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LIFILE - A PROGRAM TO PREPARE FILE STATISTICS   THE NORD

JADE COMPUTER NOTE : 19

H.E.Mills

15 February 1979

INTRODUCTION

The NORSK DATA file system provides the commands LIST-FILE and FILE-STATISTICS to examine user directories. Neither of these commands is really satisfactory since the former does not give enough information and the latter is much too verbose. The LIFILE program was written by the EMBL computer group at Heidelberg in order to help with file maintenence. It takes the output of the FILE-STATISTICS command and condenses it into one line of output per file. In addition, LIFILE can sort entries and make specific selections.

LIFILE takes longer to run than LIST-FILES but is faster than FILE-STATISTICS since there are significantly fewer lines to print. The HUMAN time required to read the output is claimed to be reduced by a factor of 10 compared with FILE-STATISTICS.

EXAMPLE OF LIFILE RUN

The following example shows the normal information required by a user concerning his files. An alphabetical listing for all files is requested to be sent to the lineprinter. For each file there will be the filename, creation, last write, and last read date and the size in pages. The command to achieve this is:

```
@(J)LIFILE L-P,,/AN/AT,:T:C:W:R:S,,
```

The output produced on the lineprinter for user PUBLIC is attached to this document. For more exotic use of LIFILE the user is refered to pages 15 to 23 of the EMBL document Incremental Backup and Selective Migration System for the NORD 10 Computers.

No	Name	Type	Created	Written	Read	Size
018	ALFRED	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
022	ALTER	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
017	BMAS-SPIEL	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
038	CO-RAND	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
008	CDP-MD	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
004	DRUE	;SYMB;001	C-1979. 2.14	W-1979. 2.14	R-1979. 2.14	00001P
014	ELSEN1	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
005	ERDAES	;SYMB;001	C-1978.11.30	W-1978.12.15	R-1979. 1.10	00001P
016	FAK	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
021	FAKT	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.22	00002P
023	FLUG	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
001	FPLA1	;BRF ;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
012	GMTIME	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
030	GLUCK	;BRF ;001	C-1978.11.30	W-1978.11.30	R-1979. 1.30	00001P
000	GLUCK	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.30	00006P
031	HAELT	;BRF ;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
013	HAELT	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
020	HALFA	;SYMB;001	C-1979. 2.14	W-1979. 2.14	R-1979. 2.14	00001P
003	HTTRY	;BRF ;001	C-1978.11.30	W-1978.11.30	R-1979. 1.30	00001P
007	HTTRY	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.30	00001P
029	MAS	;BRF ;001	C-1978.12. 5	W-1978.12. 5	R-1979. 1.30	00001P
052	MAS-PROB	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
019	MAS-SPIEL	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
033	MODE-FT	;SYMB;001	C-1979. 2.14	W-1979. 2.14	R-1979. 2.14	00001P
015	NAME	;BRF ;001	C-1978.11.30	W-1978.11.30	R-1979. 1.30	00001P
009	NEUA	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
011	PS-TEST	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.10	00001P
010	PS-TEST	;SYMB;001	C-1978.12.15	W-1979.11.10	R-1979. 1.10	00001P
002	SCH-1	;SYMB;001	C-1978.12.10	W-1978.12.10	R-1979. 0. 0	00001P
027	SCH-3	;SYMB;001	C-1978.12.10	W-1978.12.16	R-1979. 1.10	00001P
05?	SCH-SHIP-1	;SYMB;001	C-1979. 1.10	W-1979. 1.10	R-1979. 1.10	00001P
025	SCH-SHIP-2	;SYMB;001	C-1979. 1.10	W-1979. 1.10	R-1979. 1.10	00001P
060	SELONGE-CO	;SYMB;001	C-1978.12. 7	W-1978.12. 7	R-1979. 1.15	00002P
006	TESTA	;SYMB;001	C-1978.11.30	W-1978.11.30	R-1979. 1.15	00001P

CREATION DATE
LAST WRITE DATE
LAST READ DATE
SIZE IN PAGES

21.2.1979

S.Kawabata

Output Format of TOF program

The result of TOF program will be given in COMMON/CWORK/.

