EXFOR News (December 2011)

New experimental data available from Nuclear Reaction Data Centres

EXFOR is a world-wide data library for experimental neutron induced, charged-particle induced and photonuclear reaction data compiled by the International Network of the Nuclear Reaction Data Centres (NRDC)[a] coordinated by the IAEA Nuclear Data Section. Regularly updated retrieval database is available at NNDC, NEADB, IAEA-NDS, JAEA, JCPRG and CDFE. Please send an email to n.otsuka@iaea.org if you would prefer to be advised electronically when EXFOR News is released.

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 $d\Omega_1/d\Omega_2/dE'$	NUD	Delayed fission neutron multiplicity $\bar{\nu}_d$
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	η-value $\bar{\nu}\sigma_{\rm fis}/(\sigma_{\rm capt}+\sigma_{\rm fis})$	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)

[a] NNDC (USA), NEADB (France), NDS (Austria), CJD (Russia), CNDC (China), ATOMKI (Hungary), BARC (India), JAEA (Japan), JCPRG (Japan), KAERI (Korea), CAJaD (Russia), CDFE (Russia), CNPD (Russia), UkrNDC (Ukraine)

1 Hydrogen 1

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
t,n	^{3}He	DA	1USAMSU	3.4+08	3.4+08	Jour	PR/C,83,054614	11	G.Perdikakis+	C1842

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	MLT	1USALAS	1.2+05	2.9+05	Jour	PR,70,101(A3)	Jul 46	J.H.Manley+	A1176
d,p	^{3}H	MLT	1USALAS	1.2+05	3.0+05	Jour	PR,70,101(A4)	Jul 46	A.C.Graves+	A1177

2 Helium 3

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
t,el	^{3}He	POD	1USALAS	9.0+06	1.3+08	Jour	PR/C,15,(5),1613	May 77	R.F.Haglundjr+	A1124

3 Lithium 7

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,n	^{7}Be	TT	1CANMCM	1.9+06	2.2+06	Jour	NIM/A,643,47	11	W.Matysiak+	C1844

4 Beryllium 9

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,el		RP	4ZZZDUB	-9.5+05	-7.0+05	Rept	JINR-P3-89-408	Jun 89	D.I.Lyapin+	41401
p,n	^{9}B	DA	4RUSRGU	2.0+06	2.1+06	Jour	YF,12,15	Jul 70	V.S.Siksin+	F0121
d,t	^{8}Be	DAP	3EGYCAI	8.9+05	2.5+06	Jour	RRP,19,551	74	L.Bondouk+	F0130
α,0		RP	3CRORBZ			Jour	PR/C,84,034317	11	M.Freer+	D0669
α,el	^{9}Be	DA	3CRORBZ	1.7+06	6.0+06	Jour	PR/C,84,034317	11	M.Freer+	D0669
^{22}Mg,x	^{23}Mg	CS	1USAMSU	1.8+09	1.8+09	Jour	PR/C,83,054324	11	A.Gade+	C1840
^{22}Mg,x	^{23}Mg	CSP	1USAMSU	1.8+09	1.8+09	Jour	PR/C,83,054324	11	A.Gade+	C1840
^{46}Ar,x	^{44}S	CS	1USAMSU	1.0+08	1.0+08	Jour	PR/C,83,061305	11	D.Santiago-Gonzalez+	C1848
^{46}Ar,x	^{44}S	CSP	1USAMSU	1.0+08	1.0+08	Jour	PR/C,83,061305	11	D.Santiago-Gonzalez+	C1848

