ADAS Subroutine xxtcon

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      SUBROUTINE XXTCON( INTYP, OUTTYP, IZ1, ITVAL, TIN, TOUT )
C-----------------------------------------------------------------------
C
C  ****************** FORTRAN77 SUBROUTINE: XXTCON ********************
C
C  PURPOSE: TO CONVERT AN ARRAY OF TEMPERATURES INTO SPECIFIED UNITS
C
C  CALLING PROGRAM: GENERAL USE
C
C  SUBROUTINE:
C
C  INPUT :    (I*4)  INTYP   = 1 => 'TIN(array)' UNITS: KELVIN
C                            = 2 => 'TIN(array)' UNITS: eV
C                            = 3 => 'TIN(array)' UNITS: REDUCED TEMP.
C  INPUT :    (I*4)  OUTTYP  = 1 => 'TOUT(array)' UNITS: KELVIN
C                            = 2 => 'TOUT(array)' UNITS: eV
C                            = 3 => 'TOUT(array)' UNITS: REDUCED TEMP.
C  INPUT :    (I*4)  IZ1     = RECOMBINING ION CHARGE (= Z+1).
C  INPUT :    (I*4)  ITVAL   = NUMBER OF TEMPERATURES IN 'TIN(array)'
C  INPUT :    (R*8)  TIN()   = INPUT TEMPERATURES (STATED UNITS)
C  OUTPUT:    (R*8)  TOUT()  = OUTPUT TEMPERATURES (STATED UNITS)
C
C             (R*8)  EV2KEL  = ELECTRON VOLTS TO KELVIN CONVERSION
C             (R*8)  KEL2EV  = KELVIN TO ELECTRON VOLTS CONVERSION
C
C             (I*4)  I       = GENERAL USE
C
C             (R*8)  Z1P2    = 'IZ1'**2
C             (R*8)  TCONV() = TEMPERATURE CONVERSION PARAMETERS
C
C ROUTINES:  NONE
C
C NOTE:
C            TEMPERATURE CONVERSION PARAMETERS:
C
C            INTYP = 1 ; TCONV(1) =>             KELVIN  -> OUTPUT UNITS
C            INTYP = 2 ; TCONV(2) =>                 eV  -> OUTPUT UNITS
C            INTYP = 3 ; TCONV(3) => REDUCED TEMPERATURE -> OUTPUT UNITS
C
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C
C DATE:    04/01/91
C
C-----------------------------------------------------------------------
C
C-----------------------------------------------------------------------
      INTEGER             INTYP,       ITVAL,       IZ1,         OUTTYP
      REAL*8              TIN(ITVAL),  TOUT(ITVAL)
```