

## ADAS Subroutine bdcf3

```
      subroutine bdcf3( f      , e      , n      , l      , z      ,  
&                      x0     , x1     , h      ,  
&                      )
```

```
C-----  
C  
C ***** fortran77 routine: bdcf3 *****  
C  
C Purpose:  Tabulates asymptotically decaying bound coulomb function  
C  
C  
C Subroutine:  
C  
C input : (r*8)  e      = energy (Ryd) : must be <0 for a bound state  
C input : (r*8)  n      = principal quantum number  
C input : (r*8)  l      = orbital anular momentum quantum number  
C input : (r*8)  z      = ion charge +1  
C input : (r*8)  x0     = inner turning point of potential  
C input : (r*8)  x1     = outer turning point of potential  
C input : (r*8)  h      = interval for tabulation  
C  
C output: (r*8)  f()    = Coulomb function  
C                      1st dim: tabulation index  
C  
C Routines:  
C      none  
C  
C Author:  William Osborn (Tessella support services plc)  
C  
C Date:    4 July 1996  
C  
C Update:  MG O'Mullane  19/12/01  Removed junk from > column 72  
C  
C Update:  HP Summers    21/05/04  made implicit none and restructured  
C  
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: 21-15-04  
C Modified : Hugh Summers  
C           - Restructured as above.  
C-----  
C  
C      INTEGER          L,          N  
C      REAL*8          E,          F(1000),      H,          X0  
C      REAL*8          X1,          Z
```