

Nuclear Reaction Data Center (JCPRG)

EXFOR : Recent Compilation (Added in April 2007)

EXFOR is a world-wide database for experimental neutron induced, charged-particle induced and photonuclear reaction compiled by Nuclear Reaction Data Centres Network coordinated by IAEA Nuclear Data Section. This list gives newly compiled data to EXFOR. *This list consists of tables titled by target nuclide.*

Retrieval service is available at:

<http://www.jcprg.org/exfor/>

Quantity code

ALF	Alpha	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	Nu
D3A	Triple differential $d\Omega_1/d\Omega_2/dE'$	NUD	Nu delayed
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	Eta	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	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)

1 Hydrogen 1

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,el	^1H	DA	2SWDUPP	9.6+07	9.6+07	Jour	PR/C,70,(1),014607	04	V.Blideanu+	22831

26 Iron

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,x	^3He	CS	2BLGLVN	4.1+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+\alpha$	inclusive	?	2BLGLVN	4.1+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+d$	inclusive	CS	2BLGLVN	2.8+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+d$	inclusive	CSP	2BLGLVN	2.6+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+d$	inclusive	DAE	2BLGLVN	2.6+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+d$	inclusive	DAP	2BLGLVN	2.6+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+d$	inclusive	DE	2BLGLVN	2.6+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+p$	inclusive	CS	2BLGLVN	2.8+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+p$	inclusive	CSP	2BLGLVN	2.6+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+p$	inclusive	DAE	2BLGLVN	2.6+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+p$	inclusive	DAP	2BLGLVN	2.6+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+p$	inclusive	DE	2BLGLVN	2.6+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+t$	inclusive	CS	2BLGLVN	4.1+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+t$	inclusive	CSP	2BLGLVN	3.8+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+t$	inclusive	DAE	2BLGLVN	3.8+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+t$	inclusive	DAP	2BLGLVN	3.8+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884
$n,x+t$	inclusive	DE	2BLGLVN	3.8+07	6.3+07	Jour	JP/G,30,45	04	I.Slypen+	22884

26 Iron 56

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,x+\alpha$	inclusive	DE	2SWDUPP	9.6+07	9.6+07	Jour	PR/C,70,(1),014607	04	V.Blideanu+	22831
$n,x+d$	inclusive	DE	2SWDUPP	9.6+07	9.6+07	Jour	PR/C,70,(1),014607	04	V.Blideanu+	22831
$n,x+p$	inclusive	DE	2SWDUPP	9.6+07	9.6+07	Jour	PR/C,70,(1),014607	04	V.Blideanu+	22831
$n,x+t$	inclusive	DE	2SWDUPP	9.6+07	9.6+07	Jour	PR/C,70,(1),014607	04	V.Blideanu+	22831

27 Cobalt 59

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{60}Co	CS	4RUSFEI	2.5+04	2.5+04	Conf	58GENEVA,15,50(2219)	Sep 58	A.I.Leipunskij+	40244

48 Cadmium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,x</i>	¹¹⁵ Cd	CS	4ZZZDUB		1.0+03	Jour	ARI,64,823	06	M.Manolopoulous+	41481

60 Neodymium 143

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,2γ</i>	¹⁴⁴ Nd	SPC	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,54,(9),1830	Sep 84	Yu.P.Popov+	41475
<i>n,2γ</i>	¹⁴⁴ Nd	SPC	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,48,(10),1907	Oct 84	E.V.Vasil'Eva+	41477

64 Gadolinium 156

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,γ</i>		SPC	4ZZZDUB	3.3+01	1.1+03	Jour	NIM,163,591	79	V.Bondarenko+	41470
<i>n,γ</i>		SPC	4ZZZDUB	3.3+01	3.3+01	Jour	NP/A,726,175	03	V.Bondarenko+	41470

64 Gadolinium 157

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,inel</i>	¹⁵⁷ Gd	SPC	4LATULR	1.0+06	1.0+06	Jour	NP/A,726,175	03	V.Bondarenko+	41470

69 Thulium 169

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,2γ</i>	¹⁷⁰ Tm	SPC	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,60,(11),36	Nov 96	E.V.Vasil'Eva+	41472

70 Ytterbium 172

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,γ</i>		MLT	4ZZZDUB	1.4+02	2.0+02	Jour	NP/A,763,31	Sep 05	S.A.Telezhnikov+	41482

70 Ytterbium 173

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
<i>n,0</i>		RP	4ZZZDUB			Jour	NP/A,763,31	Sep 05	S.A.Telezhnikov+	41482
<i>n,γ</i>		MLT	4ZZZDUB	4.5+00	2.1+02	Jour	NP/A,763,31	Sep 05	S.A.Telezhnikov+	41482

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Ytterbium

174

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2\gamma$	^{175}Yb	SPC	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,48,(10),1907	Oct 84	E.V.Vasil'Eva+	41471
$n,2\gamma$	^{175}Yb	SPC	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,48,(10),1907	Oct 84	E.V.Vasil'Eva+	41477

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Hafnium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,tot		?	2ZZZGEL	2.4+00	1.6+04	Jour	NSTS,2,(1),936	Aug 02	P.Siegler+	22956

74

Tungsten

182

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,γ	^{183}W	SPC	4LATULR	2.5-02	2.5-02	Jour	NP/A,614,183	97	P.Prokofjevs+	41479

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Tungsten

183

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,inel	^{183}W	SPC	4LATULR		8.0+05	Jour	NP/A,614,183	97	P.Prokofjevs+	41479

78

Platinum

195

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2\gamma$	^{196}Pt	SPC	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,58,(11),152	Nov 94	M.A.Ali+	41474

80

Mercury

199

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$n,2\gamma$	^{200}Hg	SPC	4ZZZDUB	2.5-02	2.5-02	Jour	IZV,60,(11),52	Nov 96	E.V.Vasil'Eva+	41473

82

Lead

208

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

$n,x+\alpha$	inclusive	DE	2SWDUPP	9.6+07	9.6+07	Jour	PR/C,70,(1),014607	04	V.Blideanu+	22831
$n,x+d$	inclusive	DE	2SWDUPP	9.6+07	9.6+07	Jour	PR/C,70,(1),014607	04	V.Blideanu+	22831
$n,x+p$	inclusive	DE	2SWDUPP	9.6+07	9.6+07	Jour	PR/C,70,(1),014607	04	V.Blideanu+	22831
$n,x+t$	inclusive	DE	2SWDUPP	9.6+07	9.6+07	Jour	PR/C,70,(1),014607	04	V.Blideanu+	22831

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Uranium

235

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,fis	Many	CHG	4RUSFEI	2.5-02	1.1+06	Jour	PR/C,74,014607	Jul 06	V.A.Roschenko+	41480
n,fis	Many	FY	4RUSFEI	2.5-02	1.1+06	Jour	PR/C,74,014607	Jul 06	V.A.Roschenko+	41480

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Neptunium

237

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,fis		NUD	4ZZZDUB	2.5-02	2.5-02	Rept	JINR-P3-2005-171,	05	N.A.Gundorin+	41476

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Plutonium

239

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,fis	Many	CHG	4RUSFEI	2.5-02	1.1+06	Jour	PR/C,74,014607	Jul 06	V.A.Roschenko+	41480
n,fis	Many	FY	4RUSFEI	2.5-02	1.1+06	Jour	PR/C,74,014607	Jul 06	V.A.Roschenko+	41480

94

Plutonium

242

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
n,tot		?	2ZZZGEL	4.0-01	1.0+03	Priv	KOPECKY	07	P.Siegler+	22955