/A,552,363	94	A.F.Scott+	F0824
α,p	^{37}Cl	CSP	3AULAML	5.7+06	9.4+06	Jour	NP/A,552,363	94	A.F.Scott+	F0824
α,p	^{37}Cl	RR	3AULAML			Jour	NP/A,552,363	94	A.F.Scott+	F0824

		16		Sulphur			36			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,0$?	4UKRUFT			Jour	IZV,66,(1),40	02	A.N.Vodin+	D5036
p,γ	^{37}Cl	DAP	4UKRUFT	1.8+06	1.8+06	Jour	IZV,66,(1),40	02	A.N.Vodin+	D5036

		18		Argon			36			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,p	^{39}K	DAP	3SAFNAC	1.2+07	1.2+07	Jour	ZP/A,323,47	86	J.A.Stander+	F0702

		19		Potassium			39			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ	^{40}Ca	DAP	1USASTB	6.4+06	1.8+07	Jour	PR/C,7,695	73	E.M.Diener+	C1563
p,inel	^{39}K	CSP	3SAFNAC	5.7+06	5.9+06	Jour	ZP/A,323,47	86	J.A.Stander+	F0702

		20		Calcium			44			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^3\text{He},\alpha$	^{43}Ca	DAP	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},\alpha$	^{43}Ca	POD	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},d$	^{45}Sc	DAP	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},d$	^{45}Sc	POD	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},\text{inel}$	^{44}Ca	DAP	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},\text{inel}$	^{44}Ca	POD	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813

		20		Calcium			48			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{49}Ca	CS	3BZLREC	Maxwl		Conf	2007NICE,,213(#525)	07	G.S.Zahn+	31595
$^3\text{He},\alpha$	^{47}Ca	DAP	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},\alpha$	^{47}Ca	POD	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},d$	^{49}Sc	DAP	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},d$	^{49}Sc	POD	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},\text{inel}$	^{48}Ca	DAP	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},\text{inel}$	^{48}Ca	POD	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},t$	^{48}Sc	DAP	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813
$^3\text{He},t$	^{48}Sc	POD	2UK BIR	3.3+07	3.3+07	Jour	NP/A,436,236	85	J.S.Hanspal+	F0813

21

Scandium

45

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
³⁷ Cl,x	⁴⁴ Sc	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁴⁷ Sc	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁴⁸ V	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁷³ Se	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁷⁵ Br	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁷⁶ Br	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁷⁷ Br	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁷⁶ Kr	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁷⁷ Kr	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁷⁸ Rb	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745
³⁷ Cl,x	⁷⁹ Rb	CS	3INDTRM	1.0+08	1.2+08	Jour	PRM,66,985	06	Suparnasodaye+	A0745

23

Vanadium

51

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α ,el	⁵¹ V	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

24

Chromium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,inel	^{nat} Cr	DAP	1USATNC	4.1+06	1.4+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125

24

Chromium

50

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p</i> ,el	⁵⁰ Cr	DA	2SF ABA	6.0+06	6.1+06	Jour	IZV,48,1952	84	M.Brenner+	F0764
<i>p</i> ,inel	⁵⁰ Cr	DAP	2SF ABA	6.0+06	6.1+06	Jour	IZV,48,1952	84	M.Brenner+	F0764
α ,el	⁵⁰ Cr	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

24

Chromium

52

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α ,el	⁵² Cr	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

24

Chromium

53

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

α,el	^{53}Cr	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841
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25 Manganese 55

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{55}Mn	DAP	1USATNC	1.0+06	1.8+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

26 Iron

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{nat}Fe	CSP	1USATNC	9.5+05	4.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
$n,inel$	^{nat}Fe	DAP	1USATNC	9.5+05	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125
n,tot		CS	3KORKRM	1.1+06	2.0+06	Jour	JRN,271,541	07	G.D.Kim+	31592
p,x	^{47}Sc	CS	2JPNTOH	6.2+07	6.7+07	Conf	2004SANTA,769,1011	04	F.Ditroi+	D4181
p,x	^{48}V	CS	2JPNTOH	4.2+07	6.7+07	Conf	2004SANTA,769,1011	04	F.Ditroi+	D4181
p,x	^{48}Cr	CS	2JPNTOH	5.3+07	6.7+07	Conf	2004SANTA,769,1011	04	F.Ditroi+	D4181
p,x	^{51}Cr	CS	2JPNTOH	4.2+07	6.7+07	Conf	2004SANTA,769,1011	04	F.Ditroi+	D4181
p,x	^{52}Mn	CS	2JPNTOH	4.2+07	6.7+07	Conf	2004SANTA,769,1011	04	F.Ditroi+	D4181
p,x	^{54}Mn	CS	2JPNTOH	4.2+07	6.7+07	Conf	2004SANTA,769,1011	04	F.Ditroi+	D4181
p,x	^{55}Co	CS	2JPNTOH	4.2+07	6.7+07	Conf	2004SANTA,769,1011	04	F.Ditroi+	D4181
p,x	^{56}Co	CS	2JPNTOH	4.2+07	6.7+07	Conf	2004SANTA,769,1011	04	F.Ditroi+	D4181
p,x	^{57}Co	CS	2JPNTOH	4.2+07	5.6+07	Conf	2004SANTA,769,1011	04	F.Ditroi+	D4181

26 Iron 54

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{54}Fe	DAP	1USATNC	4.2+06	4.2+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
α,el	^{54}Fe	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

26 Iron 56

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{56}Fe	DAP	1USATNC	4.2+06	4.2+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
α,el	^{56}Fe	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

26 Iron 58

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,el	^{58}Fe	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

				27		Cobalt				59		
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #	
				Min	Max		Ref	Vol Page				
$n,inel$	^{59}Co	DAP	1USATNC	1.7+06	4.5+06	Prog	ORO-2791-32		71	P.S.Buchana+	14125	
$p,^3\text{He}$	^{57}Fe	DAE	3SAFITH	1.0+08	1.6+08	Jour	PR/C,75,054617		07	A.A.Cowley+	D0443	
$p,^3\text{He}$	^{57}Fe	POD	3SAFITH	1.0+08	1.6+08	Jour	PR/C,75,054617		07	A.A.Cowley+	D0443	
α,el	^{59}Co	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841	

				28		Nickel					
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$n,inel$	^{nat}Ni	DAP	1USATNC	4.0+06	1.5+07	Prog	ORO-2791-32		71	P.S.Buchana+	14125
d,x	^{61}Cu	CS	2BLGVUB	4.2+06	2.0+07	Jour	NIM/B,258,308		07	A.Hermanne+	D4182
$^{11}\text{B},x+n$	inclusive	PY	3INDTRM	4.2+07	7.2+07	Jour	NIM/A,534,518		04	C.Sunil+	A0422
$^{12}\text{C},x+n$	inclusive	PY	3INDTRM	4.2+07	8.4+07	Jour	NIM/A,534,518		04	C.Sunil+	A0422