COMMON/CWORK/ ID(983),INFM(4),IR(14,50)
DIMENSION R(14,50)
EQUIVALENCE (IR(1,1),R(1,1))

- General information
  INFM(1) : total number of tracks
      (2) : number of tracks for which mass could be defined
      (3) : number of tracks for which mass could not be defined
      (4) : number of tracks which did'nt hit TOF counters.
- TOF information for each track
  IR(1,N) = N : index(track number)
    (2,N) : flag = 1   if one track hits a counter and gives good result.
                 = -1 if one track hits a counter and gives wrong result
                 = 2   if two tracks hit a counter and gives good result
                 = -2 if two tracks hit a counter and gives wrong result
                 = 10 if the track did'nt hit any counter
    (3,N) : counter number
  R(4,N) : time of flight (ns)
    (5,N) : path length of the track (mm)
    (6,N) : β
    (7,N) : $\Delta\beta$
    (8,N) : mass (GeV)
    (9,N) : Δm (GeV)
   (10,N) : proton relative probability
   (11,N) : kaon   relative probability
   (12,N) : pion   relative probability
   (13,N) : electron relative peobability
   (14,N) : dE/dx

should go inter 'PATR'

Output Format of TOF program

The result of TOF program

Name of the banck : TOFR

Pointer to the banck : IDATA(78) in COMMON/CDATA/

IINTCY4)

Contents of the banck : INFM(4),IR(14,50)

DIMENSION R(14,50)

EQUIVALENCE (IR(1,1),R(1,1))

- General information

INFM(1) : total number of tracks

(2) : number of tracks for which mass could be defined

(3) : number of tracks for which mass could not be defined

(4) : number of tracks which did'nt hit TOF counters.

- TOF information for each track

IR(1,N) = N : index(track number)

(2,N) : flag = 1 if one track hits a counter and gives good result.

= -1 if one track hits a counter and gives wrong result

= 2 if two tracks hit a counter and give good result

= -2 if two tracks hit a counter and give wrong result

= 10 if the track did'nt hit any counter

(3,N) : counter number

R(4,N) : time of flight (ns)

(5,N) : path length of the track (mm)

(6,N) : β

(7,N) : $\Delta\beta$

(8,N) : mass (GeV)

(9,N) : Δm (GeV)

(10,N) : proton relative probability

(11,N) : kaon relative probability

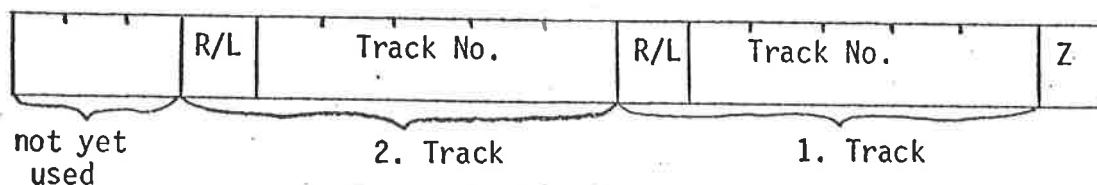(12,N) : pion relative probability

(13,N) : electron relative peobability

(14,N) : dE/dx

Hit Label Bank created by PATREC

- Name of the bank :   'JHTL'
- Pointer to the bank :   IDATA(69) in COMMON / BCS /
- Contents of the bank :

  One Integer*2 word for each hit in the same order as the hits in
  the bank 'JETC'

	R/L	Track No.	R/L	Track No.	Z
not yet used		2. Track		1. Track	

$$Z = \begin{cases} 1 & \text{if } z - \text{coordinate is good} \\ 0 & \text{if } z - \text{coordinate is bad (overlapping tracks)} \end{cases}$$

$$R/L = \begin{cases} 1 & \text{if right solution is selected} \\ 0 & \text{if left solution is selected} \end{cases}$$

Track No. and R/L-bit of the second track is only set if the hit corresponds
to two different tracks (at a kink or at a crossing point of tracks).