6 Carbon 12

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

t,^{3}He	^{12}B	DAP	1USAMSU	3.4+08	3.4+08	Jour	PR/C,83,054614	11	G.Perdikakis+	C1842
^{6}Li,el	^{12}C	DA	1USANOT	1.2+07	1.2+07	Jour	PR/C,84,014603	11	A.Barioni+	C1843
^{7}Be,el	^{12}C	DA	1USANOT	1.9+07	1.9+07	Jour	PR/C,84,014603	11	A.Barioni+	C1843
^{7}Be,el	^{12}C	DA	3BZLUSP	1.9+07	1.9+07	Jour	PR/C,84,034611	11	J.C.Zamora+	D0670
^{7}Be,non		CS	3BZLUSP	1.2+07	1.2+07	Jour	PR/C,84,034611	11	J.C.Zamora+	D0670
^{9}Be,el	^{12}C	DA	3BZLUSP	2.6+07	2.6+07	Jour	PR/C,84,034611	11	J.C.Zamora+	D0670
^{9}Be,non		CS	3BZLUSP	1.5+07	1.5+07	Jour	PR/C,84,034611	11	J.C.Zamora+	D0670
^{10}Be,el	^{12}C	DA	3BZLUSP	2.3+07	2.3+07	Jour	PR/C,84,034611	11	J.C.Zamora+	D0670
^{10}Be,non		CS	3BZLUSP	1.3+07	1.3+07	Jour	PR/C,84,034611	11	J.C.Zamora+	D0670
^{8}B,el	^{12}C	DA	1USANOT	2.6+07	2.6+07	Jour	PR/C,84,014603	11	A.Barioni+	C1843
^{22}Mg,x	^{23}Mg	CS	1USAMSU	1.8+09	1.8+09	Jour	PR/C,83,054324	11	A.Gade+	C1840
^{22}Mg,x	^{23}Mg	CSP	1USAMSU	1.8+09	1.8+09	Jour	PR/C,83,054324	11	A.Gade+	C1840

6 Carbon 14

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,el	^{14}C	DA	3CZRUJF	1.7+07	1.7+07	Jour	PR/C,84,024616	11	A.M.Mukhamedzhanov+	D0660
d,p	^{15}C	DAP	3CZRUJF	1.7+07	1.7+07	Jour	PR/C,84,024616	11	A.M.Mukhamedzhanov+	D0660

8 Oxygen 17

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,0		RP	1USANOT			Jour	PR/C,83,052802	11	A.Best+	C1846
α,γ	^{21}Ne	MLT	1USANOT	7.6+05	1.6+06	Jour	PR/C,83,052802	11	A.Best+	C1846

13 Aluminium

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,tot		CS	1USAANL	1.0-03	6.7-01	Jour	JAC,26,438	93	D.F.R.Mildner+	14302

20 Calcium 40

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,el	^{40}Ca	DA	1USATNL	1.2+07	1.7+07	Jour	PR/C,83,064605	11	J.M.Mueller+	14303

20 Calcium 48

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,el	^{48}Ca	DA	1USATNL	1.2+07	1.7+07	Jour	PR/C,83,064605	11	J.M.Mueller+	14303
α,el	^{48}Ca	DA	1USATAM	2.4+08	2.4+08	Jour	PR/C,83,044327	11	Y.-W.Lui+	C1845
α,inel	^{48}Ca	DAP	1USATAM	2.4+08	2.4+08	Jour	PR/C,83,044327	11	Y.-W.Lui+	C1845

25 Manganese 55

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{6}Li,x+n	inclusive	DE	1USAOHO	1.5+07	1.5+07	Jour	PR/C,83,054605	11	A.V.Voinov+	C1841
^{6}Li,x+p	inclusive	DE	1USAOHO	1.5+07	1.5+07	Jour	PR/C,83,054605	11	A.V.Voinov+	C1841

26 Iron 57

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,x+p	inclusive	DAE	1USAOHO	3.0+07	3.0+07	Jour	PR/C,83,054605	11	A.V.Voinov+	C1841
α,x+p	inclusive	DAP	1USAOHO	3.0+07	3.0+07	Jour	PR/C,83,054605	11	A.V.Voinov+	C1841
α,x+p	inclusive	DE	1USAOHO	3.0+07	3.0+07	Jour	PR/C,83,054605	11	A.V.Voinov+	C1841

27 Cobalt 59

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,x	^{52}Mn	CS	2JPNTOH	6.0+07	7.0+07	Jour	KPS,59,1697	11	F.Ditroi+	D4255
p,x	^{54}Mn	CS	2JPNTOH	6.0+07	7.0+07	Jour	KPS,59,1697	11	F.Ditroi+	D4255
p,x	^{55}Co	CS	2JPNTOH	6.0+07	7.0+07	Jour	KPS,59,1697	11	F.Ditroi+	D4255
p,x	^{56}Co	CS	2JPNTOH	6.0+07	7.0+07	Jour	KPS,59,1697	11	F.Ditroi+	D4255
p,x	^{57}Co	CS	2JPNTOH	6.0+07	7.0+07	Jour	KPS,59,1697	11	F.Ditroi+	D4255
p,x	^{58}Co	CS	2JPNTOH	6.0+07	7.0+07	Jour	KPS,59,1697	11	F.Ditroi+	D4255
p,x	^{57}Ni	CS	2JPNTOH	6.0+07	7.0+07	Jour	KPS,59,1697	11	F.Ditroi+	D4255