				28		Nickel				58		
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #	
				Min	Max		Ref	Vol Page				
$n,2n$	^{57}Ni	CS	3BANSAV	1.4+07	1.5+07	Jour	IPA,45,425		07	M.A.Hafiz	31598	
n,p	^{58}Co	CS	3HUNDEB	2.1+06	1.5+07	Jour	PR/C,60,017602		99	V.Avrigeanu+	31584	
$n,x+\alpha$	inclusive	CS	1USALAS	2.3+06	4.9+07	Conf	97TRIEST,1,603		97	R.C.Haight+	14136	
$^3\text{He},el$	^{58}Ni	DA	2UK BIR	3.4+07	3.4+07	Jour	NP/A,183,449		72	M.E.Cage+	F0842	
α,el	^{58}Ni	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841	

				28		Nickel				60		
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #	
				Min	Max		Ref	Vol Page				
$n,x+\alpha$	inclusive	CS	1USALAS	4.3+06	4.9+07	Conf	97TRIEST,1,603		97	R.C.Haight+	14136	
$n,x+\alpha$	inclusive	DE	1USALAS	1.4+07	3.1+07	Conf	97TRIEST,1,603		97	R.C.Haight+	14136	
p,γ	^{61}Cu	CS	3AULAML	9.4+05	4.0+06	Jour	NP/A,496,127		88	C.I.W.Tingwell+	F0834	
p,γ	^{61}Cu	RR	3AULAML			Jour	NP/A,496,127		88	C.I.W.Tingwell+	F0834	
$p,inel$	^{60}Ni	CSP	3AULAML	2.1+06	4.0+06	Jour	NP/A,496,127		88	C.I.W.Tingwell+	F0834	
$^3\text{He},el$	^{60}Ni	DA	2UK BIR	3.4+07	3.4+07	Jour	NP/A,183,449		72	M.E.Cage+	F0842	
α,el	^{60}Ni	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841	

				28		Nickel				61		
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #	
				Min	Max		Ref	Vol Page				
p,γ	^{62}Cu	CS	3AULAML	1.0+06	4.0+06	Jour	NP/A,480,162		88	C.I.W.Tingwell+	F0833	
p,γ	^{62}Cu	RR	3AULAML			Jour	NP/A,480,162		88	C.I.W.Tingwell+	F0833	
$p,inel$	^{61}Ni	CSP	3AULAML	3.9+06	4.0+06	Jour	NP/A,480,162		88	C.I.W.Tingwell+	F0833	

p,n	^{61}Cu	CS	3AULAML	3.1+06	4.6+06	Jour	NP/A,480,162	88	C.I.W.Tingwell+	F0833
p,n	^{61}Cu	RR	3AULAML			Jour	NP/A,480,162	88	C.I.W.Tingwell+	F0833

28 Nickel 62

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ	^{63}Cu	CS	3AULAML	9.8+05	4.4+06	Jour	NP/A,496,127	88	C.I.W.Tingwell+	F0834
p,γ	^{63}Cu	RR	3AULAML			Jour	NP/A,496,127	88	C.I.W.Tingwell+	F0834
$p,inel$	^{62}Ni	CSP	3AULAML	2.1+06	4.4+06	Jour	NP/A,496,127	88	C.I.W.Tingwell+	F0834
$^3\text{He},el$	^{62}Ni	DA	2UK BIR	3.4+07	3.4+07	Jour	NP/A,183,449	72	M.E.Cage+	F0842
α,el	^{62}Ni	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

28 Nickel 64

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$d,2n$	^{64}Cu	CS	2BLGVUB	4.2+06	2.0+07	Jour	NIM/B,258,308	07	A.Hermanne+	D4182
$^3\text{He},el$	^{64}Ni	DA	2UK BIR	3.4+07	3.4+07	Jour	NP/A,183,449	72	M.E.Cage+	F0842
α,el	^{64}Ni	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

29 Copper

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{nat}Cu	DAP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
$^7\text{Li},x+n$	inclusive	PY	3INDTRM	2.2+07	4.6+07	Jour	NIM/A,534,518	04	C.Sunil+	A0422
$^{12}\text{C},x+n$	inclusive	PY	3INDTRM	4.8+07	8.4+07	Jour	NIM/A,534,518	04	C.Sunil+	A0422
$^{19}\text{F},x+n$	inclusive	PY	3INDTRM	6.5+07	9.5+07	Jour	NIM/A,534,518	04	C.Sunil+	A0422

29 Copper 63

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{64}Cu	CS	3KORKRM	1.4+06	2.0+06	Jour	JRN,271,553	07	G.D.Kim+	31593
$p,2n$	^{62}Zn	CS	3KORKRM	1.6+07	4.1+07	Jour	NIM/B,258,313	07	M.S.Uddin+	O1600
$^3\text{He},el$	^{63}Cu	DA	2UK BIR	3.3+07	3.3+07	Jour	NP/A,183,449	72	M.E.Cage+	F0842
α,el	^{63}Cu	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

29 Copper 65

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	^{64}Cu	CS	3BANSAV	1.4+07	1.5+07	Jour	IPA,45,425	07	M.A.Hafiz	31598
$^3\text{He},el$	^{65}Cu	DA	2UK BIR	3.3+07	3.3+07	Jour	NP/A,183,449	72	M.E.Cage+	F0842
α,el	^{65}Cu	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

30 Zinc

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,x</i>	⁶¹ Cu	CS	3KORKRM	6.0+06	4.0+07	Jour	NIM/B,258,313	07	M.S.Uddin+	O1600
<i>p,x</i>	⁶² Zn	CS	3KORKRM	2.2+07	4.0+07	Jour	NIM/B,258,313	07	M.S.Uddin+	O1600
<i>p,x</i>	⁶⁵ Zn	CS	3KORKRM	1.1+07	4.0+07	Jour	NIM/B,258,313	07	M.S.Uddin+	O1600
<i>p,x</i>	⁶⁹ Zn	CS	3KORKRM	1.4+07	4.0+07	Jour	NIM/B,258,313	07	M.S.Uddin+	O1600
<i>p,x</i>	⁶⁶ Ga	CS	3KORKRM	4.0+06	4.0+07	Jour	NIM/B,258,313	07	M.S.Uddin+	O1600
<i>p,x</i>	⁶⁷ Ga	CS	3KORKRM	4.0+06	4.0+07	Jour	NIM/B,258,313	07	M.S.Uddin+	O1600

30 Zinc 64

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>d,2p</i>	⁶⁴ Cu	TT	2ZZZISP	2.0+07	2.0+07	Jour	RCA,95,75	07	J.Kozempel+	O1508
<i>d,x</i>	Many	TT	2ZZZISP	2.0+07	2.0+07	Jour	RCA,95,75	07	J.Kozempel+	O1508
³ He,el	⁶⁴ Zn	DA	2UK BIR	3.3+07	3.3+07	Jour	NP/A,183,449	72	M.E.Cage+	F0842
α ,el	⁶⁴ Zn	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

