EXFOR News (December 2023)

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, 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 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 ($\sigma_{\rm capt}/\sigma_{\rm fis}$)	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/dΩ	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/dΩ	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 = $\bar{\nu}\sigma_{\rm fis}/(\sigma_{\rm capt}+\sigma_{\rm fis})$	TT	Thick target yield
EVL	Evaluation	TTD	Differential thick target yield, d/dΩ
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	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 #
d,n	^{3}He	TT	1USACAL	5.0+05	9.0+05	Jour	PR,49,19	36	T.W.Bonner+	C2891
d,p	^{3}H	TT	1USAPTN	1.0+05	1.0+05	Jour	PR,50,1190	36	R.Ladenburg+	C2893

1 Hydrogen 3

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,n	^{4}He	CS	1USALAS	1.0+04	1.3+05	Rept	AECU-939	50	T.W.Bonner	C2884
d,n	^{4}He	CS	1USARIC	1.1+05	1.1+05	Jour	PR,88,468	52	J.P.Conner+	C0008

3 Lithium 6

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,d	^{8}Be	DAP	1USAFSU	2.0+07	2.4+07	Jour	PR/C,10,564	74	M.B.Greenfield+	C2797

4 Berylium 9

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,n	^{10}B	TT	1USACAL	5.0+05	9.0+05	Jour	PR,49,19	36	T.W.Bonner+	C2891

6 Carbon 12

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,^{8}Be	^{8}Be	DA	1USAFSU	1.9+07	2.3+07	Jour	NP/A,227,349	74	D.R.James+	C2796
α,el	^{12}C	DA	1USAFSU	3.5+06	3.6+06	Jour	PR/C,25,2935	82	A.D.Frawley+	C2801
α,el	^{12}C	DA	1USACLU	3.6+07	3.6+07	Jour	PL/B,56,335	75	F.E.Cecil+	C2790
α,inel	^{12}C	DAP	1USAFSU	1.8+07	1.9+07	Jour	NP/A,363,280	81	A.D.Frawley+	C2800
α,inel	^{12}C	DAP	1USACLU	3.6+07	3.6+07	Jour	PL/B,56,335	75	F.E.Cecil+	C2790
α,p	^{15}N	DAP	1USACLU	3.5+07	3.5+07	Jour	NP/A,408,21	83	J.J.Hamill+	C2787

6 Carbon 13

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,p	^{16}N	DAP	1USACLU	3.5+07	3.5+07	Jour	NP/A,408,21	83	J.J.Hamill+	C2787

9 Fluorine 19

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,t	^{20}Ne	CSP	1USALRL	2.8+07	2.8+07	Jour	PR,158,917	67	L.F.Hansen+	C2799
α,t	^{20}Ne	DAP	1USALRL	2.8+07	2.8+07	Jour	PR,158,917	67	L.F.Hansen+	C2799

13 Aluminium 27

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,el	^{27}Al	DA	1USAFSU	2.1+07	2.8+07	Jour	PR/C,6,2090	72	K.W.Kemper+	C2793

14 Silicon 30

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,γ	^{32}P	CS	1USAPUP	3.7+06	1.4+07	Jour	NP,86,429	66	F.W.Pement+	P0115
α,el	^{30}Si	DA	1USAINU	1.2+08	1.2+08	Jour	PL/B,114,419	82	A.Saha+	C2803
α,inel	^{30}Si	DAP	1USAINU	1.2+08	1.2+08	Jour	PL/B,114,419	82	A.Saha+	C2803

16 Sulphur 34

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,el	^{34}S	DA	1USAINU	1.2+08	1.2+08	Jour	PRL,52,1876	84	A.Saha+	C2795
α,inel	^{34}S	DAP	1USAINU	1.2+08	1.2+08	Jour	PRL,52,1876	84	A.Saha+	C2795

22 Titanium 46

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,inel	^{46}Ti	DAP	1USAINU	1.5+08	1.5+08	Jour	PR/C,22,1832	80	F.E.Bertrand+	C2802

24 Chromium 50

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,el	^{50}Cr	DA	1USACLU	2.3+07	2.3+07	Jour	NP/A,218,109	74	R.J.Peterson+	C2783
p,inel	^{50}Cr	DAP	1USACLU	2.3+07	2.3+07	Jour	NP/A,218,109	74	R.J.Peterson+	C2783
d,el	^{50}Cr	DA	1USACLU	1.6+07	1.6+07	Jour	NP/A,218,109	74	R.J.Peterson+	C2783
d,inel	^{50}Cr	DAP	1USACLU	1.6+07	1.6+07	Jour	NP/A,218,109	74	R.J.Peterson+	C2783
^{3}He,el	^{50}Cr	DA	1USACLU	4.1+07	4.1+07	Jour	NP/A,218,109	74	R.J.Peterson+	C2783
^{3}He,inel	^{50}Cr	DAP	1USACLU	4.1+07	4.1+07	Jour	NP/A,218,109	74	R.J.Peterson+	C2783

