KARLSRUHE CHARGED PARTICLE GROUP

KERNFORSCHUNGSZENTRUM · D-7500 KARLSRUHE · POSTFACH 3640 · TELEX 7826-484

Information

Memo CP-B/18

23.12.1977

Subject: Summarized Comments on Memos
CP-D/34 to CP-D/50 and
CP-C/17 to CP-C/25
(Excluding D/36, D/40, D/45, D/47, C/18, C/21, C/23)

In this Memo we summarize our comments on the 17 Memos from Vienna and the 9 Memos from Brookhaven obtained between end of August and beginning of December 1977. In addition we mention all Memos, which are already answered, which will be treated in the next Memo of Jan. 78 or on which we have no comments.

1. CP-D/34, CP-D/42, CP-D/48, CP-C/17, CP-C/19, CP-C/22, CP-C/25

   On these Memos we have no comments resp. we agree with the proposals.

2. CP-D/39, CP-D/43; CP-D/47, CP-C/21

   These Memos have already been answered (CP-B/16 and CP-B/17, respectively).

3. CP-D/36, CP-C/23, CP-D/45 (Variable product nucleus formalism) and CP-C/18, CP-D/40 (Manual Updates)

   These Memos will be answered at the beginning of Jan. 78.

4. CP-D/35, CP-C/20, CP-C/24: Dictionary Formats

   Since we participate at the EXFOR-programs from Vienna, we follow the decisions of NDS' programmers, which have to do the programming work. We would like to give, however, the general statement that only really important changes should be made to avoid too extensive work with reimplementation of the altered programs.

cc/ Abbee
Lammer
Lemmel
Lorenz
Maria Germana

cc/ Okamoto
Schmidt
Schwarzer
Smith

5. CP-D/37: Sum and Ratio codes

Re item 1.: We understand this proposal in that way that in REACTION SF6 primarily the parameter measured (SIG,TTY,PY) is coded and in addition - if applicable - one of the codes SUM or RAT, separated by slash. We appreciate this formulation, since combinations like RAT/SIG, SUM/TTY, SUM/PY can be easily coded.

6. CP-D/38: Manual updates

We supplement the statements given in the introduction. It is mostly unclear which of the numerous versions of manual pages and LEXFOR-entries are official replacements, proposals, counter proposals or whatever. From the individual items we appreciate especially the proposed addition referring to CM/LAB-energy conversion.

7. CP-D/41: Reactions proceeding via Intermediate States

Regarding different intermediate states for a reaction we are in doubt whether there are many cases (at least for ICPND) where such distinctions are necessary (and also possible, from a clear result of the experiment). We can, however, accept any formalism solving such problems for the neutron centers as long as there do not arise interferences with the present coding praxis.

8. CP-D/44: Multiple Monitors

We agree with the proposed DATA-headings MONIT1, MONIT2 etc. With respect to the problem of multiple monitors for multiple reactions we agree with NDS' statement not to complicate the coding for some very special and certainly rare cases. If such a complicated case really occurs it could be treated easily by not using the multiple reaction formalism.

9. CP-D/46, CP-D/49: Nuclides Dictionary

We agree with the proposed concept of the nuclides dictionary 27.

In this context we would like to propose a manual entry which states clearly that:

In cases where natural but nearly monoisotopic targets were used they should be coded in REACTION SF1 as Z-S-A rather than Z-S-O. Only in cases where spurious admixed isotopes are relevant for the reaction the code Z-S-O is obligatory. In addition, if the reaction can definitely occur by energetical reasons only from one of the isotopes in the natural target, a coding Z-S-A is preferable.

In this case, however, compilers must take care, whether corrections for the isotopic abundance have been applied (otherwise the modifier FCT must be given in REACTION SF8).
In all cases, however, the use of natural targets should be documented under the keyword SAMPLE.

10. CP-D/50: Comments on TRANS B004

Item 1: We had interpreted the Kiev-Minutes that the inclusion of the quantity subfields 6-9 under MONITOR should be optional. We agree, however, to make coding of the quantity obligatory in cases where numerical monitor data are given under the heading MONIT. We will correct the respective entries.

Item 2: We agree.

Item 3: See Memo CP-B/17. Our final comments on the variable product nucleus formalism will be given in our next Memo at beginning of January.

Item 4: The coding B+/E (not B+/EC) in subentry B0052.010 is correct, since positrons and conversion electrons were measured. Since several combinations of different decay modes seem possible, we propose to allow all combinations of decay modes (also multiple) from dict. 13 separated by a slash in DECAY-DATA SF3. Furthermore, since conversion electrons are an important and often occuring form of emitted electrons (other than decay-β^-), we propose the introduction of a special code in dict. 13 e.g.

ICE electrons from internal conversion
(A code CE should not be used to avoid confusion with EC=electron capture).
The former code E = electrons (other than decay β^-) should be kept for the (rare) cases of Auger-, Compton-electrons etc. and as the more general classification (thus making a correction of former entries unnecessary).

Summary of Proposals for Dictionary- and Manual-Entries

Since with our comments on the various Memos several proposals for dictionary- and manual additions are made, we summarize them in the following, and add two further proposals not contained in the discussion of items 1-10 and Memo CP-B/17.

1. Restrictions and explanations for process- and branch codes as specified in Memo CP-B/17.

2. Clarification of the use of combined parameter- and sum/ratio codes in REACTION SF6 (cf. item 5 above).

3. Possibility of CM/LAB-energy conversion by the compiler accompanied by a respective entry under STATUS or HISTORY (cf. item 6 above).

4. Coding of target nuclides in cases of nearly monoisotopic elements etc. (cf. item 9 above).

5. Coding of mixed decay modes in DECAY-DATA SF3

   Proposed new code ICE (internal conversion electrons) for dict. 13 (cf. item 10 above).

6. Since total reaction cross sections are of importance for theoretical and systematical investigations of excitation functions, we propose for retrieval purposes to add the code

   TRCS Total Reaction Cross Section
   for the keyword ADD-RES in dict. 20.

7. Finally, we want to propose for discussion the following problem:
   There seem cases possible, where an entry consists only of <u>one</u> subentry.
   We have not found rules for such cases in the manual.
   An example for such a case could be a publication for which the compiler has strong feelings that all or part of the data are wrong or at least mysterious. On the other hand, there might be reasons to have such a publication implemented in the file (e.g. completeness). There should be a possibility to compile the bibliographic information of such a work in only 1 subentry with obligatory explanations under STATUS or elshwere

   a) why data of this work have been omitted and
   b) why the publication has nevertheless been compiled.

If the other centers agree, this possibility together with the example should be added e.g. to Manual chapter I.