EXFOR News (November 2020)

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	Length or amplitude	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 $\mathrm{d}\Omega_1/\mathrm{d}\Omega_2/\mathrm{d}E'$	NQ	Nuclear quantity
D3E	Triple differential $\mathrm{d}\Omega/\mathrm{d}E'_1/\mathrm{d}E'_2$	NU	Fission neutron multiplicity $\bar{\nu}$
D4A	Quadruple diff. $\mathrm{d}\Omega_1/\mathrm{d}\Omega_2/\mathrm{d}E'_1/\mathrm{d}E'_2$	NUD	Delayed fission neutron multiplicity $\bar{\nu_d}$
DA	Differential $\mathrm{d}/\mathrm{d}\Omega$	POL	Polarization
DAA	Double differential $\mathrm{d}\Omega_1/\mathrm{d}\Omega_2$	POD	Differential polarization
DAE	Double differential $\mathrm{d}\Omega/\mathrm{d}E'$	PY	Product yield (other than fission)
DAP	Partial differential $\mathrm{d}/\mathrm{d}\Omega$	RI	Resonance integral
DAT	Temperature-dependent Legendre coefficient	RP	Resonance parameter
DE	Differential $\mathrm{d}/\mathrm{d}E'$	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, $\mathrm{d}/\mathrm{d}\Omega$
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)

1 Hydrogen 1

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	^{8}Li,α	^{5}He	DA	3BZLUSP	2.0+05	2.1+06	Jour	PR/C,86,064321	12	D.R.Mendesjr+	D0708
*	^{8}Li,α	^{5}He	DA	3BZLUSP	7.5+05	1.8+06	Jour	PR/C,98,064601	18	E.Leistenschneider+	D0933
*	^{8}Li,d	^{7}Li	DA	3BZLUSP	1.3+06	1.8+06	Jour	PR/C,98,064601	18	E.Leistenschneider+	D0933
*	^{8}Li,el	^{1}H	DA	3BZLUSP	1.3+06	1.8+06	Jour	PR/C,98,064601	18	E.Leistenschneider+	D0933

1 Hydrogen 2

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,2n	^{1}H	D3A	1USATNL	1.0+07	1.0+07	Jour	PR/C,101,034002	20	R.C.Malone+	14633
*	n,2n	^{1}H	DAA	1USATNL	1.0+07	1.0+07	Jour	PR/C,101,034002	20	R.C.Malone+	14633
*	n,el	^{2}H	DA	1USATNL	1.0+07	1.0+07	Jour	PR/C,101,034002	20	R.C.Malone+	14633

2 Helium 4

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	n,ths	^{4}He	AMP	1USANIS			Jour	PRL,124,012501	20	R.Haun+	14605
*	^{17}O,el	^{4}He	?	4KASATN	1.5+06	5.3+06	Jour	PR/C,100,062802	19	A.K.Nurmukhanbetova+	D8009

3 Lithium

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	p,x+n	inclusive	TTD	3CZRUJF	2.6+07	3.2+07	Jour	EPJ/CS,239,20010	20	M.Majerle+	D0980

3 Lithium 7

	Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
					Min	Max		Ref Vol Page			
*	p,n	^{7}Be	CS	3CZRUJF	1.9+07	3.7+07	Jour	NP/A,953,139	16	M.Majerle+	D0910
*	p,n	^{7}Be	TT	3CZRUJF	2.0+07	3.7+07	Jour	NP/A,953,139	16	M.Majerle+	D0910
*	p,n	^{7}Be	?	3CZRUJF	1.9+07	3.4+07	Jour	EPJ/CS,239,20010	20	M.Majerle+	D0980
*	p,x+n	inclusive	DA	3CZRUJF	1.9+07	3.4+07	Jour	EPJ/CS,239,20010	20	M.Majerle+	D0980
*	p,x+n	inclusive	TTD	3CZRUJF	1.7+07	2.0+07	Jour	EPJ/CS,239,20010	20	M.Majerle+	D0980

