

## ADAS Subroutine h4ftsp

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C
      subroutine h4ftsp(  istdim  ,
&                      x        , xa   , n   , yaa  , y   , dy   ,
&                      i0       , c1   , c2   , c3   , c4   , isw  ,
&                      )
-----
C
C
C ***** fortran77 subroutine: h4ftsp.for *****
C
C purpose: obtain the value from a spline interpolation
C
C calling program: various
C
C
C input : (i*4)  istdim  = dimensionality for splining arrays
C
C input : (r*8)  x       = required x-value
C input : (r*8)  xa(i)   = x-values
C input : (i*4)  n       = number of values
C input : (r*8)  yaa(i)  = y-values (possibly stored as multiple sets)
C input : (i*4)  i0      = starting index(-1) in yaa array of required input set
C input : (r*8)  c1(i,j) = 1st spline coefficient precursor
C input : (r*8)  c2(i,j) = 2nd spline coefficient precursor
C input : (r*8)  c3(i,j) = 3rd spline coefficient precursor
C input : (r*8)  c4(i,j) = 4th spline coefficient precursor
C input : (i*4)  isw     = .le.0  ordinary      spline interpolation
C                      = .gt.0  logarithmic   spline interpolation
C
C output: (r*8)  y       = returned y-value
C output: (r*8)  dy      = returned derivative
C
C routines:
C      routine      source      brief description
C      -----
C      i4unit       adas        fetch unit number for output of messages
C
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C
C date:    24 July 2002
C
C
C version: 1.1   Hugh Summers  24/07/02
C modified:      first release
C
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      INTEGER          I0,          ISTDIM,          ISW,          N
      REAL*8           C1(ISTDIM,ISTDIM-1),          C2(ISTDIM,ISTDIM-1)
      REAL*8           C3(ISTDIM,ISTDIM-1),          C4(ISTDIM,ISTDIM-1)
      REAL*8           DY,          X,          XA(ISTDIM),  Y
      REAL*8           YAA(*)
```