

EXFOR News (April 2018)

New experimental data available from Nuclear Reaction Data Centres

EXFOR [1] is a world-wide data library for experimental neutron, charged-particle and photon induced reaction data compiled by the [International Network of the Nuclear Reaction Data Centres \(NRDC\)](#)^a coordinated by the [IAEA Nuclear Data Section](#). Regularly updated web retrieval databases are available at [IAEA-NDS](#) as well as [NNDC](#), [NEADB](#), [JAEA](#), [JCPRG](#) and [CDFE](#).

This News lists newly created EXFOR entries as well as revised EXFOR entries where new data subentries are added. Entries from articles published in past 10 years are flagged by asterisks (*). Please send an email to N.Otsuka (NRDC Coordinator n.otsuka@iaea.org) for inclusion in the EXFOR News distribution list as well as any question on EXFOR.

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

Quantity codes

ALF	α -value ($\sigma_{\text{capt}}/\sigma_{\text{fis}}$)	FY	Fission product yield
AMP	Length or amplitude	INT	Cross section integral over incident energy
CHG	Fragment charge	KE	Kinetic energy
CS	Cross section	KER	Kerma factor
CSN	Differential with respect to number of particles	MLT	Multiplicity
CSP	Partial cross section	NQ	Nuclear quantity
CST	Temperature dependent cross section	NU	Fission neutron multiplicity $\bar{\nu}$
D3A	Triple differential $d\Omega_1/d\Omega_2/dE'$	NUD	Delayed fission neutron multiplicity $\bar{\nu}_d$
D3E	Triple differential $d\Omega/dE'_1/dE'_2$	NUF	Fragment neutrons
D4A	Quadruple diff. $d\Omega_1/d\Omega_2/dE'_1/dE'_2$	POL	Polarization
DA	Differential $d/d\Omega$	POD	Differential polarization
DAA	Double differential $d\Omega_1/d\Omega_2$	PY	Product yield (other than fission)
DAE	Double differential $d\Omega/dE'$	RI	Resonance integral
DAP	Partial differential $d/d\Omega$	RP	Resonance parameter
DAT	Temperature-dependent Legendre coefficient	RR	Reaction rate
DE	Differential d/dE'	SIF	Self indication
DEP	Energy spectrum for specific group	SPC	Gamma spectrum
DP	Diff. by linear momentum of outgoing part.	TSL	Thermal scattering
DT	Diff. by 4-momentum transfer squared	TT	Thick target yield
ETA	η -value $\bar{\nu}\sigma_{\text{fis}}/(\sigma_{\text{capt}} + \sigma_{\text{fis}})$	TTD	Differential thick target yield, $d/d\Omega$
EVL	Evaluation	TTP	Partial thick target yield

Special codes in outgoing particle field

abs	Absorption	fus	Fusion	sct	Scattering	tot	Total
el	Elastic	inel	Inelastic	tex	Total charge changing		
fis	Fission	non	Nonelastic	ths	Thermal scattering		

Special codes in incident energy field

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

^a [NNDC](#) (USA), [NEADB](#) (France), [NDS](#) (Austria), [CJD](#) (Russia), [CNDC](#) (China), [ATOMKI](#) (Hungary), [NDPCI](#) (India), [JAEA](#) (Japan), [JCPRG](#) (Japan), [KAERI](#) (Korea), [CDFE](#) (Russia), [CNPD](#) (Russia), [UkrNDC](#) (Ukraine)

1 Hydrogen 1

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,el	^1H	DA	1USAHO	1.5+07	1.5+07	Jour	EPJ/CS,146,11053	17	N.V.Kornilov+	14494
	n,sct	^1H	?	4RUSMIF		Jour	SJA,37,1094	74	S.B.Stepanov+	41620
* p,el	^1H	DA	2JPNOSA	3.9+08	3.9+08	Jour	PR/C,81,044315	10	Y.Yasuda+	E2344
	p,el	^1H	DE	4RUSLIN		Jour	ZEP,17,(3),154	73	A.A.Vorob'Ev+	F1332
* p,el	^1H	POD	2JPNOSA	3.9+08	3.9+08	Jour	PR/C,81,044315	10	Y.Yasuda+	E2344
* $^{20}\text{Ne},tcc$		CS	2JPNIRS	7.8+09	7.8+09	Jour	NIM/B,286,238	12	D.H.Zhang+	E2386
* $^{20}\text{Ne},x$	Many	CS	2JPNIRS	7.8+09	7.8+09	Jour	NIM/B,286,238	12	D.H.Zhang+	E2386
* $^{34}\text{Ar},tcc$		CS	2JPNIRS	1.0+10	1.0+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
* $^{34}\text{Ar},x$	Many	CS	2JPNIRS	1.0+10	1.0+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
* $^{35}\text{Ar},tcc$		CS	2JPNIRS	1.1+10	1.1+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
* $^{35}\text{Ar},x$	Many	CS	2JPNIRS	1.1+10	1.1+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
* $^{36}\text{Ar},tcc$		CS	2JPNIRS	1.1+10	1.3+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
* $^{36}\text{Ar},x$	Many	CS	2JPNIRS	1.1+10	1.3+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
* $^{56}\text{Fe},tcc$?	2JPNIRS	2.6+10	2.6+10	Jour	RM,50,56	13	Dong-Haizhang+	E2517
* $^{56}\text{Fe},x$	Many	?	2JPNIRS	2.6+10	2.6+10	Jour	RM,50,56	13	Dong-Haizhang+	E2517

1 Hydrogen 2

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^3H	CS	4ZZZDUB	2.5-02	2.5-02	Jour	YF,32,(6),1491	80	V.P.Alfimenkov+	40586
	n,γ	^3H	?	4ZZZDUB	2.5-02	Jour	YF,32,(6),1491	80	V.P.Alfimenkov+	40586
* $^{17}\text{F},n$	^{18}Ne	?	1USAFSU	9.6+07	9.6+07	Jour	PR/C,96,045812	17	S.A.Kuvin+	C2277
* $^{26}\text{Al},p$	^{27}Al	?	1USAANL	1.2+08	1.2+08	Jour	PRL,119,072701	17	S.Almaraz-Calderon+	C2278

1 Hydrogen 3

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^3\text{He},\gamma$	^6Li	DAP	1USAHO	5.1+05	1.1+07	Jour	PR,176,1147	68	S.L.Blatt+	C1701

1 Hydrogen

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,tot		?	4RUSMIF			Jour	SJA,42,59	77	V.E.Zhitarev+	41619
n,tot		?	4RUSMIF			Jour	SJA,37,1094	74	S.B.Stepanov+	41620
n,ths	1-H-D2O	?	4ZZZDUB	6.4-02	6.4-02	Rept	JINR-P3-86-779	86	Yu.V.Lisichkin+	41624
n,tot		?	4RUSMIF			Jour	SJA,70,238	91	K.N.Zaitsev+	41622
n,tot		?	4RUSMIF			Jour	SJA,45,997	78	V.E.Zhitarev+	41623
* $^{20}\text{Ne},tcc$		CS	2JPNIRS	7.8+09	7.8+09	Jour	NIM/B,286,238	12	D.H.Zhang+	E2386
* $^{20}\text{Ne},x$	Many	CS	2JPNIRS	7.8+09	7.8+09	Jour	NIM/B,286,238	12	D.H.Zhang+	E2386
* $^{56}\text{Fe},tcc$		CS	2JPNIRS	2.6+10	2.6+10	Jour	RM,50,56	13	Dong-Haizhang+	E2517

