

ADAS Subroutine d9scrp

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      SUBROUTINE D9SCRP( LRSCRP , LSNULL ,
&                      DSNINC , DSPECA ,
&                      NDLINE , NDCOMP , NDRAT , NDFILE ,
&                      NFILE , LFILE ,
&                      UID , GROUP , TYPE , EXT , ION ,
&                      MEMB , IZ0 ,
&                      NLINE , NCOMP ,
&                      IZION , IMET , CIMET , INDPH , CINDPH ,
&                      IFILE , TITL ,
&                      NRAT ,
&                      ILINE , JLINE , TITR , IRCODE
&                      )
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C ***** FORTRAN77 SUBROUTINE: D9SCRP *****
C
C PURPOSE: TO READ SCRIPT FILE AND ACCESS EMISSIVITY DATA
C          ON SPECTRAL LINES REQUESTED FOR FURTHER PROCESSING IN
C          EQUILIBRIUM IONISATION CODES.
C
C CALLING PROGRAM: ADAS409
C
C SUBROUTINE:
C
C INPUT : (C*120) DSNINC   = SCRIPT DATA SET NAME (FULL MVS DSN)
C                   (IN FORM SUITABLE FOR DYNAMIC ALLOCATION)
C INPUT : (I*4)   NDLINE   = MAXIMUM NUMBER OF LINES ALLOWED
C INPUT : (I*4)   NDCOMP   = MAXIMUM NUMBER OF COMPONENT FOR EACH LINE
C INPUT : (I*4)   NDRAT    = MAXIMUM NUMBER OF LINE RATIOS ALLOWED
C INPUT : (I*4)   NDFILE   = MAXIMUM NUMBER OF EMISSIVITY FILES WHICH
C                   CAN BE SEARCHED
C
C OUTPUT: (L*4)   LRSCRP   = .TRUE.  => SCRIPT FILE READ
C                   .FALSE. => SCRIPT FILE NOT READ
C OUTPUT: (L*4)   LSNULL   = .TRUE.  => SCRIPT FILE SET TO NULL
C                   .FALSE. => SCRIPT FILE VALID
C OUTPUT: (C*120) DSPECA() = PHOTON EMISSIVITY SOURCE FILES
C OUTPUT: (I*4)   NFILE    = NUMBER OF PEC FILES TO BE SCANNED
C OUTPUT: (L*4)   LFILE()  = .TRUE.  => PEC FILE EXISTS AND MATCHES
C                   .FALSE. => PEC FILE DOES NOT EXIST/MATCH
C OUTPUT: (C*6)   UID()    = USER IDENTIFIER OF PEC FILE
C OUTPUT: (C*8)   GROUP()  = GROUP IDENTIFIER OF PEC FILE
C OUTPUT: (C*5)   TYPE()   = TYPE IDENTIFIER OF PEC FILE
C OUTPUT: (C*3)   EXT()    = EXTENSION OF PEC FILE MEMBER NAME
C OUTPUT: (C*4)   ION()    = ION NAME OF PEC FILE MEMBER NAME
C OUTPUT: (C*8)   MEMB()   = MEMBER NAME OF PEC FILE
C OUTPUT: (I*4)   NLINE    = NUMBER OF LINES IDENTIFIED IN SCRIPT
C OUTPUT: (I*4)   NCOMP()  = NUMBER OF COMPONENTS OF SCRIPT LINE
C                   1ST DIM: LINE INDEX
C OUTPUT: (I*4)   IZION(,) = CHARGE STATE OF COMPONENT
C                   1ST DIM: LINE INDEX
C                   2ND DIM: COMPONENT INDEX
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C OUTPUT: (I*4) IMET(,) = NUMBER OF COMPONENTS OF SCRIPT LINE
 C 1ST DIM: LINE INDEX
 C 2ND DIM: COMPONENT INDEX
 C OUTPUT: (C*1) CIMET(,) = SIGN (+, BLANK OR -) OF METASTABLE
 C 1ST DIM: LINE INDEX
 C 2ND DIM: COMPONENT INDEX
 C OUTPUT: (I*4) INDPH(,) = PEC FILE INDEX OF LINE COMPONENT
 C 1ST DIM: LINE INDEX
 C 2ND DIM: COMPONENT INDEX
 C OUTPUT: (C*1) CINDPH(,) = DRIVER (E OR BLANK => ELECTRONS)
 C (H => HYDROGEN)
 C 1ST DIM: LINE INDEX
 C 2ND DIM: COMPONENT INDEX
 C OUTPUT: (I*4) IFILE(,) = INDEX OF PEC FILE IN FILE LIST
 C 1ST DIM: LINE INDEX
 C 2ND DIM: COMPONENT INDEX
 C OUTPUT: (C*12) TITL(,) = TITLE FOR LINE COMPONENT
 C 1ST DIM: LINE INDEX
 C 2ND DIM: COMPONENT INDEX
 C OUTPUT: (I*4) NRAT = NUMBER OF RATIOS IDENTIFIED IN SCRIPT
 C OUTPUT: (I*4) ILINE() = INDEX OF NUMERATOR LINE FOR LINE RATIO
 C OUTPUT: (I*4) JLINE() = INDEX OF DENOMINATOR LINE FOR LINE RATIO
 C OUTPUT: (C*25) TITR() = TILE FOR LINE RATIO
 C OUTPUT: (I*4) IRCODE = ERROR FLAG:
 C 0 => SCRIPT FILE WAS READ OKAY
 C 1 => SCRIPT FILE DOES NOT EXIST
 C 2 => I/O ERROR READING THE SCRIPT FILE
 C 3 => 1 OR MORE FILE NAMES IN SCRIPT FILE
 C IS/ARE INVALID.
 C
 C (I*4) IUNT10 = PARAMETER = INPUT UNIT FOR DATA
 C (L*4) OPEN10 = .TRUE. => FILE ALLOCATED TO UNIT 10.
 C .FALSE. => NO FILE ALLOCATED TO UNIT 10.