4 Beryllium 9

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	d,α	^{7}Li	DAP	3CZRUJF	2.0+07	3.5+07	Jour	JP/G,46,105110	19	B.A.Urazbekov+	D0962
*	d,el	^{9}Be	DA	3CZRUJF	2.0+07	3.5+07	Jour	JP/G,46,105110	19	B.A.Urazbekov+	D0962
*	d,inel	^{9}Be	DAP	3CZRUJF	2.0+07	3.5+07	Jour	JP/G,46,105110	19	B.A.Urazbekov+	D0962
*	d,p	^{10}Be	DAP	3CZRUJF	2.0+07	2.0+07	Jour	JP/G,46,105110	19	B.A.Urazbekov+	D0962
*	d,t	^{8}Be	DAP	3CZRUJF	2.0+07	3.5+07	Jour	JP/G,46,105110	19	B.A.Urazbekov+	D0962
*	^{24}Ne,x	^{23}Ne	CS	2GERGSI	1.7+10	1.7+10	Jour	PL/B,687,26	10	C.Rodriguez-Tajes+	D8022
*	^{25}Ne,x	^{24}Ne	CS	2GERGSI	1.8+10	1.8+10	Jour	PL/B,687,26	10	C.Rodriguez-Tajes+	D8022
*	^{26}Ne,x	^{25}Ne	CS	2GERGSI	1.8+10	1.8+10	Jour	PL/B,687,26	10	C.Rodriguez-Tajes+	D8022
*	^{27}Ne,x	^{26}Ne	CS	2GERGSI	1.9+10	1.9+10	Jour	PL/B,687,26	10	C.Rodriguez-Tajes+	D8022
*	^{28}Ne,x	^{27}Ne	CS	2GERGSI	2.0+10	2.0+10	Jour	PL/B,687,26	10	C.Rodriguez-Tajes+	D8022

8 Oxygen 17

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	α,el		RP	4KASATN	1.8+06	5.3+06	Jour	PR/C,100,062802	19	A.K.Nurmukhanbetova+	D8009

13 Aluminium 27

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,inel	^{27}Al	DAE	3SAFITH	2.0+08	2.0+08	Jour	EPJ/A,54,234	18	M.Jingo+	D0936

20 Calcium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,inel	^{nat}Ca	DAE	3SAFITH	2.0+08	2.0+08	Jour	EPJ/A,54,234	18	M.Jingo+	D0936

22 Titanium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{43}Sc	CS	3CZRUJF	7.6+06	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985
*	p,x	^{44}Sc	CS	3CZRUJF	6.4+06	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985
*	p,x	^{46}Sc	CS	3CZRUJF	7.6+06	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985
*	p,x	^{47}Sc	CS	3CZRUJF	6.4+06	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985
*	p,x	^{48}Sc	CS	3CZRUJF	1.9+07	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985
*	p,x	^{48}V	CS	3CZRUJF	6.4+06	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985

23 Vanadium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	d,x	^{51}Cr	CS	3ISLSOR	3.0+06	5.4+06	Jour	PR/C,99,034611	19	A.Kreisel+	D0954

23 Vanadium 51

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	d,p	^{52}V	CS	3ISLSOR	2.7+06	5.4+06	Jour	PR/C,99,034611	19	A.Kreisel+	D0954

26 Iron 56

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,inel	^{56}Fe	DAE	3SAFITH	2.0+08	2.0+08	Jour	EPJ/A,54,234	18	M.Jingo+	D0936

27 Cobalt 59

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	d,p	^{60}Co	CS	3ISLSOR	3.4+06	5.4+06	Jour	PR/C,99,034611	19	A.Kreisel+	D0954
*	^{14}N,x+α	inclusive	DAE	3SAFITH	2.5+08	2.5+08	Jour	NP/A,996,121695	20	J.Acharya+	D0975

