

Japan Charged-Particle Nuclear Reaction Data Group (JCPRG)

EXFOR : Recent Compilation (Added in November 2006)

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Quantity code

ALF	Alpha	FY	Fission product yield
AMP	Length or amplitude	INT	Cross section integral over incident energy
CHG	Fragment charge	KE	Kinetic energy
CS	Cross section	KER	Kerma factor
CSN	Differential with respect to number of particles	MLT	Multiplicity
CSP	Partial cross section	NQ	Nuclear quantity
CST	Temperature dependent cross section	NU	Nu
D3A	Triple differential $d\Omega_1/d\Omega_2/dE'$	NUD	Nu delayed
D3E	Triple differential $d\Omega/dE'_1/dE'_2$	NUF	Fragment neutrons
D4A	Quadruple diff. $d\Omega_1/d\Omega_2/dE'_1/dE'_2$	POL	Polarization
DA	Differential $d/d\Omega$	POD	Differential polarization
DAA	Double differential $d\Omega_1/d\Omega_2$	PY	Product yield (other than fission)
DAE	Double differential $d\Omega/dE'$	RI	Resonance integral
DAP	Partial differential $d/d\Omega$	RP	Resonance parameter
DAT	Temperature-dependent Legendre coefficient	RR	Reaction rate
DE	Differential d/dE'	SIF	Self indication
DEP	Energy spectrum for specific group	SPC	Gamma spectrum
DP	Diff. by linear momentum of outgoing part.	TSL	Thermal scattering
DT	Diff. by 4-momentum transfer squared	TT	Thick target yield
ETA	Eta	TTD	Differential thick target yield, $d/d\Omega$
EVL	Evaluation	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	Date	Author	Data #	
				Min	Max						
n,el	^1H	DA	2SWDUPP	9.5+07	9.5+07	Jour	PL/B,597,243	04	P.Mermod+	22914	
$^{208}\text{Pb},x$	Many	CS	2GERGSI	6.7+08	6.7+08	Jour	NP/A,768,1	06	L.Audouin+	O1304	

1 Hydrogen 2											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
n,el	^2H	DA	2SWDUPP	9.5+07	9.5+07	Jour	PL/B,597,243	04	P.Mermod+	22914	
n,el	^2H	DA	2SWDUPP	9.5+07	9.5+07	Jour	PR/C,72,061002	05	P.Mermod+	22920	
d,el	^2H	DA	2GERKFK	5.2+07	5.2+07	Jour	ZP,230,383	70	H.Brueckmann+	O1344	
d,n	^3He	DA	2GERKFK	5.2+07	5.2+07	Jour	ZP,230,383	70	H.Brueckmann+	O1344	
$d,n+p$	^2H	DA	2GERKFK	5.2+07	5.2+07	Jour	ZP,230,383	70	H.Brueckmann+	O1344	
d,p	^3H	DA	2GERKFK	5.2+07	5.2+07	Jour	ZP,230,383	70	H.Brueckmann+	O1344	
$d,x+p$	inclusive	DA	2GERKFK	5.2+07	5.2+07	Jour	ZP,230,383	70	H.Brueckmann+	O1344	

1 Hydrogen 3											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
$t,2n$	^4He	CS	1USALAS	1.0+05	2.5+05	Rept	LA-5828-MS	Jan 75	L.Stewart+	D0014	

1 Hydrogen											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
n,tot		CST	3ARGCAB	1.7-03	1.3+02	Jour	NIM/B,248,340	06	F.Cantargi+	31578	

2 Helium 4											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						
$^6\text{Li},el$	^4He	POD	1USAWIS	5.5+06	2.0+07	Jour	PR/C,56,270	Jul 97	E.A.George+	C0510	
$^7\text{Li},el$	^4He	DA	1USAFSU	1.2+07	1.6+07	Jour	PR/C,63,064601	01	P.D.Cathers+	C1457	
$^7\text{Li},el$	^4He	POD	1USAFSU	1.2+07	1.6+07	Jour	PR/C,63,064601	01	P.D.Cathers+	C1457	
$^7\text{Li},inel$	^4He	DAP	1USAFSU	3.2+07	3.2+07	Jour	NIM/A,457,509	01	P.D.Cathers+	C1456	
$^7\text{Li},inel$	^4He	POD	1USAFSU	3.2+07	3.2+07	Jour	NIM/A,457,509	01	P.D.Cathers+	C1456	

3

Lithium

7

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,n	${}^7\text{Be}$	CSP	2GERFRK	2.4+06	6.0+06	Jour	NP/A,182,321	72	G.Presser+	D0039
p,n	${}^7\text{Be}$	DAP	1CANALA	2.6+06	5.4+06	Jour	NIM,105,519	72	S.A.Elbakr+	D0034

3

Lithium

8

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,n	${}^{11}\text{B}$	CS	1USANOT	6.5+05	2.2+06	Jour	PL/B,343,31	95	X.Gu+	C1435

