EXFOR News (September 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)

4 Beryllium 9

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
t,^{6}He	^{6}Li	DAP	1USALAS	2.4+07	2.4+07	Jour	AP,95,326	75	W.Vonoertzen+	F0227

5 Boron 10

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,α	^{8}Be	DAP	1USARIC	5.2+06	7.5+06	Jour	BAP,16,1153(BB1)	71	D.Rendic+	F0327
t,el	^{10}B	DA	1USANRL	1.5+06	1.5+06	Jour	NP,48,1	63	H.D.Holmgren+	F0278

5 Boron 11

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,el	^{11}B	DA	2FR STR	5.5+06	5.5+06	Jour	NP,82,161	66	A.Gallmann+	F0276

47 Silver

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,fis		DA	1USATAM	8.0+07	8.0+07	Jour	ZP/A,281,255	77	H.Blok+	C2492
α,fis		?	1USATAM	8.0+07	8.0+07	Jour	ZP/A,281,255	77	H.Blok+	C2492

52 Tellurium

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,fis		DA	1USATAM	8.0+07	8.0+07	Jour	ZP/A,281,255	77	H.Blok+	C2492
α,fis		?	1USATAM	8.0+07	8.0+07	Jour	ZP/A,281,255	77	H.Blok+	C2492

72 Hafnium 178

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,fis	Many	FY	1USAINU	4.9+07	4.9+07	Jour	PR/C,30,1228	84	B.D.Wilkins+	C2498
α,fis	Many	KE	1USAINU	4.9+07	4.9+07	Jour	PR/C,30,1228	84	B.D.Wilkins+	C2498

74 Tungsten 182

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{3}He,fis		CS	1USABRK	3.0+07	1.5+08	Jour	PL/B,518,221	01	K.X.Jing+	C2513

74 Tungsten 183

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{3}He,fis		CS	1USABRK	3.2+07	1.5+08	Jour	PL/B,518,221	01	K.X.Jing+	C2513

74 Tungsten 184

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{3}He,fis		CS	1USABRK	3.3+07	1.5+08	Jour	PL/B,518,221	01	K.X.Jing+	C2513

74 Tungsten 186

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{3}He,fis		CS	1USABRK	3.4+07	1.5+08	Jour	PL/B,518,221	01	K.X.Jing+	C2513

79 Gold 197

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,fis	Many	?	1USABRK	5.0+09	5.0+09	Jour	PR/C,26,2694	82	S.B.Kaufman+	C2496
α,fis		DA	1USATAM	8.0+07	8.0+07	Jour	ZP/A,281,255	77	H.Blok+	C2492
α,fis	Many	FY	1USAWAU	4.2+07	4.2+07	Jour	PR,129,2705	63	E.F.Neuzil+	C2489
α,fis		?	1USATAM	8.0+07	8.0+07	Jour	ZP/A,281,255	77	H.Blok+	C2492
^{11}B,fis		DA	1USABRK	7.0+07	1.1+08	Jour	PR,129,2710	63	V.E.Violajr+	C2494
^{12}C,fis		DA	1USABRK	7.0+07	1.2+08	Jour	PR,129,2710	63	V.E.Violajr+	C2494
^{14}N,fis		DA	1USABRK	8.3+07	1.5+08	Jour	PR,129,2710	63	V.E.Violajr+	C2494
^{16}O,fis		DA	1USABRK	8.4+07	1.7+08	Jour	PR,129,2710	63	V.E.Violajr+	C2494
^{20}Ne,fis	Many	?	1USABRK	8.0+09	4.2+10	Jour	PR/C,26,2694	82	S.B.Kaufman+	C2496

82 Lead 204

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,fis	Many	CS	1USAWAU	2.5+07	2.5+07	Jour	JIN,32,1761	70	W.K.Hensley+	C2490
α,fis		CS	1USAWWS	2.5+07	6.5+07	Jour	JIN,32,1761	70	W.K.Hensley+	C2490
α,fis	Many	CS	1USAWAU	3.7+07	4.1+07	Jour	JIN,32,1761	70	W.K.Hensley+	C2490
α,fis	Many	CS	1USABRK	6.5+07	6.5+07	Jour	JIN,32,1761	70	W.K.Hensley+	C2490

