

ADAS Subroutine c3datao

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      SUBROUTINE C3DATAO( IUNIT  , IBSEL  ,
&                        NBSEL  , NSTORE ,
&                        IPASS   ,
&                        IONNAM  , QEFREF ,
&                        TEREFF  , DEREFF ,
&                        ZEREF   , ENREF  ,
&                        BMREF   , NENERA ,
&                        NDENSA  , NZEFFA ,
&                        NBMAGA  , NTEMPA ,
&                        ENERA   , QENERA ,
&                        TEMPA   , QTEMPA ,
&                        DENSA   , QDENSA ,
&                        ZEFFA   , QZEFFA ,
&                        BMAGA   , QBMAGA )

C-----
C
C ***** FORTRAN77 SUBROUTINE: C3DATAO *****
C
C *****
C * WARNING - WARNING - WARNING - WARNING - WARNING - WARNING - WARNING*
C *-----*
C * OLD VERSION OF C3DATA - ONLY USED BY SQEF (UNTIL SQEF UPDATED) *
C *****
C
C PURPOSE : READ IN VALUES FROM AN 'IONATOM' DATA SET OPENED BY
C           C3FILE
C
C CALLING PROGRAM: SQEF
C
C SUBROUTINE:
C
C INPUT : (I*4)  IUNIT      = UNIT NUMBER TO READ FROM
C           (OPENED BY C3FILE)
C INPUT : (I*4)  NSTORE     = ARRAY DIMENSION
C INPUT : (I*4)  ISEL       = INDEX NUMBER OF SELECTED BLOCK
C           FROM IONATOM FILE
C INPUT : (I*4)  IPASS      = 0 IF DATA FILE TO BE READ IN AFRESH
C           = 1 IF DATA FILE IS NOT TO BE READ IN AGAIN
C           (IPASS IS SET TO 0 WHEN
C           ISEL IS NOT A VALID INDEX)
C OUTPUT: (I*4)  NBSEL      = NUMBER OF BLOCKS PRESENT
C OUTPUT: (C*80) IONNAM     = NAME OF ION
C
C OUTPUT: (R*8)  QEFREF( )  = REFERENCE VALUE OF RATE COEFFICIENT
C OUTPUT: (R*8)  ENREF( )   =      "      "      "      ENERGY
C OUTPUT: (R*8)  TEREFF( )  =      "      "      "      TEMPERATURE
C OUTPUT: (R*8)  DEREFF( )  =      "      "      "      DENSITY
C OUTPUT: (R*8)  ZEREF( )   =      "      "      "      EFFECTIVE Z
C OUTPUT: (R*8)  BMREF( )   =      "      "      "      MAGNETIC FIELD
C OUTPUT: (I*4)  NENERA( )  = NUMBER OF ENERGIES
C OUTPUT: (I*4)  NTEMPA( )  = NUMBER OF TEMPERATURES
C OUTPUT: (I*4)  NDENSA( )  = NUMBER OF DENSITIES
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C OUTPUT: (I*4) NZEFFA() = NUMBER OF EFFECTIVE Z'S
 C OUTPUT: (I*4) NBMAGA() = NUMBER OF MAGNETIC FIELD VALUES
 C
 C 1ST. DIM: NSTORE
 C (FOR ABOVE ARRAYS)
 C OUTPUT: (R*8) ENERA(,) = ENERGIES
 C OUTPUT: (R*8) QENERA(,) = RATE COEFFICIENTS FOR ENERGY VALUE
 C OUTPUT: (R*8) TEMPA(,) = TEMPERATURES
 C OUTPUT: (R*8) QTEMPA(,) = RATE COEFFICIENTS FOR TEMPERATURES
 C OUTPUT: (R*8) DENSA(,) = DENSITIES
 C OUTPUT: (R*8) QDENSA(,) = RATE COEFFICIENTS FOR DENSITIES
 C OUTPUT: (R*8) ZEFFA(,) = EFFECTIVE Z
 C OUTPUT: (R*8) QZEFFA(,) = RATE COEFFICIENTS FOR EFFECTIVE Z
 C OUTPUT: (R*8) BMAGA(,) = MAGNETIC FIELD
 C OUTPUT: (R*8) QBMAGA(,) = RATE COEFFICIENTS FOR MAGNETIC FIELDS
 C
 C 1ST DIM: NSTORE
 C 2ND DIM: 12 OR 24 DEPENDING ON PARAMETER
 C

C ROUTINES:

ROUTINE	SOURCE	BRIEF DESCRIPTION
I4UNIT	ADAS	FETCHES FILE HANDLE FOR ERROR MESSAGE

C UPDATE: 15/05/95 -Tim Hammond UNIX PORT

C Put under SCCS control

C

C VERSION: 1.2 DATE: 08-11-99

C MODIFIED: RICHARD MARTIN

C CHANGED IONNAM*80(80) TO IONNAM(80)*80

C

CHARACTER*80	IONNAM(80)	
INTEGER	IBSEL, IPASS,	IUNIT
INTEGER	NBMAGA(NSTORE),	NBSEL
INTEGER	NDENSA(NSTORE),	NENERA(NSTORE)
INTEGER	NSTORE, NTEMPA(NSTORE)	
INTEGER	NZEFFA(NSTORE)	
REAL*8	BMAGA(NSTORE,12),	BMREF(NSTORE)
REAL*8	DENSA(NSTORE,24),	DEREF(NSTORE)
REAL*8	ENERA(NSTORE,24),	ENREF(NSTORE)
REAL*8	QBMAGA(NSTORE,12),	QDENSA(NSTORE,24)
REAL*8	QEFREF(NSTORE),	QENERA(NSTORE,24)
REAL*8	QTEMPA(NSTORE,12),	QZEFFA(NSTORE,12)
REAL*8	TEMPA(NSTORE,12),	TEREF(NSTORE)
REAL*8	ZEFFA(NSTORE,12),	ZEREF(NSTORE)