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Rev. 0

INTERNATIONAL ATOMIC ENERGY AGENCY

NUCLEAR DATA SERVICES

DOCUMENTATION SERIES OF THE IAEA NUCLEAR DATA SECTION

ENDF/B-5 modifications 1986

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Abstract: This document summarizes the modifications made to the ENDF/B-5 evaluated neutron data files in 1986. The new versions of the files are available from the IAEA Nuclear Data Section upon request, costfree, on magnetic tape.

IAEA NUCLEAR DATA SECTION, P.O. BOX 100, A-1400 VIENNA

ENDF/B-5 modifications 1986

The ENDF/B-5 files on standards, actinides, and fission-product cross sections were received in 1986 in a modified version. Old version and modified version were compared by the code COMPARE by D.E. Cullen.

The output of the code is given on the following pages. The listing should be self explanatory. It should enable recipients of the data to decide whether the modifications made are significant for a given application and, consequently, whether calculations made earlier with the old version will bring different results with the modified verions.

The listings on the following pages are sorted by Z and A of the nuclides.

						MAT	MF	REC.
6.00000+ 3	1.18969+ 1	0	0	0	2	1306	1	1
0.00000+ 0	0.00000+ 0	0	0	0	0	1306	1	2
0.00000+ 0	0.00000+ 0	0	0	179	87	1306	1	3
6-C - ORNL	EVAL-DEC73 C.Y.FU AND F.G.PEREY					1306	1	4
INDC(F/R)-7/L	DIST-MAR83 REV1-JAN77				830210	1306	1	5
						1306	1	6
NEW EVALUATION FOR VERSION V:						1306	1	7
1. TOTAL AND ELASTIC SCATTERING FROM THERMAL TO 4.81 MEV.						1306	1	8
2. ELASTIC ANGULAR DISTRIBUTION: THERMAL TO 4.81 MEV.						1306	1	9
3. NEW REPRESENTATION FOR (N,N3A) TO YIELD CORRECT ENERGY-						1306	1	10
ANGULAR KINEMATICS						1306	1	11
4. ACTIVATION FILE FOR (N,P)						1306	1	12
5. GAS PRODUCTION FILE.						1306	1	13
6. UNCERTAINTY FILE.						1306	1	14
**********						1306	1	15
						1306	1	16
THE NORMALIZATION AND STANDARDS SUBCOMMITTEE OF CSWEG RECOMMENDS						1306	1	17
THE CARBON ELASTIC SCATTERING ANGULAR DISTRIBUTION AS A STANDARD						1306	1	18
UP TO 1.8 MEV.						1306	1	19
						1306	1	20
**********						1306	1	21
ADOPTED FROM ENDF/B-IV(BY F.G.PEREY AND C.Y.FU):						1306	1	22
1. (N,A) BELOW 15 MEV AND (N,G) BELOW 1 MEV.						1306	1	23
2. ANGULAR DISTRIBUTIONS OF SECONDARY NEUTRON 4-51.						1306	1	24
3. MULTIPLICITY OF CAPTURE GAMMA-RAYS 12-102.						1306	1	25
4. ALL OTHER CROSS SECTIONS AND DISTRIBUTIONS BELOW 8.5						1306	1	26
MEV EXCEPT (N,G), (N,D), AND (N,T).						1306	1	27
						1306	1	28
ADOPTED FROM FRENCH EVALUATION (LA75) WHICH IS AN EXTENSIVE REV.						1306	1	29
OF ENDF/B-IV:						1306	1	30
1. (N,G) ABOVE 1 MEV, (N,D), AND (N,T).						1306	1	31
2. ANGULAR DISTRIBUTION OF SECONDARY NEUTRONS 4-52 AND 4-53						1306	1	32
AND GAMMA-RAYS 14-51.						1306	1	33
3. ALL OTHER CROSS SECTIONS ABOVE 8.5 MEV EXCEPT (N,A).						1306	1	34
						1306	1	35
DATA AND EVALUATION TECHNIQUES USED IN THE NEW EVALUATION, THE						1306	1	36
ENDF/B-IV EVALUATION, AND THE FRENCH EVALUATION, AS ADOPTED HERE,						1306	1	37
ARE SUMMERIZED BELOW.						1306	1	38
						1306	1	39
MF-MT						1306	1	40
3-1 TOTAL						1306	1	41
1.E-5 EV TO 4.81 MEV -- SUM OF 3-2 AND 3-102.						1306	1	42
4.81 MEV TO 20 MEV -- SC67,CI69, PE72.						1306	1	43
3-2 ELASTIC SCATTERING						1306	1	44
1.E-5 EV TO 4.81 MEV -- R-MATRIX ANALYSIS WITH DATA SC67,						1306	1	45
CI69, PE72, AH70, BL75, DI68, FR70, HE75, LA57, LA61, LA69,						1306	1	46
ME70, KI76, HO72, HO75, ST70, ME54, WI58, KN73, PU64, EL62,						1306	1	47
WE65, KE65, GO65, GA72, PK72. BAYES THEOREM (OR NONLINEAR						1306	1	48
LEAST SQUARE) USED FOR ENERGIES LESS THEN 2 MEV,RESULTING						1306	1	49
WEIGHTS WERE THEN USED IN THE R-MATRIX ANALYSIS. A THERMAL						1306	1	50
TOTAL CROSS SECTION OF 4.746+- 0.25(EVALUATED BY LU76						1306	1	51
WAS ALSO USED IN THE R-MATRIX FIT.						1306	1	52
4.81 MEV TO 8 MEV -- GA72, VE73, PK72.						1306	1	53
8 MEV TO 14 MEV -- HA75, VE73, PU76.						1306	1	54
14 MEV TO 20 MEV -- BO68.						1306	1	55
3-3 NONELASTIC						1306	1	56
1.E-5 EV TO 4.81 MEV -- SAME AS 3-102.						1306	1	57
4.81 MEV TO 20 MEV -- 3-1 MUNUS 3-2.						1306	1	58
3-51 INELASTIC SCATTERING TO 4.439-MEV LEVEL						1306	1	59
4.81 MEV TO 6.32 MEV -- 3-3 MINUS 3-102.						1306	1	60
6.32 MEV TO 8.796 MEV -- 3-3 MINUS 3-102 MINUS 3-107.						1306	1	61

	MAT	MF	REC.
8.796 MEV TO 20 MEV -- SAME REFS. AS IN 3-2 AND GAMMA-RAY	1306	1	62
DATA OF MO72.	1306	1	63
3-52 TO 3-91 (N,N PRIME 3A)	1306	1	64
MT=52 TO 55: REAL LEVELS WITH PHYSICAL WIDTHS GIVEN IN FILE	1306	1	65
4. MT=56 TO 68: PSEUDO LEVELS WITH 0.25-MEV HALF WIDTH	1306	1	66
OF RECTANGULAR DISTRIBUTION GIVEN IN FILE 4. MT=91: A	1306	1	67
SMALL EVAPORATION COMPONENT WITH T=0.3 TO REPRODUCE THRESHOLD	1306	1	68
EFFECT AND THE DECAY OF THE 2.43-MEV LEVEL OF BE-9.	1306	1	69
DISTRIBUTION OF SECONDARY NEUTRONS AGREE WITH AN75 AND FR55.	1306	1	70
THE SUM OF 3-52 TO 3-91 IS DERIVED FROM 3-3 AND ALL OTHER	1306	1	71
REACTION CROSS SECTIONS, AND AGREES WITH FR55, GR49, AND VA58	1306	1	72
3-102 CAPTURE	1306	1	73
1.E-5 EV TO 1 MEV -- 1/V WITH 3.36 MB AT THERMAL.	1306	1	74
1 MEV TO 20 MEV -- DERIVED FROM (G,N) CROSS SECTION OF CO57.	1306	1	75
	1306	1	76
3-103 (N,P) -- RI68.	1306	1	77
3-104 (N,D) -- DERIVED FROM (D,N) OF AM57.	1306	1	78
3-107 (N,A) -- DA63, VE68, RE60, GR55, OB72, VA70.	1306	1	79
3-203 PROTON PRODUCTION -- SAME AS 3-103.	1306	1	80
3-204 DEUTERON PRODUCTION -- SAME AS 3-104.	1306	1	81
3-207 ALPHA PRODUCTION -- SUM OF 3-52 TO 3-91, MULTIPLIED BY 3,	1306	1	82
AND ADDED TO 3-107.	1306	1	83
3-251 MU BAR -- DERIVED FROM 4-2 WITH CODE SAD.	1306	1	84
3-252 CHI -- SEE 3-251.	1306	1	85
3-253 GAMMA -- SEE 3-251.	1306	1	86
4-2 ANGULAR DISTRIBUTION OF ELASTICALLY SCATTERED NEUTRONS	1306	1	87
SAME DATA AND ANALYSIS AS IN 3-2. LEGENDRE COEFFICIENTS	1306	1	88
IN CENTER-OF-MASS WITH TRANSFORMATION MATRIX GIVEN.	1306	1	89
4-51 INELASTIC SCATTERING TO 4.439-MEV LEVEL	1306	1	90
SAME DATA SOURCES AS IN 4-2.	1306	1	91
4-52 INELASTIC SCATTERING TO 7.653-MEV LEVEL -- GR69.	1306	1	92
4-53 INELASTIC SCATTERING TO 9.638-MEV LEVEL -- GR69.	1306	1	93
4-54 TO 4-91 -- ISOTROPIC IN CENTER-OF-MASS.	1306	1	94
5-91 EVAPORATION SPECTRUM WITH T=0.3 MEV. THIS IS A SMALL	1306	1	95
COMPONENT OF (N,N PRIME 3A) AND IS USED MAINLY FOR THE DECAY	1306	1	96
OF THE 2.43-MEV LEVEL OF BE-9 (AN75) AND FOR REPRODUCING	1306	1	97
THE CORRECT THRESHOLD EFFECT (FR55).	1306	1	98
8-103 ACTIVATION DATA FOLLOWING (N,P) REACTION -- AJ75.	1306	1	99
10-103 (N,P) CROSS SECTION LEADING TO ACTIVITION -- SAME AS 3-103	1306	1	100
12-102 MULTIMLICITY OF (N,G) GAMMA-RAYS -- AJ70.	1306	1	101
13-51 PRODUCTION OF 4.439-MEV GAMMA-RAYS -- SAME AS 3-51.	1306	1	102
14-51 ANGULAR DISTRIBUTION OF 4.439-MEV GAMMA-RAYS -- MO72,	1306	1	103
DR69, HL59, PR66, NE64, AN58, KO65, EN64.	1306	1	104
14-102 ANGULAR DISTRIBUTION OF CAPTURE GAMMA-RAYS -- ISOTROPIC	1306	1	105
IN CENTER-OF-MASS.	1306	1	106
33-1 TO 33-107 UNCERTAINTY FILES FOR FILE 3 DATA.	1306	1	107
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	1306	1	109
** REFERENCES **	1306	1	110
	1306	1	111
AH30 H.AHMED ET AL., NUCL. DATA FOR REACTORS,HELSINKI(1970)	1306	1	112
AJ70 F. AJSENBERG-SELOVE, NUC.PHYS. A152,1(1970)	1306	1	113
AJ75 F.AJSENBERG-SELOVE, NUCL.PHYS. A248,1(1975)	1306	1	114
AM57 O.AMES ET AL., PHYS.REV. 106, 775(1957)	1306	1	115
AN58 J.D.ANDERSON ET AL., PHYS.REV. 111,572(1958)	1306	1	116
AN75 B.ANTOLKOVIC AND Z.DOLENEC, NUC. PHYS. A237,235(1975)	1306	1	117
BE56 J.R.BEYSTER,M.WALT AND E.W.SALMI,PHYS.REV.104,1319(1956)	1306	1	118
BL75 R.C.BLOCK ET AL., J. NUCL. SCI. AND TECH. 12,1(1975)	1306	1	119
BO59 N.A.BOSTROM ET AL., TEXAS NUC.CORP.(1959)	1306	1	120
BO68 F.BORELI ET AL., PHYS.REV. 174,1174(1968)	1306	1	121
CI69 S.CIERJACKS ET AL.,KFK 1000 AND PRIV.COMM.(1969)	1306	1	122

		MAT	MF	REC.
CL65	C.M.CLASS ET AL., NUCL.PHYS. 71,433(1965)	1306	1	123
CO57	B.C.COOK,PHYS.REV. 106,300(1957)	1306	1	124
CO76	F.COCU ET AL., CEA-R 4746(1976)	1306	1	125
DA63	E.A.DAVIS ET AL., NUC.PHYS 48,169(1963)	1306	1	126
DI68	K.M.DIMENT AND C.A.UTTLEY, EANDC(UK)94AL(1968)	1306	1	127
DR69	D.M.DRAKE ET AL., NUCL.SCI.ENG. 40,294(1969)	1306	1	128
EL62	AJ ELWYN AND R.O.LANE, NUCL.PHYS. 31,78(1962)	1306	1	129
EN64	F.C.ENGESSER,W.E.THOMPSON,J.M.FERGUSON USNRDL-TR-791(1964)	1306	1	130
FR55	G.M.FRYE ET AL.,PHYS.REV. 99,1375(1955)	1306	1	131
FR70	N.C.FRANCIS ET AL., NEUTRON STANDARDS AND FLUX NORM. SYMP.	1306	1	132
	ARGONNE, P. 21(1970)	1306	1	133
GA72	W.GALATI ET AL., PHYS.REV. C5,1508(1972)	1306	1	134
GO65	G.V.GORLOV ET AL., DOKLADY AKAD.NAUK. 158,574(1964)	1306	1	135
	ENGLISH TRANSL.: SOVIET PHYS. DOKLADY 9, 806(1965)	1306	1	136
GR49	L.L.GREEN AND W.GIBSON, PROC.PHYS.SOC. A26,296(1949)	1306	1	137
GR55	E.R.GRAVES AND R.W.DAVIS,PHYS.REV. 97,1205(1955)	1306	1	138
GR69	G.A.GRIN ET AL., HELV.PHYS.ACTA 42,990(1969)	1306	1	139
HA59	E.HADAD AND D.D.PHILLIPS,BULL.AM.PHYS.SOC. 4,358(1959)	1306	1	140
HA65	M.V.HARLOW ET AL., NUCL.PHYS. 67,246(1965)	1306	1	141
HA73	G.HAOUAT AND F. COCU, CEN B-III KIEV CONF(1973)	1306	1	142
HA75	G.HAOUAT ET AL., CEA-R 4641(1975)	1306	1	143
HE75	H.T.HEATON ET AL., NUCL. SCI. ENG. 56,27(1975)	1306	1	144
HL59	H.E.HALL AND T.W.BONNER, NUC.PHYS. 14,295(1959)	1306	1	145
HO72	R.J.HOLT,PHYS.REV.LETT. 28,134(1972)	1306	1	146
HO75	R.T.HOLT, BULL.AM.PHYS.SOC. 20,145(1975)	1306	1	147
KE65	C.A.KELSEY ET AL., NUCL. PHYS. 68,413(1965)	1306	1	148
KI76	W.E.KINNEY ORNL, PRIV. COMM.(1976)	1306	1	149
KN73	H.D.KNOX ET AL., NUCL.PHYS. A213,611(1973)	1306	1	150
KO65	T.KOSLOWSKI ET AL., INR/661/IA/PL(1965)	1306	1	151
LA57	A. LANGSDORF JR. ET AL., PHYS. REV. 107,1077(1957)	1306	1	152
LA61	R.O.LANE ET AL., ANN. PHYS. 12,135(1961)	1306	1	153
LA69	R.O.LANE ET AL., PHYS.REV. 188,1618(1969)	1306	1	154
LA75	J.LASHKAR ET AL., INDC(F/R)-7/L (1975)	1306	1	155
LI70	J.T.LINDOW ET AL., BULL.AM.PHYS.SOC. 15,86(1970)	1306	1	156
LU76	C.R.LUBITZ, KAPL, PRIV. COMM.(1976)	1306	1	157
ME54	R.W.MEIER ET AL., HELV. PHYS. ACTA 27,577(1954)	1306	1	158
ME70	J.W.MEADOWS AND J.F.WHALEN, NUCL.SCI.ENG. 41,351(1970)	1306	1	159
MO72	G.L.MORGAN ET AL., ORNL-TM-3702(1972)	1306	1	160
NE64	D.O. NELLIS AND I.L.MORGAN ET AL.,TEXAS NUC.CORP.(1964)	1306	1	161
OB72	A.W.OBST ET AL., PHYS.REV. C5,738(1972)	1306	1	162
PE72	F.G.PEREY,T.A.LOVE AND W.E.KINNEY,ORNL-4823(1972)	1306	1	163
PK72	F. G. PEREY AND W.E.KINNEY, PRIV.COMM.(1972) AND	1306	1	164
	ORNL-4441(1969)	1306	1	165
PR60	J.T.PRUDHOMME ET AL., AFSWC-TR-30(1960)	1306	1	166
PU64	F.O.PURSER ET AL., WASH-1048(1964)	1306	1	167
PU76	F.O.PURSER, TUNL, PRIV.COMM.(1976)	1306	1	168
RE60	T.RETZ ET AL., BULL.AM.PHYS.SOC. 5,110(1960)	1306	1	169
RI68	E.M.RIMMER AND P.S.FISHER, NUCL.PHYS A108,567(1968)	1306	1	170
SC67	R.B.SCHWARTZ,H.T.HEATON,R.A.SCHRACK,BULL.AM.SOC. 15,567	1306	1	171
	(1967)	1306	1	172
SM72	A.B.SMITH ANL PRIV.COMM.(1972)	1306	1	173
ST70	P.STOLER ET AL., BULL.AM.PHYS.SOC. 15,1668(1970)	1306	1	174
VA58	S.S.VASILEV ET AL.,J.E.T.P. 6,1016(1958)	1306	1	175
VA70	L. VAN DER ZWAN AND K.W.GEIGER, NUC.PHYS. A152,481(1970)	1306	1	176
VE68	V.V.VERBINSKY ET AL., PHYS.REV. 170,916(1968)	1306	1	177
VE73	D.E.VELKLEY ET AL., PHYS.REV. C7,1736(1973)	1306	1	178
WA55	M.WALT AND J.R.BEYSTER,PHYS.REV.98,677(1955)	1306	1	179
WE65	B.E.WENZEL ET AL., PHYS.REV.137,B80(1965)	1306	1	180
WI58	J.E.WILLS ET AL.,PHYS.REV. 109,891(1958)	1306	1	181
WI65	R.W.WILENZICK ET AL., NUC.PHYS. 62,511(1965)	1306	1	182
	1 451 269	2 1306	1	183

MAT MF REC

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX
TEXT & DICT.

