

EXFOR News (April 2017)

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 coordinated 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 published 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.Otsuka et al., [Nucl.Data.Sheets](#) **120**(2014)272.

Quantity codes

ALF	α -value ($\sigma_{\text{capt}}/\sigma_{\text{fis}}$)	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 $d\Omega_1/d\Omega_2/dE'$	NUD	Delayed fission neutron multiplicity $\bar{\nu}_d$
D3E	Triple differential $d\Omega/dE'_1/dE'_2$	NUF	Fragment neutrons
D4A	Quadruple diff. $d\Omega_1/d\Omega_2/dE'_1/dE'_2$	POL	Polarization
DA	Differential $d/d\Omega$	POD	Differential polarization
DAA	Double differential $d\Omega_1/d\Omega_2$	PY	Product yield (other than fission)
DAE	Double differential $d\Omega/dE'$	RI	Resonance integral
DAP	Partial differential $d/d\Omega$	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 $\bar{\nu}\sigma_{\text{fis}}/(\sigma_{\text{capt}} + \sigma_{\text{fis}})$	TTD	Differential thick target yield, $d/d\Omega$
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	tex	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 Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{11}\text{Be,el}$	^1H	?	2JPNOSA	3.0+08	3.0+08	Jour	PR/C,93,034623	16	J.Chen+	E2502
* $^{11}\text{Be,inel}$	^1H	?	2JPNOSA	3.0+08	3.0+08	Jour	PR/C,93,034623	16	J.Chen+	E2502
$^{21}\text{Na},\gamma$	^{22}Mg	?	1CANTMF	2.0+05	1.9+07	Jour	NP/A,752,510	05	A.A.Chen+	C1525
$^{24}\text{Mg},\gamma$	^{25}Al	?	1CANTMF	2.1+05	2.2+05	Jour	NP/A,752,510	05	A.A.Chen+	C1525

1 Hydrogen 3

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $\alpha,2n+p$	^4He	D3A	4UKRIJD	2.7+07	2.7+07	Jour	MPL/A,29,(19),1450105	14	G.Mandaglio+	D5130
* $\alpha,2n+p$	^4He	D3A	4UKRIJD	6.7+07	6.7+07	Jour	UFZ,60,201	15	O.M.Povoroznyk+	D5121
* $\alpha,2n+p$	^4He	?	4UKRIJD	2.7+07	2.7+07	Jour	MPL/A,29,(19),1450105	14	G.Mandaglio+	D5130
* $\alpha,2n+p$	^4He	?	4UKRIJD	6.7+07	6.7+07	Jour	UFZ,60,201	15	O.M.Povoroznyk+	D5121
* $\alpha,n+t$	^3He	?	4UKRIJD	6.7+07	6.7+07	Jour	JPJ,80,094204	11	O.Povoroznyk+	D5131
* $\alpha,p+t$	^3H	D3A	4UKRIJD	6.7+07	6.7+07	Jour	PR/C,85,064330	12	O.M.Povoroznyk+	D5129

2 Helium 4

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^8\text{He},4n$	^8Be	?	2JPNIPC	1.5+09	1.5+09	Jour	PRL,116,052501	16	K.Kisamori+	E2500

3 Lithium 7

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,n	^7Be	MLT	1USAORE	2.5+06	3.4+06	Jour	PR/C,10,1299	74	C.A.Burke+	D0037

4 Beryllium 7

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,γ	^8Be	CSP	2ZZZCER	1.3-02	1.3+04	Jour	PRL,117,152701	16	M.Barbagallo+	23312

4 Beryllium 9

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$d,x+n$	inclusive	PY	2JPNIRS	8.9+05	2.8+06	Jour	NST,5,22	68	T.Inada+	E2498

