

ADAS Subroutine xxhunt

SUBROUTINE XXHUNT(XX , N , X , JLO)

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C ***** FORTRAN77 SUBROUTINE: XXHUNT *****
C
C PURPOSE: GIVEN AN ARRAY XX(1:N), AND GIVEN A VALUE X, RETURNS A
C           VALUE JLO SUCH THAT X IS BETWEEN XX(JLO) AND XX(JLO+1).
C
C           XX(1:N) MUST BE MONOTONIC, EITHER INCREASING OR
C           DECREASING. JLO=0 OR JLO=N IS RETURNED TO INDICATE THAT
C           X IS OUT OF RANGE. JLO ON INPUT IS TAKEN AS THE INITIAL
C           GUESS FOR JLO ON OUTPUT.
C
C REFERENCE: NUMERICAL RECIPES: The Art of Scientific Computing
C             (FORTRAN Version).
C             W.H.Press, B.P.Flannery, S.A.Teukolsky & W.T.Vetterling.
C             (Cambridge University Press, Cambridge). 1989. p.233
C             ISBN 0 521 38330 7
C
C CALLING PROGRAM: GENERAL USE
C
C SUBROUTINE:
C
C INPUT :      (R*8)  XX      = MONOTONIC INPUT ARRAY
C INPUT :      (I*4)  N        = INPUT ARRAY 'XX()' LENGTH
C INPUT :      (R*8)  X        = VALUE WHERE INTERVAL IS TO BE FOUND
C I/O   :      (I*4)  JLO      = INPUT: INITIAL GUESS FOR INTERVAL INDEX
C                               OUTPU: RETURNED INTERVAL INDEX
C
C           (I*4)  INC        = HUNT INCREMENT
C           (I*4)  JHI        = UPPER BOUND FOR BRACKETING X
C           (I*4)  JM         = MEAN OF JLO AND JHI
C
C           (L*4)  ASCND      = .TRUE. FOR ASCENDING VALUES IN XX,
C                               .FALSE. FOR DESCENDING VALUES
C
C ROUTINES:  NONE
C
C NOTE:
C
C AUTHOR:  LORNE D. HORTON (IPP GARCHING)
C          L5.213
C          IPP EXT. 1635
C
C DATE:    19/03/03
C
C VERSION:  1.1                      DATE: 19/03/03
C MODIFIED: Lorne Horton
C           - Initial version
C
C UPDATE:   1.2                      DATE: 17/05/07
C MODIFIED: Allan Whiteford
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C - Updated comments as part of subroutine documentation
C procedure.

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INTEGER	JLO,	N
REAL*8	X,	XX (N)