

Unit Codes for Differential Probabilities

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In the memo CP-D/658 the code NPD and units 1/FIS/MEV were proposed.

For reactions with the NPD code in SF7 (spectra normalized to 1.)

units types in dictionary are different for different coding combinations.

There are three coding combinations with NPD code in the dictionary:

,PR,NU/DE,,NPD FY1E

,MLT/DE,,TT/NPD 1/E

,PY/DE,,TT/NPD 1/E

For the type FY1E the units are 1/FIS/MEV now;

for 1/E – 1/MEV, 1/EV, 1/GEV, 1/KEV, 1/MILLI-EV, 1/INC/KEV.

In the EXFOR data base these three types of reactions are used in Entries given in Table.

Fission neutron spectrum normalized to 1. (coded as PR,NU/DE,,NPD) can be calculated by dividing of an absolute neutron spectrum (units are PRT/FIS/MEV) by average fission neutron multiplicity NU (units PRT/FIS). So, the spectra normalized to 1. have units of 1/E type.

Similarly 1/INC/KEV must be changed to 1/KEV for the data sets coded with ,MLT/DE,,TT/NPD which is defined with the unit family 1/E in dictionary 236.

Proposals:

- correct units type in the dictionary for PR,NU/DE,,NPD : FY1E -> 1/E ;
- make correction of DATA units in mentioned Entries as proposed in the Table;
- delete code FY1E as well as units 1/FIS/MEV and 1/INC/KEV from dictionary.

EXFOR Entry	Reaction	Units	Proposed correction
	Neutron induced fission or SF		
30969.002.1, 30969.003.1	PR,NU/DE,,NPD	1/FIS/MEV	1/MEV
40644.002	PR,NU/DE,,NPD	1/FIS/MEV	1/MEV
41110.008.2, 41110.009.2, 41110.010.2	PR,NU/DE,,NPD	1/FIS/MEV	1/MEV
41162.003	PR,NU/DE,,NPD	1/FIS/MEV	1/MEV
41340.004.2, 41340.005.2	PR,NU/DE,,NPD	1/FIS/MEV	1/MEV
V0101.002	PR,NU/DE,,NPD	1/FIS/MEV	1/MEV
	CP-induced		
O1962.002.2	,MLT/DE,,TT/NPD	1/INC/KEV	1/KEV
O1963.002.2	,MLT/DE,,TT/NPD	1/INC/KEV	1/KEV
O1964.002.2	,MLT/DE,,TT/NPD	1/INC/KEV	1/KEV