30 Zinc 66

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
³ He,el	⁶⁶ Zn	DA	2UK BIR	3.3+07	3.3+07	Jour	NP/A,183,449	72	M.E.Cage+	F0842
α ,el	⁶⁶ Zn	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841
¹⁶ O,x	⁶⁶ Ga	CS	3INDTRM	7.2+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁶⁷ Ga	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁶⁷ Ge	CS	3INDTRM	7.7+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁶⁹ Ge	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁷³ Se	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁷⁵ Br	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁷⁶ Br	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁷⁷ Br	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁷⁶ Kr	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁷⁷ Kr	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁷⁸ Rb	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745
¹⁶ O,x	⁷⁹ Rb	CS	3INDTRM	6.1+07	9.3+07	Jour	PRM,66,985	06	Suparnasodaye+	A0745

30 Zinc 68

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,p</i>	⁶⁸ Cu	CS	3ARGCAB	Fiss		Jour	ARI,65,872	07	A.J.Kestelman+	31597
³ He,el	⁶⁸ Zn	DA	2UK BIR	3.3+07	3.3+07	Jour	NP/A,183,449	72	M.E.Cage+	F0842
α ,el	⁶⁸ Zn	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

				30		Zinc		70			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α, el	^{70}Zn	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841

				32		Germanium		70			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α, el	^{70}Ge	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841

				32		Germanium		72			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n, inel	^{72}Ge	?	4KASKAZ	1.0+06	1.0+06	Jour	IZV,66,(10),1460		Oct 02	Yu.G.Kosyak+	41486
α, el	^{72}Ge	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841

				32		Germanium		73			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α, el	^{73}Ge	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841

				32		Germanium		74			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α, el	^{74}Ge	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841

				32		Germanium		76			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α, el	^{76}Ge	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841

				34		Selenium		76			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α, el	^{76}Se	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573		82	J.B.A.England+	F0841

34 Selenium 78

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,el	^{78}Se	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

34 Selenium 80

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,el	^{80}Se	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

37 Rubidium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,x	^{87}Y	CS	2GERJUL	1.4+07	2.4+07	Jour	ARI,65,561	07	S.A.Kandil+	O1512
α,x	^{88}Y	CS	2GERJUL	5.6+06	2.4+07	Jour	ARI,65,561	07	S.A.Kandil+	O1512

37 Rubidium 85

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\alpha,2n$	^{87}Y	CS	2GERJUL	1.4+07	2.4+07	Jour	ARI,65,561	07	S.A.Kandil+	O1512

38 Strontium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,x	^{86}Zr	?	2GERJUL	1.8+07	2.5+07	Jour	ARI,65,561	07	S.A.Kandil+	O1512
α,x	^{88}Zr	CS	2GERJUL	1.5+07	2.5+07	Jour	ARI,65,561	07	S.A.Kandil+	O1512
α,x	^{89}Zr	CS	2GERJUL	8.5+06	2.5+07	Jour	ARI,65,561	07	S.A.Kandil+	O1512

39 Yttrium 89

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ	^{90}Zr	DAP	3POLWWA	3.7+06	1.1+07	Jour	NP/A,467,397	87	Z.Szeflinski+	F0832
$d,2n$	^{89}Zr	CS	3ARGCNE	3.4+06	2.5+07	Jour	RCA,19,161	73	A.M.Lagamma+	F0843
$d,3n$	^{88}Zr	CS	3ARGCNE	1.6+07	2.5+07	Jour	RCA,19,161	73	A.M.Lagamma+	F0843
d,α	^{87}Sr	CS	3ARGCNE	4.7+06	2.5+07	Jour	RCA,19,161	73	A.M.Lagamma+	F0843
d,p	^{90}Y	CS	3ARGCNE	4.7+06	2.7+07	Jour	RCA,15,7	71	C.Corazza+	F0844
d,t	^{88}Y	CS	3ARGCNE	1.2+07	2.5+07	Jour	RCA,19,161	73	A.M.Lagamma+	F0843

α,el ^{89}Y DA 2UK BIR 2.5+07 2.5+07 Jour NP/A,388,573 82 J.B.A.England+ F0841

40 Zirconium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{nat}Zr	DAP	1USATNC	1.6+06	5.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

40 Zirconium 90

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{16}\text{O},el$	^{90}Zr	DA	3INDTRM	9.0+07	9.0+07	Jour	EPJ/A,19,347	04	V.Jha+	A0678
$^{16}\text{O},x$	Many	CS	3INDTRM	9.0+07	9.0+07	Jour	EPJ/A,19,347	04	V.Jha+	A0678
$^{16}\text{O},x$	Many	DA	3INDTRM	9.0+07	9.0+07	Jour	EPJ/A,19,347	04	V.Jha+	A0678
$^{18}\text{O},el$	^{90}Zr	DA	3INDTRM	9.0+07	9.0+07	Jour	EPJ/A,19,347	04	V.Jha+	A0678
$^{18}\text{O},x$	Many	CS	3INDTRM	9.0+07	9.0+07	Jour	EPJ/A,19,347	04	V.Jha+	A0678
$^{18}\text{O},x$	Many	DA	3INDTRM	9.0+07	9.0+07	Jour	EPJ/A,19,347	04	V.Jha+	A0678
$^{48}\text{Ca},fus$		CS	2ITYPAD	9.1+07	1.1+08	Jour	PR/C,73,034606	06	A.M.Stefanini+	A0744

40 Zirconium 91

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{92}Zr	CS	1USALAS	2.5-02	2.5-02	Jour	NST,44,21	07	S.Nakamura+	14132

40 Zirconium 93

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{94}Zr	CS	1USALAS	2.5-02	2.5-02	Jour	NST,44,21	07	S.Nakamura+	14132

40 Zirconium 96

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{48}\text{Ca},fus$		CS	2ITYPAD	8.9+07	1.1+08	Jour	PR/C,73,034606	06	A.M.Stefanini+	A0744

41 Niobium 93

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,α	^{90}Zr	CS	2ITYFRA	2.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
p,α	^{90}Zr	DA	2ITYFRA	2.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431

p,α	^{90}Zr	DAE	2ITYFRA	2.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
$p,^3\text{He}$	^{91}Zr	DAE	3SAFITH	1.0+08	1.3+08	Jour	PR/C,75,054617	07	A.A.Cowley+	D0443
$p,^3\text{He}$	^{91}Zr	POD	3SAFITH	1.0+08	1.3+08	Jour	PR/C,75,054617	07	A.A.Cowley+	D0443
α,el	^{93}Nb	DA	2UK BIR	2.5+07	2.5+07	Jour	NP/A,388,573	82	J.B.A.England+	F0841