P. Steffen
7.3.79
(amended 19.9.1979)

JADE Computer Note No. 21

Hit Label Bank created by PATREC

- Name of the bank :   'JHTL'
- Contents of the bank :

     (1) Bank descriptor (I4)

     (2) Two Integer*2 word for each hit in the same order as the hits in the bank 'JETC'

unused	B2	B1	R/L	Track No.	Z

(for the first tra

$$Z = \begin{cases} 1 & \text{if z-coordinate is good} \\ 0 & \text{if z-coordinate is bad (overlapping tracks)} \end{cases}$$

$$R/L = \begin{cases} 1 & \text{if right solution is selected} \\ 0 & \text{if left solution is selected} \end{cases}$$

The second word is filled in the same way if the hit corresponds also to a second track.

B1 = 1   : hit is in bad agreement with fitted curve

B2 = 1   : hit has been correlated with track by pattern recognition program, but it has been excluded from the fit

Convention   : If a hit corresponds to two tracks and if it is in bad agreement only with one of the fits, the bad correlation is eliminated.

- In order to avoid unnecessary recomputation of old data, a subroutine EXJHTL (IERR) has been provided, which converts the old format into a new one. People using the SUPERVISOR will have this routine been called automatically.

    (IERR = 0 if not enough space in /BCS/ available).

JADE COMPUTER NOTE 21
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THIS IS JADEPR.TEXT(CPNOT21)

HIT LABEL BANK CREATED BY PATREC PROGRAM
==
STATUS 14/01/82
(P. STEFFEN)
REPLACEMENT OF OLD JADE COMPUTER NOTE 21 FROM 7/03/79

- BANK NAME: 'JHTL'

- BANK NUMBER: SAME NUMBER AS
                                    CORRESPONDING 'PATR'-BANK

- BANK CONTENTS (32 BIT WORDS): 1. BANK DESCIPTOR WORD
                                 2. LABEL FOR 1. HIT IN 'JETC'-BANK
                                 3. LABEL FOR 2. HIT IN 'JETC'-BANK
                                 4. LABEL FOR 3. HIT IN 'JETC'-BANK
                                    .
                                    .

- THE LABEL CONTAINS INFORMATION TO WHICH TRACKS THE HIT BELONGS TO
  (IBM CONVENTION: BIT 0 = HIGHEST ORDER BIT. 31 = LOWEST ORDER BIT

  BIT 0- 4 : DISTANCE(HIT-FITTED TRACK)   )
                      IN UNITS OF 0.2 MM   )
  BIT 5- 6 : UNUSED   )
  BIT   7 : 1/0 IF HIT ON RIGHT/LEFT SIDE   )   1. TRACK
                          OF WIRE PLANE   )
  BIT 8-14 : TRACK NUMBER TO WHICH   )
              HIT CORRESPONDS IN 'PATR'-BANK   )
  BIT   15 : 1/0 IF Z-COORDINATE IS GOOD/BAD   )

  BIT 16-20 : DISTANCE(HIT-FITTED TRACK)   )
                      IN UNITS OF 0.2 MM   )
  BIT 21-22 : UNUSED   )
  BIT   23 : 1/0 IF HIT ON RIGHT/LEFT SIDE   )   2. TRACK
                          OF WIRE PLANE   )
  BIT 24-30 : TRACK NUMBER TO WHICH   )
              HIT CORRESPONDS IN 'PATR'-BANK   )
  BIT   31 : 1/0 IF Z-COORDINATE IS GOOD/BAD   )