4

Beryllium

9

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
${}^{10}\text{B,el}$	${}^9\text{Be}$	DA	1USATAM	1.0+08	1.0+08	Jour	NP/A,631,788	98	A.M.Mukhamedzhanov+	C1335
${}^{10}\text{B,inel}$	${}^9\text{Be}$	DAP	1USATAM	1.0+08	1.0+08	Jour	NP/A,631,788	98	A.M.Mukhamedzhanov+	C1335

6

Carbon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,x	${}^7\text{Be}$	PY	2JPNKEK	1.0+07	5.0+08	Jour	RCA,93,497	05	H.Matsumura+	22911
${}^{20}\text{Ne,x}$	Many	DA	3INDVEC	1.4+08	2.0+08	Jour	PR/C,72,021601	05	C.Bhattacharya+	O1403

6

Carbon

12

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,tot		CS	2GERKFK	1.0+04	2.0+05	Jour	PR/C,73,015802	06	K.Wisshak+	22916
α,el	${}^{12}\text{C}$	DA	1USASC	8.0+06	1.2+07	Jour	NIM/B,249,101	06	J.C.Banks+	C1444
α,γ	${}^{16}\text{O}$?	1USANOT	2.6+06	6.6+06	Jour	PRL,88,072501	02	P.Tischhauser+	C1461
${}^6\text{Li},\alpha$	${}^{14}\text{N}$	DAP	1USAFSU	3.3+07	3.3+07	Jour	PR/C,51,651	95	A.J.Mendez+	C1452
${}^{19}\text{F},x+\gamma$	inclusive	DE	3POLWWA	8.3+07	8.3+07	Jour	APP/B,34,2399	93	E.Wojcik+	O1404
${}^{20}\text{Ne},x+\gamma$	inclusive	DE	3POLWWA	1.0+08	1.0+08	Jour	APP/B,34,2399	93	E.Wojcik+	O1404

7

Nitrogen

14

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,el	${}^{14}\text{N}$	DA	1USASUI	9.4+05	3.7+06	Jour	PR,114,1552	59	S.Bashkin+	C0849
p,γ	${}^{15}\text{O}$	CS	2ITYLGS	7.0+04	2.3+05	Jour	PL/B,634,483	06	A.Lemut+	O1364
α,p	${}^{17}\text{O}$	DAP	1CANMON	3.2+06	4.0+06	Jour	NIM/B,249,85	06	P.Wei+	C1450

7 Nitrogen 15

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
γ, abs		CS	3AULAML	9.7+06	2.7+07	Jour	PR/C,40,(2),506	Aug 89	A.D.Bates+	G0008
γ, n	^{14}N	?	3AULAML	9.7+06	2.7+07	Jour	PR/C,40,(2),506	Aug 89	A.D.Bates+	G0008

8 Oxygen 16

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
d, α	^{14}N	DAP	1USAOHO	7.9+05	1.7+06	Jour	NP,57,526	64	H.C.Kim+	C1438
d, n	^{17}F	TT	1USAWIS	5.5+06	5.5+06	Jour	ARI,62,525	05	T.E.Barnhart+	C1437
d, p	^{17}O	DAP	1USAOHO	7.9+05	1.7+06	Jour	NP,57,526	64	H.C.Kim+	C1438

8 Oxygen 18

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^6\text{Li}, d$	^{22}Ne	DAP	1USANOT	3.2+07	3.2+07	Jour	NP/A,567,146	94	U.Giesen+	C1451
$^6\text{Li}, \text{el}$	^{18}O	DA	1USANOT	3.2+07	3.2+07	Jour	NP/A,567,146	94	U.Giesen+	C1451

8 Oxygen 20

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p, el	^{20}O	DA	1USAMSU	3.0+07	3.0+07	Jour	PL/B,454,181	99	J.K.Jewell+	C1453
p, inel	^{20}O	DAP	1USAMSU	3.0+07	3.0+07	Jour	PL/B,454,181	99	J.K.Jewell+	C1453

9 Fluorine 18

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p, α	^{15}O	DA	1USAORL	6.6+05	8.8+05	Jour	PR/C,74,012801	06	K.Y.Chae+	C1446

9 Fluorine 19

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α, n	^{22}Na	CS	1USAWAU	3.6+06	9.9+06	Jour	PR/C,30,1339	84	E.B.Norman+	C1433

10 Neon 20											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
p,α	^{17}F	TT	1USAWIS	1.1+07	1.1+07	Jour	ARI,62,525	05	T.E.Barnhart+	C1437	

11 Sodium 23											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,α	^{20}F	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	
n,p	^{23}Ne	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	

12 Magnesium 24											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,p	^{24}Na	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	

12 Magnesium 25											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,p	^{25}Na	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	

13 Aluminium 26											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,p	^{26}Mg	CSP	2GERKFK	2.7+05	3.5+05	Jour	ZP/A,323,1	86	H.P.Trautvetter+	22712	
n,p	^{26}Mg	CSP	2FR ILL	Maxwl		Jour	ZP/A,323,1	86	H.P.Trautvetter+	22712	
n,p	^{26}Mg	CSP	2GERKFK	Maxwl		Jour	ZP/A,323,1	86	H.P.Trautvetter+	22712	
p,γ		RP	1CANTMF	5.1+06	5.2+06	Jour	PRL,96,252501	06	C.Ruiz+	C1449	

