PROGRA						Mer
	M	MERGE	R			Mer
	==		=			Mer
VERSIO	N	80-1	(JANUAI	RY 1980)		Mer
VERSIO	N	80-2	(DECEME	BER 1980))	Mer
VERSIO	N	82-1	(JANUAI	RY 1982)		Mer
VERSIO	N	83-1	(JANUAI	RY 1983)	*NEW, MORE COMPATIBLE I/O UNIT NUMBERS.	Mer
VERSIO	N	85-1	(AUGUS	r 1985)	*FORTRAN-77/H VERSION	Mer
VERSIO	N	86-1	(JANUAI	RY 1986)	*ENDF/B-VI FORMATS	Mer
VERSIO	N	88-1	(JULY 1	L988)	*OPTIONINTERNALLY DEFINE ALL I/O	Mer
					FILE NAMES (SEE, SUBROUTINES FILIO1	Mer
					AND FILIO2 FOR DETAILS).	Mer
					*IMPROVED BASED ON USER COMMENTS.	Mer
VERSIO	N	89-1	(JANUAI	RY 1989)	*PSYCHOANALYZED BY PROGRAM FREUD TO	Mer
					INSURE PROGRAM WILL NOT DO ANYTHING	Mer
					CRAZY.	Mer
					*UPDATED TO USE NEW PROGRAM CONVERT	Mer
					KEYWORDS.	Mer
					*ADDED LIVERMORE CIVIC COMPILER	Mer
VERSTO	N	92-1	(.TANITIAT.)	QY 19921	CONVENTIONS. *UPDATED BASED ON USER COMMENTS	Mer
	-1	J_ 1	'OTHORI	1992)	*ADDED FORTRAN SAVE OPTION	Mer
VERSTO	N	92-2	(JULY 1	1992)	*ALLOW UP TO 99 ENDF/B DATA FILES.	Mer
			,0011	-55-1	(TO ALLOW MANAGEMENT OF THE ENTIRE	Mer
					ENDF/B SYSTEM).	Mer
VERSIO	N	94-1	(JANUAI	RY 1994)	*VARIABLE ENDF/B DATA FILENAMES	Mer
			•		TO ALLOW ACCESS TO FILE STRUCTURES	Mer
					(WARNING - INPUT PARAMETER FORMAT	Mer
					HAS BEEN CHANGED)	Mer
					*ONLY SPECIFY FILENAMES - NO UNIT	Mer
					NUMBERS ON INPUT (WARNING - INPUT	Mer
					PARAMETERS FORMAT HAS BEEN CHANGED)	Mer
					*CLOSE ALL FILES BEFORE TERMINATING	Mer
					(SEE, SUBROUTINE ENDIT)	Mer
					*REQUEST LOG DELETED	Mer
VERSIO	N	96-1	(JANUAI	RY 1996)	*COMPLETE RE-WRITE	Mer
					+TMDDOUGD COMDUMED TNDEDENDENCE	
					*IMPROVED COMPUTER INDEPENDENCE	Mer
					*ALL DOUBLE PRECISION	Mer
					*ALL DOUBLE PRECISION *ON SCREEN OUTPUT	Mer Mer
					*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O	Mer Mer
vedeto	a.T	00_1	(MADCU	10001	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION	Mer Mer Mer
VERS IO	N	99-1	(MARCH	1999)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON	Mer Mer Mer Mer
					*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK	Mer Mer Mer Mer Mer
					*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK) *GENERAL IMPROVEMENTS BASED ON	Mer Mer Mer Mer Mer Mer
VERS.	20	00-1	(FEBRU	ARY 2000	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK) *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK	Mer Mer Mer Mer Mer Mer Mer
VERS.	20 20	00-1 02-1		ARY 2000	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK) *GENERAL IMPROVEMENTS BASED ON	Mer Mer Mer Mer Mer Mer Mer
VERS.	20 20	00-1 02-1	(FEBRUA	ARY 2000	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON	Mer Mer Mer Mer Mer Mer Mer Mer Mer
VERS. VERS. VERS.	20 20 20	00-1 02-1 04-1	(FEBRUA	ARY 2000 002) 2004)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK) *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS	Mer Mer Mer Mer Mer Mer Mer
VERS. VERS. VERS.	20 20 20 20	00-1 02-1 04-1 07-1	(FEBRUA (MAY 20 (MARCH	ARY 2000 002) 2004) 2007)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED	Mer Mer Mer Mer Mer Mer Mer Mer Mer
VERS. VERS. VERS.	20 20 20 20	00-1 02-1 04-1 07-1	(FEBRUA (MAY 20 (MARCH	ARY 2000 002) 2004) 2007)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII.	Mer Mer Mer Mer Mer Mer Mer Mer Mer Mer