28 Nickel

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,x	^{55}Co	TT	3IRNKRJ	3.0+06	1.6+07	Jour	RCA,96,399	08	M.Sadeghi+	D0662
p,x	^{57}Co	TT	3IRNKRJ	3.0+06	1.6+07	Jour	RCA,96,399	08	M.Sadeghi+	D0662
p,x	^{58}Co	TT	3IRNKRJ	3.0+06	1.6+07	Jour	RCA,96,399	08	M.Sadeghi+	D0662
p,x	^{57}Ni	TT	3IRNKRJ	3.0+06	1.6+07	Jour	RCA,96,399	08	M.Sadeghi+	D0662
p,x	^{61}Cu	TT	3IRNKRJ	3.0+06	1.6+07	Jour	RCA,96,399	08	M.Sadeghi+	D0662
p,x	^{64}Cu	TT	3CHLCEC	3.0+06	1.6+07	Jour	RCA,96,399	08	M.Sadeghi+	D0662

30 Zinc 68

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,x	^{67}Ga	TT	3IRNKRJ	5.0+06	1.5+07	Jour	NKA,54,25	09	M.Sadeghi+	D0663
p,x	^{68}Ga	TT	3IRNKRJ	5.0+06	1.5+07	Jour	NKA,54,25	09	M.Sadeghi+	D0663

35 Bromine 81

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,0		RP	4ZZZDUB			Jour	NP/A,398,(1),93	83	V.P.Alfimenkov+	41576
n,tot		CS	4ZZZDUB	8.8-01	8.8-01	Jour	NP/A,398,(1),93	83	V.P.Alfimenkov+	41576

38 Strontium

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,x	^{88}Y	TT	3IRNKRJ	8.0+06	1.8+07	Jour	RDC,53,539	11	M.Sadeghi+	D0668

41 Niobium 93

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,x	^{93}Mo	TT	3IRNKRJ	5.0+06	1.2+07	Jour	JRN,286,141	10	M.Sadeghi+	D0664

45 Rhodium 103

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,n	^{103}Pd	TT	3IRNKRJ	6.0+06	1.8+07	Jour	RCA,94,217	06	M.Sadeghi+	D0661

46 Palladium 108

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,γ	^{109}Pd	SPC	1USABNL	3.0+00	3.0+00	Jour	PR/C,21,65	Jan 80	R.F.Casten+	10738

48 Cadmium 111

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,0		RP	4ZZZDUB			Jour	NP/A,398,(1),93	83	V.P.Alfimenkov+	41576
n,tot		CS	4ZZZDUB	4.5+00	4.5+00	Jour	NP/A,398,(1),93	83	V.P.Alfimenkov+	41576

50 Tin

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

p,x	^{117}Sb	TT	3IRNKRJ	5.0+06	1.6+07	Jour	NKA,56,9	11	M.Sadeghi+	D0666
p,x	^{118}Sb	TT	3IRNKRJ	5.0+06	1.6+07	Jour	NKA,56,9	11	M.Sadeghi+	D0666
p,x	^{120}Sb	TT	3IRNKRJ	5.0+06	1.6+07	Jour	NKA,56,9	11	M.Sadeghi+	D0666
p,x	^{122}Sb	TT	3IRNKRJ	5.0+06	1.6+07	Jour	NKA,56,9	11	M.Sadeghi+	D0666
p,x	^{122}Sb	TT	3IRNKRJ	8.0+06	2.6+07	Jour	JRN,287,585	11	M.Sadeghi+	D0667

50 Tin 114

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,inel	^{114}Sn	DAP	4RUSKUR	Fiss		Jour	IZV,54,(9),1824	Sep 90	S.Yu.Araddad+	41033
n,inel	^{114}Sn	POL	4RUSKUR	Fiss		Jour	IZV,54,(9),1824	Sep 90	S.Yu.Araddad+	41033
n,inel	^{114}Sn	?	4RUSKUR	Fiss		Jour	IZV,54,(9),1824	Sep 90	S.Yu.Araddad+	41033

50 Tin 117

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,0		RP	4ZZZDUB			Jour	NP/A,398,(1),93	83	V.P.Alfimenkov+	41576
n,tot		CS	4ZZZDUB	1.3+00	1.3+00	Jour	NP/A,398,(1),93	83	V.P.Alfimenkov+	41576

53 Iodine 127

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,0		RP	4ZZZDUB			Jour	NP/A,398,(1),93	83	V.P.Alfimenkov+	41576

