

## ADAS Subroutine b6totl

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C
      SUBROUTINE B6TOTL( NDLEV  , NDMET  ,
&                      NORD    , NMET   ,
&                      IORDR   , IMETR  ,
&                      DENSX   ,
&                      STCKMX  , STACKX ,
&                      PLA1    , PLBAX  ,
&                      PLAX    , PLX
&                      )
C-----
C
C ***** FORTRAN77 SUBROUTINE: B6TOTL *****
C
C PURPOSE: TO CALCULATE TOTAL LINE POWERS FOR METASTABLES AND TOTAL
C          EQUILIBRIUM LINE POWERS.
C
C CALLING PROGRAM:  ADAS206
C
C SUBROUTINE:
C
C INPUT : (I*4) NDLEV   = PARAMETER = MAX. NO. OF LEVELS ALLOWED
C INPUT : (I*4) NDMET   = PARAMETER = MAX. NO. OF METASTABLES ALLOWED
C
C INPUT : (I*4) NORD    = NUMBER OF ORD. LEVELS (1 <= NORD <= 'NDLEV')
C INPUT : (I*4) NMET    = NUMBER OF METASTABLES (1 <= NMET <= 'NDMET')
C
C INPUT : (I*4) IORDR() = INDEX OF ORDINARY LEVELS IN COMPLETE LEVEL
C                      LIST (ARRAY SIZE = 'NDLEV' )
C INPUT : (I*4) IMETR() = INDEX OF METASTABLE IN COMPLETE LEVEL LIST
C                      (ARRAY SIZE = 'NDMET' )
C INPUT : (R*8) DENSX   = ELECTRON DENSITY (UNITS: CM-3)
C
C INPUT : (R*8) STCKMX() = METASTABLE POPULATIONS STACK
C                      AT FIXED TEMPERATURE AND DENSITY.
C                      DIMENSION: METASTABLE INDEX
C INPUT : (R*4) STACKX(,) = ORDINARY EXCITED LEVEL POPULAT'N DEPENDENCE
C                      ON METASTABLE LEVEL. AT FIXED TEMPERATURE
C                      AND DENSITY.
C                      1st DIMENSION: ORDINARY LEVEL INDEX
C                      2nd DIMENSION: METASTABLE INDEX
C
C INPUT : (R*8) PLA1()  = DIRECT LINE POWER LOSS FOR EACH LEVEL.
C                      (UNITS: ERGS SEC-1) (DIMENSION: LEVEL INDEX)
C INPUT : (R*8) PLBAX() = HIGH N PROJECTED POWER BASED ON EXCITATIONS
C                      FROM A PARTICULAR METASTABLE TO LEVELS
C                      'I PROJ' UPWARDS. (UNITS: ERGS CM3 SEC-1)
C                      AT FIXED TEMPERATURE.
C                      DIMENSION: METASTABLE INDEX
C
C OUTPUT: (R*8) PLAX   = TOTAL EQUILIBRIUM LINE POWER COEFFICIENTS.
C                      AT FIXED TEMPERATURE AND DENSITY.
C                      (UNITS: ERGS CM3 SEC-1)
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C OUTPUT: (R\*8) PLX() = TOTAL LINE POWERS FOR METASTABLES. THIS IS  
 C THE SUM OF ALL EMISSIONS ORGINATING IN THE  
 C COLLISIONAL-RADIATIVE SENSE FROM THE  
 C METASTABLE. AT FIXED TEMPERATURE AND DENSITY  
 C (UNITS: ERGS SEC-1 )  
 C DIMENSION: METASTABLE INDEX

C (I\*4) IM = METASTABLE LEVEL ARRAY INDEX  
 C (I\*4) IS = ORDINARY LEVEL ARRAY INDEX

C ROUTINES: NONE

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 C JET EXT. 5023

C DATE: 09/10/90

C UPDATE: 20/05/93-P BRIDEN: STACKX ARRAY CHANGED FROM REAL\*8 -> REAL\*4

C UNIX-IDL PORT:

C UNIX-IDL PORT:

C DATE: UNKNOWN

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C MODIFIED: WILLIAM OSBORN

C - FIRST PUT UNDER SCCS

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INTEGER	IMETR (NMET),	IORDR (NORD),	NDLEV,	NDMET
INTEGER	NMET,	NORD		
REAL*8	DENSX,	PLA1 (NDLEV),	PLAX	
REAL*8	PLBAX (NDMET),	PLX (NDMET)		
REAL	STACKX (NDLEV, NDMET)			
REAL*8	STCKMX (NDMET)			