EXFOR News (February 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/dΩ	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/dΩ	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/dΩ
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 12

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,el	^{12}C	DA	4ZZZDUB	1.4+07	1.4+07	Jour	BAS,86,893	22	I.D.Dashkov+	41752
*	n,inel	^{12}C	DAP	4ZZZDUB	1.4+07	1.4+07	Jour	BAS,86,893	22	I.D.Dashkov+	41752

6 Carbon 13

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	α,n	^{16}O	CS	3CPRAEP	3.2+05	1.5+06	Jour	PRL,129,132701	22	B.Gao+	S0295

9 Fluorine 19

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{18}F	CS	3CZRUJV	1.5+06	1.5+06	Jour	ANE,179,109418	22	M.Kostal+	31856

12 Magnesium 24

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{24}Na	CS	3CZRUJV	1.5+06	1.5+06	Jour	ANE,179,109418	22	M.Kostal+	31856
*	p,γ		RP	3CPRAEP	2.1+05	2.1+05	Jour	CPH/C,45,084108	21	Hao Zhang+	S0278
*	p,γ		?	3CPRAEP	2.1+05	2.1+05	Jour	CPH/C,45,084108	21	Hao Zhang+	S0278

12 Magnesium 25

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,γ		RP	3CPRAEP	3.0+05	3.0+05	Jour	CPH/C,45,084108	21	Hao Zhang+	S0278
*	p,γ		?	3CPRAEP	3.0+05	3.0+05	Jour	CPH/C,45,084108	21	Hao Zhang+	S0278

12 Magnesium 26

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,γ		RP	3CPRAEP	3.3+05	3.3+05	Jour	CPH/C,45,084108	21	Hao Zhang+	S0278
*	p,γ		?	3CPRAEP	3.3+05	3.3+05	Jour	CPH/C,45,084108	21	Hao Zhang+	S0278

20 Calcium 46

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{47}Ca	CS	3EGYCAI	1.0+06	1.0+06	Jour	JRN,331,1723	22	M.F.Attallah+	31851

22 Titanium 46

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{46}Sc	CS	3EGYCAI	1.0+06	1.0+06	Jour	JRN,331,1723	22	M.F.Attallah+	31851
*	n,p	^{46}Sc	CS	3CZRUJV	1.5+06	1.5+06	Jour	ANE,179,109418	22	M.Kostal+	31856

22 Titanium 47

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{47}Sc	CS	3EGYCAI	1.0+06	1.0+06	Jour	JRN,331,1723	22	M.F.Attallah+	31851
*	n,p	^{47}Sc	CS	3CZRUJV	1.5+06	1.5+06	Jour	ANE,179,109418	22	M.Kostal+	31856

22 Titanium 48

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{48}Sc	CS	3EGYCAI	1.0+06	1.0+06	Jour	JRN,331,1723	22	M.F.Attallah+	31851
*	n,p	^{48}Sc	CS	3CZRUJV	1.5+06	1.5+06	Jour	ANE,179,109418	22	M.Kostal+	31856

23 Vanadium 50

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,α	^{47}Sc	CS	3EGYCAI	1.0+06	1.0+06	Jour	JRN,331,1723	22	M.F.Attallah+	31851

23 Vanadium 51

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,α	^{48}Sc	CS	3EGYCAI	1.0+06	1.0+06	Jour	JRN,331,1723	22	M.F.Attallah+	31851

26 Iron 56

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{56}Mn	CS	3CZRUJV	1.5+06	1.5+06	Jour	ANE,179,109418	22	M.Kostal+	31856

