

EXFOR News (March 2025)

New experimental data available from Nuclear Reaction Data Centres

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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 1

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* $^8\text{He},\text{el}$	^1H	DA	1CANTMF	8.8+05	3.5+06	Jour	PL/B,754,323			16	E.Ubersedera+	C2728
* $^{12}\text{C},\text{el}$	^1H	DA	1USATAM	1.5+06	2.0+06	Jour	PL/B,754,323			16	E.Ubersedera+	C2728
* $^{12}\text{C},\text{el}$	^1H	DA	1CANTMF	4.1+05	1.4+06	Jour	PL/B,754,323			16	E.Ubersedera+	C2728

4 Beryllium 9

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* $^{198}\text{Pt},\text{x}$	Many	CS	1USAMSU	1.7+10	1.7+10	Jour	PR/C,108,034608			23	K.Haak+	C2971

5 Boron 11

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* $^{16}\text{O},n$	^{26}Al	DAP	1USAANL	1.9+07	1.9+07	Jour	PR/C,105,L042801			22	G.Lotay+	C2771

6 Carbon

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* $^{238}\text{U},\text{x}$	Many	CS	1USAMSU	1.9+10	1.9+10	Jour	PR/C,108,034604			23	M.Bowry+	C2970

6 Carbon 12

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* p,γ		RP	1USANOT			Jour	PR/C,108,035805			23	K-U.Kettner+	C2972
* p,γ	^{13}N	CS	1USANOT	2.5+04	2.5+04	Jour	PR/C,108,035805			23	K-U.Kettner+	C2972
* p,γ	^{13}N	DA	1USANOT	1.1+06	2.5+06	Jour	PR/C,108,035805			23	K-U.Kettner+	C2972
* p,γ	^{13}N	RR	1USANOT			Jour	PR/C,108,035805			23	K-U.Kettner+	C2972
* p,γ	^{13}N	TT	1USANOT	1.0+06	2.0+06	Jour	PR/C,108,035805			23	K-U.Kettner+	C2972
t,α	^{11}B	CSP	1USANRL	9.5+05	2.0+06	Jour	PR,125,648			62	G.D.Gutsche+	C3023
t,α	^{11}B	DAP	1USANRL	8.0+05	2.0+06	Jour	PR,125,648			62	G.D.Gutsche+	C3023
t,el	^{12}C	DA	1USANRL	1.0+06	2.0+06	Jour	PR,125,648			62	G.D.Gutsche+	C3023
t,p	^{14}C	CSP	1USANRL	9.0+05	1.8+06	Jour	PR,125,648			62	G.D.Gutsche+	C3023
t,p	^{14}C	DAP	1USANRL	7.6+05	1.9+06	Jour	PR,125,648			62	G.D.Gutsche+	C3023
α,inel	^{12}C	DAP	1USATAM	1.3+08	1.3+08	Jour	PR/C,21,1252			80	C.M.Rozsa+	C3014
* $^{18}\text{O},^{12}\text{B}$	^{18}F	CSP	2ITYLNS	2.8+08	2.8+08	Jour	PR/C,110,064612			24	A.Spatafora+	D8104
* $^{18}\text{O},^{12}\text{B}$	^{18}F	DAP	2ITYLNS	2.8+08	2.8+08	Jour	PR/C,110,064612			24	A.Spatafora+	D8104

7 Nitrogen 14

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* p,γ		RP	1USANOT	5.2+06	6.8+06	Jour	PR/C,103,045802			21	B.Frentz+	C2628

8 Oxygen 16

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* $^{41}\text{K},\text{fus}$		CS	1USAMSU	2.4+07	3.0+07	Jour	PR/C,104,L041601			21	V.Singh+	C2698

11 Sodium 23

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* $p,0$		RP	1USATNL			Jour	PR/C,104,L032801			21	C.Marshall+	C2659

12 Magnesium 25

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* $^3\text{He},d$	^{26}Al	DAP	1USAANL	1.0+07	1.0+07	Jour	PL/B,813,136033			21	A.Kankainen+	C2632

13 Aluminium 27

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
$^{40}\text{Ar},x+\alpha$	inclusive	DAE	1USATAM	2.4+08	2.4+08	Jour	PR/C,35,2125			87	Z.Majka+	C3015

