EXFOR News (April 2016)

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, 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 pubslished 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.Otuka et al., Nucl.Data.Sheets **120**(2014)272.

Quantity codes

ALF	α-value ($\sigma_{\rm capt}/\sigma_{\rm fis}$)	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 dΩ_1/dΩ_2/dE'	NUD	Delayed fission neutron multiplicity $\bar{\nu}_d$
D3E	Triple differential dΩ/dE'_1/dE'_2	NUF	Fragment neutrons
D4A	Quadruple diff. dΩ_1/dΩ_2/dE'_1/dE'_2	POL	Polarization
DA	Differential d/dΩ	POD	Differential polarization
DAA	Double differential dΩ_1/dΩ_2	PY	Product yield (other than fission)
DAE	Double differential dΩ/dE'	RI	Resonance integral
DAP	Partial differential d/dΩ	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 $\bar{\nu}\sigma_{\rm fis}/(\sigma_{\rm capt}+\sigma_{\rm fis})$	TTD	Differential thick target yield, d/dΩ
EVL	Evaluation	TTP	Partial thick target yield

Special codes in outgoing particle field

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

Special codes in incident energy field

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

[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 2

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,π^0	^{2}H		4RUSSIB	2.3+08	2.9+08	Jour	IZV,79,(7),958	15	S.A.Zevakov+	M0919
*	p,γ	^{3}He		4RUSTPI	9.0+03	3.5+04	Jour	FCY/L,12,(4),855	15	V.M.Bystritsky+	F1271

2 Helium 4

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{10}Be,el	^{4}He		1USAORL			Jour	PR/C,90,054324	14	M.Freer+	C2146

3 Lithium

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,x	Many		4ZZZDUB			Rept	JINR-E1-12730	79	A.U.Abdurakhimov+	F1265

3 Lithium 7

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,n	^{7}Be	?	4RUSFEI	1.9+06	1.9+06	Jour	AE,43,303	77	V.N.Kononov+	F1267

6 Carbon

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,x	Many		4ZZZDUB			Rept	JINR-E1-12730	79	A.U.Abdurakhimov+	F1265

7 Nitrogen 14

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,t	^{12}N		1USAORL	3.8+07	3.8+07	Jour	PR/C,92,034325	15	K.A.Chipps+	C2191
*	p,t	^{12}N	?	1USAORL	3.8+07	3.8+07	Jour	PR/C,92,034325	15	K.A.Chipps+	C2191

9 Fluorine 19

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	α,n	^{22}Na		1USAWAU	3.5+06	1.0+07	Jour	ARI,103,177	15	E.B.Norman+	C1433

12 Magnesium 24

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,el	^{24}Mg		4RUSSUL	5.8+06	6.0+06	Jour	IZV,34,(10),2163	70	L.V.Gustova+	F1264
*	p,el	^{24}Mg		4RUSMOS	7.4+06	7.4+06	Jour	YF,78,(9),818	15	L.I.Galanina+	F1277
	p,inel	^{24}Mg		4RUSSUL	5.8+06	6.0+06	Jour	IZV,34,(10),2163	70	L.V.Gustova+	F1264
*	p,inel	^{24}Mg		4RUSMOS	7.4+06	7.4+06	Jour	YF,78,(9),818	15	L.I.Galanina+	F1277

12 Magnesium 25

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,el	^{25}Mg		4RUSSUL	6.1+06	6.1+06	Jour	YF,11,(1),29	70	O.V.Chubinskii+	F1259
	p,inel	^{25}Mg		4RUSSUL	6.1+06	6.1+06	Jour	YF,11,(1),29	70	O.V.Chubinskii+	F1259

13 Aluminium 27

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	d,x	^{24}Na		4ZZZDUB	6.0+09	7.3+09	Jour	CZJ,40,393	90	P.Kozma+	F1258
	α,x	Many		4ZZZDUB			Rept	JINR-E1-12730	79	A.U.Abdurakhimov+	F1265

14 Silicon 28

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,el	^{28}Si		4RUSSUL	5.8+06	6.0+06	Jour	IZV,36,(12),2634	72	L.V.Gustova+	F1263
	p,inel	^{28}Si		4RUSSUL	5.8+06	6.0+06	Jour	IZV,36,(12),2634	72	L.V.Gustova+	F1263
	d,p	^{29}Si		4RUSMOS	4.3+06	4.3+06	Jour	ZET,36,(1),52	59	V.G.Sukharevsky	F1260
	d,p	^{29}Si	?	4RUSMOS	4.3+06	4.3+06	Jour	ZET,36,(1),52	59	V.G.Sukharevsky	F1260

14 Silicon 29

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	d,p	^{30}Si		4RUSMOS	4.3+06	4.3+06	Jour	ZET,36,(1),52	59	V.G.Sukharevsky	F1260

