

EXFOR News (September 2012)

New experimental data available from Nuclear Reaction Data Centres

EXFOR is a world-wide data library for experimental neutron induced, charged-particle induced and photonuclear reaction data compiled by the [International Network of the Nuclear Reaction Data Centres \(NRDC\)](#)^a coordinated by the [IAEA Nuclear Data Section](#). Regularly updated retrieval database is available at [NNDC](#), [NEADB](#), [IAEA-NDS](#), [JAEA](#), [JCPRG](#) and [CDFE](#). Please send an email to n.otsuka@iaea.org if you would prefer to be advised electronically when EXFOR News is released.

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	sc	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), [CAJaD](#) (Russia), [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					
²⁶ Si,0		RP	2JPNIPC			Jour	PR/C,85,(4),045802	Apr 12	H.S.Jung+	E2372
²⁶ Si,eI	¹ H	DA	2JPNIPC	1.3+06	2.8+06	Jour	PR/C,85,(4),045802	Apr 12	H.S.Jung+	E2372
³⁴ Si,0		RP	2JPNIPC			Jour	PR/C,85,(3),034313	Mar 12	N.Imai+	E2375
³⁴ Si,eI	¹ H	DA	2JPNIPC	2.5+06	5.5+06	Jour	PR/C,85,(3),034313	Mar 12	N.Imai+	E2375

3 Lithium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,x+n</i>	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456	70	V.K.Daruga+	O0116
<i>d,x+n</i>	inclusive	TTD	2JPNJAE	3.2+07	3.2+07	Prog	JAERI-M-91-170,137	91	M.Sugimoto+	E2358

3 Lithium 6

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>d,α</i>	⁴ He	CS	2JPNTOH	1.9+04	5.2+04	Jour	JPJ,80,084201	Aug 11	K.Fang+	E2357
<i>d,α</i>	⁴ He	TT	2JPNTOH	2.5+04	7.0+04	Jour	JPJ,80,084201	Aug 11	K.Fang+	E2357

3 Lithium 7

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>p,α</i>	⁴ He	CS	2JPNTOH	2.0+04	6.1+04	Jour	JPJ,80,084201	Aug 11	K.Fang+	E2357
<i>p,α</i>	⁴ He	TT	2JPNTOH	2.2+04	7.0+04	Jour	JPJ,80,084201	Aug 11	K.Fang+	E2357
<i>p,x+n</i>	inclusive	TTD	2JPNTOH	6.8+07	7.0+07	Jour	KPS,59,(2),1676	Aug 11	S.Kamada+	E2366

4 Beryllium 9

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\gamma,0$		RP	1USATNL			Jour	PR/C,85,044605	12	C.W.Arnold+	L0171
γ,n	⁸ Be	CS	1USATNL	1.5+06	5.2+06	Jour	PR/C,85,044605	12	C.W.Arnold+	L0171
<i>p,x+n</i>	inclusive	TTD	2JPNTOH	1.1+07	1.1+07	Jour	KPS,59,(2),1676	Aug 11	S.Kamada+	E2366
<i>p,x+n</i>	inclusive	TTD	4RUSFEI	1.2+07	2.4+07	Jour	AE,29,456	70	V.K.Daruga+	O0116
<i>p,x+n</i>	inclusive	TTD	2JPNTOH	6.4+07	7.0+07	Jour	KPS,59,(2),1676	Aug 11	S.Kamada+	E2366

6 Carbon 12

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,inel$	^{12}C	CSP	1USARIC	6.6+06	1.2+07	Jour	NP,86,130	66	A.C.L.Barnard+	O0256
$p,inel$	^{12}C	DAP	1USARIC	6.6+06	1.2+07	Jour	NP,86,130	66	A.C.L.Barnard+	O0256
$p,x+n$	inclusive	TTD	4RUSFEI	1.2+07	2.4+07	Jour	AE,29,456	70	V.K.Daruga+	O0116
α,eI	^{12}C	DA	2JPNOSA	3.9+08	3.9+08	Jour	PR/C,84,(5),054308	Nov 11	M.Itoh+	E2157
$\alpha,inel$	^{12}C	DAE	2JPNOSA	3.9+08	3.9+08	Jour	PR/C,84,(5),054308	Nov 11	M.Itoh+	E2157
$\alpha,inel$	^{12}C	DAP	2JPNOSA	3.9+08	3.9+08	Jour	PR/C,84,(5),054308	Nov 11	M.Itoh+	E2157
$^{17}\text{F},sct$	^{12}C	DAP	2JPNTOK	6.0+07	6.0+07	Jour	EPJ/A,48,65	May 12	G.L.Zhang+	E2377