$\alpha,0$ RP 1USAIIT Jour PR,93,924(K4) 54 W.E.Bennett+ C1143

6 Carbon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{30}\text{Ne,inel}$	$^{\text{nat}}\text{C}$	CSP	2JPNIPC	6.8+09	6.8+09	Jour	PR/C,93,044306	16	P.Doornenbal+	E2504
* $^{36}\text{Mg,inel}$	$^{\text{nat}}\text{C}$	CSP	2JPNIPC	7.8+09	7.8+09	Jour	PR/C,93,044306	16	P.Doornenbal+	E2504

6 Carbon 12

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* p,x	^{10}C	CS	2JPNIRS	1.1+07	6.8+07	Jour	NP/A,946,104	16	K.Matsushita+	E2501
* p,x	^{11}C	CS	2JPNIRS	1.1+07	6.8+07	Jour	NP/A,946,104	16	K.Matsushita+	E2501
* $^{12}\text{C},x$	^6Li	CS	2JPNIRS	1.3+09	4.7+09	Jour	PR/C,92,024614	15	T.Ogawa+	E2486
* $^{12}\text{C},x$	^7Li	CS	2JPNIRS	1.3+09	4.7+09	Jour	PR/C,92,024614	15	T.Ogawa+	E2486
* $^{12}\text{C},x$	^8Li	CS	2JPNIRS	1.3+09	4.8+09	Jour	PR/C,92,024614	15	T.Ogawa+	E2486
* $^{12}\text{C},x$	^7Be	CS	2JPNIRS	1.8+09	4.7+09	Jour	PR/C,92,024614	15	T.Ogawa+	E2486
* $^{12}\text{C},x$	^9Be	CS	2JPNIRS	1.8+09	4.7+09	Jour	PR/C,92,024614	15	T.Ogawa+	E2486
* $^{12}\text{C},x$	^{10}Be	CS	2JPNIRS	1.3+09	4.8+09	Jour	PR/C,92,024614	15	T.Ogawa+	E2486
* $^{12}\text{C},x$	^{10}B	CS	2JPNIRS	1.3+09	4.7+09	Jour	PR/C,92,024614	15	T.Ogawa+	E2486
* $^{12}\text{C},x$	^{11}B	CS	2JPNIRS	1.8+09	4.8+09	Jour	PR/C,92,024614	15	T.Ogawa+	E2486
$^{24}\text{F},x$	Many	CS	1USAMSU	4.7+07	4.7+07	Jour	NP/A,746,536	04	M.Thoennessen+	C1527
$^{25}\text{F},x$	Many	CS	1USAMSU	5.0+07	5.0+07	Jour	NP/A,746,536	04	M.Thoennessen+	C1527
$^{26}\text{F},x$	Many	CS	1USAMSU	5.4+07	5.4+07	Jour	NP/A,746,536	04	M.Thoennessen+	C1527
$^{26}\text{F},x$	^{25}O	CS	1USAMSU	5.4+07	5.4+07	Jour	NP/A,746,536	04	M.Thoennessen+	C1527

9 Fluorine 19

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,x+\gamma$	inclusive	PY	3AULAUA	1.8+06	2.8+06	Jour	AUJ,34,35	81	M.J.Kenny	D0830
d,α	^{17}O	DAP	4UKRIFU	2.4+06	4.0+06	Jour	YF,8,663	68	I.I.Zalyubovskii+	D5128
* α,n	^{22}Na	CS	1USANOT	3.9+06	6.7+06	Rept	INL/EXT-16-38791	16	W.A.Peters+	C0500
* α,n	^{22}Na	CS	1USAORL	5.3+06	6.6+06	Rept	INL/EXT-16-38791	16	W.A.Peters+	C0500

12 Magnesium 24

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* α,el	^{24}Mg	DA	2JPNOSA	3.9+08	3.9+08	Jour	PL/B,748,343	15	Y.K.Gupta+	E2484
* α,inel	^{24}Mg	DAE	2JPNOSA	3.9+08	3.9+08	Jour	PL/B,748,343	15	Y.K.Gupta+	E2484
* α,inel	^{24}Mg	DAP	2JPNOSA	3.9+08	3.9+08	Jour	PL/B,748,343	15	Y.K.Gupta+	E2484