C ROUTINES:

| ROUTINE | SOURCE | BRIEF DESCRIPTION |
|---------|--------|-------------------------------------|
| XXSLEN | ADAS | FIND NON-BLANK CHARACTERS IN STRING |

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C MODIFIED: RICHARD MARTIN

C - PUT UNDER SCCS CONTROL

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|---------------|-------------------------|------------------------|
| CHARACTER | CIMET (NDLINE, NDCOMP) | |
| CHARACTER | CINDPH (NDLINE, NDCOMP) | |
| CHARACTER*120 | DSNINC, DSPECA (NDFILE) | |
| CHARACTER*3 | EXT (NDFILE) | |
| CHARACTER*8 | GROUP (NDFILE) | |
| CHARACTER*4 | ION (NDFILE) | |
| CHARACTER*8 | MEMB (NDFILE) | |
| CHARACTER*12 | TITL (NDLINE, NDCOMP) | |
| CHARACTER*25 | TITR (NDRAT) | |
| CHARACTER*5 | TYPE (NDFILE) | |
| CHARACTER*6 | UID (NDFILE) | |
| INTEGER | IFILE (NDLINE, NDCOMP), | ILINE (NDRAT) |
| INTEGER | IMET (NDLINE, NDCOMP), | INDPH (NDLINE, NDCOMP) |
| INTEGER | IRCODE, IZ0, | IZION (NDLINE, NDCOMP) |
| INTEGER | JLINE (NDRAT), | NCOMP (NDLINE) |
| INTEGER | NDCOMP, NDFILE, | NDLINE, NDRAT |
| INTEGER | NFILE, NLINE, | NRAT |
| LOGICAL | LFILE (NDFILE), | LRSCR, LSNULL |