```
      PROGRAM EBU
C  MAIN PROGRAM
C -----------------------------------------------
C           17.11.97      My version
C           19.11.97
C           16/04/98
C           20/04/98
C           14/05/98      New version for float1
C           12/08/98
C           20/10/98
C           22/05/2001
C -----------------------------------------------
C
                              L O G I C A L
     & RUN,FIRST,RESTRT,SIGMA
      REAL*8 t1,t2,t3
C-----------------------------------------------------------------------
      INCLUDE "CTLBLK"
      PARAMETER (IM=111,JM=221)
      PARAMETER (IMJM=IM*JM-JM/2)

      DIMENSION PDWORK(IMJM)

C--------INITIALIZE CONSTANTS AND VARIABLES-----------------------------
      call clock(t1)
                   CALL INIT

         WRITE(66,*)' NTSTM=',NTSTM
         WRITE(66,*)'EBU PROGRAM START'
         WRITE(66,*)'IDTAD=',IDTAD,' #/'
         WRITE(66,*)'NRADS=',NRADS,' #/'
         WRITE(66,*)'NPHS =',NPHS, ' #/'
         WRITE(66,*)'TRANSPORT MODEL START (TM1)'

         CALL TM1(NTSD,IDAT,DT)

C--------JUMP INTO THE TIME LOOP FOR PRELIMINARY CALCULATIONS----------
                   G O   T O  1200
C********ENTRY INTO THE TIME LOOP**************************************
 2000 NTSD=NTSD+1
      IF(MOD(NTSD,225).EQ.0)THEN
      WRITE(6,2001) NTSD,(NTSD-1)*DT,(NTSD-1)*DT/3600.
      ENDIF
 2001 FORMAT('EBU(float1): TIMESTEP NTSD=',I5,' FCST TIME=',F8.1,
     * ' sec',F8.1,' hrs')
C
C**********************************************************************
C
C--------PRESS. TEND.,ETA DOT & VERTICAL OMEGA-ALPHA--------------------
                   CALL PDTE
C--------IS IT TIME FOR A CHECK POINT ON THE MODEL HISTORY FILE?--------
                   CALL CHKOMG
C--------IS IT TIME FOR ADVECTION?--------------------------------------
      IF(MOD(NTSD-1,IDTAD).EQ.0)THEN
                   CALL VTADV
                   CALL HZADV
      ENDIF
C--------UPDATING PRESSURE DIFFERENCE-----------------------------------
                   CALL PDNEW
C--------RADIATION------------------------------------------------------
      IF(MOD(NTSD-1,NRADS).EQ.0.OR.MOD(NTSD-1,NRADL).EQ.0)
     1             CALL RADTN
C--------APPLY TEMPERATURE TENDENCY DUE TO RADIATION--------------------
                   CALL RDTEMP
C--------TURBULENT PROCESSES AND PRECIPITATION--------------------------
      IF(MOD(NTSD-1,NPHS).EQ.0)        T H E N
                   CALL PROFQ2
                   CALL SURFCE
                   CALL PROFS
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      ENDIF
      IF(MOD(NTSD-1,NPHS).EQ.0)        T H E N
                   CALL GSCOND
      ENDIF
      IF(MOD(NTSD-1,NCNVC).EQ.0)        T H E N
                   CALL CUCNVC
      ENDIF
      IF(MOD(NTSD-1,NPHS).EQ.0)        T H E N
                   CALL PRECPD
      ENDIF
C--------LATERAL DIFFUSION---------------------------------------------
                   CALL HDIFF
C--------UPDATING BOUNDARY VALUES AT HEIGHT POINTS----------------------
                   CALL BOCOH
C--------IS IT TIME FOR A CHECK POINT ON THE MODEL HISTORY FILE?-------
 1200              CALL CHKOUT
C--------PGF,CORIOLIS,DIVERGENCE & HORIZONTAL PART OF OMEGA-ALPHA-------
                   CALL PFDHT
C--------CLEAN UP AFTER 1ST STEP PRELIMINARY CALCULATIONS---------------
      IF(FIRST.AND..NOT.RESTRT)        T H E N
                   FIRST=.FALSE.

      call clock(t2)
      write(6,1001) t2-t1

      call clock(t1)
1001  format('CPU TIME for initiallization: ',f10.4,' sec')
C
                   GO TO 2000
      ENDIF
C -------------------------------------------------------------------

      CALL EXCHAN(NTSD,IDAT)

C--------DIVERGENCE DAMPING--------------------------------------------
                   CALL DDAMP
C--------UPDATING BOUNDARY VALUES AT VELOCITY POINTS--------------------
                   CALL BOCOV
C--------CLEAN UP AFTER RESTART-----------------------------------------
      IF(RESTRT)                       T H E N
                   FIRST=.FALSE.
                   RESTRT=.FALSE.
      ENDIF
C**********************************************************************
      IF(NTSD.LT.NTSTM)                GO TO 2000
C********EXIT FROM THE TIME LOOP***************************************
      call clock(t2)
      write(6,1002) t2-t1
1002  format('CPU TIME for calculation: ',f10.4,' sec')
                            STOP1
      END
```