13 Aluminium 27

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* p,α	^{24}Mg	MLT	3IRNNRT	1.7+06	3.0+06	Jour	NIM/B,394,28	17	A.Jokar+	D0833
* p,inel	^{27}Al	MLT	3IRNNRT	1.5+06	3.0+06	Jour	NIM/B,394,28	17	A.Jokar+	D0833
* $d,x+n$	inclusive	DAE	1USAOHO	7.5+06	7.5+06	Rept	AIP-1005,61	08	A.V.Voinov+	C0982
* $^3\text{He},x+\alpha$	inclusive	CSP	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $^3\text{He},x+\alpha$	inclusive	DAE	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $^3\text{He},x+d$	inclusive	CSP	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $^3\text{He},x+d$	inclusive	DAE	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $^3\text{He},x+^3\text{He}$	inclusive	CSP	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $^3\text{He},x+^3\text{He}$	inclusive	DAE	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $^3\text{He},x+p$	inclusive	CSP	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $^3\text{He},x+p$	inclusive	DAE	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $^3\text{He},x+t$	inclusive	CSP	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $^3\text{He},x+t$	inclusive	DAE	4KASKAZ	5.0+07	5.0+07	Jour	BAS,80,894	16	A.Duisebayev+	D0831
* $\alpha,x+n$	inclusive	PY	1USAMSU	6.2+08	6.2+08	Jour	NSE,132,1	99	L.Heilbronn+	C1051
* $^7\text{Li},X+t$	^4He	DAA	3INDNSD	4.8+07	4.8+07	Jour	PRM,53,541	99	T.Madhusoodhanan+	D6220
* $^8\text{Li},\text{el}$	^{27}Al	DA	3BZLUSP	1.5+07	1.5+07	Jour	PR/C,95,014615	17	V.Morcelle+	D0835
* $^{12}\text{C},x+n$	inclusive	PY	1USAMSU	1.9+09	1.9+09	Jour	NSE,132,1	99	L.Heilbronn+	C1051

14 Silicon 28

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* p,inel	^{28}Si	MLT	3IRNNRT	2.4+06	3.0+06	Jour	NIM/B,394,28	17	A.Jokar+	D0833

14 Silicon 29

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* p,inel	^{29}Si	MLT	3IRNNRT	2.2+06	3.0+06	Jour	NIM/B,394,28	17	A.Jokar+	D0833

19 Potassium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* α,x	^{43}Sc	TT	3POLWWA	1.9+07	2.9+07	Jour	ARI,118,182	16	K.Szkliniarz+	D0832
* α,x	^{44}Sc	TT	3POLWWA	2.0+06	2.0+07	Jour	ARI,118,182	16	K.Szkliniarz+	D0832
* α,x	^{44}Sc	?	3POLWWA	2.0+06	2.0+07	Jour	ARI,118,182	16	K.Szkliniarz+	D0832

20 Calcium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* α,x	^{43}Sc	TT	3POLWWA		2.0+07	Jour	ARI,118,182	16	K.Szkliniarz+	D0832
* α,x	^{43}Sc	TT	3POLWWA		2.0+07	Jour	ARI,118,182	16	K.Szkliniarz+	D0832

*	α,x	^{44}Sc	TT	3POLWWA	1.2+07	2.9+07	Jour	ARI,118,182	16	K.Szkliniarz+	D0832
*	α,x	^{44}Sc	?	3POLWWA	1.2+07	2.9+07	Jour	ARI,118,182	16	K.Szkliniarz+	D0832

20 Calcium 48

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	p,inel	^{48}Ca	DAE	2JPNOSA	3.0+08	3.0+08	Jour	PR/C,93,041302(R)	16	J.Birkhan+	E2503
*	p,inel	^{48}Ca	DAP	2JPNOSA	3.0+08	3.0+08	Jour	PR/C,93,041302(R)	16	J.Birkhan+	E2503

26 Iron 57

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	p,n	^{57}Co	CSP	1USAHO	7.6+06	8.6+06	Jour	PR/C,49,750	94	V.Mishra+	C0486