28 Nickel 58

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,2n	^{56}Ni	INT	4RUSMOS		3.4+07	Jour	PAN,85,316	22	V.V.Varlamov+	M1036
*	γ,n	^{57}Ni	INT	4RUSMOS		3.4+07	Jour	PAN,85,316	22	V.V.Varlamov+	M1036
*	γ,x+n	inclusive	INT	4RUSMOS		3.4+07	Jour	PAN,85,316	22	V.V.Varlamov+	M1036
*	n,2n	^{57}Ni	CS	3CZRUJV	1.5+06	1.5+06	Jour	ANE,179,109418	22	M.Kostal+	31856
*	n,x	^{57}Co	CS	3CZRUJV	1.5+06	1.5+06	Jour	ANE,179,109418	22	M.Kostal+	31856

28 Nickel 60

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,2n	^{58}Ni	INT	4RUSMOS		3.0+07	Jour	PAN,85,411	22	V.V.Varlamov+	M1037
*	γ,n	^{59}Ni	INT	4RUSMOS		3.0+07	Jour	PAN,85,411	22	V.V.Varlamov+	M1037
*	γ,x+n	inclusive	INT	4RUSMOS		3.0+07	Jour	PAN,85,411	22	V.V.Varlamov+	M1037

31 Gallium 69

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{70}Ga	CS	3ISLSOR			Jour	PR/C,105,035801	22	M.Tessler+	31850

31 Gallium 70

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{71}Ga	CS	3ISLSOR	Maxwl		Jour	PR/C,105,035801	22	M.Tessler+	31850

31 Gallium 71

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{72}Ga	CS	3ISLSOR			Jour	PR/C,105,035801	22	M.Tessler+	31850

34 Selenium 82

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,2n	^{81}Se	CS	3CPRLNZ	1.4+07	1.5+07	Jour	NIM/B,265,453	07	Junhua Luo+	31609
*	n,2n	^{81}Se	CS	3INDTRM	1.5+07	1.5+07	Jour	EPJ/A,58,80	22	N.S.Tawade+	33177

38 Strontium 84

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{83}Sr	CS	3INDPOO	1.5+07	1.5+07	Jour	NP/A,1023,122445	22	T.S.Ganesapandy+	33180

38 Strontium 86

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{85}Sr	CS	3INDPOO	1.5+07	1.5+07	Jour	NP/A,1023,122445	22	T.S.Ganesapandy+	33180

38 Strontium 88

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{87}Sr	CS	3INDPOO	1.5+07	1.5+07	Jour	NP/A,1023,122445	22	T.S.Ganesapandy+	33180
*	n,α	^{85}Kr	CS	3INDPOO	1.5+07	1.5+07	Jour	NP/A,1023,122445	22	T.S.Ganesapandy+	33180
*	n,p	^{88}Rb	CS	3INDPOO	1.5+07	1.5+07	Jour	NP/A,1023,122445	22	T.S.Ganesapandy+	33180

40 Zirconium 90

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,α	^{87}Sr	CS	3INDPOO	1.4+07	1.5+07	Jour	ARI,184,110192	22	F.M.D.Attar+	33176

41 Niobium 93

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,α	^{90}Y	CS	3INDPOO	1.4+07	1.5+07	Jour	ARI,184,110192	22	F.M.D.Attar+	33176

42 Molybdenum 92

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{91}Mo	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812
*	n,α	^{89}Zr	CS	3CPRNPC			Jour	RCA,109,513	21	Junhua Luo+	32855
*	n,α	^{89}Zr	CS	3INDPOO	1.4+07	1.5+07	Jour	ARI,184,110192	22	F.M.D.Attar+	33176
*	n,p	^{92}Nb	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812
*	n,t	^{90}Nb	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812
*	n,x	^{91}Nb	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812

42 Molybdenum 94

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{93}Mo	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812

42 Molybdenum 95

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{95}Nb	CS	3CPRNPC			Jour	RCA,109,513	21	Junhua Luo+	32855

42 Molybdenum 96

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{96}Nb	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812

42 Molybdenum 97

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{97}Nb	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812

42 Molybdenum 98

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,α	^{95}Zr	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812
*	n,p	^{98}Nb	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812