13 Aluminium 27											
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,p	^{27}Mg	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	
n,x	^7Be	PY	2JPNKEK	1.0+07	5.0+08	Jour	RCA,93,497	05	H.Matsumura+	22911	
α,x	^{12}C	DAE	3INDVEC	5.0+07	6.0+07	Jour	ZP/A,352,417	95	R.N.Mukherjee+	O1396	
α,x	^{16}O	DAE	3INDVEC	5.0+07	6.0+07	Jour	ZP/A,352,417	95	R.N.Mukherjee+	O1396	
$^7\text{Li,el}$	^{27}Al	DA	3ARGCNE	6.0+06	1.8+07	Jour	PR/C,73,054603	06	J.M.Figueira+	O1429	

14 Silicon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
⁶ Li,non		CS	1USAMSU	1.5+07	2.3+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
⁷ Be, ⁶ Li		CS	1USAMSU	2.6+07	3.8+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
⁷ Be,non		CS	1USAMSU	2.1+07	3.5+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹⁰ B, ⁹ Be		CS	1USAMSU	3.0+07	4.2+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹⁰ B,non		CS	1USAMSU	2.5+07	3.8+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
⁹ C,non		CS	1USAMSU	2.8+07	4.7+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹⁰ C,non		CS	1USAMSU	2.3+07	4.6+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹¹ C, ¹⁰ B		CS	1USAMSU	1.7+07	3.7+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹¹ C,non		CS	1USAMSU	1.7+07	3.7+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹² N, ¹¹ C		CS	1USAMSU	2.0+07	4.2+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹² N,non		CS	1USAMSU	2.0+07	4.2+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹⁴ N,non		CS	1USAMSU	3.4+07	3.0+08	Jour	PR/C,65,044605	02	D.A.Roberts+	C1468
¹³ O, ¹² N		CS	1USAMSU	2.3+07	4.9+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹³ O,non		CS	1USAMSU	2.2+07	4.7+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹⁵ O, ¹⁴ N		CS	1USAMSU	2.2+07	4.4+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹⁵ O,non		CS	1USAMSU	2.2+07	4.4+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹⁶ O,non		CS	1USAMSU	4.0+07	3.4+08	Jour	PR/C,65,044605	02	D.A.Roberts+	C1468
¹⁷ F,non		CS	1USAMSU	2.8+07	5.3+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445
¹⁸ F,non		CS	1USAMSU	4.7+07	3.8+08	Jour	PR/C,65,044605	02	D.A.Roberts+	C1468
¹⁷ Ne, ¹⁵ O		CS	1USAMSU	2.8+07	5.3+07	Jour	PR/C,74,014605	06	R.E.Warner+	C1445

14 Silicon 28

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,p</i>	²⁸ Al	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
⁶ Li,el	²⁸ Si	DA	1USAMRD	2.1+08	2.1+08	Jour	PR/C,39,536	89	A.Nadasen+	C1458

14 Silicon 29

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,p</i>	²⁹ Al	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

14 Silicon 30

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,α</i>	²⁷ Mg	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

15 Phosphorus 31

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

n,α	^{28}Al	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
p,γ	^{32}S	CSP	1USAWAU	3.3+06	3.3+06	Jour	PR/C,73,054313	06	S.Triambak+	C1448

16 Sulphur 40

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
d,x	^{31}Al	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{32}Al	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{33}Si	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{34}Si	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{36}P	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{37}P	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{38}S	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{39}S	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{40}Cl	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465

16 Sulphur 42

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
d,x	^{32}Al	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{33}Al	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{35}Si	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{36}Si	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{37}P	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{38}P	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{39}P	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{40}S	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{41}S	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465
d,x	^{42}Cl	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465

19 Potassium 41

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
n,α	^{38}Cl	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,p	^{41}Ar	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

20 Calcium 40

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max					
$^6\text{Li},e\ell$	^{40}Ca	DA	1USAMRD	2.1+08	2.1+08	Jour	PR/C,39,536	89	A.Nadasen+	C1458

				20		Calcium		48			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						Ref Vol
<i>d,2n</i>	⁴⁸ Sc	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	³⁹ Cl	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁰ Cl	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴² Cl	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴² Ar	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁴ Ar	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁵ Ar	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁴ K	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁵ K	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁶ K	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁷ K	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁸ K	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁶ Ca	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	
<i>d,x</i>	⁴⁷ Ca	CS	1USAMSU	2.0+08	2.0+08	Jour	PR/C,74,034602	06	B.T.Roeder+	C1465	

				24		Chromium					
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						Ref Vol
<i>n,γ</i>		SPC	3HUNII	5.0-04	5.0-04	Jour	NIM/B,213,29	04	T.Belgya+	31587	
<i>n,inel</i>	^{nat} Cr	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037	

				24		Chromium		50			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						Ref Vol
<i>n,2n</i>	⁴⁹ Cr	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	

				24		Chromium		52			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						Ref Vol
<i>n,2n</i>	⁵¹ Cr	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	
<i>n,p</i>	⁵² V	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	

				24		Chromium		53			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						Ref Vol
<i>n,p</i>	⁵³ V	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	