			MAT	MF	REC.
2	151	4	0 1306	1	184
3	1	260	1 1306	1	185
3	2	260	1 1306	1	186
3	3	78	1 1306	1	187
3	4	50	1 1306	1	188
3	51	43	1 1306	1	189
3	52	7	1 1306	1	190
3	53	7	1 1306	1	191
3	54	6	1 1306	1	192
3	55	6	1 1306	1	193
3	56	6	1 1306	1	194
3	57	6	1 1306	1	195
3	58	5	1 1306	1	196
3	59	5	1 1306	1	197
3	60	5	1 1306	1	198
3	61	5	1 1306	1	199
3	62	5	1 1306	1	200
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3	66	4	1 1306	1	204
3	67	4	1 1306	1	205
3	68	4	1 1306	1	206
3	91	7	1 1306	1	207
3	102	19	1 1306	1	208
3	103	8	1 1306	1	209
3	104	8	1 1306	1	210
3	107	16	1 1306	1	211
3	203	8	1 1306	1	212
3	204	8	1 1306	1	213
3	207	25	1 1306	1	214
3	251	76	1 1306	1	215
3	252	76	1 1306	1	216
3	253	76	1 1306	1	217
4	2	512	1 1306	1	218
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4	53	26	1 1306	1	221
4	54	2	1 1306	1	222
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4	56	2	1 1306	1	224
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4	61	2	1 1306	1	229
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4	66	2	1 1306	1	234
4	67	2	1 1306	1	235
4	68	2	1 1306	1	236
4	91	2	1 1306	1	237
5	91	7	1 1306	1	238
12	102	13	1 1306	1	239
13	51	43	1 1306	1	240
14	51	143	1 1306	1	241
14	102	1	0 1306	1	242
33	1	25	1 1306	1	243
33	2	25	2 1306	1	244

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TEXT & DICT.

MAT MF REC.

			MAT	MF	REC.
33	3	8	1 1306	1	245
33	4	6	2 1306	1	246
33	51	16	1 1306	1	247
33	52	4	1 1306	1	248
33	53	4	1 1306	1	249
33	54	4	1 1306	1	250
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33	56	4	1 1306	1	252
33	57	4	1 1306	1	253
33	58	4	1 1306	1	254
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33	64	4	1 1306	1	260
33	65	4	1 1306	1	261
33	66	4	1 1306	1	262
33	67	4	1 1306	1	263
33	68	4	1 1306	1	264
33	91	12	2 1306	1	265
33	102	4	1 1306	1	266
33	103	4	2 1306	1	267
33	104	4	2 1306	1	268
33	107	13	1 1306	1	269
			1306	1	270
			1306	2	276
			1306	3	538
			1306	3	799
			1306	3	878
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			1306	3	973
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			1306	3	989
			1306	3	996
			1306	3	1003
			1306	3	1010
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			1306	3	1035
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			1306	3	1123
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			1306	3	1184
			1306	3	1261
			1306	3	1338
			1306	3	1415
			1306	4	1929

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MAT	MF	REC.
1306	4	2098
1306	4	2129
1306	4	2156
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1306	4	2162
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1306	4	2186
1306	4	2189
1306	4	2192
1306	4	2195
1306	4	2198
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1306	14	2420
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1306	33	2614
1306	33	2619
1306	33	2633

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COMPARE TWO BCD FILES (COMPARE 82-1)
----------------------------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST-------       70 (   1 TO 80 )
COLUMNS TO COMPARE------------        66 (   1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---       66 (   1 TO 70 )
SPECIAL FILE FLAG-------------         2
ACCEPTABLE DIFFERENCE----------        0 (   1 TO 70 )
COMMENT CARDS-----------------COMPARED
----------------------------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
----------------------------------------------------------------------------------------------------------------------
FILE 1 =ST1306  OLD
FILE 2 =ST1306  NEW
----------------------------------------------------------------------------------------------------------------------
 FILE  CARD  CONTENTS
----------------------------------------------------------------------------------------------------------------------
                     1         2         3         4         5         6         7         8
 FILE  CARD 12345678901234567890123456789012345678901234567890123456789012345678901234567890
----------------------------------------------------------------------------------------------------------------------
----------------------------------------------------------------------------------------------------------------------
    1     2  6.00000+ 3 1.18969+ 1          0          0          0          11306 1451    1
    2     2  6.00000+ 3 1.18969+ 1          0          0          0          21306 1451    1
 DIFFERENCES                                                                 $
----------------------------------------------------------------------------------------------------------------------
    1     4  0.00000+ 0 0.00000+ 0          0          0        178         871306 1451    3
    2     4  0.00000+ 0 0.00000+ 0          0          0        179         871306 1451    3
 DIFFERENCES                                                      $
----------------------------------------------------------------------------------------------------------------------
    1     6  INDC(F/R)-7/L        DIST-MAY79 REV1-JAN77            781226     1306 1451    5
    2     6  INDC(F/R)-7/L        DIST-MAR83 REV1-JAN77            830210     1306 1451    5
 DIFFERENCES                             $$$                       $$$ $$
----------------------------------------------------------------------------------------------------------------------
    2   109  ******MT-4,91,103,104 MOD PC FU TO MAGURNO NOV.1982*********     1306 1451  108
 DIFFERENCES ON    1 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
----------------------------------------------------------------------------------------------------------------------
    1   183                                 1        451        268          11306 1451  182
    2   184                                 1        451        269          21306 1451  183
 DIFFERENCES                                                      $          $
----------------------------------------------------------------------------------------------------------------------
    1   244                                33          2         25          11306 1451  243
    2   245                                33          2         25          21306 1451  244
 DIFFERENCES                                                                 $
----------------------------------------------------------------------------------------------------------------------
    1   246                                33          4          6          11306 1451  245
    2   247                                33          4          6          21306 1451  246
 DIFFERENCES                                                                 $
----------------------------------------------------------------------------------------------------------------------
    1   265                                33         91         12          11306 1451  264
    2   266                                33         91         12          21306 1451  265
 DIFFERENCES                                                                 $
----------------------------------------------------------------------------------------------------------------------
    1   267                                33        103          4          11306 1451  266
    2   268                                33        103          4          21306 1451  267
 DIFFERENCES                                                                 $
----------------------------------------------------------------------------------------------------------------------
    1   268                                33        104          4          11306 1451  267
    2   269                                33        104          4          21306 1451  268
 DIFFERENCES                                                                 $
----------------------------------------------------------------------------------------------------------------------
    1  2483  6.00000+ 3 1.18970+ 1          0          0          0          1130633  4 2482
    2  2484  6.00000+ 3 1.18969+ 1          0          0          0          1130633  4 2483
 DIFFERENCES                 $$
----------------------------------------------------------------------------------------------------------------------
    1  2595  7.88700+ 6 2.00000+ 7          0          0         48         24130633 91 2594
    2  2596  8.29600+ 6 2.00000+ 7          0          0         48         24130633 91 2595
```

```
 DIFFERENCES  $ $$$
-------------------------------------------------------------------------------------------------------------------------------
    1  2613   1.00000- 5 0.00000+ 0 1.36460+ 7 4.00000- 2 2.00000+ 7 3.00000- 8130633103 2612
    2  2614   1.00000- 5 0.00000+ 0 1.36460+ 7 4.00000- 2 2.00000+ 7 0.00000+00130633103 2613
 DIFFERENCES                                                                  $       $$$
-------------------------------------------------------------------------------------------------------------------------------
    1  2618   1.00000- 5 0.00000+ 0 1.48880+ 7 4.00000- 2 2.00000+ 7 3.00000- 8130633104 2617
    2  2619   1.00000- 5 0.00000+ 0 1.48880+ 7 4.00000- 2 2.00000+ 7 0.00000+00130633104 2618
 DIFFERENCES                                                                  $       $$$
-------------------------------------------------------------------------------------------------------------------------------
SUMMARY OF ENDF/B DIFFERENCES BY SECTION
-------------------------------------------------------------------------------------------------------------------------------
 MAT   MF   MT        FILE 1          FILE 2
                   CARDS  DIFFER   CARDS  DIFFER
-------------------------------------------------------------------------------------------------------------------------------
   0    0    0        1       0       1       0
-------------------------------------------------------------------------------------------------------------------------------
1306    1  451      269       9     270      10 (DIFFERENCES)
1306    2  151        6       0       6       0
1306    3    1      262       0     262       0
1306    3    2      261       0     261       0
1306    3    3       79       0      79       0
1306    3    4       51       0      51       0
1306    3   51       44       0      44       0
1306    3   52        8       0       8       0
1306    3   53        8       0       8       0
1306    3   54        7       0       7       0
1306    3   55        7       0       7       0
1306    3   56        7       0       7       0
1306    3   57        7       0       7       0
1306    3   58        6       0       6       0
1306    3   59        6       0       6       0
1306    3   60        6       0       6       0
1306    3   61        6       0       6       0
1306    3   62        6       0       6       0
1306    3   63        5       0       5       0
1306    3   64        5       0       5       0
1306    3   65        5       0       5       0
1306    3   66        5       0       5       0
1306    3   67        5       0       5       0
1306    3   68        5       0       5       0
1306    3   91        8       0       8       0
1306    3  102       20       0      20       0
1306    3  103        9       0       9       0
1306    3  104        9       0       9       0
1306    3  107       17       0      17       0
1306    3  203        9       0       9       0
1306    3  204        9       0       9       0
1306    3  207       26       0      26       0
1306    3  251       77       0      77       0
1306    3  252       77       0      77       0
1306    3  253       77       0      77       0
1306    4    2      514       0     514       0
1306    4   51      169       0     169       0
1306    4   52       31       0      31       0
1306    4   53       27       0      27       0
1306    4   54        3       0       3       0
1306    4   55        3       0       3       0
1306    4   56        3       0       3       0
1306    4   57        3       0       3       0
1306    4   58        3       0       3       0
1306    4   59        3       0       3       0
1306    4   60        3       0       3       0
1306    4   61        3       0       3       0
1306    4   62        3       0       3       0
1306    4   63        3       0       3       0
```

1306	4	64	3	0	3	0	
1306	4	65	3	0	3	0	
1306	4	66	3	0	3	0	
1306	4	67	3	0	3	0	
1306	4	68	3	0	3	0	
1306	4	91	3	0	3	0	
1306	5	91	9	0	9	0	
1306	12	102	15	0	15	0	
1306	13	51	45	0	45	0	
1306	14	51	145	0	145	0	
1306	14	102	2	0	2	0	
1306	33	1	27	0	27	0	
1306	33	2	26	0	26	0	
1306	33	3	9	0	9	0	
1306	33	4	7	1	7	1	(DIFFERENCES)
1306	33	51	17	0	17	0	
1306	33	52	5	0	5	0	
1306	33	53	5	0	5	0	
1306	33	54	5	0	5	0	
1306	33	55	5	0	5	0	
1306	33	56	5	0	5	0	
1306	33	57	5	0	5	0	
1306	33	58	5	0	5	0	
1306	33	59	5	0	5	0	
1306	33	60	5	0	5	0	
1306	33	61	5	0	5	0	
1306	33	62	5	0	5	0	
1306	33	63	5	0	5	0	
1306	33	64	5	0	5	0	
1306	33	65	5	0	5	0	
1306	33	66	5	0	5	0	
1306	33	67	5	0	5	0	
1306	33	68	5	0	5	0	
1306	33	91	13	1	13	1	(DIFFERENCES)
1306	33	102	5	0	5	0	
1306	33	103	5	1	5	1	(DIFFERENCES)
1306	33	104	5	1	5	1	(DIFFERENCES)
1306	33	107	14	0	14	0	
1306	33	107	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER
2636	13	2637	14

END OF RUN

11/2

						MAT	MF	REC.
4.30990+ 4	9.81500+ 1	1	0	0	2	1308	1	1
0.00000+ 0	1.00000+ 0	0	0	0	0	1308	1	2
0.00000+ 0	0.00000+ 0	0	0	51	39	1308	1	3

43-TC- 99 HEDL,BAW EVAL-NOV78 SCHENTER,LIVOLSI,SCHMITTROTH,ETAL 1308 1 4
DIST-JUL83 REV1-OCT80 801027 1308 1 5
HEDL EVAL-NOV78 SCHENTER,JOHNSON (FAST CAPTURE) 1308 1 6
HEDL EVAL-NOV78 MANN,SCHMITTROTH (FAST CAPTURE) 1308 1 7
RCN EVAL-APR78 GRUPPELAAR (FAST CAPTURE) 1308 1 8
INEL EVAL-MAR78 BUNTING(DECAY) 1308 1 9
BAW EVAL-OCT71 LIVOLSI (ENDF/B-IV) 1308 1 10
1308 1 11
SIGMA-TOTAL 2200M/SEC= 24.58 B 1308 1 12
SIGMA-SCAT. 2200M/SEC= 5.09 B 1308 1 13
SIGMA-CAPT. 2200M/SEC= 19.49 B 1308 1 14
1/E WEIGHTED CAPT.INTEGRAL ABOVE .5EV= 350.1 B 1308 1 15
1308 1 16
1308 1 17

FILE CONTENTS 1308 1 18
2-151 RESOLVED RESONANCES FROM RPI(1). S AND P WAVES GIVEN. 1308 1 19
UNRESOLVED RESONANCES (5) S AND P-WAVES 1308 1 20
3-001 TOTAL CROSS SECTION CALCULATED BY OPTICAL MODEL (6) CONVER- 1308 1 21
GING ON EXPERIMENT (7) ABOVE 2.MEV 1308 1 22
3-002 ELASTIC SCATTERING XSECTION RESULTANT OF COMPOUND (8) AND 1308 1 23
SHAPE ELASTIC (6) 1308 1 24
3-004 TOTAL (N,N*) SCATTERING (8) 1308 1 25
3-016 (N,2N) SCATTERING (9,10) 1308 1 26
3-051 EXCITED DISCRETE (N,N*) LEVELS (1,8) 1308 1 27
THRU EXCITED DISCRETE (N,N*) LEVELS (1,8) 1308 1 28
3-061 EXCITED DISCRETE (N,N*) LEVELS (1,8) 1308 1 29
3-091 (N,N*) LEVELS DESCRIBED BY CONTINUUM (8) 1308 1 30
3-102 CAPTURE HEDL AND RCN REEVALUATION 11/78 1308 1 31
3-251 THROUGH 3-253 1308 1 32
4-002 DIFF. ELASTIC CALCULATED BY MR BHAT FOR AG (NO EXP DATA) 1308 1 33
4-016 1308 1 34
4-051 THROUGH 4-091 1308 1 35
5-016 MAXWELLIAN EVAPORATION SPECTRUM FOR (N,2N) 1308 1 36
5-091 MAXWELLIAN EVAPORATION SPECTRUM FOR (N,N*) 1308 1 37
8-457 DECAY DATA 1308 1 38
***REVISED0 03/13/78 RLB (INEL) 1308 1 39
Q-0 A.H.WAPSTRA, K.BOS, AT.DATA FILE ENTRY0 08/06/76 1308 1 40
MAL (I 1308 1 41
REFERENCES0 L.R.MEDSKER NUCLEAR DATA SHEETS 12, 431(1974) 1308 1 42
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 12/78 1308 1 43
1308 1 44

REFERENCES 1308 1 45
5- JEN-CHANG CHOU, INR-4/70-28 (N/1970) 1308 1 46
6- ABACUS- EH AUERBACH, BNL-6562 (1964) 1308 1 47
7- W FOSTER, SCISRS FILE (BNW-1967) 1308 1 48
8- COMNUC- CL DUNFORD, AI-AEC-12931 1308 1 49
9- S PEARLSTEIN, NUCL.DATA 3A,327(1967) 1308 1 50
10- JM BLATT, VF WEISSKOPF, THEOR.NUCL.PHYSICS, P.484 1308 1 51
11- GGOD- AZ LIVOLSI, A PRINCE (NOT RELEASED) 1308 1 52
12- FISPRO2- V BENZI, GC PANINI, G REFFO, CEC(69)24 1308 1 53
1308 1 54

1	451	93	2	1308	1	55
2	151	84	1	1308	1	56
3	1	23	1	1308	1	57
3	2	16	0	1308	1	58
3	4	15	0	1308	1	59
3	16	6	0	1308	1	60

			MAT	MF	REC.
3	51	13	0 1308	1	61
3	52	13	0 1308	1	62
3	53	12	0 1308	1	63
3	54	10	0 1308	1	64
3	55	10	0 1308	1	65
3	56	9	0 1308	1	66
3	57	8	0 1308	1	67
3	58	8	0 1308	1	68
3	59	8	0 1308	1	69
3	60	7	0 1308	1	70
3	61	7	0 1308	1	71
3	91	9	0 1308	1	72
3	102	22	1 1308	1	73
3	251	14	0 1308	1	74
3	252	14	0 1308	1	75
3	253	14	0 1308	1	76
4	2	211	0 1308	1	77
4	16	10	0 1308	1	78
4	51	10	0 1308	1	79
4	52	10	0 1308	1	80
4	53	10	0 1308	1	81
4	54	10	0 1308	1	82
4	55	10	0 1308	1	83
4	56	10	0 1308	1	84
4	57	10	0 1308	1	85
4	58	10	0 1308	1	86
4	59	10	0 1308	1	87
4	60	10	0 1308	1	88
4	61	10	0 1308	1	89
4	91	10	0 1308	1	90
5	16	7	0 1308	1	91
5	91	9	0 1308	1	92
8	457	9	2 1308	1	93
			1308	1	94
			1308	2	180
			1308	3	205
			1308	3	222
			1308	3	238
			1308	3	245
			1308	3	259
			1308	3	273
			1308	3	286
			1308	3	297
			1308	3	308
			1308	3	318
			1308	3	327
			1308	3	336
			1308	3	345
			1308	3	353
			1308	3	361
			1308	3	371
			1308	3	394
			1308	3	409
			1308	3	424
			1308	3	439
			1308	4	652
			1308	4	663
			1308	4	674
			1308	4	685
			1308	4	696
			1308	4	707

ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX
TEXT & DICT.

MAT	MF	REC.
1308	4	718
1308	4	729
1308	4	740
1308	4	751
1308	4	762
1308	4	773
1308	4	784
1308	4	795
1308	5	804
1308	5	814
1308	8	825

COMPARE TWO BCD FILES (COMPARE 82-1)

```
COLUMNS TO READ AND LIST-------        70 (  1 TO 80 )
COLUMNS TO COMPARE-------------        66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---        66 (  1 TO 70 )
SPECIAL FILE FLAG--------------         2
ACCEPTABLE DIFFERENCE----------         0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
```

DESCRIPTION OF TWO FILES TO BE COMPARED

```
FILE 1 =FP 1308 OLD
FILE 2 =FP 1308 NEW
```

FILE CARD CONTENTS

```
                            1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890

    1     6                      DIST-OCT80 REV1-OCT80               801027     1308 1451     5
    2     6                      DIST-JUL83 REV1-OCT80               801027     1308 1451     5
 DIFFERENCES                           $$$ $

    1    56                                 1        451        93         11308 1451    55
    2    56                                 1        451        93         21308 1451    55
 DIFFERENCES                                                               $
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1308	1	451	94	2	94	2	(DIFFERENCES)
1308	2	151	86	0	86	0	
1308	3	1	25	0	25	0	
1308	3	2	17	0	17	0	
1308	3	4	16	0	16	0	
1308	3	16	7	0	7	0	
1308	3	51	14	0	14	0	
1308	3	52	14	0	14	0	
1308	3	53	13	0	13	0	
1308	3	54	11	0	11	0	
1308	3	55	11	0	11	0	
1308	3	56	10	0	10	0	
1308	3	57	9	0	9	0	
1308	3	58	9	0	9	0	
1308	3	59	9	0	9	0	
1308	3	60	8	0	8	0	
1308	3	61	8	0	8	0	
1308	3	91	10	0	10	0	
1308	3	102	23	0	23	0	
1308	3	251	15	0	15	0	
1308	3	252	15	0	15	0	
1308	3	253	15	0	15	0	
1308	4	2	213	0	213	0	
1308	4	16	11	0	11	0	
1308	4	51	11	0	11	0	
1308	4	52	11	0	11	0	
1308	4	53	11	0	11	0	
1308	4	54	11	0	11	0	
1308	4	55	11	0	11	0	
1308	4	56	11	0	11	0	

1308	4	57	11	0	11	0
1308	4	58	11	0	11	0
1308	4	59	11	0	11	0
1308	4	60	11	0	11	0
1308	4	61	11	0	11	0
1308	4	91	11	0	11	0
1308	5	16	9	0	9	0
1308	5	91	10	0	10	0
1308	8	457	11	0	11	0
1308	8	457	3	0	3	0

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	829	2	829	2

END OF RUN

17/18

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX

TEXT & DICT.