α,fis	Many	FY	1USAWAU	4.2+07	4.2+07	Jour	PR,129,2705	63	E.F.Neuzil+	C2489
α,fis	^{93}Y	CS	1USAWAU	4.2+07	4.2+07	Jour	PR,129,2705	63	E.F.Neuzil+	C2489

82 Lead 206

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
α,fis	Many	FY	1USAWAU	4.2+07	4.2+07	Jour	PR,129,2705	63	E.F.Neuzil+	C2489
α,fis	^{93}Y	CS	1USAWAU	4.2+07	4.2+07	Jour	PR,129,2705	63	E.F.Neuzil+	C2489

82 Lead 207

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
α,fis	^{93}Y	CS	1USAWAU	4.2+07	4.2+07	Jour	PR,129,2705	63	E.F.Neuzil+	C2489

82 Lead 208

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
α,fis	^{93}Y	CS	1USAWAU	4.2+07	4.2+07	Jour	PR,129,2705	63	E.F.Neuzil+	C2489

83 Bismuth 209

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
α,fis		CS	1USANRL	6.9+07	1.4+08	Jour	PR/C,20,1716	79	W.G.Meyer+	C2493
α,fis	Many	KE	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		MAS	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		?	1USAMRY	1.4+08	1.4+08	Jour	PR/C,20,1716	79	W.G.Meyer+	C2493
α,fis		?	1USANRL	4.9+07	6.9+07	Jour	PR/C,20,1716	79	W.G.Meyer+	C2493
^{6}He,el	^{209}Bi	DA	1USANOT	1.9+07	1.9+07	Jour	PR/C,63,061603	01	E.F.Aguilera+	C1247
^{6}He,fus		CS	1USANOT	1.9+07	2.9+07	Jour	PRL,81,4580	98	J.J.Kolata+	C2521
^{6}He,non		CS	1USANOT	1.4+07	2.1+07	Jour	PR/C,63,061603	01	E.F.Aguilera+	C1247
^{11}B,fis		DA	1USABRK	6.3+07	1.1+08	Jour	PR,129,2710	63	V.E.Violajr+	C2494
^{12}C,fis		DA	1USABRK	8.1+07	1.2+08	Jour	PR,129,2710	63	V.E.Violajr+	C2494
^{14}N,fis		DA	1USABRK	8.3+07	1.4+08	Jour	PR,129,2710	63	V.E.Violajr+	C2494
^{16}O,fis		DA	1USABRK	8.4+07	1.7+08	Jour	PR,129,2710	63	V.E.Violajr+	C2494

88 Radium 226

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
p,fis	Many	KE	1USAANL	1.6+07	1.6+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
p,fis		MAS	1USAANL	1.6+07	1.6+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
p,fis		NU	1USAANL	1.6+07	1.6+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491

90 Thorium 230

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621
α,fis	Many	FY	1USALAS	2.6+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis	Many	KE	1USALAS	2.6+07	2.6+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis		KE	1USALAS	2.6+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis	Many	KE	1USALAS	3.0+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis	Many	NU	1USALAS	2.6+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522

