

ADAS Subroutine r8gbf

FUNCTION R8GBF(EN , U)

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C ***** FORTRAN77 REAL*8 FUNCTION: R8GBF *****

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C PURPOSE: CALCULATES BOUND-FREE GAUNT FACTORS

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C CALLING PROGRAM: GENERAL USE

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C FUNC : (R*8) R8GBF =

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C INPUT : (R*8) EN =

C INPUT : (R*8) U = $N^{**2} / K^{**2} = N^{**2} * E / Z^{**2}$

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C PARAM : (R*8) P1 = 2/3.

C PARAM : (R*8) P2 = 25/18.

C PARAM : (R*8) P3 = 4/3

C

C (R*8) X =

C (R*8) T1 =

C (R*8) T2 =

C

C ROUTINES: NONE

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C AUTHOR: JONATHAN NASH (TESSELLA SUPPORT SERVICES PLC)

C K1/0/81

C JET EXT. 5183

C

C DATE: 04/11/93

C

C UNIX-IDL PORT:

C

C AUTHOR: WILLIAM OSBORN (TESSELLA SUPPORT SERVICES PLC)

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C DATE: 22ND MAY 1996

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C VERSION: 1.1 DATE: 22-05-96

C MODIFIED: WILLIAM OSBORN

C - FIRST VERSION. IBM VERSION NOT CHANGED

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C VERSION : 1.2

C DATE : 02-03-2005

C MODIFIED: Martin O'Mullane

C - Change P2 from 25/18 to 28/18 as given by equation B3

C in Burgess & Summers, MNRAS, vol 174, (1976), p345.

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C VERSION : 1.3

C DATE : 10-04-2007

C MODIFIED : Allan Whiteford

C - Modified documentation as part of automated

C subroutine documentation preparation.

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REAL*8

EN,

U