*	$^{56}\text{Fe},x$	Many	CS	2JPNIRS	2.6+10	2.6+10	Jour	RM,50,56	13	Dong-Haizhang+	E2517
	n,γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
	n,ths	1-H-WTR	?	4RUSFEI	8.0-03	8.0-03	Rept	FEL-1548	84	A.G.Novikov+	41625
	n,tot		?	4RUSMIF			Jour	SJA,42,59	77	V.E.Zhitarev+	41619
	n,tot		?	4RUSMIF			Jour	SJA,37,1094	74	S.B.Stepanov+	41620
	n,tot		?	4RUSMIF			Jour	SJA,41,743	76	S.B.Stepanov+	41621
	n,tot		?	4RUSMIF			Jour	SJA,70,238	91	K.N.Zaitsev+	41622

2 Helium 3

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,el	^3He	CS	4ZZZDUB	2.5-02	2.5-02	Rept	INDC(CCP)-0177,27	82	V.P.Alfimenkov+	41630
n,tot		CS	4ZZZDUB	2.0-02	2.2+02	Rept	INDC(CCP)-0177,27	82	V.P.Alfimenkov+	41630

2 Helium 4

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$^3\text{He},p$	^6Li	DAP	1USACAL	1.2+07	1.8+07	Jour	PR,163,964	67	R.J.Spiger+	A1094
* $^8\text{Li},n$	^{11}B	?	2JPNJAE	4.8+05	1.7+06	Jour	PR/C,95,055805	17	S.K.Das+	E2548
* $^{10}\text{Be},\text{el}$	^4He	?	2JPNIPC		7.2+06	Jour	PL/B,766,11	17	H.Yamaguchi+	E2528
* $^{11}\text{C},p$	^{14}N	?	2JPNIPC		4.5+06	Jour	PR/C,93,065802	16	S.Hayakawa+	E2516
* $^{20}\text{O},\text{inel}$	^4He	?	2JPNIPC	5.5+09	5.5+09	Jour	PL/B,768,387	17	N.Nakatsuka+	E2532

3 Lithium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$d,x+n$	inclusive	DA	3INDTAT	5.0+05	5.0+05	Jour	IPA,2,364	64	M.K.Saxena+	D6286

3 Lithium 6

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,t	^4He	CS	1USAUCX	2.4+05	9.8+06	Jour	NIM/A,874,57	17	L.E.Kirsch+	14483

3 Lithium 7

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,γ	^8Be	DA	1USAMIN	4.3+06	8.0+06	Jour	NP,44,338	Jun 63	N.W.Reay+	A1522
* p,n	^7Be	DA	2JPNTAK	5.0+07	5.0+07	Jour	NST,54,529	17	T.Matsumoto+	E2529
* $p,x+n$	inclusive	PY	2JPNOSA	1.4+08	2.0+08	Jour	NSTP,4,657	14	Y.Iwamoto+	E2510

4 Beryllium 9

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	n,γ	^{10}Be	CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
*	d,n	^{10}B	DAP	1USANOT	1.6+07	1.6+07	Jour	PR/C,96,024613	17	M.Febbraro+	C2272
	d,p	^{10}Be	CSP	2JPNKYU	1.7+06	3.0+06	Jour	JPJ,16,367	61	T.Ishimatsu+	E2393
	d,p	^{10}Be	DAP	2JPNKYU	1.7+06	3.0+06	Jour	JPJ,16,367	61	T.Ishimatsu+	E2393
*	$^3\text{He},t$	^9B	DAP	2JPNOSA	4.2+08	4.2+08	Jour	PR/C,84,014308	Jul 11	C.Scholl+	E2351
*	$^{124}\text{Xe},x$	Many	CS	2JPNIPC	4.3+10	4.3+10	Jour	PRL,116,162501	16	I.Celikovic+	E2512
*	$^{124}\text{Xe},x$	Many	CS	2JPNIPC	4.3+10	4.3+10	Jour	PR/C,96,034604	17	H.Suzuki+	E2554
*	$^{238}\text{U},\text{fis}$	Many	CS	2JPNIPC	8.2+10	8.2+10	Jour	PR/C,95,051601	17	T.Sumikama+	E2549
*	$^{238}\text{U},\text{fis}$	Many	CS	2JPNIPC	8.2+10	8.2+10	Jour	JPJ,87,014202	18	N.Fukuda+	E2561
*	$^{238}\text{U},\text{fis}$	Many	CS	2JPNIPC	8.2+10	8.2+10	Jour	JPJ,87,014203	18	Y.Shimizu+	E2562

5 Boron 11

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	$p,x+n$	inclusive	DAE	4RUSLIN	1.0+09	1.0+09	Jour	ZEP,30,86	79	V.N.Baturin+	F1333
*	d,n	^{12}C	DAP	1USANOT	1.5+07	1.5+07	Jour	PR/C,96,024613	17	M.Febbraro+	C2272

6 Carbon 11

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	n,γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
*	$p,x+n$	inclusive	CS	2JPNOSA	1.4+08	2.0+08	Jour	NIM/A,690,10	12	Y.Iwamoto+	E2387
*	$p,x+n$	inclusive	DAE	2JPNOSA	1.4+08	2.0+08	Jour	NIM/A,690,10	12	Y.Iwamoto+	E2387
*	$^{14}\text{O},x$	^{11}C	CS	2JPNOSA	8.4+08	8.4+08	Jour	PR/C,93,044607	16	Y.L.Sun+	E2505
*	$^{14}\text{O},x$	^{13}O	DE	2JPNOSA	8.4+08	8.4+08	Jour	PR/C,93,044607	16	Y.L.Sun+	E2505
*	$^{20}\text{Ne},\text{tcc}$		CS	2JPNIRS	7.8+09	7.8+09	Jour	NIM/B,286,238	12	D.H.Zhang+	E2386
*	$^{20}\text{Ne},x$	Many	CS	2JPNIRS	7.8+09	7.8+09	Jour	NIM/B,286,238	12	D.H.Zhang+	E2386
*	$^{25}\text{Si},\text{tcc}$		CS	2JPNIRS	6.7+09	6.7+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{25}\text{Si},x$	Many	CS	2JPNIRS	6.7+09	6.7+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{26}\text{Si},\text{tcc}$		CS	2JPNIRS	6.8+09	6.8+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{26}\text{Si},x$	Many	CS	2JPNIRS	6.8+09	6.8+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{27}\text{Si},\text{tcc}$		CS	2JPNIRS	7.0+09	7.0+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{27}\text{Si},x$	Many	CS	2JPNIRS	7.0+09	7.0+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{28}\text{Si},\text{tcc}$		CS	2JPNIRS	7.5+09	7.5+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{28}\text{Si},x$	Many	CS	2JPNIRS	7.5+09	7.5+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{33}\text{Cl},\text{tcc}$		CS	2JPNIRS	9.8+09	9.8+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{33}\text{Cl},x$	Many	CS	2JPNIRS	9.8+09	9.8+09	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{34}\text{Ar},\text{tcc}$		CS	2JPNIRS	1.0+10	1.0+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{34}\text{Ar},x$	Many	CS	2JPNIRS	1.0+10	1.2+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{35}\text{Ar},\text{tcc}$		CS	2JPNIRS	1.1+10	1.1+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{35}\text{Ar},x$	Many	CS	2JPNIRS	1.1+10	1.1+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{36}\text{Ar},\text{tcc}$		CS	2JPNIRS	1.3+10	1.3+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{36}\text{Ar},x$	Many	CS	2JPNIRS	1.1+10	1.1+10	Jour	NP/A,961,142	17	K.Sawahata+	E2531
*	$^{56}\text{Fe},\text{tcc}$		CS	2JPNIRS	2.6+10	2.6+10	Jour	RM,50,56	13	Dong-Haizhang+	E2517
*	$^{56}\text{Fe},x$	Many	CS	2JPNIRS	2.6+10	2.6+10	Jour	RM,50,56	13	Dong-Haizhang+	E2517