24

Chromium

54

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α	^{51}Ti	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

25

Manganese

55

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	^{54}Mn	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,α	^{52}V	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,inel	^{55}Mn	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037
n,p	^{55}Cr	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
$n,x+n$	inclusive	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037
d,n	^{56}Fe	DE	1USAOHO	7.0+06	7.0+06	Jour	PR/C,74,014314	06	A.V.Voinov+	C1463

26

Iron

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{nat}Fe	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037
$n,x+n$	inclusive	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037
p,x	^{46}Sc	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447
p,x	^{48}V	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447
p,x	^{51}Cr	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447
p,x	^{52}Mn	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447
p,x	^{54}Mn	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447
p,x	^{56}Co	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447

26

Iron

54

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	^{53}Fe	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,α	^{51}Cr	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,p	^{54}Mn	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

26

Iron

56

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{56}Mn	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

				26		Iron		57			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						Ref Vol Page
<i>n,p</i>	⁵⁷ Mn	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	

				27		Cobalt		59			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						Ref Vol Page
<i>n,α</i>	⁵⁶ Mn	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	
<i>n,inel</i>	⁵⁹ Co	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037	
<i>n,p</i>	⁵⁹ Fe	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	
<i>n,x+n</i>	inclusive	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037	
<i>α,2n</i>	⁶¹ Cu	CS	3POLIFJ	1.4+07	2.5+07	Jour	ZP/A,342,61	92	W.Skulski+	O1397	
<i>α,n</i>	⁶² Cu	CS	3POLIFJ	1.1+07	2.5+07	Jour	ZP/A,342,61	92	W.Skulski+	O1397	

				28		Nickel					
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						Ref Vol Page
<i>n,inel</i>	^{nat} Ni	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037	
<i>p,x</i>	⁴⁶ Sc	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁴⁸ V	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁵¹ Cr	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁵² Mn	CS	1USAHRV	2.0+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁵⁴ Mn	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁵⁹ Fe	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁵⁶ Co	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁵⁷ Co	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁵⁸ Co	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁶⁰ Co	CS	1USAHRV	1.4+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁵⁶ Ni	CS	1USAHRV	2.0+08	4.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	
<i>p,x</i>	⁵⁷ Ni	CS	1USAHRV	2.0+08	5.0+08	Jour	NIM/B,251,1	06	J.M.Sisterson+	C1447	

				28		Nickel		58			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #	
				Min	Max						Ref Vol Page
<i>n,2n</i>	⁵⁷ Ni	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	
<i>n,p</i>	⁵⁸ Co	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338	
<i>α,el</i>	⁵⁸ Ni	DA	1USATAM	2.4+08	2.4+08	Jour	PR/C,73,014314	06	Y.W.Lui+	C1439	
<i>α,inel</i>	⁵⁸ Ni	DAP	1USATAM	2.4+08	2.4+08	Jour	PR/C,73,014314	06	Y.W.Lui+	C1439	
¹⁶ O,el	⁵⁸ Ni	DA	3BZLUSP	3.5+07	3.8+07	Jour	NP/A,597,253	96	L.C.Chamon+	O0937	
¹⁶ O,inel	⁵⁸ Ni	DAP	3BZLUSP	3.5+07	3.7+07	Jour	NP/A,597,253	96	L.C.Chamon+	O0937	

28

Nickel

60

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{60}Co	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
$^{16}\text{O,el}$	^{60}Ni	DA	3BZLUSP	3.5+07	3.8+07	Jour	NP/A,597,253	96	L.C.Chamon+	O0937
$^{16}\text{O,inel}$	^{60}Ni	DAP	3BZLUSP	3.5+07	3.8+07	Jour	NP/A,597,253	96	L.C.Chamon+	O0937

28

Nickel

61

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{61}Co	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

28

Nickel

62

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{62}Co	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
$^{16}\text{O,el}$	^{62}Ni	DA	3BZLUSP	3.4+07	3.6+07	Jour	NP/A,597,253	96	L.C.Chamon+	O0937
$^{16}\text{O,inel}$	^{62}Ni	DAP	3BZLUSP	3.4+07	3.6+07	Jour	NP/A,597,253	96	L.C.Chamon+	O0937

28

Nickel

64

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α	^{61}Fe	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
$^{16}\text{O,el}$	^{64}Ni	DA	3BZLUSP	3.4+07	3.6+07	Jour	NP/A,597,253	96	L.C.Chamon+	O0937
$^{16}\text{O,inel}$	^{64}Ni	DAP	3BZLUSP	3.4+07	3.6+07	Jour	NP/A,597,253	96	L.C.Chamon+	O0937

29

Copper

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{nat}Cu	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037
n,x	Many	PY	2JPNKEK	1.0+07	5.0+08	Jour	RCA,93,497	05	H.Matsumura+	22911

29

Copper

63

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	^{62}Cu	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,α	^{60}Co	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

29

Copper

65

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	^{64}Cu	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,α	^{62}Co	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,p	^{65}Ni	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

30

Zinc

64

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	^{63}Zn	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,p	^{64}Cu	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