VERS. VERS. VERS. VERS.	20 20 20 20	00-1 02-1 04-1 07-1 07-2	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE	ARY 2000 002) 2004) 2007)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK)) *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES.	Mer Mer Mer Mer Mer Mer Mer Mer Mer Mer
VERS. VERS. VERS. VERS.	20 20 20 20 20	00-1 02-1 04-1 07-1 07-2	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr.	ARY 2000 2002) 2004) 2007) 2007)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK) *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES.	Mer Mer Mer Mer Mer Mer Mer Mer Mer Mer
VERS. VERS. VERS. VERS.	20 20 20 20 20	00-1 02-1 04-1 07-1 07-2	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr.	ARY 2000 002) 2004) 2007) 2007)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OFTIONAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback	Mer Mer Mer Mer Mer Mer Mer Mer Mer Mer
VERS. VERS. VERS. VERS.	20 20 20 20 20	00-1 02-1 04-1 07-1 07-2	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr.	ARY 2000 002) 2004) 2007) 2007)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *O **EDBACK *OPTIONAL IMPROVEMENTS BASED ON USER FEEDBACK *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME	Mer Mer Mer Mer Mer Mer Mer Mer Mer Mer
VERS. VERS. VERS. VERS. VERS.	20 20 20 20 20 20 20	00-1 02-1 04-1 07-1 07-2 10-1 12-1	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug.	ARY 2000 002) 2004) 2007) 2007) 2010) 2012)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements.	Mer Mer Mer Mer Mer Mer Mer Mer Mer Mer
VERS. VERS. VERS. VERS. VERS.	20 20 20 20 20 20 20	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1	(FEBRUA (MAY 2) (MARCH (JAN. (JUNE (Apr. (Aug.	ARY 2000 2004) 2007) 2007) 2010) 2012) 2015) 2017)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck.	Mer
VERS. VERS. VERS. VERS. VERS.	20 20 20 20 20 20 20	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug.	ARY 2000 2004) 2007) 2007) 2010) 2012) 2015) 2017)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck.	Mer
VERS. VERS. VERS. VERS. VERS. VERS. VERS.	20 20 20 20 20 20 20 20 20	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1 18-1	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug. (Jan. (May (Jan.	2004) 2004) 2007) 2007) 2010) 2012) 2015) 2017) 2018)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck.	Mer
VERS. VERS. VERS. VERS. VERS. VERS. VERS. OWNED,	20 20 20 20 20 20 20 20 20	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1 18-1 AINTA	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug. (Jan. (May (Jan.	2004) 2004) 2007) 2010) 2012) 2015) 2017) 2018)	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK () *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck. *Added on-line output for ALL ENDERROR	Mer
VERS. VERS. VERS. VERS. VERS. VERS. OWERS.	20 20 20 20 20 20 20 20 20	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1 18-1 AINTA	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug. (Jan. (May (Jan.	2004) 2004) 2007) 2010) 2012) 2015) 2017) 2018) ND DISTR	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK () *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck. *Added on-line output for ALL ENDERROR	Mer