6 Carbon 12

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	d,α	^{10}B	DAP	4RUSMOS	1.1+07	1.2+07	Jour	ZEP,2,(3),120	65	V.K.Dolinov+	F1331
*	$^{12}\text{C},\text{tcc}$		CS	2JPNOSA	4.6+08	5.8+08	Jour	PR/C,94,064604	16	D.T.Tran+	E2526
*	$^{13}\text{C},\text{tcc}$		CS	2JPNOSA	6.2+08	6.2+08	Jour	PR/C,94,064604	16	D.T.Tran+	E2526
*	$^{14}\text{C},\text{tcc}$		CS	2JPNOSA	6.5+08	6.5+08	Jour	PR/C,94,064604	16	D.T.Tran+	E2526
*	$^{15}\text{C},\text{tcc}$		CS	2JPNOSA	6.6+08	6.6+08	Jour	PR/C,94,064604	16	D.T.Tran+	E2526
*	$^{16}\text{C},\text{tcc}$		CS	2JPNOSA	7.2+08	7.2+08	Jour	PR/C,94,064604	16	D.T.Tran+	E2526
*	$^{14}\text{N},\text{el}$	^{12}C	DA	4KASATN	2.1+07	2.1+07	Jour	JP/CS,590,012055	15	Nburtebayev+	D0879
*	$^{30}\text{Ne},\text{x}$	^{29}Ne	CS	2JPNIPC	6.8+09	6.8+09	Jour	PL/B,767,58	17	H.N.Liu+	E2530
*	$^{30}\text{Ne},\text{x}$	^{29}Ne	CSP	2JPNIPC	6.8+09	6.8+09	Jour	PL/B,767,58	17	H.N.Liu+	E2530

6 Carbon 13

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	d,n	^{14}N	DAP	1USANOT	1.6+07	1.6+07	Jour	PR/C,96,024613	17	M.Febbraro+	C2272
*	$^3\text{He},t$	^{13}N	DAP	2JPNOSA	4.2+08	4.2+08	Jour	PR/C,84,014308	Jul 11	C.Scholl+	E2351

7 Nitrogen 14

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	d,n	^{15}O	DAP	1USANOT	1.5+07	1.5+07	Jour	PR/C,96,024613	17	M.Febbraro+	C2272

7 Nitrogen 15

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	d,n	^{16}O	DAP	1USANOT	1.5+07	1.5+07	Jour	PR/C,96,024613	17	M.Febbraro+	C2272

8 Oxygen 16

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	p,x	^{11}C	CS	2JPNIRS	2.9+07	7.0+07	Jour	PR/C,8,2570	18	T.Masuda+	E2568
*	p,x	^{13}N	CS	2JPNIRS	5.6+06	7.0+07	Jour	PR/C,8,2570	18	T.Masuda+	E2568
*	p,x	^{15}O	CS	2JPNIRS	1.2+07	7.0+07	Jour	PR/C,8,2570	18	T.Masuda+	E2568
	d,α	^{14}N	DAP	4RUSMOS	1.1+07	1.2+07	Jour	ZEP,2,(3),120	65	V.K.Dolinov+	F1331
	α,el	^{16}O	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

9 Fluorine 17

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* p,el		RP	1USAFSU	6.0+05	1.2+06	Jour	PR/C,96,045812	17	S.A.Kuvin+	C2277
* p,γ	^{18}Ne	?	1USAFSU			Jour	PR/C,96,045812	17	S.A.Kuvin+	C2277

9 Fluorine 19

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $n,2n$	^{18}F	CS	3CZRUV	Fiss		Jour	ARI,132,29	18	M.Schulc+	31786
* d,n	^{20}Ne	DAP	1USANOT	1.6+07	1.6+07	Jour	PR/C,96,024613	17	M.Febbraro+	C2272

10 Neon 20

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
		RP	3CZRUV			Jour	NP/A,96,529	67	P.Bem+	D0888
	^{20}Ne	DA	3RUMBUC	3.3+06	5.1+06	Jour	JET,18,1248	64	H.Hulubei+	D0890
	^{20}Ne	DA	3CZRUV	3.8+06	5.1+06	Jour	NP/A,96,529	67	P.Bem+	D0888
	^{20}Ne	POD	3CZRUV	3.9+06	5.1+06	Jour	NP/A,96,529	67	P.Bem+	D0888
* $p,^3\text{He}$	^{18}F	DAP	1USAORL	3.0+07	3.0+07	Jour	PR/C,96,055806	17	D.W.Bardayan+	C2282
	^{20}Ne	DAP	3RUMBUC	3.6+06	4.4+06	Jour	JET,18,1248	64	H.Hulubei+	D0890
	^{20}Ne	POD	3CZRUV	4.7+06	5.1+06	Jour	NP/A,96,529	67	P.Bem+	D0888

11 Sodium 23

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $n,2n$	^{22}Na	CS	3CZRUV	Fiss	1.0+06	Jour	ARI,111,1	16	M.Kostal+	31766
* $n,2n$	^{22}Na	CS	3CZRUV	Fiss		Jour	ARI,132,29	18	M.Schulc+	31786
	$n,x+\gamma$ inclusive	CS	4RUSITE		1.0-01	Jour	SJA,3,1161	57	V.N.Sakharov+	41643

12 Magnesium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
	$^{\text{nat}}\text{Mg}$	DA	4UKRIJD	1.5+06	1.5+06	Jour	UPI,13,1266	69	I.A.Korz+h	40043
	n,γ	CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
	α,el	$^{\text{nat}}\text{Mg}$	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

12 Magnesium 24

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

	<i>p</i> ,el	²⁴ Mg	DA	3RUMBUC	7.1+06	7.1+06	Jour	JEL,2,207	65	H.Hulubei+	D0889
	<i>p</i> ,inel	²⁴ Mg	DAP	3RUMBUC	7.1+06	7.1+06	Jour	JEL,2,207	65	H.Hulubei+	D0889
*	³ He, <i>p</i>	²⁶ Al	DAP	2JPNOSA	2.5+07	2.5+07	Jour	PR/C,96,021303	17	Y.Ayyad+	E2551
	α , ¹² C	¹⁶ O	DAP	3INDVEC	2.6+07	3.7+07	Jour	PR/C,39,1856	89	M.A.Eswaran+	D6288
	α ,el	²⁴ Mg	DA	3INDVEC	2.5+07	3.7+07	Jour	PR/C,39,1856	89	M.A.Eswaran+	D6288
*	α ,inel	²⁴ Mg	DAE	2JPNOSA	3.9+08	3.9+08	Jour	PR/C,93,044324	16	Y.K.Gupta+	E2513
	α ,inel	²⁴ Mg	DAP	3INDVEC	2.5+07	3.7+07	Jour	PR/C,39,1856	89	M.A.Eswaran+	D6288
	α , <i>p</i>	²⁷ Al	DAP	3POLIFJ	2.3+07	2.9+07	Jour	APP/B,7,289	76	J.Ploskonka+	F0592

12 Magnesium 25

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
	<i>p</i> , γ	RP	3AULAML	3.2+05	5.9+05	Jour	NP/A,349,154	80	M.R.Anderson+	D0887
	<i>p</i> , γ	RP	3AULAML	5.9+05	1.7+06	Jour	NP/A,373,326	82	M.R.Anderson+	D0886

13 Aluminium 27

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>n</i> , α	²⁴ Na	CS	3CZRUV	Fiss		ARI,132,29	18	M.Schulc+	31786	
	<i>n</i> ,el	²⁷ Al	DA	4UKRIJD	1.5+06	1.5+06	Jour	UPJ,13,1266	69	I.A.Korzh+	40043
*	<i>n</i> , <i>p</i>	²⁷ Mg	CS	3CZRUV	Fiss		ARI,132,29	18	M.Schulc+	31786	
	α ,el	²⁷ Al	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560
*	²⁰ Ne,tcc		CS	2JPNIRS	7.8+09	7.8+09	Jour	NIM/B,286,238	12	D.H.Zhang+	E2386
*	²⁰ Ne,x	Many	CS	2JPNIRS	7.8+09	7.8+09	Jour	NIM/B,286,238	12	D.H.Zhang+	E2386
*	⁵⁶ Fe,tcc		CS	2JPNIRS	2.6+10	2.6+10	Jour	RM,50,56	13	Dong-Haizhang+	E2517
*	⁵⁶ Fe,x	Many	CS	2JPNIRS	2.6+10	2.6+10	Jour	RM,50,56	13	Dong-Haizhang+	E2517

