

## ADAS Subroutine cnv404b

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      SUBROUTINE CNV404B(ITYPE , ISWIT ,  
&          NUTMAX , NUDMAX , NUZMAX , NUMMAX ,  
&          MAXT , MAXD ,  
&          IZL , IZH , IZO ,  
&          TEK , DENSA ,  
&          NGRD ,  
&          IST2 , IST5 , IWRITE , DATE ,  
&          DSNIN , OPEN17)
```

C

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C

C \*\*\*\*\* FORTRAN 77 SUBROUTINE BND404B \*\*\*\*\*

C

C VERSION 1.0

C

C PURPOSE:

C

C TO FETCH DATA FROM RESOLVED ADF10 FILES, SPLINE THEM  
C ONTO THE REQUESTED TEMPERATURE/DENSITY GRID, AND  
C WRITE THE RESULT TO ADF11 FILES.

C

C CALLING PROGRAM LH404RR

C

C DATA:

C

C THE SOURCE DATA IS CONTAINED AS MEMBERS OF PARTITIONED  
C DATA SETS AS FOLLOWS:

C

C 8. JETUID.PLT<YR>.DATA

C

C 9. JETUID.PLS<YR>.DATA

C

C WHERE <YR> DENOTES TWO INTEGERS FOR THE YEAR SELECTED.

C

C SUBROUTINE:

C

C INPUT : (I\*4) ITYPE - TYPE OF ADF10 DATA BEING READ (SEE ABOVE)

C

C INPUT : (I\*4) ISWIT - SWITCH FOR INTERPOLATION TYPE

C

C INPUT : (I\*4) NUTMAX - OUTPUT ELEMENT MASTER FILE

C

C MAXIMUM NUMBER OF TEMPERATURES

C

C INPUT : (I\*4) NUDMAX - OUTPUT ELEMENT MASTER FILE

C

C MAXIMUM NUMBER OF DENSITIES

C

C INPUT : (I\*4) NUZMAX - OUTPUT ELEMENT MASTER FILE

C

C MAXIMUM NUMBER OF CHARGE STATES

C

C INPUT : (I\*4) NUMMAX - OUTPUT ELEMENT MASTER FILE

C

C MAXIMUM NUMBER OF METASTABLES

C

C INPUT : (I\*4) MAXT - OUTPUT ELEMENT MASTER FILE

C

C ACTUAL NUMBER OF TEMPERATURES

C

C INPUT : (I\*4) MAXD - OUTPUT ELEMENT MASTER FILE

C

C ACTUAL NUMBER OF DENSITIES

C

C INPUT : (I\*4) IZL - LOWEST ION CHARGE TO READ

C

C INPUT : (I\*4) IZH - HIGHEST ION CHARGE TO READ

C

C INPUT : (I\*4) IZO - NUCLEAR CHARGE TO READ

C

C INPUT : (R\*8) DENSA() - OUTPUT ELEMENT MASTER FILE



```

C
C-----
C AUTHOR:  LORNE D. HORTON
C          ROOM K1/1/58, JET JOINT UNDERTAKING
C
C   DATE:   5TH AUGUST 1996
C-----
C UNIX-IDL PORT:
C
C VERSION: 1.1 DATE: 11-11-96
C MODIFIED: WILLIAM OSBORN (TESSELLA SUPPORT SERVICES PLC)
C - FIRST CONVERTED
C
C-----
C
C VERSION: 1.2 DATE: 20-10-97
C MODIFIED: LORNE HORTON (JET)
C - INCREASED SPACE FOR DIAGNOSTIC PRINTS OF FILE NAMES
C   - ADDED D4OPEN TO SUPPRESS ERROR MESSAGES ON MISSING
C     FILES AND ALLOWED ZERO-FILLING
C
C VERSION: 1.3 DATE: 13-10-99
C MODIFIED: Martin O'Mullane
C - PRB definition has been changed and they are now
C       summed over the parents. This necessitates writing
C       different information on the header line of the
C       adf11 file. Format statement 1207 and write
C       associated with it have been changed.
C
C VERSION : 1.4
C DATE    : 04-01-2007
C MODIFIED: Martin O'Mullane
C       - When converting from ergs to Joules check for zero value
C         before subtracting (it's a log!) 7. In this case set
C         value of element to -74.0.
C-----
C

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CHARACTER*8	DATE			
CHARACTER*80	DSNIN(50,10)			
INTEGER	IST2,	IST5,	ISWIT,	ITYPE
INTEGER	IWRITE,	IZ0,	IZH,	IZL
INTEGER	MAXD,	MAXT,	NGRD(50),	NUDMAX
INTEGER	NUMMAX,	NUTMAX,	NUZMAX	
LOGICAL	OPEN17			
REAL*8	DENSA(NUDMAX),		TEK(NUTMAX)	