12 Magnesium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,x+n$	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456	70	V.K.Daruga+	O0116

13 Aluminium 27

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,x+n$	inclusive	TTD	4RUSFEI	1.2+07	2.4+07	Jour	AE,29,456	70	V.K.Daruga+	O0116

22 Titanium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,x+n$	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456	70	V.K.Daruga+	O0116
$d,x+n$	inclusive	TTD	2JPNKYU	9.0+06	9.0+06	Jour	KPS,59,(2),1725	Aug 11	N.Shigyo+	E2367

22 Titanium 48

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,ths	^{48}Ti	TSL	1USAANL	2.5-02	2.5-02	Jour	JAP,30,1323	Sep 59	S.S.Sidhu+	13580

26 Iron

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p,x+n$	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456	70	V.K.Daruga+	O0116

27

Cobalt

59

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456		70	V.K.Daruga+	O0116

28

Nickel

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456		70	V.K.Daruga+	O0116

28

Nickel

58

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,γ	^{59}Ni	CS	1USAORL	Maxwl	1.4+06	Jour	PR/C,47,1143		Mar 93	C.M.Perey+	12972

29

Copper

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456		70	V.K.Daruga+	O0116
$d,x+n$	inclusive	TTD	2JPNKYU	9.0+06	9.0+06	Jour	KPS,59,(2),1725		Aug 11	N.Shigyo+	E2367

30

Zinc

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456		70	V.K.Daruga+	O0116

36

Krypton

86

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
γ,n	^{85}Kr	CS	1USATNL	9.9+06	1.1+07	Jour	JP/CS,337,012048		12	R.Raut+	L0174

38

Strontium

86

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,γ	^{87}Sr	CS	1USAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

38

Strontium

87

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
n,γ	^{88}Sr	CS	IUSAORL	Maxwl		Jour	AJ,149,577			67	R.L.Macklin+	14322

38

Strontium

88

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
n,γ	^{89}Sr	CS	IUSAORL	Maxwl		Jour	AJ,149,577			67	R.L.Macklin+	14322

40

Zirconium

90

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
n,γ	^{91}Zr	CS	IUSAORL	Maxwl		Jour	AJ,149,577			67	R.L.Macklin+	14322

40

Zirconium

91

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
n,γ	^{92}Zr	CS	IUSAORL	Maxwl		Jour	AJ,149,577			67	R.L.Macklin+	14322

40

Zirconium

92

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
n,γ	^{93}Zr	CS	IUSAORL	Maxwl		Jour	AJ,149,577			67	R.L.Macklin+	14322

40

Zirconium

94

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
n,γ	^{95}Zr	CS	IUSAORL	Maxwl		Jour	AJ,149,577			67	R.L.Macklin+	14322

40

Zirconium

96

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
n,γ	^{97}Zr	CS	IUSAORL	Maxwl		Jour	AJ,149,577			67	R.L.Macklin+	14322

41

Niobium

93

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	1.2+07	2.4+07	Jour	AE,29,456		70	V.K.Daruga+	00116

42

Molybdenum

94

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,inel$	^{94}Mo	CSP	2GERHAM	2.6+07	2.6+07	Jour	NP/A,468,247		87	E.Fretwurst+	00580

42

Molybdenum

96

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,inel$	^{96}Mo	CSP	2GERHAM	2.6+07	2.6+07	Jour	NP/A,468,247		87	E.Fretwurst+	00580

42

Molybdenum

100

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,inel$	^{100}Mo	CSP	2GERHAM	2.6+07	2.6+07	Jour	NP/A,468,247		87	E.Fretwurst+	00580

44

Ruthenium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,ths	^{nat}Ru	TSL	1USAANL	2.5-02	2.5-02	Jour	JAP,30,1323		Sep 59	S.S.Sidhu+	13580

48

Cadmium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456		70	V.K.Daruga+	00116

49

Indium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,γ		CS	1USAORL	3.0+04	1.7+05	Jour	PR,122,182		61	J.H.Gibbons+	11329
n,ths	^{nat}In	TSL	1USAANL	2.5-02	2.5-02	Jour	JAP,30,1323		Sep 59	S.S.Sidhu+	13580

				50		Tin		116		
Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{117}Sn	CS	IUSAORL	Maxwl		Jour	AJ,149,577	67	R.L.Macklin+	14322

				50		Tin		117		
Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{118}Sn	CS	IUSAORL	Maxwl		Jour	AJ,149,577	67	R.L.Macklin+	14322

				50		Tin		118		
Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{119}Sn	CS	IUSAORL	Maxwl		Jour	AJ,149,577	67	R.L.Macklin+	14322