30

Zinc

66

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	^{65}Zn	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,p	^{66}Cu	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

30

Zinc

67

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{67}Cu	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

30

Zinc

68

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α	^{65}Ni	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,γ	^{69}Zn	CS	4RUSRI	1.0+06	1.0+06	Conf	87KIEV,3,331	Sep 87	Yu.N.Trofimov	41001
n,p	^{68}Cu	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

30

Zinc

70

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2n$	^{69}Zn	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338
n,p	^{70}Cu	CS	2TUKCNA	1.5+07	1.5+07	Conf	91JUELIC,,376	May 91	A.Ercan+	22338

				34		Selenium				74		
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #		
				Min	Max							
n,γ	^{75}Se	CS	2GERKFK	Maxwl		Jour	PR/C,73,015803	06	I.Dillmann+	22892		
n,γ	^{75}Se	RR	2GERKFK	Maxwl		Jour	PR/C,73,015803	06	I.Dillmann+	22892		
				36		Krypton				82		
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #		
				Min	Max							
$^3\text{He},n+p$	^{83}Rb	CS	2GERJUL	1.2+07	3.3+07	Jour	RCA,43,185	88	F.Tarkanyi+	D4041		
				38		Strontium				84		
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #		
				Min	Max							
n,γ	^{85}Sr	CS	2GERKFK	Maxwl		Jour	PR/C,73,015803	06	I.Dillmann+	22892		
n,γ	^{85}Sr	RR	2GERKFK	Maxwl		Jour	PR/C,73,015803	06	I.Dillmann+	22892		
				39		Yttrium				89		
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #		
				Min	Max							
n,inel	^{89}Y	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037		
$^{16}\text{O},2n$	^{103}Ag	CS	3INDTRM	4.2+07	5.2+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},2n+2\alpha$	^{95}Tc	CS	3INDTRM	4.9+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},2n+\alpha$	^{99}Rh	CS	3INDTRM	4.2+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},3n$	^{102}Ag	CS	3INDTRM	4.2+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},3n+2\alpha$	^{94}Tc	CS	3INDTRM	5.2+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},3n+\alpha$	^{98}Rh	CS	3INDTRM	4.9+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},3n+p$	^{101}Pd	CS	3INDTRM	4.2+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},4n$	^{101}Ag	CS	3INDTRM	4.2+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},4n+p$	^{100}Pd	CS	3INDTRM	4.9+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},5n+p$	^{99}Pd	CS	3INDTRM	5.8+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},n+2\alpha$	^{96}Tc	CS	3INDTRM	4.2+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},n+3\alpha$	^{92}Nb	CS	3INDTRM	4.2+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
$^{16}\text{O},n+\alpha$	^{100}Rh	CS	3INDTRM	4.2+07	6.7+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400		
				40		Zirconium						
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #		
				Min	Max							
n,inel	^{nat}Zr	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037		
$n,x+n$	inclusive	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037		

40 Zirconium 90										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{90}Y	CS	3PAKNIL	Fiss		Jour	RCA,94,381	06	I.A.Abbasi+	31583
$^6\text{Li,el}$	^{90}Zr	DA	1USAMRD	2.1+08	2.1+08	Jour	PR/C,39,536	89	A.Nadasen+	C1458
40 Zirconium 91										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,p	^{91}Y	CS	3PAKNIL	Fiss		Jour	RCA,94,381	06	I.A.Abbasi+	31583
α,γ	^{95}Mo	CS	2GERBOC	9.0+06	1.1+07	Jour	NP/A,758,505	05	S.Harissopulos+	O1415
40 Zirconium 92										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α	^{89}Sr	CS	3PAKNIL	Fiss		Jour	RCA,94,381	06	I.A.Abbasi+	31583
40 Zirconium 94										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α	^{91}Sr	CS	3PAKNIL	Fiss		Jour	RCA,94,381	06	I.A.Abbasi+	31583
40 Zirconium 96										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^{60}\text{Ni,x}\alpha$	inclusive	DAE	1USAWAU	3.3+08	3.3+08	Jour	PR/C,56,908	97	J.F.Liang+	C1455
$^{60}\text{Ni,x}p$	inclusive	DAE	1USAWAU	3.3+08	3.3+08	Jour	PR/C,56,908	97	J.F.Liang+	C1455
41 Niobium 93										
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{93}Nb	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037
$n,x+n$	inclusive	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037
$^{12}\text{C},2n$	^{103}Ag	CS	3INDTRM	3.7+07	5.0+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},2n+2\alpha$	^{95}Tc	CS	3INDTRM	3.7+07	6.1+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},2n+\alpha$	^{99}Rh	CS	3INDTRM	3.7+07	6.0+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},3n$	^{102}Ag	CS	3INDTRM	3.7+07	6.1+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},3n+2\alpha$	^{94}Tc	CS	3INDTRM	4.3+07	6.0+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},3n+\alpha$	^{98}Rh	CS	3INDTRM	3.8+07	6.1+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},4n$	^{101}Ag	CS	3INDTRM	3.7+07	6.1+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400

