

ADAS Subroutine b8norm

```
C
      SUBROUTINE B8NORM( NDLEV , NDMET ,
&                      NORD   ,
&                      STCK   ,
&                      PLAX   , PLX   ,
&                      PLASX  , PLSX
&                      )
-----
C
C
C ***** FORTRAN77 SUBROUTINE: B6STOT *****
C
C PURPOSE: TO NORMALISE TOTAL/SPECIFIC LINE POWERS FOR LEVEL 1
C           AND TOTAL EQUILIBRIUM LINE POWERS TO STAGE TOTAL POPULATION.
C
C CALLING PROGRAM:  ADAS206
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*4)  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)  PLAX   = INPUT:
C                           TOTAL EQUILIBRIUM LINE POWER COEFFICIENTS.
C                           AT FIXED TEMPERATURE AND DENSITY.
C                           (UNITS: ERGS CM3 SEC-1)
C                           OUTPUT:
C                           NORMALISED TO TOTAL STAGE POPULATION
C I/O   :  (R*8)  PLX    = INPUT:
C                           TOTAL LINE POWERS FOR LEVEL 1 AT FIXED
C                           TEMPERATURE AND DENSITY.
C                           (UNITS: ERGS SEC-1).
C                           OUTPUT:
C                           NORMALISED TO TOTAL STAGE POPULATION
C
C I/O   :  (R*8)  PLASX  = INPUT:
C                           SPECIFIC EQUILIBRIUM LINE PWR COEFFICIENTS.
C                           AT FIXED TEMPERATURE AND DENSITY.
C                           (UNITS: ERGS CM3 SEC-1)
C                           OUTPUT:
C                           NORMALISED TO TOTAL STAGE POPULATION
C I/O   :  (R*8)  PLSX   = INPUT:
C                           SPECIFIC LINE PWR FOR LEVEL 1 AT FIXED
C                           TEMPERATURE AND DENSITY.
```

```

C                                     (UNITS: ERGS SEC-1).
C                                     OUTPUT:
C                                     NORMALISED TO TOTAL STAGE POPULATION
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:  PAUL E. BRIDEN (TESSELLA SUPPORT SERVICES PLC)
C          K1/0/37
C          JET EXT. 5023
C
C DATE:    18/05/93
C
C UPDATE:  20/05/93 - P BRIDEN: STCK ARRAY CHANGED FROM REAL*8 -> REAL*4
C
C UNIX-IDL PORT:
C
C DATE: UNKNOWN
C
C AUTHOR: DAVID H BROOKS, UNIVERSITY OF STRATHCLYDE
C
C*****
C PUT UNDER SCCS CONTROL:
C
C VERSION: 1.1 DATE: 10/05/96
C MODIFIED: WILLIAM OSBORN (TESSELLA SUPPORT SERVICES PLC)
C          - FIRST PUT UNDER SCCS
C
C-----
C
C-----
C
C          INTEGER          NDLEV,          NDMET,          NORD
C          REAL*8           PLASX,          PLAX,          PLSX,          PLX
C          REAL             STCK (NDLEV, NDMET)

```