

ADAS Subroutine c2wr11

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C
      SUBROUTINE C2WR11( IUNIT      , UID      , DATE      ,
&                      NSTORE     , NTDIM    ,
&                      NBSEL      , ISELA    ,
&                      CPRMYA     , CSCDYA   ,
&                      CTYPEA     ,
&                      DSFLLA     ,
&                      AMDA       , AMRA     ,
&                      ITA        ,
&                      TPA        ,
&                      QFTEQA     , QFTIAA   ,
&                      )
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C
C ***** FORTRAN77 SUBROUTINE: C2WR11 *****
C
C PURPOSE:  TO WRITE DATA TO THERMAL ION/ATOM
C           RATE COEFFICIENT PASSING FILE FOR GIVEN PRIMARY SPECIES.
C
C CALLING PROGRAM: ADAS302
C
C DATA:
C
C           UP TO 'NSTORE' SETS (DATA-BLOCKS) OF DATA MAY BE WRITTEN TO
C           THE FILE - EACH BLOCK FORMING A COMPLETE SET OF RATE-
C           COEFFICIENTS FOR THE PRIMARY SPECIES.
C
C           THE UNITS USED IN THE DATA FILE ARE TAKEN AS FOLLOWS:
C
C           TEMPERATURES           : EV
C           RATE COEFFICIENTS      : CM**3 SEC-1
C
C SUBROUTINE:
C
C INPUT : (I*4)  IUNIT      = UNIT TO WHICH INPUT FILE IS ALLOCATED.
C INPUT : (C*6)  UID        = USER IDENTIFIER OF PRODUCER
C INPUT : (C*8)  DATE       = DATE
C INPUT : (I*4)  NSTORE     = MAXIMUM NUMBER OF DATA-BLOCKS THAT CAN
C                           BE WRITTEN.
C INPUT : (I*4)  NTDIM      = MAX NUMBER OF RECEIVER & DONOR TEMPERATURES
C                           ALLOWED
C
C INPUT : (I*4)  NBSEL      = NUMBER OF DATA-BLOCKS WRITTEN
C INPUT : (I*4)  ISELA()    = WRITE - DATA-SET DATA-BLOCK ENTRY INDICES
C                           DIMENSION: DATA-BLOCK INDEX
C INPUT : (C*5)  CPRMYA()  = INPUT DATA FILE - SELECTED DATA-BLOCK:
C                           PRIMARY SPECIES IDENTIFICATION
C                           DIMENSION: DATA-BLOCK INDEX
C INPUT : (C*5)  CSCDYA()  = INPUT DATA FILE - SELECTED DATA-BLOCK:
C                           SECONDARY SPECIES IDENTIFICATION
C                           DIMENSION: DATA-BLOCK INDEX
C INPUT : (C*3)  CTYPEA()  = INPUT DATA FILE - SELECTED DATA-BLOCK:
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C          CROSS-SECTION TYPE
C          DIMENSION: DATA-BLOCK INDEX
C INPUT : (R*8)  AMRA      = READ - SECONDARY SPECIES ATOMIC MASS
C          DIMENSION: DATA-BLOCK INDEX
C INPUT : (R*8)  AMDA      = READ - PRIMARY SPECIES ATOMIC MASS
C          DIMENSION: DATA-BLOCK INDEX
C INPUT : (C*44) DSFLLA() = MVS DATA SET NAME OF SOURCE DATA SET
C          DIMENSION: DATA-BLOCK INDEX
C
C
C INPUT : (I*4)  ITA()     = READ - NUMBER OF TEMPERATURES
C          DIMENSION: DATA-BLOCK INDEX
C
C INPUT : (R*8)  TPA(,)    = READ - TEMPERATURES (UNITS: EV)
C          1st DIMENSION: TEMPERATURE INDEX
C          2nd DIMENSION: DATA-BLOCK INDEX
C
C INPUT : (R*8)  QFTEQA(,) = READ - EQUAL TEMPERATURE RATE-COEFFICIENTS
C          (UNITS: cm**3 sec-1)
C          1st DIMENSION: SECONDARY TEMPERATURE INDEX
C          2nd DIMENSION: DATA-BLOCK INDEX
C INPUT : (R*8)  QFTIAA(,,) = READ - FULL SET OF RATE-COEFFICIENTS
C          (UNITS: cm**3 sec-1)
C          1st DIMENSION: PRIMARY TEMPERATURE INDEX
C          2nd DIMENSION: SECONDARY TEMPERATURE INDEX
C          3rd DIMENSION: DATA-BLOCK INDEX
C
C          (C*2)  CEQUAL    = PARAMETER = 'EQ'
C
C          (I*4)  I4EIZ0    = FUNCTION - (SEE ROUTINES SECTION BELOW)
C          (I*4)  I4FCTN    = FUNCTION - (SEE ROUTINES SECTION BELOW)
C          (I*4)  I4UNIT    = FUNCTION - (SEE ROUTINE SECTION BELOW)
C          (I*4)  IBLK      = ARRAY INDEX: DATA-BLOCK INDEX
C          (I*4)  ITR        = ARRAY INDEX: SECONDARY TEMPERATURE INDEX
C          (I*4)  ITD        = ARRAY INDEX: PRIMARY TEMPERATURE INDEX
C          (I*4)  NTRNUM     = NUMBER OF SECONDARY TEMPERATURES FOR CURRENT
C          DATA-BLOCK
C          (I*4)  NTDNUM     = NUMBER OF PRIMARY TEMPERATURES FOR CURRENT
C          DATA-BLOCK
C          (I*4)  IABT      = RETURN CODE FROM 'I4FCTN'
C
C          (C*10) IONNAM     = READ - PRIMARY SPECIES DESIGNATION STRING
C          (C*80) C80        = GENERAL USE 80 BYTE CHARACTER STRING FOR
C          THE INPUT OF DATA-SET RECORDS.
C
C ROUTINES:
C          ROUTINE      SOURCE      BRIEF DESCRIPTION
C          -----
C          I4UNIT       ADAS         INTEGER*4 FUNCTION -
C          FETCH UNIT NUMBER FOR OUTPUT OF MESSAGES
C
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C JA8.08
 C TEL. 0141-553-4196
 C
 C DATE: 18/11/96
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 C UNIX-IDL PORT: H.P.SUMMERS
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 C VERSION: 1.1 DATE: 19-11-96
 C MODIFIED: WILLIAM OSBORN (TESSELLA SUPPORT SERVICES PLC)
 C - PUT UNDER S.C.C.S. CONTROL
 C
 C-----

CHARACTER*5	CPRMYA (NSTORE) ,	CSCDYA (NSTORE)
CHARACTER*3	CTYPEA (NSTORE)	
CHARACTER*8	DATE	
CHARACTER*80	DSFLLA (NSTORE)	
CHARACTER*6	UID	
INTEGER	ISELA (NSTORE) ,	ITA (NSTORE) , IUNIT
INTEGER	NBSEL, NSTORE,	NTDIM
REAL*8	AMDA (NSTORE) ,	AMRA (NSTORE)
REAL*8	QFTEQA (NTDIM, NSTORE)	
REAL*8	QFTIAA (NTDIM, NTDIM, NSTORE)	
REAL*8	TPA (NTDIM, NSTORE)	