

ADAS Subroutine dclnorm

```
      SUBROUTINE DCLNORM( NDLEV  , NDMET  ,  
&                      NORD    ,  
&                      STCK    ,  
&                      COEF  
&                      )
```

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C-----  
C  
C ***** FORTRAN77 SUBROUTINE: DCLNORM *****  
C  
C PURPOSE: TO NORMALISE LINE EMISSIVITY  
C          ADAPTED FROM B6NORM  
C  
C CALLING PROGRAM: XCOEF  
C  
C SUBROUTINE:  
C  
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) NORD = NUMBER OF ORDINARY EXCITED LEVELS  
C  
C INPUT : (R*8) STCK(,) = POPULATION MATRIX COVERING ALL NON-METAST-  
C                       ABLE/ORDINARY EXCITED LEVELS AS FUNCTION  
C                       OF METASTABLE INDEX.  
C                       VALUES FOR GIVEN TEMPERATURE AND DENSITY.  
C                       1st DIMENSION: ORDINARY EXCITED LEVEL INDEX  
C                       2nd DIMENSION: METASTABLE LEVEL INDEX  
C  
C I/O   : (R*8) COEF = INPUT:  
C                       LINE EMISSIVITY  
C                        $A(J \rightarrow K) * [N(J)/N(1)]$   
C                       AT FIXED TEMPERATURE AND DENSITY.  
C                       (UNITS: ERGS CM3 SEC-1) >>>>?<<<<  
C                       OUTPUT:  
C                       NORMALISED TO TOTAL STAGE POPULATION  
C                        $[N(1)/SUM(N(I))] * A(J \rightarrow K) * [N(J)/N(1)]$   
C  
C          (I*4) IS1 = ORDINARY EXCITED LEVEL INDEX  
C  
C          (R*8) STOTX = VARIABLE USED TO SUM STAGE TOTAL POPULATN.  
C                       (INITIAL VALUE = 1 => GROUND)  
C  
C ROUTINES: NONE  
C  
C NOTE:  
C  
C AUTHOR: A. Lanzafame, University of Strathclyde  
C  
C DATE: apr28-95  
C  
C UPDATE:  
C
```

C VERSION 1.1 DATE: 27-10-97

C RICHARD MARTIN.

C PUT UNDER SCCS CONTROL.

C

C-----

C

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INTEGER

NDLEV,

NDMET,

NORD

REAL*8

COEF,

STCK (NDLEV, NDMET)