EXFOR News (January 2015)

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 #
*	n,el	^{2}H	POD	1USATNL	2.2+07	2.2+07	Jour	PR/C,89,054001	14	G.J.Weisel+	14395

6 Carbon 14

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{15}C	CS	2GERKFK	Maxwl		Jour	AJ,387,258	92	H.Beer+	23252

13 Aluminium 27

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,α	^{24}Na	?	2BLGMOL	Fiss		Rept	STI/PUB-329,97	72	A.Fabry	23251
n,p	^{27}Mg	CS	2BLGMOL	Fiss		Rept	STI/PUB-329,97	72	A.Fabry	23251
n,p	^{27}Mg	?	2BLGMOL	Fiss		Rept	STI/PUB-329,97	72	A.Fabry	23251

54 Xenon 136

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{137}Xe	CS	1USATNL	3.7+05	1.5+07	Jour	PR/C,89,031602	14	M.Bhike+	14385

55 Caesium 135

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{136}Cs	CS	2GERKFK	Maxwl		Jour	NP/A,621,247	97	S.Jaag+	22448

72 Hafnium

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ		CS	2ZZZGEL	4.9-03	1.9+05	Rept	INDC(EUR)-0032	14	T.C.Ware+	23250

72 Hafnium 176

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{177}Hf	CS	2ZZZGEL	4.4-01	1.8+05	Rept	INDC(EUR)-0032	14	T.C.Ware+	23250

72 Hafnium 177

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{178}Hf	CS	2ZZZGEL	5.1-01	1.8+05	Rept	INDC(EUR)-0032	14	T.C.Ware+	23250

72 Hafnium 178

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{179}Hf	CS	2ZZZGEL	5.1-01	1.8+05	Rept	INDC(EUR)-0032	14	T.C.Ware+	23250

72 Hafnium 179

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{180}Hf	CS	2ZZZGEL	4.4-01	1.8+05	Rept	INDC(EUR)-0032	14	T.C.Ware+	23250

92 Uranium 235

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,fis		KE	1USALAS	3.7+06	4.5+07	Jour	PR/C,89,051604	14	R.Yanez+	14394
	n,fis		?	1USANBS	Fiss		Conf	71VIENNA,107	71	J.A.Grundl	13913

92 Uranium 238

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{239}U	CS	1USALAS	1.0+04	6.3+05	Jour	PR/C,89,034603	14	J.L.Ullmann+	14310

94 Plutonium 241

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
	n,abs		ALF	1USAORL	1.0+01	3.0+05	Jour	NSE,65,454	Mar 78	L.W.Weston+	10768
	n,fis		CS	1USAORL	4.0-01	3.0+04	Jour	NSE,65,454	Mar 78	L.W.Weston+	10768

	Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
*	n,γ	^{242}Am	CS	2JPNJAE	1.0-02	2.0-01	Jour	NDS,119,61	14	H.Harada+	23172
*	n,γ	^{242}Am	INT	2JPNJAE	2.0-02	1.5+00	Jour	NDS,119,61	14	H.Harada+	23172