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Memo CP-E/079

Date: September 21, 2005
To: Distribution
From: OTSUKA Naohiko
Subject: Remarks on quantity codes for fission data

I find some problems during a compilation of proton-induced fission experiment (I. Nishinaka *et al*., Phys. Rev. C **70**(2004)014609 compiled, E1905.).

1) Neutron yield

We restrict the use of "NU" to neutron induced or spontaneous fission (See comment in the dictionary). We also find similar rule in LEXFOR "Neutron yield". However many entries are coded with "NU" rather than "MLT" even for charged-particle induced fission. I propose that we use "NU" for neutron yield in all fission reactions and use "MLT" for other reactions. (Then ",MLT,N/FF" will be made obsolete.)

2) Averaged kinetic energy

We have two parameter codes "AKE" and "KE" for averaged kinetic energy. The difference of two codes should be clarified. Averaged total kinetic energy of fission fragments has been compiled with various codes: ",AKE,FF", ",KE,FF" and ",KE/CRL,LF/HF". The difference among these codes should be clarified.

3) Total kinetic energy distribution

Now total kinetic energy distribution is coded by ",DE,FF" (Energy spectrum of fission fragments). If we keep consistency with the discussion in CP-D/434 and CP-E/071, ",DE,LF+HF" or "DE,LF/HF" may be better for distribution of total kinetic energy of fission fragments.

4) Neutron yield as a function of fragment energy and alpha energy

We assign dimension "FYDE" for neutron yield as a function of fragment energy (e.g. "PR,NU/DE,FF" and alpha energy (e.g. "PR,NU/DE,A"). However I think these quantities are not differential with respect to energy. Some relevant entries are coded with "PT/FIS/MEV". However such unit cannot be found in original references.

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