α,el	^{50}Cr	DA	1USACLU	3.6+07	3.6+07	Jour	NP/A,218,109	74	R.J.Peterson+	C2783
α,inel	^{50}Cr	DAP	1USACLU	3.6+07	3.6+07	Jour	NP/A,218,109	74	R.J.Peterson+	C2783

26 Iron 54

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
α,el	^{54}Fe	DA	1USAFSU	8.0+06	1.5+07	Jour	NP/A,215,197	73	B.Yaramis+	C2794

28 Nickel 58

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
α,el	^{58}Ni	DA	1USAINU	1.5+08	1.5+08	Jour	PR/C,22,1832	80	F.E.Bertrand+	C2802
α,inel	^{58}Ni	DAP	1USAINU	1.5+08	1.5+08	Jour	PR/C,22,1832	80	F.E.Bertrand+	C2802

31 Gallium 71

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
d,α	^{69}Zn	CS	1USAPUP	4.5+06	1.4+07	Jour	PR,155,1352	67	J.B.Natowitz+	C2325

40 Zirconium 90

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
α,el	^{90}Zr	DA	1USAINU	1.5+08	1.5+08	Jour	PR/C,22,1832	80	F.E.Bertrand+	C2802
α,inel	^{90}Zr	DAP	1USAINU	1.5+08	1.5+08	Jour	PR/C,22,1832	80	F.E.Bertrand+	C2802

40 Zirconium 94

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
d,n	^{95}Nb	CS	1USAPUP	6.0+06	1.4+07	Jour	PR,155,1352	67	J.B.Natowitz+	C2325

42 Molybdenum 92

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
d,n	^{93}Tc	CS	1USAPUP	8.0+05	1.4+07	Jour	PR,155,1352	67	J.B.Natowitz+	C2325

50 Tin 116

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,p	^{119}Sb	DAP	1USACLU	3.6+07	3.6+07	Jour	PR/C,19,1767	79	P.A.Smith+	C2786

50 Tin 120

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,el	^{120}Sn	DA	1USAINU	1.5+08	1.5+08	Jour	PR/C,22,1832	80	F.E.Bertrand+	C2802
α,inel	^{120}Sn	DAP	1USAINU	1.5+08	1.5+08	Jour	PR/C,22,1832	80	F.E.Bertrand+	C2802

52 Tellurium 130

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,n	^{131}I	?	1USAPUP	4.5+06	1.4+07	Jour	NP,86,429	66	F.W.Pement+	P0115

56 Barium

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,x	^{135}La	CS	1USAPUP	5.6+06	1.4+07	Jour	NP,86,429	66	F.W.Pement+	P0115

56 Barium 138

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,γ	^{140}La	CS	1USAPUP	5.6+06	1.4+07	Jour	NP,86,429	66	F.W.Pement+	P0115

73 Tantalum 181

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,x+n	inclusive	TT	1USABRK	4.0+07	8.0+07	Jour	HP,11,659	65	W.W.Wadman	C2883

74 Tungsten

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,x	^{184}Re	CS	1USAPUP	7.3+06	1.4+07	Jour	NP,86,429	66	F.W.Pement+	P0115

78 Platinum 194

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{3}He,d	^{195}Au	DAP	1USACLU	4.1+07	4.1+07	Jour	NP/A,303,199	78	M.L.Munger+	C2785
α,t	^{195}Au	DAP	1USACLU	3.5+07	3.5+07	Jour	NP/A,303,199	78	M.L.Munger+	C2785

78 Platinum 196

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{3}He,d	^{197}Au	DAP	1USACLU	4.1+07	4.1+07	Jour	NP/A,303,199	78	M.L.Munger+	C2785

78 Platinum 198

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{3}He,d	^{199}Au	DAP	1USACLU	4.1+07	4.1+07	Jour	NP/A,303,199	78	M.L.Munger+	C2785
α,t	^{199}Au	DAP	1USACLU	3.5+07	3.5+07	Jour	NP/A,303,199	78	M.L.Munger+	C2785

82 Lead 206

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,p	^{209}Bi	DAP	1USACLU	3.6+07	3.6+07	Jour	PR/C,16,139	77	E.R.Flynn+	C2784