42 Molybdenum

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,tot		CS	3KORPUE	1.6-02	2.0+02	Jour	PRM,68,279	07	A.K.M.Moinulhaquemeaze+	31594

44 Ruthenium 104

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
d,el	^{104}Ru	DA	2GERMUU	2.3+07	2.3+07	Jour	NP/A,451,219	86	H.Clement+	F0828
d,el	^{104}Ru	POD	2GERMUU	2.3+07	2.3+07	Jour	NP/A,451,219	86	H.Clement+	F0828
d,inel	^{104}Ru	DAP	2GERMUU	2.3+07	2.3+07	Jour	NP/A,451,219	86	H.Clement+	F0828
d,inel	^{104}Ru	POD	2GERMUU	2.3+07	2.3+07	Jour	NP/A,451,219	86	H.Clement+	F0828

46 Palladium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,x	^{97}Ru	CS	2JPNTOH	3.6+07	7.0+07	Jour	JRN,272,231	07	F.Ditroi+	D4183
p,x	^{101}Rh	CS	2JPNTOH	2.9+07	7.0+07	Jour	JRN,272,231	07	F.Ditroi+	D4183
p,x	^{100}Pd	CS	2JPNTOH	2.9+07	7.0+07	Jour	JRN,272,231	07	F.Ditroi+	D4183
p,x	^{105}Ag	CS	2JPNTOH	6.7+06	7.0+07	Jour	JRN,272,231	07	F.Ditroi+	D4183
p,x	^{106}Ag	CS	2JPNTOH	6.7+06	7.0+07	Jour	JRN,272,231	07	F.Ditroi+	D4183
p,x	^{110}Ag	CS	2JPNTOH	2.9+07	2.9+07	Jour	JRN,272,231	07	F.Ditroi+	D4183

46 Palladium 104

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
d,t	^{103}Pd	DAP	3BZLUSP	1.5+07	1.5+07	Jour	RBF,36,1363	06	M.R.D.Rodrigues+	D0432
α,el	^{104}Pd	DA	2GERHAM	3.0+07	3.0+07	Jour	NP/A,542,61	92	V.Riech+	F0822
α,inel	^{104}Pd	DAP	2GERHAM	3.0+07	3.0+07	Jour	NP/A,542,61	92	V.Riech+	F0822

46 Palladium 105

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{106}Pd	CS	1USALAS	2.5-02	2.5-02	Jour	NST,44,103	07	S.Nakamura+	14133

46 Palladium 106

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α, el	^{106}Pd	DA	2GERHAM	3.0+07	3.0+07	Jour	NP/A,542,61	92	V.Riech+	F0822
α, inel	^{106}Pd	DAP	2GERHAM	3.0+07	3.0+07	Jour	NP/A,542,61	92	V.Riech+	F0822

46 Palladium 107

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n, γ	^{108}Pd	CS	1USALAS	2.5-02	2.5-02	Jour	NST,44,103	07	S.Nakamura+	14133

46 Palladium 108

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α, el	^{108}Pd	DA	2GERHAM	3.0+07	3.0+07	Jour	NP/A,542,61	92	V.Riech+	F0822
α, inel	^{108}Pd	DAP	2GERHAM	3.0+07	3.0+07	Jour	NP/A,542,61	92	V.Riech+	F0822

46 Palladium 110

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α, el	^{110}Pd	DA	2GERHAM	3.0+07	3.0+07	Jour	NP/A,542,61	92	V.Riech+	F0822
α, inel	^{110}Pd	DAP	2GERHAM	3.0+07	3.0+07	Jour	NP/A,542,61	92	V.Riech+	F0822

47 Silver 107

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p, α	^{104}Pd	CS	2ITYFRA	2.0+07	3.0+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
p, α	^{104}Pd	DA	2ITYFRA	2.0+07	3.0+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
p, α	^{104}Pd	DAE	2ITYFRA	2.0+07	3.0+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431

48 Cadmium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
d, x	^{105}Ag	CS	2JPNTOH	1.4+07	4.0+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
d, x	^{106}Ag	CS	2JPNTOH	1.5+07	4.0+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
d, x	^{110}Ag	CS	2JPNTOH	1.2+07	4.0+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
d, x	^{111}Ag	CS	2JPNTOH	1.2+07	2.1+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
d, x	^{111}Cd	CS	2JPNTOH	4.9+06	2.1+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
d, x	^{115}Cd	CS	2JPNTOH	4.9+06	4.0+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179

<i>d,x</i>	¹¹⁷ Cd	CS	2JPNTOH	4.9+06	2.1+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹⁰⁷ In	CS	2JPNTOH	6.5+06	1.4+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹⁰⁸ In	CS	2JPNTOH	1.2+07	2.1+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹⁰⁹ In	CS	2JPNTOH	4.9+06	4.0+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹¹⁰ In	CS	2JPNTOH	9.0+06	4.0+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹¹¹ In	CS	2JPNTOH	4.9+06	4.0+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹¹² In	CS	2JPNTOH	8.0+06	2.1+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹¹³ In	CS	2JPNTOH	4.9+06	2.1+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹¹⁴ In	CS	2JPNTOH	6.5+06	4.0+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹¹⁵ In	CS	2JPNTOH	6.5+06	2.1+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179
<i>d,x</i>	¹¹⁶ In	CS	2JPNTOH	8.0+06	2.1+07	Jour	NIM/B,259,817	07	F.Tarkanyi+	D4179

49 Indium 113

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,γ</i>	¹¹⁴ In	CS	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,66,(3),396	02	A.G.Belov+	41485

49 Indium 115

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,γ</i>	¹¹⁶ In	CS	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,66,(3),396	02	A.G.Belov+	41485
<i>n,inel</i>	¹¹⁵ In	CSP	1USATNC	1.5+06	1.5+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
<i>n,inel</i>	¹¹⁵ In	DAP	1USATNC	1.5+06	1.5+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

50 Tin 112

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>α,p</i>	¹¹⁵ Sb	CS	1USANOT	1.0+07	1.2+07	Jour	PR/C,75,025801	07	N.Ozkan+	C1555

50 Tin 116

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>d,t</i>	¹¹⁵ Sn	DAP	2FR SAT	2.0+08	2.0+08	Jour	PR/C,66,054303	02	H.Langevin-Joliot+	O1321
<i>d,t</i>	¹¹⁵ Sn	POD	2FR SAT	2.0+08	2.0+08	Jour	PR/C,66,054303	02	H.Langevin-Joliot+	O1321

50 Tin 118

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,α</i>	¹¹⁵ In	CS	2ITYFRA	2.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
<i>p,α</i>	¹¹⁵ In	DA	2ITYFRA	2.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
<i>p,α</i>	¹¹⁵ In	DAE	2ITYFRA	2.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431