18 Argon 40

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* $^7\text{Li},\text{fus}$		CS	1USANOT	7.2+06	1.5+07	Jour	NIM/A,1025,166180			22	T.Ahn+	C2723

19 Potassium 39

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* p,γ		RP	1USANOT	3.5+05	1.3+06	Jour	PR/C,107,065806			23	Ph.Scholz+	C2966

20 Calcium 40

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$\alpha, {}^5\text{Li}$	${}^{39}\text{K}$	DAP	1USATAM	9.7+07	9.7+07	Jour	NP/A,313,157	79	D.R.Brown+	C3012
α, inel	${}^{40}\text{Ca}$	DAP	1USATAM	7.9+07	7.9+07	Jour	PR/C,13,1072	76	L.L.Rutledgejr+	C3006

20 Calcium 48

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
${}^3\text{He}, \alpha$	${}^{47}\text{Ca}$	CS	1USASTB	4.6+06	4.2+07	Jour	NP/A,153,225	70	B.M.Gordon	C3021
$\alpha, n+\alpha$	${}^{47}\text{Ca}$	CS	1USABNL	2.1+07	3.8+07	Jour	NP/A,153,225	70	B.M.Gordon	C3021

22 Titanium 48

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
$p, 2n$	${}^{47}\text{V}$	CS	1CANMCG	2.0+07	8.5+07	Jour	ZP/A,301,289	81	E.Gadioli+	D4060
p, x	${}^{38}\text{Cl}$	CS	1CANMCG	6.5+07	8.5+07	Jour	ZP/A,301,289	81	E.Gadioli+	D4060
p, x	${}^{42}\text{K}$	CS	1CANMCG	4.0+07	8.5+07	Jour	ZP/A,301,289	81	E.Gadioli+	D4060
p, x	${}^{43}\text{Sc}$	CS	1CANMCG	3.5+07	8.5+07	Jour	ZP/A,301,289	81	E.Gadioli+	D4060
p, x	${}^{46}\text{Sc}$	CS	1CANMCG	3.0+07	8.5+07	Jour	ZP/A,301,289	81	E.Gadioli+	D4060

22 Titanium 50

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p, x	${}^{39}\text{Cl}$	CS	1CANMCG	5.0+07	8.5+07	Jour	ZP/A,301,289	81	E.Gadioli+	D4060
p, x	${}^{43}\text{K}$	CS	1CANMCG	3.0+07	8.5+07	Jour	ZP/A,301,289	81	E.Gadioli+	D4060
p, x	${}^{44}\text{Sc}$	CS	1CANMCG	4.0+07	8.5+07	Jour	ZP/A,301,289	81	E.Gadioli+	D4060
p, x	${}^{47}\text{Sc}$	CS	1CANMCG	1.5+07	8.5+07	Jour	ZP/A,301,289	81	E.Gadioli+	D4060

23 Vanadium 41

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
${}^{16}\text{O}, x+\alpha$	inclusive	DAE	1USATAM	1.3+08	1.3+08	Jour	PR/C,35,2125	87	Z.Majka+	C3015
${}^{16}\text{O}, x+p$	inclusive	DAE	1USATAM	1.3+08	1.3+08	Jour	PR/C,35,2125	87	Z.Majka+	C3015

23 Vanadium 51

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* γ, α	${}^{47}\text{Sc}$	CS	1USACBF		3.2+07	Jour	NSE,198,158	24	R.Bentley+	L0286

24 Chromium 52

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α ,inel	^{52}Cr	DAP	1USATNL	7.4+06	1.4+07	Jour	PR/C,20,1589	79	H.R.Weller+	C3020

25 Manganese 55

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
^{12}C ,x α	inclusive	DAE	1USATAM	1.3+08	1.3+08	Jour	PR/C,35,2125	87	Z.Majka+	C3015

26 Iron 54

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
p,d	^{53}Fe	DAP	1USATNL	2.9+07	2.9+07	Jour	NP/A,215,541	73	R.O.Nelson+	C3019
α ,inel	^{54}Fe	DAP	1USATNL	8.3+06	1.9+07	Jour	PR/C,20,1589	79	H.R.Weller+	C3020
* ^6Li ,x α	inclusive	DE	1USAOHO	1.5+07	1.5+07	Jour	PR/C,108,034302	23	A.V.Voinov+	C2969