42 Molybdenum 100

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{99}Mo	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812
*	n,α	^{97}Zr	CS	3CPRNPC	1.4+07	1.5+07	Jour	CPH/C,44,114002	20	Junhua Luo+	32812

60 Neodymium 150

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{149}Nd	CS	3INDTRM	1.5+07	1.5+07	Jour	EPJ/A,58,80	22	N.S.Tawade+	33177

62 Samarium 154

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{153}Sm	CS	3INDTRM	1.5+07	1.5+07	Jour	EPJ/A,58,80	22	N.S.Tawade+	33177

67 Holmium 165

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,3n	^{162}Ho	CS	4ZZZDUB	5.8+07	1.1+08	Jour	PPN/L,19,347	22	J.H.Khushvaktov+	M1038
*	γ,4n	^{161}Ho	CS	4ZZZDUB	5.4+07	1.1+08	Jour	PPN/L,19,347	22	J.H.Khushvaktov+	M1038
*	γ,5n	^{160}Ho	CS	4ZZZDUB	5.1+07	1.1+08	Jour	PPN/L,19,347	22	J.H.Khushvaktov+	M1038
*	γ,6n	^{159}Ho	CS	4ZZZDUB	5.5+07	1.1+08	Jour	PPN/L,19,347	22	J.H.Khushvaktov+	M1038
*	γ,n	^{164}Ho	CS	4ZZZDUB	5.0+07	1.1+08	Jour	PPN/L,19,347	22	J.H.Khushvaktov+	M1038

70 Ytterbium 168

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{167}Yb	CS	3INDPOO	1.5+07	1.5+07	Jour	RPC,195,110066	22	G.T.Bholane+	33175

70 Ytterbium 170

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{169}Yb	CS	3INDPOO	1.5+07	1.5+07	Jour	RPC,195,110066	22	G.T.Bholane+	33175

70 Ytterbium 173

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,p	^{173}Tm	CS	3INDPOO	1.5+07	1.5+07	Jour	RPC,195,110066	22	G.T.Bholane+	33175

70 Ytterbium 174

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,α	^{171}Er	CS	3INDPOO	1.5+07	1.5+07	Jour	RPC,195,110066	22	G.T.Bholane+	33175
*	n,p	^{174}Tm	CS	3INDPOO	1.5+07	1.5+07	Jour	RPC,195,110066	22	G.T.Bholane+	33175

70 Ytterbium 176

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{175}Yb	CS	3INDPOO	1.5+07	1.5+07	Jour	RPC,195,110066	22	G.T.Bholane+	33175

71 Lutetium 175

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,2n	^{174}Lu	CS	3CPRLNZ	1.4+07	1.5+07	Jour	NIM/B,265,453	07	Junhua Luo+	31609
*	n,2n	^{174}Lu	CS	3CZRUJV	Fiss		Jour	ARI,188,110378	22	M.Schulc+	31855
*	n,3n	^{173}Lu	CS	3CZRUJV	Fiss		Jour	ARI,188,110378	22	M.Schulc+	31855
*	n,p	^{175}Yb	CS	3CZRUJV	Fiss		Jour	ARI,188,110378	22	M.Schulc+	31855

71 Lutetium 176

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,inel	^{176}Lu	CS	3CZRUJV	Fiss		Jour	ARI,188,110378	22	M.Schulc+	31855

74 Tungsten 182

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{36}Ar,4n	^{214}U	CS	3CPRIMP	1.8+08	1.8+08	Jour	PRL,126,152502	21	Z.Y.Zhang+	S0279

78 Platinum 198

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,2n	^{197}Pt	CS	3CPRLNZ	1.4+07	1.5+07	Jour	NIM/B,265,453	07	Junhua Luo+	31609

