**=======================================================================RELABEL**

**RELABEL**

**PROGRAM RELABEL RELABEL**

**=============== RELABEL**

**VERSION 69-1 (APRIL 1969) RELABEL**

**VERSION 73-1 (JUNE 1973) RELABEL**

**VERSION 77-1 (SEPTEMBER 1977) RELABEL**

**VERSION 80-1 (AUGUST 1980) IBM VERSION RELABEL**

**VERSION 83-1 (JANUARY 1983) COMBINED STATEMENT NUMBER SEQUENCE RELABEL**

**AND LINE I.D. INTO ONE PROGRAM. RELABEL**

**VERSION 86-1 (JANUARY 1986) FORTRAN-77/H VERSION RELABEL**

**VERSION 88-1 (JULY 1988) \*OPTION...INTERNALLY DEFINE ALL I/O RELABEL**

**FILE NAMES (SEE, SUBROUTINES FILIO1 RELABEL**

**AND FILIO2 FOR DETAILS). RELABEL**

**\*IMPROVED BASED ON USER COMMENTS. RELABEL**

**VERSION 89-1 (JANUARY 1989)\*PSYCHOANALYZED BY PROGRAM FREUD TO RELABEL**

**INSURE PROGRAM WILL NOT DO ANYTHING RELABEL**

**CRAZY. RELABEL**

**\*UPDATED TO USE NEW PROGRAM CONVERT RELABEL**

**KEYWORDS. RELABEL**

**\*ADDED LIVERMORE CIVIC COMPILER RELABEL**

**CONVENTIONS. RELABEL**

**VERSION 92-1 (JANUARY 1992)\*ADDED FORTRAN SAVE OPTION RELABEL**

**VERSION 94-1 (JANUARY 1994)\*COMPLETE RE-WRITE RELABEL**

**\*OUTPUT MINIMUM NON-BLANK LENGTH FOR RELABEL**

**EACH LINE - NO SEQUENCE NUMBERS. RELABEL**

**\*INCREASED MAXIMUM NUMBER OF LABELS RELABEL**

**PER ROUTINE FROM 1000 TO 50,000 RELABEL**

**\*CAN NOW PROCESS UPPER OR LOWER CASE RELABEL**

**CODING. RELABEL**

**\*SKIP IMBEDDED BLANKS IN KEYWORDS. RELABEL**

**\*ADDED WRITE(XX,XX,ERR=YYY,END=ZZZ) RELABEL**

**\*ADDED OPEN(XX,ERR=YYY,END=ZZZ) RELABEL**

**\*ADDED CLOSE(XX,ERR=YYY,END=ZZZ) RELABEL**

**\*INTEGER INSTEAD OF CHARACTERS IS NO RELABEL**

**LONGER SUPPORTED - ALL CHARACTERS RELABEL**

**MUST BE IDENTIFIED AS CHARACTERS. RELABEL**

**\*VARIABLE FILENAMES TO ALLOW ACCESS RELABEL**

**FILE STRUCTURES RELABEL**

**(WARNING - INPUT PARAMETER FORMAT RELABEL**

**HAS BEEN CHANGED) RELABEL**

**\*CLOSE ALL FILES BEFORE TERMINATING RELABEL**

**(SEE, SUBROUTINE ENDIT) RELABEL**

**VERSION 96-1 (JANUARY 1996) \*COMPLETE RE-WRITE RELABEL**

**\*IMPROVED COMPUTER INDEPENDENCE RELABEL**

**\*ALL DOUBLE PRECISION RELABEL**

**\*ON SCREEN OUTPUT RELABEL**

**\*IMPROVED OUTPUT PRECISION RELABEL**

**\*DEFINED SCRATCH FILE NAMES RELABEL**

**\*INCREASED THE NUMBER OF LABELS RELABEL**

**IN A ROUTINE FOR 5,000 TO 50,000 RELABEL**

**VERSION 99-1 (MARCH 1999) \*GENERAL IMPROVEMENTS BASED ON RELABEL**

**USER FEEDBACK RELABEL**

**VERS. 2000-1 (FEBRUARY 2000)\*UPDATED TO IGNORE ( AND ) IN QUOTES RELABEL**

**\*GENERAL IMPROVEMENTS BASED ON RELABEL**

**USER FEEDBACK RELABEL**

**VERS. 2002-1 (MAY 2002) \*OPTIONAL INPUT PARAMETERS RELABEL**

