ADAS Subroutine pchg

```
      FUNCTION PCHG(V,L,L1,E,FACT)
      IMPLICIT REAL*8(A-H,O-Z)
C----------------------------------------------------------------------
C
C  PURPOSE: EVALUATES PEACH AMPLITUDE G(V,L,E,L1) BY TABLE INTERPOLATION
C
C  TABLES ARE READ IN FROM DISC FILE 'JETSHP.PCHGTAB.DATA' ON FIRST
C  CALL TO PCHG AND STORED IN LABELLED COMMON /PCHGTB/.
C  THE INPUT IS ON STREAM 13.  IGONE MUST BE SET TO 1 IN MAIN ROUTINE
C  INITIALLY. IT IS RESET TO 0 AFTER TABLES ARE READ IN.
C  ********** H.P. SUMMERS, JET    26 JUNE 1985  ********************
C_____
C  INPUT
C      N=EFFECTIVE PRINCIPAL QUANTUM NUMBER OF BOUND STATE
C      L=ORBITAL ANGULAR MOMENTUM OF ELECTRON IN BOUND STATE
C      L1=ORBITAL ANGULAR MOMENTUM OF ELECTRON IN FREE STATE
C      E=ELECTRON ENERGY IN FREE STATE (REDUCED RYDBERG UNITS)
C  OUTPUT
C      PCHG=PEACH INTERPOLATED AMPLITUDE G OR G*
C      FACT=1                 IF PEACH G  RETURNED
C          =DSQRT(DABS(V-L)) IF PEACH G* RETURNED
C                            NB OBTAIN G FROM G* BY MULTIPLYING BY FACT
C_____
C----------------------------------------------------------------------
C UNIX-IDL PORT:
C
C AUTHOR:  WILLIAM OSBORN (TESSELLA SUPPORT SERVICES PLC)
C
C DATE:    4TH JULY 1996
C
C VERSION: 1.1                      DATE: 04-07-96
C MODIFIED: WILLIAM OSBORN
C              - FIRST VERSION.
C
C VERSION: 1.2                      DATE: 19-12-01
C MODIFIED: Martin O'MULLANE
C              - Removed junk from > column 72.
C
C VERSION: 1.3                      DATE: 20-07-07
C MODIFIED: Allan Whiteford
C              - Small modification to comments to allow for
C                automatic documentation preparation.
C
C----------------------------------------------------------------------
      INTEGER          L,          L1
      REAL*8           E,          FACT,        V
```