

**Nuclear Data Section  
International Atomic Energy Agency  
P.O.Box 100, A-1400 Vienna, Austria**

**Memo CP-D/544**

**Date:** 9 February 2009

**To:** Distribution

**From:** N. Otsuka

**Subject:** Dictionary transmission 9098

- Dictionary transmission 9098 is available in three formats (Trans, Archive and Backup) from the NDS open area: <http://nds121.iaea.org/ndsx4/trans/dicts/>.
- These dictionaries and ZVV formatted dictionaries in zipped form are also available: <http://www-nds.iaea.org/exfor-master/backup/dicts-2009-02-09.zip>.
- Many comments on the dictionary from Nicoals Soppera and Manuel Bossant (NEA Data Bank) are taken into account.
- All memos submitted before 6 January (for dictionary 1, 2, 4, 16, 24-25, 30-35, 37, 236) and 6 February (for other dictionaries) are considered in this update.
- There has been no comment on Memo CP-D/509 (WP2008-27) by the end of 2008. Therefore all additions and corrections proposed in the memo are implemented in this update. See also Action 56 of the 2008 NRDC meeting.
- The characters in the expansions of Dictionary 1 are revised from upper cases to upper and lower cases. (Not listed in the table below.)
- New codes for “unknown” readers proposed in Memo CP-N/070 are introduced in Dictionary 52 with the following explanation  
"Unknown (coded without definition in old entries)".  
Status code EXT is assigned to these codes because these reader codes will be valid for entries made by the “old” readers unless their real names are found.
- The following obvious corrections (not proposed in previous memos) are implemented.

**Dictionary 5 (Journal Codes)**

CNP (Made extinct, last issue: vol.19 no.4 (1997))

EUL (Expansion updated.)

New expansion: EPL – A Letters Journal Exploring Frontiers of Physics)

**Dictionary 24 (Data Headings)**

ANG1-MAX (1<sup>st</sup> digit of plotting flag should be 3 – max. of independent variable)

ANG2-MAX (1<sup>st</sup> digit of plotting flag should be 3 – max. of independent variable)  
MOM-TR-ERR (Unit family should be E/C – linear momentum)

### **Dictionary 236 (Quantities)**

NN, POL/DA/DE, \*, ANA (Expansion updated according to CP-D/520)

SS, POL/DA/DE, \*, ANA (Expansion updated according to CP-D/520)

- The character length of ZCAL (in zero-degree calorimeter, dictionary 32) exceeds the maximum length (3). I deleted this code from the dictionary and added one new code ZCL with the same expansion. Note that this quantity is an index to determine “centrality” (impact parameter) in relativistic heavy-ion collision and was used internally by NNDC in area H entries (H0007.002, 006 and 010) which are in the EXFOR master.

### **Dictionary 32 (Parameters)**

ZCAL (deleted)

ZCL in zero-degree calorimeter

- Two method codes ANC and TROJA were moved from Dictionary 21 (Method) to Dictionary 23 (Analysis). Affected entries were listed by Nicolas Soppera:

**ANC:**

D0483.003, O1241.004

**TROJA:**

F0756.001, O0899.001, O1221.001, O1317.001, O1639.001, O1652.001,  
O1653.001, O1661.001

- All corrections (except trivial editorial corrections) are summarized below. “Status” gives alteration flags and status codes defined in EXFOR/CINDA Dictionary Manual.

Dict	Status	Code	Expansion	Remark
3	MTRA	2SPNJNE	Junta de Energia Nuclear, Madrid	Typo in expansion
3	MTRA	2SPNPCM	Parque Cientifico de Madrid	Typo in expansion
3	ATRA	2ZZZNTF	The nTOF Collaboration	CP-D/524
3	ATRA	3BULPLV	Plovdivski Univercitet "Paisii Hiledarski", Plovdiv	CP-D/538
3	MTRA	3IRNKRJ	Nucl.Res.Center for Agricult.&Medicine (NRCAM), Karaj	Typo in expansion
3	ATRA	3MGLNUM	National University of Mongolia, Ulaanbaatar	CP-D/539
3	ATRA	3SRBBKB	Institut za Nuklearne Nauke	CP-D/533

