ADAS Subroutine xxprs1

subroutine xxprs1(ndmet,string,wno,cpl,npt,ipla,zpla,ifail)

```
C----------------------------------------------------------------------
C
C  ***************** fortran77 subroutine: xxprs1 *********************
C
C  purpose:  to analyse the tail character string of an level data line
C            of an adf04 specific ion file into wave-number and sets of
C            (parent identifier, effective zeta for the parent) pairs.
C
C            unified version of baprs1, b9prs1, bbprs1, g5prs1 which is
C            a replacement for these subroutines
C
C  calling program: various
C
C  notes: detect  -  level wave number which preceeds first '{'
C                 -  sets of  parent index contained in '{.}'
C                             followed by effective zeta
C         nb. 'x' as first parent assignment means exclude ionisation
C             from this level.
C             no parent assignment means take lowest parent with
C             zeta =1.
C             lowest parent but no zeta means take zeta =1.
C             if there is more than one parent then zeta's must be in.
C
C
C  subroutine:
C
C  input : (i*4)  ndmet    =  maximum number of parents
C  input : (c*(*))string   =  string to be parsed
C
C  output: (r*8)  wno      =  excitation wave number of level relative
C                             to lowest parent
C  output: (c*1)  cpl      =  lead parent for ionisation  or 'x'
C  output: (i*4)  npt      =  number of parents detected
C  output: (i*4)  ipla()   =  parent indices.
C  output: (r*8)  zpla()   =  effective zeta for parent ipla()
C  output: (i*4)  ifail    =  0 - subroutine concludes correctly
C                             1 - fault detected in subroutine
C                             2 - single ionisation potential detected
C
C         (i*4)   maxwrd   =  maximum number of words sought initially
C                             initially, finally number actually found
C         (i*4)   nfirst   =  first word to be extracted from string
C         (i*4)   ifirst() =  index of first char. of word () in string
C         (i*4)   ilast()  =  index of last  char. of word () in string
C         (i*4)   iwords   =  number of words found in string
C
C         (l*4)   lset     =  .true.  -  wave number part set
C                             .false. -  wave number part not set
C         (l*4)   lwno     =  .true.  -  in the wave number part
C                             .false. -  not in the wave number part
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C          (l*4)  lprnt   = .true.  - in a parent specifier
C                            .false. - not in a parent specifier
C          (l*4)  lzeta   = .true.  - in a zeta specifier
C                            .false. - not in a zeta specifier
C          (i*4)  ic      = general use
C          (i*4)  iabt    = failure number from r8fctn
C          (i*4)  nchar   = number of characters in substring
C          (c*15) sstrng  = isolated substring
C
C routines:
C          routine    source    brief description
C          ------------------------------------------------------------
C          i4unit     adas      fetch unit number for output of messages
C          r8fctn     adas      converts from character to real variable
C          i4fctn     adas      converts from char. to integer  variable
C          xxword     adas      parses a string into separate words
C                               for ' ()<>{}' delimiters
C
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C          JA7.08, University of Strathclyde
C          Tel: 0141-548-4196
C
C DATE:    04/12/02
C
C UPDATE:   :
C
C------------------------------------------------------------------------
       CHARACTER         CPL
       CHARACTER*(*)     STRING
       INTEGER           IFAIL,      IPLA(NDMET), NDMET,        NPT
       REAL*8            WNO,        ZPLA(NDMET)
```