

ADAS Subroutine lfitsp

SUBROUTINE LFITSP (X, XA, N, YAA, Y, DY, I0, C1, C2, C3, C4, ISW)
IMPLICIT REAL*8 (A-H, O-Z)

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C ***** FORTRAN 77 SUBROUTINE: LFITSP *****

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C PURPOSE: SUBROUTINE TO PERFORM SPLINE INTERPOLATION

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C LARGER ARRAY DIMENSION VERSION OF NFITSP

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C INPUT

C X = REQUIRED X-VALUE

C XA (I) = X-VALUES

C N = NUMBER OF VALUES

C YAA (I) = Y-VALUES (POSSIBLY STORED AS MULTIPLE SETS)

C I0 = STARTING INDEX (-1) IN YAA ARRAY OF REQUIRED INPUT SET

C C1 (I, J) = 1ST SPLINE COEFFICIENT PRECURSOR

C C2 (I, J) = 2ND SPLINE COEFFICIENT PRECURSOR

C C3 (I, J) = 3RD SPLINE COEFFICIENT PRECURSOR

C C4 (I, J) = 4TH SPLINE COEFFICIENT PRECURSOR

C ISW = .LE.0 ORDINARY SPLINE INTERPOLATION

C = .GT.0 LOGARITHMIC SPLINE INTERPOLATION

C OUTPUT

C Y = RETURNED Y-VALUE

C DY = RETURNED DERIVATIVE

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C AUTHOR:

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C ***** H.P.SUMMERS, JET 7 FEB 1989 *****

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C UNIX-IDL CONVERSION:

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C VERSION: 1.1 DATE: 07-10-96

C MODIFIED: WILLIAM OSBORN

C - FIRST CONVERTED.

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C VERSION: 1.2 DATE: 15-05-07

C MODIFIED: Allan Whiteford

C - Updated comments as part of subroutine

C documentation production.

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INTEGER I0, ISW, N
REAL*8 C1 (40, 39), C2 (40, 39), C3 (40, 39)
REAL*8 C4 (40, 39), DY, X, XA (40)
REAL*8 Y, YAA (40)