$^{12}\text{C},4n+p$	^{100}Pd	CS	3INDTRM	3.7+07	6.0+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},5n+p$	^{99}Pd	CS	3INDTRM	5.6+07	6.1+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},n+2\alpha$	^{96}Tc	CS	3INDTRM	3.7+07	6.1+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},n+3\alpha$	^{92}Nb	CS	3INDTRM	3.7+07	6.1+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},n+\alpha$	^{100}Rh	CS	3INDTRM	3.7+07	6.0+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400
$^{12}\text{C},x$	^{101}Pd	CS	3INDTRM	3.7+07	6.1+07	Jour	ZP/A,343,223	92	B.S.Tomar+	O1400

44 Ruthenium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ		CS	2GERMUN	1.3+00	5.2+00	Jour	ZP/A,352,449	95	K.Knopf+	22782
n,ths	^{nat}Ru	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782
n,ths	^{nat}Ru	TSL	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782
n,tot		CS	2GERMUN	1.3+00	5.2+00	Jour	ZP/A,352,449	95	K.Knopf+	22782
n,ths	44-RU-CMP	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782
n,ths	44-RU-OXI	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782

45 Rhodium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,ths	45-RH-CMP	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782

45 Rhodium 103

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,ths	^{103}Rh	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782
n,ths	^{103}Rh	TSL	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782

47 Silver

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,x	Many	PY	2JPNKEK	1.0+07	5.0+08	Jour	RCA,93,497	05	H.Matsumura+	22911

47 Silver 109

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{110}Ag	CS	2FR SAC	2.5-02	5.2+00	Jour	EPI/A,27,59	06	X.Ledoux+	22919

48 Cadmium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,γ</i>		CS	2GERMUN	1.3+00	5.2+00	Jour	ZP/A,352,449	95	K.Knopf+	22782
<i>n,tot</i>		CS	2GERMUN	1.3+00	5.2+00	Jour	ZP/A,352,449	95	K.Knopf+	22782
<i>n,ths</i>	48-CD-OXI	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782

48 Cadmium 108

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,ths</i>	¹⁰⁸ Cd	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782

48 Cadmium 110

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,ths</i>	¹¹⁰ Cd	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782

48 Cadmium 111

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,ths</i>	¹¹¹ Cd	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782

48 Cadmium 112

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,ths</i>	¹¹² Cd	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782

48 Cadmium 113

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,2γ</i>	¹¹⁴ Cd	SPC	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,60,(11),58	Nov 96	E.V.Vasil'Eva+	41478

48 Cadmium 114

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,ths</i>	¹¹⁴ Cd	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782
<i>p,n</i>	¹¹⁴ In	?	4UKRIJD	5.8+06	6.2+07	Jour	ARI,41,177	90	N.G.Zaitseva+	D4070

				48		Cadmium		116			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,th	^{116}Cd	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782	

				50		Tin		112			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
α,γ	^{116}Te	CS	1USANOT	8.1+06	1.1+07	Jour	EPJ/A,27,145	06	N.Ozkan+	C1443	

				50		Tin		114			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,p	^{114}In	CS	4UKRKHU	1.5+07	1.5+07	Conf	87KIEV,3,295	Sep 87	P.M.Gopych+	41032	

				50		Tin		118			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,p	^{118}In	CS	4UKRKHU	1.5+07	1.5+07	Conf	87KIEV,3,295	Sep 87	P.M.Gopych+	41032	
α,γ	^{122}Te	CS	2GERBOC	1.0+07	1.1+07	Jour	NP/A,758,505	05	S.Harissopulos+	O1415	

				51		Antimony		121			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ	^{122}Sb	CS	2FR SAC	2.5-02	6.2+00	Jour	EPJ/A,27,59	06	X.Ledoux+	22919	
$^{35}\text{Cl},x+p$	inclusive	DAE	1USAWAU	2.2+08	2.2+08	Jour	PR/C,56,908	97	J.F.Liang+	C1455	

				52		Tellurium		122			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ	^{123}Te	CS	3HUNII	2.5-02	2.5-02	Jour	PR/C,68,067602	03	I.Tomandl+	31567	

				52		Tellurium		123			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$n,2\gamma$	^{124}Te	SPC	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,58,(11),160	Nov 94	E.V.Vasil'Eva+	41468	

				52		Tellurium		124			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ	^{125}Te	CS	3HUNII	2.5-02	2.5-02	Jour	PR/C,68,067602	03	I.Tomandl+	31567	
n,γ	^{125}Te	SPC	3CZRUF	Maxwl		Jour	NP/A,645,331	99	J.Honzatko+	31569	
p,n	^{124}I	TT	1USANYB	1.4+07	1.4+07	Jour	ARI,64,965	06	M.Sajjad+	C1462	

				52		Tellurium		125			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ	^{126}Te	CS	3HUNII	2.5-02	2.5-02	Jour	PR/C,68,067602	03	I.Tomandl+	31567	

				52		Tellurium		126			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ	^{127}Te	CS	3HUNII	2.5-02	2.5-02	Jour	PR/C,68,067602	03	I.Tomandl+	31567	

				52		Tellurium		128			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ	^{129}Te	CS	3HUNII	2.5-02	2.5-02	Jour	PR/C,68,067602	03	I.Tomandl+	31567	