				50		Tin		119		
Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{120}Sn	CS	IUSAORL	Maxwl		Jour	AJ,149,577	67	R.L.Macklin+	14322

				50		Tin		120		
Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{121}Sn	CS	IUSAORL	Maxwl		Jour	AJ,149,577	67	R.L.Macklin+	14322

				52		Tellurium		122		
Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{123}Te	CS	IUSAORL	Maxwl		Jour	AJ,149,577	67	R.L.Macklin+	14322

				52		Tellurium		123		
Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{124}Te	CS	IUSAORL	Maxwl		Jour	AJ,149,577	67	R.L.Macklin+	14322

				52		Tellurium		124			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{125}Te	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				52		Tellurium		125			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{126}Te	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				52		Tellurium		126			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{127}Te	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				52		Tellurium		128			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{129}Te	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				52		Tellurium		130			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{131}Te	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				62		Samarium		144			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{145}Sm	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				62		Samarium		147			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,α	^{144}Nd	CS	IUSARPI	2.5-02	7.9+04	Jour	NIM/A,673,16		12	J.T.Thompson+	14319
n,γ	^{148}Sm	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				62		Samarium		148			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{149}Sm	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				62		Samarium		149			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,α	^{146}Nd	CS	IUSARPI	2.5-02	7.9+04	Jour	NIM/A,673,16		12	J.T.Thompson+	14319
n,γ	^{150}Sm	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				62		Samarium		150			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{151}Sm	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				62		Samarium		152			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{153}Sm	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				62		Samarium		154			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
n,γ	^{155}Sm	CS	IUSAORL	Maxwl		Jour	AJ,149,577		67	R.L.Macklin+	14322

				64		Gadolinium		155			
Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max	Ref Vol Page					
$n,0$		RP	IUSALAS			Jour	PR/C,85,024622		12	B.Baramsai+	14318
n,γ	^{156}Gd	CS	IUSAGRT	1.0+03	2.2+04	Conf	70HELSINKI,2,265		Jun 70	M.P.Fricke+	10049

64

Gadolinium

157

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,γ	^{158}Gd	CS	1USAGRT	1.0+03	2.2+04	Conf	70HELSINKI,2,265		Jun 70	M.P.Fricke+	10049

73

Tantalum

181

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	2.4+07	2.4+07	Jour	AE,29,456		70	V.K.Daruga+	00116

74

Tungsten

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	1.2+07	1.2+07	Jour	AE,29,456		70	V.K.Daruga+	00116

77

Iridium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,ths	^{nat}Ir	TSL	1USAANL	2.5-02	2.5-02	Jour	JAP,30,1323		Sep 59	S.S.Sidhu+	13580

82

Lead

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	1.2+07	2.4+07	Jour	AE,29,456		70	V.K.Daruga+	00116

82

Lead

208

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,el	^{208}Pb	DA	1USAMSU	3.0+07	4.0+07	Jour	PR/C,85,024619		12	R.P.Devito+	14317

92

Uranium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$p,x+n$	inclusive	TTD	4RUSFEI	1.2+07	2.4+07	Jour	AE,29,456		70	V.K.Daruga+	00116

92

Uranium

235

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,fis		CS	1USABRK		7.0+06	Jour	PR/C,85,024613	12	R.O.Hughes+	14316
<i>n</i> ,fis		?	1USABRK		7.6+06	Jour	PR/C,85,024613	12	R.O.Hughes+	14316

92

Uranium

236

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,fis		CS	1USABRK	1.0+05	9.8+06	Jour	PR/C,85,024613	12	R.O.Hughes+	14316
<i>n</i> ,fis		?	1USABRK	2.0+05	9.5+06	Jour	PR/C,85,024613	12	R.O.Hughes+	14316

92

Uranium

238

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
γ ,sct		RP	1USATNL			Jour	PR/C,85,044302	12	S.L.Hammond+	L0170

98

Californium

252

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0,fis	Many	FY	4ZZZDUB		Spont	Conf	2006SMOLEN,,295	06	A.V.Daniel+	14331
0,fis	^{nat} G	?	1USALRL		Spont	Jour	NIM/A,624,691	10	D.L.Bleuel+	14286
0,fis	Many	?	1USALRL		Spont	Jour	NIM/A,624,691	10	D.L.Bleuel+	14286
0,fis	^{nat} G	?	1USALRL		Spont	Jour	PR/C,85,021601	12	A.Chyzh+	14315
0,fis	Many	?	4ZZZDUB		Spont	Conf	2006SMOLEN,,295	06	A.V.Daniel+	14331
0,fis	¹⁰⁶ Mo	?	1USALRL		Spont	Jour	NIM/A,624,691	10	D.L.Bleuel+	14286