50 Tin 120

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>d,t</i>	¹¹⁹ Sn	DAP	2FR SAT	2.0+08	2.0+08	Jour	PR/C,66,054303	02	H.Langevin-Joliot+	O1321
<i>d,t</i>	¹¹⁹ Sn	POD	2FR SAT	2.0+08	2.0+08	Jour	PR/C,66,054303	02	H.Langevin-Joliot+	O1321
⁷ Li, ⁶ Li	¹²¹ Sn	POD	2UK UK	7.0+07	7.0+07	Jour	PR/C,69,064605	04	N.J.Davis+	O1316
⁷ Li, ⁸ Be	¹¹⁹ In	POD	2UK UK	7.0+07	7.0+07	Jour	PR/C,69,064605	04	N.J.Davis+	O1316

51 Antimony

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,inel</i>	^{nat} Sb	DAP	1USATNC	1.0+06	3.5+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

51 Antimony 121

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,inel</i>	¹²¹ Sb	DAP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

51 Antimony 123

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,inel</i>	¹²³ Sb	DAP	1USATNC	1.0+06	3.5+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

52 Tellurium 128

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
¹⁴ N, <i>4n</i>	¹³⁸ Pr	CS	3INDNSD	6.4+07	9.0+07	Jour	IMP/E,14,775	05	Unnati+	A0742
¹⁴ N, <i>5n</i>	¹³⁷ Pr	CS	3INDNSD	7.6+07	9.0+07	Jour	IMP/E,14,775	05	Unnati+	A0742
¹⁴ N, <i>x</i>	¹³⁰ I	CS	3INDNSD	7.6+07	9.0+07	Jour	IMP/E,14,775	05	Unnati+	A0742
¹⁴ N, <i>x</i>	¹³¹ I	CS	3INDNSD	8.6+07	9.0+07	Jour	IMP/E,14,775	05	Unnati+	A0742
¹⁴ N, <i>x</i>	¹³² La	CS	3INDNSD	8.6+07	9.0+07	Jour	IMP/E,14,775	05	Unnati+	A0742
¹⁴ N, <i>x</i>	¹³³ La	CS	3INDNSD	8.6+07	9.0+07	Jour	IMP/E,14,775	05	Unnati+	A0742
¹⁴ N, <i>x</i>	¹³⁷ Ce	CS	3INDNSD	7.6+07	9.0+07	Jour	IMP/E,14,775	05	Unnati+	A0742

52 Tellurium 132

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

$^{14}\text{N,x}$	^{135}Cs	CS	3INDNSD	7.6+07	9.0+07	Jour	IMP/E,14,775	05	Unnati+	A0742
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54

Xenon

136

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	^{135}Xe	CSP	1USALAS	8.7+06	4.3+07	Jour	PR/C,75,054322	07	N.Fotiades+	14140
$n,3n$	^{134}Xe	CSP	1USALAS	1.1+07	4.3+07	Jour	PR/C,75,054322	07	N.Fotiades+	14140
n,inel	^{136}Xe	CSP	1USALAS	1.1+06	4.3+07	Jour	PR/C,75,054322	07	N.Fotiades+	14140
n,xn	^{nat}G	CSP	1USALAS	9.2+06	3.3+07	Jour	PR/C,75,054322	07	N.Fotiades+	14140

57

Lanthanum

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,x	^{138}Ce	CS	2GERJUL	2.0+06	2.0+07	Jour	NIM/B,255,331	07	C.Vermeulen+	O1511
p,x	^{139}Ce	TT	2GERJUL	1.8+06	1.9+07	Jour	NIM/B,255,331	07	C.Vermeulen+	O1511

58

Cerium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{nat}Ce	DAP	1USATNC	3.0+06	4.5+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

58

Cerium

140

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{140}Ce	DAP	1USATNC	1.8+06	2.1+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

58

Cerium

142

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{142}Ce	DAP	1USATNC	8.0+05	1.8+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

59

Praesodymium

141

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,x	^{132}Ce	CS	3SAFITH	7.2+07	9.6+07	Jour	NIM/B,255,331	07	C.Vermeulen+	O1511
p,x	^{133}Ce	CS	3SAFITH	6.4+07	9.6+07	Jour	NIM/B,255,331	07	C.Vermeulen+	O1511
p,x	^{135}Ce	CS	3SAFITH	3.7+07	9.6+07	Jour	NIM/B,255,331	07	C.Vermeulen+	O1511
p,x	^{137}Ce	CS	3SAFITH	2.6+07	9.6+07	Jour	NIM/B,255,331	07	C.Vermeulen+	O1511

p,x	^{139}Ce	CS	3SAFITH	2.1+07	9.6+07	Jour	NIM/B,255,331	07	C.Vermeulen+	O1511
p,x	^{139}Ce	TT	3SAFITH	2.5+07	1.0+08	Jour	NIM/B,255,331	07	C.Vermeulen+	O1511

60 Neodymium 144

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^3\text{He},\alpha$	^{143}Nd	DAP	2DENNBI	2.3+07	2.3+07	Jour	NP/A,481,71	88	G.Lovhoiden+	F0831

62 Samarium 144

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{16}\text{O},\text{el}$	^{144}Sm	DA	3ARGCNE	6.1+07	7.6+07	Jour	PR/C,39,546	89	D.Aabriola+	O1607
$^{16}\text{O},\text{inel}$	^{144}Sm	DAP	3ARGCNE	6.9+07	7.6+07	Jour	PR/C,39,546	89	D.Aabriola+	O1607

62 Samarium 147

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{16}\text{O},\text{fus}$		CS	3ARGCNE	6.2+07	7.5+07	Jour	PR/C,39,516	89	D.E.Digregorio+	O1606

62 Samarium 148

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{16}\text{O},\text{fus}$		CS	3ISLWZI	6.0+07	7.5+07	Jour	PR/C,21,2427	80	R.G.Stokstad+	O1608
$^{16}\text{O},\text{fus}$		CS	3ARGCNE	6.1+07	7.5+07	Jour	PR/C,39,516	89	D.E.Digregorio+	O1606

62 Samarium 149

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{16}\text{O},\text{fus}$		CS	3ARGCNE	6.1+07	7.5+07	Jour	PR/C,39,516	89	D.E.Digregorio+	O1606

62 Samarium 150

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{16}\text{O},\text{fus}$		CS	3ISLWZI	6.0+07	7.5+07	Jour	PR/C,21,2427	80	R.G.Stokstad+	O1608

				62		Samarium		152			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol			
							Page				
¹⁶ O,fus		CS	3ISLWZI	6.0+07	7.5+07	Jour	PR/C,21,2427		80	R.G.Stokstad+	O1608

				62		Samarium		154			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol			
							Page				
¹⁶ O,fus		CS	3ISLWZI	6.0+07	7.5+07	Jour	PR/C,21,2427		80	R.G.Stokstad+	O1608