**\*CORRECTED END=, ERR=, WHEN I/O UNIT RELABEL**

**NUMBER IS DIMENSIONED RELABEL**

**VERS. 2004-1 (MARCH 2004) \*ADDED INCLUDE FOR COMMON RELABEL**

**\*INCREASED THE NUMBER OF LABELS IN RELABEL**

**A ROUTINE FOR 50,000 TO 100,000 RELABEL**

**VERS. 2007-1 (DEC. 2007) \*72 CHARACTER FILE NAMES. RELABEL**

**VERS. 2010-1 (Apr. 2010) \*General update based on user feedbackRELABEL**

**VERS. 2012-1 (Aug. 2012) \*Added CODENAME RELABEL**

**\*32 and 64 bit COMPATIBLE RELABEL**

**\*Added ERROR stop RELABEL**

**VERS. 2015-1 (Jan. 2015) \*Replaced ALL 3 way IF Statements. RELABEL**

**VERS. 2017-1 (May 2017) \*Updated based on user feedback. RELABEL**

**VERS. 2018-1 (Jan. 2018) \*On-line output for ALL ENDERROR RELABEL**

**VERS. 2019-1 (June 2019) \*Identical to 2018-1 RELABEL**

**VERS. 2020-1 (Feb. 2020) \*Identical to 2018-1 RELABEL**

**VERS. 2021-1 (Jan. 2021) \*Update fot FORTRAN 2018 RELABEL**

**RELABEL**

**OWNED, MAINTAINED AND DISTRIBUTED BY RELABEL**

**------------------------------------ RELABEL**

**THE NUCLEAR DATA SECTION RELABEL**

**INTERNATIONAL ATOMIC ENERGY AGENCY RELABEL**

**P.O. BOX 100 RELABEL**

**A-1400, VIENNA, AUSTRIA RELABEL**

**EUROPE RELABEL**

**RELABEL**

**ORIGINALLY WRITTEN BY RELABEL**

**------------------------------------ RELABEL**

**Dermott E. Cullen RELABEL**

**RELABEL**

**PRESENT CONTACT INFORMATION RELABEL**

**--------------------------- RELABEL**

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**RELABEL**

**PURPOSE RELABEL**

**------- RELABEL**

**THIS PROGRAM IS DESIGNED TO RE-LABEL A FORTRAN PROGRAM SO THAT RELABEL**

**STATEMENT LABELS ARE IN INCREASING ORDER IN INCREMENTS OF 10 RELABEL**

**WITHIN EACH ROUTINE. RELABEL**

**RELABEL**

**THE FOLLOWING TYPES OF FORTRAN STATEMENTS ARE CONSIDERED, RELABEL**

**RELABEL**

**GO TO NN RELABEL**

**GO TO (NN,MM,.....,JJ,KK),LL (MULTI LINE O.K.) RELABEL**

**DO NN RELABEL**

**IF(......) NN,MM,...JJ,KK RELABEL**

**IF(......) GO TO NN RELABEL**

**IF(......) GO TO (NN,MM,.....,JJ,KK),LL (MULTI LINE O.K.) RELABEL**

**IF(......) READ(.....,END=NN,ERR=MM) RELABEL**

**IF(......) WRITE(.....,END=NN,ERR=MM) RELABEL**

**READ(......,END=NN,ERR=MM) RELABEL**

**OPEN(......,END=NN,ERR=MM) RELABEL**

**RELABEL**

**GO TO STATEMENTS MAY APPEAR IN THE FORM 'GO TO' OR 'GOTO'. IF RELABEL**

**THERE IS ROOM ON THE LINE 'GOTO' WILL BE CONVERTED TO 'GO TO'. RELABEL**

**WHETHER OR NOT 'GOTO' IS CONVERTED TO 'GO TO' IT WILL BE TREATED RELABEL**

**AS IDENTICAL TO 'GO TO' FOR SUBSEQUENT PROCESSING AND RELACEMENT RELABEL**

**OF STATEMENT NUMBERS. RELABEL**

**RELABEL**

**ALL OTHER STATEMENT TYPES ARE NOT CHANGED. IN