

EXFOR News (May 2022)

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](#), [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 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 ($\sigma_{\text{capt}}/\sigma_{\text{fis}}$)	KE	Kinetic energy
AMP	Scattering length	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 $d\Omega_1/d\Omega_2/dE'$	NQ	Nuclear quantity
D3E	Triple differential $d\Omega/dE'_1/dE'_2$	NU	Fission neutron multiplicity $\bar{\nu}$
D4A	Quadruple diff. $d\Omega_1/d\Omega_2/dE'_1/dE'_2$	NUD	Delayed fission neutron multiplicity $\bar{\nu}_d$
DA	Differential $d/d\Omega$	POL	Polarization
DAA	Double differential $d\Omega_1/d\Omega_2$	POD	Differential polarization
DAE	Double differential $d\Omega/dE'$	PY	Product yield (other than fission)
DAP	Partial differential $d/d\Omega$	RI	Resonance integral
DAT	Temperature-dependent Legendre coefficient	RP	Resonance parameter
DE	Differential d/dE'	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 = $\bar{\nu}\sigma_{\text{fis}}/(\sigma_{\text{capt}} + \sigma_{\text{fis}})$	TT	Thick target yield
EVL	Evaluation	TTD	Differential thick target yield, $d/d\Omega$
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	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

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,tot		CS	1USACSE	2.0+06	1.4+07	Rept	COO-1573-6	66	L.A.Galloway+	11522

9 Fluorine 19

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,0		RP	1USACOL		2.0+02	Conf	65ANTWERP.,(74)	Jul 65	J.B.Garg+	11517

11 Sodium 23

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,0		RP	1USACOL		2.0+02	Conf	65ANTWERP.,(74)	Jul 65	J.B.Garg+	11517
<i>n</i> ,tot		CS	1USAANL	1.5+03	6.3+04	Jour	PR,85,595	52	C.T.Hibdon+	11386

12 Magnesium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,0		RP	1USACOL		2.0+02	Conf	65ANTWERP.,(74)	Jul 65	J.B.Garg+	11517

14 Silicon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,tot		CS	1USALAS	3.0-03	4.9+01	Conf	79KNOX.,86	79	R.M.Brugger+	10943
<i>n</i> ,tot		CST	1USALAS	3.0-03	4.9+01	Conf	79KNOX.,86	79	R.M.Brugger+	10943

16 Sulphur

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n</i> ,0		RP	1USACOL		2.0+02	Conf	65ANTWERP.,(74)	Jul 65	J.B.Garg+	11517

17 Chlorine

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	1USACOL		2.0+02	Conf	65ANTWERP,,(74)	Jul 65	J.B.Garg+	11517

19 Potassium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,0$		RP	1USACOL		2.0+02	Conf	65ANTWERP,,(74)	Jul 65	J.B.Garg+	11517
$n,x+\gamma$	inclusive	DAP	1USAQTY	1.8+06	4.0+06	Jour	PR,166,1074	68	D.B.Nichols+	11619

20 Calcium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,tot		CS	1USADKE	1.9+05	3.0+05	Jour	AP,14,365	61	H.W.Newson+	11368

22 Titanium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,tot		CS	1USAANL	2.0+03	3.9+04	Jour	PR,85,595	52	C.T.Hibdon+	11386

25 Manganese 55

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,tot		CS	1USAANL	3.1+02	6.0+04	Jour	PR,85,595	52	C.T.Hibdon+	11386

28 Nickel

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,inel$	^{nat}Ni	CS	1USALTI	1.4+06	3.9+06	Jour	NSE,72,191	79	S.Traiforos+	10852

56 Barium 130

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{131}Ba	CS	1CANCR	2.5-02	2.5-02	Jour	PR,75,699(2)	49	L.Yaffe+	14718

102 Nobelium 252

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
0, fis		KE	1USAORL	Spont		Jour	PR/C,15,705	77	C.E.Bemisjr+	14541
0, fis	Many	KE	1USAORL	Spont		Jour	PR/C,15,705	77	C.E.Bemisjr+	14541
0, fis		MAS	1USAORL	Spont		Jour	PR/C,15,705	77	C.E.Bemisjr+	14541