EXFOR News (September 2023)

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] co-ordinated by the IAEA Nuclear Data Section. Regularly updated web retrieval databases are available at IAEA-NDS as well as NNDC, NEADB, 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 pubslished in past 10 years are flagged by asterisks (*). Please send an email to the NRDC Coordinator (n.otsuka@iaea.org) for inclusion in the EXFOR News distribution list as well as any question on EXFOR.

[1] N. Otuka, E. Dupont, V. Semkova, B. Pritychenko et al., Nucl.Data.Sheets **120**(2014)272.

Quantity codes

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

[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)

6 Carbon

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,el	^{nat}C	CS	1USAKTY	5.0+05	8.0+06	Jour	NP/A,1023,122446	22	A.P.D.Ramirez+	14784
*	n,el	^{nat}C	DA	1USAKTY	5.0+05	8.0+06	Jour	NP/A,1023,122446	22	A.P.D.Ramirez+	14784
*	n,inel	^{nat}C	CSP	1USAKTY	5.6+06	7.8+06	Jour	NP/A,1023,122446	22	A.P.D.Ramirez+	14784
*	n,inel	^{nat}C	DAP	1USAKTY	5.6+06	7.8+06	Jour	NP/A,1023,122446	22	A.P.D.Ramirez+	14784

6 Carbon 12

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,inel	^{12}C	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,5729	22	N.Ophoven+	23789

8 Oxygen 16

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,inel	^{16}O	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,5729	22	N.Ophoven+	23789

8 Oxygen 18

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,inel	^{18}O	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,5729	22	N.Ophoven+	23789

13 Aluminium 27

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
	n,α	^{24}Na	CS	1USABRK	6.2+06	1.5+07	Rept	UCRL-11375	64	W.W.Wadman	14818
*	n,inel	^{27}Al	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,3987	22	E.Mauerhofer+	23787

14 Silicon

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
	n,tot		CS	1USANBS	1.6+06	1.9+06	Conf	72BUD,,198	72	B.-H.Choi+	14806

14 Silicon 28

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,0		RP	1USANBS			Conf	72BUD,,198	72	B.-H.Choi+	14806

17 Chlorine 35

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,p	^{35}S	CS	2GERMUN	2.5-02	2.5-02	Rept	EANDC(E)-66,38(2)	66	W.Koehler+	21354

20 Calcium 40

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,α	^{37}Ar	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,5729	22	N.Ophoven+	23789
*	n,inel	^{40}Ca	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,5729	22	N.Ophoven+	23789
*	n,p	^{40}K	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,5729	22	N.Ophoven+	23789

20 Calcium 42

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,inel	^{42}Ca	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,5729	22	N.Ophoven+	23789

20 Calcium 44

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,inel	^{44}Ca	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,5729	22	N.Ophoven+	23789

22 Titanium 46

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,inel	^{46}Ti	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,3987	22	E.Mauerhofer+	23787
*	n,p	^{46}Sc	CS	4ZZZDUB	Fiss		Jour	RPC,206,110804	23	M.Schulc+	41755

22 Titanium 47

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,inel	^{47}Ti	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,3987	22	E.Mauerhofer+	23787

22 Titanium 48

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,inel	^{48}Ti	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,3987	22	E.Mauerhofer+	23787

22 Titanium 49

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,inel	^{49}Ti	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,3987	22	E.Mauerhofer+	23787

22 Titanium 50

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,inel	^{50}Ti	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,3987	22	E.Mauerhofer+	23787

24 Chromium 53

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,p	^{53}V	CS	1USALAS		5.0+06	Jour	PR,99,1055(1)	55	R.K.Sheline+	14814

26 Iron 54

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{54}Mn	CS	4ZZZDUB	Fiss		Jour	RPC,206,110804	23	M.Schulc+	41755

27 Cobalt 59

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,α	^{56}Mn	CS	1USABRK	1.3+07	1.6+07	Rept	UCRL-11375	64	W.W.Wadman	14818

28 Nickel 58

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,n	^{57}Ni	CS	4RUSRUS		3.7+07	Jour	PAN,85,813	22	M.V.Zheltonozhskaya+	M1042

*	γ,p	^{57}Co	CS	4RUSRUS		3.7+07	Jour	PAN,85,813	22	M.V.Zheltonozhskaya+	M1042
	n,2n	^{57}Ni	CS	1USABRK	1.2+07	1.5+07	Rept	UCRL-11375	64	W.W.Wadman	14818
*	n,inel	^{58}Ni	CSP	2ZZZGEL	3.4+06	1.4+07	Jour	PR/C,106,024609	22	A.Olacel+	23773
	n,p	^{58}Co	CS	1USABRK	1.2+06	1.5+07	Rept	UCRL-11375	64	W.W.Wadman	14818
*	n,x	^{57}Co	CS	4ZZZDUB	Fiss		Jour	RPC,206,110804	23	M.Schulc+	41755

