


```

C                                     = .FALSE. => 'AOUT()' VALUE FOR CHARGE-
C                                     STATE 'IZ1' EXTRAPOLATED.
C OUTPUT: (L*4)  LDRNG() = .TRUE.  => 'AOUT()' VALUE FOR DENSITY
C                                     INDEX INTERPOLATED.
C                                     = .FALSE. => 'AOUT()' VALUE FOR DENSITY
C                                     INDEX EXTRAPOLATED.
C                                     DIMENSION: DENSITY INDEX
C OUTPUT: (L*4)  LTRNG() = .TRUE.  => 'AOUT()' VALUE FOR TEMPERATURE
C                                     INDEX INTERPOLATED.
C                                     = .FALSE. => 'AOUT()' VALUE FOR TEMPERATURE
C                                     INDEX EXTRAPOLATED.
C                                     DIMENSION: TEMPERATURE INDEX
C
C OUTPUT: (R*8)  AOUT(,) = EXTRAPOLATED/INTERPOLATED DATA FOR
C                                     USER ENTERED TEMPERATURE/DENSITY ARRAY.
C                                     ( STORES LOG10(INTERPOLATED VALUES) )
C                                     1ST DIMENSION: TEMPERATURE
C                                     2ND DIMENSION: DENSITY
C
C      (I*4)  NUDIM   = PARAMETER = MUST BE GREATER THAN OR EQUAL TO
C                                     'NUDMAX' AND 'NUTMAX'
C
C      (I*4)  NDMAX1  = 'NDDEN'
C      (I*4)  NTMAX1  = 'NDTIN'
C      (I*4)  NZMAX1  = 'NDZ1V'
C      (I*4)  NDMAX2  = 'NUDMAX'
C      (I*4)  NTMAX2  = 'NUTMAX'
C      (I*4)  ITD     = GENERAL USE ARRAY SUBSCRIPT INDEX
C      (I*4)  IDD     = GENERAL USE ARRAY SUBSCRIPT INDEX
C
C      (R*8)  ATTY(,) = WORKING SPACE FOR 3-WAY SPLINE ITERPOLATION
C                                     ( STORES LOG10(INTERPOLATED VALUES) )
C                                     1ST DIMENSION: TEMPERATURE
C                                     2ND DIMENSION: DENSITY
C
C PARAMETER (I*4)  DLOGMIN = SETS MINIMUM VALUE OF LOG OF COEFFICIENT
C
C NOTE:
C
C ROUTINES:
C      ROUTINE      SOURCE      BRIEF DESCRIPTION
C      -----
C      XUFLOW
C      DXSPL1      ADAS          1ST PART OF 3-WAY SPLINE OF INPUT DATA
C      DXSPL2      ADAS          2ND PART OF 3-WAY SPLINE OF INPUT DATA
C      DXSPL3      ADAS          3RD PART OF 3-WAY SPLINE OF INPUT DATA
C
C
C AUTHOR:  WILLIAM J. DICKSON      12/12/92
C          (REFER TO DOCUMENTATION FOR  D1SPLN)
C
C UPDATES FROM D1SPLN:
C

```

C 12/12/92 ARRAY BOUNDS FOR ATTY SET EQUAL TO THOSE IN DXSPL1 ETC
C THEREFORE INCLUDE ATTY IN CALL LIST
C 22/02/96 HOUSECLEANING AFTER COPY FOR USE WITH LH404RU

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 VERSION : 1.2

C DATE : 23-02-2006

C MODIFIED: Martin O'Mullane

C - Remove mainframe listing information in columns 72-80.

C

C-----

INTEGER	IDE,	ISWIT,	ITE,	IZ1
INTEGER	IZE,	MAXD,	MAXT,	NDDEN
INTEGER	NDTIN,	NDZ1V,	NUDMAX,	NUTMAX
LOGICAL	LDRNG (NUDMAX),		LSWIT	
LOGICAL	LTRNG (NUTMAX),		LZPNG (1)	
REAL*8	AIPT (NDDEN, NDTIN, NDZ1V),		AOUT (NUTMAX, NUDMAX)	
REAL*8	ATTY (NUTMAX, NUDMAX),		DENSR (NDDEN)	
REAL*8	DUSR (NUDMAX),		EIA (50)	
REAL*8	TR (NDTIN),	TUSR (NUTMAX)		
REAL*8	ZIPT (NDZ1V)			