

ADAS Subroutine b4sumd

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      SUBROUTINE B4SUMD ( NDREP , NDT ,  
      &                   MAXTM , IREPMAX , IREP , DRMF , DRMS ,  
      &                   EIJN , PWTEMP  
      &                   )
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C  
C ***** FORTRAN 77 SUBROUTINE: B4SUMD *****  
C  
C VERSION: 2.0  
C  
C PURPOSE: TO SUM BADNELL DIELECTRONIC RATE COEFFICIENT DATA OVER THE  
C REPRESENTATIVE SET TO GIVE ZERO DENSITY TOTAL AND  
C RADIATED POWER FROM SATELLITE LINES  
C  
C CALLING PROGRAM: B4DATD  
C  
C  
C INPUT:  
C INPUT : (I*4) NDREP = MAXIMUM NUMBER OF REPRESENTATIVE LEVELS  
C INPUT : (I*4) NDT = MAXIMUM NUMBER OF TEMPERATURES  
C INPUT : (I*4) DRMF ( , ) = BADNELL DIELECTRONIC DATA (CM3 S-1)  
C 1ST DIM.: REPRESENTATIVE LEVEL INDEX  
C 2ND DIM.: TEMPERATURE INDEX  
C INPUT : (I*4) NBT = NO. OF TEMPERATURES  
C INPUT : (I*4) IREPMAX = NO OF REPRESENTATIVE LEVELS  
C INPUT : (I*4) IREP ( ) = SET OF REPRESENTATIVE LEVELS  
C INPUT : (R*8) EIJN ( ) = SATELLITE. ENERGY AS A FUNCTION OF  
C REPRESENTATIVE LEVEL (K)  
C  
C OUTPUT: (R*8) DRMS ( ) = SUMMED DR RATE COEFFICIENTS (CM3 S-1)  
C 1ST DIM.: TEMPERATURE INDEX  
C OUTPUT: (R*8) PWTEMP ( ) = SAT. RADIATED POWER (UNITS ERG S-1 CM3)  
C 1ST DIM.: TEMPERATURE INDEX  
C  
C (I*4) NREP = GENERAL LEVEL INDEX  
C (I*4) IN = GENERAL INDEX  
C (I*4) IT = GENERAL INDEX  
C (R*8) V = GENERAL VARIABLE FOR N-SHELL  
C (R*8) V1 = GENERAL VARIABLE FOR N-SHELL  
C (R*8) Y = GENERAL VARIABLE FOR N-SHELL  
C (R*8) YP = GENERAL VARIABLE FOR N-SHELL  
C (R*8) Y0 = GENERAL VARIABLE FOR N-SHELL  
C (R*8) Y1 = GENERAL VARIABLE FOR N-SHELL  
C (R*8) PW = GENERAL VARIABLE FOR N-SHELL  
C (R*8) PW1 = GENERAL VARIABLE FOR N-SHELL  
C  
C  
C AUTHOR: WILLIAM J. DICKSON, JET JOINT UNDERTAKING  
C  
C DATE: 14TH DECEMBER 1992  
C  
C UPDATE: 15/12/92 WJ DICKSON - REVISED ALGORITHM HAS BETTER
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C
C UPDATE: 31/01/97 HP SUMMERS - CHANGED NAME TO B4SUMD
C
C VERSION: 1.1 DATE: 05-03-98
C MODIFIED: RICHARD MARTIN
C - PUT UNDER SCCS CONTROL.
C

C-----
C INTEGER IREP (NDREP), IREPMAX, MAXTM, NDREP
C INTEGER NDT
C REAL*8 DRMF (NDREP, NDT), DRMS (NDT)
C REAL*8 EIJN (NDREP), PWTEMP (NDT)