						MAT	MF	REC.
4.71070+ 4 1.05987+ 2	1	0	0	2		1407	1	1
0.00000+ 0 0.00000+ 0	0	0	0	0		1407	1	2
0.00000+ 0 0.00000+ 0	0	0	120	61		1407	1	3
47-AG-107 BNL,HEDL EVAL-JUN83 A.PRINCE,R.E.SCHENTER						1407	1	4
DIST-JUL83			830914			1407	1	5
EVALUATION OF A. PRINCE 7/80 WHICH SUPERSEDES ENDF/V MAT 1371						1407	1	6
BY BNL/HEDL (SCHENTER,BHAT,PRINCE AND JOHNSON). CHANGES IN						1407	1	7
THE CAPTURE AND ELASTIC KEEPING THE TOTAL CROSS SECTION						1407	1	8
CONSTANT WERE ALSO MADE BY R. SCHENTER. THESE CHANGES REFLECT						1407	1	9
THE USE OF RESULTS OF RECENT MEASUREMENTS BY MACKLIN AND						1407	1	10
POENITZ ON ISOTOPIC AND ELEMENTAL CAPTURE (REF.22 AND REF. 23).						1407	1	11
***** ***** *****						1407	1	12
FILE 2 RESONANCE PARAMETERS						1407	1	13
						1407	1	14
RESONANCE PARAMETERS BASED ON NEW EXPTL.DATA (REF.1)						1407	1	15
L=0 NUMBER OF RESONANCES IS 74						1407	1	16
AVERAGE TOTAL WIDTH = 2.3298-01 EV.						1407	1	17
AVERAGE REDUCED NEUTRON WIDTH = 2.82367-03 EV.						1407	1	18
AVERAGE GAMMA WIDTH = 1.39069-01 EV.						1407	1	19
AVERAGE LEVEL SPACING=3.65767+01 EV.						1407	1	20
S-WAVE STRENGTH FUNCTION = 3.7851-05						1407	1	21
0.025 EV CAPTURE CROSS SECTION (CALC)= 3.7616+01BARNS						1407	1	22
RESONANCE ABSORPTION INTEGRAL (0.5 EV CUT-OFF)= 1.0487+02 B						1407	1	23
EFFECTIVE SCATTERING RADIUS = 6.60 FM.						1407	1	24
***** ***** *****						1407	1	25
FILE 3 SMOOTH CROSS SECTIONS						1407	1	26
						1407	1	27
ALL DATA RE-EVALUATED BASED ON LATEST EXPERIMENTAL DATA						1407	1	28
AND NUCLEAR MODEL CALCS.						1407	1	29
MT=1 TOTAL CROSS SECTION IN ENERGY RANGE 0.25 MEV TO 4.5 MEV						1407	1	30
BASED ON EXPERIMENTAL DATA OF REF 2.						1407	1	31
FROM 4.5 TO 20.0 MEV OPTICAL MODEL CALCS. COMBINED WITH						1407	1	32
EXPTL DATA FROM BNL-325						1407	1	33
MT=2 ELASTIC CROSS SECTIONS DERIVED FROM ANGLE INTEGRATED						1407	1	34
EXPTL DATA OF REF.2 AND BNL 325 SUPPLEMENTED WITH OPTICAL						1407	1	35
MODEL CALCS. AT HIGHER ENERGIES (5.0 TO 20.0 MEV) THE						1407	1	36
ELASTIC CROSS SECTION WAS CHOSEN TO BE CONSISTENT WITH						1407	1	37
TOTAL MINUS NON-ELASTIC EXPTL DATA (BNL-325)						1407	1	38
MT=3 NON ELASTIC CROSS SECTIONS DETERMINED FROM EXPTL DATA						1407	1	39
OF REF.2 IN REGION 0.25 TO 4.5 MEV. FROM 5.0 TO 20.0 MEV						1407	1	40
OPTICAL MODEL CALCS. COMBINED WITH BNL-325 EXPTL DATA.						1407	1	41
MT=4 TOTAL INELASTIC CROSS SECTION BASED ON EXPTL DATA OF						1407	1	42
REF.2 AND REF.3 COMBINED WITH HAUSER-FESHBACH CALCS.						1407	1	43
MT=16 N-2N CROSS SECTIONS WERE DETERMINED FROM RECENT EXPTL						1407	1	44
DATA OF REFS.4 TO 8 AND BNL 325. IN REGIONS LACKING						1407	1	45
EXPTL DATA, MODEL CALCS WERE PERFORMED.						1407	1	46
MT=17 N-3N CROSS SECTIONS WERE BASED PRIMARILY ON MODEL CALCS						1407	1	47
NORMALIZED TO EXPTL DATA OF REFS.7 AND 9.						1407	1	48
MT=22,28,104,105,106 DETERMINED FROM STATISTICAL MODEL CALCS.						1407	1	49
MT=51 TO 63 DISCRETE INELASTIC CROSS SECTIONS, CALCULATED USING						1407	1	50
HAUSER-FESHBACH THEORY WITH WIDTH FLUCTUATION					10	1407	1	51
CORRECTIONS DERIVED BY REFS. 10 AND 11, WERE COMBINED						1407	1	52
WITH EXPTL. DATA OF REFS.2 ,3 AND 12.						1407	1	53
LEVEL EXCITATION ENERGIES UP TO 1.65 TAKEN FROM REFS.13						1407	1	54
14 AND 15.						1407	1	55
MT=91 CONTINUUM INELASTIC CROSS SECTION WITH 1.143 MEV CUTOFF						1407	1	56
TAKEN AS DIFFERENCE BETWEEN TOTAL INELASTIC AND DISCRETE.						1407	1	57
LEVEL EXCITATIONS						1407	1	58
MT=102 RADIATIVE CAPTURE CROSS SECTION USING RESULTS MAINLY						1407	1	59
FROM REF.22. AND 23.						1407	1	60

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX
TEXT & DICT.

	MAT	MF	REC.
MT=103 N-PROTON CROSS SECTION-HAUSER-FESHBACH AND STATISTICAL	1407	1	61
MODEL CALCS. WERE NORMALIZED TO 14.0 MEV DATA OF REF.18	1407	1	62
MT=107 N-ALPHA CROSS SECTION- CALCULATED IN SAME MANNER AS MT103	1407	1	63
AND COMBINED WITH EXPTL. DATA OF REFS.19 AND 20.	1407	1	64
TOTAL GAS PRODUCTION MT=203,204,206,207 DERIVED FROM	1407	1	65
RESULTS OF H,D,T HE-3 AND HE-4 CONTAINED IN MT=103 TO 107	1407	1	66
AND MT=22,28	1407	1	67
MT=251 TO 253 SAME AS BNL/HEDL ENDF/V 1979 EVALUATION REF.17	1407	1	68
***** ***** *****	1407	1	69
FILE 4- ANGULAR DISTRIBUTION OF SECONDARY NEUTRONS	1407	1	70
MT=2 SAME AS BNL/HEDL ENDF/V 1979 EVALUATION REF.17	1407	1	71
MT=16,17,22,28,51 TO 91 ANGULAR DISTRIBUTIONS ASSUMED TO BE	1407	1	72
ISOTROPIC	1407	1	73
FILE 5- ENERGY DISTRIBUTION OF SECONDARY NEUTRONS	1407	1	74
MT=16,17,22,28 AND 91 ENERGY DISTRIBUTIONS PRESENTED AS	1407	1	75
HISTOGRAM BASED ON CALCS. USING NUCLEAR TEMPERATURES	1407	1	76
DETERMINED FROM REF.21	1407	1	77
***** ***** *****	1407	1	78
SUMMARY	1407	1	79
FILES 2 AND 3 ARE COMPLETELY NEW EVALUATIONS RESULTING	1407	1	80
FROM IMPROVED NUCLEAR MODEL CALCS. AND THE MOST RECENT	1407	1	81
EXPERIMENTAL DATA.	1407	1	82
FILE 4 REMAINS THE SAME AS THE EARLIER VERSION EXCEPT FOR	1407	1	83
5 ADDITIONAL INELASTIC LEVEL EXCITATIONS AND THE INCLUSION	1407	1	84
OF MT= 17,22 AND 28	1407	1	85
FILE 5 ALSO HAS BEEN EXPANDED TO INCLUDE MT=17,22 AND 28	1407	1	86
***** ***** *****	1407	1	87
CODES USED	1407	1	88
1. CERBERO 2 IMPROVED VERSION OF THE CERBERO COMPUTER CODE	1407	1	89
FOR CALCULATION OF NUCLEAR REACTION CROSS SECTION	1407	1	90
F.FABBRI ET AL RT/FI(77)6 CNEN 1977	1407	1	91
2. ERINNI AN OPTICAL MODEL FORTRAN IV CODE FOR THE CALCULATION	1407	1	92
OF MULTIPLE CASCADING PARTICLE EMISSIONS F.FABBRI AND	1407	1	93
G.REFFO RT/FI(77)4 CNEN 1977	1407	1	94
3. SCAT4U MODIFIED VERSION OF SCAT2 AN OPTICAL MODEL PROGRAM	1407	1	95
O.BERSILLON- BRUYERES-LE-CHATEL (PRIVATE COMMUNICATION)	1407	1	96
4. THRES2 MODIFIED VERSION OF THRESH- S.PEARLSTEIN 1975	1407	1	97
(PRI. COMM.)	1407	1	98
***** ***** *****	1407	1	99
REFERENCES	1407	1	100
1. S.MUGHAGHAB (PRIVATE COMM.)1980	1407	1	101
2. A.SMITH,ET AL REPORT ANL/NOM-46(JAN.1979)	1407	1	102
3. E.BARNARD,ET AL, HARWELL CONF.(1978) PROL.-78-HA	1407	1	103
4. E.RONDAIAH, J.PHYS.A MATH-NUC.GEN.7(12)1457(1974)	1407	1	104
5. W.MANNHART AND H.VONACH, Z.PHYS.A272,279(1975)	1407	1	105
6. W.AUGUSTYNIACK,ET AL, NUCL.PHYS.A247,231(1975)	1407	1	106
7. B.P.BAYHURST,ET AL, PHYS.REV.C12,451(1975)	1407	1	107
8. S.C.MISRA AND U.C.GUPTA,J.PHYS.G NUCL.PHYS.5,855(1979)	1407	1	108
9. H.LISKIEN,NUCL.PHYS.A118,379(1968)	1407	1	109
10. J.W.TEPEL,ET AL,PHYS.LETT.49B,1(1974)	1407	1	110
11. H.M.HOFFMAN,ET AL,ANN.PHYS.90,403(1975)	1407	1	111
12. W.G.VONACH AND A.B.SMITH,NUCL.PHYS.78,389(1966)	1407	1	112
13. C.M.LEDERER,ET AL TABEL OF ISOTOPES(7TH-ED.) WILEY (1978)	1407	1	113
14. H-W.SCHUH,ET AL,ZEIT F.PHYSIK A293,301(1979)	1407	1	114
15. Z.MATUMOTO,ET AL,JAERI-M7734(1978)	1407	1	115
16. Y.D.HARRER,ET AL RPT.TREE 1259(CFRMF INFU)1978	1407	1	116
17. R.E.SCHENTER,ET AL ENDF/V SUMMARY DOCUMENTATION 47-107-1 1979	1407	1	117
18. R.PRASAD AND D.C.SARKER, NUOVO CIM.3A,467(1961)	1407	1	118
19. A.RUBBIND AND D.ZUBKE,NUCL PHYS.85,606(1966)	1407	1	119
20. M.BORMANN,ET AL,NUCL.PHYS.A186,65(1972)	1407	1	120
21. A.G.GILBERT AND A.G.W.CAMERON,CAN.J.PHYS.43,1446(1965)	1407	1	121

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TEXT & DICT.

			MAT	MF	REC.
22. R.L.MACKLIN,NUCL.SCI.AND.ENG.82,400(1982)			1407	1	122
23. W.P.POENITZ,SPEC.MEET.ON.FAST.CAPTURE,ANL-83-4,239(1982)			1407	1	123
1	451	184	2 1407	1	124
2	151	79	2 1407	1	125
3	1	43	2 1407	1	126
3	2	43	2 1407	1	127
3	4	38	2 1407	1	128
3	16	11	2 1407	1	129
3	17	7	2 1407	1	130
3	22	9	2 1407	1	131
3	28	11	2 1407	1	132
3	51	15	2 1407	1	133
3	52	15	2 1407	1	134
3	53	14	2 1407	1	135
3	54	14	2 1407	1	136
3	55	13	2 1407	1	137
3	56	12	2 1407	1	138
3	57	12	2 1407	1	139
3	58	12	2 1407	1	140
3	59	11	2 1407	1	141
3	60	11	2 1407	1	142
3	61	11	2 1407	1	143
3	62	10	2 1407	1	144
3	63	10	2 1407	1	145
3	91	28	2 1407	1	146
3	102	20	2 1407	1	147
3	103	19	2 1407	1	148
3	104	15	2 1407	1	149
3	105	13	2 1407	1	150
3	106	10	2 1407	1	151
3	107	15	2 1407	1	152
3	203	20	2 1407	1	153
3	204	15	2 1407	1	154
3	205	13	2 1407	1	155
3	206	10	2 1407	1	156
3	207	16	2 1407	1	157
3	251	14	2 1407	1	158
3	252	14	2 1407	1	159
3	253	14	2 1407	1	160
4	2	211	2 1407	1	161
4	16	10	2 1407	1	162
4	17	10	2 1407	1	163
4	22	10	2 1407	1	164
4	28	10	2 1407	1	165
4	51	10	2 1407	1	166
4	52	10	2 1407	1	167
4	53	10	2 1407	1	168
4	54	10	2 1407	1	169
4	55	10	2 1407	1	170
4	56	10	2 1407	1	171
4	57	10	2 1407	1	172
4	58	10	2 1407	1	173
4	59	10	2 1407	1	174
4	60	10	2 1407	1	175
4	61	10	2 1407	1	176
4	62	10	2 1407	1	177
4	63	10	2 1407	1	178
4	91	10	2 1407	1	179
5	16	8	2 1407	1	180
5	17	7	2 1407	1	181
5	22	9	2 1407	1	182

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				MAT	MF	REC.
5	28	9	2	1407	1	183
5	91	11	2	1407	1	184
				1407	1	185
				1407	2	266
				1407	3	311
				1407	3	355
				1407	3	394
				1407	3	406
				1407	3	414
				1407	3	424
				1407	3	436
				1407	3	452
				1407	3	468
				1407	3	483
				1407	3	498
				1407	3	512
				1407	3	525
				1407	3	538
				1407	3	551
				1407	3	563
				1407	3	575
				1407	3	587
				1407	3	598
				1407	3	609
				1407	3	638
				1407	3	659
				1407	3	679
				1407	3	695
				1407	3	709
				1407	3	720
				1407	3	736
				1407	3	757
				1407	3	773
				1407	3	787
				1407	3	798
				1407	3	815
				1407	3	830
				1407	3	845
				1407	3	860
				1407	4	1073
				1407	4	1084
				1407	4	1095
				1407	4	1106
				1407	4	1117
				1407	4	1128
				1407	4	1139
				1407	4	1150
				1407	4	1161
				1407	4	1172
				1407	4	1183
				1407	4	1194
				1407	4	1205
				1407	4	1216
				1407	4	1227
				1407	4	1238
				1407	4	1249
				1407	4	1260
				1407	4	1271
				1407	5	1281
				1407	5	1289
				1407	5	1299

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MAT	MF	REC.
1407	5	1309
1407	5	1321

```
COMPARE TWO BCD FILES (COMPARE 82-1)
------------------------------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST-------      70 (  1 TO 80 )
COLUMNS TO COMPARE-------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (  1 TO 70 )
SPECIAL FILE FLAG--------------       2
ACCEPTABLE DIFFERENCE----------       0 (  1 TO 70 )
COMMENT CARDS-----------------COMPARED
------------------------------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
------------------------------------------------------------------------------------------------------------------------
FILE 1 =FP 1371 OLD
FILE 2 =FP 1407 NEW
------------------------------------------------------------------------------------------------------------------------
 FILE   CARD  CONTENTS
------------------------------------------------------------------------------------------------------------------------
                      1         2         3         4         5         6         7         8
 FILE   CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   1 451 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   2 151 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3   1 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3   2 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3   4 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3  16 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3  51 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3  52 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3  53 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3  54 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3  55 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3  56 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3  91 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3 102 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3 103 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3 104 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3 105 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3 107 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3 251 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3 252 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   3 253 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   4   2 ONLY ON FILE 1...SECTION SKIPPED
------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1371   4  16 ONLY ON FILE 1...SECTION SKIPPED
```

