

ADAS Subroutine cxtblf

SUBROUTINE CXTBLF (MXNSHL , IZ1 , NBOT , NTOP , TBLF)

C

C

C-----

C

C ***** FORTRAN77 SUBROUTINE: CXTBLF *****

C

C PURPOSE: SETS UP A RADIATIVE LIFETIME TABLE FOR NL LEVELS OF A
C HYDROGENIC ION.

C

C CALLING PROGRAM: ADAS306 , ADAS308.

C

C INPUT : (I*4) MXNSHLL = MAXIMUM VALUE OF N QUANTUM NUMBER.

C INPUT : (I*4) IZ1 = ION CHARGE.

C INPUT : (I*4) NBOT = MINIMUM PRINCIPAL QUANTUM NUMBER.

C INPUT : (I*4) NTOP = MAXIMUM PRINCIPAL QUANTUM NUMBER.

C

C OUTPUT: (R*8) TBLF () = TABLE OF RADIATIVE LIFETIMES.

C UNITS: SECS

C DIMENSION: REFERENCED BY FUNC I4IDFL(N,L) .

C

C (I*4) NU = UPPER VALUE OF N QUANTUM NUMBER.

C (I*4) LU = L QUANTUM NUMBER FOR NU.

C (I*4) NL = LOWER VALUE OF N QUANTUM NUMBER.

C (I*4) LL = L QUANTUM NUMBER FOR NL.

C (I*4) IDL = TABLE INDEX.

C

C (R*8) SUM = SUM OF A-VALUES FOR GIVEN NU AND LU.

C

C ROUTINES:

C ROUTINE SOURCE BRIEF DESCRIPTION

C-----

C R8ATAB ADAS RETURNS HYDRONIC L-RESOLVED A-VALUES.

C I4IDFL ADAS RETURNS UNIQUE INDEX FROM QUANTUM

C NUMBERS N AND L.

C

C AUTHOR: JONATHAN NASH (TESSELLA SUPPORT SERVICES PLC)

C K1/0/81

C JET EXT. 5183

C

C DATE: 30/09/93

C

C-----

C

C-----

INTEGER IZ1, MXNSHL, NBOT, NTOP
REAL*8 TBLF ((MXNSHL*(MXNSHL+1))/2)