28 Nickel 59

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,α	^{56}Fe	CS	1USALAS	8.0+05	1.0+07	Jour	PR/C,105,044608	22	S.A.Kuvin+	14787
*	n,α	^{56}Fe	CSP	1USALAS	8.0+05	1.0+07	Jour	PR/C,105,044608	22	S.A.Kuvin+	14787
*	n,p	^{59}Co	CS	1USALAS	6.5+05	1.0+07	Jour	PR/C,105,044608	22	S.A.Kuvin+	14787
*	n,p	^{59}Co	CSP	1USALAS	6.5+05	1.0+07	Jour	PR/C,105,044608	22	S.A.Kuvin+	14787

28 Nickel 60

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,inel	^{60}Ni	CSP	2ZZZGEL	1.4+06	1.4+07	Jour	PR/C,106,024609	22	A.Olacel+	23773

28 Nickel 62

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	γ,p	^{61}Co	CS	4RUSRUS		2.0+07	Jour	PAN,85,813	22	M.V.Zheltonozhskaya+	M1042

29 Copper 63

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,inel	^{63}Cu	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,3987	22	E.Mauerhofer+	23787

29 Copper 65

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,inel	^{65}Cu	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,3987	22	E.Mauerhofer+	23787
	n,p	^{65}Ni	CS	1USABRK	2.2+06	1.5+07	Rept	UCRL-11375	64	W.W.Wadman	14818

39 Yttrium 89

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

*	n,2n	^{88}Y	CS	4ZZZDUB	Fiss		Jour	RPC,206,110804	23	M.Schulc+	41755

41 Niobium 93

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,γ		RP	2ZZZGEL		7.0+03	Conf	78HARWELL,,696	78	J.Winter+	22602

42 Molybdenum

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,x	^{92}Nb	CS	4RUSRUS		5.5+07	Jour	PAN,85,818	22	P.D.Remizov+	M1043

42 Molybdenum 92

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,x	^{89}Nb	CS	4RUSRUS		5.5+07	Jour	PAN,85,818	22	P.D.Remizov+	M1043
*	γ,x	^{90}Nb	CS	4RUSRUS		5.5+07	Jour	PAN,85,818	22	P.D.Remizov+	M1043

42 Molybdenum 94

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,x	^{92}Nb	CS	4RUSRUS		2.0+07	Jour	PAN,85,818	22	P.D.Remizov+	M1043

42 Molybdenum 95

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,0		RP	1USAORL			Jour	PR/C,105,054306	22	P.E.Koehler	14797
*	n,γ	^{96}Mo	CS	1USAORL	Maxwl	1.5+04	Jour	PR/C,105,054306	22	P.E.Koehler	14797
*	n,tot		CS	1USAORL	1.0+01	2.0+04	Jour	PR/C,105,054306	22	P.E.Koehler	14797

42 Molybdenum 100

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,x	^{98}Nb	CS	4RUSRUS		5.5+07	Jour	PAN,85,818	22	P.D.Remizov+	M1043

45 Rhodium 103

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,tot		CS	1USABNL	1.3+00	1.3+00	Jour	PR,93,931(Q4)	54	H.H.Landon	14793

46 Palladium 108

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,0		RP	1USABNL	3.0+00	3.0+00	Conf	72BUD,,216	72	S.F.Mughabghab+	14805

47 Silver 129

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{129}Cd	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

47 Silver 130

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{130}Cd	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

47 Silver 131

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{131}Cd	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

48 Cadmium 130

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{130}In	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

48 Cadmium 131

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{131}In	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

48 Cadmium 132

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{132}In	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

48 Cadmium 133

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{133}In	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

48 Cadmium 134

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{134}In	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

49 Indium 113

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,inel	^{113}In	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,535	22	E.Mauerhofer+	23788

49 Indium 115

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{116}In	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,535	22	E.Mauerhofer+	23788
*	n,γ	^{116}In	?	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,535	22	E.Mauerhofer+	23788
*	n,inel	^{115}In	CSP	2GERMUN	2.3+06	2.3+06	Jour	JRN,331,535	22	E.Mauerhofer+	23788

49 Indium 131

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{131}Sn	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

49 Indium 132

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{132}Sn	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

49 Indium 133

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{133}Sn	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

49 Indium 134

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{134}Sn	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

49 Indium 135

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{135}Sn	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

49 Indium 136

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{136}Sn	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

50 Tin 134

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{134}Sb	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

50 Tin 135

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{135}Sb	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