79 Gold 197

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,2n	^{196}Au	CS	3CZRUJV	1.5+06	1.5+06	Jour	ANE,179,109418	22	M.Kostal+	31856
*	n,2n	^{196}Au	CS	3INDTRM	1.5+07	1.5+07	Jour	EPJ/A,58,80	22	N.S.Tawade+	33177
*	n,γ	^{198}Au	CS	3CPRIHP	1.0+00	9.9+04	Jour	CNST,32,101	21	Xin-Rong Hu+	32856
	d,2n	^{197}Hg	CS	3CPRSIU	7.7+06	1.3+07	Jour	CNP,9,48	87	Long Xianguan+	S0012
	d,p	^{198}Au	CS	3CPRSIU	6.6+06	1.3+07	Jour	CNP,9,48	87	Long Xianguan+	S0012
	d,x	^{196}Au	CS	3CPRSIU	1.0+07	1.3+07	Jour	CNP,9,48	87	Long Xianguan+	S0012

90 Thorium 232

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis	Many	FY	3CPRNPC	1.4+07	1.5+07	Jour	ARI,164,109242	20	Luocheng Yang+	32809
*	n,fis	^{84}Se	CS	3CPRNPC	1.4+07	1.5+07	Jour	ARI,164,109242	20	Luocheng Yang+	32809
*	n,fis	^{84}Se	FY	3CPRNPC	1.4+07	1.5+07	Jour	ARI,164,109242	20	Luocheng Yang+	32809
*	n,fis	^{84}Br	CS	3CPRNPC	1.4+07	1.5+07	Jour	ARI,164,109242	20	Luocheng Yang+	32809
*	n,fis	^{84}Br	FY	3CPRNPC	1.4+07	1.5+07	Jour	ARI,164,109242	20	Luocheng Yang+	32809

92 Uranium 232

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis	Many	FY	3INDTRM	2.5-02	2.5-02	Jour	NSE,196,433	22	H.Naik+	33173
*	n,fis		MAS	3INDTRM	2.5-02	2.5-02	Jour	NSE,196,433	22	H.Naik+	33173

92 Uranium 235

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis	Many	FY	3EGYCAI	2.5-02	2.5-02	Jour	PPN/L,19,152	22	M.Tohamy+	31852
	n,fis		INT	4RUSKUR	1.0+02	1.0+01	Rept	INDC(CCP)-099,(6),76	76	T.A.Mostovaya+	40488

92 Uranium 236

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		?	3CPRIHP	4.5+05	3.8+07	Jour	PR/C,102,034604	20	Zhizhou Ren+	32811

92 Uranium 238

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,fis	Many	FY	4RUSTIL	1.5+07	1.5+07	Jour	SNP,11,654	70	K.A.Petrzhak+	40422
*	n,fis	Many	FY	3EGYCAI	5.0+06	5.0+06	Jour	PPN/L,19,152	22	M.Tohamy+	31852

94 Plutonium 239

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis	Many	FY	3INDTRM	2.5-02	2.5-02	Jour	NSE,196,824	22	H.Naik+	33178
*	n,fis		MAS	3INDTRM	2.5-02	2.5-02	Jour	NSE,196,824	22	H.Naik+	33178

95 Americium 241

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis	Many	FY	3INDTRM	2.5-02	2.5-02	Jour	NSE,196,982	22	H.Naik+	33179
*	n,fis		MAS	3INDTRM	2.5-02	2.5-02	Jour	NSE,196,982	22	H.Naik+	33179

95 Americium 243

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis	Many	FY	3INDTRM	1.9+06		Jour	NSE,196,694	22	H.Naik+	33174
*	n,fis		MAS	3INDTRM	1.9+06		Jour	NSE,196,694	22	H.Naik+	33174

98 Californium 252

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	0,fis		KE	3DDRTUD	Spont		Rept	INDC(GDR)-28	84	H.Maerten+	31854
	0,fis		MFQ	3DDRTUD	Spont		Rept	INDC(GDR)-28	84	H.Maerten+	31854