INFORMATION FOR 2. TRACK IS ONLY FILLED IF HIT CORRESPONDS TO
2 TRACKS (E.G. AT KINK OR CROSSING POINT OF TRACKS)
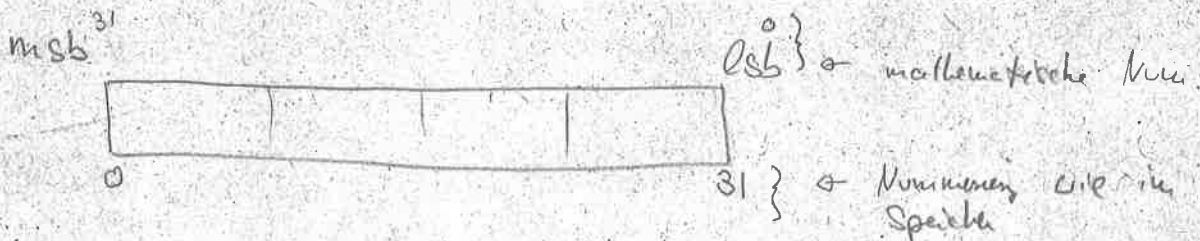
JADE COMPUTER NOTE 22 - ISSUE 3

MU SOFTWARE INFORMATION.

JOHN ALLISON.
CHRIS BOWDERY.
IAN DUERDOTH.
JOHN HASSARD.
HUGH MCCANN.
HARRY PROSPER.

10/04/81.

THIS INFORMATION IS KEPT ON *F22ALL.JADEMUS(@MUINFOM)*.   IT CONTAINS
    EXTENSIVE INFORMATION ON THE MUON ANALYSIS AND MONTE CARLO
    PROGRAMS.   IT WAS ISSUED IN JADE COMPUTER NOTE 22 - ISSUE 2 IN
    MAY 1980. (THIS NOTE REPLACES THAT ISSUE.).

‡   FURTHER MODIFICATIONS WILL BE RECORDED ON F22ALL.JADEMUS(MUNEWS)
‡   PRIOR TO A FURTHER RE-ISSUE OF THIS NOTE. WATCH THAT SPACE

‡ FURTHER INFORMATION ON MUSEFUL PROGRAMS IS KEPT ON
‡   *F22ALL.MUSEFULS(@MUSEFUL)*.

? LINES PREFIXED WITH ? INDICATE INTENTION ONLY.   FEATURES MARKED IN
?   THIS WAY ARE NOT YET IMPLEMENTED.   HOPEFULLY THEY WILL BE
?   IMPLEMENTED AT SOME TIME AND AN UPDATED NOTE WILL BE ISSUED.

‡ LINES PREFIXED WITH ‡ INDICATE RECENTLY IMPLEMENTED FEATURES OR
‡ RECENT INFORMATION.
 LAST CHANGE AT 09.51 15/05/80. JOHN ALLISON.
 LAST CHANGE AT 08.00 10/04/81. HUGH MCCANN.

Outdated

USING THE MUON ROUTINES OUTSIDE OF THE SUPERVISOR IS QUITE SIMPLE.
HERE IS THE BASIC STRUCTURE OF SUCH A PROGRAMME :

```
C------------------------------------------------------------------------
C                  MACRO CDATA .... BOS COMMON.
C------------------------------------------------------------------------
      COMMON /BCS/ IDATA(25000)
      DIMENSION HDATA(10),IPNT(50),ADATA(2000)
      EQUIVALENCE (HDATA(1),IDATA(1),ADATA(1)),(IPNT(1),IDATA(55))
      EQUIVALENCE (NWORD,IPNT(50))
C--------------------------- END OF MACRO CDATA -------------------------
C    - - - -
C---        INITIALIZE BOS.
C    - - -
      CALL MUINI
C    - -
C---      MAIN EVENT LOOP
C---
      NUNIN=2
    1 CONTINUE
      CALL BSLT
      CALL BDLG
C---
      CALL BREAD(NUNIN,&10,&20)
      CALL KALIBR
C
C FORCE MUON RE-ANALYSIS.
C
      CALL BMLT(2,'MLRIMUR2')
      CALL BDLM
C
C---   CALL MU CHAMBER TRACKING.
      IMUARG=1
      CALL MUANA(IMUARG)
C    - - - -
C  ANALYSE RESULTS
C    - - - -
      GO TO 1
C    - - - -
      STOP
      END
      BLOCK DATA
C FILL VARIABLES IN MACRO CIOUNI (FOR USE IN KALIBR. SEE JADEGS(SUPERV))
      END
```

MUANA - THE MUON ANALYSIS DRIVER.

