

ADAS Subroutine bdxref

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SUBROUTINE BDXREF ( IUNIT , NDLEV , NDJLEV , NDPRT ,
&                   DSNNSP , DSNBD , DSNNSPO ,
&                   NTRM , NPTRM , NLVL , NPLVL ,
&                   ISTRM , IGTRM , ISPTRM , IGPTRM ,
&                   ISLVL , FSLVL , JTREF ,
&                   ISPLVL , FSPLVL , JTPREF ,
&                   LSJ , IERROR
&                   )

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C
C ***** FORTRAN77 SUBROUTINE: BDXREF *****
C
C PURPOSE: TO FETCH DATA FROM INPUT ADF18/A23_A04 CROSS-REFERENCE FILE.
C
C CALLING PROGRAM: ADAS213
C
C SUBROUTINE:
C
C INPUT : (I*4) IUNIT      = UNIT TO WHICH INPUT FILE IS ALLOCATED
C
C INPUT : (I*4) NDLEV      = MAX. NO. OF TERMS THAT CAN BE READ
C INPUT : (I*4) NDJLEV     = MAX. NO. OF LEVELS THAT CAN BE READ
C INPUT : (I*4) NDPRT      = MAX. NO. OF PARENT STATES
C
C OUTPUT: (C*80) DSNNSP    = INPUT ADF04 FILE NAME
C OUTPUT: (C*80) DSNBD     = ADF23 IONISATION DATA FILE NAME
C OUTPUT: (C*80) DSNNSPO   = OUTPUT ADF04 FILE NAME
C
C OUTPUT: (I*4) NTRM       = NUMBER OF TERMS IN X-REF FILE.
C OUTPUT: (I*4) NPTRM     = NUMBER OF PARENT TERMS IN X-REF FILE.
C OUTPUT: (I*4) NLVL      = NUMBER OF LEVELS IN X-REF FILE.
C OUTPUT: (I*4) NPLVL     = NUMBER OF PARENT LEVELS IN X-REF FILE.
C
C OUTPUT: (I*4) ISTRM()    = SPEC. ION FILE TERM INDEX FROM X-REF
C                          1ST.DIM.: TERM COUNTER IN X-REF FILE
C OUTPUT: (I*4) IGTRM()    = IONIS. FILE TERM INDEX FROM X-REF
C                          1ST.DIM.: TERM COUNTER IN X-REF FILE
C OUTPUT: (I*4) ISPTRM()   = SPEC. ION FILE PRNT. TERM INDEX FROM X-REF
C                          1ST.DIM.: PRNT. TERM COUNTER IN X-REF FILE
C OUTPUT: (I*4) IGPTRM()   = IONIS. FILE PRNT. TERM INDEX FROM X-REF
C                          1ST.DIM.: PRNT. TERM COUNTER IN X-REF FILE
C OUTPUT: (I*4) ISLVL()    = SPEC. ION FILE LEVEL INDEX FROM X-REF
C                          1ST.DIM.: LEVEL COUNTER IN X-REF FILE
C OUTPUT: (I*4) JTREF()    = SP. ION FILE TERM ASSOCIATED WITH LEVEL
C                          FROM X-REF FILE.
C                          1ST.DIM.: LEVEL COUNTER IN X-REF FILE
C OUTPUT: (I*4) ISPLVL()   = SPEC. ION FILE PRNT. LEVEL INDEX FROM X-REF
C                          1ST.DIM.: PRNT. LEVEL COUNTER IN X-REF FILE
C OUTPUT: (I*4) JTPREF()   = SP. ION FILE PRNT. TERM ASSOCIATED WITH
C                          PRNT. LEVEL FROM X-REF FILE.
C                          1ST.DIM.: LEVEL COUNTER IN X-REF FILE

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C OUTPUT: (I*4) ISPTRM() = SPEC. ION FILE PRNT. TERM INDEX FROM X-REF
 C 1ST.DIM.: PRNT. TERM COUNTER IN X-REF FILE
 C OUTPUT: (I*4) IGPTRM() = IONIS. FILE PRNT. TERM INDEX FROM X-REF
 C 1ST.DIM.: PRNT. TERM COUNTER IN X-REF FILE
 C
 C OUTPUT: (R*8) FSLVL() = FRACTIONATION OF TERM RATES AMONG LEVELS
 C 1ST.DIM.: LEVEL COUNTER IN X-REF FILE
 C OUTPUT: (R*8) FSPLVL() = FRACTIONATION OF PRNT. TERM RATES AMONG
 C PRNT. LEVELS
 C 1ST.DIM.: LEVEL COUNTER IN X-REF FILE
 C OUTPUT: (L*4) LSJ = .TRUE. => J-RESOL. INFO. IN X-REF FILE
 C .FALSE.=> NO J-RESOL. IN X-REF FILE
 C OUTPUT: (I*4) IERROR = 0 => X-REF FILE OK
 C 1 => FAULT IN XREF FILE DATASETS
 C 2 => FAULT IN XREF FILE TERM COUNT
 C 3 => FAULT IN XREF FILE LEVEL COUNT
 C
 C (C*18) C18 = GENERAL CHARACTER STRING
 C
 C ROUTINES:

ROUTINE	SOURCE	BRIEF DESCRIPTION
I4UNIT	ADAS	FETCH UNIT NUMBER FOR OUTPUT OF MESSAGES
XXFLNM	ADAS	CONVERT SHORT FILE NAME TO FULL NAME

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C VERSION: 1.1

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C MODIFIED: HUGH SUMMERS

C FIRST VERSION.

CHARACTER*80	DSNBD,	DSNSP,	DSNSPO
INTEGER	IERROR,	IGPTRM(NDPRT)	
INTEGER	IGTRM(NDLEV),		ISLVL(NDJLEV)
INTEGER	ISPLVL(NDPRT),		ISPTRM(NDPRT)
INTEGER	ISTRM(NDLEV),		IUNIT
INTEGER	JTPREF(NDPRT),		JTREF(NDJLEV)
INTEGER	NDJLEV,	NDLEV,	NDPRT, NLVL
INTEGER	NPLVL,	NPTRM,	NTRM
LOGICAL	LSJ		
REAL*8	FSLVL(NDJLEV),		FSPLVL(NDPRT)