

ADAS Subroutine xxdata_42

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subroutine xxdata_42( fname ,
&                    ndtem , ndden , ndwvl , ndpix , ndmet ,
&                    dsnin , dsnexp , dsnflt ,
&                    dsnpec , dsnfpec , dsnplt , dsnpltf ,
&                    celem , iz0 , iz1 , bwno ,
&                    lnormr , nmetr , imetrr ,
&                    lioselr, lhselr , lrselr , liselr ,
&                    lnselr , lpselr , zeffr ,
&                    lmetrr , ltsclr , ldsclr , lbrdir ,
&                    numter , numdensr, numwvlr,
&                    tine , tinp , tinh , dine , dinp ,
&                    npix , wvmin , wvmax , aminr
&                    )
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C-----
C
C ***** FORTRAN77 subroutine: xxdata_42 *****
C
C Purpose: To fetch data from an adas810 driver set (adf42).
C
C Calling program: ADAS810
C
C Subroutine:
C
C input : (C*80) fname = Name of adf42 driver file
C input : (I*4) ndtem = maximum number of electron temperatures
C input : (I*4) ndden = maximum number of electron tdensities
C input : (I*4) ndwvl = maximum number of wavelength intervals
C input : (I*4) ndpix = maximum number of pixels per wvln. interval
C input : (I*4) ndmet = maximum number of metastables
C
C output: (C*80) dsnin = input adf04 file for population analysis
C output: (C*80) dsnexp = input adf18/a17_p208 expansion file
C output: (C*80) dsnflt = input adf35 filter file for power data
C output: (C*80) dsnpec = output adf15 file for traditional pec data
C output: (C*80) dsnfpec = output adf40 file for feature pec data
C output: (C*80) dsnplt = output adf11 file for line power
C output: (C*80) dsnpltf = output adf11 file for filtered line power
C
C output: (C*2) celem = element symbol.
C output: (I*4) iz = recombined ion charge read
C output: (I*4) iz0 = nuclear charge read
C output: (I*4) iz1 = recombining ion charge read
C (note: iz1 should equal iz+1)
C output: (R*8) bwno = ionisation potential (cm-1) of lowest parent
C
C output: (I*4) nte = number of electron temperatures
C output: (R*8) tea() = electron temperatures (k)
C output: (I*4) ndens = number of electron densities
C output: (R*8) densa() = electron densities (cm-3)
C
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C output: (I*4)  nwvl    = wvaelength intervals
C output: (R*8)  npix()  = nombre of pixels assigned to wavelength interval
C output: (R*8)  wvmin() = lower limit of wavelength interval (ang)
C output: (R*8)  wvmax() = upper limit of wavelength interval (ang)
C
C output: (L*4)  lmetr   = .TRUE. => identify and resolve metastables
C                               = .FALSE. => do not resolve metastables
C output: (L*4)  ltscl   = .TRUE. => input temperatures are z-scaled
C                               = .FALSE. => input temperatures not z-scaled
C output: (L*4)  ldscl   = .TRUE. => input densities are z-scaled
C                               = .FALSE. => input densities not z-scaled
C output: (L*4)  lbrdi   = .TRUE. => impose ion temperature broadening
C                               = .FALSE. => input densities not z-scaled
C
C

```

C ROUTINES:

| Routine | Source | Brief Description |
|---------|--------|--|
| i4unit | ADAS | Fetch unit number for output of messages |
| xxflnm | ADAS | Checks for & replaces the ADASCENT environment variable. |

C AUTHOR: Martin O'Mullane

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C NOTES: Copied from haddat.for

C VERSION : 1.1

C DATE : 28-05-2003

C MODIFIED : Martin O'Mullane
 - First version

| | | | | |
|--------------|-----------------|---------------|--------------|---------|
| CHARACTER*2 | CELEM | | | |
| CHARACTER*80 | DSNEXP, | DSNFLT, | DSNFPEC, | DSNIN |
| CHARACTER*80 | DSNPEC, | DSNPLT, | DSNPLTF, | FNAME |
| INTEGER | IMETRR (NDMET), | | IZ0, | IZ1 |
| INTEGER | NDDEN, | NDMET, | NDPIX, | NDTEM |
| INTEGER | NDWVL, | NMETR, | NPIX (NDWVL) | |
| INTEGER | NUMDENS, | NUMTER, | NUMWVLR | |
| LOGICAL | LBRDIR, | LDSCLR, | LHSELR, | LIOSELR |
| LOGICAL | LISELR, | LMETRR, | LNORMR, | LNSELR |
| LOGICAL | LPSELR, | LRSELR, | LTSCLR | |
| REAL*8 | AMINR, | BWNO, | DINE (NDDEN) | |
| REAL*8 | DINP (NDDEN), | TINE (NDTEM), | TINH (NDTEM) | |
| REAL*8 | TINP (NDTEM), | WVMAX (NDWVL) | | |
| REAL*8 | WVMIN (NDWVL), | | ZEFFR | |