28 Nickel

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	^{70}Ge,x	Many	CS	2FR GAN	5.0+09	5.0+09	Jour	EPJ/A,31,267	07	B.Blank+	D8024

28 Nickel 58

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,inel	^{58}Ni	DAE	3SAFITH	2.0+08	2.0+08	Jour	EPJ/A,54,234	18	M.Jingo+	D0936
*	^{12}B,el	^{58}Ni	DA	3BZLUSP	3.0+07	3.3+07	Jour	PR/C,99,064613	19	E.O.N.Zevallos+	D0958

29 Copper

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{58}Co	CS	3CZRUJF	2.4+07	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985
*	p,x	^{61}Cu	CS	3CZRUJF	2.2+07	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985

*	p,x	^{62}Zn	CS	3CZRUJF	1.4+07	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985
*	p,x	^{63}Zn	CS	3CZRUJF	7.3+06	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985
*	p,x	^{65}Zn	CS	3CZRUJF	7.3+06	3.6+07	Jour	NIM/B,480,78	20	J.Cervenak+	D0985

29 Copper 65

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{66}Cu	CS	1USALAS	Maxwl	9.3+05	Jour	PR/C,99,055809	19	C.J.Prokop+	14571
*	^{16}O,^{12}C	^{69}Ga	DA	3BZLUSP	2.8+07	3.5+07	Jour	PR/C,99,054623	19	E.Crema+	D0957
*	^{16}O,el	^{65}Cu	DA	3BZLUSP	4.6+07	4.6+07	Jour	PR/C,99,054623	19	E.Crema+	D0957

41 Niobium 93

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{14}N,x+α	inclusive	DAE	3SAFITH	2.5+08	2.5+08	Jour	NP/A,996,121695	20	J.Acharya+	D0975

42 Molybdenum 100

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{32}S,fis		CS	2ITYPAD	2.0+08	2.0+08	Jour	EPJ/A,43,127	10	E.Vardaci+	D8023
*	^{32}S,fus		CS	2ITYPAD	2.0+08	2.0+08	Jour	EPJ/A,43,127	10	E.Vardaci+	D8023

49 Indium 113

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,inel	^{113}In	CS	3EGYCAI	2.9+06	1.4+07	Jour	NP/A,984,112	19	E.K.Elmaghraby+	D0949
*	p,n	^{113}Sn	CS	3EGYCAI	2.9+06	1.4+07	Jour	NP/A,984,112	19	E.K.Elmaghraby+	D0949
*	p,t	^{111}In	CS	3EGYCAI	6.0+06	1.4+07	Jour	NP/A,984,112	19	E.K.Elmaghraby+	D0949

49 Indium 115

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,inel	^{115}In	CS	3EGYCAI	2.9+06	1.4+07	Jour	NP/A,984,112	19	E.K.Elmaghraby+	D0949
*	p,x	^{114}In	CS	3EGYCAI	1.2+07	1.4+07	Jour	NP/A,984,112	19	E.K.Elmaghraby+	D0949

50 Tin 120

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

*	^{6}He,el	^{120}Sn	DA	3BZLUSP	2.2+07	2.2+07	Jour	PR/C,99,014601	19	S.Appannababu+	D0945
*	^{6}He,x+α	inclusive	DA	3BZLUSP	2.0+07	2.4+07	Jour	PR/C,99,014601	19	S.Appannababu+	D0945
*	^{6}He,x+α	inclusive	DAE	3BZLUSP	2.0+07	2.4+07	Jour	PR/C,99,014601	19	S.Appannababu+	D0945

53 Iodine 137

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{137}Xe	NUD	1USAANL	Decay		Jour	PR/C,101,024312	20	A.Czeszumska+	14632

53 Iodine 138

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{138}Xe	NUD	1USAANL	Decay		Jour	PR/C,101,024312	20	A.Czeszumska+	14632

