ADAS Subroutine baprs1

SUBROUTINE BAPRS1 (NDMET, STRING, WNO, CPL, NPT, IPLA, ZPLA, IFAIL) С ********** FORTRAN77 SUBROUTINE: BAPRS1 *************** С С C PURPOSE: TO ANALYSE THE TAIL CHARACTER STRING OF A LEVEL DATA LINE OF A SPECIFIC ION FILE INTO WAVE-NUMBER AND SETS OF С С (PARENT IDENTIFIER, EFFECTIVE ZETA FOR THE PARENT) PAIRS. С C CALLING PROGRAM: ADAS210 С C NOTES: DETECT - LEVEL WAVE NUMBER WHICH PRECEEDS FIRST '{' - SETS OF PARENT INDEX CONTAINED IN '{.}' С С FOLLOWED BY EFFECTIVE ZETA NB. 'X' AS FIRST PARENT ASSIGNMENT MEANS EXCLUDE IONISATION С С FROM THIS LEVEL. NO PARENT ASSIGNMENT MEANS TAKE LOWEST PARENT WITH С С С LOWEST PARENT BUT NO ZETA MEANS TAKE ZETA =1. IF THERE IS MORE THAN ONE PARENT THEN ZETA'S MUST BE IN. С С С C SUBROUTINE: С C INPUT : (1*4) NDMET = MAXIMUM NUMBER OF PARENTS C INPUT : (C*(*)) STRING = STRING TO BE PARSED С C OUTPUT: (R*8) WNO = EXCITATION WAVE NUMBER OF LEVEL RELATIVE С TO LOWEST PARENT C OUTPUT: (C*1) CPL = LEAD PARENT FOR IONISATION OR 'X' C OUTPUT: (I*4) NPT = NUMBER OF PARENTS DETECTED OUTPUT: (I * 4) IPLA() = PARENT INDICES. С OUTPUT: (R*8) ZPLA() = EFFECTIVE ZETA FOR PARENT IPLA() С OUTPUT: (1*4) IFAIL = 0 - SUBROUTINE CONCLUDES CORRECTLY С 1 - FAULT DETECTED IN SUBROUTINE С 2 - SINGLE IONISATION POTENTIAL DETECTED С С (I*4) MAXWRD = MAXIMUM NUMBER OF WORDS SOUGHT INITIALLY С С INITIALLY, FINALLY NUMBER ACTUALLY FOUND (1*4) NFIRST = FIRST WORD TO BE EXTRACTED FROM STRING С С (1*4) IFIRST() = INDEX OF FIRST CHAR. OF WORD () IN STRING С (1*4) ILAST() = INDEX OF LAST CHAR. OF WORD () IN STRING (1*4) IWORDS = NUMBER OF WORDS FOUND IN STRING С С С (L*4) LSET = .TRUE. - WAVE NUMBER PART SET С .FALSE. - WAVE NUMBER PART NOT SET $(L \star 4)$ LWNO С = .TRUE. - IN THE WAVE NUMBER PART .FALSE. - NOT IN THE WAVE NUMBER PART С С (L*4) LPRNT = .TRUE. - IN A PARENT SPECIFIER .FALSE. - NOT IN A PARENT SPECIFIER С

(L*4) LZETA = .TRUE. - IN A ZETA SPECIFIER

С

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С
                            .FALSE. - NOT IN A ZETA SPECIFIER
          (I*4) IC = GENERAL USE

(I*4) IABT = FAILURE NUMBER FROM R8FCTN

(I*4) NCHAR = NUMBER OF CHARACTERS IN SUBSTRING
          (I*4) IC
С
С
С
С
          (C*15) SSTRNG = ISOLATED SUBSTRING
С
C ROUTINES:
         ROUTINE SOURCE BRIEF DESCRIPTION
С
С
          ______
          I4UNIT ADAS
С
                            FETCH UNIT NUMBER FOR OUTPUT OF MESSAGES
С
         R8FCTN
                   ADAS
                            CONVERTS FROM CHARACTER TO REAL VARIABLE
         I4FCTN ADAS CONVERTS FROM CHAR. TO INTEGER VARIATIONS ADAS PARSES A STRING INTO SEPARATE WORDS
                            CONVERTS FROM CHAR. TO INTEGER VARIABLE
С
С
С
                            FOR ' () <> { }' DELIMITERS
С
C AUTHOR: HP SUMMERS
С
        K1/1/57
С
         JET EXT. 4941
С
C DATE: 22/06/92
С
C UPDATE: 8/07/93 - HPS ALTERED TO USE XXWORD PARSING ROUTINE
С
C UPDATE: 21/12/95 - DHB INCREASED SIZE OF IFIRST & ILAST TO 12 IN
С
                        LINE WITH CHANGE TO NDMET
С
C UNIX-IDL PORT:
С
C VERSION: 1.1
                                     DATE: 22-1-96
C MODIFIED: TIM HAMMOND (TESSELLA SUPPORT SERVICES PLC)
              - PUT UNDER SCCS CONTROL
С
С
C-----
     CHARACTER
                       CPL
     CHARACTER*(*)
                      STRING
                       IFAIL,
WNO,
                                 IPLA(NDMET), NDMET, NPT
     INTEGER
                                  ZPLA (NDMET)
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REAL*8