

ADAS Subroutine h9tran

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      SUBROUTINE H9TRAN( NDLEV  , NDTRN  , NDTEM  ,
&                      IL      , ISTRN  , NV      ,
&                      IA      , WA      , XJA      ,
&                      I1A     , I2A     , AVAL     ,
&                      SCOM,
&                      IUPPER , ILOWER ,
&                      LUPPER , LLOWER ,
&                      WUPPER , WLOWER ,
&                      EUPPER , ELOWER ,
&                      AA      , GAMMA
&                      )
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C
C ***** FORTRAN77 SUBROUTINE: H9TRAN *****
C
C PURPOSE:  TO SET UP SELECTED TRANSITION PARAMETERS.
C
C CALLING PROGRAM: ADAS809
C
C SUBROUTINE:
C
C INPUT : (I*4) NDLEV      = MAXIMUM NUMBER OF INDEX LEVELS
C INPUT : (I*4) NDTRN      = MAXIMUM NUMBER OF TRANSITIONS
C INPUT : (I*4) NDTEM      = MAXIMUM NUMBER OF INPUT FILE TEMPERATURES
C
C INPUT : (I*4) IL         = NUMBER OF INDEX LEVELS
C INPUT : (I*4) ISTRN      = SELECTED TRANSITION INDEX.
C INPUT : (I*4) NV         = INPUT DATA FILE: NUMBER OF GAMMA/TEMPERATURE
C                          PAIRS FOR THE SELECTED TRANSITION.
C
C INPUT : (I*4) IA ( )     = LEVEL INDEX NUMBER ARRAY
C INPUT : (R*8) WA ( )     = LEVEL ENERGIES RELATIVE TO LEVEL 1 (CM-1)
C INPUT : (R*8) XJA ( )    = QUANTUM NUMBER (J-VALUE) FOR LEVEL
C                          NOTE: (2*XJA)+1 = STATISTICAL WEIGHT
C
C INPUT : (I*4) I1A ( )    = LOWER LEVEL INDEX FOR ELECTRON IMPACT
C                          TRANSITION
C INPUT : (I*4) I2A ( )    = UPPER LEVEL INDEX FOR ELECTRON IMPACT
C                          TRANSITION
C INPUT : (I*4) AVAL ( )   = A-VALUE FOR ELECTRON IMPACT TRANSITION
C INPUT : (I*4) SCOM ( , ) = GAMMA VALUES FOR ELECTRON IMPACT
C                          (DE-)EXCITATION
C                          1st DIMENSION: TEMPERATURE INDEX
C                          2nd DIMENSION: TRANSITION INDEX
C OUTPUT: (I*4) IUPPER     = SELECTED TRANSITION: UPPER LEVEL ARRAY INDEX
C OUTPUT: (I*4) ILOWER     = SELECTED TRANSITION: LOWER LEVEL ARRAY INDEX
C
C OUTPUT: (I*4) LUPPER     = SELECTED TRANSITION: UPPER INDEX LEVEL
C OUTPUT: (I*4) LLOWER     = SELECTED TRANSITION: LOWER INDEX LEVEL
C
C OUTPUT: (R*8) WUPPER     = SELECTED TRANSITION: UPPER LEVEL STAT. WT.
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C OUTPUT: (R*8) WLOWER = SELECTED TRANSITION: LOWER LEVEL STAR. WT.
 C (NOTE: STAT. WT. = STATISTICAL WEIGHT)
 C
 C OUTPUT: (R*8) EUPPER = SELECTED TRANSITION: UPPER ENERGY LEVEL
 C RELATIVE TO INDEX LEVEL 1. (CM-1)
 C OUTPUT: (R*8) ELOWER = SELECTED TRANSITION: LOWER ENERGY LEVEL
 C RELATIVE TO INDEX LEVEL 1. (CM-1)
 C OUTPUT: (R*8) AA = SELECTED TRANSITION A-VALUE (SEC-1)
 C OUTPUT: (R*8) GAMMAUP () = INPUT DATA FILE: SELECTED EXCITATION -
 C GAMMAUP VALUE AT 'TEMP ()'
 C OUTPUT: (R*8) GAMMADN () = INPUT DATA FILE: SELECTED DE-EXCITATION -
 C GAMMADN VALUE AT 'TEMP ()'
 C
 C (I*4) I = GENERAL USE.

C ROUTINES: NONE

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 C JA7.08
 C EXT. 4196

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INTEGER	I1A (NDTRN) ,	I2A (NDTRN) ,	IA (NDLEV) ,	IL
INTEGER	ILOWER,	ISTRN,	IUPPER,	LLOWER
INTEGER	LUPPER,	NDLEV,	NDTEM,	NDTRN
INTEGER	NV			
REAL*8	AA,	AVAL (NDTRN) ,	ELOWER,	EUPPER
REAL*8	GAMMA (NDTEM) ,		SCOM (NDTEM, NDTRN)	
REAL*8	WA (NDLEV) ,	WLOWER,	WUPPER	
REAL*8	XJA (NDLEV)			