MAT/MF/MT= 1371 4 51 ONLY ON FILE 1...SECTION SKIPPED

MAT/MF/MT= 1371 4 52 ONLY ON FILE 1...SECTION SKIPPED

MAT/MF/MT= 1371 4 53 ONLY ON FILE 1...SECTION SKIPPED

MAT/MF/MT= 1371 4 54 ONLY ON FILE 1...SECTION SKIPPED

MAT/MF/MT= 1371 4 55 ONLY ON FILE 1...SECTION SKIPPED

MAT/MF/MT= 1371 4 56 ONLY ON FILE 1...SECTION SKIPPED

MAT/MF/MT= 1371 4 91 ONLY ON FILE 1...SECTION SKIPPED

MAT/MF/MT= 1371 5 16 ONLY ON FILE 1...SECTION SKIPPED

MAT/MF/MT= 1371 5 91 ONLY ON FILE 1...SECTION SKIPPED

1315 CARDS ON FILE 2 AFTER THE END OF FILE 1

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER
0	0	0	1	0	1	0
1371	1	451	ONLY ON FILE 1			
1371	2	151	ONLY ON FILE 1			
1371	3	1	ONLY ON FILE 1			
1371	3	2	ONLY ON FILE 1			
1371	3	4	ONLY ON FILE 1			
1371	3	16	ONLY ON FILE 1			
1371	3	51	ONLY ON FILE 1			
1371	3	52	ONLY ON FILE 1			
1371	3	53	ONLY ON FILE 1			
1371	3	54	ONLY ON FILE 1			
1371	3	55	ONLY ON FILE 1			
1371	3	56	ONLY ON FILE 1			
1371	3	91	ONLY ON FILE 1			
1371	3	102	ONLY ON FILE 1			
1371	3	103	ONLY ON FILE 1			
1371	3	104	ONLY ON FILE 1			
1371	3	105	ONLY ON FILE 1			
1371	3	107	ONLY ON FILE 1			
1371	3	251	ONLY ON FILE 1			
1371	3	252	ONLY ON FILE 1			
1371	3	253	ONLY ON FILE 1			
1371	4	2	ONLY ON FILE 1			
1371	4	16	ONLY ON FILE 1			
1371	4	51	ONLY ON FILE 1			
1371	4	52	ONLY ON FILE 1			
1371	4	53	ONLY ON FILE 1			
1371	4	54	ONLY ON FILE 1			
1371	4	55	ONLY ON FILE 1			
1371	4	56	ONLY ON FILE 1			
1371	4	91	ONLY ON FILE 1			
1371	5	16	ONLY ON FILE 1			
1371	5	91	14	0	1323	0

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER

	876	0	1325	0

END OF RUN

						MAT	MF	REC.
4.71090+ 4 1.07969+ 2	1	0	0	2	1409	1	1
0.00000+ 0 0.00000+ 0	0	0	0	0	1409	1	2
0.00000+ 0 0.00000+ 0	0	0	99	75	1409	1	3
47-AG-109 BNL,HEDL EVAL-JUN83 A.PRINCE,R.E.SCHENTER					1409	1	4
DIST-JUL83			830914		1409	1	5
EVALUATION OF A. PRINCE 7/80 WHICH SUPERSEDES ENDF/V MAT 1373					1409	1	6
BY BNL/HEDL (SCHENTER,BHAT,PRINCE AND JOHNSON). CHANGES IN					1409	1	7
THE CAPTURE AND ELASTIC KEEPING THE TOTAL CROSS SECTION					1409	1	8
CONSTANT WERE ALSO MADE BY R. SCHENTER. THESE CHANGES REFLECT					1409	1	9
THE USE OF RESULTS OF RECENT MEASUREMENTS BY MACKLIN AND					1409	1	10
POENITZ ON ISOTOPIC AND ELEMENTAL CAPTURE (REF.13 AND REF. 14).					1409	1	11
***** ***** *****					1409	1	12
FILE 2 RESONANCE PARAMETERS					1409	1	13
RESONANCE PARAMETERS BASED ON NEW EXPTL DATA (REF.1)					1409	1	14
L=0 NUMBER OF RESONANCES IS 83					1409	1	15
AVERAGE TOTAL WIDTH =2.11512-01 EV					1409	1	16
AVERAGE REDUCED NEUTRON WIDTH =2.80735-03 EV.					1409	1	17
AVERAGE GAMMA WIDTH =1.320-01 EV.					1409	1	18
AVERAGE LEVEL SPACING=3.04977+01 EV.					1409	1	19
S-WAVE STRENGTH FUNCTION =4.55065-05					1409	1	20
0.025 EV CAPTURE CROSS SECTION =9.0720+01 BARNS					1409	1	21
RESONANCE ABSORPTION INTEGRAL (0.5 EV CUT-OFF)= 1.4675+03 B					1409	1	22
EFFECTIVE SCATTERING RADIUS =6.60 FM.					1409	1	23
***** ***** *****					1409	1	24
FILE 3 SMOOTH CROSS SECTIONS					1409	1	25
					1409	1	26
ALL DATA RE-EVALUATED FROM LATEST EXPTL. DATA COUPLED WITH					1409	1	27
NUCLEAR MODEL CALCS.					1409	1	28
MT=1 TOTAL CROSS SECTIONS (ENERGY RANGE 0.25 MEV TO 20.0 MEV					1409	1	29
BASED ON AG-107 EXPTL. DATA OF REF.2, BNL-325 AND OPTICAL					1409	1	30
MODEL CALCS.					1409	1	31
MT=2 ELASTIC SCATTERING CROSS SECTIONS DERIVED FROM ANGLE					1409	1	32
INTEGRATED EXPTL DATA OF REF.2,BNL-325 AND OPTICAL MODEL					1409	1	33
CALCS.					1409	1	34
MT=4 TOTAL INELASTIC CROSS SECTION BASED ON EXPTL. RESULTS OF					1409	1	35
REF.2,3 AND HAUSER-FESHBACH CALCS.					1409	1	36
MT=16 N-2N CROSS SECTIONS WERE DETERMINED PRIMARILY FROM THE					1409	1	37
EXPTL. DATA OF REF.4.,BNL-325 AND STATISTICAL MODEL CALCS.					1409	1	38
MT=17,22,28,104,105,106 DETERMINED FROM STATISTICAL MODEL CALCS.					1409	1	39
MT=51 TO 70 DISCRETE INELASTIC CROSS SECTIONS, CALCULATED USING					1409	1	40
HAUSER-FESHBACH THEORY WITH WIDTH FLUCTUATION CORRECTIONS					1409	1	41
DERIVED BY REFS.5 AND 6, WERE COMBINED WITH EXPTL. DATA OF					1409	1	42
REFS.2,3 AND 7.					1409	1	43
LEVEL EXCITATION INFORMATION UP TO ENERGY= 1.66 MEV TAKEN					1409	1	44
FROM REFS.8,9 AND 10.					1409	1	45
MT=91 CONTINUUM INELASTIC CROSS SECTION WITH 0.911 MEV CUTOFF					1409	1	46
TAKEN AS DIFFERENCE BETWEEN TOTAL INELASTIC AND DISCRETE					1409	1	47
LEVEL EXCITATIONS.					1409	1	48
MT=102 RADIATIVE CAPTURE CROSS SECTION USING RESULTS MAINLY					1409	1	49
FROM REF.13. AND 14.					1409	1	50
MT=103 N-PROTON CROSS SECTIONS- HAUSER-FESHBACH AND EVAPORATION					1409	1	51
MODEL CALCS. WERE COMBINED WITH EXPTL. DATA OF REF.4. AND					1409	1	52
EXPTL DATA IN BNL-325					1409	1	53
MT=107 N-ALPHA CROSS SECTION CALCS. IN SAME MANNER AS MT=103					1409	1	54
MT=203,204,206,207 DERIVED FROM RESULTS OF H,D,T,HE-3 AND HE-4					1409	1	55
CONTAINED IN MT=1-3 TO 107 AND MT=22 AND 28.					1409	1	56
MT=251 TO 253 SAME AS BNL/HEDL ENDF/V 1979 EVALUATION REF 1					1409	1	57
***** ***** *****					1409	1	58
FILE 4- ANGULAR DISTRIBUTION OF SECONDARY NEUTRONS					1409	1	59
MT=2 SAME AS BNL/HEDL EVALUATION REF.11					1409	1	60

	MAT	MF	REC.
MT=16,17,22,28,51 TO 91 ANGULAR DISTRIBUTIONS ASSUMED TO BE	1409	1	61
ISOTROPIC	1409	1	62
FILE 5- ENERGY DISTRIBUTION OF SECONDARY NEUTRONS	1409	1	63
MT=16,17,22,28 AND 91 ENERGY DISTRIBUTIONS PRESENTED AS	1409	1	64
HISTOGRAMS BASED ON CALCS. USING NUCLEAR TEMPERATURES	1409	1	65
FROM REF.12.	1409	1	66
***** ***** *****	1409	1	67
SUMMARY	1409	1	68
FILES 1,2 AND 3 ARE COMPLETELY NEW EVALUATIONS RESOLTING	1409	1	69
FROM THE MOST RECENT EXPTL. DATA AND IMPROVED MODEL CALCS.	1409	1	70
FILE 4 INCLUDES 15 ADDITIONAL LEVEL EXCITATIONS AND THE	1409	1	71
ADDITION OF MT=17,22 AND 28.	1409	1	72
FILE 5 ALSO EXPANEDED TO INCLUDE MT=17,22 AND 28.	1409	1	73
***** ***** *****	1409	1	74
CODES USED	1409	1	75
1. CERBERO 2 IMPROVED VERSION OF THE CERBERO COMPUTER CODE	1409	1	76
FOR CALCULATION OF NUCLEAR REACTION CROSS SECTIONS	1409	1	77
F.FABBRI,ET AL, RT/FI(77)6 CNEN 1977	1409	1	78
2. ERINNI AN OPTICAL MODEL FORTRAN IV CODE FOR THE CALCULATION	1409	1	79
OF MULTIPLE CASCADING PARTICLE EMISSIONS F.FABBRI AND	1409	1	80
G.REFFO RT/FI(77)4 CNEN 1977	1409	1	81
3. SCAT4U BNL MODIFIED VERSION OF SCAT2 AN OPTICAL MODEL	1409	1	82
PROGRAM O.DERSILLON- BRUYERS-LE-CHATEL(PRI. COMM.)1979	1409	1	83
4. THRES2 MODIFIED VERSION OF THRESH -S.PEARLSTEIN BNL 1975	1409	1	84
(PRI. COMM.)	1409	1	85
***** ***** *****	1409	1	86
REFERENCES	1409	1	87
1. S.MUGHABGHAB BNL(PRIV. COMMUNICATION)	1409	1	88
2. A.B.SMITH,ET AL, ANL/NDM-46(JAN.1979)	1409	1	89
3. E.BARNARD ET AL, HARWELL CONF.(1978) PROL.-78-HA	1409	1	90
4. W.AUGUSTYNIAK,ET AL, NUCL. PHYS.A247,231(1975)	1409	1	91
5. J.W.TEPEL,ET AL, PHYS.LETT.49B,1(1974)	1409	1	92
6. H.M.HOFFMAN,ET AL, ANN, PHYS.90,403(1975)	1409	1	93
7. W.G.VONACH AND A.B.SMITH, NUCL. PHYS.78,389(1966)	1409	1	94
8. C.M.LEDERER,ET AL, TABLE OF ISOTOPES(7TH-ED.) WILEY(1978)	1409	1	95
9. H-W.SCHUH,ET AL, ZEIT.F.PHYSIK A293,301(1979)	1409	1	96
10. Z.MATUMATO,ET AL, JAERI-M7734(1978)	1409	1	97
11. R.E.SCHENTER,ET AL, ENDF/V SUMMARY DOCUMENTATION 47-107-1	1409	1	98
HEDL(1979)	1409	1	99
12. A.G.GILBERT AND A.G.W.CAMERON, CAN. J. PHYS.43,1446(1965)	1409	1	100
13. R.L.MACKLIN,NUCL.SCI.AND.ENG.82,400(1982)	1409	1	101
14. W.P.POENITZ,SPEC.MEET.ON.FAST.CAPTURE,ANL-83-4,239(1982)	1409	1	102
1 451 177 2	1409	1	103
2 151 88 2	1409	1	104
3 1 52 2	1409	1	105
3 2 52 2	1409	1	106
3 4 46 2	1409	1	107
3 16 11 2	1409	1	108
3 17 9 2	1409	1	109
3 22 8 2	1409	1	110
3 28 11 2	1409	1	111
3 51 16 2	1409	1	112
3 52 16 2	1409	1	113
3 53 14 2	1409	1	114
3 54 13 2	1409	1	115
3 55 12 2	1409	1	116
3 56 13 2	1409	1	117
3 57 13 2	1409	1	118
3 58 13 2	1409	1	119
3 59 12 2	1409	1	120
3 60 12 2	1409	1	121

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX
TEXT & DICT.

			MAT	MF	REC.
3	61	12	2 1409	1	122
3	62	12	2 1409	1	123
3	63	12	2 1409	1	124
3	64	11	2 1409	1	125
3	65	12	2 1409	1	126
3	66	11	2 1409	1	127
3	67	11	2 1409	1	128
3	68	10	2 1409	1	129
3	69	10	2 1409	1	130
3	70	10	2 1409	1	131
3	91	33	2 1409	1	132
3	102	20	2 1409	1	133
3	103	17	2 1409	1	134
3	104	14	2 1409	1	135
3	105	12	2 1409	1	136
3	106	9	2 1409	1	137
3	107	15	2 1409	1	138
3	203	18	2 1409	1	139
3	204	14	2 1409	1	140
3	205	12	2 1409	1	141
3	206	9	2 1409	1	142
3	207	15	2 1409	1	143
3	251	14	2 1409	1	144
3	252	14	2 1409	1	145
3	253	14	2 1409	1	146
4	2	211	2 1409	1	147
4	16	10	2 1409	1	148
4	17	10	2 1409	1	149
4	22	10	2 1409	1	150
4	28	10	2 1409	1	151
4	51	10	2 1409	1	152
4	52	10	2 1409	1	153
4	53	10	2 1409	1	154
4	54	10	2 1409	1	155
4	55	10	2 1409	1	156
4	56	10	2 1409	1	157
4	57	10	2 1409	1	158
4	58	10	2 1409	1	159
4	59	10	2 1409	1	160
4	60	10	2 1409	1	161
4	61	10	2 1409	1	162
4	62	10	2 1409	1	163
4	63	10	2 1409	1	164
4	64	10	2 1409	1	165
4	65	10	2 1409	1	166
4	66	10	2 1409	1	167
4	67	10	2 1409	1	168
4	68	10	2 1409	1	169
4	69	10	2 1409	1	170
4	70	10	2 1409	1	171
4	91	10	2 1409	1	172
5	16	8	2 1409	1	173
5	17	7	2 1409	1	174
5	22	11	2 1409	1	175
5	28	9	2 1409	1	176
5	91	11	2 1409	1	177
			1409	1	178
			1409	2	268
			1409	3	322
			1409	3	375
			1409	3	422

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX
TEXT & DICT.

MAT	MF	REC.
1409	3	434
1409	3	444
1409	3	453
1409	3	465
1409	3	482
1409	3	499
1409	3	514
1409	3	528
1409	3	541
1409	3	555
1409	3	569
1409	3	583
1409	3	596
1409	3	609
1409	3	622
1409	3	635
1409	3	648
1409	3	660
1409	3	673
1409	3	685
1409	3	697
1409	3	708
1409	3	719
1409	3	730
1409	3	764
1409	3	785
1409	3	803
1409	3	818
1409	3	831
1409	3	841
1409	3	857
1409	3	876
1409	3	891
1409	3	904
1409	3	914
1409	3	930
1409	3	945
1409	3	960
1409	3	975
1409	4	1188
1409	4	1199
1409	4	1210
1409	4	1221
1409	4	1232
1409	4	1243
1409	4	1254
1409	4	1265
1409	4	1276
1409	4	1287
1409	4	1298
1409	4	1309
1409	4	1320
1409	4	1331
1409	4	1342
1409	4	1353
1409	4	1364
1409	4	1375
1409	4	1386
1409	4	1397
1409	4	1408
1409	4	1419

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX TEXT & DICT.

MAT	MF	REC.
1409	4	1430
1409	4	1441
1409	4	1452
1409	4	1463
1409	5	1473
1409	5	1481
1409	5	1493
1409	5	1503
1409	5	1515

```
COMPARE TWO BCD FILES (COMPARE 82-1)
-------------------------------------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST-------      70 (  1 TO 80 )
COLUMNS TO COMPARE-------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (  1 TO 70 )
SPECIAL FILE FLAG--------------       2
ACCEPTABLE DIFFERENCE----------      0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
-------------------------------------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
-------------------------------------------------------------------------------------------------------------------------------
FILE 1 =FP 1373 OLD
FILE 2 =FP 1409 NEW
-------------------------------------------------------------------------------------------------------------------------------
 FILE  CARD  CONTENTS
-------------------------------------------------------------------------------------------------------------------------------
                      1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
-------------------------------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  1 451 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  2 151 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3   1 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3   2 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3   4 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3  16 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3  51 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3  52 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3  53 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3  54 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3  55 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3  91 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3 102 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3 103 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3 107 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3 251 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3 252 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  3 253 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  4   2 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  4  16 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  4  51 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  4  52 ONLY ON FILE 1...SECTION SKIPPED
-------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1373  4  53 ONLY ON FILE 1...SECTION SKIPPED
```

```
MAT/MF/MT= 1373  4  54 ONLY ON FILE 1...SECTION SKIPPED
MAT/MF/MT= 1373  4  55 ONLY ON FILE 1...SECTION SKIPPED
MAT/MF/MT= 1373  4  91 ONLY ON FILE 1...SECTION SKIPPED
MAT/MF/MT= 1373  5  16 ONLY ON FILE 1...SECTION SKIPPED
MAT/MF/MT= 1373  5  91 ONLY ON FILE 1...SECTION SKIPPED
  1510 CARDS ON FILE 2 AFTER THE END OF FILE 1
SUMMARY OF ENDF/B DIFFERENCES BY SECTION
 MAT  MF  MT        FILE 1          FILE 2
                 CARDS  DIFFER   CARDS  DIFFER
   0   0   0        1       0       1       0
1373   1 451 ONLY ON FILE 1
1373   2 151 ONLY ON FILE 1
1373   3   1 ONLY ON FILE 1
1373   3   2 ONLY ON FILE 1
1373   3   4 ONLY ON FILE 1
1373   3  16 ONLY ON FILE 1
1373   3  51 ONLY ON FILE 1
1373   3  52 ONLY ON FILE 1
1373   3  53 ONLY ON FILE 1
1373   3  54 ONLY ON FILE 1
1373   3  55 ONLY ON FILE 1
1373   3  91 ONLY ON FILE 1
1373   3 102 ONLY ON FILE 1
1373   3 103 ONLY ON FILE 1
1373   3 107 ONLY ON FILE 1
1373   3 251 ONLY ON FILE 1
1373   3 252 ONLY ON FILE 1
1373   3 253 ONLY ON FILE 1
1373   4   2 ONLY ON FILE 1
1373   4  16 ONLY ON FILE 1
1373   4  51 ONLY ON FILE 1
1373   4  52 ONLY ON FILE 1
1373   4  53 ONLY ON FILE 1
1373   4  54 ONLY ON FILE 1
1373   4  55 ONLY ON FILE 1
1373   4  91 ONLY ON FILE 1
1373   5  16 ONLY ON FILE 1
1373   5  91       14       0    1517       0
SUMMARY OF DIFFERENCES FOR ENTIRE FILES
                 FILE 1          FILE 2
              CARDS  DIFFER   CARDS  DIFFER
                809       0    1519       0
END OF RUN
```

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX TEXT & DICT.

