## **ADAS Subroutine r8gav**

function r8gav(u, gam2, n0)

```
C-----
С
С
 ********* FORTRAN77 REAL*8 FUNCTION: R8GAV *************
С
C PURPOSE: CALCULATES TOTAL GAUNT FACTOR FOR FREE-FREE AND
C QUASI-CONTINUOUS FREE-BOUND TRANSITIONS
С
C INPUT
С
  U=HV/KT WHERE HV IS PHOTON ENERGY
            AND KT IS ELECTRON TEMPERATURE (ENERGY UNITS)
С
     GAM2=Z*Z*IH/KT WHERE Z IS TARGET ION CHARGE
С
                  AND IH IS THE RYDBERG ENERGY
С
С
    NO
            IS THE FIRST BOUND LEVEL TO BE INCLUDED IN THE
С
            INTEGRAL
C OUTPUT
С
   GAV=MAXWELLIAN AVERAGED GAUNT FACTOR.
С
С
C AUTHOR : L D Horton
C DATE : 24-06-1997
С
С
С
C VERSION : 1.1
C DATE : 02-03-2005
C MODIFIED : Martin O'Mullane
С
             - First version in central ADAS.
С
              - Make implicit none.
С
C VERSION : 1.2
C DATE : 15-03-2006
C MODIFIED : Allan Whiteford
С
             - Removed external giii statement.
С
C VERSION: 1.3
C DATE : 22-06-2006
C MODIFIED : Martin O'Mullane
С
            - Removed redundant external gbf statement.
С
C VERSION: 1.4
C DATE : 10-04-2007
C MODIFIED : Allan Whiteford
С
            - Modified documentation as part of automated
C subroutine documentation preparation.
C-----
    INTEGER
                    NΟ
    REAL*8
                     GAM2,
                          U
```