ADAS Subroutine r8dcon

```
      FUNCTION R8DCON( INTYP, OUTTYP, IZ1, DIN )
C-----------------------------------------------------------------------
C
C  **************** FORTRAN77 REAL*8 FUNCTION: R8DCON *****************
C
C  PURPOSE: TO CONVERT A DENSITY INTO SPECIFIED UNITS
C
C           (DOUBLE PRECISION FUNCTION VERSION OF 'XXTCON')
C
C  CALLING PROGRAM: GENERAL USE
C
C  FUNCTION:
C
C             (R*8)  R8DCON  = FUNCTION NAME -
C                              OUTPUT DENSITY (STATED UNITS)
C             (I*4)  INTYP   = 1 => 'DIN' UNITS: CM-3
C                            = 2 => 'DIN' UNITS: REDUCED
C             (I*4)  OUTTYP  = 1 => 'R8DCON' UNITS: CM-3
C                            = 2 => 'R8DCON' UNITS: REDUCED
C             (I*4)  IZ1     = RECOMBINING ION CHARGE (= Z+1).
C             (R*8)  DIN     = INPUT DENSITY (STATED UNITS)
C
C             (R*8)  Z1P7   = 'IZ1'**7
C             (R*8)  DCONV() = DENSITY CONVERSION PARAMETERS
C
C ROUTINES:  NONE
C
C NOTE:
C            DENSITY CONVERSION PARAMETERS:
C
C            INTYP = 1 ; DCONV(1) =               CM-3  -> OUTPUT UNITS
C            INTYP = 2 ; DCONV(2) =            REDUCED  -> OUTPUT UNITS
C
C AUTHOR:  PAUL E. BRIDEN (TESSELLA SUPPORT SERVICES PLC)
C          K1/0/81
C          JET EXT. 4569
C
C DATE:    04/01/91
C
C UPDATE:  07/08/91 - PE BRIDEN: CHANGED 'DBLE(IZ1**7)' TO 'DBLE(IZ1)**7
C                                TO AVOID INTEGER OVERFLOW IF IZ1>21.
C
C VERSION  : 1.2
C DATE     : 10-04-2007
C MODIFIED : Allan Whiteford
C               - Modified documentation as part of automated
C   subroutine documentation preparation.
C
C-----------------------------------------------------------------------
C
C-----------------------------------------------------------------------
      INTEGER             INTYP,       IZ1,         OUTTYP
```

```
      REAL*8              DIN
```