27 Cobalt 57

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	0,0		NQ	1USAHO	Spont		Jour	PR/C,49,750	94	V.Mishra+	C0486

29 Copper

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	n,tot		CS	2ZZZGEL	1.5+02	9.0+04	Jour	NIM/A,767,364	14	H.Tsuchiya+	23324
*	n,tot		CS	2ZZZGEL	1.5+02	9.0+04	Rept	EUR-26479	13	K.Kauwenberghs+	23325

29 Copper 63

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	n,tot		CS	2ZZZGEL	1.5+02	9.0+04	Rept	EUR-26479	13	K.Kauwenberghs+	23325

29 Copper 65

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	n,tot		CS	2ZZZGEL	1.5+02	9.0+04	Rept	EUR-26479	13	K.Kauwenberghs+	23325

32 Germanium 70

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,0$		RP	3INDTRM			Jour	PRM,12,653	79	C.R.Ramaswamy+	D6246
p,el	^{70}Ge	DA	3INDTRM	3.5+06	4.7+06	Jour	PRM,12,653	79	C.R.Ramaswamy+	D6246

40 Zirconium 90

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^3\text{He},t$	^{90}Nb	DAP	2JPNOSA	4.2+08	4.2+08	Jour	PR/C,86,054323	12	J.H.Thies+	E2412
$^{197}\text{Au},x$	Many	CS	1USAMSU	3.9+09	3.9+09	Jour	NP/A,705,279	02	G.A.Souliotis+	C1690

40 Zirconium 92

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^3\text{He},t$	^{92}Nb	DAP	2JPNOSA	4.2+08	4.2+08	Jour	PR/C,86,054323	12	J.H.Thies+	E2412

40 Zirconium 96

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^3\text{He},t$	^{96}Nb	DAP	2JPNOSA	4.2+08	4.2+08	Jour	PR/C,86,054323	12	J.H.Thies+	E2412

50 Tin

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{129}\text{Xe},non$		CS	2FR GAN	1.0+09	4.5+09	Jour	PR/C,94,044611	16	L.Manduci+	D0829

50 Tin 116

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* d,el	^{116}Sn	DA	2JPNOSA	2.0+08	2.0+08	Jour	PL/B,735,387	14	D.Patel+	E2459
* $d,inel$	^{116}Sn	DAP	2JPNOSA	2.0+08	2.0+08	Jour	PL/B,735,387	14	D.Patel+	E2459
* $d,inel$	^{116}Sn	?	2JPNOSA	2.0+08	2.0+08	Jour	PL/B,735,387	14	D.Patel+	E2459

58 Cerium

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

*	n, tot		CS	2ZZZGEL	3.0+02	2.0+05	Rept	EUR-28223	16	K.Guber+	23322
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69 Thulium 169

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	$^{20}\text{Ne}, x$	Many	CS	2JPNOSA	8.3+07	1.4+08	Jour	JRN,303,1273	15	S.Ueno+	E2475

74 Tungsten

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	n, tot		CS	2ZZZGEL	8.2+00	2.3+03	Jour	EPJ/P,129,58	14	B.Becker+	23323
*	d, x	^{184}Re	CS	2JPNJAE	2.0+07	4.0+07	Conf	2007NICE,2,1011	07	K.Ochiai+	E2121

74 Tungsten 180

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
	n, γ	^{181}W	CS	2GERKFK	Maxwl		Jour	AAA,105,270	Sep 82	H.Beer+	21768

79 Gold 197

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	n, γ	^{198}Au	CS	2ZZZGEL	3.5+03	8.4+04	Jour	EPJ/A,50,124	14	C.Massimi+	23253
	$^{46}\text{Ar}, \text{inel}$	^{197}Au	CSP	1USAMSU	3.4+09	3.4+09	Jour	PR/C,68,014302	03	A.Gade+	C1677