57 Lanthanum 139

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,0		RP	4ZZZDUB			Jour	NP/A,398,(1),93	83	V.P.Alfimenkov+	41576
n,tot		CS	4ZZZDUB	7.5-01	7.5-01	Jour	NP/A,398,(1),93	83	V.P.Alfimenkov+	41576

69 Thulium 169

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,γ	^{173}Lu	CS	3HUNDEB	1.3+07	1.7+07	Jour	NP/A,867,52	11	G.G.Kiss+	D4248
α,n	^{172}Lu	CS	3HUNDEB	1.1+07	1.7+07	Jour	NP/A,867,52	11	G.G.Kiss+	D4248

74 Tungsten

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,x	^{186}Re	TT	3IRNKRJ	7.0+06	2.5+07	Jour	NET,42,600	10	P.S.Bidokhti+	D0665

79 Gold 197

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{14}N,fis	Many	FY	3INDNSD	1.5+07	1.6+07	Jour	PR/C,79,054607	09	T.K.Ghosh+	C1702

81 Thallium 203

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
d,x	^{202}Tl	CS	2BLGVUB	3.6+06	2.1+07	Jour	KPS,59,1975	11	R.Adamrebeles+	D4249
d,x	^{202}Pb	CS	2BLGVUB	1.5+07	2.1+07	Jour	KPS,59,1975	11	R.Adamrebeles+	D4249
d,x	^{203}Pb	CS	2BLGVUB	6.9+06	2.1+07	Jour	KPS,59,1975	11	R.Adamrebeles+	D4249
d,x	^{204}Pb	CS	2BLGVUB	1.3+07	2.1+07	Jour	KPS,59,1975	11	R.Adamrebeles+	D4249

90 Thorium 232

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
^{14}N,fis	Many	FY	3INDNSD	1.4+07	1.5+07	Jour	PR/C,79,054607	09	T.K.Ghosh+	C1702

92 Uranium 235

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
γ,el		RP	1USATNL	1.7+06	2.8+06	Jour	PR/C,83,041601	11	E.Kwan+	L0161
γ,el		?	1USATNL	1.7+06	2.8+06	Jour	PR/C,83,041601	11	E.Kwan+	L0161
n,fis		CS	4RUSKUR	4.7+00	2.2+03	Conf	87KIEV,3,84	Sep 87	V.F.Gerasimov+	40993
n,fis		NU	4RUSFEI	2.5+04	2.5+04	Conf	70HELSINKI,2,167	Jun 70	V.G.Nesterov+	40033
n,fis		?	4RUSFEI	2.5+04	1.5+06	Conf	70HELSINKI,2,167	Jun 70	V.G.Nesterov+	40033
^{11}B,fis	Many	FY	3INDNSD	1.1+07	1.3+07	Jour	PR/C,79,054607	09	T.K.Ghosh+	C1702

92 Uranium 238

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
γ,el		RP	1USAMIT	2.1+06	2.5+06	Jour	NIM/B,269,1130	11	B.J.Quiter+	L0160

94 Plutonium 239

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,abs		ALF	4RUSITE	3.0-01	3.0-01	Conf	70HELSINKI,1,339	Jun 70	F.N.Belyaev+	40087
n,fis		NU	4RUSFEI	2.5+04	2.5+04	Conf	70HELSINKI,2,167	Jun 70	V.G.Nesterov+	40033
n,fis		?	4RUSFEI	2.5+04	1.6+06	Conf	70HELSINKI,2,167	Jun 70	V.G.Nesterov+	40033

95 Americium 243

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
n,el		RP	4RUSJIA			Prog	JIA-1288	11	A.A.Alekseev+	41578
n,fis		CS	4RUSJIA	3.0-02	8.7+03	Prog	JIA-1288	11	A.A.Alekseev+	41578
n,fis		RI	4RUSJIA	1.1+04	5.0-01	Prog	JIA-1288	11	A.A.Alekseev+	41578
n,fis		RP	4RUSJIA	-2.0+00	2.1+01	Prog	JIA-1288	11	A.A.Alekseev+	41578

98 Californium 252

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis	^{nat}G	MLT	4ZZZDUB	Spont		Jour	YF,52,942	90	Yu.N.Pokotilovskiy	41577

102 Nobelium 252

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
0,fis		KE	4ZZZDUB	Spont		Jour	PTE,5,50	11	A.I.Svirikhin+	41579
0,fis		NU	4ZZZDUB	Spont		Jour	PTE,5,50	11	A.I.Svirikhin+	41579