				64		Gadolinium		160			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol			
							Page				
⁷ Li,4n	¹⁶³ Ho	CS	2GERMPH	3.5+07	5.6+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,5n	¹⁶² Ho	CS	2GERMPH	3.5+07	6.7+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,6n	¹⁶¹ Ho	CS	2GERMPH	5.1+07	6.7+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,7n	¹⁶⁰ Ho	CS	2GERMPH	6.1+07	6.7+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,x	¹⁶⁰ Gd	CS	2GERMPH	5.6+07	6.7+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,x	¹⁶⁰ Dy	CS	2GERMPH	5.1+07	6.7+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,x	¹⁶¹ Dy	CS	2GERMPH	5.1+07	6.7+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,x	¹⁶² Dy	CS	2GERMPH	3.5+07	6.7+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,x	¹⁶³ Dy	CS	2GERMPH	3.5+07	5.6+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,x	¹⁶⁴ Dy	CS	2GERMPH	3.5+07	5.1+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,x+d	inclusive	DA	2ITYPAD	5.6+07	5.6+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,x+p	inclusive	DA	2ITYPAD	5.6+07	5.6+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323
⁷ Li,x+t	inclusive	DA	2ITYPAD	5.6+07	5.6+07	Jour	PR/C,66,014312		02	A.Jungclaus+	O1323

				65		Terbium		159			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol			
							Page				
¹⁶ O,3n	¹⁷² Ta	CS	3INDNSD	6.9+07	9.5+07	Jour	NP/A,776,83		06	Manojkumarsharma+	A0751
¹⁶ O,4n	¹⁷¹ Ta	CS	3INDNSD	7.9+07	9.5+07	Jour	NP/A,776,83		06	Manojkumarsharma+	A0751
¹⁶ O,5n	¹⁷⁰ Ta	CS	3INDNSD	8.3+07	9.5+07	Jour	NP/A,776,83		06	Manojkumarsharma+	A0751
¹⁶ O,x	¹⁶⁵ Tm	CS	3INDNSD	8.3+07	9.5+07	Jour	NP/A,776,83		06	Manojkumarsharma+	A0751
¹⁶ O,x	¹⁶⁹ Lu	CS	3INDNSD	7.9+07	9.5+07	Jour	NP/A,776,83		06	Manojkumarsharma+	A0751
¹⁶ O,x	¹⁷⁰ Lu	CS	3INDNSD	8.3+07	9.5+07	Jour	NP/A,776,83		06	Manojkumarsharma+	A0751
¹⁶ O,x	¹⁷¹ Lu	CS	3INDNSD	7.9+07	9.5+07	Jour	NP/A,776,83		06	Manojkumarsharma+	A0751
¹⁶ O,x	¹⁷⁰ Hf	CS	3INDNSD	8.3+07	9.5+07	Jour	NP/A,776,83		06	Manojkumarsharma+	A0751
¹⁶ O,x	¹⁷¹ Hf	CS	3INDNSD	7.5+07	9.5+07	Jour	NP/A,776,83		06	Manojkumarsharma+	A0751

				67		Holmium		165			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol			
							Page				

$n,2\gamma$	^{166}Ho	SPC	4LATULR	2.5-02	2.5-02	Jour	FIZ/B,9,97	00	P.Prokofjevs+	41488
n,γ	^{166}Ho	SPC	4LATULR	2.5-02	2.5-02	Jour	FIZ/B,9,97	00	P.Prokofjevs+	41488
p,α	^{162}Dy	CS	2ITYFRA	2.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
p,α	^{162}Dy	DA	2ITYFRA	2.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
p,α	^{162}Dy	DAE	2ITYFRA	2.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431

68 Erbium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
d,x	^{171}Er	CS	2BLGVUB	6.3+06	4.0+07	Jour	NIM/B,259,829	07	F.Tarkanyi+	D4157
d,x	^{163}Tm	CS	2BLGVUB	1.8+07	2.1+07	Jour	NIM/B,259,829	07	F.Tarkanyi+	D4157
d,x	^{165}Tm	CS	2BLGVUB	6.3+06	4.0+07	Jour	NIM/B,259,829	07	F.Tarkanyi+	D4157
d,x	^{166}Tm	CS	2BLGVUB	7.7+06	4.0+07	Jour	NIM/B,259,829	07	F.Tarkanyi+	D4157
d,x	^{167}Tm	CS	2BLGVUB	6.3+06	4.0+07	Jour	NIM/B,259,829	07	F.Tarkanyi+	D4157
d,x	^{168}Tm	CS	2BLGVUB	6.3+06	4.0+07	Jour	NIM/B,259,829	07	F.Tarkanyi+	D4157
d,x	^{170}Tm	CS	2BLGVUB	6.3+06	2.1+07	Jour	NIM/B,259,829	07	F.Tarkanyi+	D4157
α,x	^{169}Yb	CS	2BLGVUB	1.0+07	3.6+07	Conf	2007NICE,,137(#255)	07	B.Kiraly+	D4184

69 Thulium 169

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
p,α	^{166}Er	CS	2ITYFRA	3.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
p,α	^{166}Er	DA	2ITYFRA	3.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
p,α	^{166}Er	DAE	2ITYFRA	3.0+07	4.4+07	Rept	INFN/BE-78/6	78	A.M.Ferrero+	D0431
d,x	^{167}Tm	CS	2BLGVUB	1.4+07	2.1+07	Jour	ARI,65,663	07	F.Tarkanyi+	D4180
d,x	^{168}Tm	CS	2BLGVUB	4.9+06	2.1+07	Jour	ARI,65,663	07	F.Tarkanyi+	D4180
d,x	^{169}Yb	CS	2BLGVUB	4.4+06	2.1+07	Jour	ARI,65,663	07	F.Tarkanyi+	D4180

70 Ytterbium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
α,x	^{169}Yb	CS	2BLGVUB	2.4+07	3.8+07	Conf	2007NICE,,137(#255)	07	B.Kiraly+	D4184
α,x	^{177}Lu	CS	2BLGVUB	7.8+06	3.8+07	Conf	2007NICE,,137(#255)	07	B.Kiraly+	D4184

74 Tungsten

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
n,fis		CS	4RUSLIN	6.6+07	2.2+08	Conf	2004SANTA,1,865	04	A.V.Laptev+	41487
n,fis		?	4RUSLIN	6.6+07	2.2+08	Conf	2004SANTA,1,865	04	A.V.Laptev+	41487
n,inel	^{nat}W	DAP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
n,tot		CS	4ZZZDUB	1.3-03	1.3-03	Jour	PTE,,(5),27	May 06	Zh.V.Mezentseva+	41491
$n,x+\gamma$	inclusive	CSP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
$n,x+\gamma$	inclusive	DAP	1USATNC	3.0+05	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125
$^{48}\text{Ca},x$	Many	CS	1USAMSU	6.8+09	6.8+09	Jour	PR/C,75,064613	07	O.B.Tarasov+	C1568