14 Silicon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	<i>n</i> ,el	^{nat} Si	DA	4UKRIJD	1.5+06	1.5+06	Jour	UPJ,13,1266	69	I.A.Korzh+	40043
	α ,el	^{nat} Si	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560
*	⁶ He,non		CS	4ZZZDUB	6.5+07	9.1+07	Jour	YF,80,(5),525	17	Yu.E.Penionzhkevich+	F1330
*	⁹ Li,non		CS	4ZZZDUB	5.0+07	1.8+08	Jour	YF,80,(5),525	17	Yu.E.Penionzhkevich+	F1330

14 Silicon 28

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	α ,el	²⁸ Si	DA	3POLIFJ	2.6+07	2.6+07	Rept	INP-699	70	K.Chyla+	D0875
	α ,inel	²⁸ Si	DAP	3POLIFJ	2.6+07	2.6+07	Rept	INP-699	70	K.Chyla+	D0875

15 Phosphorus 31

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,el	^{31}P	DA	3POLIFJ	2.6+07	2.6+07	Rept	INP-699	70	K.Chyla+	D0875
$\alpha,incl$	^{31}P	DAP	3POLIFJ	2.6+07	2.6+07	Rept	INP-699	70	K.Chyla+	D0875

16 Sulphur 32

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,el	^{32}S	DA	3POLIFJ	2.6+07	2.6+07	Rept	INP-699	70	K.Chyla+	D0875
$\alpha,incl$	^{32}S	DAP	3POLIFJ	2.6+07	2.6+07	Rept	INP-699	70	K.Chyla+	D0875

20 Calcium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,el	^{nat}Ca	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

20 Calcium 40

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $p,^3\text{He}$	^{38}K	DAP	2JPNOSA	6.5+07	6.5+07	Jour	PR/C,96,021303	17	Y.Ayyad+	E2551

20 Calcium 48

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,n	^{48}Sc	DAP	3SAFSUN	4.0+06	5.1+06	Jour	NP/A,99,17	67	W.R.Mcmurray+	D0891

21 Scandium 45

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,abs		CS	4UKRIJD	2.5-02	2.5-02	Jour	PTE,,(3),42	77	E.A.Pavlenko+	32244
p,γ	^{46}Ti	CS	3AULAML	8.4+05	4.2+06	Jour	NP/A,312,140	78	S.B.Solomon+	D0884

22 Titanium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,el	^{nat}Ti	DA	4UKRIFU	1.5+06	1.5+06	Jour	UPJ,12,1522	68	I.A.Korzh+	40042

*	α, x	^{43}K	CS	2JPNIPC	4.7+07	5.0+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536
*	α, x	^{43}Sc	CS	2JPNIPC	4.7+07	5.0+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536
*	α, x	^{44}Sc	CS	2JPNIPC	3.3+07	5.0+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536
*	α, x	^{46}Sc	CS	2JPNIPC	2.7+07	5.0+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536
*	α, x	^{47}Sc	CS	2JPNIPC	1.0+07	5.0+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536
*	α, x	^{48}Sc	CS	2JPNIPC	2.7+07	5.0+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536
*	α, x	^{48}V	CS	2JPNIPC	2.0+07	5.0+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536
*	α, x	^{48}Cr	CS	2JPNIPC	2.0+07	5.0+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536
*	α, x	^{49}Cr	CS	2JPNIPC	1.0+07	5.0+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536
*	α, x	^{51}Cr	CS	2JPNIPC	1.0+07	4.7+07	Jour	NIM/B,399,34	17	A.R.Usman+	E2536

22 Titanium 48

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	α, n	^{51}Cr	CS	3RUMBUC	7.3+06	1.0+07	Jour	EPJ/CS,146,01016	17	A.Oprea+	D0893

23 Vanadium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	n, abs		CS	4UKRIJD	2.5-02	2.5-02	Jour	PTE,,(3),42	77	E.A.Pavlenko+	32244

23 Vanadium 51

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	n, x	^{47}Ca	CS	3CZRUJF	2.3+07	3.4+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
*	n, x	^{46}Sc	CS	3CZRUJF	2.0+07	3.4+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
*	n, x	^{47}Sc	CS	3CZRUJF	1.7+07	3.4+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
*	n, x	^{48}Sc	CS	3CZRUJF	1.7+07	3.4+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
*	n, x	^{50}Sc	CS	3CZRUJF	2.5+07	3.3+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
*	n, x	^{51}Ti	CS	3CZRUJF	1.7+07	3.0+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
*	n, x	^{48}V	CS	3CZRUJF	2.7+07	3.4+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784

24 Chromium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	n, abs		RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
	n, el	natCr	DA	4UKRIFU	1.5+06	1.5+06	Jour	UPJ,12,1522	68	I.A.Korzsh+	40042
	n, γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648

25 Manganese 55

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{56}Mn	CS	4RUSFEI	Maxwl	3.0+04	Jour	AE,19,(3),292	65	Yu.Ya.Stavisskii+	41635
α,el	^{55}Mn	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

26 Iron

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,abs		RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
n,el	natFe	DA	4UKRIFU	1.5+06	1.5+06	Jour	UPJ,12,1522	68	I.A.Korzh+	40042
n,γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
n,abs		RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
n,γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648

26 Iron 54

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
*	n,α	^{51}Cr	CS	3CZRUVJ	Fiss		ARI,132,29	18	M.Schulc+	31786
*	n,p	^{54}Mn	CS	3CZRUVJ	Fiss		ARI,132,29	18	M.Schulc+	31786

26 Iron 56

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ		RP	4ZZZDUB	5.0+03	2.0+05	Jour	PAN,62,827	99	Yu.P.Popov+	41409

27 Cobalt 59

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,el	^{59}Co	DA	4UKRIFU	1.5+06	1.5+06	Jour	UPJ,12,1522	68	I.A.Korzh+	40042
α,el	^{59}Co	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

28 Nickel

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,abs		CS	4UKRIJD	2.5-02	2.5-02	Jour	PTE,,(3),42	77	E.A.Pavlenko+	32244
n,abs		RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
n,el	natNi	DA	4UKRIFU	1.5+06	1.5+06	Jour	UPJ,12,1522	68	I.A.Korzh+	40042
n,γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
α,el	natNi	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

28 Nickel 58

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{10}\text{B},\text{el}$	^{58}Ni	DA	3ARGCNE	1.9+07	3.5+07	Jour	PR/C,96,054610	17	V.Scarduelli+	D0882
* $^{10}\text{B},\text{inel}$	^{58}Ni	DAP	3ARGCNE	1.9+07	3.5+07	Jour	PR/C,96,054610	17	V.Scarduelli+	D0882

28 Nickel 68

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,γ	^{69}Ni	RR	1USAMSU			Jour	JP/G,44,044002	17	A.Spyrou+	14476

28 Nickel 69

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* 0,0		NQ	1USAMSU	Spont		Jour	JP/G,44,044002	17	A.Spyrou+	14476

