EXFOR News (November 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] 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)

92 Uranium 233

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis		NU	1USALAS	2.5-02	4.0+06	Conf	61VIENNA,1,149	61	B.C.Diven+	14297

92 Uranium 235

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis		CS	1USANBS	1.1+06	6.0+06	Rept	IAEA-TECDOC-335,467	85	M.S.Dias+	12924
n,fis		CS	1USANBS	1.2+06	3.1+06	Conf	78HARWELL,,880	78	A.D.Carlson+	12848
n,fis		CS	1USAANL	1.9+05	4.4+06	Jour	NSE,64,894	77	W.P.Poenitz	10711
n,fis		CS	1USANBS	2.8+06	6.2+06	Conf	78HARWELL,,880	78	A.D.Carlson+	12848
n,fis		CS	1USAANL	4.4+06	8.3+06	Jour	NSE,64,894	77	W.P.Poenitz	10711
n,fis		CS	1USANBS	5.0+03	8.0+05	Conf	70ANL,,183	76	O.A.Wasson	10595
n,fis		DA	1USAMHG	1.5+07	1.5+07	Conf	82ANTWER,,58	82	M.Mahdavi+	12826
n,fis		NU	1USALAS	2.5-02	4.0+06	Conf	61VIENNA,1,149	61	B.C.Diven+	14297
n,fis		NU	1USAANL	Maxwl		Conf	66PARIS,1,297	66	A.Devolpi+	14294

92 Uranium 238

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		NU	1CANOTC	Spont		Jour	CJP,32,498	54	K.W.Geiger+	14295
0,fis		NU	1USABNL	Spont		Jour	JNE/A,12,101	60	R.Sher+	14296
n,fis		NU	1USABNL	Fiss		Jour	JNE/A,12,101	60	R.Sher+	14296
n,γ	^{239}U	?	1USAANL	3.0+04	1.4+06	Jour	NSE,40,383	70	W.P.Poenitz	10086

94 Plutonium 239

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis		DA	1USAMHG	1.5+07	1.5+07	Conf	82ANTWER,,58	82	M.Mahdavi+	12826
n,fis		NU	1USALAS	2.5-02	4.0+06	Conf	61VIENNA,1,149	61	B.C.Diven+	14297
n,fis		?	1USAMHG	1.4+05	9.6+05	Jour	ANE,5,569	78	M.C.Davis+	10314
n,fis		?	1USAANL	1.5+05	1.4+06	Jour	NSE,40,383	70	W.P.Poenitz	10086
n,fis		?	1USAMHG	1.5+07	1.5+07	Conf	82ANTWER,,58	82	M.Mahdavi+	12826

94 Plutonium 240

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis		NU	1USALAS		2.5-02	Conf	61VIENNA,1,149	61	B.C.Diven+	14297

98 Californium 249

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis		KE	1USAANL	2.5-02	2.5-02	Conf	73ROCH,2,19	73	J.P.Unik+	14298
n,fis		NU	1USAANL	2.5-02	2.5-02	Conf	73ROCH,2,19	73	J.P.Unik+	14298

98 Californium 252

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		NU	1USAANL	Spont		Conf	66PARIS,1,297	66	A.Devolpi+	14294
0,fis		NU	1USALAS	Spont		Conf	61VIENNA,1,149	61	B.C.Diven+	14297

99 Einsteinium 253

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		NU	1USAANL	Spont		Jour	JIN,38,661	76	K.F.Flynn+	13340

99 Einsteinium 254

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,fis		NU	1USAANL	2.5-02	2.5-02	Jour	JIN,38,661	76	K.F.Flynn+	13340

100 Fermium 254

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		NU	1USAANL	Spont		Jour	PR/C,16,1483	Oct 77	J.E.Gindler+	10642

100 Fermium 256

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		NU	1USAANL	Spont		Jour	PR/C,5,1725	72	K.F.Flynn+	13454