55 Cesium 144

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{144}Ba	NUD	1USAANL	Decay		Jour	PR/C,101,024312	20	A.Czeszumska+	14632

55 Cesium 145

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	0,β^-	^{145}Ba	NUD	1USAANL	Decay		Jour	PR/C,101,024312	20	A.Czeszumska+	14632

73 Tantalum 181

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,inel	^{181}Ta	CS	4RUSFEI	5.2+06	7.9+06	Rept	INDC(CCP)-197,17	82	S.P.Simakov+	40603
	n,inel	^{181}Ta	DE	4RUSFEI	5.2+06	7.9+06	Rept	INDC(CCP)-197,17	82	S.P.Simakov+	40603

78 Platinum

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{193}Au	CS	3EGYCAI	1.0+07	1.4+07	Jour	RPC,157,97	19	H.Showaimy+	D0950
*	p,x	^{194}Au	CS	3EGYCAI	7.0+06	1.4+07	Jour	RPC,157,97	19	H.Showaimy+	D0950
*	p,x	^{195}Au	CS	3EGYCAI	4.5+06	1.4+07	Jour	RPC,157,97	19	H.Showaimy+	D0950
*	p,x	^{196}Au	CS	3EGYCAI	4.5+06	1.4+07	Jour	RPC,157,97	19	H.Showaimy+	D0950
*	p,x	^{198}Au	CS	3EGYCAI	4.5+06	1.4+07	Jour	RPC,157,97	19	H.Showaimy+	D0950

82 Lead 208

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,inel	^{208}Pb	DAE	3SAFITH	2.0+08	2.0+08	Jour	EPJ/A,54,234	18	M.Jingo+	D0936

83 Bismuth 209

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,inel	^{209}Bi	CS	4RUSFEI	5.0+06	8.1+06	Rept	INDC(CCP)-197,17	82	S.P.Simakov+	40603
	n,inel	^{209}Bi	DE	4RUSFEI	5.0+06	8.1+06	Rept	INDC(CCP)-197,17	82	S.P.Simakov+	40603
*	^{7}Li,α	^{212}Po	DE	3AULCBR	3.9+07	3.9+07	Jour	PRL,122,102501	19	K.J.Cook+	D0951
*	^{7}Li,x+α	inclusive	DA	3AULCBR	3.9+07	3.9+07	Jour	PRL,122,102501	19	K.J.Cook+	D0951
*	^{7}Li,x+α	inclusive	DAE	3AULCBR	3.9+07	3.9+07	Jour	PRL,122,102501	19	K.J.Cook+	D0951
*	^{7}Li,x+α	inclusive	DE	3AULCBR	3.9+07	3.9+07	Jour	PRL,122,102501	19	K.J.Cook+	D0951

90 Thorium 232

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		KE	1USALAS	1.1+06	3.7+07	Jour	PR/C,101,014601	20	D.Higgins+	14600
	n,fis	Many	?	1USABRK	1.7+07	1.7+07	Jour	PR,59,212(2)	41	E.Segre+	14654
	n,fis	^{4}He	?	4RUSRI			Jour	SNP,9,424	69	V.M.Adamov+	41692

92 Uranium 233

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis	^{1}H	?	4RUSRI	1.0+00	1.4+07	Jour	SNP,9,424	69	V.M.Adamov+	41692
	n,fis	^{4}He	KE	4RUSRI	1.0+00	1.4+07	Jour	SNP,9,424	69	V.M.Adamov+	41692
	n,fis	^{4}He	?	4RUSRI		1.0+00	Jour	SNP,9,424	69	V.M.Adamov+	41692