29 Copper

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4RUSITE			Rept	INDSWG-120,16	65	K.G.Ignatev+	41627
n,abs		RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
n,el	$^{\text{nat}}\text{Cu}$	DA	4UKRIFU	1.5+06	1.5+06	Jour	UPI,12,1522	68	I.A.Korzh+	40042
n,γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
* n,x	^{56}Mn	CS	3CZRUFJ	2.3+07	3.6+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
* n,x	^{59}Fe	CS	3CZRUFJ	2.3+07	3.6+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
* n,x	^{58}Co	CS	3CZRUFJ	2.5+07	3.6+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
* n,x	^{61}Co	CS	3CZRUFJ	1.7+07	3.3+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
* n,x	^{61}Cu	CS	3CZRUFJ	2.3+07	3.6+07	Jour	EPJ/CS,146,09019	17	M.Majerle+	31784
* p,x	^{64}Cu	TT	3IRNKRJ	1.2+07	1.7+07	Jour	ARI,136,32	18	M.Rostampour+	D0897
* p,x	^{62}Zn	TT	3IRNKRJ	1.2+07	1.7+07	Jour	ARI,136,32	18	M.Rostampour+	D0897
* p,x	^{63}Zn	TT	3IRNKRJ	1.2+07	1.7+07	Jour	ARI,136,32	18	M.Rostampour+	D0897
* p,x	^{65}Zn	TT	3IRNKRJ	1.2+07	1.7+07	Jour	ARI,136,32	18	M.Rostampour+	D0897
α,el	$^{\text{nat}}\text{Cu}$	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

30 Zinc

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4RUSITE			Rept	INDSWG-120,16	65	K.G.Ignatev+	41627
$n,x+\gamma$	inclusive	SPC	4RUSKUR	2.5-02	2.5-02	Jour	BAS,30,1187	67	L.V.Groshev+	41644

32 Germanium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α, el	$^{\text{nat}}\text{Ge}$	DA	3POLIFJ	2.3+07	2.3+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

32 Germanium 76

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^3\text{He}, t$	^{76}As	DAP	2JPNOSA	4.2+08	4.2+08	Jour	PR/C,86,014304	Jul 12	J.H.Thies+	E2383

34 Selenium 77

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n, α		RP	4ZZZDUB		1.3+03	Rept	JINR-P3-81-348	81	A.Antonov+	41645

35 Bromine 87

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0,B-	^{87}Kr	NUD	4RUSRUS	Spont		Jour	SJA,16,447	64	P.M.Aron+	41617

35 Bromine 88

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0,B-	^{88}Kr	NUD	4RUSRUS	Spont		Jour	SJA,16,447	64	P.M.Aron+	41617

35 Bromine 89

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0,B-	^{89}Kr	NUD	4RUSRUS	Spont		Jour	SJA,16,447	64	P.M.Aron+	41617

38 Strontium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n, abs		RI	4RUSFEI	5.0-01		Thes	PROKHOROV	56	Yu.A.Prokhorov	41626

38 Strontium 86

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* α, n	^{89}Zr	CS	3RUMBUC	1.0+07	1.1+07	Jour	EPJ/CS,146,01016	17	A.Oprea+	D0893

39 Yttrium 89

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $n, 2n$	^{88}Y	CS	3CZRUVJ	Fiss		Jour	ARI,132,29	18	M.Schulc+	31786

40 Zirconium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n, abs		RI	4RUSFEI	5.0-01		Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
α, el	$^{\text{nat}}\text{Zr}$	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

40 Zirconium 90

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $n, 2n$	^{89}Zr	CS	3CZRUVJ	Fiss		Jour	ARI,132,29	18	M.Schulc+	31786
* α, inel	^{90}Zr	DAE	2JPNOSA	3.8+08	3.8+08	Jour	PL/B,760,482	16	Y.K.Gupta+	E2519

40 Zirconium 92

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* α, inel	^{92}Zr	DAE	2JPNOSA	3.8+08	3.8+08	Jour	PL/B,760,482	16	Y.K.Gupta+	E2519

41 Niobium 93

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n, abs		RI	4RUSFEI	5.0-01		Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
* n, tot		CS	3VN DAL	2.4+04	1.5+05	Jour	ANE,113,420	18	Trantuananh+	31781

42 Molybdenum

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4RUSITE			Rept	INDSWG-120,16	65	K.G.Ignatev+	41627
n,abs		RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
n,γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648

42 Molybdenum 92

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $\alpha,inel$	^{92}Mo	DAE	2JPNOSA	3.8+08	3.8+08	Jour	PL/B,760,482	16	Y.K.Gupta+	E2519

46 Palladium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4RUSITE			Rept	INDSWG-120,16	65	K.G.Ignatev+	41627

47 Silver

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,abs		RI	4RUSFEI	5.0-01		Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
α,el	^{nat}Ag	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

48 Cadmium 116

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,n	^{119}Sn	CS	2JPNIPC	6.2+06	2.3+07	Jour	JIN,43,1727	81	H.Muramatsu+	E2563

49 Indium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4RUSITE			Rept	INDSWG-120,16	65	K.G.Ignatev+	41627
α,el	^{nat}In	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

49 Indium 115

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

n,γ	^{116}In	CS	4RUSFEI	Maxwl	2.5+04	Jour	AE,19,(3),292	65	Yu.Ya.Stavisskii+	41635
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50 Tin

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,el	$^{\text{nat}}\text{Sn}$	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

51 Antimony

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	p,x	^{117}Sn	CS	IUSADAV	1.7+07	6.7+07	Jour	NIM/B,412,34	17	M.A.Mosby+	C2279
*	p,x	^{117}Sb	CS	IUSADAV	2.6+07	6.7+07	Jour	NIM/B,412,34	17	M.A.Mosby+	C2279
*	p,x	^{118}Sb	CS	IUSADAV	3.4+07	6.7+07	Jour	NIM/B,412,34	17	M.A.Mosby+	C2279
*	p,x	^{120}Sb	CS	IUSADAV	1.2+07	6.7+07	Jour	NIM/B,412,34	17	M.A.Mosby+	C2279
*	p,x	^{122}Sb	CS	IUSADAV	1.2+07	6.7+07	Jour	NIM/B,412,34	17	M.A.Mosby+	C2279
*	p,x	^{118}Te	CS	IUSADAV	3.4+07	6.7+07	Jour	NIM/B,412,34	17	M.A.Mosby+	C2279
*	p,x	^{119}Te	CS	IUSADAV	2.1+07	6.7+07	Jour	NIM/B,412,34	17	M.A.Mosby+	C2279
*	p,x	^{121}Te	CS	IUSADAV	1.2+07	6.7+07	Jour	NIM/B,412,34	17	M.A.Mosby+	C2279
*	p,x	^{123}Te	CS	IUSADAV	1.2+07	6.7+07	Jour	NIM/B,412,34	17	M.A.Mosby+	C2279

51 Antimony 124

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,x	^{125}Sb	CS	4RUSRUS	1.0+06	1.0+06	Jour	AE,2,(6),552	57	A.N.Murin+	41639

52 Tellurium 124

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{125}Te	CS	4RUSLIN	2.5-02	2.5-02	Jour	JET,36,439	59	V.S.Gvozdev+	41633

52 Tellurium 128

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	$^3\text{He},t$	^{128}I	DAP	2JPNOSA	4.2+08	4.2+08	Jour	PR/C,86,044603	12	P.Puppe+	E2390

52 Tellurium 130

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^3\text{He},t$	^{130}I	DAP	2JPNOSA	4.2+08	4.2+08	Jour	PR/C,86,044603	12	P.Puppe+	E2390

53 Iodine 127

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4ZZZDUB			Conf	82ANTWER.,758	82	Zoinok+	41287
n,abs		RI	4RUSFEI	5.0-01		Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
n,eI	^{127}I	AMP	4ZZZDUB	2.0+01	2.7+02	Conf	82ANTWER.,758	82	Zoinok+	41287
n,γ	^{128}I	CS	4RUSFEI	3.0+04	3.0+04	Jour	AE,19,(3),292	65	Yu.Ya.Stavisskii+	41635
n,γ	^{128}I	CS	2JPNKTO	3.1-03	9.4+01	Jour	NPSM,50,224	05	J.R.Yoon+	30840
n,γ	^{128}I	CS	4RUSFEI	Maxwl		Jour	AE,19,(3),292	65	Yu.Ya.Stavisskii+	41635