PARTICULAR ALL I/O RELABEL**

**STATEMENTS AND ASSOCIATED FORMAT STATEMENTS ARE NOT CONVERTED. RELABEL**

**RELABEL**

**WARNING RELABEL**

**------- RELABEL**

**THIS PROGRAM IS ONLY DESIGNED TO MAINTAIN ENDF/B PRE-PROCESSING RELABEL**

**PROGRAMS, WHICH ONLY USE A RESTRICTED SET OF FORTRAN STATEMENT RELABEL**

**TYPES THAT CAN BE USED ON A VARIETY OF DIFFERENT TYPES OF RELABEL**

**COMPUTERS. THIS PROGRAM IS NOT DESIGNED TO HANDLE ALL POSSIBLE RELABEL**

**TYPES OF FORTRAN STATEMENTS. RELABEL**

**RELABEL**

**THE FORTRAN STATEMENTS DESCRIBED ABOVE AND TREATED BY THIS PROGRAMRELABEL**

**DO NOT INCLUDE ALL POSSIBLE FORTRAN STATEMENTS. AS SUCH THIS RELABEL**

**PROGRAM IS NOT COMPLETELY GENERAL AND SHOULD ONLY BE USED WITH RELABEL**

**PROGRAMS THAT ONLY USE THE FORTRAN STATEMENTS DESCRIBED ABOVE. RELABEL**

**RELABEL**

**FAILURE TO FOLLOW THESE INSTRUCTIONS CAN LEAD TO ERROR IN PROGRAMSRELABEL**

**RELABEL**

**OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2) RELABEL**

**---------------------------------------------------------------- RELABEL**

**UNIT FILE NAME DESCRIPTION RELABEL**

**---- ---------- ----------- RELABEL**

**2 RELABEL.INP INPUT PARAMETERS RELABEL**

**3 RELABEL.LST OUTPUT REPORT RELABEL**

**10 RELABEL.IN PROGRAM TO READ RELABEL**

**11 RELABEL.OUT PROGRAM TO WRITE RELABEL**

**12 (SCRATCH) RELABEL**

**RELABEL**

**INPUT CARDS RELABEL**

**----------- RELABEL**

**LINE COLUMNS DEFINITION RELABEL**

**---- ------- ---------- RELABEL**

**1 1-72 INPUT PROGRAM FILENAME RELABEL**

**(STANDARD OPTION = RELABEL.IN) RELABEL**

**2 1-72 OUTPUT PROGRAM FILENAME RELABEL**

**(STANDARD OPTION = RELABEL.OUT) RELABEL**

**RELABEL**

**LEAVE THE DEFINITION OF THE FILENAMES BLANK - THE PROGRAM WILL RELABEL**

**THEN USE STANDARD FILENAMES. RELABEL**

**RELABEL**

**EXAMPLE INPUT NO. 1 RELABEL**

**------------------- RELABEL**

**TO READ \PREPRO94\RECENT\RECENT.FOR AND RELABEL**

**WRITE \PREPRO94\RECENT\RECENT.NEW THE FOLLOWING 2 INPUT LINES RELABEL**

**ARE REQUIRED, RELABEL**

**RELABEL**

**\PREPRO94\RECENT\RECENT.FOR RELABEL**

**RELABEL**

**EXAMPLE INPUT NO. 2 RELABEL**

**------------------- RELABEL**

**TO READ RELABEL.IN AND WRITE RELABEL.OUT THE FOLOWING 2 INPUT RELABEL**

**LINES ARE REQUIRED, RELABEL**

**RELABEL**

**RELABEL.IN RELABEL**

**RELABEL.OUT RELABEL**

**RELABEL**

**EXAMPLE INPUT NO. 3 RELABEL**

**------------------- RELABEL**

**TO READ RELABEL.IN AND WRITE RELABEL.OUT, SINCE THESE ARE THE RELABEL**

**STANDARD OPTIONS THE 2 INPUT LINES CAN BE COMPLETELY BLANK. RELABEL**

**RELABEL**

**=======================================================================RELABEL**