			"Vinca", Beograd	
3	ATRA	3SRBSRB	Serbia	CP-D/533
3	SOBS	3YUGBKB	Inst. Boris Kidrich, Vinca	CP-D/538
3	SOBS	3YUGYUG	Yugoslavia Yugoslavia	CP-D/538
3	MTRA	4RUSLIN	Peterburgskiy Inst. Yad.Fiz.,Russ.Ak.Nauk , Gatchina	CP-D/534
3	MTRA	4RUSTPI	Tomskii Politekhnikeskii Universitet, Tomsk	CP-A/166
4	ATRA	0	Experimental data library	CP-D/515
4	ATRA	3	Evaluated data library	CP-D/515
4	ATRA	4	Experimental data library	CP-D/515
5	ATRA	AR/S	Acta Radiolog.Suppl.Acta Radiologica Supplement	CP-D/528
5	AEXT	ASI/OE	Acta Phys. Sin.OSEd.Acta Physica Sinica (Overseas Edition)	CP-D/526
5	SEXT	CNP	Chin.J.Nucl.Phys. Chinese J.of Nuclear Physics (Beijing).	This memo
5	MTRA	EUL	EPL	This memo
5	ATRA	IZTP	Izotopy v SSSR	CP-D/532
5	ATRA	RPD	Radiat.Prot.Dosim. Radiation Protection Dosimetry	CP-D/526
5	MTRA	SPC	Soviet Physics- Crystallography	Typo in expansion
5	ATRA	YFE	Yad.Fiz.Energetika Yaderna Fizika ta Energetika	CP-D/536
5	MTRA	YK	Yad.Konst. Vop. At.Nauki i Tekhn.,Ser.Yadernye Konstanty	CP-D/535
5	SEXT	ZNJD	Zbir.Nauk.Kyiv Inst.Zbirnik Nauk. Institutu Yadernikh Doslidzhen	CP-D/536
7	MTRA	61BRUSSELS	Colloquium on Neutron Time-of-Flight Methods, Brussels 1961	Typo in comment
7	MTRA	63ADAM	Symp. On Exponential and Critical Experiments. Amsterdam, Netherlands, 2- 3 Sep 1963)	Typo in expansion
7	MTRA	67BORDEAUX	Colloque de Physique Nucleaire Noyaux Moyens et Noyaux Lourds, French Physical Society, Bordeaux, France, 22-24 Mar 1967	Typo in expansion
7	MTRA	92KARLSR	2.Int.Symposium on	Typo in

			Nuclear Astrophysics: Nuclei in the Cosmos, Karlsruhe, Germany, 6-10 July 1992	expansion
7	MTRA	98MARSEI	20. Symposium on Fusion Technology, Marseille, France, 7-11 Sept. 1998	Typo in expansion
7	MTRA	99SARAT	6 <sup>th</sup> International Workshop on Fundamental Problems of Charged Particles Beam Physics, Mathematical Modeling, Optimization Control and Associate Research Areas, Saratov, Russia, 6 – 10 September, 1999	Typo in expansion
7	MTRA	2001SARAT	8 <sup>th</sup> International Workshop on Fundamental Problems of Charged Particles Beam Physics, Mathematical Modeling, Optimization Control and Associate Research Areas, Saratov, Russia, 25 – 29 June, 2001	Typo in expansion
8	MTRA	4	Beryllium	Typo in expansion
8	MTRA	59	Praseodymium	Typo in expansion
8	MTRA	77	Iridium	Typo in expansion
15	MTRA	C	Compiled at the data center	Typo in expansion
21	DTRA	ANC	Asymptotic normalization constant	CP-D/529
21	DTRA	TROJA	Trojan-horse method	CP-D/529
22	MTRA	MAGSP	Magnetic spectrometer	Typo in comment
23	ATRA	ANC	Asymptotic normalization constant	CP-D/529
23	ATRA	PES	Extracted from equilibrium particle emission spectra	CP-D/512
23	ATRA	PGS	Extracted from primary gamma spectra	CP-D/512
23	ATRA	SURGT	Surrogate reaction method	CP-D/529
23	ATRA	TROJA	Trojan-horse method	CP-D/529
24	ATRA	ANG-CM-NRM	Angle at which normalization was made, C.M. System	CP-E/135
24	MTRA	ANG1-MAX	Upper Limit of First Angular Range, Lab. System	This memo
24	MTRA	ANG2-MAX	Upper Limit of Second	This memo