VERS. VERS. VERS. VERS. VERS. VERS. OWNED,	20 20 20 20 20 20 20 20	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1 18-1 AINTA	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug. (Jan. (May (Jan. INED AN	2004) 2004) 2007) 2010) 2012) 2015) 2017) 2018) ND DISTR	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK () *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck. *Added on-line output for ALL ENDERROR	Mer
VERS. VERS. VERS. VERS. VERS. VERS. OWNED,	20 20 20 20 20 20 20 20 20	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1 18-1 AINTA EAR D	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug. (Jan. (May (Jan. INED AN	2004) 2004) 2007) 2010) 2012) 2015) 2017) 2018) ND DISTR	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck. *Added on-line output for ALL ENDERROR	Mer
VERS. VERS. VERS. VERS. VERS. VERS. OWNED, THE NU INTERN P.O. B	20 20 20 20 20 20 20 20 20 EAT	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1 18-1 AINTA EAR D IONAL 100	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug. (Jan. (May (Jan. INED AN	ARY 2000 2004) 2007) 2010) 2012) 2015) 2017) 2018) ND DISTR CTION C ENERGY	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck. *Added on-line output for ALL ENDERROR	Mer
VERS. VERS. VERS. VERS. VERS. VERS. OWNED, THE NU INTERN P.O. B A-1400	20 20 20 20 20 20 20 20 M	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1 18-1 AINTA EAR D IONAL 100	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug. (Jan. (May (Jan. INED AN	ARY 2000 2004) 2007) 2010) 2012) 2015) 2017) 2018) ND DISTR CTION C ENERGY	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck. *Added on-line output for ALL ENDERROR	Mer
VERS. VERS. VERS. VERS. VERS. VERS. VERS. THE NUITNTENN P.O. B A-1400 EUROPE	20 20 20 20 20 20 20 20 M CL	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1 18-1 AINTA EAR D IONAL 100 VIENN	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug. (Jan. (May (Jan. INED AN	2004) 2004) 2007) 2007) 2010) 2012) 2015) 2017) 2018) ND DISTR CTION C ENERGY	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck. *Added on-line output for ALL ENDERROR	Mer
VERS. VERS. VERS. VERS. VERS. VERS. VERS. THE NU INTERN P.O. B A-1400 EUROPE ORIGIN	20 20 20 20 20 20 20 M CL AT	00-1 02-1 04-1 07-1 07-2 10-1 12-1 15-1 17-1 18-1 AINTA EAR D IONAL 100 VIENN	(FEBRUA (MAY 20 (MARCH (JAN. (JUNE (Apr. (Aug. (Jan. (May (Jan. INED AN	2004) 2004) 2007) 2007) 2010) 2012) 2015) 2017) 2018) ND DISTR CTION C ENERGY	*ALL DOUBLE PRECISION *ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O *IMPROVED OUTPUT PRECISION *GENERAL IMPROVEMENTS BASED ON USER FEEDBACK *OPTIONAL INPUT PARAMETERS *ADDED INCLUDE TO DEFINE COMMON *ADDED TEND LINE IF NO DATA RETRIEVED *CHECKED AGAINST ALL ENDF/B-VII. *UP, TO 1,000 ENDF/B FILES. *72 CHARACTER FILE NAMES. *General update based on user feedback *Added CODENAME *32 and 64 bit Compatible *Added ERROR stop *Replaced ALL 3 way IF Statements. *Updated based on user feedbck. *Added on-line output for ALL ENDERROR	Mer

