ADAS Subroutine cdsum

```
       SUBROUTINE CDSUM(  INUNIT   ,INFILE    ,TERAY   ,ITCOUNT,
     &   INCOUNT  ,IECOUNT   ,TEREF   ,NEREF  ,
     &   EBREF    ,ITREF     ,IEREF   ,INREF  ,
     &   ITA       ,IEA      ,INA     ,EBRAY  ,
     &   NERAY     , MAXTE   ,MAXEB   ,MAXNE  )
C-----------------------------------------------------------------------
C
C  ****************** FORTRAN77 SUBROUTINE: CDSUM *********************
C
C       PURPOSE:  TO  FETCH  A SUMMARY OF THE DATA CONTAINED IN THE
C   BUNDLE-NL POPULATION STRUCTURE FILES OF TYPE ADF26.
C
C       CALLING ROUTINE : ADAS313
C
C INPUT :
C
C (CHR) INFILE : FILENAME FOR WHICH DATA HAS
C   TO BE EXTRACTED FROM.
C (I*4) INUNIT : FILENAME STREAM.
C (I*4) MAXNE : MAXIUM NUMBER OF DENSITIES
C (I*4) MAXEB : MAXIMUM NUMBER OF BEAM
C   ENERGIES.
C (I*4) MAXTE : MAXIMUM NUMBER OF TARGET
C   TEMPERATURES
C
C OUTPUT  :
C
C (R*8)   TERAY() : TARGET TEMPERATURES (eV).
C (R*8) NERAY() : ELECTRON DENSITY ( cm-3).
C (R*8) EBRAY() : NEUTRAL BEAM ENERGY (eV/amu).
C (R*8) TEREF : REFERENCE TEMPERATURE ( eV ).
C (R*8) NEREF : REFERENCE DENSITY ( cm-3).
C (R*8)   EBREF : REFERNCE ENERGY ( eV amu-1 ).
C (I*4) INA() : REFERENCE ARRAY FOR DENSITY.
C (I*4) IEA() : REFERENCE ARRAY FOR ENERGY.
C (I*4) ITA() : REFERENCE ARRAY FOR TEMPERATURE.
C (I*4) INREF : ARRAY INDEX OF REFERENCE DENSITY.
C (I*4) ITREF : ARRAY INDEX OF REFERENCE TEMP.
C (I*4) IEREF : ARRAY INDEX OF REFERENCE ENERGY.
C (I*4) INCOUNT : NUMBER OF TARGET DENSITIES.
C (I*4) IECOUNT : NUMBER OF BEAM ENERGIES.
C (I*4) ITCOUNT : NUMBER OF TEMPERATURES.
C
C
C  ADDITIONAL ROUTINES:
C
C          ROUTINE       SOURCE            BRIEF DESCRIPTION
C          ------------------------------------------------------------
C          CCFIND       ADAS312      ISOLATE DATA IN ADF26 TYPE FILE.
C          CCFILL       ADAS312      USED TO ORDER AND SORT ARRAYS.
C          CCSORT       ADAS312      USED TO ORDER AND SORT ARRAYS.
C
```

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C
C
C   CONTACT :   HARVEY ANDERSON
C           UNIVERSITY OF STRATHCLYDE
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C
C   DATE    :   07/05/98  ( FIRST VERSION )
C
C VERSION: 1.1 DATE: 16-03-99
C MODIFIED: RICHARD MARTIN
C - PUT UNDER SCCS CONTROL.
C
C VERSION: 1.2                                      DATE: 13-10-99
C MODIFIED: Martin O'Mullane
C   - With certain compilers array dimension variables
C must be declared before they are used. Move the
C integer declerations before the array definitions.
C
C-----------------------------------------------------------------------
C
      CHARACTER*80        INFILE
      INTEGER             IEA(MAXNE),  IECOUNT,     IEREF
      INTEGER             INA(MAXNE),  INCOUNT,     INREF,       INUNIT
      INTEGER             ITA(MAXTE),  ITCOUNT,     ITREF,       MAXEB
      INTEGER             MAXNE,       MAXTE
      REAL*8              EBRAY(MAXEB),             EBREF
      REAL*8              NERAY(MAXNE),             NEREF
      REAL*8              TERAY(MAXTE),             TEREF
```