				52		Tellurium		130			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ	^{131}Te	CS	3HUNII	2.5-02	2.5-02	Jour	PR/C,68,067602	03	I.Tomandl+	31567	
n,p	^{130}Sb	CS	4UKRKHU	1.5+07	1.5+07	Conf	87KIEV,3,295	Sep 87	P.M.Gopych+	41032	

				53		Iodine		127			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$\gamma,2n$	^{125}I	CS	3AULAML	1.6+07	2.3+07	Jour	PR/C,39,(4),1631	Apr 89	R.P.Rassool+	G0013	

				55		Cesium		133			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ	^{134}Cs	CS	2FR SAC	2.5-02	5.9+00	Jour	EPJ/A,27,59	06	X.Ledoux+	22919	

				57		Lanthanum		139			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$n,0$		RP	2ZZZCER	6.0-01	9.0+03	Conf	2005NOTRED,,283	05	R.Terlizzi+	22930	

				62		Samarium					
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ		CS	2GERKFK	3.0+03	2.2+05	Jour	PR/C,73,015802	06	K.Wisshak+	22916	
n,γ		?	2GERKFK	3.0+03	2.2+05	Jour	PR/C,73,015802	06	K.Wisshak+	22916	
n,tot		CS	2GERKFK	1.0+04	2.0+05	Jour	PR/C,73,015802	06	K.Wisshak+	22916	

				62		Samarium		144			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$^{12}\text{C},x+\alpha$	inclusive	DAE	1USAWAU	1.4+08	1.4+08	Jour	PR/C,56,908	97	J.F.Liang+	C1455	
$^{12}\text{C},x+p$	inclusive	DAE	1USAWAU	1.4+08	1.4+08	Jour	PR/C,56,908	97	J.F.Liang+	C1455	

				62		Samarium		151			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$n,0$		RP	2ZZZCER		2.1+01	Jour	PR/C,73,034604	06	S.Marrone+	22893	
n,el		RP	2ZZZCER		4.0+02	Jour	PR/C,73,034604	06	S.Marrone+	22893	
n,γ	^{152}Sm	CS	2ZZZCER	1.0+03	1.0+06	Jour	PR/C,73,034604	06	S.Marrone+	22893	
n,γ	^{152}Sm	CS	2GERKFK	3.0+03	2.2+05	Jour	PR/C,73,015802	06	K.Wisshak+	22916	
n,γ	^{152}Sm	CS	2ZZZCER	Maxwl		Jour	PR/C,73,034604	06	S.Marrone+	22893	
n,γ	^{152}Sm	CS	2GERKFK	Maxwl		Jour	PR/C,73,015802	06	K.Wisshak+	22916	
n,γ	^{152}Sm	RI	2ZZZCER		5.0-01	Jour	PR/C,73,034604	06	S.Marrone+	22893	
n,γ	^{152}Sm	?	2GERKFK	3.0+03	2.2+05	Jour	PR/C,73,015802	06	K.Wisshak+	22916	
n,tot		CS	2GERKFK	1.0+04	2.0+05	Jour	PR/C,73,015802	06	K.Wisshak+	22916	
n,tot		CS	2ZZZCER	Maxwl		Jour	PR/C,73,034604	06	S.Marrone+	22893	

				66		Dysprosium		161			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{162}Dy	CS	2JPNTIT	5.5+05	5.5+05	Jour	KPS,45,1474		04	H.Kim+	22767

				66		Dysprosium		162			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{163}Dy	CS	2JPNTIT	5.5+05	5.5+05	Jour	KPS,45,1474		04	H.Kim+	22767

				66		Dysprosium		163			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{164}Dy	CS	2JPNTIT	5.5+05	5.5+05	Jour	KPS,45,1474		04	H.Kim+	22767

				66		Dysprosium		164			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{165}Dy	CS	2JPNTIT	5.5+05	5.5+05	Jour	KPS,45,1474		04	H.Kim+	22767

				71		Lutetium		176			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{177}Lu	CS	2FR SAC	1.4-01	1.6+00	Jour	EPI/A,27,59		06	X.Ledoux+	22919

				72		Hafnium		178			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
$n,2\gamma$	^{179}Hf	SPC	4ZZZDUB	2.5-02	2.5-02	Rept	JINR-P6-86-493,		86	S.T.Boneva+	41466

				74		Tungsten					
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
$n,x+n$	inclusive	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102		Mar 71	O.A.Salnikov+	40037

				74		Tungsten		180			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$n,2n$	^{179}W	CS	4RUSRI	1.3+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	

				74		Tungsten		182			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,α	^{179}Hf	CS	4RUSRI	1.4+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	
n,p	^{182}Ta	CS	4RUSRI	1.3+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	

				74		Tungsten		183			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,α	^{180}Hf	CS	4RUSRI	1.4+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	
n,p	^{183}Ta	CS	4RUSRI	1.4+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	

				74		Tungsten		184			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,α	^{181}Hf	CS	4RUSRI	1.4+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	
n,p	^{184}Ta	CS	4RUSRI	1.3+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	