90 Thorium 232

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621
n,fis	^{3}H	FY	1USAGA	Fast		Jour	ANS,24,458	76	G.Buzzelli+	14624
^{3}He,fis	Many	DAE	1USAINU	2.7+08	2.7+08	Jour	PRL,69,3713	92	D.E.Fields+	C2520
^{3}He,fis	Many	FY	1USAWAU	2.8+07	2.8+07	Jour	CJC,61,786	83	P.L.Reeder	C2501
^{3}He,fis		MAS	1USAWAU	2.8+07	2.8+07	Jour	CJC,61,786	83	P.L.Reeder	C2501
^{3}He,fis	Many	?	1USAWAS	2.8+07	2.8+07	Jour	CJC,61,786	83	P.L.Reeder	C2497
^{3}He,fis	^{6}Li	DAE	1USAINU	2.7+08	2.7+08	Jour	PRL,69,3713	92	D.E.Fields+	C2520
^{3}He,fis	^{7}Li	DAE	1USAINU	2.7+08	2.7+08	Jour	PRL,69,3713	92	D.E.Fields+	C2520
^{3}He,fis	^{9}Be	DAE	1USAINU	2.7+08	2.7+08	Jour	PRL,69,3713	92	D.E.Fields+	C2520
^{3}He,fis	^{10}Be	DAE	1USAINU	2.7+08	2.7+08	Jour	PRL,69,3713	92	D.E.Fields+	C2520
α,fis	Many	CS	1USAINU	2.0+08	2.0+08	Jour	PR/C,54,R2114	96	S.L.Chen+	C2512
α,fis		DA	1USAANL	3.0+07	4.2+07	Jour	PR,124,846	61	R.Vandenbosch+	C2523
α,fis	Many	DAE	1USAINU	2.0+08	2.0+08	Jour	PR/C,54,R2114	96	S.L.Chen+	C2512
α,fis	Many	FY	1USALAS	2.2+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis	Many	KE	1USALAS	2.2+07	2.2+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis		KE	1USALAS	2.2+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis	Many	KE	1USALAS	2.6+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis	Many	KE	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		MAS	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		NU	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		?	1USAANL	2.1+07	4.3+07	Jour	PR,124,846	61	R.Vandenbosch+	C2523

91 Protactinium 231

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

92 Uranium 233

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

n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621
α,fis		CS	1USANRL	2.8+07	1.4+08	Jour	PR/C,20,1716	79	W.G.Meyer+	C2493
α,fis		DA	1USAANL	3.2+07	4.2+07	Jour	PR,124,846	61	R.Vandenbosch+	C2523
α,fis	Many	FY	1USALAS	2.2+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis	Many	KE	1USALAS	2.2+07	2.2+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis		KE	1USALAS	2.2+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis	Many	KE	1USALAS	2.6+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis	Many	KE	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		MAS	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis	Many	NU	1USALAS	2.6+07	3.0+07	Jour	PR,133,B603	64	H.C.Britt+	C2522
α,fis		NU	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		?	1USAMRY	1.4+08	1.4+08	Jour	PR/C,20,1716	79	W.G.Meyer+	C2493
α,fis		?	1USAANL	2.1+07	4.3+07	Jour	PR,124,846	61	R.Vandenbosch+	C2523
α,fis		?	1USANRL	4.9+07	6.9+07	Jour	PR/C,20,1716	79	W.G.Meyer+	C2493

92 Uranium 234

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

92 Uranium 235

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	FY	1USAORL	1.4+07	1.4+07	Rept	AECD-3597	53	G.P.Ford	14623
n,fis	Many	FY	1CANCRC	2.5-02	2.5-02	Jour	RPP,12,1	49	H.G.Thode+	14622
n,fis	Many	FY	1USACLA	7.0+05	8.0+06	Conf	58GENEVA,15,449	58	L.R.Bunney+	14625
n,fis	Many	?	1USAORL	1.4+07	1.4+07	Rept	AECD-3597	53	G.P.Ford	14623
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621
n,fis	^{3}H	FY	1USAGA	Fast		Jour	ANS,24,458	76	G.Buzzelli+	14624
n,fis	^{127}Te	FY	1USAANL	2.5-02	2.5-02	Book	RCS,2,979(136ft)	51	L.E.Glendenin	14638
n,fis	^{129}Te	FY	1USAANL	2.5-02	2.5-02	Book	RCS,2,976	51	T.B.Novey	14607
n,fis	^{131}I	FY	1USAANL	2.5-02	2.5-02	Book	RCS,2,1017	51	S.Katcoff+	14617
n,fis	^{147}Nd	FY	1USAORL	2.5-02	2.5-02	Book	RCS,2,1229	51	J.A.Marinsky+	14619
p,fis	^{95}Nb	CS	1USAWSU	1.0+07	1.0+07	Jour	JIN,30,365	68	C.Rudy+	C2471