53 Iodine 137

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0,B-	^{137}Xe	NUD	4RUSRUS	Spont		Jour	SJA,16,447	64	P.M.Aron+	41617

53 Iodine 138

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0,B-	^{138}Xe	NUD	4RUSRUS	Spont		Jour	SJA,16,447	64	P.M.Aron+	41617

54 Xenon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4RUSITE			Rept	INDSWG-120,16	65	K.G.Ignatev+	41627

55 Caesium 133

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4ZZZDUB			Conf	82ANTWER.,758	82	Zoinok+	41287
n,eI	^{133}Cs	AMP	4ZZZDUB	2.2+01	2.4+02	Conf	82ANTWER.,758	82	Zoinok+	41287
* n,γ	^{134}Cs	CS	2JPNKTO	3.3-03	6.0+01	Jour	NPSM,61,7	11	J.R.Yoon+	30842

56 Barium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,abs		RI	4RUSFEI	5.0-01		Thes	PROKHOROV	56	Yu.A.Prokhorov	41626

58 Cerium 136

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,0		RP	4UKRIJD		2.8+02	Rept	INDC(CCP)-007,40	70	V.P.Vertebny+	40052
<i>n</i> ,el		RP	4UKRIJD	6.6+01	2.8+02	Rept	INDC(CCP)-007,40	70	V.P.Vertebny+	40052

59 Praseodymium 141

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> , γ		RP	4ZZZDUB	8.5+01	6.4+02	Conf	69STUDSVIK,,651	69	F.Becvar+	41629

60 Neodymium 145

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> , α		RP	4ZZZDUB		3.1+02	Rept	JINR-P3-81-348	81	A.Antonov+	41645

61 Promethium 147

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,0		RP	4RUSNIR		5.5+01	Jour	SJA,45,1189	78	V.A.Anufriev+	40524
<i>n</i> ,el		RP	4RUSNIR		5.5+01	Jour	SJA,45,1189	78	V.A.Anufriev+	40524

62 Samarium 147

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,0		RP	LINAC			Jour	BAS,35,1406	72	I.Wilhelm+	41647
<i>n</i> , α		RP	LINAC	3.4+00	1.8+02	Jour	BAS,35,1406	72	I.Wilhelm+	41647

62 Samarium 149

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> , α		RP	LINAC	-5.0-01	1.7+01	Jour	YF,20,(1),3	74	P.Winiwarter+	41641

63 Europium 151

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α		RP	4ZZZDUB		3.7+00	Rept	JINR-P3-7376	73	N.P.Balabanov+	41649

64 Gadolinium 155

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α		RP	4ZZZDUB		2.1+01	Rept	JINR-P3-7376	73	N.P.Balabanov+	41649

68 Erbium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,sct	^{nat}Er	CS	4UKRIFU	2.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039
n,ths	^{nat}Er	CS	4UKRIFU	2.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039

68 Erbium 162

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4UKRIJD	7.6+00	1.3+02	Jour	UPI,13,477	68	V.P.Vertebnyi+	40239
n,sct	^{162}Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039
n,ths	^{162}Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039
*	p,γ	CS	1USANOT	4.0+06	8.9+06	Jour	PR/C,96,045805	17	N.Ozkan+	C2276
*	p,n	CS	1USANOT	6.0+06	8.9+06	Jour	PR/C,96,045805	17	N.Ozkan+	C2276

68 Erbium 164

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4UKRIJD	7.8+00	1.3+02	Jour	UPI,13,477	68	V.P.Vertebnyi+	40239
n,sct	^{164}Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039
n,ths	^{164}Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039

68 Erbium 166

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4UKRIJD	1.6+01	1.7+02	Jour	UPI,13,477	68	V.P.Vertebnyi+	40239
n,sct	^{166}Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039

<i>n</i> ,ths	¹⁶⁶ Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039
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68 Erbium 167

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,0		RP	4UKRIJD	4.6-01	6.2+01	Jour	UPI,13,477	68	V.P.Vertebnyi+	40239
<i>n</i> ,sct	¹⁶⁷ Er	CS	4UKRIFU	2.0-02	1.5-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039
<i>n</i> ,ths	¹⁶⁷ Er	CS	4UKRIFU	2.0-02	1.5-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039

68 Erbium 168

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,sct	¹⁶⁸ Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039
<i>n</i> ,ths	¹⁶⁸ Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039

68 Erbium 170

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,sct	¹⁷⁰ Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039
<i>n</i> ,ths	¹⁷⁰ Er	CS	4UKRIFU	1.0-02	4.0-01	Jour	UPI,13,420	68	V.V.Kolotyi+	40039

69 Thulium 169

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>n</i> ,3 <i>n</i>	¹⁶⁷ Tm	CS	1USATNL	2.4+07	3.0+07	Jour	PR/C,96,024622	17	M.E.Gooden+	14480
*	<i>n</i> ,γ	¹⁷⁰ Tm	CS	2JPNKTO	3.5-03	1.8+02	Jour	NPSM,60,338	10	S.Y.Lee	30841
*	<i>d</i> , <i>x</i>	¹⁶⁷ Tm	CS	2JPNIPC	1.5+07	2.4+07	Jour	ARI,125,23	17	M.Saito+	E2533
*	<i>d</i> , <i>x</i>	¹⁶⁸ Tm	CS	2JPNIPC	5.1+06	2.4+07	Jour	ARI,125,23	17	M.Saito+	E2533
*	<i>d</i> , <i>x</i>	¹⁷⁰ Tm	CS	2JPNIPC	5.1+06	2.4+07	Jour	ARI,125,23	17	M.Saito+	E2533
*	<i>d</i> , <i>x</i>	¹⁶⁹ Yb	CS	2JPNIPC	5.1+06	2.4+07	Jour	ARI,125,23	17	M.Saito+	E2533

70 Ytterbium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,abs		CS	4UKRIJD	2.5-02	2.5-02	Jour	PTE,,(3),42	77	E.A.Pavlenko+	32244

70 Ytterbium 168

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4RUSNIR		2.7+01	Jour	AE,49,(2),116	80	V.A.Anufriev+	41637
$n,e1$		RP	4RUSNIR	5.9-01	2.7+01	Jour	AE,49,(2),116	80	V.A.Anufriev+	41637
n,γ	^{169}Yb	CS	4RUSNIR	2.5-02	2.5-02	Jour	AE,49,(2),116	80	V.A.Anufriev+	41637
n,γ	^{169}Yb	RI	4RUSNIR		1.0-01	Jour	AE,49,(2),116	80	V.A.Anufriev+	41637

70 Ytterbium 169

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	4RUSNIR		4.5+01	Jour	AE,49,(2),116	80	V.A.Anufriev+	41637
$n,e1$		RP	4RUSNIR	8.1-01	4.5+01	Jour	AE,49,(2),116	80	V.A.Anufriev+	41637
n,γ	^{170}Yb	CS	4RUSNIR	2.5-02	2.5-02	Jour	AE,49,(2),116	80	V.A.Anufriev+	41637
n,γ	^{170}Yb	RI	4RUSNIR		1.0-01	Jour	AE,49,(2),116	80	V.A.Anufriev+	41637

72 Hafnium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\alpha,e1$	$^{\text{nat}}\text{Hf}$	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

72 Hafnium 177

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,α		RP	4ZZZDUB		1.4+01	Rept	JINR-P3-7376	73	N.P.Balabanov+	41649

73 Tantalum

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,abs		RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
n,γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
* p,x	^{178}Hf	CS	4RUSITE	4.4+07	2.6+09	Jour	NIM/A,880,6	18	Yu.E.Titarenko+	F1335

73 Tantalum 181

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,x+n$	inclusive	DAE	4RUSLIN	1.0+09	1.0+09	Jour	ZEP,30,86	79	V.N.Baturin+	F1333
* $^{48}\text{Ca},x$	Many	CS	2FR GAN	2.9+09	2.9+09	Jour	JP/G,37,105111	10	S.Lukyanov+	D0883