				74		Tungsten		186			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$n,2n$	^{185}W	CS	4RUSRI	1.4+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	
n,α	^{183}Hf	CS	4RUSRI	1.3+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	
$n,n+\alpha$	^{182}Hf	CS	4RUSRI	1.5+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	
n,p	^{186}Ta	CS	4RUSRI	1.3+07	1.5+07	Jour	NP/A,765,1	06	V.Avrigeanu+	41469	

				75		Rhenium		187			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,γ	^{188}Re	CS	2FR SAC	2.5-02	4.4+00	Jour	EPJ/A,27,59	06	X.Ledoux+	22919	

				77		Iridium		193			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
<i>d,p</i>	¹⁹⁴ Ir	DAP	1CANMCM	1.6+07	1.6+07	Jour	NP/A,579,103	94	P.E.Garrett+	C1454	

				79		Gold		197			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
<i>n,tot</i>		CS	2GERKFK	1.0+04	2.0+05	Jour	PR/C,73,015802	06	K.Wisshak+	22916	
<i>n,x</i>	Many	PY	2JPNKEK	1.0+07	5.0+08	Jour	RCA,93,497	05	H.Matsumura+	22911	
<i>t,d</i>	¹⁹⁸ Au	CS	2GERMUU	3.9+06	7.1+06	Jour	ZP/A,334,293	89	M.N.Thoma+	O1375	

				81		Thallium					
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
<i>n,γ</i>		CS	2GERMUN	1.3+00	5.2+00	Jour	ZP/A,352,449	95	K.Knopf+	22782	
<i>n,ths</i>	<i>nat</i> Tl	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782	
<i>n,tot</i>		CS	2GERMUN	1.3+00	5.2+00	Jour	ZP/A,352,449	95	K.Knopf+	22782	
<i>n,ths</i>	81-TL-CMP	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782	
<i>n,ths</i>	81-TL-OXI	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782	

				81		Thallium		203			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
<i>n,0</i>		RP	2GERMUN			Jour	ZP/A,352,449	95	K.Knopf+	22782	
<i>n,ths</i>	²⁰³ Tl	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782	
<i>n,ths</i>	²⁰³ Tl	TSL	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782	

				81		Thallium		205			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
<i>n,0</i>		RP	2GERMUN			Jour	ZP/A,352,449	95	K.Knopf+	22782	
<i>n,ths</i>	²⁰⁵ Tl	AMP	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782	
<i>n,ths</i>	²⁰⁵ Tl	TSL	2GERMUN	5.7-04	5.7-04	Jour	ZP/A,352,449	95	K.Knopf+	22782	

				82		Lead					
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
<i>p,x</i>	⁵³ Mn	CS	2GERMUN	2.7+08	2.6+09	Jour	NIM/A,562,1057	06	D.Schumann+	O1411	
<i>p,x</i>	⁶⁰ Fe	CS	2GERMUN	2.4+08	2.6+09	Jour	NIM/A,562,1057	06	D.Schumann+	O1411	

				82		Lead		206			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
${}^6\text{He},2n$	${}^{210}\text{Po}$	CS	4ZZZDUB	9.4+06	2.4+07	Jour	PRL,96,162701	06	Yu.E.Penionzhkevich+	O1413	

				82		Lead		208			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
α,el	${}^{208}\text{Pb}$	DA	1USAMSU	5.8+07	5.8+07	Jour	NP/A,247,187	75	R.Tickle+	C1434	
${}^6\text{Li},\text{el}$	${}^{208}\text{Pb}$	DA	1USAMRD	2.1+08	2.1+08	Jour	PR/C,39,536	89	A.Nadasen+	C1458	

				83		Bismuth		209			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$n,x+n$	inclusive	DAP	4RUSFEI	1.4+07	1.4+07	Rept	YK-7,102	Mar 71	O.A.Salnikov+	40037	
${}^6\text{He},\text{el}$	${}^{209}\text{Bi}$	DA	1USANOT	1.4+07	2.1+07	Jour	EPJ/A,13,117	02	J.J.Kolata	C1436	
${}^6\text{He},\text{non}$		CS	1USANOT	1.4+07	2.1+07	Jour	EPJ/A,13,117	02	J.J.Kolata	C1436	

				90		Thorium		232			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$d,{}^6\text{Li}$	${}^{228}\text{Ra}$	DAP	1USAMSU	5.5+07	5.5+07	Jour	PR/C,23,101	81	J.Janecke+	C1459	

				92		Uranium		238			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
$d,{}^6\text{Li}$	${}^{234}\text{Th}$	DAP	1USAMSU	5.5+07	5.5+07	Jour	PR/C,23,101	81	J.Janecke+	C1459	

				96		Curium		243			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
n,fis		CS	4RUSEPA	8.0+04	3.5+06	Jour	AE,69,(4),258	Oct 90	E.F.Fomushkin+	41095	

Reaction	Product	Quant.	Lab.	98		Californium		252		Data #
				Energy (eV)		Type	Documentation	Date	Author	
				Min	Max					
0,fis	Many	FY	4RUSKUR	Spont		Jour	YF,30,(1),36	Jul 79	V.P.Zakharova+	40420