

ADAS Subroutine c6pmin

SUBROUTINE C6PMIN(MXNSHL , MXJSHL , N , VD , VDS , VDI , RHS)

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C ***** FORTRAN77 SUBROUTINE: C6PMIN *****
C
C PURPOSE: CALCULATES THE SOLUTION OF A TRIDIAGONAL PARTITIONED MATRIX
C ORGANISED SET OF SIMULTANEOUS EQUATIONS.
C
C THE PARTITIONS ARE 2X2 IN THE PRESENT IMPLEMENTATION. A
C VARIANT OF OF THE DOUBLE PASS ALGORITHM (IN A PARTITIONED
C MATRIX SENSE) IS USED WITH RECURRENCE IN TWO DIRECTIONS TO
C THE CENTRE AND BACK. THIS IS ANALOGOUS TO THE NAG ROUTINE
C F04EAF FOR AN ORDINARY TRIDAGONAL MATRIX THE INDEXING OF
C THE DIAG, SUPRADIAG AND INFRADIAG ELEMENTS FOLLOWS THAT OF
C THE NAG ROUTINE F04EAF.
C
C CALLING PROGRAM: C6WSOL
C
C INPUT : (I*4) MXNSHL = MAXIMUM NUMBER OF N SHELLS.
C INPUT : (I*4) MXJSHL = MAXIMUM NUMBER OF J SUB-SHELLS.
C INPUT : (I*4) N = NUMBER OF PARTIONS ALONG THE DIAGONAL.
C INPUT : (R*8) VD (,) = DIAGONAL PARTITION.
C 1ST DIMENSION: 2 * MXJSHL
C 2ND DIMENSION: N SHELL INDEX.
C INPUT : (R*8) VDS (,) = SUPRADIAGONAL PARTITION.
C 1ST DIMENSION: 2 * MXJSHL
C 2ND DIMENSION: N SHELL INDEX.
C INPUT : (R*8) VDI (,) = INFRADIAGONAL PARTITION.
C 1ST DIMENSION: 2 * MXJSHL
C 2ND DIMENSION: N SHELL INDEX.
C
C I/O : (R*8) RHS (,) = INPUT: RIGHT HAND SIDE OF VECTOR PARTITION.
C OUTPUT: SOLUTION OF VECTOR PARTITION.
C 1ST DIMENSION: 2 * MXJSHL
C 2ND DIMENSION: N SHELL INDEX.
C
C
C PARAM : (I*4) MXJ = MXJSHL.
C
C (I*4) I = LOOP INDEX.
C (I*4) K =
C
C (R*8) UNIT () =
C DIMENSION: 4
C (R*8) W1 () =
C DIMENSION: 4
C (R*8) W2 () =
C DIMENSION: 4
C (R*8) VW1 () =
C DIMENSION: 2

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C          (R*8)  VW2 ( )    =
C
C          DIMENSION: 2
C          (R*8)  TEMP ( )   = TEMPORARY STORE.
C          DIMENSION: 4
C
C ROUTINES:
C          ROUTINE      SOURCE      BRIEF DESCRIPTION
C          -----
C          I4UNIT      ADAS          RETURNS UNIT NO. FOR OUTPUT OF MESSAGES.
C
C NOTES:
C          1) THE 2X2 PARTITIONS ARE STORED AS LINEAR VECTORS BY COLUMN
C             IN THE 1ST DIMENSIONS OF VD ( , ), VDS ( , ), VDI ( , ).
C
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C
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C
C UNIX-IDL PORT:
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C
C DATE:    22ND MAY 1996
C
C VERSION: 1.1                                DATE: 22-05-96
C MODIFIED: WILLIAM OSBORN
C          - FIRST VERSION. IBM VERSION NOT CHANGED
C
C VERSION: 1.2                                DATE: 29-05-96
C MODIFIED: WILLIAM OSBORN
C          - REMOVED UNUSED VARIABLES
C
C VERSION: 1.3                                DATE: 29-05-96
C MODIFIED: WILLIAM OSBORN
C          - S.C.C.S. MISTAKE
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C
C-----
C          INTEGER          MXJSHL,      MXNSHL,      N
C          REAL*8           RHS (MXJSHL, MXNSHL) ,      VD (2*MXJSHL, MXNSHL)
C          REAL*8           VDI (2*MXJSHL, MXNSHL) ,      VDS (2*MXJSHL, MXNSHL)

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