92 Uranium 236

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

92 Uranium 238

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis	Many	FY	1USAARK	Spont		Jour	JCP,25,603	56	P.K.Kuroda+	14620

n,fis	Many	FY	1USACLA	7.0+05	8.0+06	Conf	58GENEVA,15,449	58	L.R.Bunney+	14625
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621
n,fis	^{3}H	FY	1USAGA	Fast		Jour	ANS,24,458	76	G.Buzzelli+	14624
p,fis		DA	1USALAS	1.1+07	2.1+07	Jour	PR,144,1060	66	T.D.Thomas+	C2472
p,fis	^{4}He	FY	1USALAS	1.1+07	2.1+07	Jour	PR,144,1060	66	T.D.Thomas+	C2472
^{3}He,fis	Many	FY	1USAWAU	2.5+07	2.8+07	Jour	CJC,61,786	83	P.L.Reeder	C2501
^{3}He,fis		MAS	1USAWAU	2.5+07	2.8+07	Jour	CJC,61,786	83	P.L.Reeder	C2501
^{3}He,fis	Many	?	1USAWAS	2.5+07	2.8+07	Jour	CJC,61,786	83	P.L.Reeder	C2497
α,α+fis		?	1USABRK	1.2+08	1.2+08	Jour	PR/C,41,1039	90	P.J.Countryman+	C2499
α,α+n+X		?	1USABRK	1.2+08	1.2+08	Jour	PR/C,41,1039	90	P.J.Countryman+	C2499
α,fis		DA	1USAANL	3.7+07	4.3+07	Jour	PR,124,846	61	R.Vandenbosch+	C2523
α,fis	Many	FY	1USAWAU	2.6+07	2.6+07	Jour	CJC,61,786	83	P.L.Reeder	C2501
α,fis	Many	KE	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		MAS	1USAWAU	2.6+07	2.6+07	Jour	CJC,61,786	83	P.L.Reeder	C2501
α,fis		MAS	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		NU	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		?	1USAANL	2.5+07	4.3+07	Jour	PR,124,846	61	R.Vandenbosch+	C2523
α,fis	Many	?	1USAWAS	2.6+07	2.6+07	Jour	CJC,61,786	83	P.L.Reeder	C2497
α,^{3}He+fis		?	1USAINU	1.5+08	1.5+08	Jour	PR/C,24,500	81	J.R.Wu+	C2495
α,x+^{3}He	inclusive	DAE	1USAINU	1.5+08	1.5+08	Jour	PR/C,24,500	81	J.R.Wu+	C2495
^{12}C,x	Many	CS	1USABRK	2.4+08	2.4+08	Jour	PR/C,38,1757	88	C.H.Lee+	C2470

93 Neptunium 237

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,9n	^{232}Am	CS	1USABRK	9.4+07	9.8+07	Jour	PR/C,42,1480	90	H.L.Hall+	C2500

94 Plutonium 238

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

94 Plutonium 239

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621
α,fis	Many	KE	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		MAS	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491
α,fis		NU	1USAANL	4.5+07	4.5+07	Jour	PR/C,12,1809	75	Z.Fraenkel+	C2491

94 Plutonium 240

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

94 Plutonium 241

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

94 Plutonium 244

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

95 Americium 241

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

95 Americium 243

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

96 Curium 243

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

96 Curium 244

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

96 Curium 246

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621

96 Curium 248

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis	Many	?	2UK DOU	Fast		Rept	ORNL-6266	86	J.K.Dickens+	14621
^{18}O,x	^{261}Lr	CS	1USABRK	9.7+07	9.7+07	Jour	JRN,124,135	88	D.C.Hoffman+	C2514
^{18}O,x	^{262}Lr	CS	1USABRK	9.3+07	9.3+07	Jour	JRN,124,135	88	D.C.Hoffman+	C2514

97 Berkelium 249

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{18}O,3n+α	^{260}Lr	CS	1USABRK	1.0+08	1.0+08	Jour	JRN,124,135	88	D.C.Hoffman+	C2514
^{18}O,5n	^{262}Db	CS	1USABRK	1.0+08	1.0+08	Jour	JRN,124,135	88	D.C.Hoffman+	C2514

98 Californium 252

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		DA	1USALAS	Spont		Jour	PR,144,1060	66	T.D.Thomas+	14618
0,fis	^{4}He	FY	1USALAS	Spont		Jour	PR,144,1060	66	T.D.Thomas+	14618