						MAT	MF	REC.
5.41320+ 4	1.30771+ 2	1	0	0	2	1352	1	1
0.00000+ 0	0.00000+ 0	0	0	0	0	1352	1	2
0.00000+ 0	0.00000+ 0	0	0	39	31	1352	1	3

54-XE-132 BNL EVAL-MAR78 M.R.BHAT AND S.F.MUGHABGHAB 1352 1 4
DIST-OCT80 REV1-OCT80 801027 1352 1 5
THIS EVALUATION IS THE SAME AS IN ENDF/B-IV(MAT=1176) 1352 1 6
EXCEPT FOR CHANGES IN THE FOLLOWING MF/MTS - 2/151,3/1, 1352 1 7
3/2,3/102,3/103,5/17 1352 1 8
DATA USED 1352 1 9
2200 M/SEC CAPTURE CROSS-SECTION 0.44B. MEAN OF THE CAPTURE 1352 1 10
CROSS-SECTION TO THE METASTABLE STATE BY EASTWOOD ET. 1352 1 11
AL.EANDC(CAN)-16(1963) AND OF KONDAIAH ET.AL.NPA/120, 1352 1 12
329(1968) IS 26MB. KARDON,YF,10,27(1969) OBTAINS FOR 1352 1 13
THE RATIO SIGMA(METASTABLE)/SIGMA(GROUND) = 0.063.IF 1352 1 14
THIS RATIO IS USED WITH THE ABOVE VALUE OF 26MB ONE 1352 1 15
OBTAINS SIGMA(GROUND)=413MB.MEAN OF THIS AND KONDAIAH 1352 1 16
VALUE OF 415MB IS 414MB WHICH ADDED TO 26MB GIVES 0.44B 1352 1 17
RESOLVED RESONANCE PARAMETERS BY P.RIBON,THESIS,UNIVERSITY OF 1352 1 18
PARIS,JAN16,1969.BOUND LEVEL PARAMETERS ADJUSTED TO 1352 1 19
GIVE THE ASSIGNED THERMAL CAPTURE CROSS-SECTION. 1352 1 20
MEV TOTAL CROSS SECTION OF NATURAL XENON BY F.J.VAUGHN ET.AL 1352 1 21
PHYS.REV. 118,683,1960 1352 1 22
(N,P) CROSS-SECTION CALCULATED USING FASCRO NORMALISED TO 3.3MB 1352 1 23
AT 14.5MEV. THIS IS A MEAN OF THE DATA OF E.KONDAIAH ET 1352 1 24
AL. NP/A120,329(1968) AND SIGG ET.AL.NSE 60,235(1976) 1352 1 25
PARTICLE THRESHOLD ENERGIES CALCULATED USING THE DATA OF 1352 1 26
A.H.WAPSTRA AND N.B.GOVE,NUCLEAR DATA TABLES VOLA9,267, 1352 1 27
1971 1352 1 28
NUCLEAR MODEL CALCULATIONS 1352 1 29
OPTICAL MODEL PARAMETERS WILMORE-HODGSON PARAMETERS P.E.HODGSON 1352 1 30
ANN.REV.NUCL.SCI.VOL17,1,1967 R0=1.26FM. 1352 1 31
CODES USED 1352 1 32
1.ABACUS-2 E.H.AUERBACH BNL6562,1964 1352 1 33
TOTAL AND SHAPE-ELASTIC CROSS-SECTIONS 1352 1 34
2.COMMNUC(AI-AEC-12931)C.DUNFORD. COMPOUND NUCLEUS 1352 1 35
REACTION CROSS SECTIONS. 1352 1 36
3.FASCRO(TO BE PUBLISHED)S.PEARLSTEIN,(N,PARTICLE)CROSS 1352 1 37
SECTIONS. 1352 1 38
4.CHAD(NAA-SR-11231)R.F.BERLAND. ANGULAR DISTRIBUTION 1352 1 39
DATA FITTED BY USING THIS CODE. 1352 1 40
NUCLEAR TEMPERATURE CALCULATIONS BASED ON GILBERT AND CAMERON 1352 1 41
CAN.JOUR.PHYS.VOL43,1446,1965 1352 1 42

1	451	73	2	1352	1	43
2	151	9	1	1352	1	44
3	1	29	1	1352	1	45
3	2	29	1	1352	1	46
3	4	18	0	1352	1	47
3	16	8	0	1352	1	48
3	17	5	0	1352	1	49
3	51	17	0	1352	1	50
3	52	14	0	1352	1	51
3	53	13	0	1352	1	52
3	54	11	2	1352	1	53
3	91	11	0	1352	1	54
3	102	25	1	1352	1	55
3	103	10	1	1352	1	56
3	104	7	0	1352	1	57
3	105	6	0	1352	1	58
3	107	9	0	1352	1	59
3	251	15	1	1352	1	60

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX
TEXT & DICT.

			MAT	MF	REC.
3	252	15	1 1352	1	61
3	253	15	1 1352	1	62
4	2	220	1 1352	1	63
4	16	10	0 1352	1	64
4	17	10	0 1352	1	65
4	51	10	0 1352	1	66
4	52	10	0 1352	1	67
4	53	10	0 1352	1	68
4	54	10	0 1352	1	69
4	91	10	0 1352	1	70
5	16	9	0 1352	1	71
5	17	8	1 1352	1	72
5	91	12	0 1352	1	73
			1352	1	74
			1352	2	85
			1352	3	116
			1352	3	146
			1352	3	165
			1352	3	174
			1352	3	180
			1352	3	198
			1352	3	213
			1352	3	227
			1352	3	239
			1352	3	251
			1352	3	277
			1352	3	288
			1352	3	296
			1352	3	303
			1352	3	313
			1352	3	329
			1352	3	345
			1352	3	361
			1352	4	583
			1352	4	594
			1352	4	605
			1352	4	616
			1352	4	627
			1352	4	638
			1352	4	649
			1352	4	660
			1352	5	671
			1352	5	680
			1352	5	693

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX

COMPARE TWO BCD FILES (COMPARE 82-1)

```
COLUMNS TO READ AND LIST-------      70 (  1 TO 80 )
COLUMNS TO COMPARE------------       66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (  1 TO 70 )
SPECIAL FILE FLAG-------------        2
ACCEPTABLE DIFFERENCE---------        0 (  1 TO 70 )
COMMENT CARDS-----------------COMPARED
```

DESCRIPTION OF TWO FILES TO BE COMPARED

```
FILE 1 =FP 1352 OLD
FILE 2 =FP 1352 NEW
```

```
 FILE  CARD  CONTENTS

                         1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890

    1   44                                 1        451        73         11352 1451    43
    2   44                                 1        451        73         21352 1451    43
 DIFFERENCES                                                              $
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1352	1	451	74	1	74	1	(DIFFERENCES)
1352	2	151	11	0	11	0	
1352	3	1	31	0	31	0	
1352	3	2	30	0	30	0	
1352	3	4	19	0	19	0	
1352	3	16	9	0	9	0	
1352	3	17	6	0	6	0	
1352	3	51	18	0	18	0	
1352	3	52	15	0	15	0	
1352	3	53	14	0	14	0	
1352	3	54	12	0	12	0	
1352	3	91	12	0	12	0	
1352	3	102	26	0	26	0	
1352	3	103	11	0	11	0	
1352	3	104	8	0	8	0	
1352	3	105	7	0	7	0	
1352	3	107	10	0	10	0	
1352	3	251	16	0	16	0	
1352	3	252	16	0	16	0	
1352	3	253	16	0	16	0	
1352	4	2	222	0	222	0	
1352	4	16	11	0	11	0	
1352	4	17	11	0	11	0	
1352	4	51	11	0	11	0	
1352	4	52	11	0	11	0	
1352	4	53	11	0	11	0	
1352	4	54	11	0	11	0	
1352	4	91	11	0	11	0	
1352	5	16	11	0	11	0	
1352	5	17	9	0	9	0	
1352	5	91	13	0	13	0	
1352	5	91	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER
697	1	697	1

END OF RUN

						MAT	MF	REC.
5.41350+ 4	1.33748+ 2	0	0	0	1	1294	1	1
0.00000+ 0	1.00000+ 0	0	0	0	0	1294	1	2
0.00000+ 0	0.00000+ 0	0	0	53	16	1294	1	3
54-XE-135 BNW		EVAL-JUN67 B.R.LEONARD,JR. AND K.B.STEWART				1294	1	4
PRI.COM.JUNE,1967		DIST-OCT80 REV1-OCT80			801027	1294	1	5
*	*	*	*	*	*	1294	1	6
ENDF/B VERSION-IV MODIFICATIONS=				(APR74)		1294	1	7
FILE EXTENDED FROM 1.0 KEV TO 20.0 MEV BY F.SCHMITTROTH AND						1294	1	8
R.E. SCHENTER (HEDL)						1294	1	9
ADDED SAME ANGULAR DISTRIBUTION (MF=4,MT=2) AS FOR						1294	1	10
CS-133 (MAT=1141).						1294	1	11
*	*	*	*	*	*	1294	1	12
DATA MODIFIED JUNE,1970 TO CONFORM TO ENDF/B-II FORMATS						1294	1	13
*	*	*	*	*	*	1294	1	14
XENON-135 ENTRY BY B.R.LEONARD,JR. AND K.B.STEWART REF.1						1294	1	15
JUNE 1967						1294	1	16
*	*	*	*	*	*	1294	1	17
XE 135 EVALUATION UPDATED FOR ENERGIES FROM 1 KEV TO						1294	1	18
20 MEV.						1294	1	19
F. SCHMITTROTH AND R.E. SCHENTER						1294	1	20
WESTINGHOUSE HANFORD COMPANY (FEBRUARY 1974)						1294	1	21
MT=1 TOTAL CROSS SECTION WAS OBTAINED FROM MOLDAUERS						1294	1	22
OPTICAL POTENTIAL,REF.6.						1294	1	23
MT=2 ELASTIC CROSS SECTION WAS OBTAINED BY SUBTRACTING						1294	1	24
THE INELASTIC AND CAPTURE CROSS SECTIONS FROM						1294	1	25
TOTAL.						1294	1	26
MT=4,51,91 INELASTIC CROSS SECTIONS WERE OBTAINED						1294	1	27
FROM THE COMPOUND NUCLEUS CODE COMNUC,REF.7.						1294	1	28
MT=102 NEUTRON CAPTURE OBTAINED FROM THE CODE NCAP,						1294	1	29
REF.8.						1294	1	30
*	*	*	*	*	*	1294	1	31
MF=1		GENERAL INFORMATION				1294	1	32
MT=451 ATOMIC MASS = 134.907 REF.2						1294	1	33
MF=3		SMOOTH CROSS SECTIONS				1294	1	34
MT=1 THE RESONANCE PARAMETERS OF SUMNER(REF.4) HAVE BEEN						1294	1	35
MT=2 ACCEPTED AS THE BEST ESTIMATE OF THE CROSS SECTION.						1294	1	36
MT=102 THESE PARAMETERS HAVE BEEN USED IN THE PROGRAM						1294	1	37
UNICORN(REF.5) TO CALCULATE POINT VALUES AT 0 DEG.K						1294	1	38
FROM 0.0001 EV TO 1 KEV .THE CALCULATIONS GIVE						1294	1	39
SIGMA CAPTURE = 2.636E+06 BARNS AT 0.0253 EV.						1294	1	40
Q-VALUE REF.J.MATTAUCH ET AL.NUC.PHYS 67(1965)NO.1						1294	1	41
MF=8,MT=457 EVAL DATE 07/14/76 BY RLB (INEL)						1294	1	42
REFERENCE: EA HENRY, NUCL.DATA SHEETS 14 #2,191(1975)						1294	1	43
MJ MARTIN, 'NUCLEAR DECAY DATA FOR SELECTED RADIO-						1294	1	44
NUCLIDES', ORNL-5514,40(1976) % ENSDF (751219)						1294	1	45
** NOTE ** SECONDARY SPECTRA FROM ORNL-5514,40(1976)						1294	1	46
ICC(249.8-KEV GAMMA) = 0.0723 (0.0022) PURE M1						1294	1	47
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 12/78						1294	1	48
REFERENCES						1294	1	49
1. LEONARD,B.R.,STEWART,K.B.,PNL JUNE 1967						1294	1	50
2. EVERLING,F.,ET.AL.,NUCL.PHYS.18,529(1960).						1294	1	51
4. SUMNER,H.M.,AEEW-R-116(JUNE 1962).						1294	1	52
5. OTTER,J.M.,NAA-SR.11980,VOL.6(JUNE 1966).						1294	1	53
6. F.A.MOLDAUER,PHYS.REV.,VOL.135(1964)B642.						1294	1	54
7. C.DUNFORD, COMNUC-3,PRIVATE COMM. TO A.PRINCE.						1294	1	55
8. F.SCHMITTROTH,HEDL-TME-71-106,AUGUST 1971.						1294	1	56
	1	451	72		1	1294	1	57
	2	151	4		0	1294	1	58
	3	1	130		0	1294	1	59
	3	2	130		0	1294	1	60

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX TEXT & DICT.

			MAT	MF	REC.
3	4	8	0 1294	1	61
3	51	8	0 1294	1	62
3	91	8	0 1294	1	63
3	102	130	0 1294	1	64
3	251	14	0 1294	1	65
3	252	14	0 1294	1	66
3	253	14	0 1294	1	67
4	2	206	0 1294	1	68
4	51	10	0 1294	1	69
4	91	10	0 1294	1	70
5	91	7	0 1294	1	71
8	457	69	1 1294	1	72
			1294	1	73
			1294	2	79
			1294	3	211
			1294	3	342
			1294	3	351
			1294	3	360
			1294	3	369
			1294	3	500
			1294	3	515
			1294	3	530
			1294	3	545
			1294	4	753
			1294	4	764
			1294	4	775
			1294	5	784
			1294	8	855

COMPARE TWO BCD FILES (COMPARE 82-1)