14 Silicon 30

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	d,p	^{31}Si		4RUSMOS	4.3+06	4.3+06	Jour	ZET,36,(1),52	59	V.G.Sukharevsky	F1260
	d,p	^{31}Si	?	4RUSMOS	4.3+06	4.3+06	Jour	ZET,36,(1),52	59	V.G.Sukharevsky	F1260

16 Sulphur 32

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,inel	^{32}S		4ZZZDUB	3.4+06	3.7+06	Jour	IZV,44,(1),53	80	Vansynchan+	F1261
	^{3}He,d	^{33}Cl		1USATAM	3.0+07	3.4+07	Jour	PR/C,5,413	72	R.L.Kozub+	C2197

20 Calcium 40

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,inel	^{40}Ca		4RUSLIN	1.0+09	1.0+09	Jour	ZEP,102,(1),15	15	O.V.Miklukho+	F1268

22 Titanium 48

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	p,inel	^{48}Ti		4ZZZDUB	2.9+06	3.0+06	Jour	IZV,44,(1),53	80	Vansynchan+	F1261

29 Copper

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{10}Be		1USANAL	3.9+08	1.2+11	Jour	NIM/B,361,685	15	S.Sekimoto+	C2192
*	p,x	^{26}Al		1USANAL	3.9+08	1.2+11	Jour	NIM/B,361,685	15	S.Sekimoto+	C2192
	α,x	Many		4ZZZDUB			Rept	JINR-E1-12730	79	A.U.Abdurakhimov+	F1265

39 Yttrium 89

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{10}Be		1USANAL	3.9+08	1.2+11	Jour	NIM/B,361,685	15	S.Sekimoto+	C2192
*	p,x	^{26}Al		1USANAL	1.2+11	1.2+11	Jour	NIM/B,361,685	15	S.Sekimoto+	C2192

42 Molybdenum 92

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	^{3}He,d	^{93}Tc		1USATAM	3.5+07	3.5+07	Jour	PR/C,4,535	71	R.L.Kozub+	C2198

47 Silver

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,x	^{104}Ag		4RUSMOS		5.5+07	Jour	YF,78,(11),953	15	S.S.Belyshev+	M0918
*	γ,x	^{106}Ag		4RUSMOS		5.5+07	Jour	YF,78,(11),953	15	S.S.Belyshev+	M0918

64 Gadolinium 156

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{45}Sc,3n	^{198}At		1USATAM	3.9+07	4.6+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,4n	^{197}At		1USATAM	3.9+07	5.1+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{196}Po		1USATAM	5.5+07	5.9+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{197}Po		1USATAM	3.9+07	5.9+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{198}Po		1USATAM	3.9+07	3.9+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193

64 Gadolinium 157

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{45}Sc,3n	^{199}At		1USATAM	4.3+07	5.4+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,4n	^{198}At		1USATAM	4.7+07	5.9+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,5n	^{197}At		1USATAM	5.4+07	5.4+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,6n	^{196}At		1USATAM	5.0+07	5.4+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{196}Po		1USATAM	6.3+07	6.3+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{197}Po		1USATAM	4.7+07	6.3+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{198}Po		1USATAM	4.7+07	6.3+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193

64 Gadolinium 158

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{45}Sc,3n	^{200}At		1USATAM	4.1+07	4.8+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,4n	^{199}At		1USATAM	4.1+07	5.7+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,5n	^{198}At		1USATAM	5.2+07	5.7+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{198}Po		1USATAM	5.2+07	5.7+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{199}Po		1USATAM	4.8+07	5.7+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{200}Po		1USATAM	4.1+07	4.1+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193

64 Gadolinium 160

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{45}Sc,3n	^{202}At		1USATAM	5.0+07	5.6+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,4n	^{201}At		1USATAM	4.5+07	6.1+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,5n	^{200}At		1USATAM	5.0+07	6.1+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,6n	^{199}At		1USATAM	5.6+07	6.1+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{199}Po		1USATAM	6.1+07	6.1+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{200}Po		1USATAM	5.6+07	5.6+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{201}Po		1USATAM	5.2+07	5.2+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193

65 Terbium 159

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	p,x	^{10}Be		1USANAL	3.9+08	3.9+08	Jour	NIM/B,361,685	15	S.Sekimoto+	C2192
*	^{45}Sc,4n	^{200}Rn		1USATAM	5.3+07	6.4+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,5n	^{199}Rn		1USATAM	5.6+07	5.6+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{198}At		1USATAM	7.0+07	7.0+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{199}At		1USATAM	5.3+07	7.0+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{200}At		1USATAM	5.0+07	6.6+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{201}At		1USATAM	4.9+07	6.4+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193