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Merger PRESENT CONTACT INFORMATION Merger Merger Dermott E. Cullen Merger 1466 Hudson Way Merger Livermore, CA 94550 Merger TT S A Merger Telephone 925-443-1911 Merger E. Mail RedCullen1@Comcast.net Merger Website RedCullen1.net/HOMEPAGE.NEW Merger AUTHORS MESSAGE Merger Merger THE COMMENTS BELOW SHOULD BE CONSIDERED THE LATEST DOCUMENTATION Merger FOR THIS PROGRAM INCLUDING ALL RECENT IMPROVEMENTS. PLEASE READ Merger ALL OF THESE COMMENTS BEFORE IMPLEMENTATION, PARTICULARLY THE Merger COMMENTS CONCERNING MACHINE DEPENDENT CODING. Merger AT THE PRESENT TIME WE ARE ATTEMPTING TO DEVELOP A SET OF COMPUTER Merger INDEPENDENT PROGRAMS THAT CAN EASILY BE IMPLEMENTED ON ANY ONE Merger OF A WIDE VARIETY OF COMPUTERS. IN ORDER TO ASSIST IN THIS PROJECT Merger IT WOULD BE APPECIATED IF YOU WOULD NOTIFY THE AUTHOR OF ANY Merger COMPILER DIAGNOSTICS, OPERATING PROBLEMS OR SUGGESTIONS ON HOW TO Merger IMPROVE THIS PROGRAM. HOPEFULLY, IN THIS WAY FUTURE VERSIONS OF THIS PROGRAM WILL BE COMPLETELY COMPATIBLE FOR USE ON YOUR Merger COMPUTER. Merger Merger PURPOSE Merger Merger THIS PROGRAM IS DESIGNED TO SELECTIVELY RETRIEVE DATA OFF OF FROM Merger 1 TO 10 ENDF/B DATA TAPES AND TO MERGE THE SELECTED DATA INTO A SINGLE MAT/MF/MT ORDERED FINAL OUTPUT FILE. Merger Merger IN THE DISCUSSION THAT FOLLOWS FOR SIMPLICITY THE ENDF/B Merger TERMINOLOGY---ENDF/B TAPE---WILL BE USED. IN FACT THE ACTUAL Merger MEDIUM USED MAY BE TAPE, CARD, DISK OR ANY OTHER MEDIUM. Merger Merger ENDF/B FORMAT Merger THIS PROGRAM ONLY USES THE ENDF/B BCD OR CARD IMAGE FORMAT (AS Merger OPPOSED TO THE BINARY FORMAT) AND CAN HANDLE DATA IN ANY VERSION Merger OF THE ENDF/B FORMAT (I.E., ENDF/B-I, II, III, IV OR V FORMAT). Merger Merger THE ONLY NUMERICAL DATA THAT THIS PROGRAM READS IS THE ZA FROM THE Merger FIRST CARD OF EACH SECTION AND THE MAT/MF/MT FROM EACH CARD. SEQUENCE NUMBERS ARE IGNORED ON INPUT AND ALL OTHER FIELDS ARE Merger READ AS HOLLERITH. AS SUCH THIS PROGRAM NEED NOT DISTINGUISH Merger BETWEEN DIFFERENT VERSIONS OF THE ENDF/B FORMAT. Merger Merger IT IS ASSUMED THAT THE DATA IS CORRECTLY CODED IN THE ENDF/B Merger FORMAT AND NO ERROR CHECKING IS PERFORMED. IN PARTICULAR IT IS Merger ASSUMED THAT THE MAT, MF AND MT ON EACH CARD IS CORRECT. SEQUENCE Merger NUMBERS (COLUMNS 76-80) ARE IGNORED ON INPUT, BUT WILL BE Merger CORRECTLY OUTPUT ON ALL CARDS. Merger Merger SECTION SIZE Merger Merger SINCE THIS PROGRAM ONLY READS THE DATA ONE CARD AT A TIME THERE Merger IS NO LIMIT TO THE SIZE OF ANY GIVEN SECTION, E.G. THE TOTAL Merger CROSS SECTION MAY BE DESCRIBED BY 200,000 DATA POINTS. Merger Merger SELECTION OF DATA Merger Merger THE USER MAY CHOOSE TO MERGE ALL DATA OR THE USER MAY SPECIFY Merger THAT ONLY CERTAIN DATA SHOULD BE SELECTED. THE DATA TO BE Merger SELECTED IS DEFINED BY SPECIFYING UP TO 100 MAT/MF/MT OR Merger ZA/MF/MT RANGES. EACH RANGE IS DEFINED BY LOWER AND UPPER LIMITS Merger OF MAT/MF/MT OR ZA/MF/MT. Merger