			Angular Range, Lab. System	
24	MTRA	ISOMER	Isomer for Nuclide Given	Typo in comment
24	MTRA	MOM-TR-ERR	Error of momentum transfer (in units MeV/c or equiv.)	This memo
27	MTRA	86-RN-210		X at col.72 (spin) deleted
27	MTRA	1-H-DXX	Deuterium Compound	Typo in comment
32	ATRA	LD	Level-density	CP-D/512
32	DINT	ZCAL	in zero-degree calorimeter	This memo
32	AINTE	ZCL	in zero-degree calorimeter	This memo
34	MTRA	2G	times 2 * statistical weight factor	Typo in expansion
36	MTRA	CUM, FY/RAT	Cumulative fission-product yield isom. ratio	Typo in expansion
43	MTRA	2	JEFF	CP-D/531
43	SEXT	3	EFF	CP-D/531
43	ATRA	58	PADF	CP-D/531
43	ATRA	59	RUSFOND	CP-D/531
44	MINT	BENZI-DFN	Bologna Library of Evaluated Neutron Cross Sections for Fission-Product Nuclei	Typo in expansion
45	AEXT	1	Unknown	CP-N/070
45	AEXT	A	Unknown	CP-N/070
45	AEXT	C	Unknown	CP-N/070
45	AEXT	D	Unknown	CP-N/070
45	AEXT	G	Unknown	CP-N/070
45	AEXT	H	Unknown	CP-N/070
45	AEXT	I	Unknown	CP-N/070
45	AEXT	K	Unknown	CP-N/070
45	AEXT	P	Unknown	CP-N/070
45	AEXT	Q	Unknown	CP-N/070
45	AEXT	R	Unknown	CP-N/070
45	AEXT	T	Unknown	CP-N/070
45	AEXT	U	Unknown	CP-N/070
45	AEXT	V	Unknown	CP-N/070
45	AEXT	X	Unknown	CP-N/070

45	ATRA	X4	Automatically generated CINDA lines from EXFOR	CP-N/070
45	AEXT	-	Unknown	CP-N/070
45	AEXT	.	Unknown	CP-N/070
45	AEXT	/	Unknown	CP-N/070
45	AEXT	=	Unknown	CP-N/070
144	MTRA	AUSTR-DFN	Australian Library of Evaluated Neutron Cross	CP-D/515
144	MTRA	BENZI-DFN	Bologna Library of Evaluated Neutron Cross Sections	CP-D/515
144	MTRA	BROND-	Russian Recommended Evaluated Neutron Data Library	CP-D/515
144	DTRA	BROND-2-	Russian computer library of recommended	CP-D/515
144	MTRA	CENDL-	Chinese Evaluated Nuclear Data Library (CENDL)	CP-D/515
144	MTRA	CNEN-CEA	Evaluated Data Library from CNEN (Italy) - CEA	CP-D/515
144	MEXT	EFF-	NEA European Fusion File	CP-D/515
144	MTRA	ENDF/B-	US Evaluated Nuclear Data File (ENDF) B Library	CP-D/515
144	MTRA	ENDL-	Livermore Evaluated Nuclear Data Library (ENDL)	CP-D/515
144	MTRA	EXFOR	EXFOR Experimental Nuclear Reaction Data Library	CP-D/515
144	MTRA	FENDL	Fusion Evaluated Nuclear Data Library (FENDL)	CP-D/515
144	MTRA	INDL-	IAEA Nuclear Data Library (INDL)	CP-D/515
144	MTRA	INDL/A-	IAEA Nuclear Data Library for evaluated neutron	CP-D/515
144	MTRA	INDL/V-	IAEA Nuclear Data Library for Various neutron data	CP-D/515
144	MTRA	IRDF-	International Reactor Dosimetry File (IRDF) in	CP-D/515
144	MEXT	JEF-	NEA Joint Evaluated File (JEF)	CP-D/515
144	MTRA	JEFF-	NEA Joint Evaluated Fission and Fusion (JEFF) Library,	CP-D/515
144	MTRA	JENDL-	Japanese Evaluated Nuclear Data Library (JENDL)	CP-D/515
144	MTRA	JENDL-A-	JENDL Activation File (JENDL/A)	CP-D/515
144	MTRA	JENDL-AC-	JENDL Actinoid File (JENDL/AC)	CP-D/515
144	MTRA	JENDL-AN-	JENDL (alpha,n) Reaction	CP-D/515