82 Lead

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	$^{30}\text{Ne}, \text{inel}$	$^{\text{nat}}\text{Pb}$	CSP	2JPNIPC	7.0+09	7.0+09	Jour	PR/C,93,044306	16	P.Doornenbal+	E2504
*	$^{36}\text{Mg}, \text{inel}$	$^{\text{nat}}\text{Pb}$	CSP	2JPNIPC	8.0+09	8.0+09	Jour	PR/C,93,044306	16	P.Doornenbal+	E2504

82 Lead 208

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #	
				Min	Max						
*	d, inel	^{208}Pb	?	2JPNOSA	2.0+08	2.0+08	Jour	PL/B,735,387	14	D.Patel+	E2459
*	$^{18}\text{O}, \text{fis}$	Many	FY	1USATAM	7.8+07	2.0+08	Jour	PAN,71,(6),956	08	A.Ya.Rusanov+	C1046
*	$^{18}\text{O}, \text{fis}$	Many	?	1USATAM	7.8+07	2.0+08	Jour	PAN,71,(6),956	08	A.Ya.Rusanov+	C1046
	$^{64}\text{Ni}, n$	^{271}Ds	CS	1USABRK	3.1+08	3.1+08	Jour	PR/C,67,064609	03	T.N.Ginter+	C1698

92 Uranium 233

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,abs		?	2UK HAR		2.5-02	Rept	TNCC(UK)-77	60	M.J.Cabell+	23311
<i>n</i> ,fis		CS	2UK ALD	2.5-02	2.5-02	Jour	JNE,22,477	68	R.L.G.Keith+	23309
<i>n</i> ,fis		?	2UK ALD	2.5-02	2.5-02	Jour	JNE,22,477	68	R.L.G.Keith+	23309
<i>n</i> ,fis		?	2FR FAR	Maxwl		Conf	70HELSINKI,1,295	Jun 70	R.Vidal+	20552

92 Uranium 235

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,abs		ALF	2UK HAR		2.5-02	Rept	NRDC-129	60	F.W.Cornish	23310
<i>n</i> ,fis		CS	2UK ALD	2.5-02	2.5-02	Jour	JNE,22,477	68	R.L.G.Keith+	23309
* <i>n</i> ,fis		CS	2ZZZCER	6.6-01	1.0+04	Jour	EPJ/CS,111,02003	16	C.Paradela+	23294
<i>n</i> ,fis		NU	2SWDFOA	2.5-02	2.5-02	Jour	AF,29,293	Mar 65	H.Conde	20025

92 Uranium 238

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* <i>n</i> , γ		RP	2ZZZCER	1.5+02	1.6+03	Jour	PR/C,95,034604	17	F.Mingrone+	23234
* <i>n</i> , γ	²³⁹ U	CS	2ZZZCER	1.0+00	7.1+05	Jour	PR/C,95,034604	17	F.Mingrone+	23234
* <i>n</i> , γ	²³⁹ U	CS	2ZZZGEL	1.5+02	1.2+03	Jour	EPJ/A,52,170	16	H.I.Kim+	23302
* <i>n</i> , γ	²³⁹ U	CS	2ZZZCER	3.0+03	7.2+05	Jour	PR/C,95,034604	17	F.Mingrone+	23234
* <i>n</i> , γ	²³⁹ U	CS	2ZZZGEL	3.5+00	1.2+03	Jour	EPJ/A,52,170	16	H.I.Kim+	23302

94 Plutonium 239

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,abs		?	2UK HAR			Rept	AERE-R-5874,1	68	M.J.Cabell	21410
<i>n</i> ,abs		?	2UK HAR		2.5-02	Rept	TNCC(UK)-77	60	M.J.Cabell+	23311
<i>n</i> ,fis		CS	2UK ALD	2.5-02	2.5-02	Jour	JNE,22,477	68	R.L.G.Keith+	23309
<i>n</i> ,fis		?	2UK ALD	2.5-02	2.5-02	Jour	JNE,22,477	68	R.L.G.Keith+	23309

94 Plutonium 241

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,abs		?	2UK HAR			Rept	AERE-R-5874,1	68	M.J.Cabell	21410