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Memo CP-D/514

Date: 3 September 2008
To: Distribution
From: N. Otsuka

Subject: **Light charged-particle spectrum in fission**
Reference: Memo CP-N/68

A new quantity code TER/PAR,FY,* (Yield of particle specified from ternary fission) is proposed in Memo CP-N/68 for compilation of S. Vermote *et al*. (2008) [1].

SF5 code "PAR" refers usually to the discrete spectra of the particles. In the cited article continuous spectra are given. Therefore the code DE in SF6 seems to be more relevant for this quantity. (Reference to LEXFOR in addition)

So far, light charged particles have been coded in SF4 rather than in SF7 when the yield is not a function of the atomic number and/or mass number of fission fragments (but there is inconsistency). In addition, kinetic energy of charged particles is a continuous independent variable in these subentries. I would therefore propose a new code TER,FY/DE in place of TER/PAR,FY for this compilation.

We have a similar data in 30916.004 [2], where energy spectra of alpha measured for a given ratio of two fission fragments are coded with

(98-CF-252(0,F)MASS,TER/PAR,FY,A,REL)

, however SF5-SF6 should be TER,FY/DE according to above discussion. Only 30916.004 uses this quantity code. Therefore both obsolete flag for TER/PAR,FY,A and addition of a new code TER,FY/DE,A are also proposed for this subentry.

Dictionary 236 (Quantities)

TER,FY/DE	Differential fission product yield for ternary fission
TER,FY/DE,A	Differential fission alpha yield with a ternary fission fragment of definite mass and/or charge

Dictionary 236 (Quantities) - Obsolete

TER/PAR,FY/DE	Yield of ternary alpha particles for given alpha e

Quantity	Reaction Type	Dimension	Subentry
TER,FY/DE	FYE	FYDE	23026.002-006
TER,FY/DE,A	FYE	FYDE	30916.004

Reference

[1] S. Vermote *et al*., Nucl. Phys. **A806** (2008) 1.
[2] Han Hongyin et al., Chinese J. Nucl. Phys. **5** (1983) 142.

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