BROOKHAVEN NATIONAL LABORATORY

M E M O R A N D U M

CP-C/113

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TO: Distribution

FROM: V. McLane *vm*

SUBJECT: Multiple Monitors

The coding of more than one monitor continues to be a problem. According to the EXFOR Manual:

In the case of two or more monitors, each monitor must be coded separately, starting in Column 12. The respective monitor values coded will be linked to the Monitor codes:

a.) using pointers (see page 6.3 BIB/DATA links)

Example:

REACTION	1(AAAAA)	
	2(BBBBB)	
MONITOR	1(CCCCC)	
	2(DDDDD)	

DATA					
EN	DATA	1DATA	2MONIT	1MONIT	2

b.) using the data headings MONIT1, MONIT2, etc., where MONIT1 refers to the first code entered, MONIT2 the second, etc. This fomalism must be used when two or more monitors are given for one reaction.

Example:

REACTION	(AAAAA)
MONITOR	(CCCCC)
	(DDDDD)

DATA			
EN	DATA	MONIT1	MONIT2

For usage **a**, two main problems have occurred:

1.) the pointers have been used when there is no link to REACTION.

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2.) a second set of pointers has been used, which has the effect of dissociating the monitor values from either reaction.

For usage b, the problem occurs mainly when not all the monitor reactions have values given in the COMMON or DATA sections. In this case, the compiler often forgets to include those reactions in numbering the monitor values.

Example:

```
MONITOR      (92-R-235(N,F),,SIG)
             (5-B-10(N,A)3-LI-7,,SIG)
             .
             .
             .
COMMON
EN-NRM       MONIT
EV           B
   0.0253    3837.
ENCOMMON
```

Since we are now very involved in writing programs for the computer manipulation of the data, we would, again, like to propose a positive link between the BIB and DATA coding of MONITOR.

We propose the addition of an optional first field in the code string of the keywords MONITOR and MONIT-REF (similar to DECAY-DATA) identifying the associated data heading.

Examples:

```
a.)   MONITOR      (92-U-235(N,F),,SIG)
                   ((MONIT)5-B-10(N,A)3-LI-7,,SIG)

b.)   MONITOR      ((MONIT1)41-NB-93(N,INL)41-NB-93-M,,SIG)
                   ((MONIT2)13-AL-27(N,A)11-NA-24,,SIG)
      MONIT-REF    ((MONIT1),G.SHANI,J,NT,51,83,80)
                   ((MONIT2),A.CALAMAN,R,IAEA-156,74)
```

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