			Data File (JENDL/AN)	
144	MTRA	JENDL-D-	JENDL Dosimetry File (JENDL/D)	CP-D/515
144	MTRA	JENDL-F-	JENDL Fusion File (JENDL/F)	CP-D/515
144	MTRA	JENDL-HE-	JENDL High Energy File (JENDL/HE)	CP-D/515
144	MTRA	JENDL-PD-	JENDL Photonuclear Data File (JENDL/PD)	CP-D/515
144	MEXT	JNDC-FFP-WG	Nuclear data evaluated by JNDC Fast FP WG	CP-D/515
144	SEXT	JNDC-FP	JNDC nuclear data library of Fission Products	CP-D/515
144	MEXT	KEDAK-	Karlsruhe Evaluated Nuclear Data Library (KEDAK)	CP-D/515
144	MTRA	RCN-	ECN, Petten, Evaluated Fission Product Cross	CP-D/515
144	MEXT	SOKRATOR-	USSR Evaluated Nuclear Data Library	CP-D/515
144	MTRA	UKFY2	UK Fission Yield library (UKFY) version 2	CP-D/515
144	MTRA	UKNDL-DFN	United Kingdom Nuclear Data Library (UKNDL)	CP-D/515
144	MTRA	VIEN-V	Various International Evaluated Neutron data (VIEN)	CP-D/515
209	MTRA	1-H-DXX	Deuterium Compound	Typo in comment
213	ATRA	CRP	Partial cross section at resonance	CP-D/509
213	ATRA	CSR	Cross section at resonance	CP-D/509
236	MTRA	,AKE , * , RES	Average kinetic en. of specif.part. at reson.	CP-D/509
236	MTRA	,ALF , , RES	Capture-to-fission (alpha) ratio at resonance	CP-D/509
236	MTRA	,AP , *F , RES	Most probable mass of fragment specif.at reson.	CP-D/509
236	MTRA	,ETA , , RES	Eta at resonance	CP-D/509
236	MTRA	,ETA/NU , , RES	Eta/Nu at resonance	CP-D/509
236	MTRA	,INT , , RES	Cross-section integral over inc. energy at res.	CP-D/509
236	ATRA	,IPA/DE , *+*	d/dA(*+*)/dE(*+*) int.over part.ang.range	CP-E/135
236	ATRA	,LD	Level density	CP-D/512
236	MTRA	,MLT , G , RES	Average particle multiplicity at resonance	CP-D/509
236	MTRA	,NU , , RES	Total Nu-bar at resonance	CP-D/509
236	MTRA	,SIG , , RES	Cross section at resonance	CP-D/509
236	MTRA	,SIG , , RES/RTE	Cross section * square	CP-D/509

