

ADAS Subroutine bxstkd

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      SUBROUTINE BXSTKD( NDTEM , NDLEV , NDMET ,  
&                      IT      , NORD  , NMET  ,  
&                      IORDR  , IMETR  ,  
&                      CC      , STV   , VEC   ,  
&                      VRED  
&                      )
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C-----  
C  
C ***** FORTRAN77 SUBROUTINE: BXSTKD *****  
C  
C PURPOSE: TO STACK UP IN 'VRED' THE RECOMBINATION RATE CONTRIBUTIONS  
C           FOR EACH METASTABLE LEVEL FOR A GIVEN TEMPERATURE AND  
C           DENSITY.  
C  
C CALLING PROGRAM: ADAS205/ADAS206  
C  
C SUBROUTINE:  
C  
C INPUT : (I*4) NDTEM = MAXIMUM NUMBER OF TEMPERATURES ALLOWED  
C INPUT : (I*4) NDLEV = MAXIMUM NUMBER OF ENERGY LEVELS ALLOWED  
C INPUT : (I*4) NDMET = MAXIMUM NUMBER OF METASTABLE LEVELS ALLOWED  
C  
C INPUT : (I*4) IT     = INDEX DENOTING THE TEMPERATURE  
C INPUT : (I*4) NORD   = NUMBER OF ORDINARY EXCITED LEVELS  
C INPUT : (I*4) NMET   = NUMBER OF METASTABLE LEVELS  
C  
C INPUT : (I*4) IMETR() = INDEX OF METASTABLE IN COMPLETE LEVEL LIST  
C                       (ARRAY SIZE = 'NDMET' )  
C INPUT : (I*4) IORDR() = INDEX OF ORDINARY EXCITED LEVELS IN COMPLETE  
C                       LEVEL LIST.  
C                       (ARRAY SIZE = 'NDLEV' )  
C  
C INPUT : (R*8) CC(,)   = RATE MATRIX COVERING ALL TRANSITIONS  
C                       (UNITS: SEC-1)  
C                       VALUES FOR GIVEN TEMPERATURE AND DENSITY.  
C                       1st DIMENSION: ENERGY LEVEL INDEX  
C                       2nd DIMENSION: ENERGY LEVEL INDEX  
C INPUT : (R*8) STV()   = RECOMBINATION CONTRIBUTION FOR EACH  
C                       NON-METASTABLE/ORDINARY EXCITED LEVELS.  
C                       (UNITS: CM**3)  
C                       VALUES FOR GIVEN TEMPERATURE AND DENSITY.  
C                       DIMENSION: ORDINARY EXCITED LEVEL INDEX  
C INPUT : (R*8) VEC(,)  = RECOMBINATION RATE COEFFT. VALUES.  
C                       (UNITS: CM**3/SEC-1)  
C                       VALUES FOR GIVEN TEMPERATURE AND DENSITY.  
C                       1st DIMENSION: TEMPERATURE INDEX ('IT')  
C                       2nd DIMENSION: CAPTURING LEVEL INDEX  
C  
C OUTPUT: (R*8) VRED() = VECTOR OF RECOMBINATION RATE CONTRIBUTIONS  
C                       FOR EACH METASTABLE LEVEL.  
C                       (UNITS: SEC-1)  
C                       VALUES FOR GIVEN TEMPERATURE AND DENSITY.
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C                                     DIMENSION: METASTABLE LEVEL INDEX
C
C          (I*4)  IM          = METASTABLE LEVEL ARRAY INDEX
C          (I*4)  IS          = ORDINARY EXCITED LEVEL INDEX
C
C
C ROUTINES: NONE
C
C NOTE:
C          VRED(IM)          =      ( the recombination rate for IM )
C                               +
C                               SUM( (the transistion rate from ordinary
C                                   level IS to IM) x (the recombina-
C                                   tion contribution for ordinary
C                                   level IS) )
C
C                               ABOVE SUM IS OVER ALL ORDINARY LEVELS.
C
C
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C          K1/0/81
C          JET EXT. 4569
C
C DATE:   09/10/90
C
C-----
C
C-----
C          INTEGER          IMETR (NDMET) ,          IORDR (NDLEV)
C          INTEGER          IT,          NDLEV,          NDMET,          NDTEM
C          INTEGER          NMET,          NORD
C          REAL*8           CC (NDLEV, NDLEV) ,          STV (NDLEV)
C          REAL*8           VEC (NDTEM, NDLEV) ,          VRED (NDMET)

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