74 Tungsten

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	<i>n</i> ,abs	RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626	
	<i>n</i> , γ	CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648	
*	<i>p</i> , <i>x</i>	¹⁷⁸ Hf	CS	4RUSITE	1.5+08	2.6+09	Jour	NIM/A,880,6	18	Yu.E.Titarenko+	F1335
*	<i>d</i> , <i>x</i>	¹⁸² Ta	CS	2JPNIRS	1.2+07	3.8+07	Jour	NIM/B,403,51	17	M.U.Khandaker+	E2537
*	<i>d</i> , <i>x</i>	¹⁸⁷ W	CS	2JPNIRS	4.9+06	3.8+07	Jour	NIM/B,403,51	17	M.U.Khandaker+	E2537
*	<i>d</i> , <i>x</i>	¹⁸¹ Re	CS	2JPNIRS	8.0+06	3.8+07	Jour	NIM/B,403,51	17	M.U.Khandaker+	E2537
*	<i>d</i> , <i>x</i>	¹⁸² Re	CS	2JPNIRS	8.0+06	3.8+07	Jour	NIM/B,403,51	17	M.U.Khandaker+	E2537
*	<i>d</i> , <i>x</i>	¹⁸³ Re	CS	2JPNIRS	8.0+06	3.8+07	Jour	NIM/B,403,51	17	M.U.Khandaker+	E2537
*	<i>d</i> , <i>x</i>	¹⁸⁴ Re	CS	2JPNIRS	8.0+06	3.8+07	Jour	NIM/B,403,51	17	M.U.Khandaker+	E2537
*	<i>d</i> , <i>x</i>	¹⁸⁶ Re	CS	2JPNIRS	4.9+06	3.8+07	Jour	NIM/B,403,51	17	M.U.Khandaker+	E2537
	α ,el	natW	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

75 Rhenium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
*	<i>n</i> , γ	CS	1USARPI	1.0-02	6.0+02	Jour	PNE,99,59	17	B.E.Epping+	14475
*	<i>n</i> ,tot	CS	1USARPI	1.0-02	1.0+03	Jour	PNE,99,59	17	B.E.Epping+	14475

75 Rhenium 185

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
*	<i>n</i> ,0	RP	1USARPI			Jour	PNE,99,59	17	B.E.Epping+	14475

75 Rhenium 187

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
*	<i>n</i> ,0	RP	1USARPI			Jour	PNE,99,59	17	B.E.Epping+	14475

76 Osmium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
	<i>n</i> ,0	RP	4RUSITE			Rept	INDSWG-120,16	65	K.G.Ignatev+	41627

76 Osmium 187

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

<i>n,α</i>		RP	4ZZZDUB	2.2+01	Rept	JINR-P3-7376	73	N.P.Balabanov+	41649
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76 Osmium 189

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,α</i>		RP	4ZZZDUB	6.8+00	2.2+01	Rept	JINR-P3-7376	73	N.P.Balabanov+	41649

76 Osmium 192

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,tot</i>		CS	4UKRIJD	1.0+00	3.0+02	Rept	INDC(CCP)-456-V1,181	71	V.P.Vertebnyj+	40127

77 Iridium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,0</i>		RP	4RUSITE			Rept	INDSWG-120,16	65	K.G.Ignatev+	41627

78 Platinum 195

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,0</i>		RP	4RUSITE			Jour	JET,11,(5),1045	60	N.D.Galanina+	41632
<i>n,γ</i>	¹⁹⁶ Pt	?	4RUSITE	1.2+01	9.5+01	Jour	JET,11,(5),1045	60	N.D.Galanina+	41632

79 Gold 197

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,γ</i>	¹⁹⁸ Au	CS	4RUSFEI	Maxwl	3.0+04	Jour	AE,19,(3),292	65	Yu.Ya.Stavisskii+	41635
<i>p,fis</i>		CS	3IRNKRJ	2.9+07	2.9+07	Jour	CPL,24,1525	07	S.Soheyli	D0895
<i>p,fis</i>	Many	FY	3IRNKRJ	2.9+07	2.9+07	Jour	CPL,24,1525	07	S.Soheyli	D0895
<i>p,fis</i>		KE	3IRNKRJ	2.9+07	2.9+07	Jour	CPL,24,1525	07	S.Soheyli	D0895
<i>α,el</i>	¹⁹⁷ Au	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560
* <i>²⁰O,incl</i>	¹⁹⁷ Au	?	2JPNIPC	5.5+09	5.5+09	Jour	PL/B,768,387	17	N.Nakatsuka+	E2532

81 Thallium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,0</i>		RP	4RUSITE			Rept	INDSWG-120,16	65	K.G.Ignatev+	41627

82 Lead

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,abs		RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
n,γ		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648

82 Lead 208

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* α,el	^{208}Pb	DA	3INDVEC	4.0+07	4.0+07	Rept	AIP-1491,321	12	C.Basu+	D6287

83 Bismuth 209

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $n,4n$	^{206}Bi	CS	1USATNL	2.4+07	3.0+07	Jour	PR/C.96,024622	17	M.E.Gooden+	14480
n,abs		RI	4RUSFEI		5.0-01	Thes	PROKHOROV	56	Yu.A.Prokhorov	41626
n,γ	^{210}Bi	CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
α,el	^{209}Bi	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560
* $^8\text{Li},\alpha+X$	^4He	CS	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},\alpha+X$	^4He	?	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},d+X$	^4He	CS	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},d+X$	^4He	?	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},el$	^{209}Bi	DA	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},p+X$	^4He	CS	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},p+X$	^4He	?	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},t+X$	^4He	CS	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},t+X$	^4He	?	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},X+t$	^4He	CS	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},X+t$	^4He	?	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},x$	^7Li	CS	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},x$	^7Li	DA	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},x$	^9Be	CS	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},x$	^9Be	DA	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},x+\alpha$	inclusive	DA	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896
* $^8\text{Li},x+\alpha$	inclusive	?	3AULCBR	3.7+07	3.9+07	Jour	PR/C.97,021601R	18	K.J.Cook+	D0896

88 Radium 226

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,fis		CS	4RUSRI	2.5-02	2.5-02	Rept	INDC(CCP)-0111,11	78	I.M.Kuks+	41628

90 Thorium 230

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{231}Th	RI	4RUSITE	5.0-01		Rept	INDC(CCP)-226,3	84	L.N.Jurova+	40579

90 Thorium 232

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,fis		CS	4ZZZDUB	2.5-02	2.5-02	Jour	JET,37,(1),29	60	E.I.Korneev+	41631
n,sct	^{232}Th	DAP	1USAANL	1.5+06	1.5+06	Conf	82ANTWER,,39	Sep 82	A.B.Smith+	12742
$^{11}\text{B},x$	^6He	DAE	4ZZZDUB	8.9+07	8.9+07	Jour	ZEP,36,104	82	Yu.Ts.Oganesyan+	F1334
$^{11}\text{B},x$	^8He	DAE	4ZZZDUB	8.9+07	8.9+07	Jour	ZEP,36,104	82	Yu.Ts.Oganesyan+	F1334
$^{11}\text{B},x$	^{10}He	DA	4ZZZDUB	8.9+07	8.9+07	Jour	ZEP,36,104	82	Yu.Ts.Oganesyan+	F1334
$^{11}\text{B},x$	^{11}Li	DA	4ZZZDUB	8.9+07	8.9+07	Jour	ZEP,36,104	82	Yu.Ts.Oganesyan+	F1334
$^{11}\text{B},x+\alpha$	inclusive	DAE	4ZZZDUB	8.9+07	8.9+07	Jour	ZEP,36,104	82	Yu.Ts.Oganesyan+	F1334
$^{11}\text{B},x+^3\text{He}$	inclusive	DAE	4ZZZDUB	8.9+07	8.9+07	Jour	ZEP,36,104	82	Yu.Ts.Oganesyan+	F1334
$^{15}\text{N},x$	^{14}Be	DA	4ZZZDUB	1.4+08	1.4+08	Jour	ZEP,36,104	82	Yu.Ts.Oganesyan+	F1334

