

ADAS Subroutine b6wr13

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      SUBROUTINE B6WR13( IUNIT , DATE , IZ1 , IL ,
&                      NDMET , NDTEM , NDDEN ,
&                      LNORM ,
&                      NMET , IMETR ,
&                      IFOUT , MAXT , TINE ,
&                      IDOUT , MAXD , DINE ,
&                      ILOWER , IUPPER ,
&                      CSTRGA , PLS
&                      )
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C
C ***** FORTRAN77 SUBROUTINE: B6WR13 *****
C
C PURPOSE: TO OUTPUT SPECIFIC LINE POWER PARAMETERS TO THE PASSING
C           FILE ON STREAM 'IUNIT'.
C
C CALLING PROGRAM: ADAS206
C
C SUBROUTINE:
C
C INPUT : (I*4)  IUNIT  = OUTPUT STREAM NUMBER
C INPUT : (C*8)  DATE    = CURRENT DATE AS 'DD/MM/YY'
C INPUT : (I*4)  IZ1    = RECOMBINING ION CHARGE
C                      (NOTE: IZ1 SHOULD EQUAL Z+1)
C INPUT : (I*4)  IL     = NUMBER OF INDEX ENERGY LEVELS
C
C INPUT : (I*4)  NDMET  = MAX. NO. OF METASTABLES ALLOWED
C INPUT : (I*4)  NDTEM  = MAX. NO. OF TEMPERATURES ALLOWED
C INPUT : (I*4)  NDDEN  = MAX. NUMBER OF DENSITIES ALLOWED
C
C INPUT : (L*4)  LNORM  =.TRUE. => IF NMET=1 THEN TOTAL AND SPECIFIC
C                      LINE POWER OUTPUT FILES PLT/PLS
C                      NORMALISED TO STAGE TOT.POPULATN.
C                      (** NORM TYPE = T)
C                      =.FALSE. => OTHERWISE NORMALISE TO IDENTIFIED
C                      METASTABLE POPULATIONS.
C                      (** NORM TYPE = M)
C
C INPUT : (I*4)  NMET   = NUMBER OF METASTABLES ( 1 -> 5 )
C INPUT : (I*4)  IMETR() = INDEX OF METASTABLES IN COMPLETE LEVEL LIST
C
C INPUT : (I*4)  IFOUT  = 1 => INPUT TEMPERATURES IN KELVIN
C                      2 => INPUT TEMPERATURES IN EV
C                      2 => INPUT TEMPERATURES IN REDUCED FORM
C INPUT : (I*4)  MAXT   = NUMBER OF INPUT TEMPERATURES (1 -> 20)
C INPUT : (R*8)  TINE() = ELECTRON TEMPERATURES (UNITS: SEE 'IFOUT')
C
C INPUT : (I*4)  IDOUT  = 1 => INPUT DENSITIES IN CM-3
C                      2 => INPUT DENSITIES IN REDUCED FORM
C INPUT : (I*4)  MAXD   = NUMBER OF INPUT DENSITIES (1 -> 20)
C INPUT : (R*8)  DINE() = ELECTRON DENSITIES (UNITS: SEE 'IFOUT')
C
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C INPUT : (I*4) ILOWER = SPECIFIC LINE POWER: SELECTED ELECTRON
C IMPACT TRANSITION LOWER LEVEL INDEX
C INPUT : (I*4) IUPPER = SPECIFIC LINE POWER: SELECTED ELECTRON
C IMPACT TRANSITION UPPER LEVEL INDEX
C
C INPUT : (C*18) CSTRGA() = INDEX LEVEL CONFIGURATIONS
C INPUT : (R*8) PLS(,,) = SPECIFIC LINE POWERS FOR METASTABLES. THIS
C IS THE SPECIFIC EMISSION ORIGINATING IN THE
C COLLISIONAL-RADIATIVE SENSE FROM THE
C METASTABLE. (SEE 'ISTRN')
C => P(SPECIFIC)/N(IMET) (ERGS SEC-1)
C 1st DIMENSION: METASTABLE INDEX
C 2nd DIMENSION: TEMPERATURE INDEX
C 3rd DIMENSION: DENSITY INDEX
C
C (I*4) L1 = PARAMETER = 1
C (I*4) L2 = PARAMETER = 2
C (I*4) L3 = PARAMETER = 3
C
C (I*4) I = GENERAL USE
C (I*4) IM = ARRAY INDEX POINTER FOR METASTABLE STATES
C (I*4) IT = ARRAY INDEX POINTER FOR TEMPERATURES
C (I*4) ID = ARRAY INDEX POINTER FOR DENSITIES
C
C (R*8) RDEN() = ELECTRON DENSITIES (UNITS: REDUCED FORM)
C (R*8) RTEM() = ELECTRON TEMPERATURES (UNITS: REDUCED FORM)
C
C (C*1) CSTAR = '*'
C
C ROUTINES:
C ROUTINE SOURCE BRIEF DESCRIPTION
C -----
C XXTCN ADAS CONVERTS ENTERED TEMP. VALUES TO EV.
C XXDCN ADAS CONVERTS ENTERED DENSITY VALUES TO CM-3.
C
C AUTHOR: PAUL E. BRIDEN (TESSELLA SUPPORT SERVICES PLC)
C K1/0/81
C JET EXT. 4569
C
C DATE: 09/10/90
C
C UPDATE: 18/05/93 - PE BRIDEN: ADDED NORMALISATION INFO TO OUTPUT.
C NEW ARGUMENT - LNORM
C CHANGED FORMAT - 1011
C
C UPDATE: 20/05/93 - ADAS91 PEB: TO REFLECT CHANGES IN BXDATA THE
C CHARACTER ARRAY CSTRGA IS NOW 18 BYTES
C INSTEAD OF 12.
C NOTE: ONLY THE FIRST 12 BYTES ARE
C OUTPUT TO THE PASSING FILE.
C
C UNIX-IDL PORT:
C

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C AUTHOR: WILLIAM OSBORN (TESSELLA SUPPORT SERVICES PLC)

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C DATE: 06/06/96

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C VERSION: 1.1 DATE:06/06/96

C MODIFIED: WILLIAM OSBORN

C - FIRST VERSION

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CHARACTER*18	CSTRGA(IL)			
CHARACTER*8	DATE			
INTEGER	IDOUT,	IFOUT,	IL,	ILOWER
INTEGER	IMETR(NMET),	IUNIT,	IUPPER,	IZ1
INTEGER	MAXD,	MAXT,	NDDEN,	NDMET
INTEGER	NDTEM,	NMET		
LOGICAL	LNORM			
REAL*8	DINE(MAXD),	PLS(NDMET,NDTEM,NDDEN)		
REAL*8	TINE(MAXT)			