        CALL MUANA(IJOIN)

WHERE IJOIN.NE.0 TO GET MUON ROUTINES TO ATTEMPT TO JOIN MUON HITS AND
        TRACKS TO INNER DETECTOR AND LEAD GLASS TRACKS AND CLUSTERS.
        I.E. YOU WOULD USUALLY CALL MUANA(1) SAY. (IJOIN=0 SUPRESSES
        SUCH ATTEMPTS AND THUS CAN BE USED ON MU DATA ALONE WHEN NO
        OTHER BANKS EXIST.)

    MUANA CALLS 4 OTHER DRIVING ROUTINES, WHICH CALL NUMEROUS OTHER
        ROUTINES.....

    1)MUANAC. THIS CONVERTS SIGNALS TO COORDINATES AND CREATES
        'MURI' BANKS 0,1,AND 2 (SEE BELOW). IT CALLS THE SIGNAL TO
    COORDINATE CONVERSION ROUTINE MUCOOR.
    WHICH USES THE FULL MUON CALIBRATION DATA PREPARED BY MUCON

✡NOTE ON GRAPHICS :
✡-------------------
✡   IMPORTANT : ANYONE INTERESTED IN LOOKING AT MUONS AT A GRAPHICS
✡   TERMINAL MUST READ THIS PARTICULAR SECTION.
✡
✡   TO GET MU RESULTS PROCEED TO INDEX=8.
✡   THE STANDARD JADE GRAPHICS MODULE (F1ILHO.GRAPHL(JADEZ)) DISPLAYS
✡   THE MUR1 & MUR2 BANKS WHICH EXIST ON THE INPUT FILE. SO, IF THE MUON
✡   PROGRAMMES OR CALIBRATION HAVE CHANGED SINCE THE INPUT FILE WAS
✡   PRODUCED , YOU WILL NOT HAVE THE MOST UP-TO-DATE ANALYSIS UNLESS
✡   YOU EXPLICITLY FORCE REANALYSIS AS FOLLOWS :
✡   MUPT 1 (TO FORCE REANALYSIS)
✡   STVW (OR SIMILAR COMMAND TO GET HITS REDRAWN)
✡   MUPT (AGAIN TO GET MU LINES, MULTIPLE SCATTERING ELLIPSES, ETC.)
✡
✡   FURTHERMORE, THE FOLLOWING ARE USEFUL :
✡   CDTL 9 (TO GET X,Y,Z INSTEAD OF THE DEFAULT R,Z - ESSENTIAL FOR ZX AND
✡   ZY VIEWS).
✡   CDTL 24 (TO GET HITS AND ELLIPSES IN FACING FACE - CAN GET MESSY).
✡   CDTL 22 (TO GET MUON HIT NUMBERS).
✡   CDTL 18 (TO GET T3 TRIGGER DISPLAY).
✡   CDTL 6 (TO SPEED JET CHAMBER DISPLAY).
✡   CDTL 26 (TO SPEED JET CHAMBER DISPLAY).
✡
✡   TO JUDGE WHETHER A TRACK IS A MUON AT THE GRAPHICS SCREEN. IT IS
✡   ESSENTIAL TO CONSIDER THE STATUS OF INDIVIDUAL CHAMBERS. WHEN A
✡   BROKEN LINE (- - - -) IS DRAWN OVER THE DRIFT WIDTH OF A CHAMBER
✡   (SEE FIGURE 1, POINT A), IT MEANS THAT THE CHAMBER WAS NOT SENSITIVE
✡   WHEN THIS EVENT WAS RECORDED.
✡   THE COMMAND "MUPT" CAUSES THE PROJECTED TRAJECTORY OF EACH PATREC
✡   TRACK TO BE DRAWN ON THE SCREEN. ASSUMING EACH TRACK TO BE A MUON
✡   (FIG 1, B). THE EXPECTED RANGE OF THE TRACK IS INDICATED BY THE
