



```

C          .TRUE.  => SCALED VALUE INTERPOLATED
C          .FALSE. => SCALED VALUE EXTRAPOLATED.
C
C          (R*8)  VL()   = LN(INPUT VALUE/REF. VALUE) FOR PARAM.
C                   DIMENSION: 1
C          (R*8)  QVL()  = LN(INPUT TABLE RATE COEF.) FOR PARAM.
C                   DIMENSION: 1
C          (R*8)  VECL() = LN(TABLE VALUE/REF. VALUE) FOR PARAM.
C                   DIMENSION: MXIN
C          (R*8)  QVECL() = LN(TABLE RATE COEF./REF. RATE COEF.)
C                   DIMENSION: MXIN
C          (R*8)  DY()   = DERIVATIVES AT INPUT KNOTS TO XXSPLN.
C                   DIMENSION: MXIN

```

ROUTINES:

ROUTINE	SOURCE	BRIEF DESCRIPTION
I4UNIT	ADAS	RETURNS UNIT NO. FOR OUTPUT OF MESSAGES.
XXSPLE	ADAS	SPLINE SUBROUTINE (EXTENDED DIAGNOSTICS)
R8FUN1	ADAS	PERFORMS TRANSFORMATION ( X -> X )

NOTES: THE QUANTITIES WHICH ARE SCALED BY THIS ROUTINE ARE : ION DENSITY, ION TEMPERATURE, EFFECTIVE Z AND MAGNETIC FIELD THIS CODE IS TAKEN FROM THE OLDER ADAS CODE 'QEFFH.FOR' BY H.P. SUMMERS

AUTHOR: C.J. WHITEHEAD, PAP, UNIVERSITY OF STRATHCLYDE  
EXT 4205

DATE: 24/11/94

UPDATE: 19/12/94 - HP SUMMERS: ADJUST FORMATTING

UPDATE: 21/04/95 - HP SUMMERS: REORDER TWO-DIMENSIONAL ARRAY INDICES

UPDATE: 03/05/95 - PE BRIDEN : 1) REPLACED CALLS TO SPLINE NAG ROUTINES E01BAF/E02BBF WITH A CALL TO XXSPLE. (REQUIRED SOME RECODING). + CHECK FOR ATTEMPTED EXTRAPOLATION.  
2) MADE CHANGES TO CODE TO MAKE IT ANSI STANDARD FORTRAN 77.  
3) TIDIED UP CODE + ADDED CHECK TO MAKE SURE INTERNAL ARRAYS ARE LARGE ENOUGH.  
4) GENERAL CHANGES TO FORMAT ETC.

UPDATE: 15/05/95 - Tim Hammond: UNIX PORT  
Put under SCCS control

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INTEGER                      IBSEL,                      NA,                      NSTORE

INTEGER  
REAL\*8  
REAL\*8  
REAL\*8

NVALS (NSTORE)  
ATMREF (NSTORE) ,  
QATOM (NA, NSTORE) ,  
RION,                    SCALED

ATOM (NA, NSTORE)  
QEFREF (NSTORE)