```
COLUMNS TO READ AND LIST-------      70 (   1 TO 80 )
COLUMNS TO COMPARE------------       66 (   1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (   1 TO 70 )
SPECIAL FILE FLAG-------------        2
ACCEPTABLE DIFFERENCE----------       0 (   1 TO 70 )
COMMENT CARDS------------------COMPARED
```

DESCRIPTION OF TWO FILES TO BE COMPARED

FILE 1 =FP 1294 OLD
FILE 2 =FP 1294 NEW

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 FILE  CARD  CONTENTS
                              1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890

    1    58                                   1      451         72          01294 1451   57
    2    58                                   1      451         72          11294 1451   57
 DIFFERENCES                                                                 $
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1294	1	451	73	1	73	1	(DIFFERENCES)
1294	2	151	6	0	6	0	
1294	3	1	132	0	132	0	
1294	3	2	131	0	131	0	
1294	3	4	9	0	9	0	
1294	3	51	9	0	9	0	
1294	3	91	9	0	9	0	
1294	3	102	131	0	131	0	
1294	3	251	15	0	15	0	
1294	3	252	15	0	15	0	
1294	3	253	15	0	15	0	
1294	4	2	208	0	208	0	
1294	4	51	11	0	11	0	
1294	4	91	11	0	11	0	
1294	5	91	9	0	9	0	
1294	8	457	71	0	71	0	
1294	8	457	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER
859	1	859	1

END OF RUN

						MAT	MF	REC.
6.31520+ 4	1.50620+ 2	1	0	0	2	1292	1	1
0.00000+ 0	1.00000+ 0	0	0	0	0	1292	1	2
0.00000+ 0	0.00000+ 0	0	0	173	42	1292	1	3
63-EU-152 BNL	EVAL-DEC73 H.TAKAHASHI					1292	1	4
	DIST-OCT80 REV1-OCT80			801027		1292	1	5
THIS MATERIAL CONTAINS THE EVALUATED RESULTS FOR THE NEUTRON						1292	1	6
CROSS SECTION FOR EUROPIUM ISOTOPES OF EU-152. NO EXPERIMENTAL						1292	1	7
DATA ARE AVAILABLE FOR THESE ISOTOPES EXCEPT FEW REACTIONS, SO						1292	1	8
THAT THE EVALUATIONS WERE MOSTLY CARRIED OUT BY NUCLEAR MODEL						1292	1	9
CALCULATIONS.						1292	1	10
3. FILE 2 RESONANCE PARAMETERS						1292	1	11
3.1 RESOLVED RESONANCES						1292	1	12
THE RESOLVED RESONANCE PARAMETERS WERE MADE BY TAKING INTO						1292	1	13
ACCOUNT THEIR STATISTICAL PROPERTIES FOR LEVEL SPACING AND						1292	1	14
REDUCED NEUTRON WIDTH FLUCTUATION. THE METHOD USED IN THIS						1292	1	15
CALCULATION WAS SIMILAR TO THE PROCEDURE USED BY COOK. (1)						1292	1	16
HOWEVER, INSTEAD OF USING THE MONTE CARLO CALCULATION, THE						1292	1	17
LEVEL SPACING AND THE REDUCED NEUTRON WIDTH FLUCTUATION ARE						1292	1	18
DETERMINED BY USING THE STATISTICAL PROPERTIES OF EU-151.						1292	1	19
THE AVERAGE VALUES OF THESE QUANTITIES ARE DETERMINED IN THE						1292	1	20
SIMILAR WAY AS THE PROCEDURE OF BARR ET AL. (2) THAT IS, THE						1292	1	21
RATIOS OF THE AVERAGE VALUES FOR ODD EVEN NUCLEI TO THOSE FOR						1292	1	22
ODD-ODD NUCLEI WERE ESTIMATED FROM THEIR NEIGHBORING NUCLEI.						1292	1	23
THESE RATIOS WERE MULTIPLIED TO THE VALUES OF EU-151 TO OBTAIN						1292	1	24
THE ONES FOR EU-152. THE GAMMA RAY WIDTH WERE TAKEN AS						1292	1	25
CONSTANT VALUES FOR ALL RESONANCES.						1292	1	26
THE 108 RESONANCES WERE ASSIGNED BETWEEN 0.01EV AND 61.704EV.						1292	1	27
THERMAL NEUTRON CAPTURE CROSS SECTION HAD BEEN MEASURED BY						1292	1	28
HAYDEN ET AL. (3) AND WALKER (4). THE PRELIMINARY DRAFT OF NEW						1292	1	29
BNL-325 IS RECOMMENDING THOSE VALUES AS 2300 +/- 1000 BARN FOR						1292	1	30
EU-152 (GROUND). THE PARAMETERS OF THE LOWEST RESONANCES WERE						1292	1	31
ADJUSTED SO THAT THE CALCULATED THERMAL NEUTRON CAPTURE						1292	1	32
CROSS SECTIONS AGREE WITH THE VALUES RECOMMENDED IN THE NEW						1292	1	33
BNL-325. (5)						1292	1	34
3.2 UNRESOLVED RESONANCES						1292	1	35
UNRESOLVED RESONANCE PARAMETERS WERE GIVEN THE ENERGY REGIONS						1292	1	36
FROM 61.5 EV TO 10 KEV. AS MENTIONED ABOVE, BARR AND DEVANEY (2)						1292	1	37
EVALUATED THE UNRESOLVED RESONANCE PARAMETERS BY STUDYING THE						1292	1	38
CHANGE OF THESE PARAMETERS FROM ODD-ODD NUCLEI TO ODD-EVEN						1292	1	39
NUCLEI OF LU-175, LU-176, AND TA-180, TA-181. THE UNRESOLVED						1292	1	40
RESONANCE PARAMETERS WERE ESTIMATED BY USING THE NEW BNL-325						1292	1	41
VALUES.						1292	1	42
4. FILE 3 (NEUTRON CROSS SECTION)						1292	1	43
4.1 TOTAL CROSS SECTION (MT = 1)						1292	1	44
BETWEEN 10000 EV TO 2.5 MEV NEUTRON ENERGY, THE TOTAL CROSS						1292	1	45
SECTIONS WERE CALCULATED USING THE ABACUS-2 CODE (6) OF THE						1292	1	46
OPTICAL MODEL. THE OPTICAL PARAMETERS USED IN THE CALCULATION						1292	1	47
WILL BE SHOWN IN THE LATER SECTION. ABOVE 2.5 MEV, THE TOTAL						1292	1	48
CROSS SECTIONS WERE ASSUMED TO BE THE SAME AS THE EXPERIMENTAL						1292	1	49
VALUES OF NATURAL EUROPIUM MEASURED BY FOSTER. (7)						1292	1	50
4.2 ELASTIC SCATTERING CROSS SECTION (MT = 2)						1292	1	51
THE ELASTIC SCATTERING CROSS SECTIONS IN THE ENERGY HIGHER						1292	1	52
THAN THE UNRESOLVED RESONANCE ENERGY WERE OBTAINED BY						1292	1	53
SUBSTRUCTING THE NON ELASTIC CROSS SECTION FROM THE EVALUATED						1292	1	54
TOTAL CROSS SECTION.						1292	1	55
4.3 NONELASTIC SCATTERING CROSS SECTION (MT = 3)						1292	1	56
THE NONELASTIC SCATTERING CROSS SECTION WAS CALCULATED BY						1292	1	57
SUMMING UP ALL CROSS SECTIONS EXCEPT THE ELASTIC SCATTERING						1292	1	58
CROSS SECTION.						1292	1	59
4.4 INELASTIC SCATTERING CROSS SECTION (MT=4,51,52...,91)						1292	1	60
THE INELASTIC SCATTERING CROSS SECTIONS WERE GIVEN AS TOTAL						1292	1	61

3	59	12	2	1409	1	121
3	60	12	2	1409	1	121

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX TEXT & DICT.

	MAT	MF	REC.
(MT = 4), DISCRETE LEVEL EXCITATION CROSS SECTION (MT=51...) FOR	1292	1	62
THE FIRST 5 LEVELS AND CONTINUUM LEVEL EXCITATION CROSS SECTION	1292	1	63
(MT = 91). THE LEVEL SCHEME FOR THESE DISCRETE LEVEL IS TAKEN	1292	1	64
FROM REF. (9,10,11,12,13).	1292	1	65
SINCE NO EXPERIMENTAL DATA ARE AVAILABLE FOR THE INDIVIDUAL	1292	1	66
LEVEL EXCITATION CROSS SECTIONS, THEY WERE CALCULATED USING THE	1292	1	67
COMNUC-3 CODE (14,15) FOR ENERGIES UP TO 3 MEV. ABOVE 3 MEV,	1292	1	68
NEUTRON ENERGY, INELASTIC SCATTERING IS MOSTLY THE EXCITATION OF	1292	1	69
THE CONTINUUM OF LEVELS, SO THAT THE INELASTIC SCATTERING CROSS	1292	1	70
SECTION FOR DISCRETE LEVEL EXCITATION ABOVE THIS ENERGY WAS	1292	1	71
NEGLECTED AND THE INELASTIC SCATTERING CROSS SECTION FOR	1292	1	72
CONTINUUM LEVEL EXCITATION WAS CALCULATED BY THE CASCADE	1292	1	73
CALCULATION OF GROGI-3 CODE. (16) THE LEVEL DENSITY PARAMETERS	1292	1	74
FOR THE CONTINUUM OF LEVELS WERE TAKEN FROM COOK'S DATA (18) FOR	1292	1	75
THE DEFORMED NUCLEI USING THE GILBERT-CAMERON FORMULA. (19)	1292	1	76
4.5 (N,P) AND (N,N',P) CROSS SECTION (MT = 103, 28)	1292	1	77
NO EXPERIMENTAL VALUES WERE AVAILABLE, SO THAT WE CALCULATED	1292	1	78
THESE BY NUCLEAR MODEL CODES. FOR (N,P) REACTION, THE SEMI-	1292	1	79
EMPIRICAL STATISTICAL MODEL CODE THRESH (21) WAS USED, BUT THE	1292	1	80
EVALUATION (7) OF EU-151 AND EU-153 INDICATED THAT THE CROSS	1292	1	81
SECTIONS AROUND 14 MEV CALCULATED BY THIS CODE WERE SMALL	1292	1	82
COMPARED TO THE EXPERIMENTAL VALUES. THUS, THE CALCULATED CROSS	1292	1	83
SECTIONS WERE NORMALIZED BY THE FACTORS OBTAINED FOR EU-151.	1292	1	84
THE (N,N'P) CROSS SECTIONS WERE CALCULATED BY USING GROGI-3.	1292	1	85
4.6 (N,ALPHA) AND (N,N'D) CROSS SECTION (MT = 107,22)	1292	1	86
THESE CROSS SECTIONS WERE OBTAINED IN THE SINILAR MANNER AS THE	1292	1	87
CASES OF (N,P) AND (N,N'P) REACTIONS.	1292	1	88
4.7 (N,2N), (N,3N) CROSS SECTION (MT = 16, 17)	1292	1	89
THESE CROSS SECTIONS WERE CALCULATED BY USING THE GROGI-3 CODE.	1292	1	90
THE OPTICAL MODEL PARAMETERS DESCRIBED IN THE LATER SECTION WERE	1292	1	91
USED.	1292	1	92
4.8 (N,D),(N,T),AND(N,HE-3) REACTION CROSS SECTION (MT=104,105,	1292	1	93
AND 107)	1292	1	94
THE CROSS SECTIONS CALCULATED BY THRESH WERE ADAPTED AS THE	1292	1	95
EVALUATED CROSS SECTIONS.	1292	1	96
4.9 THE RADIATIVE CAPTURE CROSS SECTION (MT = 102)	1292	1	97
THE RADIATIVE CAPTURE CROSS SECTIONS AT LOW ENERGY RANGE WERE	1292	1	98
CALCULATED FROM THE RESONANCE PARAMETERS DISCUSSED IN THE SECTION	1292	1	99
OF FILE 2 AND ARE PRESENTED AS THE SMOOTH CROSS SECTIONS. THE	1292	1	100
CROSS SECTIONS BETWEEN 100 EV AND 10 KEV ARE PRESENTED AS THE	1292	1	101
UNRESOLVED RESONANCE PARAMETERS.	1292	1	102
FOR ENERGY HIGHER THAN 10 KEV, THE CROSS SECTIONS WERE EVALUATED	1292	1	103
BY THE COMNUC-3 CALCULATION. THE CALCULATION WAS DONE SIMILARLY	1292	1	104
TO THE ONES FOR EU-151 AND EU-153 (7). THAT IS, WE ASSUMED	1292	1	105
MOLDAUER'S Q VALUE TO BE ZERO, AND THE CORRELATION CORRECTION	1292	1	106
FACTOR DUE TO THE DEGREE OF FREEDOM ASSOCIATED WITH OPEN CHANNEL	1292	1	107
WAS TAKEN INTO ACCOUNT IN THE CALCULATION. FROM 3 MEV TO 20 MEV,	1292	1	108
THE CAPTURE CROSS SECTION WAS OBTAINED BY GROGI-3 FOR COMPOUND	1292	1	109
PROCESS, BY THE CVELBAR'S FORMULA (22) BASED ON LANE-LYNN (23)	1292	1	110
AND BROWN'S (24) FORMULA FOR THE DIRECT AND SEMI-DIRECT	1292	1	111
REACTION.	1292	1	112
5. FILE 4 (ANGULAR DISTRIBUTION OF SECONDARY NEUTRONS)	1292	1	113
5.1 ELASTIC SCATTERING (MT = 2)	1292	1	114
THESE WERE CALCULATED BY ABACUS-2 (NABAK PDP-10 VERSION) (6) AND	1292	1	115
THE LEGENDRE COEFFICIENTS CALCULATED BY CHAD (NUCHAD IN PDP-10	1292	1	116
VERSION) (25) WERE GIVEN. SINCE THE ELASTIC SCATTERING DUE TO THE	1292	1	117
NUCLEAR COMPOUND PROCESS IS SMALL IN THE ENERGY RANGE ABOVE 3	1292	1	118
MEV, THE ANGULAR DISTRIBUTION OF ELASTIC SCATTERING NEUTRON	1292	1	119
WAS CALCULATED BY TAKING ONLY THE SHAPE ELASTIC SCATTERING INTO	1292	1	120
ACCOUNT ABOVE 3 MEV.	1292	1	121
5.2 INELASTICALLY SCATTERED NEUTRON, (N,2N),(N,3N),(N,N'P), AND	1292	1	122

	MAT	MF	REC.
(N,N'ALPHA) REACTION (MT=51,...,91, MT=16,17,22,23)	1292	1	123
NEUTRONS FROM THESE REACTIONS WERE ASSUMED TO BE ISOTROPIC IN	1292	1	124
THE CENTER OF MASS SYSTEM.	1292	1	125
6. FILE 5 (ENERGY DISTRIBUTION OF SECONDARY NEUTRONS)	1292	1	126
6.1 (N,2N), (N,3N), AND (N,N') REACTIONS (MT=16,16,AND 91)	1292	1	127
THE ENERGY DISTRIBUTIONS OF NEUTRON FROM THE (N,2N), (N,3N)	1292	1	128
AND THE INELASTIC SCATTERING CROSS SECTION OF CONTINUUM PART WERE	1292	1	129
ASSUMED AS MAXWELLIAN. THE EFFECTIVE TEMPERATURE OF THESE	1292	1	130
MAXWELLIANS WERE OBTAINED BY THE WEISKOPF FORMULA. (26)	1292	1	131
7. FILE 8 RADIOATIVE DECAY DATA	1292	1	132
7.1 RADIOATIVE DECAY DATA MT=457	1292	1	133
11/28/78 RLB (INEL)	1292	1	134
152EU EC DECAY (13.33 Y) ENSDF DATED 780601	1292	1	135
152EU B- DECAY (13.33 Y) ENSDF DATED 780601	1292	1	136
"(EC+B+)=72.08 19	1292	1	137
"B-=27.92 19	1292	1	138
NR AND BR ARE OBTAINED FROM I(1408G)=20.85 9 PER 100	1292	1	139
152EU DECAYS (152SM G) AND THE REQUIREMENT SUM I(G+CE TO GS)=100.	1292	1	140
UNCERTAINTIES ARE OMITTED HERE SINCE THE RI ALREADY CONTAIN THE	1292	1	141
TOTAL UNCERTAINTY APPROPRIATE TO PHOTONS PER 100 152EU DECAYS.	1292	1	142
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 1/79	1292	1	143
ADDED TO TRANSLATED ENDF/B-IV FILE BY KINSEY (BNL) 3/79	1292	1	144
1. J.L.COOK, AAEC/TM-549 (1969).	1292	1	145
2. D.W.BARR AND J.H.DEVANEY, LA-3643 (1967).	1292	1	146
3. R.J.HAYDEN, ET. AL., PHYS. REV. 75, 1500 (1949).	1292	1	147
4. W.H.WALKER, AECL-3037, PART I (1969).	1292	1	148
5. S.F.MUGHABGHAB, AND D.GARBER, BNL-325 THIRD EDIT.	1292	1	149
VOL 1. (1973).	1292	1	150
6. E.H.AUERBACH, BNL-6562 (1962).	1292	1	151
7. H.TAKAHASHI, EVALUATION OF THE NEUTRON AND GAMMA-RAY	1292	1	152
PRODUCTION CROSS SECTION FOR EU-151 AND EU-153 TO BE	1292	1	153
PUBLISHED AS BNL REPORT (1973).	1292	1	154
8. D.G.FOSTER JR., AND D.W.GLASGOW, PNWL UNPUBLISHED DATA (1966).	1292	1	155
9. T.LEWISE AND R.GRATZER, NUCL. PHYS. A162, 145 (1971).	1292	1	156
10. FAESLLER, NUCL. PHYS. 59, 1977 (1964).	1292	1	157
11. L.V.GROSHEV ET AL., NUCL. DATA TABLE A5, 1 (1968).	1292	1	158
12. D.J.HOREN ET AL., "NUCLEAR LEVEL SCHEME A=45 THROUGH A=257,"	1292	1	159
TO BE PUBLISHED IN NUCL. DATA TABLES.	1292	1	160
13. C.LEDERER, J.HOLLANDER AND I.PERLMAN, TABLE OF ISOTOPES,	1292	1	161
SIXTH EDITION (1967).	1292	1	162
14. C.DUNFORD, PRIVATE COMMUNICATION (COMNUC-3 CODE) (1971).	1292	1	163
15. C.DUNFORD, AI-AEC-12931 (1970).	1292	1	164
16. H.TAKAHASHI, GROGI-III, MODIFIED FROM GROGI-2. (17)	1292	1	165
17. J.GILAT, BNL-50246(T-580) (1969).	1292	1	166
18. J.COOK, H.FERGUSON AND A.MUSGROVE, AAEC/TM-392 (1967).	1292	1	167
19. A.GILBERT AND A.CAMERON, CAN. J. PHYS. 43, 1446 (1965).	1292	1	168
20. T.TAMURA, REV. MOD. PHYS. 37, 679 (1965).	1292	1	169
21. S.PEARLSTEIN, J. NUCL. ENER. 27, 81 (1973).	1292	1	170
22. F.CVELBAR, ET. AL., NIJS REPORT T-529 (1968).	1292	1	171
23. A.M.LANE AND J.E.LYNN, GENEVA CONFERENCE ON PEACEFUL USES OF	1292	1	172
ATOMIC ENERGY, 15, 4 (1958).	1292	1	173
24. G.E.BROWN, NUCL. PHYS. 57, 339 (1964).	1292	1	174
25. R.F.BERLAND, NAA-SR-11231 (1965).	1292	1	175
26. A.WEINBERG AND E.WIGNER THE PHYSICAL THEORY OF REACTORS(1959)	1292	1	176
1 451 218 2	1292	1	177
2 151 108 0	1292	1	178
3 1 992 0	1292	1	179
3 2 522 0	1292	1	180
3 3 89 0	1292	1	181
3 4 30 0	1292	1	182
3 16 8 0	1292	1	183

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX TEXT & DICT.

