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Memo CP-C/304

DATE: May 3, 2002
TO: Distribution
FROM: V. McLane
SUBJECT: Redundancies in EXFOR (Memo CP-C/259)

We have discussed redundancies in EXFOR at many of the recent NRDC meetings. In Memo CP-C/338, I made some proposals for clarification. There is no mention of whether anything was decided at the NRDC in 2000, I will reiterate the following proposals.

1. Independent versus cumulative: In EXFOR, a defined cross section is assumed to be independent if no other indication is given.

Proposal: The use of the code IND, in REACTION sub-field 5, is restricted to use with the codes F and X in SF3.

I have a code that will convert the affected entries.

2. Undefined reaction channels: Similarly, a reaction for which the reaction channel is undefined is coded using the process code X in sub-field 3. The use of UND was introduced for charged particles and was coupled to the number of protons and neutrons being given in sub-field 3. This led to the introduction of the variable number of emitted nucleons formalism in order to be able to use the variable nucleus formalism for multiple reaction products.

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Proposals:

a.) Eliminate the use of the codes UND and DEF in REACTION sub-field 5. The code (DEF) will remain.

b.) Eliminate the use of a variable number of emitted nucleons, that is, the process codes XN and YP. XN have been used in about 60 subentries, where neutron emission data is given, i.e., they should be coded as (…,X)0-NN-1…..).

c.) Eliminate the data headings N-OUT and P-OUT. These have been used in only one entry, which could be easily recoded. (*There are new proposals for variable output particles*).

I volunteer to retrieve and convert the entries affected.

3. Experimental data code: Data with no code in REACTION SF9 is considered to be experimental. For charged-particle data, the code EXP was introduced for REACTION sub-field 9 as a positive indication that the data is experimental. This is not so serious, however, it may be confusing to users, who may think there is a difference between data coded in 2 different ways..

Proposal: Eliminate the use of the code EXP in REACTION sub-field 9.