```
CON
C+**************************************************************************
C
      SUBROUTINE MEDFLY(LF,MF,NF,ASCII,MAP)
C
C     ACRONYM: MEDIANS LINK LIST MAP FILE OF SPLIT DATABASE FILES ON THE FLY.
C              ***                                                      ***
C
C     PURPOSE: To read a split database file (E,I,PE) and create a
C              map of its direct access records relating orbit #,start rec #,
C              & stop rec # via an entry in a link list file.  The link list
C              file has rec #'s corresponding to orbit #'s with the start & stop
C              rec #'s of the database file as record entries.
C
C     OVERVIEW: Program configuration parameters are passed via dummy arguments.
C               All files are opened prior to invocation.
C               The first record of the database file will be interrogated to
C               determine the beginning orbit number.  The algorythm reads
C               each record to determine the start & stop record numbers which
C               bound an orbit in the database file.  Upon encountering a new
C               orbit  the algorythm writes a record about the privious orbit
C               in the link list file.  Each orbit in the file will be
C               processed in this manner until an end of file has been detected.
C
C     PARAMETERS:
C      NAME        DIM    TYPE  I/O   DESCRIPTION
C      ----        ---    ----  ---   -----------
C        LF         -      I*4  I     LUN of split database file.
C        MF         -      I*4  I     LUN of link list file.
C        NF         -      I*4  I     LUN of list of link list.
C      ASCII        -      L*1  I     Flag indicates create and ASCII disk file
C                                     of the link list map.
C        MAP        -      L*1  I     Flag indicates create a map file.
C
C     NOTES:
C
C     CALLING MODULE: MEDMAP
C
C     SUBROUTINES CALLED:
C      NAME           DESCRIPTION
C      ----           -----------
C
C
C     COMMONS USED:
C      NAME           DESCRIPTION
C      ----           -----------
C
C     FILE USAGE:
C      FILE              LUN          DESCRIPTION
C      ----              ---          -----------
C      ELE1.LSF          LF=          Electron mode database.
C      ION1.LSF          LF=          Ion mode database.
C      PHE1.LSF          LF=          Photoelectron mode database.
C      PHE2.LSF          LF=          Photoelectron mode database.
C      ELE1.MAP          MF=          Electron mode database link list.
C      ION1.MAP          MF=          Ion mode database link list.
C      PHE1.MAP          MF=          Photoelectron mode database link list.
```

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C      ELE1.LIS          NF=          ASCII list of electron database map.
C      ION1.LIS          NF=          ASCII list of ion database map.
C      PHE1.LIS          NF=          ASCII list of photoelectron database map.
C
C     ENVIRONMENT: VAX/VMS
C
C     AUTHOR:  JOE GOOSBY
C     DATE:    7/93
C
C
C-************************************************************************
COFF
      LOGICAL*1 ASCII,MAP
      DIMENSION EPM(17)
C
C... Write header record to list file.
       IF (ASCII) WRITE(NF,1000)
C
C... Initialize all map files to zero.
      IF (MAP) THEN
         IS=0
         DO I=1,5055
           WRITE(MF,REC=I) IS,IS
         END DO
      END IF
C... Determine 1st orbit # in file.
      READ(LF,REC=1,IOSTAT=IUS) IORBT
        IUS=0
         I8=0
         I9=0
          I=1
       ISTR=I9+1
        NOR=IORBT
      DO WHILE(IUS.EQ.0)
         I8=I8+1
         DO WHILE(IORBT.EQ.NOR.AND.IUS.EQ.0)
            I9=I9+1
            READ(LF,REC=I9,IOSTAT=IUS) IORBT
C            READ(LF,REC=I9,IOSTAT=IUS) IORBT,KPER,KDAY,NDSE,
C     *               TIME,ALTE,SZAE,TOTE,TE,PHIE,FRSE,BCKE,
C     *                                        (EPM(K),K=1,17)
         END DO
         IF (IORBT.NE.NOR.AND.IUS.EQ.0) THEN
            IF (MAP) THEN
               READ(MF,REC=NOR)
               REWRITE(MF,IOSTAT=IOS) ISTR,I9-1
               IF (IOS.NE.0) THEN
                  WRITE(*,'('' MEDFLY: Rewrite error = '',I10)') IOS
                  WRITE(*,'(''              on orbit = '',I5)') NOR
               END IF
            END IF
       IF (ASCII) WRITE(NF,'(I7,1X,I7,1X,I12,1X,I12)') I8,NOR,ISTR,I9-1
            ISTR=I9
             NOR=IORBT
         END IF
         IF (IUS.NE.0) THEN
            IF (MAP) THEN
```

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               READ(MF,REC=NOR)
               REWRITE(MF,IOSTAT=IOS) ISTR,I9-1
               IF (IOS.NE.0) THEN
                  WRITE(*,'('' MEDFLY: Rewrite error = '',I10)') IOS
                  WRITE(*,'(''              on orbit = '',I5)') NOR
               END IF
            END IF
       IF (ASCII) WRITE(NF,'(I7,1X,I7,1X,I12,1X,I12)') I8,NOR,ISTR,I9-1
         END IF
      END DO
C
      RETURN
 1000 FORMAT( / 1X,' SEQ #   ORBIT  START REC #   STOP REC #')
C
C
      END
```