66 Dysprosium 162

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{45}Sc,3n	^{204}Fr		1USATAM	6.2+07	6.2+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,4n	^{203}Fr		1USATAM	6.2+07	6.2+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,5n	^{202}Fr		1USATAM	6.2+07	6.2+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,α	^{203}At		1USATAM	5.1+07	6.2+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{201}At		1USATAM	6.5+07	6.8+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{202}At		1USATAM	5.6+07	6.8+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{201}Rn		1USATAM	6.5+07	6.8+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{202}Rn		1USATAM	5.1+07	6.8+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{203}Rn		1USATAM	5.1+07	6.5+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193
*	^{45}Sc,x	^{204}Rn		1USATAM	5.1+07	6.5+07	Jour	PR/C,92,034613	15	T.A.Werke+	C2193

76 Osmium 188

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,2n	^{186}Os		4RUSMOS	1.5+07	3.0+07	Jour	IZV,78,(5),599	14	V.V.Varlamov+	M0916
*	γ,3n	^{185}Os		4RUSMOS	2.3+07	3.0+07	Jour	IZV,78,(5),599	14	V.V.Varlamov+	M0916
*	γ,n	^{187}Os		4RUSMOS	7.4+06	3.0+07	Jour	IZV,78,(5),599	14	V.V.Varlamov+	M0916
*	γ,x+n	inclusive		4RUSMOS	7.4+06	3.0+07	Jour	IZV,78,(5),599	14	V.V.Varlamov+	M0916

76 Osmium 189

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	γ,2n	^{187}Os		4RUSMOS	1.4+07	3.0+07	Jour	IZV,78,(5),599	14	V.V.Varlamov+	M0916
*	γ,3n	^{186}Os		4RUSMOS	2.1+07	3.0+07	Jour	IZV,78,(5),599	14	V.V.Varlamov+	M0916
*	γ,n	^{188}Os		4RUSMOS	7.4+06	3.0+07	Jour	IZV,78,(5),599	14	V.V.Varlamov+	M0916
*	γ,x+n	inclusive		4RUSMOS	7.4+06	3.0+07	Jour	IZV,78,(5),599	14	V.V.Varlamov+	M0916

79 Gold 197

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	d,x	Many		4ZZZDUB	4.4+09	4.4+09	Jour	PR/C,90,(5),054612	14	A.R.Balabekyan+	F1269

82 Lead 208

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{136}Xe,x	^{210}Po		4ZZZDUB	8.5+08	8.5+08	Jour	PR/C,86,044611	12	E.M.Kozulin+	F1274
*	^{136}Xe,x	^{222}Rn		4ZZZDUB	8.5+08	8.5+08	Jour	PR/C,86,044611	12	E.M.Kozulin+	F1274
*	^{136}Xe,x	^{224}Ra		4ZZZDUB	8.5+08	8.5+08	Jour	PR/C,86,044611	12	E.M.Kozulin+	F1274

88 Radium 226

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	d,fis			4RUSRI	5.0+06	1.2+07	Jour	YF,5,(3),538	67	A.S.Dovgilenko+	F1262

90 Thorium 232

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	d,fis			1USAWAS	8.5+06	9.9+06	Jour	JIN,24,1185	62	M.V.Ramaniah+	C2199
	d,fis	Many		1USAWAS	8.5+06	9.9+06	Jour	JIN,24,1185	62	M.V.Ramaniah+	C2199
	d,fis	Many	?	1USAWAS	8.5+06	9.9+06	Jour	JIN,24,1185	62	M.V.Ramaniah+	C2199

94 Plutonium 239

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{48}Ca,3n	^{284}Fl		4ZZZDUB	2.4+08	2.4+08	Jour	PR/C,92,034609	15	V.K.Utyonkov+	F1273

94 Plutonium 240

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{48}Ca,3n	^{285}Fl		4ZZZDUB	2.4+08	2.4+08	Jour	PR/C,92,034609	15	V.K.Utyonkov+	F1273
*	^{48}Ca,4n	^{284}Fl		4ZZZDUB	2.5+08	2.5+08	Jour	PR/C,92,034609	15	V.K.Utyonkov+	F1273

94 Plutonium 242

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	^{18}O,x	^{255}No		4ZZZDUB	8.6+07	1.0+08	Jour	YF,5,(6),1186	67	G.N.Flerov+	F1266
	^{18}O,x	^{256}No		4ZZZDUB	8.2+07	9.7+07	Jour	YF,5,(6),1186	67	G.N.Flerov+	F1266

94 Plutonium 244

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	^{48}Ca,fus			4ZZZDUB			Jour	PR/C,90,054608	14	E.M.Kozulin+	F1270

96 Curium 248

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	γ,fis	Many		4ZZZDUB		2.5+07	Jour	FCY/L,2,(2),44	05	Yu.P.Gangrskii+	M0813
*	^{48}Ca,fus			4ZZZDUB			Jour	PR/C,90,054608	14	E.M.Kozulin+	F1270