ADAS Subroutine d8intg

```
       subroutine d8intg( ndedge  ,  ndeng   ,
     &                    iedge   ,  ieng    ,
     &                    edge    ,  energy  ,  fraction ,
     &                    te      ,  flimit  ,  result
     &                   )

C-----------------------------------------------------------------------
C
C  ******************** FORTRAN77 SUBROUTINE: D8TRAN ******************
C
C  PURPOSE: To integrate between a and b with an interval of step
C           the integrand
C                           f(x)exp(-x) * exp(+a)
C           where f(x) is the filter function.
C
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)  te       = user supplied temperature (eV).
C  input : (r*8)  flimit   = lower limit of integration (eV/Te)
C
C  output: (r*8)  result   = value of integral.
C
C  NOTES:
C
C  ROUTINES:
C          ROUTINE    SOURCE    BRIEF DESCRIPTION
C          ------------------------------------------------------------
C          i4indfvs   ADAS      Finds nearest index for a non-monotonic
C                               array
C          xxmerg     ADAS      Merge two grids.
C          d8tran     ADAS      Returns transmission of a filter.
C          d8part     ADAS      Trapezoidal integration routine.
C
C  Author   : Martin O'Mullane UCC 26/8/92
C
C  VERSION  : 1.1
C  DATE     : 15-04-96
C  MODIFIED : Martin O'Mullane
C               - First version in SCCS.
C
C  VERSION  : 1.2
C  DATE     : 05-0-2003
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C  MODIFIED : Martin O'Mullane
C               - Uses adf35 filter file data.
C
C  VERSION  : 1.3
C  DATE     : 16-02-2005
C  MODIFIED : Martin O'Mullane
C               - Do not re-use x1() and x2() in parts integration.
C
C
C-----------------------------------------------------------------------
      INTEGER             IEDGE,       IENG,        NDEDGE,      NDENG
      REAL*8              EDGE(NDEDGE),             ENERGY(NDENG)
      REAL*8              FLIMIT,      FRACTION(NDENG),          RESULT
      REAL*8              TE
```