			MAT	MF	REC.
3	17	6	0 1292	1	184
3	22	8	0 1292	1	185
3	28	8	0 1292	1	186
3	51	18	0 1292	1	187
3	52	16	0 1292	1	188
3	53	14	0 1292	1	189
3	54	13	0 1292	1	190
3	55	11	0 1292	1	191
3	91	17	0 1292	1	192
3	102	73	0 1292	1	193
3	103	17	0 1292	1	194
3	104	12	0 1292	1	195
3	105	12	0 1292	1	196
3	106	6	0 1292	1	197
3	107	16	0 1292	1	198
3	251	21	0 1292	1	199
3	252	21	0 1292	1	200
3	253	21	0 1292	1	201
4	2	345	0 1292	1	202
4	16	10	0 1292	1	203
4	17	10	0 1292	1	204
4	22	10	0 1292	1	205
4	28	10	0 1292	1	206
4	51	10	0 1292	1	207
4	52	10	0 1292	1	208
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4	54	10	0 1292	1	210
4	55	10	0 1292	1	211
4	91	10	0 1292	1	212
5	16	7	0 1292	1	213
5	17	7	0 1292	1	214
5	22	7	0 1292	1	215
5	28	7	0 1292	1	216
5	91	7	0 1292	1	217
8	457	407	2 1292	1	218
			1292	1	219
			1292	2	329
			1292	3	1323
			1292	3	1846
			1292	3	1936
			1292	3	1967
			1292	3	1976
			1292	3	1983
			1292	3	1992
			1292	3	2001
			1292	3	2020
			1292	3	2037
			1292	3	2052
			1292	3	2066
			1292	3	2078
			1292	3	2096
			1292	3	2170
			1292	3	2188
			1292	3	2201
			1292	3	2214
			1292	3	2221
			1292	3	2238
			1292	3	2260
			1292	3	2282
			1292	3	2304
			1292	4	2651

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ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX
TEXT & DICT.

MAT	MF	REC.
1292	4	2662
1292	4	2673
1292	4	2684
1292	4	2695
1292	4	2706
1292	4	2717
1292	4	2728
1292	4	2739
1292	4	2750
1292	4	2761
1292	5	2770
1292	5	2778
1292	5	2786
1292	5	2794
1292	5	2802
1292	8	3211

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COMPARE TWO BCO FILES (COMPARE 82-1)
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COLUMNS TO READ AND LIST-------          70 (  1 TO 80 )
COLUMNS TO COMPARE-------------          66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---          66 (  1 TO 70 )
SPECIAL FILE FLAG--------------           2
ACCEPTABLE DIFFERENCE----------           0 (  1 TO 70 )
COMMENT CARDS-----------------COMPARED
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DESCRIPTION OF TWO FILES TO BE COMPARED
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FILE 1 =FP 1292 OLD
FILE 2 =FP 1292 NEW
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 FILE  CARD  CONTENTS
------------------------------------------------------------------------------------------------------------------------
                        1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
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------------------------------------------------------------------------------------------------------------------------
    1   178                                    1        451        218           11292 1451  177
    2   178                                    1        451        218           21292 1451  177
 DIFFERENCES                                                                     $
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SUMMARY OF ENDF/B DIFFERENCES BY SECTION
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MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1292	1	451	219	1	219	1	(DIFFERENCES)
1292	2	151	110	0	110	0	
1292	3	1	994	0	994	0	
1292	3	2	523	0	523	0	
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1292	3	16	9	0	9	0	
1292	3	17	7	0	7	0	
1292	3	22	9	0	9	0	
1292	3	28	9	0	9	0	
1292	3	51	19	0	19	0	
1292	3	52	17	0	17	0	
1292	3	53	15	0	15	0	
1292	3	54	14	0	14	0	
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1292	3	91	18	0	18	0	
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1292	3	252	22	0	22	0	
1292	3	253	22	0	22	0	
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1292	4	22	11	0	11	0	
1292	4	28	11	0	11	0	
1292	4	51	11	0	11	0	
1292	4	52	11	0	11	0	
1292	4	53	11	0	11	0	
1292	4	54	11	0	11	0	

1292	4	55	11	0	11	0
1292	4	91	11	0	11	0
1292	5	16	9	0	9	0
1292	5	17	8	0	8	0
1292	5	22	8	0	8	0
1292	5	28	8	0	8	0
1292	5	91	8	0	8	0
1292	8	457	409	0	409	0
1292	8	457	3	0	3	0

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	3215	1	3215	1

END OF RUN

MAT/MF
MAT/MF
MAT/MF
MAT/MF
MAT/MF
1510
SUMMAR
MAT
0
1373
1373
1373
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1373
SUMM
END

						MAT	MF	REC.
6.31540+ 4 1.52600+ 2	1	0	0	1	1293	1	1	
0.00000+ 0 1.00000+ 0	0	0	0	0	1293	1	2	
0.00000+ 0 0.00000+ 0	0	0	172	42	1293	1	3	
63-EU-154 BNL	EVAL-DEC73 H.TAKAHASHI				1293	1	4	
	DIST-OCT80 REV1-OCT80			801027	1293	1	5	
THIS MATERIAL CONTAINS THE EVALUATED RESULTS FOR THE NEUTRON					1293	1	6	
CROSS SECTION FOR EUROPIUM ISOTOPES OF EU-154. NO EXPERIMENTAL					1293	1	7	
DATA ARE AVAILABLE FOR THESE ISOTOPES EXCEPT FEW REACTIONS, SO					1293	1	8	
THAT THE EVALUATIONS WERE MOSTLY CARRIED OUT BY NUCLEAR MODEL					1293	1	9	
CALCULATIONS.					1293	1	10	
* * * * * *					1293	1	11	
MF=8,MT=457 RADIOACTIVE DECAY DATA BY RLB(INEL) 7/27/77					1293	1	12	
154EU B- DECAY ENSDF DATED 760515					1293	1	13	
NOTE: ELECTRON CAPTURE BRANCH OF 0.02 PERCENT HAS BEEN					1293	1	14	
PROPOSED BY R.A MEYER IN PHYS.REV.170, 1089(1968). ALSO, 30					1293	1	15	
WEAK GAMMA-RAY TRANSITIONS, LISTED BY MEYER WITH UPPER LIMITS					1293	1	16	
ON INTENSITIES OF LESS THAN 0.76 RELATIVE TO INTENSITY OF 405					1293	1	17	
FOR THE 123.14-KEV GAMMA, HAVE BEEN OMITTED.					1293	1	18	
DECAY SCHEME IN MEYER SHOWS E0 TRANSITION TO GROUND STATE					1293	1	19	
FROM THE 680-KEV LEVEL.					1293	1	20	
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 12/78					1293	1	21	
* * * * * *					1293	1	22	
3. FILE 2 RESONANCE PARAMETERS					1293	1	23	
3.1 RESOLVED RESONANCES					1293	1	24	
THE RESOLVED RESONANCE PARAMETERS WERE MADE BY TAKING INTO					1293	1	25	
ACCOUNT THEIR STATISTICAL PROPERTIES FOR LEVEL SPACING AND					1293	1	26	
REDUCED NEUTRON WIDTH FLUCTUATION. THE METHOD USED IN THIS					1293	1	27	
CALCULATION WAS SIMILAR TO THE PROCEDURE USED BY COOK. (1)					1293	1	28	
HOWEVER, INSTEAD OF USING THE MONTE CARLO CALCULATION, THE					1293	1	29	
LEVEL SPACING AND THE REDUCED NEUTRON WIDTH FLUCTUATION ARE					1293	1	30	
DETERMINED BY USING THE STATISTICAL PROPERTIES OF EU-153.					1293	1	31	
THE AVERAGE VALUES OF THESE QUANTITIES ARE DETERMINED IN THE					1293	1	32	
SIMILAR WAY AS THE PROCEDURE OF BARR ET AL. (2) THAT IS, THE					1293	1	33	
RATIOS OF THE AVERAGE VALUES FOR ODD EVEN NUCLEI TO THOSE FOR					1293	1	34	
ODD-ODD NUCLEI WERE ESTIMATED FROM THEIR NEIGHBORING NUCLEI.					1293	1	35	
THESE RATIOS WERE MULTIPLIED TO THE VALUES OF EU-153 TO OBTAIN					1293	1	36	
THE ONES FOR EU-154. THE GAMMA RAY WIDTH WERE TAKEN AS					1293	1	37	
CONSTANT VALUES FOR ALL RESONANCES.					1293	1	38	
THE 96 RESONANCES WERE ASSIGNED BETWEEN 0.01EV AND 59.732EV.					1293	1	39	
THERMAL NEUTRON CAPTURE CROSS SECTION HAD BEEN MEASURED BY					1293	1	40	
HAYDEN ET AL. (3) AND WALKER (4). THE PRELIMINARY DRAFT OF NEW					1293	1	41	
BNL-325 IS RECOMMENDING THOSE VALUES AS 1500 +/- 400 BARN FOR					1293	1	42	
EU-154 (8 YEAR). THE PARAMETERS OF THE LOWEST RESONANCES WERE					1293	1	43	
ADJUSTED SO THAT THE CALCULATED THERMAL NEUTRON CAPTURE					1293	1	44	
CROSS SECTIONS AGREE WITH THE VALUES RECOMMENDED IN THE NEW					1293	1	45	
BNL-325. (5)					1293	1	46	
3.2 UNRESOLVED RESONANCES					1293	1	47	
UNRESOLVED RESONANCE PARAMETERS WERE GIVEN THE ENERGY REGIONS					1293	1	48	
FROM 60.0 EV TO 10 KEV. AS MENTIONED ABOVE, BARR AND DEVANEY (2)					1293	1	49	
EVALUATED THE UNRESOLVED RESONANCE PARAMETERS BY STUDYING THE					1293	1	50	
CHANGE OF THESE PARAMETERS FROM ODD-ODD NUCLEI TO ODD-EVEN					1293	1	51	
NUCLEI OF LU-175, LU-176, AND TA-180, TA-181. THE UNRESOLVED					1293	1	52	
RESONANCE PARAMETERS WERE ESTIMATED BY USING THE NEW BNL-325					1293	1	53	
VALUES.					1293	1	54	
4. FILE 3 (NEUTRON CROSS SECTION)					1293	1	55	
4.1 TOTAL CROSS SECTION (MT = 1)					1293	1	56	
BETWEEN 10000 EV TO 2.5 MEV NEUTRON ENERGY, THE TOTAL CROSS					1293	1	57	
SECTIONS WERE CALCULATED USING THE ABACUS-2 CODE (6) OF THE					1293	1	58	
OPTICAL MODEL. THE OPTICAL PARAMETERS USED IN THE CALCULATION					1293	1	59	
WILL BE SHOWN IN THE LATER SECTION. ABOVE 2.5 MEV, THE TOTAL					1293	1	60	

	MAT	MF	REC.
CROSS SECTIONS WERE ASSUMED TO BE THE SAME AS THE EXPERIMENTAL	1293	1	61
VALUES OF NATURAL EUROPIUM MEASURED BY FOSTER. (7)	1293	1	62
4.2 ELASTIC SCATTERING CROSS SECTION (MT = 2)	1293	1	63
THE ELASTIC SCATTERING CROSS SECTIONS IN THE ENERGY HIGHER	1293	1	64
THAN THE UNRESOLVED RESONANCE ENERGY WERE OBTAINED BY	1293	1	65
SUBSTRUCTING THE NON ELASTIC CROSS SECTION FROM THE EVALUATED	1293	1	66
TOTAL CROSS SECTION.	1293	1	67
4.3 NONELASTIC SCATTERING CROSS SECTION (MT = 3)	1293	1	68
THE NONELASTIC SCATTERING CROSS SECTION WAS CALCULATED BY	1293	1	69
SUMMING UP ALL CROSS SECTIONS EXCEPT THE ELASTIC SCATTERING	1293	1	70
CROSS SECTION.	1293	1	71
4.4 INELASTIC SCATTERING CROSS SECTION (MT=4,51,52...,91)	1293	1	72
THE INELASTIC SCATTERING CROSS SECTIONS WERE GIVEN AS TOTAL	1293	1	73
(MT = 4), DISCRETE LEVEL EXCITATION CROSS SECTION (MT=51...) FOR	1293	1	74
THE FIRST 5 LEVELS AND CONTINUUM LEVEL EXCITATION CROSS SECTION	1293	1	75
(MT = 91). THE LEVEL SCHEME FOR THESE DISCRETE LEVEL IS TAKEN	1293	1	76
FROM REF. (9,10,11,12,13).	1293	1	77
SINCE NO EXPERIMENTAL DATA ARE AVAILABLE FOR THE INDIVIDUAL	1293	1	78
LEVEL EXCITATION CROSS SECTIONS, THEY WERE CALCULATED USING THE	1293	1	79
COMNUC-3 CODE (14,15) FOR ENERGIES UP TO 3 MEV. ABOVE 3 MEV,	1293	1	80
NEUTRON ENERGY, INELASTIC SCATTERING IS MOSTLY THE EXCITATION OF	1293	1	81
THE CONTINUUM OF LEVELS, SO THAT THE INELASTIC SCATTERING CROSS	1293	1	82
SECTION FOR DISCRETE LEVEL EXCITATION ABOVE THIS ENERGY WAS	1293	1	83
NEGLECTED AND THE INELASTIC SCATTERING CROSS SECTION FOR	1293	1	84
CONTINUUM LEVEL EXCITATION WAS CALCULATED BY THE CASCADE	1293	1	85
CALCULATION OF GROGI-3 CODE. (16) THE LEVEL DENSITY PARAMETERS	1293	1	86
FOR THE CONTINUUM OF LEVELS WERE TAKEN FROM COOK'S DATA (18) FOR	1293	1	87
THE DEFORMED NUCLEI USING THE GILBERT-CAMERON FORMULA. (19)	1293	1	88
4.5 (N,P) AND (N,N',P) CROSS SECTION (MT = 103, 28)	1293	1	89
NO EXPERIMENTAL VALUES WERE AVAILABLE, SO THAT WE CALCULATED	1293	1	90
THESE BY NUCLEAR MODEL CODES. FOR (N,P) REACTION, THE SEMI-	1293	1	91
EMPIRICAL STATISTICAL MODEL CODE THRESH (21) WAS USED. BUT THE	1293	1	92
EVALUATION (7) OF EU-151 AND EU-153 INDICATED THAT THE CROSS-	1293	1	93
SECTIONS AROUND 14 MEV CALCULATED BY THIS CODE WERE SMALL	1293	1	94
COMPARED TO THE EXPERIMENTAL VALUES. THUS, THE CALCULATED CROSS	1293	1	95
SECTIONS WERE NORMALIZED BY THE FACTORS OBTAINED FOR EU-151.	1293	1	96
THE (N,N'P) CROSS SECTIONS WERE CALCULATED BY USING GROGI-3.	1293	1	97
4.6 (N,ALPHA) AND (N,N'D) CROSS SECTION (MT = 107,22)	1293	1	98
THESE CROSS SECTIONS WERE OBTAINED IN THE SINILAR MANNER AS THE	1293	1	99
CASES OF (N,P) AND (N,N'P) REACTIONS.	1293	1	100
4.7 (N,2N), (N,3N) CROSS SECTION (MT = 16, 17)	1293	1	101
THESE CROSS SECTIONS WERE CALCULATED BY USING THE GROGI-3 CODE.	1293	1	102
THE OPTICAL MODEL PARAMETERS DESCRIBED IN THE LATER SECTION WERE	1293	1	103
USED.	1293	1	104
4.8 (N,D),(N,T),AND(N,HE-3) REACTION CROSS SECTION (MT=104,105,	1293	1	105
AND 107)	1293	1	106
THE CROSS SECTIONS CALCULATED BY THRESH WERE ADAPTED AS THE	1293	1	107
EVALUATED CROSS SECTIONS.	1293	1	108
4.9 THE RADIATIVE CAPTURE CROSS SECTION (MT = 102)	1293	1	109
THE RADIATIVE CAPTURE CROSS SECTIONS AT LOW ENERGY RANGE WERE	1293	1	110
CALCULATED FROM THE RESONANCE PARAMETERS DISCUSSED IN THE SECTION	1293	1	111
OF FILE 2 AND ARE PRESENTED AS THE SMOOTH CROSS SECTIONS. THE	1293	1	112
CROSS SECTIONS BETWEEN 100 EV AND 10 KEV ARE PRESENTED AS THE	1293	1	113
UNRESOLVED RESONANCE PARAMETERS.	1293	1	114
FOR ENERGY HIGHER THAN 10 KEV, THE CROSS SECTIONS WERE EVALUATED	1293	1	115
BY THE COMNUC-3 CALCULATION. THE CALCULATION WAS DONE SIMILARLY	1293	1	116
TO THE ONES FOR EU-151 AND EU-153 (7). THAT IS, WE ASSUMED	1293	1	117
MOLDAUER'S Q VALUE TO BE ZERO, AND THE CORRELATION CORRECTION	1293	1	118
FACTOR DUE TO THE DEGREE OF FREEDOM ASSOCIATED WITH OPEN CHANNEL	1293	1	119
WAS TAKEN INTO ACCOUNT IN THE CALCULATION. FROM 3 MEV TO 20 MEV,	1293	1	120
THE CAPTURE CROSS SECTION WAS OBTAINED BY GROGI-3 FOR COMPOUND	1293	1	121

	MAT	MF	REC.
PROCESS, BY THE CVELBAR'S FORMULA (22) BASED ON LANE-LYNN (23)	1293	1	122
AND BROWN'S (24) FORMULA FOR THE DIRECT AND SEMI-DIRECT	1293	1	123
REACTION.	1293	1	124
5. FILE 4 (ANGULAR DISTRIBUTION OF SECONDARY NEUTRONS)	1293	1	125
5.1 ELASTIC SCATTERING (MT = 2)	1293	1	126
THESE WERE CALCULATED BY ABACUS-2 (NABAK PDP-10 VERSION) (6) AND	1293	1	127
THE LEGENDRE COEFFICIENTS CALCULATED BY CHAD (NUCHAD IN PDP-10	1293	1	128
VERSION) (25) WERE GIVEN. SINCE THE ELASTIC SCATTERING DUE TO THE	1293	1	129
NUCLEAR COMPOUND PROCESS IS SMALL IN THE ENERGY RANGE ABOVE 3	1293	1	130
MEV, THE ANGULAR DISTRIBUTION OF ELASTIC SCATTERING NEUTRON	1293	1	131
WAS CALCULATED BY TAKING ONLY THE SHAPE ELASTIC SCATTERING INTO	1293	1	132
ACCOUNT ABOVE 3 MEV.	1293	1	133
5.2 INELASTICALLY SCATTERED NEUTRON, (N,2N),(N,3N),(N,N'P), AND	1293	1	134
