ADAS Subroutine d8tran

```
      subroutine d8tran(ndeng  , ndedge  ,
     &                   ieng   , iedge   ,
     &                   edge   , energy  , fraction ,
     &                   ein    , fout
     &                  )
```

```
C-------------------------------------------------------------------
C
C  ******************** FORTRAN77 SUBROUTINE: D8TRAN ********************
C
C  PURPOSE:  To determine transmission fraction at energy ein.
C
C  CALLING PROGRAM: adas408
C
C  FUNCTION:
C
C  input : (i*4)  ndeng    = maximum number of energies in adf35 file.
C  input : (i*4)  ndedge   = maximum number of energy edges in adf35 file.
C  input : (i*4)  ieng     = actual number of energies.
C  input : (i*4)  iedge    = actual number of edges.
C  input : (r*8)  edge     = tabulated edge energies (eV).
C  input : (r*8)  energy   = tabulated energies (eV).
C  input : (r*8)  fraction = tabulated transmission fractions.
C  input : (r*8)  ein      = user supplied energy (eV).
C
C  output: (r*8)  fout     = transmission fraction at ein.
C
C  NOTES: No extrapolation is allowed and energies outside the range
C         and set to the limit values.
C
C  ROUTINES:
C          ROUTINE    SOURCE   BRIEF DESCRIPTION
C          -----------------------------------------------------------
C          i4indfvs   ADAS     Finds nearest index for a non-monotonic
C                              array
C          xxpint     ADAS     Order 3 polynomial interpolation.
C
C
C  VERSION  : 1.1
C  DATE     : 15-04-96
C  MODIFIED : Martin O'Mullane
C               - First version.
C
C  VERSION  : 1.2
C  DATE     : 23-07-2003
C  MODIFIED : Martin O'Mullane
C               - Interpolates adf35 filter file data
C                   rather than calculating the fraction from formulae.
C                   This allows a wider range of filters.
C
C  VERSION  : 1.3
C  DATE     : 16-02-2005
```

```
C  MODIFIED : Martin O'Mullane
C               - Drop warnings to screen.
C
C-----------------------------------------------------------------
      INTEGER            IEDGE,        IENG,       NDEDGE,      NDENG
      REAL*8             EDGE(NDEDGE),              EIN
      REAL*8             ENERGY(NDENG),            FOUT
      REAL*8             FRACTION(NDENG)
```