

ADAS Subroutine nhydes

SUBROUTINE NHYDES (Z0, ZEFF, N, L, E0)

IMPLICIT REAL*8 (A-H, O-Z)

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C
C PURPOSE: CALCULATES LOWEST ORDER NON-RELATIVISTIC, RELATIVISTIC AND
C QUANTUM-ELECTRODYNAMIC ENERGIES FOR HYDROGENIC IONS
C
C BINDING ENERGY FOR CENTRE OF TERM IS PRODUCED. FINE STRUCTURE FOR
C L>0 MUST BE ADDED EXTERNALLY. FORMULAE ARE FROM ERIKSON (1977) J.PHY
C CHEM. REF.DATA,6,831.
C QED EFFECTS FOR L>0 OMITTED.

C-----
C VERSION : 1.1
C DATE : 18-03-1999
C MODIFIED : ???
C
C VERSION : 1.2
C DATE : 05-10-2000
C MODIFIED : ???
C - Removed junk from columns > 72
C
C VERSION : 1.3
C DATE : 16-05-2007
C MODIFIED : Allan Whiteford
C - Updated comments as part of subroutine documentation
C procedure.

C-----
INTEGER L, N
REAL*8 E0, Z0, ZEFF