

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

Memo CP-D/613

Date: 19 February 2010
To: Distribution
From: N. Otsuka, S. Dunaeva, [M. Mikhaylyukova](#)
Subject: **Differential light charged-particle fission yield**
Reference: CP-D/605

In addition to fission yield listed in Memo CP-D/605, there are also differential light charged-particle fission yield data coded with particle codes in the SF7 field. See the table in the last page. They are coded with DA, DE or DA/DE in SF6, namely treated as differential *cross sections*.

Quantity codes	Unit family	Unit code (example)
TER, DA, *	DA	MB/SR
TER, DE, *	DE	MB/MEV
TER, DA/DE, *	DAE	MB/SR/MEV

These three distributions are however always given in arbitrary unit in EXFOR (REL in SF8), and may be regarded as differential fission “yields” rather than differential fission “cross section”. In addition, the concept of “cross section” is not applicable for spontaneous fission. Use of the following quantity codes with REL in SF8 is more suitable:

Quantity codes	Unit family	Unit code (example)
TER, FY/DA, *	FYDA	PRT/FIS/SR
TER, FY/DE, *	FYDE	PT/FIS/MEV
TER, FY/DA/DE, *	FYAE	P/FS/MEVSR

The following 2 new quantity codes are proposed for correction of the subentries shown in the last page:

Dictionary 236 (Quantities)

TER, FY/DA Differential fission yield with respect to angle in ternary fission
 TER, FY/DA/DE Double differential fission yield in ternary fission

Below parameter codes are summarized for fission fragment yield and neutron multiplicity.

Summary of SF6 for various fission yield

Unit Family	FY	FYDA	FYDE	FYAE
Fission fragment yield	FY	FY/DA	FY/DE	FY/DA/DE
Fission neutron multiplicity	NU	NU/DA	NU/DE	NU/DA/DE

Distribution

blokhin@ippe.ru
chiba@earth.sgu.ac.jp
claes.nordborg@oecd.org
emmeric.dupont@oecd.org
ganesan@barc.gov.in
gezg@ciae.ac.cn
hongwei@ciae.ac.cn
jhchang@kaeri.re.kr
j.roberts@iaea.org
kaltchenko@kinr.kiev.ua
katakura.junichi@jaea.go.jp
kato@nucl.sci.hokudai.ac.jp
kiralyb@atomki.hu
l.vrapcjenjak@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
pronyaev@ippe.ru
r.forrest@iaea.org
samaev@obninsk.ru
s.babykina@polyn.kiae.su
scyang@kaeri.re.kr
s.dunaeva@iaea.org
stakacs@atomki.hu
stanislav.hlavac@savba.sk
taova@expd.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

Proposed corrections for light charged particle differential yield

(Responsible centre should check if proposed corrections are right before the correction. [REL has to be explained obligatory in free text](#))

Subentry	Current REACTION	Should be
14055.002	102-NO-256(0,F),TER,DE,A,REL	102-NO-256(0,F)2-HE-4,TER,FY/DE,,REL
14055.003	88-RA-214(0,F),TER,DE,A,REL	88-RA-214(0,F)2-HE-4,TER,FY/DE,,REL
14066.002	98-CF-252(0,F),TER,DA,A,REL	98-CF-252(0,F)2-HE-4,TER,FY/DA,,REL
14066.003	98-CF-252(0,F),TER,DA/DE,A,REL	98-CF-252(0,F)2-HE-4,TER,FY/DA/DE,,REL
14066.004	98-CF-252(0,F),TER,DE,A,REL	98-CF-252(0,F)2-HE-4,TER,FY/DE,,REL
14066.005	98-CF-252(0,F),TER,DA/DE,A,REL	98-CF-252(0,F)2-HE-4,TER,FY/DA/DE,,REL
14066.006	98-CF-252(0,F),TER,DA/DE,A,REL	98-CF-252(0,F)2-HE-4,TER,FY/DA/DE,,REL
30270.002	92-U-235(N,F),TER,DE,A,MXW/REL	92-U-235(N,F)2-HE-4,TER,FY/DE,,MXW/REL
30270.003	92-U-235(N,F),TER,DE,A,SPA/REL	92-U-235(N,F)2-HE-4,TER,FY/DE,,SPA/REL
30272.003	92-U-235(N,F),TER,DE,A,MXW/REL	92-U-235(N,F)2-HE-4,TER,FY/DE,,MXW/REL
30278.002	92-U-235(N,F),TER,DE,A,MXW/REL	92-U-235(N,F)2-HE-4,TER,FY/DE,,MXW/REL
30279.002	92-U-235(N,F),TER,DA/DE,A,MXW/REL	92-U-235(N,F)2-HE-4,TER,FY/DA/DE,,MXW/REL
30279.003	92-U-235(N,F),TER,DA/DE,A,MXW/REL	92-U-235(N,F)2-HE-4,TER,FY/DA/DE,,MXW/REL
30319.002	92-U-235(N,F),TER,DA/DE,A,REL/MXW	92-U-235(N,F)2-HE-4,TER,FY/DA/DE,,MXW/REL
30320.002 , .003	94-PU-239(N,F)ELEM/MASS,TER,DE ARB-UNITS	94-PU-239(N,F)ELEM/MASS,TER,FY/DE
30505.002	92-U-235(N,F)2-HE-4,TER,DA,A,REL/MXW	92-U-235(N,F)2-HE-4,TER,FY/DA,,MXW/REL
41442.004	98-CF-252(0,F),TER,DE,A,REL	98-CF-252(0,F)2-HE-4,TER,FY/DE,,REL