

## ADAS Subroutine diag

```
C
      SUBROUTINE DIAG(N,Z,D)
      IMPLICIT REAL*8(A-H,O-Z)
C
C PURPOSE: DIAGONALIZATION OF REAL SYMMETRIC N-BY-N MATRIX Z.
C
C INPUT REQUIRED. N AND Z. ONLY LOWER TRIANGLE OF Z NEED BE SUPPLIED.
C              MATRIX Z OVERWRITTEN BY EIGENVECTORS OF Z.
C OUTPUT.      Z AND D, WHERE Z CONSISTS OF COLUMN EIGENVECTORS
C              AND D CONSISTS OF CORRESPONDING EIGENVALUES.
C N.B. THE VALUE OF N MUST NOT EXCEED THE DIMENSION OF THE VARIABLE E,
C SPECIFIED IN THE FOLLOWING LINE.
C
C-----
C
C VERSION   : 1.1
C DATE      : ?
C MODIFIED  : H P Summers
C           - Initial version.
C
C VERSION   : 1.2
C DATE      : 16-05-2007
C MODIFIED  : Allan Whiteford
C           - Remove listing information from columns 72+.
C           - Updated comments as part of subroutine documentation
C           procedure.
C-----
      INTEGER          N
      REAL*8           D(10),      Z(10,10)
```