74 Tungsten 180

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{181}W	CS	3KORKAE	Maxwl		Rept	NUCL-EX-0704-3042	07	W.G.Kang+	31596

74 Tungsten 182

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{183}W	DAP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
n,inel	^{182}W	DAP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

74 Tungsten 183

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{184}W	CSP	1USARPI	7.6+00	2.7+01	Jour	PR,155,1301	67	E.R.Rae+	14142

74 Tungsten 184

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{185}W	DAP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
n,inel	^{184}W	DAP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125

74 Tungsten 186

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{187}W	CS	3KORKRM	1.6+06	2.2+06	Jour	JRN,271,553	07	G.D.Kim+	31593

76 Osmium 184

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α	^{181}W	CSP	4RUSITE	Maxwl		Jour	YF,1,(2),252	65	V.N.Andreev+	40775

76 Osmium 186											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,α	^{183}W	CSP	4RUSITE	Maxwl		Jour	YF,1,(2),252		65	V.N.Andreev+	40775
80 Mercury 199											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
n,γ	^{200}Hg	CSP	1USARPI	2.5-02	1.8+02	Jour	PR,155,1301		67	E.R.Rae+	14142
81 Thallium											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
p,x	^{201}Pb	?	3SARSAR	1.9+07	2.7+07	Jour	RCA,95,127		07	F.S.Alsaleh+	O1509
p,x	^{202}Pb	?	3SARSAR	1.6+07	2.7+07	Jour	RCA,95,127		07	F.S.Alsaleh+	O1509
p,x	^{203}Pb	?	3SARSAR	6.2+06	2.7+07	Jour	RCA,95,127		07	F.S.Alsaleh+	O1509
p,x	^{204}Pb	?	3SARSAR	1.1+07	2.7+07	Jour	RCA,95,127		07	F.S.Alsaleh+	O1509
82 Lead 206											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
n,tot		CS	1USALAS	1.6-04	1.0+02	Jour	NIM/A,572,866		07	G.Muhrer+	14141
82 Lead 206											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
$n,x+\gamma$	inclusive	DAP	1USATNC	5.4+05	1.5+07	Prog	ORO-2791-32		71	P.S.Buchana+	14125
82 Lead 207											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
n,inel	^{207}Pb	DAP	1USATNC	1.0+06	4.5+06	Prog	ORO-2791-32		71	P.S.Buchana+	14125
$n,x+\gamma$	inclusive	DAP	1USATNC	1.0+06	1.5+07	Prog	ORO-2791-32		71	P.S.Buchana+	14125
82 Lead 208											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #

<i>d,el</i>	²⁰⁸ Pb	DA	2GERJUL	8.6+07	8.6+07	Jour	PR/C,22,489	80	H.P.Morsch+	F0793
<i>d,el</i>	²⁰⁸ Pb	POD	1USAWIS	4.0+06	9.0+06	Jour	NP/A,435,502	85	J.E.Kammeraad+	C1564
<i>d,inel</i>	²⁰⁸ Pb	DAP	2GERJUL	8.6+07	8.6+07	Jour	PR/C,22,489	80	H.P.Morsch+	F0793
<i>α,el</i>	²⁰⁸ Pb	DA	2GERJUL	1.7+08	1.7+08	Jour	PR/C,22,489	80	H.P.Morsch+	F0793
<i>α,inel</i>	²⁰⁸ Pb	DAP	2GERJUL	1.7+08	1.7+08	Jour	PR/C,22,489	80	H.P.Morsch+	F0793
⁶ Li, <i>d+α</i>	²⁰⁸ Pb	DA	2ITYPAD	3.1+07	3.9+07	Jour	PR/C,67,044607	03	C.Signorini+	O1320
⁶ Li, <i>d+α</i>	²⁰⁸ Pb	?	2ITYPAD	3.1+07	3.9+07	Jour	PR/C,67,044607	03	C.Signorini+	O1320
⁶ Li, <i>p+α</i>	²⁰⁹ Pb	DA	2ITYPAD	3.1+07	3.9+07	Jour	PR/C,67,044607	03	C.Signorini+	O1320
⁶ Li, <i>x+α</i>	inclusive	CS	2ITYPAD	2.8+07	3.8+07	Jour	EPJ/A,10,249	01	C.Signorini+	O1615
⁶ Li, <i>x+α</i>	inclusive	CS	2ITYPAD	3.1+07	3.9+07	Jour	PR/C,67,044607	03	C.Signorini+	O1320
⁶ Li, <i>x+α</i>	inclusive	DA	2ITYPAD	2.9+07	3.9+07	Jour	EPJ/A,10,249	01	C.Signorini+	O1615
⁶ Li, <i>x+α</i>	inclusive	DA	2ITYPAD	3.1+07	3.9+07	Jour	PR/C,67,044607	03	C.Signorini+	O1320
⁷ Li, <i>x+α</i>	inclusive	CS	2ITYPAD	2.8+07	3.8+07	Jour	EPJ/A,10,249	01	C.Signorini+	O1615

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Bismuth

209

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,fis</i>		CS	4RUSLIN	2.8+07	2.0+08	Conf	2004SANTA,1,865	04	A.V.Laptev+	41487
<i>n,fis</i>		?	4RUSLIN	2.8+07	2.0+08	Conf	2004SANTA,1,865	04	A.V.Laptev+	41487
<i>n,inel</i>	²⁰⁹ Bi	DAP	1USATNC	1.5+06	5.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
<i>n,x+γ</i>	inclusive	DAP	1USATNC	1.5+07	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125
<i>p,x</i>	Many	CS	1USACOL	3.8+08	3.8+08	Jour	PR,115,1053	59	E.T.Hunter+	C0364
<i>p,x</i>	Many	CS	1USACHI	7.5+07	4.5+08	Jour	PR,99,1470	55	L.G.Jodra+	C0363
<i>p,x</i>	⁶¹ Cu	CS	1USACHI	4.5+08	4.5+08	Jour	PR,99,1459	55	P.Kruger+	C0297
<i>t,α</i>	²⁰⁸ Pb	DAP	1CANMCM	8.5+06	9.0+06	Jour	NP/A,356,33	81	A.Warwick+	C1565
<i>α,fis</i>		CS	4ZZZDUB	3.5+07	7.4+07	Jour	EPJ/A,13,123	02	Yu.E.Penionzkevich+	O1405
⁶ He, <i>4n</i>	²¹¹ At	CS	4ZZZDUB	2.4+07	4.0+07	Jour	EPJ/A,13,123	02	Yu.E.Penionzkevich+	O1405
⁶ He, <i>fis</i>		CS	4ZZZDUB	2.7+07	6.8+07	Jour	EPJ/A,13,123	02	Yu.E.Penionzkevich+	O1405

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Polonium

210

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,α</i>	²⁰⁷ Pb	CSP	4RUSITE	Maxwl		Jour	YF,1,(2),252	65	V.N.Andreev+	40775