26 Iron 56

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n ,x p	inclusive	CS	3INDTAT	1.3+07	1.7+07	Jour	PL/B,848,138381	24	A.Sharma+	33201
* α , n	^{59}Ni	DAE	1USAOHO	1.3+07	1.3+07	Jour	PR/C,108,034302	23	A.V.Voinov+	C2969
* α , n	^{59}Ni	DAP	1USAOHO	1.3+07	1.3+07	Jour	PR/C,108,034302	23	A.V.Voinov+	C2969

26 Iron 58

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α ,inel	^{58}Fe	DAP	1USATNL	8.1+06	1.8+07	Jour	PR/C,20,1589	79	H.R.Weller+	C3020

28 Nickel 58

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n , p	^{58}Co	CS	3INDTRM	1.7+06	2.7+06	Jour	CPH/C,48,024001	24	A.Hingu+	33203

28 Nickel 60

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α ,inel	^{60}Ni	DAP	1USATNL	8.1+06	1.9+07	Jour	PR/C,20,1589	79	H.R.Weller+	C3020

28 Nickel 61

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* d,p	^{62}Ni	CSP	1USAFSU	1.6+07	1.6+07	Jour	PR/C,108,014311	23	M.Spieker+	C2967
* d,p	^{62}Ni	DAP	1USAFSU	1.6+07	1.6+07	Jour	PR/C,108,014311	23	M.Spieker+	C2967

28 Nickel 64

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α , ^6He	^{62}Ni	DAP	1USATAM	8.0+07	8.0+07	Jour	PRL,40,13	78	R.E.Tribble+	C3011
α , ^8He	^{60}Ni	DAP	1USATAM	8.0+07	8.0+07	Jour	PRL,40,13	78	R.E.Tribble+	C3011

29 Copper 63

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α ,x α	inclusive	DAE	1USATAM	1.2+08	1.2+08	Jour	PR/C,35,2125	87	Z.Majka+	C3015
α ,x	inclusive	DAE	1USATAM	1.2+08	1.2+08	Jour	PR/C,35,2125	87	Z.Majka+	C3015

30 Zinc 64

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α ,inel	^{64}Zn	DAP	1USATAM	1.3+08	1.3+08	Jour	PL/B,93,31	80	Y.-W.Lui+	C3013

30 Zinc 66

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
α ,inel	^{66}Zn	DAP	1USATAM	1.3+08	1.3+08	Jour	PL/B,93,31	80	Y.-W.Lui+	C3013

30 Zinc 68

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,γ	^{69}Zn	CS	3INDTRM	1.0+06	2.0+06	Jour	ARI,214,111535	24	N.S.Tawade+	33206

31 Gallium 71

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
*	γ, α	^{67}Cu	CS	1USACBF	3.2+07	Jour	NSE,198,158		24	R.Bentley+	L0286

35 Bromine

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
*	γ, x	^{79}Br	?	1USABRK	3.5+07	Jour	PRL,134,052504		25	R.E.Jacob+	L0272
*	e, x	^{79}Br	?	1USABRK	3.5+07	3.5+07	PRL,134,052504		25	R.E.Jacob+	L0272

35 Bromine 81

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
*	γ, n	^{80}Br	CS	1USABRK	3.5+07	Jour	PRL,134,052504		25	R.E.Jacob+	L0272
*	e, n	^{80}Br	CS	1USABRK	3.5+07	3.5+07	PRL,134,052504		25	R.E.Jacob+	L0272

38 Strontium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
*	n, x	^{87}Sr	CS	3INDTRM	8.6+05	2.0+06	Jour	NP/A,1042,122805	24	N.S.Tawade+	33202

40 Zirconium

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
	n, γ	RI	4RUSLEB		1.0+00	Rept	JINR-1845,104		64	S.P.Kapchigashev+	41233