92 Uranium 235

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		DA	1USALAS	1.8+05	2.3+08	Jour	PR/C,99,064619	19	V.Geppert-Kleinrath+	14606
	n,fis	Many	FY	4RUSFTI	2.5-02	1.5+07	Jour	SNP,11,162	70	Yu.M.Artem'Ev+	41695
	n,fis	Many	FY	4RUSRI	2.5-02	2.5-02	Jour	SNP,10,654	70	I.A.Baranov+	41696
	n,fis		FY	4RUSRI	2.5-02	2.5-02	Jour	SNP,10,654	70	I.A.Baranov+	41696
	n,fis	γ	FY	4RUSLIN	2.5-02	2.5-02	Jour	YF,22,468	75	L.A.Popeko+	41699
	n,fis		KE	4RUSFTI	1.5+07	1.5+07	Jour	SNP,11,162	70	Yu.M.Artem'Ev+	41695
	n,fis		MAS	4RUSFTI	2.5-02	1.5+07	Jour	SNP,11,162	70	Yu.M.Artem'Ev+	41695
	n,fis	^{1}H	?	4RUSRI	1.0+00	1.4+07	Jour	SNP,9,424	69	V.M.Adamov+	41692

	n,fis	^{3}H	FY	4RUSRI	1.0+00	1.4+07	Jour	SNP,9,424	69	V.M.Adamov+	41692
	n,fis	^{4}He	FY	4RUSRI	1.0+00	1.4+07	Jour	SNP,9,424	69	V.M.Adamov+	41692
	n,fis	^{4}He	KE	4RUSRI	1.0+00	1.0+00	Jour	SNP,9,424	69	V.M.Adamov+	41692
	n,fis	^{4}He	?	4RUSRI			Jour	SNP,9,424	69	V.M.Adamov+	41692

92 Uranium 238

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis		?	4RUSFEI	1.5+06	3.0+06	Jour	SJA,43,808	77	B.I.Fursov+	40506
	n,fis	^{1}H	?	4RUSRI	1.4+07	1.4+07	Jour	SNP,9,424	69	V.M.Adamov+	41692
	n,fis	^{4}He	FY	4RUSRI	1.4+07	1.4+07	Jour	JET,14,7	62	N.A.Perfilov+	41700
	n,fis	^{4}He	KE	4RUSRI	1.4+07	1.4+07	Jour	SNP,9,424	69	V.M.Adamov+	41692
	n,fis	^{4}He	?	4RUSRI			Jour	SNP,9,424	69	V.M.Adamov+	41692
*	^{9}Be,fis		CS	3AULCBR	4.3+07	5.8+07	Jour	PR/C,102,024603	20	T.Banerjee+	D0983

93 Neptunium 237

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis	^{1}H	?	4RUSRI	1.4+07	1.4+07	Jour	SNP,9,424	69	V.M.Adamov+	41692
	n,fis	^{4}He	KE	4RUSRI	1.4+07	1.4+07	Jour	SNP,9,424	69	V.M.Adamov+	41692
	n,fis	^{4}He	?	4RUSRI			Jour	SNP,9,424	69	V.M.Adamov+	41692

94 Plutonium 239

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis	Many	KE	4UZ UZB	Maxwl		Jour	SNP,48,204	88	A.D.Belyaev+	41693
	n,fis	Many	NU	4RUSNIR	2.5-02	2.5-02	Jour	SNP,29,305	79	Yu.S.Zamyatnin+	41694
	n,fis		NU	4RUSNIR	2.5-02	2.5-02	Jour	SNP,29,305	79	Yu.S.Zamyatnin+	41694

94 Plutonium 241

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis	Many	FY	4UZ UZB	Maxwl		Jour	SNP,48,204	88	A.D.Belyaev+	41693
	n,fis	Many	KE	4UZ UZB	Maxwl		Jour	SNP,48,204	88	A.D.Belyaev+	41693

