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Information

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

Memo   CP-B/13   8.7.1977

Subjects: Conclusions of the Kiev Meeting

Coding under MONITOR; Compilation of Errors

Exfor-Manual Revision for Report-Codes

References: Vienna-Memo from June 21, 1977

CAJaD Progress Report

Memo CP-D/30

We regret that the first two references above have no Memo-number to make
easy a lateron referencing of both contributions. In the following, those items
of the Vienna-Memo to which we have comments will be referenced with their
original numbers.

I. Comments on the Vienna-Memo from June 21, 1977 concerning conclusions of
the Kiev Meeting.

C1.1; Action 8: KACHAPAG transmission tapes will consist of 1 file also if
future entries originating from other centers will be included. Entries
from one center will be sorted together automatically by means of their
identical center identification character.

C1.2: See our Memo CP-B/10

C2.5: See our proposal of an additional dictionary in Memo CP-B/12.

C2.8: In our opinion the code FF should be kept in SF4 for clarity in order
to denote to which particle a given parameter (e.g. SIG) refers or
which outgoing objects are meant, especially because SF7 (particle
considered) is mostly not used by KACHAPAG. We would, however, agree
to make the code FF in SF4 optional.

C2.10,11,12; Action 16:

We have stated our opinion to these items in several Memos. We feel that
we have a different meaning on the interpretation of reaction types and on

what should be achieved by an variable product nucleus formalism. Such a formalism must be clearly defined before new codes (SPL, FUS) can be accepted. We refuse, therefore, to accept new codes before they are clearly defined and the necessary formalism is fixed. Furthermore, we expect that the other cooperating centers seriously consider our proposals (see Memos CP-B/9,11) and give critical comments on what is not acceptable and why. When new proposals are submitted, objections already made on several items should be taken into account or at least discussed.

Regarding action 16 we believe that the programming efforts for indexing and retrieving variable product nuclei of a spallation reaction are identical to those for the products of (p,xn+yp+...)-reactions or others, since in every case a balancing of the reaction products must be performed to optimize the information obtainable from the file.

C2.12: For clarification only we want to state again, that our proposals on a general use of a variable endproduct formalism aimed not on special reactions and simultaneous measurements but should combine the results of one publication.

C2.13: See our Memos CP-B/9,11

C2.15: We agree with the given restrictions and assume that the 4. case includes also data for the same reaction obtained by different types of experiments in the same publication (e.g. cross sections measured via radioactive decay as well as by neutron counting).

C2.21: As argumented in CP-B/10, it. III, p. 4 we would like to keep the combination SIG/SUM.

C3.1: The strong "must" should be slightly weakened by adding: "whenever possible", since the location of the facility used by several cooperating laboratories is not always clear, especially in earlier publications.

C3.3: Please explain the border-lines between the new generalized N-SOURCE and FACILITY.

C3.6: Meanwhile KACHAPAG has decided to use the code DEP under STATUS in all cases together with a subaccessionnumber (also when referring to the same subentry) to avoid the introduction of a further "special case".

C3.7: To code a reference data set not only under STATUS with code DEP but also under REL-REF has in our opinion never been proposed and never been considered. Shall we do it?

C3.9: Here must have occurred a misunderstanding. In Memo CP-B/10, p.4 we asked with reference to manual page VIII.3. ANALYSIS for a short explanation of this and some other BIB-keywords and referred to DECAY-DATA, where such an explanation had been already given.

C3.11: See our comments on the CAJaD proposals in the following.

C3.12: Regarding the coding rules of SF1 of MONIT-REF the following remark should be added: Giving a <u>subaccession</u> number is the normal case. Accession numbers should only be given when no completed compilation exists and only an accession number has been attributed to a publication.

C3.14; Action 14: We have no objections against the MONIT-REF formalism.

C3.16: See Memo CP-B/10, p.3

Action 5: We would prefer that such a "brief description" aimed rather to advice users of data files under EXFOR how to interpret future edited listings of the file and how and what kind of information can be obtained.

Action 8: See item C1.1 above.

Action 10: We have no own check-programs but use the programs from Vienna.

Action 16: See item C2.10 ff. above

II. Comments on the CAJaD Progress Report

1. Item 2.4 (p.2) MONITOR:

In our opinion the keyword MONITOR is not at all relevant in all cases, e.g. if BCINT is coded under METHOD mostly no monitor reaction has been used. Instead of stating MONITOR in all entries it should rather be proposed that the check-program should test whether either MONITOR or BCINT is present in a subentry. If both are missing an error message, if only MONITOR is absent, a warning message should be printed.

Furthermore, we are <u>very</u> reluctant to introduce a code "NOT USED" for any BIB-keyword not relevant in a subentry. The warning and error messages of the Vienna-check-program seem to be sufficient for a test for completeness.

2. Item 3.1.1 (p.4) Compilation of Errors:

On this subject we want to give the following general statements:

a) Errors quoted in the data section are of relevance only in context with an appropriate entry under ERR-ANALYSIS explaining type and amount of the different contributing errors. To judge data errors obtained from a machine retrieval is impossible since, the entries under ERR-ANALYSIS are

given in free text and are therefore not retrievable. We recommend not to
stress even explicitly given error values, since authors frequently
imply different definitions when quoting socalled "absolute" or "total"
errors.

b) Global errors (like "the excitation function is accurate to within
   10 percent") mean always averaged values or even rough estimates. Small
   cross sections e.g. near the reaction thresholds have normally larger
   errors. To calculate individual errors from such global values can easily
   lead to a falsification of the original data.

c) Taking into account this general reserve against error specifications,
   an incomplete or even missing error specification should not be the only
   reason for rejecting a publication at all, especially, since it was
   always intended to have the CPND-files as complete as possible.
   Furthermore, one should leave a judgement of the quality of the data to
   the user. Compilers should only provide as many information as possible
   (but not more than is contained in the paper).

d) In our opinion it must be strictly forbidden that a compiler "considers
   maximum errors" if no specifications are given in a publication, since he
   is mostly unable to judge details of an experiment in which he did not
   participate.

e) We are very interested to learn whether the experiment of our soviet
   collegues, to induce the authors to an essential cooperation in preparing
   the compilations, will work. Our limited experience in doing so was
   not very encouraging until now. Furthermore, if papers are too old,
   inquiries of the authors for additional data are mostly impossible.

f) On the other hand, if there is additional information obtained from the
   author, this fact must be stated as private communication in order to
   fix clearly all sources of data given in a compilation and to make them
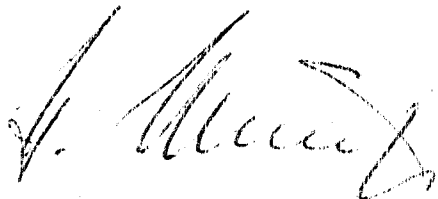   checkable. All other statements must be marked as "comment by the compiler".

In general, it is well known, that the discussion about "what is the error
of an experimental value" is very old. It would be highly desirable to have
clear rules stating the uncertainties and - in addition - to have authors
obeying those rules. If anybody would work out such rules, KACHAPAG would
be very glad to apply them in the judgement of the quality of a publication.

III. Ad Memo CP-D/30

We agree with the proposed EXFOR-manual version concerning report coding and want only to remember that the new type code S is not yet contained in Dict. 4.

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