

ADAS Subroutine cdaval

SUBROUTINE CDAVAL (IUNIT, DSNAME, UN, UL, LN, LL, MULTI, AVALUE)

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C *****      FORTRAN77 SUBROUTINE: CDAVAL *****
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C  PURPOSE:  EXTRACTS A-VALUE FROM AN ADF04 TYPE FILE GIVEN
C  THE QUANTUM NUMBERS DESCRIBING THE INITIAL AND
C  FINAL CONFIGURATION.
C
C  CALLING PROGRAM:  ADAS313
C
C INPUT  :
C
C (I*4) UN : UPPER PRINCIPAL QUANTUM
C  NUMBER.
C (I*4) UL : UPPER TOTAL L QUANTUM
C  NUMBER.
C (I*4) LN : LOWER PRINCIPAL QUANTUM
C  NUMBER.
C (I*4) LL : LOWER TOTAL L QUANTUM
C  NUMBER.
C (I*4) MULTI : MULTIPLICITY.
C (I*4) IUNIT : STREAM NUMBER FOR ADF04
C  TYPE FILE.
C (CHR) DSNAME : ADF04 FILENAME INCLUDING
C  THE PATH.
C
C OUPUT  :
C (R*8) AVALUE : TRANSITION PROBABILITY.
C
C
C GENERAL :
C
C (I*4) IA() : INDEX ARRAY.
C (I*4) NB() : PRINCIPAL QUANTUM NUMBER.
C (I*4) NA() : PRINCIPAL QUANTUM NUMBER.
C (I*4) MULTA() : MULTIPLICITY.
C (I*4) LTA() : TOTAL L QUANTUM NUMBER.
C (I*4) I : GENERAL COUNTER.
C (I*4) J : GENERAL COUNTER.
C (I*4) NDLEVELS : NUMBER OF LEVELS CONTAINED
C  IN THE ADF04 FILE.
C (I*4) UREF : INDEX REFERENCING THE UPPER
C  LEVEL.
C (I*4) LREF : INDEX REFERENCING THE LOWER
C  LEVEL.
C (I*4) UINDX : INDEX OF THE UPPER LEVEL
C  CONTAINED IN THE ADF04 TYPE
C  FILE.
C (I*4) LINDX : INDEX OF THE LOWER LEVEL
C  CONTAINED IN THE ADF04 TYPE
C  FILE.
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C
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C DATE : 04/29/98
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C VERSION: 1.1 DATE: 16-03-99

C MODIFIED: RICHARD MARTIN

C - PUT UNDER SCCS CONTROL.
C

C VERSION: 1.2 DATE: 15-10-99

C MODIFIED: RICHARD MARTIN

C REMOVED SUPERFLUOUS WRITE STATEMAENT.
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CHARACTER*80	DSNAME			
INTEGER	IUNIT,	LL,	LN,	MULTI
INTEGER	UL,	UN		
REAL*8	AVALUE			