REQUEST LIMITS

Merger

Merger

Merger

IN ORDER TO SIMPLIFY THE INPUT OF SELECTION REQUESTS THE FOLLOWING Merger CONVENTIONS HAVE BEEN INTRODUCED IN ORDER TO DEFINE THE UPPER LIMITS OF REQUESTS IF THEY ARE NOT DEFINED BY INPUT (I.E., IF THEY Merger ARE ZERO).

- (1) MAT OR ZA IF THE UPPER LIMIT IS ZERO IT IS SET EQUAL TO THE Merger LOWER LIMIT.
- (2) MF OR MT IF THE UPPER LIMIT IS ZERO IT IS SET EQUAL TO THE MAXIMUM POSSIBLE VALUE, 99 OR 999 RESPECTIVELY.

WITH THESE CONVENTIONS AN ENTIRE EVALUATION MAY BE SELECTED BY MERELY SPECIFYING THE LOWER LIMIT OF MAT OR ZA. THE UPPER MAT OR ZA LIMIT WILL BE SET EQUAL TO THE LOWER LIMIT, THE LOWER LIMITS OF Merger MF/MT WILL BE 0/0 AND THE UPPER LIMITS OF MF/MT WILL BE SET TO 99/999. THIS WILL CAUSE ALL SECTIONS OF A SINGLE EVALUATION TO BE SELECTED.

SATISFYING SELECTION CRITERIA -----

IN ORDER FOR A SECTION TO MEET THE SELECTION CRITERIA SPECIFIED BY ONE OF THE RETRIEVAL REQUESTS, EACH OF THE THREE FIELDS (MAT/MF/MT OR ZA/MF/MT) MUST INDIVIDUALLY SATISFY THE CORRESPONDING Merger LIMITS OF THE REQUEST. IT IS NOT SUFFICIENT THAT THE MAT OF A SECTION LIE BETWEEN THE MINIMUM AND MAXIMUM MATS OF A REQUEST. THE Merger MF AND MT WILL ALSO BE INDIVIDUALLY COMPARED TO THE MF AND MT LIMITS OF THE REQUEST. FOR EXAMPLE, A SECTION WITH $\mathtt{MAT}/\mathtt{MF}/\mathtt{MT}=$ 2500/3/2 DOES NOT SATISFY A REQUEST THAT SPECIFIES A REQUEST USING Merger THE RANGE 2000/3/1 THROUGH 3000/3/1. THIS REQUEST SPECIFIES ALL MATERIALS WITH MAT BETWEEN 2000 AND 3000, BUT ONLY THOSE SECTIONS WITH MF/MT=3/1. SIMILARLY A REQUEST FOR 2000/3/1 THROUGH 3000/99/ 999 WILL NOT SELECT ANY SECTIONS WITH MF=1 OR 2, SINCE THE REQUEST SPECIFIES ALL MATERIALS WITH MAT BETWEEN 2000 AND 3000, BUT ONLY THOSE SECTIONS WITH MF= 3, OR MORE.

DUPLICATE SECTIONS

IF TWO OR MORE SECTIONS WITH THE SAME MAT/MF/MT ARE FOUND EITHER ON THE SAME OR DIFFERENT TAPES, THE SECTION FROM THE TAPE DEFINED EARLIEST IN THE INPUT CARDS WILL BE COPIED TO THE FINAL TAPE AND ALL OTHER SECTIONS WITH THE SAME MAT/MF/MT WILL BE SKIPPED. THE OUTPUT REPORT WILL INDICATE WHICH SECTIONS WERE COPIED FROM WHICH TAPES, AS WELL AS WHICH SECTIONS ARE DUPLICATE AND WERE SKIPPED.

REACTION INDEX

THIS PROGRAM DOES NOT UPDATE THE REACTION INDEX IN MF=1, MT=451. FOR EACH MATERIAL THE PROGRAM WILL FOLLOW THE CONVENTIONS DEFINED ABOVE AND ONLY COPY ONE SECTION MF=1, MT=451 AND SKIP ALL OTHERS (IF MORE THAN ONE). THIS CONVENTION HAS BEEN ADOPTED BECAUSE MOST USERS DO NOT REQUIRE A CORRECT REACTION INDEX FOR THERE APPLICATIONS AND IT WAS NOT CONSIDERED WORTHWHILE TO INCLUDE Merger THE OVERHEAD OF CONSTRUCTING A CORRECT REACTION INDEX IN THIS PROGRAM. HOWEVER, IF YOU REQUIRE A REACTION INDEX FOR YOUR APPLICATION AFTER RUNNING THIS PROGRAM YOU MAY USE PROGRAM DICTIN TO CREATE ONE.

