word 19

bit no.	contents
0	accidental coincidence LA1
:	
7	" " LA8
8	coincidence L1
:	
15	" L8

The luminosity scintillator latches are stored in the CAMAC word 20 according to the following scheme:

bit no.	contents
0	counter 1A
:	
7	" 8A
8	" 1B
:	
15	" 8B

The lead glass energy sum latches are stored in the CAMAC word 21 (which is not yet foreseen in JADE note 32) according to the following scheme:

bit no.	contents
0	lead glass sum 1S above threshold
1	" " " 2S " "
2	" " " AS " "
:	
11	" " " DS " "
12	" " " at -Z (SMZ) above lower threshold
13	" " " " -Z (SMZ) below upper "
14	" " " " +Z (SPZ) above lower "
15	" " " " +Z (SPZ) below upper "

4. to provide values for LUN, IARR(1) and IRUN where

   IARR(1) = N_1 -4

   IRUN = run number (if IRUN ≤ 0 the run number is not checked)

5. CALL AVTIN(LUN,&10), once for each file to initialize the program

6. CALL AVENT(LUN,IARR,&20) to get an event. After each call, the event is stored in array ID and the length of the event is (IARR(2)-3)/2 in I*4 words.

Example:

```
MEMBER EV

C   25/01/79 C9013C01   MEMBER NAME  EV        (S)          FORTRAN      0000000
      INTEGER*2 IARR(10004)                                               0000010
      COMMON/CMNF/IRUN,IREC,ISTAT,IFLAG,NWPR                              0000020
      COMMON/CDATA/LENG,ICD1(2),ID(5000)                                  0000030
      EQUIVALENCE(IARR(5),ID(1))                                          0000040
      DATA LUN/9/                                                         0000050
      DATA NEV/0/                                                         0000060
    1 FORMAT(' READ ERROR IN AVTIN')                                      0000070
    2 FORMAT(' READ ERROR IN AVENT AT NEV = ')                            0000080
      IRUN=9999                                                           0000090
      IARR(1)=10000                                                       0000100
      GO TO 80                                                            0000110
   10 WRITE(6,1)                                                          0000120
      GO TO 300                                                           0000130
   20 WRITE(6,2) NEV                                                      0000140
      GO TO 300                                                           0000150
   80 CALL AVTIN(LUN,&10)                                                 0000160
  100 CALL AVENT(LUN,IARR,&20)                                            0000170
      IF(ISTAT.EQ.4) GO TO 300                                            0000180
      IF(ISTAT.NE.1) GO TO 100                                            0000190
      NEV=NEV+1                                                           0000200
      LENG=(IARR(2)-3)/2                                                  0000210
      CALL YWRITE(2,LENG,ID)                                              0000220
C   THE EVENT IS STORED IN ARRAY ID, THE LENGTH OF THE EVENT              0000230
C   IS EQUAL TO (IARR(2)-3)/2 IN I*4 WORDS                                0000240
      GOTO 100                                                            0000250
  300 CONTINUE                                                            0000260
      STOP                                                                0000270
      END                                                                 0000280
```



```
//F22YEN35 JOB '10218222',YEN,CLASS=A,MSGLEVEL=(1,1)                      000
//*MAIN LINES=(2),ORG=EXT                                                 000
//*  EXEC NEWFAST                                                         000
// EXEC FCLG,PARM.LKED='MAP,LIST',TIME.GO=1                               000
//MACRO EV                                                                000
//LKED.SYSLIB DD                                                          000
// DD                                                                     000
// DD DSN=F22YEN.JADE.L,DISP=SHR,UNIT=FAST                                000
// DD DSN=RC2BLT.CERNLIB,DISP=SHR                                         000
//GO.FT09F001 DD DSN=F22YEN.MCRD10,DISP=SHR,UNIT=TAPE,VOL=SER=F22B01,    000
// DCB=(RECFM=F,BLKSIZE=4096,DEN=3),LABEL=(,NL)                           000
// DD DSN=F22YEN.MCRD10,DISP=SHR,VOL=SER=F22F08,                          000
// DCB=(RECFM=F,BLKSIZE=4096,DEN=3),LABEL=(,NL),UNIT=AFF=FT09F001         000
//GO.FT02F001 DD DSN=F22YEN.MAG.MC90,DISP=(NEW,CATLG,DELETE),            000
// DCB=(RECFM=VBS,BLKSIZE=6240,LRECL=6236),UNIT=TAPE                      000
```

Form.(3) After calibration

ALGN
1
0
LNG
B.descr.
≠0
pointer
"
"
"
ADDR
DATA
ADDR
DATA

≥ 100
calibration code
= 1

Form.(4) present
M.C. by W. Bartel

ALGL
7
0
LNG
pointer
"
"
"
ADDR
DATA
ADDR
DATA
ADDR
DATA

= 1

The lead glass cluster finding routine LGANAL accepts the format shown in Form. 3. But at present the Monte Carlo LG-data generated by W. Bartel has a formally decided format (Form. (4)). To keep the program development going on, LGANAL can also analyse the M.C. data with the old format. At the very beginning of LGANAL the ADC data is copied into the common /CWORK/ by a copying subroutine. At first it looks for the expected bank 'ALGN'/1. When the bank is missing it searches for the present Bartel's M.C. bank 'ALGL'/7 and copies it into /CWORK/ with necessary modifications. (There are Monte Carlo events with both 'ALGL'/7 and 'ALGN'/1 in F22YAM.JETYS130. The latter is generated by means of the 3-dimensional shower program to learn lateral spread of clusters. The original M.C. data for it is F22ELS.JETYS130.)

After cluster analysis 'ALGN'/1 is filled with the shuffled ADC data again as described in the JADE computer note 14. Notice that the ADC-values are not changed and the shuffling is made only among those ADC's from the same detector part and the gross order of data (barrel, -Z end cap, +Z end cap) is maintained. Hence, the output 'ALGN'/1 bank can be used as an input for LGANAL again.