82 Lead 208

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,el	^{208}Pb	DA	1USAINU	1.5+08	1.5+08	Jour	PR/C,22,1832	80	F.E.Bertrand+	C2802
α,el	^{208}Pb	DA	1USAFSU	1.7+07	2.6+07	Jour	PR/C,9,1521	74	G.M.Hudson+	C2798
α,inel	^{208}Pb	DAP	1USAINU	9.6+07	1.5+08	Jour	PR/C,22,1832	80	F.E.Bertrand+	C2802
α,p	^{211}Bi	DAP	1USACLU	3.6+07	3.6+07	Jour	PR/C,16,139	77	E.R.Flynn+	C2784
^{9}Li,el	^{208}Pb	DA	1CANTMF	2.3+07	3.3+07	Jour	PRL,109,262701	12	M.Cubero+	C1974

93 Neptunium 237

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,fis		CS	1USABRK	2.0+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{89}Sr	CS	1USABRK	2.3+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{91}Sr	CS	1USABRK	2.0+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{97}Zr	CS	1USABRK	3.2+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{103}Ru	CS	1USABRK	3.2+07	3.2+07	Rept	UCRL-3493	56	W.M.Gibson	C2882

α,fis	^{105}Ru	CS	1USABRK	2.0+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{109}Pd	CS	1USABRK	4.5+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{112}Pd	CS	1USABRK	4.5+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{111}Ag	CS	1USABRK	3.2+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{113}Ag	CS	1USABRK	3.2+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{115}Cd	CS	1USABRK	2.0+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{117}Cd	CS	1USABRK	2.0+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{139}Ba	CS	1USABRK	2.0+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{140}Ba	CS	1USABRK	2.0+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{141}Ce	CS	1USABRK	4.6+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{143}Ce	CS	1USABRK	3.2+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{144}Ce	CS	1USABRK	4.6+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{147}Nd	CS	1USABRK	2.3+07	3.2+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{157}Eu	CS	1USABRK	3.2+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,fis	^{159}Gd	CS	1USABRK	2.3+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
α,x	Many	CS	1USABRK	2.3+07	4.6+07	Rept	UCRL-3493	56	W.M.Gibson	C2882

94 Plutonium 238

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
d,2n	^{238}Am	CS	1USABRK	1.2+07	2.3+07	Rept	UCRL-3495	56	E.V.Luoma	C2885
d,3n	^{237}Am	CS	1USABRK	1.2+07	2.3+07	Rept	UCRL-3495	56	E.V.Luoma	C2885
d,α	^{236}Np	CS	1USABRK	2.0+07	2.0+07	Rept	UCRL-3495	56	E.V.Luoma	C2885
d,n	^{239}Am	CS	1USABRK	9.1+06	2.3+07	Rept	UCRL-3495	56	E.V.Luoma	C2885

94 Plutonium 239

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
d,fis		CS	1USABRK			Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{89}Sr	CS	1USABRK	9.2+06	2.3+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{91}Sr	CS	1USABRK	9.2+06	2.3+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{91}Y	CS	1USABRK	2.1+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{93}Y	CS	1USABRK	2.1+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{95}Zr	CS	1USABRK	1.5+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{97}Zr	CS	1USABRK	1.5+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{103}Ru	CS	1USABRK	1.5+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{105}Ru	CS	1USABRK	1.5+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{111}Ag	CS	1USABRK	1.5+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{113}Ag	CS	1USABRK	1.5+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{115}Cd	CS	1USABRK	9.2+06	2.3+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{117}Cd	CS	1USABRK	9.2+06	2.3+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{139}Ba	CS	1USABRK	9.2+06	2.0+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{140}Ba	CS	1USABRK	9.2+06	2.3+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{143}Ce	CS	1USABRK	9.2+06	2.3+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{147}Nd	CS	1USABRK	9.2+06	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{156}Eu	CS	1USABRK	1.6+07	2.0+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{157}Eu	CS	1USABRK	1.6+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{159}Gd	CS	1USABRK	2.1+07	2.1+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,fis	^{161}Tb	CS	1USABRK	1.6+07	2.0+07	Rept	UCRL-3493	56	W.M.Gibson	C2882
d,x	Many	CS	1USABRK	2.1+07	2.3+07	Rept	UCRL-3493	56	W.M.Gibson	C2882

Reaction	Product	Quant.	Lab.	Energy (eV)		Type	Documentation	Date	Author	Data #
				Min	Max		Ref Vol Page			
d,2n	^{240}Am	CS	1USABRK	1.2+07	2.3+07	Rept	UCRL-3495	56	E.V.Luoma	C2885
d,3n	^{239}Am	CS	1USABRK	1.2+07	2.3+07	Rept	UCRL-3495	56	E.V.Luoma	C2885
d,fis	Many	CS	1USABRK		1.0+07	Rept	UCRL-3495	56	E.V.Luoma	C2885
d,fis		CS	1USABRK		1.0+07	Rept	UCRL-3495	56	E.V.Luoma	C2885