RETRIEVAL STATISTICS

THERE WILL ALWAYS BE AN OUTPUT REPORT LISTING INDICATING WHICH SECTIONS WHERE SELECTED, WHICH DUPLICATE SECTIONS WERE SKIPPED, WHICH TAPE THE SECTION WAS ON, WHICH REQUEST (MAT/MF/MT OR ZA/MF/MT RANGE) CAUSED THE SECTION TO BE SELECTED AND HOW MANY CARDS WERE IN THE SECTION. IN ADDITION THE USER MAY OPTIONALLY OBTAIN A FILE CONTAINING THE SAME INFORMATION. THIS FILE MAY BE COMBINED WITH OTHER SIMILAR FILES OUTPUT BY THIS PROGRAM IN ORDER TO ACCUMULATE RETRIEVAL STATISTICS OVER A PERIOD OF TIME. IF SPECIFIED THIS FILE WILL CONTAIN THE FOLLOWING INFORMATION IN 617 FORMAT.

- (1) ZA
- (2) MAT

Merger Merger

Merger

Merger

Merger Merger

Merger

Merger

Merger

Merger Merger

Merger

Merger

Merger

Merger

Merger

Merger

Merger

Merger

(4) M' (5) N	(3) MF (4) MT (5) NUMBER OF CARDS IN SECTION (6) REQUEST NUMBER THAT CAUSED SECTION TO BE SELECTED							
INPUT	r FILES							
	DESCRIPTI	ION		Merger Merger				
	2 INPUT CARDS (BCD - 80 CHARACTERS/RECORD)							
VARY FROM 1 TO 99 ENDF/B DATA FILES (BCD - 80 CHARACTERS/RECORD) OUTPUT FILES								
	DESCRIPTI	ION		Merger Merger				
				Merger				
3 10	OUTPUT REPORT LISTING (BCD - 120 CHARACTERS/RECORD) MERGED ENDF/B DATA (BCD - 80 CHARACTERS/RECORD)							
OPTIO	NAL STANDA	ARD FILE 1	NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)	Merger Merger				
				Merger				
UNIT	FILE NAME		IPTION	Merger				
			PARAMETERS	Merger Merger				
3	MERGER.LS			Merger				
			EVED ENDF/B DATA	Merger				
12 13	ENDFB.IN1		B DATA TO READFILENAMES WILL BE DEFINED E ORDER ENDFB.IN1, ENDFB.IN2,ENDFB.I99	Merger Merger				
	ENDFB.IN3		SPONDING TO THE FIRST, SECOND,99-TH	Merger				
15	ENDFB.IN4	ENDF/I	B DATA FILE TO READ.	Merger				
	ENDFB.IN5			Merger				
17 18	ENDFB.IN6			Merger Merger				
10		•		Merger				
				Merger				
110	ENDFB.199	9		Merger				
TMDII	r CADDC			Merger				
	r cards			Merger Merger				
CARD	COLUMNS	FORMAT	DESCRIPTION	Merger				
				Merger				
1	1-72	A72	FILENAME FOR MERGED OUTPUT. (LEAVE BLANK FOR STANDARD = ENDFB.OUT)	Merger Merger				
2	1-66	16A4,A2	·	Merger				
		,	IF BLANK - LABEL FROM FIRST FILE READ WILL					
			BE OUTPUT	Merger				
	67-70	14	MERGED FILE ENDF/B NUMBER IF ZERO - NUMBER OF FIRST FILE READ WILL	Merger Merger				
			BE OUTPUT.	Merger				
	71-72	12	RETRIEVAL CRITERIA	Merger				
			= 0 - MAT/MF/MT RANGES	Merger				
3-N	1-72	A72	= 1 - ZA/MF/MT RANGES FILENAME FOR FILE TO RETRIEVE DATA FROM	Merger Merger				
J 14	- /-	A/Z	(LEAVE BLANK FOR STANDARDENDFB.IN1,ETC.)	_				
			TERMINATE LIST OF FILES WITH A LINE THAT	Merger				
		.	SAYS END OR end	Merger				
VARY	1- 6 7- 8	16 12	LOWER PRIMARY LIMIT (MAT OR ZA) LOWER MF LIMIT	Merger Merger				
	9-11	13	LOWER MT LIMIT	Merger				
	12-17	16	UPPER PRIMARY LIMIT (MAT OR ZA)	Merger				
	18-19	I2	UPPER MF LIMIT	Merger				
	20-22	13	UPPER MT LIMIT RANGES OF MAT/MF/MT OR ZA/MF/MT TO BE	Merger Merger				
			RETRIEVED ARE SPECIFIED BY DEFINING	Merger				
			ONE RANGE (LOWER AND UPPER LIMITS) PER	Merger				
			CARD. THE USER MAY SPECIFY 0 TO 100	Merger				
			RANGES AND THE LIST OF REQUEST RANGES IS TERMINATED BY A BLANK CARD. IF	Merger Merger				
			THE FIRST CARD IS BLANK (0 REQUESTS)	Merger				
			ALL DATA WILL BE RETRIEVED. IF THE UPPER	Merger				
			PRIMARY CRITERIA (MAT OR ZA) IS LESS THAN	Merger				

