Memo 4C-3/202

CP-D/26

To: Distribution   1977-03-31

From: Pamela Attree and Peter Smith

Subject: <u>Coding for keyword MONITOR</u>

Present EXFOR manual page VIII.20c and dictionary 2 (of 770228) specify that MONITOR should be coded in the format

(reaction,subacc#,author,reference,data-type)

where 'reaction', 'author' and 'reference' are obligatory.

Memo CP-D/21 proposed that MONITOR should be coded in the format

(reaction,quantity,data-type,author,reference,subacc#)

This proposal was reflected in the pages on MONITOR distributed in Memo 4C-3/198 = CP-D/23, with the same restriction on obligatory fields as at present agreed.

Hans Lemmel now states that it should be permitted to omit 'author' and/or 'reference'. Often a monitor value is given without quoting its origin.

We are appalled at the complexity of this coding in either form!

The examples given on page VIII.3.MONITOR.2 show why!

Such coding is unintelligible to a user and therefore it must be possible to provide an edited version by programming. This in turn requires that the coding is correct, otherwise the edited version will be equally unintelligible. Therefore the coding must be thoroughly checked by programming; the probability of a compiler making a mistake, e.g. omitting commas, is obvious from the examples.

Such coding is very difficult to check (and edit), for the main reason that the reference coding, which has a variable number of subfields is embedded in the code.

We therefore make the following proposal, which simplifies both the input for the compiler and the programming for checking and editing.

(Continued)

These paragraphs replace 4 and 5 on page VIII.3MONITOR.1.

4.1 The general format of the code consists of 5 fields, coded on 3 lines, each starting in col.12, as follows:

(reaction,quantity,data-type,
author,reference,
subacc#)

4.2 The first line containing reaction, quantity and data-type is equivalent in structure to a REACTION code, and trailing sub-fields (in the REACTION sense) need not be indicated by commas. For example, if the data-type is not given, the first line would end after the last non-empty sub-field of the quantity field.

4.3 No embedded blanks should appear within the coding on any line and any free text should follow the final parenthesis.

4.4 The omission of any of the fields author, reference or subacc# should be indicated by a comma.

4.5 If the reference field is omitted, the subacc# may, as a relaxation of rule 4.1, be placed on the second line.

4.6 Thus the following are examples of permitted formats in addition to the general form above.

i) Author, reference and subacc# omitted

(reaction,quantity,data-type)

ii) Data-type and author omitted

(reaction,quantity,
,reference,
subacc#)

iii) Author and reference omitted

(reaction,quantity,data-type,
,,subacc#)

iv) Reference omitted

(reaction,quantity,data-type,
author,,subacc#)

5. Reaction, quantity, data-type are coded in exactly the same way as for the keyword REACTION. One comma is required to indicate the end of coding.

Author is the family name of the author of the reference in the next field. If more than one author, the name is followed by '+'.

Reference is coded in exactly the same way as for the keyword REFERENCE.

Subacc# is the 8 character identification of the subentry containing the monitor data.

The following examples replace those on page VIII.3.MONITOR.2.

Examples

a) MONITOR   (29-CU-63(P,N)30-ZN-63,,SIG,
                GOSHAL,J,PR,80,939,50,
                B0017005)

b) MONITOR   (29-CU-65(P,N+P)29-CU-64,,SIG,
                ,T,MEGHIR,62,
                B0016002)

c) MONITOR   (92-U-238(P,F)47-AG-111,CUM,SIG,,,EXP,
                PANONTIN+,J,JIN,30,2017,68,
                B0019007)
                (92-U-238(P,F)49-IN-111,CUM,SIG,,,EXP,
                PANONTIN+,J,JIN,30,2017,68,
                B0019010)

d) MONITOR   1(92-U-238(P,F)47-AG-111,CUM,SIG,,,EXP,
                PANONTIN+,J,JIN,30,2017,68)
                2(92-U-238(P,F)49-IN-111,CUM,SIG,,,EXP,
                PANONTIN+,J,JIN,30,2017,68)

e) MONITOR   (29-CU-63(P,N)30-ZN-63,,SIG,
                ,,B0017005)

f) MONITOR   (29-CU-63(P,N)30-ZN-63,,SIG,
                GOSHAL,,B0017005)

Note: We do not expect that this memo will reach all participants of the
       2nd NRDC Meeting before their departure. However, since this topic
       is of great importance for the progress in CPND-Exfor programming,
       we hope that the proposal can be dicussed at the Meeting although
       it was not timely submitted.