40 Zirconium 90

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
	n, γ	^{91}Zr	RI	4RUSLEB	1.0+00	Rept	JINR-1845,104		64	S.P.Kapchigashev+	41233
	$\alpha, ^5\text{Li}$	^{89}Y	DAP	1USATAM	9.7+07	9.7+07	NP/A,313,157		79	D.R.Brown+	C3012
	α, inel	^{90}Zr	DAP	1USATAM	1.3+08	1.3+08	PR/C,21,1252		80	C.M.Rozsa+	C3014
	α, inel	^{90}Zr	DAP	1USATAM	9.6+07	9.6+07	PRL,37,816		76	J.M.Moss+	C3007

40 Zirconium 91

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,γ	^{92}Zr	RI	4RUSLEB		1.0+00	Rept	JINR-1845,	104	64	S.P.Kapchigashev+	41233

40 Zirconium 94

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
n,γ	^{95}Zr	RI	4RUSLEB		1.0+00	Rept	JINR-1845,	104	64	S.P.Kapchigashev+	41233

40 Zirconium 96

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
* n,γ	^{97}Zr	CS	3INDTRM	2.0+06	2.0+06	Jour	ARI,214,	111535	24	N.S.Tawade+	33206

41 Niobium 93

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
* $\gamma,3n$	^{90}Nb	CS	4ARMJER		6.7+07	Jour	NIM/B,557,	165557	24	R.V.Avetisyan+	M1053
* $\gamma,4n$	^{89}Nb	CS	4ARMJER		6.7+07	Jour	NIM/B,557,	165557	24	R.V.Avetisyan+	M1053
* γ,n	^{92}Nb	CS	4ARMJER		6.7+07	Jour	NIM/B,557,	165557	24	R.V.Avetisyan+	M1053

46 Palladium 105

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
$n,0$		RP	4ZZZDUB			Rept	JINR-P3-	11013	77	A.B.Popov+	41285

50 Tin 116

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α,inel	^{116}Sn	DAP	1USATAM	1.2+08	1.2+08	Jour	PR/C,18,	741	78	J.M.Moss+	C3010
α,inel	^{116}Sn	DAP	1USATAM	1.3+08	1.3+08	Jour	PR/C,21,	1252	80	C.M.Rozsa+	C3014

50 Tin 124

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α,inel	^{124}Sn	DAP	1USATAM	1.2+08	1.2+08	Jour	PR/C,18,	741	78	J.M.Moss+	C3010

51 Antimony 121

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* n,γ	^{122}Sb	CS	3INDTRM	1.0+06	2.0+06	Jour	ARI,214,111535			24	N.S.Tawade+	33206

51 Antimony 123

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* n,γ	^{124}Sb	CS	3INDTRM	1.0+06	2.0+06	Jour	ARI,214,111535			24	N.S.Tawade+	33206

60 Neodymium 142

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
α,inel	^{142}Nd	DAP	1USATAM	1.2+08	1.2+08	Jour	PRL,37,816			76	J.M.Moss+	C3007

60 Neodymium 150

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* n,γ	^{151}Nd	CS	3INDTRM	8.6+05	2.0+06	Jour	NP/A,1042,122805			24	N.S.Tawade+	33202

62 Samarium 144

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
α,inel	^{144}Sm	DAP	1USATAM	9.6+07	9.6+07	Jour	PRL,39,1188			77	D.H.Youngblood+	C3009

62 Samarium 148

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
α,inel	^{148}Sm	DAP	1USATAM	1.2+08	1.2+08	Jour	PRL,37,816			76	J.M.Moss+	C3007

62 Samarium 152

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation			Date	Author	Data #
				Min	Max		Ref	Vol	Page			
* n,γ	^{153}Sm	CS	3INDTRM	8.6+05	2.0+06	Jour	NP/A,1042,122805			24	N.S.Tawade+	33202

62 Samarium 154

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
*	γ ,el	^{154}Sm	CS	1USATNL	1.1+07 1.8+07	Jour	PRL,134,022503	25	J.Kleemann+	L0285
*	γ ,inel	^{154}Sm	CSP	1USATNL	1.1+07 1.8+07	Jour	PRL,134,022503	25	J.Kleemann+	L0285
*	n,γ	^{155}Sm	CS	3INDTRM	8.6+05 2.0+06	Jour	NP/A,1042,122805	24	N.S.Tawade+	33202
	α ,inel	^{154}Sm	DAP	1USATAM	1.2+08 1.2+08	Jour	PRL,37,816	76	J.M.Moss+	C3007