50 Tin 136

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{136}Sb	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

50 Tin 137

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{137}Sb	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

50 Tin 138

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{138}Sb	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

50 Tin 139

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{139}Sb	NUD	2JPNIPC	Decay		Jour	PRL,129,172701	22	V.H.Phong+	23786

53 Iodine 125

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,γ	^{126}I	CS	1CANCRC	Maxwl		Rept	INDC(SEC)-62,120(2)	77	D.C.Santry+	14803

53 Iodine 127

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,2n	^{126}I	CS	1USABRK	9.3+06	1.4+07	Rept	UCRL-11375	64	W.W.Wadman	14818

53 Iodine 129

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,abs		CS	1USALAS	Maxwl		Jour	PR,71,826	47	S.Katcoff	14808

53 Iodine 131

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,γ	^{132}I	CS	1CANCRC	Maxwl		Rept	INDC(SEC)-62,120(2)	77	D.C.Santry+	14803

66 Dysprosium 156

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{155}Dy	CS	2GRCATH	1.7+07	1.9+07	Jour	PR/C,104,064603	21	E.Georgali+	23782

70 Ytterbium 173

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,0		RP	1USAORL	1.0+02	1.0+02	Conf	72BUD,,214	72	S.F.Mughabghab+	10822

79 Gold 197

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,tot		CS	1USALAS	8.7-01	1.0+04	Jour	EPJ/A,58,195	22	P.E.Koehler+	14796

81 Thallium 203

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,2n	^{202}Tl	CS	1USABRK	1.2+07	1.6+07	Rept	UCRL-11375	64	W.W.Wadman	14818

82 Lead 207

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,el	^{207}Pb	CS	2JPNJAE	1.5+06	3.6+06	Rept	INDC(JAP)-020	73	Y.Tomita+	20340
	n,inel	^{207}Pb	CSP	2JPNJAE	1.5+06	3.6+06	Rept	INDC(JAP)-020	73	Y.Tomita+	20340

83 Bismuth 209

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,3n	^{207}Bi	CS	4ZZZDUB	Fiss		Jour	RPC,206,110804	23	M.Schulc+	41755

92 Uranium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis		NUD	1USACOL	2.5-02	2.5-02	Jour	PR,55,876(1)	39	E.T.Booth+	14802

92 Uranium 233

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis	Many	FY	2FR ILL	Maxwl		Jour	EPJ/A,57,335	21	A.Chebboubi+	23784
*	n,fis	Many	KE	2FR ILL	Maxwl		Jour	EPJ/A,57,335	21	A.Chebboubi+	23784

92 Uranium 235

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis	Many	FY	2GERMNZ	Maxwl		Conf	73ROCH,2,95	73	J.-V.Kratz+	21273
	n,fis	Many	?	2SWTWUR	Fast		Jour	NSE,58,414	75	M.Rajagopalan+	21595
*	n,fis	^{132}Sn	FY	2FR ILL	2.5-02	2.5-02	Jour	PL/B,775,190	17	A.Chebboubi+	23314

92 Uranium 238

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		CS	4RUSLIN	3.1+05	5.1+08	Jour	JEL,117,557	23	A.S.Vorobyev+	41756
*	n,fis		DA	4RUSLIN	8.2+05	4.8+08	Jour	JEL,117,557	23	A.S.Vorobyev+	41756
*	n,fis		?	4RUSLIN	3.1+05	5.1+08	Jour	JEL,117,557	23	A.S.Vorobyev+	41756

93 Neptunium 237

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis		CS	1USAANL	Maxwl		Book	TRANSU.EL.,,1639	49	A.Ghiorso+	14807

94 Plutonium 239

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,abs		ETA	4RUSITE	3.0-01	3.0-01	Conf	70HELSINKI,1,339	70	F.N.Belyaev+	40087
*	n,γ	^{240}Pu	CS	1USALAS	1.0+03	1.4+06	Jour	PR/C,97,041601	18	S.Mosby+	14794

94 Plutonium 242

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis		CS	2ZZZGEL	3.0+05	9.7+06	Jour	NP/A,438,333	85	H.Weigmann+	21996

98 Californium 249

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis	Many	FY	4RUSKUR	Maxwl		Jour	SNP,14,528	72	B.V.Kurchatov+	40145

98 Californium 252

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,fis	γ	FY	2NOROSL	Spont		Jour	PR/C,103,034609	21	D.Gjestvang+	23783
*	0,fis	γ	KE	2NOROSL	Spont		Jour	PR/C,103,034609	21	D.Gjestvang+	23783
	0,fis		MFQ	1USAANL	Spont		Jour	PR,108,411	57	A.B.Smith+	14798