91 Protactinium 231

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{232}Pa	RI	4RUSITE	5.0-01		Rept	INDC(CCP)-226,3	84	L.N.Jurova+	40579

91 Protactinium 232

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{233}Pa	RI	4RUSITE	5.0-01		Rept	INDC(CCP)-226,3	84	L.N.Jurova+	40579

92 Uranium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α,el	$^{\text{nat}}\text{U}$	DA	3POLIFJ	2.5+07	2.5+07	Jour	PL,11,(1),74	64	A.Budzanowski+	D0560

92 Uranium 233

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,non		?	4RUSKUR	1.5-01	1.3+02	Conf	55GENEVA,5,172	55	P.Spivak+	41634
n,sct	^{233}U	DAP	1USAANL	3.6+06	3.6+06	Conf	82ANTWER,,39	Sep 82	A.B.Smith+	12742

92 Uranium 235

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,abs		CS	4RUSFEI	Maxwl		Thes	PROKHOROV	56	Yu.A.Prokhorov	41648
<i>n</i> ,fis		CS	4ZZZDUB			Rept	JINR-P3-4992	70	Yu.V.Ryabov+	40070
<i>n</i> ,fis		CS	4ZZZDUB	1.0+01	3.0+04	Rept	INDC(CCP)-031,34	72	M.A.Kurov+	40024
<i>n</i> ,fis		CS	4RUSFEI	Maxwl	7.0+04	Jour	AE,19,(3),292	65	Yu.Ya.Stavisskii+	41635
<i>n</i> ,fis		?	4RUSITE		1.0-01	Jour	SJA,3,1161	57	V.N.Sakharov+	41643
<i>n</i> ,fis		?	4RUSFEI	7.0+04	7.0+04	Jour	AE,19,(3),292	65	Yu.Ya.Stavisskii+	41635
<i>n</i> ,non		?	4RUSKUR	1.5-01	1.3+02	Conf	55GENEVA,5,172	55	P.Spivak+	41634
<i>n</i> ,sct	²³⁵ U	DAP	1USAANL	2.5+06	2.5+06	Conf	82ANTWER,,39	Sep 82	A.B.Smith+	12742

92 Uranium 236

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>n</i> ,0		RP	1USALAS		Jour	PR/C,96,024619	17	B.Baramsai+	14481	
*	<i>n</i> , γ	²³⁷ U	CS	1USALAS	1.0+01	7.1+05	Jour	PR/C,96,024619	17	B.Baramsai+	14481
	<i>n</i> , γ	²³⁷ U	RI	4RUSITE	5.0-01		Rept	INDC(CCP)-226,3	84	L.N.Jurova+	40579

92 Uranium 238

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	<i>n</i> ,2 <i>n</i>	²³⁷ U	CS	1USATNL	6.3+06	1.5+07	Jour	PR/C,96,044623	17	Krishichayan+	14482
	<i>n</i> , γ	²³⁹ U	CS	4RUSFEI	Maxwl	7.0+04	Jour	AE,19,(3),292	65	Yu.Ya.Stavisskii+	41635
	<i>n</i> ,sct	²³⁸ U	DAP	1USAANL	1.5+06	1.5+06	Conf	82ANTWER,,39	Sep 82	A.B.Smith+	12742
*	⁴⁸ Ca,3 <i>n</i>	²⁸³ Cn	CS	2JPNIPC	2.5+08	2.5+08	Jour	JPJ,86,085001	17	D.Kaji+	E2542

93 Neptunium 237

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	<i>n</i> , γ	²³⁸ Np	RI	4RUSITE	5.0-01		Rept	INDC(CCP)-226,3	84	L.N.Jurova+	40579

94 Plutonium 239

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	<i>n</i> ,0		RP	4RUSLIN	3.0-01	3.0-01	Jour	YF,36,(1),44	82	G.V.Val'Skiy+	41642
	<i>n</i> ,fis		CS	4ZZZDUB	5.5+00	2.0+04	Rept	INDC(CCP)-031,34	72	M.A.Kurov+	40024
	<i>n</i> ,fis		CS	4RUSFEI	Maxwl		Jour	AE,19,(3),292	65	Yu.Ya.Stavisskii+	41635
*	<i>n</i> ,fis	γ	FY	3HUNKFI	Maxwl		Jour	PR/C,95,064609	17	A.Gatera+	31778
*	<i>n</i> ,fis	γ	KE	3HUNKFI	Maxwl		Jour	PR/C,95,064609	17	A.Gatera+	31778
	<i>n</i> ,sct	²³⁹ Pu	DAP	1USAANL	3.5+06	3.5+06	Conf	82ANTWER,,39	Sep 82	A.B.Smith+	12742

94 Plutonium 240

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,abs		RI	4RUSKUR		5.0-01	Conf	55GENEVA,5,172	55	P.Spivak+	41634
<i>n</i> ,non		?	4RUSKUR	1.5-01	2.5+01	Conf	55GENEVA,5,172	55	P.Spivak+	41634
<i>n</i> ,sct	²⁴⁰ Pu	DAP	1USAANL	3.6+06	3.6+06	Conf	82ANTWER,,39	Sep 82	A.B.Smith+	12742
* ⁴⁸ Ca, <i>3n</i>	²⁸⁵ F1	CS	4ZZZDUB	2.5+08	2.5+08	Jour	PR/C,97,014320	18	V.K.Utyonkov+	F1336

94 Plutonium 244

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> , γ	²⁴⁵ Pu	RI	4RUSRUS	1.0-01		Jour	AE,46,(6),414	79	A.A.Druzhinin+	41636

95 Americium 241

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> , γ	²⁴² Am	?	4ZZZDUB		5.0-01	Jour	YF,10,(1),65	69	Yu.P.Gangrskiy+	41640

96 Curium 243

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,0		RP	4RUSNIR		6.6+01	Jour	AE,51,(5),330	81	V.A.Anufriev+	41638

96 Curium 248

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* ⁴⁸ Ca, <i>3n</i>	²⁹³ Lv	CS	2JPNIPC	2.6+08	2.6+08	Jour	JPJ,86,034201	17	D.Kaji+	E2538
* ⁴⁸ Ca, <i>4n</i>	²⁹² Lv	CS	2JPNIPC	2.6+08	2.6+08	Jour	JPJ,86,034201	17	D.Kaji+	E2538

98 Californium 252

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* 0,fis		KE	4RUSLIN	Spont		Jour	JET,125,(4),619	17	A.S.Vorobyev+	41618
* 0,fis		NUD	4RUSLIN	Spont		Jour	JET,125,(4),619	17	A.S.Vorobyev+	41618
* 0,fis		NUF	1USARPI	Spont		Jour	PR/C,95,064615	17	E.Blain+	14477
* 0,fis		NUF	4RUSLIN	Spont		Jour	JET,125,(4),619	17	A.S.Vorobyev+	41618

100 Fermium 244

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0, fis		KE	4ZZZDUB	Spont		Rept	JINR-P15-81-706	81	D.D.Bogdanov+	41646
0, fis		NU	4ZZZDUB	Spont		Rept	JINR-P15-81-706	81	D.D.Bogdanov+	41646
0, fis		?	4ZZZDUB	Spont		Rept	JINR-P15-81-706	81	D.D.Bogdanov+	41646

100 Fermium 246

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0, fis		KE	4ZZZDUB	Spont		Rept	JINR-P15-81-706	81	D.D.Bogdanov+	41646
0, fis		NU	4ZZZDUB	Spont		Rept	JINR-P15-81-706	81	D.D.Bogdanov+	41646
0, fis		?	4ZZZDUB	Spont		Rept	JINR-P15-81-706	81	D.D.Bogdanov+	41646