68 Erbium 164

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
	n ,tot		CS	4UKRIFU	2.5-02 2.5-02	Rept	INDC(CCP)-006,5	68	V.P.Vertebny+	40061

68 Erbium 167

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
	n ,0		RP	4ZZZDUB	5.9+00 2.9+02	Rept	JINR-P3-8511	75	E.N.Karzhavina+	41277

68 Erbium 168

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
	n ,tot		CS	4UKRIFU	2.5-02 2.5-02	Rept	INDC(CCP)-006,5	68	V.P.Vertebny+	40061

68 Erbium 170

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
	n ,tot		CS	4UKRIFU	2.5-02 2.5-02	Rept	INDC(CCP)-006,5	68	V.P.Vertebny+	40061

70 Ytterbium 173

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
	n ,0		RP	4ZZZDUB	1.7+01 6.2+02	Rept	JINR-P3-8511	75	E.N.Karzhavina+	41277

73 Tantalum 180

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
* γ ,inel	^{180}Ta	CS	1USATNL	1.6+06	3.7+06	Jour	NIM/A,928,79		19	W.Tornow+	L0275

75 Rhenium 187

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
* ^{19}F ,fus		CS	3INDNSD	1.2+08	1.6+08	Jour	NP/A,1042,122789		24	K.Hajara+	D6462

79 Gold 197

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α ,inel	^{197}Au	DAP	1USATAM	1.2+08	1.2+08	Jour	PR/C,18,741		78	J.M.Moss+	C3010

82 Lead 208

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
α , ^5Li	^{207}Tl	DAP	1USATAM	9.7+07	9.7+07	Jour	NP/A,313,157		79	D.R.Brown+	C3012
α ,inel	^{208}Pb	DAP	1USATAM	7.9+07	7.9+07	Jour	PR/C,13,1072		76	L.L.Rutledgejr+	C3006
α ,inel	^{208}Pb	DAP	1USATAM	9.6+07	9.6+07	Jour	PRL,39,1188		77	D.H.Youngblood+	C3009

92 Uranium 235

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
* n ,fis		NUD	4RUSFEI	4.2+05	8.0+06	Jour	ANE,211,110904		25	D.E.Gremyachkin+	41777

94 Plutonium 241

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation		Date	Author	Data #
				Min	Max		Ref	Vol Page			
* n ,fis	Many	FY	3INDTRM	5.0-01		Jour	RCA,111,793		23	H.Naik+	33198
* n ,fis	^{130}Sb	FY	3INDTRM	5.0-01		Jour	RCA,111,793		23	H.Naik+	33198
* n ,fis	^{132}Sb	FY	3INDTRM	5.0-01		Jour	RCA,111,793		23	H.Naik+	33198
* n ,fis	^{131}Te	FY	3INDTRM	5.0-01		Jour	RCA,111,793		23	H.Naik+	33198
* n ,fis	^{133}Te	FY	3INDTRM	5.0-01		Jour	RCA,111,793		23	H.Naik+	33198
* n ,fis	^{134}I	FY	3INDTRM	5.0-01		Jour	RCA,111,793		23	H.Naik+	33198
* n ,fis	^{136}I	FY	3INDTRM	5.0-01		Jour	RCA,111,793		23	H.Naik+	33198
* n ,fis	^{135}Xe	FY	3INDTRM	5.0-01		Jour	RCA,111,793		23	H.Naik+	33198
* n ,fis	^{138}Cs	FY	3INDTRM	5.0-01		Jour	RCA,111,793		23	H.Naik+	33198

94 Plutonium 244

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* $^{50}\text{Ti}_{\text{x}}$	^{290}Lv	CS	1USABRK	2.2+08	2.2+08	Jour	PRL,133,172502	24	J.M.Gates+	C3022

96 Curium 245

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation Ref Vol Page	Date	Author	Data #
				Min	Max					
* n,fis	Many	CHG	3INDTRM	5.0-01		Jour	EPJ/A,59,230	23	H.Naik+	33199
* n,fis	Many	FY	3INDTRM	5.0-01		Jour	EPJ/A,59,230	23	H.Naik+	33199
* n,fis	Many	MAS	3INDTRM	5.0-01		Jour	EPJ/A,59,230	23	H.Naik+	33199