✡   TRAJECTORY CHANGING FROM A SOLID LINE TO A BROKEN LINE (FIG 1, C).
✡   AT EACH INTERSECTED CHAMBER LAYER ALONG THE EXPECTED TRAJECTORY,
✡   AN "ERROR BAR" IS DRAWN,INDICATING THE UNCERTAINTY IN THE EXPECTED
✡   TRAJECTORY. THIS "ERROR BAR" IS ONE STANDARD DEVIATION LONG ON EACH
✡   SIDE OF THE TRACK AND IS CALCULATED FROM THE PATREC ERROR AND THE
✡   EXPECTED MULTIPLE SCATTERING DISTRIBUTION (FIG 1, D).IF CDTL 24
✡   IS SWITCHED ON, AN ERROR ELLIPSE IS DRAWN INSTEAD (FIG 2, A).
✡   IF, IN THE VIEWED PROJECTION, A TRACK APPEARS TO GO THROUGH A
✡   PARTICULAR CHAMBER LAYER BUT THERE IS NO ERROR BAR DRAWN, THEN THIS
✡   IMPLIES THAT THE TRACK DID NOT INTERSECT THIS CHAMBER LAYER IN 3-D.
✡   (FIG 1, E).YOU SHOULD THEN LOOK IN THE RELEVANT PROJECTION TO
✡   SEARCH FOR FURTHER HITS ALONG THIS TRACK.
✡   WHEN ONE AMBIGUITY OF A HIT IS MARKED "✡" (FIG 2,B). INSTEAD OF THE
✡   NORMAL "X". THIS MEANS THAT THIS AMBIGUITY OF THIS HIT IS IN THE BEST
✡   CHI-SQUARED PERMUTATION FOR A MUON-CANDIDATE TRACK. (SEE THE PHILO-
✡   SOPHY 2 WRITE-UP FOR THE CRITERIA USED TO DEFINE A MUON-CANDIDATE
✡   TRACK.) HITS MARKED WITH A SMALLER THAN USUAL "X" (FIG 2,C) ARE BADLY
✡   DIGITISED HITS AND ARE NOT USED IN THE CHI-SQUARED CALCULATION.
✡   HOWEVER, IF THERE IS MORE THAN ONE ASSOCIATED HIT IN A PARTICULAR
✡   CHAMBER LAYER AND ONE OF THEM IS A "BAD" HIT, THE "BAD"HIT IS USED
✡   FOR THE HIT PERMUTATION PROCEDURE. I.E. A "BAD" HIT CAN BE PREFFERED
✡   OVER A "GOOD" HIT IF THE CHI-SQUARED/NO. OF DEGREES OF FREEDOM FOR
✡   THE BEST L/R AMBIGUITY PERMUTATION THUS OBTAINED IS BETTER THAN THAT
✡   OBTAINED WHEN THE "GOOD" HIT IS USED. ANY "BAD" HIT WHICH IS IN THE
✡   BEST PERMUTATION OF HITS FOR A MUON CANDIDATE TRACK HAS A CIRCLE
✡   DRAWN ROUND IT I.E. IT APPEARS AS "⊗" . THUS A SCANNER CAN SEE
✡   EXACTLY WHICH HITS/AMBIGUITIES WERE USED TO CALCULATE THE CHI-SQUARED.
✡   ANY L/R AMBIGUITY OF ANY HIT WHICH IS "ASSOCIATED" WITH A TRACK.
✡   BUT IS NOT IN THE BEST CHI-SQUARED PERMUTATION FOR THAT TRACK.
✡   HAS A SQUARE DRAWN ROUND IT I.E. IT APPEARS AS " ☒ " (SEE THE PHIL2
✡   WRITE-UP FOR THE DEFINITION OF "ASSOCIATED".) --- PROVIDED THE OTHER
✡   AMBIGUITY IS NOT "ASSOCIATED" WITH THE SAME TRACK AND IN THE BEST