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Thorium

232

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,el</i>	²³² Th	POD	1USALAS	8.3+06	3.9+08	Jour	PRL,67,564	91	C.M.Frankle+	14143
<i>n,γ</i>		RP	4ZZZDUB	2.2+01	2.0+02	Jour	NIM/B,168,453	00	W.Y.Baek+	41489
<i>n,γ</i>	²³³ Th	CS	4ZZZDUB	2.2+01	1.0+04	Jour	KPS,43,(5),704	03	Zh.V.Mezentseva+	41490
<i>n,γ</i>	²³³ Th	CS	4ZZZDUB	2.2+01	2.2+02	Jour	NIM/B,168,453	00	W.Y.Baek+	41489
<i>n,tot</i>		CS	4ZZZDUB	1.0+01	1.0+04	Jour	KPS,43,(5),704	03	Zh.V.Mezentseva+	41490

92 Uranium 233

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,fis		NUD	4RUSFEI	3.4+05	4.9+06	Jour	PTE,6,29	06	V.M.Piksaykin+	41495

92 Uranium 235

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,2 <i>n</i>	²³⁴ U	CSP	1USALAS	5.9+06	1.9+07	Conf	99SANTA,,384	99	D.P.Mcnabb+	14144
<i>n</i> , α	²³² Th	CSP	4RUSITE	Maxwl		Jour	YF,1,(2),252	65	V.N.Andreev+	40775
<i>n</i> ,abs		ALF	4RUSFEI	2.4+04	2.4+04	Jour	AE,19,(1),41	Jul 65	A.A.Van'Kov+	40808
<i>n</i> ,abs		ETA	4RUSFEI	2.4+07	2.4+07	Jour	AE,19,(1),41	Jul 65	A.A.Van'Kov+	40808
<i>n</i> ,fis		CS	1USALAS	5.0+03	1.3+06	Rept	LA-137	44	G.A.Linenberger+	14137
<i>n</i> ,fis		INT	1USARPI	3.9+00	2.4+01	Jour	NSE,23,45	65	G.Desaussure+	14135
<i>n</i> ,fis	Many	KE	4RUSMIF	2.5-02	2.5-02	Jour	YF,57,(12),2137	Dec 94	A.A.Aleksandrov+	41496
<i>n</i> ,fis		?	1USAANL	3.9+04	1.0+06	Jour	JNE,21,157	67	J.W.Meadows+	12399
<i>n</i> , γ	²³⁶ U	?	1USARPI	2.0+01	1.0+03	Jour	NSE,23,45	65	G.Desaussure+	14135
<i>n</i> , γ	²³⁶ U	?	4RUSFEI	2.4+04	2.4+04	Jour	AE,19,(1),41	Jul 65	A.A.Van'Kov+	40808
<i>n</i> , γ	²³⁶ U	?	1USAORL	3.0+04	6.4+04	Prog	ORNL-3360,51	62	G.Desaussure+	14138
<i>n</i> ,inel	²³⁵ U	CSP	1USATNC	1.0+06	1.0+06	Prog	ORO-2791-32	71	P.S.Buchana+	14125
<i>n</i> ,inel	²³⁵ U	DAP	1USATNC	3.0+05	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125

92 Uranium 236

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,fis		CS	1USABRK	1.1+05	2.1+07	Jour	PR/C,76,014606	07	B.F.Lyles+	14146

92 Uranium 238

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,el	²³⁸ U	POD	1USALAS	1.1+07	2.8+08	Conf	90ASILOM,,747	90	C.R.Gould+	14145
<i>n</i> ,fis		?	4RUSFEI	1.4+07	1.8+07	Jour	AE,102,(2),124	Feb 07	V.M.Piksaykin+	41494
<i>n</i> , γ	²³⁹ U	CS	1USALAS	5.0+03	2.8+06	Rept	LA-137	44	G.A.Linenberger+	14137
<i>n</i> , γ	²³⁹ U	?	1USAORL	3.0+04	6.4+04	Prog	ORNL-3360,51	62	G.Desaussure+	14138
<i>n</i> ,inel	²³⁸ U	DAP	1USATNC	1.1+06	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125

94 Plutonium 239

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> , α	²³⁶ U	CSP	4RUSITE	Maxwl		Jour	YF,1,(2),252	65	V.N.Andreev+	40775
<i>n</i> ,fis		NUD	4RUSFEI	3.4+05	4.9+06	Jour	PTE,6,29	06	V.M.Piksaykin+	41495
<i>n</i> ,inel	²³⁹ Pu	DAP	1USATNC	3.0+05	1.5+07	Prog	ORO-2791-32	71	P.S.Buchana+	14125

94 Plutonium 240

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0,fis		NU	1USALAS	Spont		Jour	NP,48,433	63	J.C.Hopkins+	12326
<i>n</i> ,fis		CS	4RUSLIN	5.8+05	2.0+08	Conf	2004SANTA,1,865	04	A.V.Laptev+	41487
<i>n</i> ,fis		?	4RUSLIN	5.8+05	2.0+08	Conf	2004SANTA,1,865	04	A.V.Laptev+	41487

95 Americium 242

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,fis		FY	4RUSMIF	2.5-02	2.5-02	Jour	YF,57,(12),2137	Dec 94	A.A.Aleksandrov+	41496
<i>n</i> ,fis	Many	FY	4RUSMIF	2.5-02	2.5-02	Jour	YF,57,(12),2137	Dec 94	A.A.Aleksandrov+	41496
<i>n</i> ,fis	Many	KE	4RUSMIF	2.5-02	2.5-02	Jour	YF,57,(12),2137	Dec 94	A.A.Aleksandrov+	41496

95 Americium 243

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,fis		CS	4RUSLIN	5.8+05	2.0+08	Conf	2004SANTA,1,865	04	A.V.Laptev+	41487
<i>n</i> ,fis		?	4RUSLIN	5.8+05	2.0+08	Conf	2004SANTA,1,865	04	A.V.Laptev+	41487

96 Curium 243

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,fis	⁹¹ Sr	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	⁹¹ Y	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	⁹⁵ Zr	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	⁹⁷ Zr	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	⁹⁵ Nb	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	⁹⁷ Nb	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	⁹⁹ Mo	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹⁰³ Ru	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹⁰⁵ Rh	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹¹² Ag	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹²⁷ Sb	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹³¹ Te	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹³² Te	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹³¹ I	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹³² I	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹³³ I	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹³⁵ I	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹³⁶ Cs	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹⁴⁰ Ba	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹⁴⁰ La	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n</i> ,fis	¹⁴³ Ce	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095

<i>n, fis</i>	¹⁴⁷ Nd	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
<i>n, fis</i>	¹⁵¹ Pm	FY	1USAORL	2.5-02	2.5-02	Rept	ORNL-TM-8168	82	D.G.Breederland	14095
