

ADAS Subroutine g3astj

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      SUBROUTINE G3ASTJ(IWR04 , IWRP , LPAPER , IOPT , DATE ,
&                      IZ0   , IZ   , IZ1   , NELEC ,
&                      BWNO  , MAXT  , TEA   ,
&                      NAUTO , ITIA  , ITCA  , AUGA  ,
&                      NCONFIG , ICF  , NLSETA , EPSIL  , EPSILMAX ,
&                      NLEVEL , NFREE , IBREFA ,
&                      IA    , ISA   , ILA   , ICFA  , EFREE  ,
&                      ENERA  , WTA   , IXREFA , IFREFA ,
&                      LPA    , ISPA  , XJP   ,
&                      NTRAN  , IIPA  , IIA   , AA    , FA)
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C ***** FORTRAN77 SUBROUTINE: G3ASTJ *****

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C PURPOSE: CALCULATES COLLISION STRENGTHS IN IMPACT PARAMETER
C APPROXIMATION AND WRITES THE ADF04 AND PAPER.TXT FILES.

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C CALLING PROGRAM: ADAS703

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C SUBROUTINE:

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C INPUT : (I*4) NDTIN = MAX. NUMBER OF INPUT TEMPERATURE/DENSITY
C (I*4) BWNO(I) = IONISATION POTENTIALS (CM-1)
C TRA(IT) = REDUCED TEMPERATURE SET (K)
C MAXT = NUMBER OF TEMPERATURES (LE.NDTIN)
C IOPT = OUTPUT CONFIGURATION FORM
C (1=EISSNER,0=STANDARD)

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C IA() = LEVEL INDEX
C ILA() = TOTAL ORBITAL QUANTUM NUMBER
C ISA() = TOTAL SPIN QUANTUM NUMBER (2*S+1)
C IJA() = TOTAL ANGUL. QUANTUM NUMBER (2*J)
C ICFA() = CONFIGURATION INDEX OF LEVEL
C ENERA() = LEVEL ENERGY (CM-1)
C WTA() = (LEVEL STATISTICAL WEIGHT-1)/2
C NLEVEL = NUMBER OF LEVELS
C IIA() = LOWER LEVEL INDEX OF TRANSITION
C IIPA() = UPPER LEVEL INDEX OF TRANSITION
C AA() = A-VALUE FOR TRANSITION
C GAMSSA(,) = GAMMAS FOR TRANSITION
C NTRAN = NUMBER OF TRANSITIONS

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C ROUTINES:

C ROUTINE SOURCE BRIEF DESCRIPTION

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C XXFLSH IDL-ADAS CALLS FLUSH TO CLEAR PIPES.

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C
 C AUTHOR : Martin O'Mullane
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 C DATE : 29/04/98
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 C VERSION : 1.1
 C MODIFIED : Martin O'Mullane
 C FIRST VERSION

DATE: 29-04-98

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 CHARACTER*8 DATE
 INTEGER IA (NDLEVL) , IBREFA (NDLEVL)
 INTEGER ICF (NDCFG) , ICFA (NDLEVL)
 INTEGER IFREFA (NDLEVL) , IIA (NDTRAN)
 INTEGER IIPA (NDTRAN) , ILA (NDLEVL) , IOPT
 INTEGER ISA (NDLEVL) , ISPA (NDFREE)
 INTEGER ITCA (NDTRAN) , ITIA (NDTRAN)
 INTEGER IWR04 , IWRP , IXREFA (NDLEVL)
 INTEGER IZ , IZ0 , IZ1
 INTEGER LPA (NDFREE) , MAXT , NAUTO , NCONFIG
 INTEGER NELEC , NFREE , NLEVL
 INTEGER NLSETA (NDCFG , 30 , 2) , NTRAN
 LOGICAL LPAPER
 REAL*8 AA (NDTRAN) , AUGA (NDTRAN)
 REAL*8 BWNO (10) , EFREE (NDFREE)
 REAL*8 ENERA (NDLEVL) , EPSIL (15)
 REAL*8 EPSILMAX , FA (NDTRAN) , TEA (NDTIN)
 REAL*8 WTA (NDLEVL) , XJP (NDFREE)