MUON CALIBRATION DATA BANKS :

THESE ARE KEPT ON DATASETS
(A) F22ALL.MUCALIB.DATA0001 (-0002. ....-0016)
     AS BOS RECORDS WHICH CAN BE READ BY BREAD :
(B) F22ALL.MUCALIB.NBOS0001 (-0002. ....-0016)
     AS SINGLE LOGICAL RECORDS OF LENGTH 4185 WORDS.

THE FIRST ONE OF BOTH TYPES IS FOR MONTE CARLO ANALYSIS.
DATASETS (A) ARE PROVIDED FOR THE PURPOSE OF PRIVATE MUON
CALIBRATION OUTSIDE THE O'NEILL SYSTEM . ANY CHANGES OR UPDATES
ARE PUT ONTO THESE EOS DATASETS . THE CHANGES ARE THEN CHECKED
INDEPENDENTLY BEFORE PROVIDING A COPY IN FORMAT (B) FOR THE O'NEILL
SYSTEM.
   CHANGES AND UPDATES ARE IMPLEMENTED BY ROUTINE MUCONE WHICH IS
ACTIVATED BY RUNNING JOB #MUTEST WITH PARAMETER "LUNE" SET TO THE
LOGICAL UNIT NUMBER OF THE INPUT EDIT DATA . IF THIS IS ZERO . NO
EDITS ARE CARRIED OLT. THE UPDATED DATASETS CAN ALSO BE OUTPUT BY
THE SAME JOB BY SETTING THE PARAMETER "LUNO" TO THE LOGICAL UNIT
NUMBER OF THE OUTPUT DATA SET . ACTIVATING ROUTINE MUCONW AS
FOLLOWS :
   LUNO=0   ==> NO OUTPUT :
   LUNO < 40 OR =40   ==> MUCONW WRITES ONLY A BOS FORMAT DATA SET
                           ON LOGICAL UNIT NUMBER LUNO :
   40<LUNO<45   ==> MUCONW WRITES BOTH A BOS DATA SET AND A
                           SINGLE LOGICAL RECORD OF LENGTH 4185 WORDS
                           ON LOGICAL UNIT NUMBERS LUNO AND LUNO+1
                           RESPECTIVELY :
   LUNO > 45 OR =45   ==> MUCONW WRITES ONLY A SINGLE LOGICALRECORD
                           OF LENGTH 4185 WORDS ON LOGICAL UNIT
                           NUMBER LUNO.
ONLY ONE COMMON IS USED BY MUCONE AND MUCONW . NAMELY CMUCALIB.
   THE ROUTINES MUCONW & MUCONR WILL SHORTLY BE CHANGED RE LOGICAL
   UNIT NOS. ETC. (KEEP WATCHING MEMBER MUNEWS   )

BANK NAMES, NUMBERS AND LENGTHS

NAME/NUMBER		LENGTH	CONTENTS
MUCD	0	16	VERSION NUMBER AND DESCRIPTION.
MUOV	0	3	OVERALL JADE UNIT TRANSLATIONS.
MFFI	2	370	FIXED FRAME PARAMETERS.
MCFI	3	318	FIXED CHAMBER PARAMETERS.
MFSU	4	246	*SURVEY* FRAME PARAMETERS.
MCSU	5	634	*SURVEY* CHAMBER PARAMETERS.
MCEL	6	2220	*ELECTRONIC* CHAMBER PARAMETERS.
MCST	7	317	CHAMBER STATUS WORDS.
MUFI	8	36	FILTER (ABSORBER BLOCK) PARAMETERS.
MUYO	9	10	SIDE, TOP AND BOTTOM YOKE PARAMETERS.
MUEN	10	15	YOKE END-PLUG PARAMETERS.

TOTAL LENGTH 4185 WORDS.