			root(E) at resonance	
236	MTRA	, SIG , , SFC/RES	S-factor for cross section at resonance	CP-D/509
236	MTRA	, SPC , , RES	Gamma spectrum at resonance	CP-D/509
236	MTRA	, SPC , , TT	Gamma spectrum for thick target	CP-D/509
236	MTRA	CUM , FY/RAT	Cumulative fission-product yield isom. Ratio	Typo in expansion
236	MTRA	LL , POL/DA , , ANA	Tensor analyzing power, A(zz)	CP-D/520
236	MTRA	LL , POL/DA , , C	Initial spin correlation parameter, C(LL)	CP-D/520
236	MTRA	LL/PAR , POL/DA , , ANA	Partial tensor analyzing power, A(zz)	CP-D/520
236	MTRA	LS , POL/DA , , ANA	Tensor analyzing power, A(zx)	CP-D/520
236	MTRA	LS , POL/DA , , C	Initial spin correlation parameter, C(LS)	CP-D/520
236	MTRA	NL , POL/DA , , ANA	Tensor analyzing power, A(yz)	CP-D/520
236	MTRA	NN , POL/DA , , ANA	Tensor analyzing power, A(yy)	CP-D/520
236	MTRA	NN , POL/DA , , C	Initial spin correlation parameter, C(NN)	CP-D/520
236	MTRA	NN , POL/DA/DE , * , ANA	Tensor analyzing power A(yy)/dA(*)/dE(*)	This memo
236	MTRA	NN/PAR , POL/DA , , ANA	Partial tensor analyzing power, A(yy)	CP-D/520
236	MTRA	PAR , DA , , RES	Partial diff. cross section at resonance	CP-D/509
236	ATRA	PAR , IPA/DE , *+*	Par.d/dA(*+*)/dE(*+*) int.over part.ang.range	CP-E/135
236	MTRA	PAR , MLT , , RES	Partial multiplicity at resonance	CP-D/509
236	MTRA	PAR , MLT , * , RES	Partial multiplicity of part.spec. at resonance	CP-D/509
236	MTRA	PAR , SIG , , RES	Partial cross section at resonance	CP-D/509
236	MTRA	PR , NU , , RES	Prompt Nu-bar at resonance	CP-D/509
236	MTRA	SL , POL/DA , , ANA	Tensor analyzing power, A(xz)	CP-D/520
236	MTRA	SL , POL/DA , , C	Initial spin correlation parameter, C(SL)	CP-D/520
236	MTRA	SL/PAR , POL/DA , , ANA	Partial tensor analyzing power, A(xz)	CP-D/520
236	MTRA	SS , POL/DA , , ANA	Tensor analyzing power, A(xx)	CP-D/520
236	MTRA	SS , POL/DA , , C	Initial spin correlation parameter, C(SS)	CP-D/520
236	MTRA	SS , POL/DA/DE , * , ANA	Tensor analyzing power A(yy)/dA(*)/dE(*)	This memo



236	MTRA	TER , FY / DE	Diff. fission yield dY/dE for tern. Fission	CP-D/514
236	ATRA	TER , FY / DE , A	Diff.fiss.alph.yield dY/dE corr.w.fragment	CP-D/514
236	MTRA	TER , SIG , , RES	Ternary fission cross section at resonance	CP-D/509
236	MTRA	TER / BIN , SIG / RAT , , RES	Ternary/binary cross section ratio at resonance	CP-D/509
236	DOBS	TER / PAR , FY , A	Yield of tern.alpha particles for given alpha e	CP-D/514

**Distribution:**

a.mengoni@iaea.org  
a.nichols@iaea.org  
blokhin@ippe.ru  
chiba@earth.sgu.ac.jp  
claes.nordborg@oecd.org  
ganesan@barc.gov.in  
gezg@ciae.ac.cn  
hasegawa@nea.fr  
henriksson@near.fr  
hongwei@ciae.ac.cn  
jhchang@kaeri.re.kr  
kaltchenko@kinr.kiev.ua  
katakura.junichi@jaea.go.jp  
kato@nucl.sci.hokudai.ac.jp  
kirarlyb@atomki.hu  
l.vrapcnjak@iaea.org  
manuel.bossant@oecd.org  
manokhin@ippe.ru  
mmarina@ippe.ru  
mwherman@bnl.gov

nicolas.soppera@oecd.org  
nklimova@kinr.kiev.ua  
n.otsuka@iaea.org  
nrdc@jcprg.org  
oblozinsky@bnl.gov  
ogritzay@kinr.kiev.ua  
otto.schwerer@aon.at  
samaev@obninsk.ru  
s.babykina@polyn.kiae.su  
s.dunaeva@iaea.org  
stakacs@atomki.hu  
stanislav.hlavac@savba.sk  
taova@exped.vniief.ru  
tarkanyi@atomki.hu  
varlamov@depni.sinp.msu.ru  
vlasov@kinr.kiev.ua  
vmclane@optonline.net  
v.zerkin@iaea.org  
yolee@kaeri.re.kr