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C          2ND DIM: CHARGE STATE INDEX
C          3RD DIM: FIRST METASTABLE INDEX
C          4TH DIM: SECOND METASTABLE INDEX
C INPUT   : (R*8)  XCDA(,,,) = INTERPOLATION OF XCD COEFFICIENT (CM3 S-1)
C          1ST DIM: TEMPERATURE INDEX
C          2ND DIM: CHARGE STATE INDEX
C          3RD DIM: FIRST PARENT METASTABLE INDEX
C          4TH DIM: SECOND PARENT METASTABLE INDEX
C
C INPUT   : (R*8)  DENS()    = ELECTRON DENSITIES FOR MODEL
C INPUT   : (R*8)  DENSH()   = NEUTRAL HYDROGEN DENSITIES FOR MODEL
C
C INPUT   : (I*4)  ITEM      = CURRENT TEMP/DENSITY INDEX
C
C OUTPUT  : (R*8)  A(,)      = RECOMB/IONIS COLL. RAD. MATRIX
C
C          (I*4)  I          = GENERAL INDEX
C          (I*4)  IGRD       = GENERAL INDEX
C          (I*4)  IND        = GENERAL INDEX
C          (I*4)  IND1       = GENERAL INDEX
C          (I*4)  IPRT       = GENERAL INDEX
C          (I*4)  IZ         = IONISATION STAGE COUNTER
C          (I*4)  I          = GENERAL INDEX
C          (I*4)  JGRD       = GENERAL INDEX
C
C
C ROUTINES:
C          ROUTINE      SOURCE      BRIEF DESCRIPTION
C          -----
C
C AUTHOR   : H. P. SUMMERS, JET
C           K1/1/57
C           JET EXT. 4941
C
C DATE    : 27/07/94
C UNIX-IDL PORT:
C
C AUTHOR:  WILLIAM OSBORN (TESSELLA SUPPORT SERVICES PLC)
C
C DATE:    07/06/96
C
C VERSION: 1.1          DATE:07/06/96
C MODIFIED: WILLIAM OSBORN
C          - FIRST VERSION
C
C VERSION: 1.2          DATE:28/03/07
C MODIFIED: ALLAN WHITEFORD
C          - REMOVED VERSIONING INFORMATION FROM COLUMNS 73-80
C
C-----
C          INTEGER      IMDIMD,      IPDIMD,      ITEM,      IZDIMD
C          INTEGER      NMDIM,        NPART (IZDIMD),  NSTAGE

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INTEGER	NTDIM
REAL*8	A (NMDIM, NMDIM)
REAL*8	ACDA (NTDIM, IZDIMD, IPDIMD, IPDIMD)
REAL*8	CCDA (NTDIM, IZDIMD, IPDIMD, IPDIMD)
REAL*8	DENS (NTDIM) , DENS (NTDIM)
REAL*8	QCDA (NTDIM, IZDIMD, IPDIMD, IPDIMD)
REAL*8	SCDA (NTDIM, IZDIMD, IPDIMD, IPDIMD)
REAL*8	XCDA (NTDIM, IZDIMD, IPDIMD, IPDIMD)