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THE LOWER PRIMARY CRITERIA, THE UPPER
                                                                      Merger
                         PRIMARY CRITERIA WILL BE SET EOUAL TO
                                                                      Merger
                         THE LOWER PRIMARY CRITERIA. IF THE UPPER
                                                                      Merger
                         MF OR MT LIMIT IS ZERO, OR BLANK, IT
                                                                      Merger
                         WILL BE SET TO THE MAXIMUM POSSIBLE
                                                                      Merger
                         VALUE, I.E. MF=99 OR MT=999 (SEE
                                                                      Merger
                         EXAMPLE INPUT).
                                                                      Merger
                                                                      Merger
 EXAMPLE INPUT NO. 1
                                                                      Merger
                                                                      Merger
 MERGE ENDF/B DATA ONTO UNIT 10 FROM UNITS 11, 12, 13 AND 14.
                                                                      Merger
 RETRIEVE DATA BY MAT NUMBER. RETRIEVE MATS 1103, 1106, ALL MATS
                                                                      Merger
 BETWEEN 1204 AND 1215, MF=1, 3, 4 AND 5 OF MAT 1219 AND MF=3,
                                                                      Merger
MT=1 OF MAT 1304. USE STANDARD FILENAMES.
                                                                      Merger
                                                                      Merger
 THE FOLLOWING 13 INPUT CARDS ARE REQUIRED.
                                                                      Merger
                                                                      Merger
                                                                      Merger
EXAMPLE FILE LABEL FOR MERGER
                                                                  0 0 Merger
ENDFB.IN1
                                                                      Merger
ENDER IN2
                                                                      Merger
ENDFB.IN3
                                                                      Merger
ENDFB.IN4
                                                                      Merger
END
  1103
                             4317 (UPPER LIMIT SET TO 1103/99/999) Merger
                             4317 (UPPER LIMIT SET TO 1106/99/999) Merger
4317 (UPPER LIMIT SET TO 1215/99/999) Merger
  1106
  1204
             1215
                             4317 (UPPER LIMIT SET TO 1219/ 1/999) Merger
  1219 1
             1219 1
             1219 5
                            4317 (UPPER LIMIT SET TO 1219/ 5/999) Merger
  1219 3
                           4317 (UPPER LIMIT COMPLETELY DEFINED) Merger
  1304 3 1 1304 3 1
                                    (BLANK CARD TERMINATES REQUESTS) Merger
                                                                      Merger
 EXAMPLE INPUT NO. 2
                                                                      Merger
                                                                      Merger
 THE SAME AS EXAMPLE 1, EXCEPT SPECIFY FILENAMES
                                                                      Merger
                                                                      Merger
\ENDFB6\MERGED.LIB
                                                                      Merger
EXAMPLE FILE LABEL FOR MERGER
                                                                  0 0 Merger
ENDFB6.PART1
                                                                      Merger
ENDFB6.PART2
                                                                      Merger
ENDFB6.PART3
                                                                      Merger
ENDFB6.PART4
                                                                      Merger
END
                                                                      Merger
                             4317 (UPPER LIMIT SET TO 1103/99/999) Merger
  1103
  1106
                             4317
                                    (UPPER LIMIT SET TO 1106/99/999) Merger
  1204
             1215
                             4317 (UPPER LIMIT SET TO 1215/99/999) Merger
  1219 1
             1219 1
                             4317 (UPPER LIMIT SET TO 1219/ 1/999) Merger
                             4317 (UPPER LIMIT SET TO 1219/ 5/999) Merger
4317 (UPPER LIMIT COMPLETELY DEFINED) Merger
  1219 3
             1219 5
  1304 3 1 1304 3 1
                                    (BLANK CARD TERMINATES REQUESTS) Merger
                                                                      Merger
```