94 Plutonium 244

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{9}Be,fis		CS	3AULCBR	4.3+07	5.8+07	Jour	PR/C,102,024603	20	T.Banerjee+	D0983
*	^{16}O,fis		CS	3AULCBR	8.0+07	1.1+08	Jour	PR/C,102,024603	20	T.Banerjee+	D0983
*	^{16}O,fis		DA	3AULCBR	8.0+07	1.1+08	Jour	PR/C,102,024603	20	T.Banerjee+	D0983

96 Curium 244

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	0,fis	^{1}H	?	4RUSRI	Spont		Jour	SNP,9,424	69	V.M.Adamov+	41692
	0,fis	^{4}He	KE	4RUSRI	Spont		Jour	SNP,9,424	69	V.M.Adamov+	41692
	0,fis	^{4}He	?	4RUSRI	Spont		Jour	SNP,9,424	69	V.M.Adamov+	41692

96 Curium 245

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis		CS	1USAANL	2.5-02	2.5-02	Jour	PR,102,180	56	P.R.Fields+	14655

96 Curium 248

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{9}Be,fis		CS	3AULCBR	4.3+07	5.8+07	Jour	PR/C,102,024603	20	T.Banerjee+	D0983
*	^{12}C,fis		CS	3AULCBR	5.8+07	8.5+07	Jour	PR/C,102,024603	20	T.Banerjee+	D0983
*	^{12}C,fis		DA	3AULCBR	5.8+07	8.5+07	Jour	PR/C,102,024603	20	T.Banerjee+	D0983

98 Californium 249

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{9}Be,fis		CS	3AULCBR	4.3+07	5.8+07	Jour	PR/C,102,024603	20	T.Banerjee+	D0983
*	^{9}Be,fis		DA	3AULCBR	4.3+07	5.8+07	Jour	PR/C,102,024603	20	T.Banerjee+	D0983

98 Californium 252

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	0,fis	γ	DA	4RUSNIR	Spont		Jour	YF,15,1121	72	O.I.Ivanov	41697
*	0,fis	Many	FY	1USAVBT	Spont		Jour	PR/C,101,034610	20	B.M.Musangu+	14634
	0,fis	Many	FY	1USALAS	Spont		Jour	PR,129,2239	63	H.C.Britt+	14653
	0,fis		FY	4RUSRI	Spont		Jour	YF,17,935	73	A.G.Donichkin+	41698
	0,fis	Many	FY	4RUSRI	Spont		Jour	YF,17,935	73	A.G.Donichkin+	41698
	0,fis		FY	4RUSRI	Spont		Jour	YF,17,935	73	A.G.Donichkin+	41698
	0,fis		KE	1USALAS	Spont		Jour	PR,129,2239	63	H.C.Britt+	14653
	0,fis	Many	NU	4RUSNIR	Spont		Jour	SNP,29,305	79	Yu.S.Zamyatnin+	41694
	0,fis		NU	4RUSNIR	Spont		Jour	SNP,29,305	79	Yu.S.Zamyatnin+	41694
	0,fis		?	4RUSNIR	Spont		Jour	YF,15,1121	72	O.I.Ivanov	41697
	0,fis	γ	?	4RUSNIR	Spont		Jour	YF,15,1121	72	O.I.Ivanov	41697
	0,fis	^{3}H	FY	4RUSKUR	Spont		Jour	SNP,36,783	82	D.V.Aleksandrov+	41691

0,fis	^{7}H	?	4RUSKUR	Spont	Jour	SNP,36,783	82	D.V.Aleksandrov+	41691
0,fis	^{4}He	FY	4RUSKUR	Spont	Jour	SNP,36,783	82	D.V.Aleksandrov+	41691
0,fis	^{6}He	FY	4RUSKUR	Spont	Jour	SNP,36,783	82	D.V.Aleksandrov+	41691
0,fis	^{8}He	FY	4RUSKUR	Spont	Jour	SNP,36,783	82	D.V.Aleksandrov+	41691
0,fis	^{10}He	?	4RUSKUR	Spont	Jour	SNP,36,783	82	D.V.Aleksandrov+	41691