(N,N'ALPHA) REACTION (MT=51,...,91, MT=16,17,22,23)	1293	1	135
NEUTRONS FROM THESE REACTIONS WERE ASSUMED TO BE ISOTROPIC IN	1293	1	136
THE CENTER OF MASS SYSTEM.	1293	1	137
6. FILE 5 (ENERGY DISTRIBUTION OF SECONDARY NEUTRONS)	1293	1	138
6.1 (N,2N), (N,3N), AND (N,N') REACTIONS (MT=16,16,AND 91)	1293	1	139
THE ENERGY DISTRIBUTIONS OF NEUTRON FROM THE (N,2N), (N,3N)	1293	1	140
AND THE INELASTIC SCATTERING CROSS SECTION OF CONTINUUM PART WERE	1293	1	141
ASSUMED AS MAXWELLIAN. THE EFFECTIVE TEMPERATURE OF THESE	1293	1	142
MAXWELLIANS WERE OBTAINED BY THE WEISKOPF FORMULA. (26)	1293	1	143
1. J.L.COOK, AAEC/TM-549 (1969).	1293	1	144
2. D.W.BARR AND J.H.DEVANEY, LA-3643 (1967).	1293	1	145
3. R.J.HAYDEN, ET. AL., PHYS. REV. 75, 1500 (1949).	1293	1	146
4. W.H.WALKER, AECL-3037, PART I (1969).	1293	1	147
5. S.F.MUGHABGHAB, AND D.GARBER, BNL-325 THIRD EDIT.	1293	1	148
VOL 1. (1973).	1293	1	149
6. E.H.AUERBACH, BNL-6562 (1962).	1293	1	150
7. H.TAKAHASHI, EVALUATION OF THE NEUTRON AND GAMMA-RAY	1293	1	151
PRODUCTION CROSS SECTION FOR EU-151 AND EU-153 TO BE	1293	1	152
PUBLISHED AS BNL REPORT (1973).	1293	1	153
8. D.G.FOSTER JR., AND D.W.GLASGOW, PNWL UNPUBLISHED DATA (1966).	1293	1	154
9. T.LEWISE AND R.GRATZER, NUCL. PHYS. A162, 145 (1971).	1293	1	155
10. FAESLLER, NUCL. PHYS. 59, 1977 (1964).	1293	1	156
11. L.V.GROSHEV ET AL., NUCL. DATA TABLE A5, 1 (1968).	1293	1	157
12. D.J.HOREN ET AL., "NUCLEAR LEVEL SCHEME A=45 THROUGH A=257,"	1293	1	158
TO BE PUBLISHED IN NUCL. DATA TABLES.	1293	1	159
13. C.LEDERER, J.HOLLANDER AND I.PERLMAN, TABLE OF ISOTOPES,	1293	1	160
SIXTH EDITION (1967).	1293	1	161
14. C.DUNFORD, PRIVATE COMMUNICATION (COMNUC-3 CODE) (1971).	1293	1	162
15. C.DUNFORD, AI-AEC-12931 (1970).	1293	1	163
16. H.TAKAHASHI, GROGI-III, MODIFIED FROM GROGI-2. (17)	1293	1	164
17. J.GILAT, BNL-50246(T-580) (1969).	1293	1	165
18. J.COOK, H.FERGUSON AND A.MUSGROVE, AAEC/TM-392 (1967).	1293	1	166
19. A.GILBERT AND A.CAMERON, CAN. J. PHYS. 43, 1446 (1965).	1293	1	167
20. T.TAMURA, REV. MOD. PHYS. 37, 679 (1965).	1293	1	168
21. S.PEARLSTEIN, J. NUCL. ENER. 27, 81 (1973).	1293	1	169
22. F.CVELBAR, ET. AL., NIJS REPORT T-529 (1968).	1293	1	170
23. A.M.LANE AND J.E.LYNN, GENEVA CONFERENCE ON PEACEFUL USES OF	1293	1	171
ATOMIC ENERGY, 15, 4 (1958).	1293	1	172
24. G.E.BROWN, NUCL. PHYS. 57, 339 (1964).	1293	1	173
25. R.F.BERLAND, NAA-SR-11231 (1965).	1293	1	174
26. A.WEINBERG AND E.WIGNER THE PHYSICAL THEORY OF REACTORS(1959)	1293	1	175
1 451 217 1	1293	1	176
2 151 87 0	1293	1	177
3 1 418 0	1293	1	178
3 2 396 0	1293	1	179
3 3 85 0	1293	1	180
3 4 24 0	1293	1	181
3 16 9 0	1293	1	182

04/06/86

ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX
TEXT & DICT.

			MAT	MF	REC.
3	17	5	0 1293	1	183
3	22	7	0 1293	1	184
3	28	7	0 1293	1	185
3	51	17	0 1293	1	186
3	52	15	0 1293	1	187
3	53	14	0 1293	1	188
3	54	13	0 1293	1	189
3	55	11	0 1293	1	190
3	91	16	0 1293	1	191
3	102	68	0 1293	1	192
3	103	16	0 1293	1	193
3	104	12	0 1293	1	194
3	105	11	0 1293	1	195
3	106	5	0 1293	1	196
3	107	15	0 1293	1	197
3	251	21	0 1293	1	198
3	252	21	0 1293	1	199
3	253	21	0 1293	1	200
4	2	345	0 1293	1	201
4	16	10	0 1293	1	202
4	17	10	0 1293	1	203
4	22	10	0 1293	1	204
4	28	10	0 1293	1	205
4	51	10	0 1293	1	206
4	52	10	0 1293	1	207
4	53	10	0 1293	1	208
4	54	10	0 1293	1	209
4	55	10	0 1293	1	210
4	91	10	0 1293	1	211
5	16	7	0 1293	1	212
5	17	7	0 1293	1	213
5	22	7	0 1293	1	214
5	28	7	0 1293	1	215
5	91	7	0 1293	1	216
8	457	368	1 1293	1	217
			1293	1	218
			1293	2	307
			1293	3	727
			1293	3	1124
			1293	3	1210
			1293	3	1235
			1293	3	1245
			1293	3	1251
			1293	3	1259
			1293	3	1267
			1293	3	1285
			1293	3	1301
			1293	3	1316
			1293	3	1330
			1293	3	1342
			1293	3	1359
			1293	3	1428
			1293	3	1445
			1293	3	1458
			1293	3	1470
			1293	3	1476
			1293	3	1492
			1293	3	1514
			1293	3	1536
			1293	3	1558
			1293	4	1905

3	2	130	0	1294	1	60

04/06/86

ENDF/B-V: MODS FOR V.1 & V.2.FISS.PROD.:INDEX TEXT & DICT.

MAT	MF	REC.
1293	4	1916
1293	4	1927
1293	4	1938
1293	4	1949
1293	4	1960
1293	4	1971
1293	4	1982
1293	4	1993
1293	4	2004
1293	4	2015
1293	5	2024
1293	5	2032
1293	5	2040
1293	5	2048
1293	5	2056
1293	8	2426

COMPARE TWO BCD FILES (COMPARE 82-1)

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COLUMNS TO READ AND LIST-------      70 (  1 TO 80 )
COLUMNS TO COMPARE-------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (  1 TO 70 )
SPECIAL FILE FLAG--------------       2
ACCEPTABLE DIFFERENCE----------       0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
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DESCRIPTION OF TWO FILES TO BE COMPARED

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FILE 1 =FP 1293 OLD
FILE 2 =FP 1293 NEW
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FILE CARD CONTENTS

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                          1         2         3         4         5         6         7         8
FILE   CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890

    1   177                                    1       451       217          01293 1451  176
    2   177                                    1       451       217          11293 1451  176
 DIFFERENCES                                                                  $
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SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1293	1	451	218	1	218	1	(DIFFERENCES)
1293	2	151	89	0	89	0	
1293	3	1	420	0	420	0	
1293	3	2	397	0	397	0	
1293	3	3	86	0	86	0	
1293	3	4	25	0	25	0	
1293	3	16	10	0	10	0	
1293	3	17	6	0	6	0	
1293	3	22	8	0	8	0	
1293	3	28	8	0	8	0	
1293	3	51	18	0	18	0	
1293	3	52	16	0	16	0	
1293	3	53	15	0	15	0	
1293	3	54	14	0	14	0	
1293	3	55	12	0	12	0	
1293	3	91	17	0	17	0	
1293	3	102	69	0	69	0	
1293	3	103	17	0	17	0	
1293	3	104	13	0	13	0	
1293	3	105	12	0	12	0	
1293	3	106	6	0	6	0	
1293	3	107	16	0	16	0	
1293	3	251	22	0	22	0	
1293	3	252	22	0	22	0	
1293	3	253	22	0	22	0	
1293	4	2	347	0	347	0	
1293	4	16	11	0	11	0	
1293	4	17	11	0	11	0	
1293	4	22	11	0	11	0	
1293	4	28	11	0	11	0	
1293	4	51	11	0	11	0	
1293	4	52	11	0	11	0	
1293	4	53	11	0	11	0	
1293	4	54	11	0	11	0	

1293	4	55	11	0	11	0
1293	4	91	11	0	11	0
1293	5	16	9	0	9	0
1293	5	17	8	0	8	0
1293	5	22	8	0	8	0
1293	5	28	8	0	8	0
1293	5	91	8	0	8	0
1293	8	457	370	0	370	0
1293	8	457	3	0	3	0

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	2430	1	2430	1

END OF RUN

COMPA
COLUM
COLUM
COLUM
SPECI
ACCEP
COMME
DESCR
FILE
FILE
FILE
FILE
1
2
DIFF
SUMMA
MAT
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1294
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1294
1294
SUM
END

							MAT	MF	REC.
7.91970+ 4	1.95274+ 2	1	0	0	3		1379	1	1
0.00000+ 0	0.00000+ 0	0	0	0	0		1379	1	2
0.00000+ 0	0.00000+ 0	0	0	140	52		1379	1	3
79-AU-197 BNL	EVAL-FEB77 S.F.MUGHABGHAB						1379	1	4
	DIST-MAR83 REV1-OCT80				801027		1379	1	5
**********							1379	1	6
							1379	1	7
THE NORMALIZATION AND STANDARDS SUBCOMMITTEE OF CSWEG RECOMMENDS							1379	1	8
AU-197 (N,GAMMA) AS A NEUTRON CROSS-SECTION STANDARD FROM 200KEV							1379	1	9
TO 3.5 MEV							1379	1	10
**********							1379	1	11
FILE=2	RESONANCE PARAMETERS						1379	1	12
----------							1379	1	13
MT=151	RESOLVED RESONANCE PARAMETERS GIVEN FROM 1.0E-05EV						1379	1	14
	TO 2KEV BASED ON REF1 AND REFERENCES THERIN						1379	1	15
	AND A BOUND LEVEL.SOME OF THE RESONANCE SPIN ASSIGNMENT						1379	1	16
	S FROM REF2.FROM 2 TO 4.827KEV THE PARAMETERS ARE BASED						1379	1	17
	ON MACKLIN ETAL AND HOFFMAN ETAL NORMALIZED DATA.(REF.3						1379	1	18
	,4)						1379	1	19
	THERMAL CROSS SECTIONS ARE AS FOLLOWS:						1379	1	20
	CAPTURE = 98.71 B						1379	1	21
	SCATTERING = 6.84 B						1379	1	22
	TOTAL = 105.55 B						1379	1	23
	THE ABSORPTION RESONANCE INTEGRAL IS 1559 B						1379	1	24
FILE=3	NEUTRON CROSS-SECTIONS						1379	1	25
----------							1379	1	26
MT=1	TOTAL CROSS-SECTION FROM 10.0KEV-2.3MEV REF 5-9,FROM						1379	1	27
	2.3-15.0MEV BASED MAINLY ON FOSTERS DATA(REF10) AND REF						1379	1	28
	11-14.FROM 15.0-20.0MEV DATA IN REF 14-15 WAS USED.						1379	1	29
MT=2	ELASTIC CROSS-SECTION BY SUBTRACTING SUM OF ALL NON-						1379	1	30
	ELASTIC CROSS-SECTIONS(REF16-23) FROM TOTAL CROSS-						1379	1	31
	SECTION						1379	1	32
MT=4	TOTAL INELASTIC SUM OF ALL THE DISCRETE LEVEL EXCITA-						1379	1	33
	TION CROSS-SECTIONS AND THE CONTINUUM CROSS-SECTION						1379	1	34
MT=16	(N,2N) CROSS-SECTION, DATA ARE IN REF 24-27.						1379	1	35
MT=17	(N,3N) CROSS-SECTION, DATA ARE IN REF 27						1379	1	36
*****	NOTE: FOLLOWING AND DECAY INFORMATION NOW IN FILES 8 AND 10						1379	1	37
	CROSS-SECTION FOR THE FORMATION OF 10.0HOUR METASTABLE						1379	1	38
	(SIXTH LEVEL) IN AU-196 DATA IN REF 24-25, 28-29						1379	1	39
MT=51-64	CROSS-SECTIONS FOR THE EXCITATION OF DISCRETE LEVELS,						1379	1	40
	NODEL CALCULATIONS USING COMMNUC-I (REF 30) NORMALIZED						1379	1	41
	TO THE EXPERIMENTAL DATA ON INDIVIDUAL LEVELS WHERE						1379	1	42
	AVAILABLE(REF 31-33)						1379	1	43
MT=91	INELASTIC SCATTERING CROSS-SECTION TO THE CONTINUUM OF						1379	1	44
	LEVELS OBTAINED BY USING COMMNUC-I AND NORMALIZING IT						1379	1	45
	TO THE DIFFERENCE BETWEEN NON-ELASTIC(REF16-23) AND THE						1379	1	46
	SUM OF DISCRETE INELASTIC AND (N,PARTICLE) CROSS-SECNS.						1379	1	47
MT=102	CAPTURE CROSS-SECTION FROM 1.0E-05 TO 4.827KEV CALCULA						1379	1	48
	TED FROM RESONANCE PARAMETERS						1379	1	49
	FROM 4.827-200KEV, IT IS BASED ON MACKLIN ET AL(REF3)						1379	1	50
	NORMALIZED TO ENDF/B V LI-6(N,A) CROSS SECTION						1379	1	51
	FROM 0.200 TO 3.5 MEV, CAPTURE CROSS SECTION IS BASED						1379	1	52
	ON REF 3 AND REF 34-49. DATA ARE NORMALIZED TO ENDF/B V						1379	1	53
	PRIMARY STANDARDS (N,P), LI6(N,A), B10(N,A),AND U235(N,						1379	1	54
	F)						1379	1	55
	IN ENERGY REGION 3.5-20 MEV,EVALUATION IS BASED						1379	1	56
	ON REF.47,49 AND ON COMNUC CALCULATIONS NORMALIZED TO A						1379	1	57
	VALUE OF 1MB AT 14 MEV(REF.50-51)						1379	1	58
MT=103	(N,P) CROSS SECTION BASED ON THE DATA OF REF 25.						1379	1	59
MT=107	(N,ALPHA) CROSS SECTION BASED ON THE DATA OF REF 25.						1379	1	60

WAS CALCULATED BY TAKING ONLY THE CHARGED PARTICLE 1292 1 121
ACCOUNT ABOVE 3 MEV.
5.2 INELASTICALLY SCATTERED NEUTRON, (N,2N),(N,3N),(N,N'P), AND 1292 1 122

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX
TEXT & DICT. MAT MF REC.

MT=251-253 CALCULATED USING THE ANGULAR DISTRIBUTION OF FILE4, 1379 1 61
MT=2 USING THE CODE DUMMY5(REF 52) 1379 1 62
FILE=4 ANGULAR DISTRIBUTION OF SECONDARY NEUTRONS 1379 1 63
MT=2 ELASTIC SCATTERING BASED ON THE EXPERIMENTAL DATA IN 1379 1 64
REF 54-60 UPTO 8.05MEV, FROM 9.0MEV AND ABOVE BASED ON 1379 1 65
MODEL CALCULATIONS USING ABACUS-2(REF 53) AND THE 1379 1 66
OPTICAL MODEL PARAMETERS GIVEN IN REF54, 1379 1 67
MT=16 (N,2N) ANGULAR DISTRIBUTION ASSUMED TO BE ISOTROPIC 1379 1 68
MT=17 (N,3N) ANGULAR DISTRIBUTION ASSUMED TO BE ISOTROPIC 1379 1 69
FILE=5 ENERGY DISTRIBUTION OF SECONDARY NEUTRONS 1379 1 70
--- 1379 1 71
MT=16,17 ENERGY DISTRIBUTIONS GIVEN BY AN EVAPORATION SPECTRUM 1379 1 72
MT=91 A TEMPERATURE MODEL USING THE PARAMETERS IN REF 63, 1379 1 73
REFERENCES 1379 1 74
--- 1379 1 75

1.S.F.MUGHABGHAB AND D.I.GARBER BNL-325,3RD EDN,VOL I(1973) 1379 1 76
2.A.LOTTIN AND A.JAIN CONF ON NUCLEAR STRUCTURE STUDY WITH 1379 1 77
NEUTRONS,BUDAPEST,1972 P34 AND PRIVATE COMMUNICATION, 1379 1 78
3.R.MACKLIN ET AL. PHYS. REV/C 11,1270(1975) AND PRIVATE 1379 1 79
COMMUNICATION 1379 1 80
4.M.M. HOFFMAN ET AL. 75WASHINGTON CONF., 2, 868(1971) KNOXVILLE 1379 1 81
5.K.K.SETH,PHYS.LETTERS,16,306(1965) 1379 1 82
6.W.BILPUCH,PRIVATE COMMUNICATION(1959) 1379 1 83
7.J.F.WHALEN,ANL-7210,16(1966) 1379 1 84
8.M.WALT AND R.L.BECKER,PHYS.REV.89,1271(1953) 1379 1 85
9.R.B.DAY,PRIVATE COMMUNICATION(1965) 1379 1 86
10.D.G.FOSTER JR.PRIVATE COMMUNICATION(1967).PHYS.REV/C,3,576 1379 1 87
(1971) 1379 1 88
11.M.WALT PHYS.REV.98,677(1955) 1379 1 89
12.J.H.COON,PHYS.REV.88,562(1952) 1379 1 90
13.J.P.CONNER,PHYS.REV.109,1268(1958) 1379 1 91
14.J.M.PETERSON,PHYS.REV.110,927(1958) 1379 1 92
15.J.M.PETERSON,PHYS.REV.120,521(1960) 1379 1 93
16.J.R.BEYSTER,PHYS.REV.98,1216(1955) 1379 1 94
17.J.R.BEYSTER,PHYS.REV.104,1319(1956) 1379 1 95
18.M.H.MACGREGOR,PHYS.REV.108,726(1957) 1379 1 96
19.M.WALT,PHYS.REV.93,1062(1954) 1379 1 97
20.E.R.GRAVES,PHYS.REV.89,343(1953) 1379 1 98
21.E.R.GRAVES,PHYS.REV.97,1205(1955) 1379 1 99
22.D.O.PHILLIPS,PHYS.REV.88,600(1952) 1379 1 100
23.R.C.ALLEN ET.AL.PHYS.REV.104,731(1956) 1379 1 101
24.H.A.TEWES ET.AL PRIVATE COMMUNICATION(1960) 1379 1 102
25.R.J.PRESTWOOD AND B.P.BAYHURST,PHYS.REV.121,1438(1961) 1379 1 103
26.H.LISKIEN, ET.AL. AKE 26,1,34(1975) 1379 1 104
27.L.R.VEESER AND E.D. ARTHUR, 76 LOWELL, 1351(1976) 1379 1 105
28.A.K. HANKLA AND R.W. FINK, NUCL. PHYS. A180,157(1972, 1379 1 106
29.W.DILG AND H. VONACH, NUCL.PHYS. A118,9(1968) 1379 1 107
30.C.L.DUNFORD. AI-AEC-12931(1970) 1379 1 108
31.J.A.M.DEVILLIERS ET.AL.ZEIT,FUR PHYSIK,183,323,1965 1379 1 109
32.E.BARNARD ET.AL.NUCL.PHYS.A107,612(1968) 1379 1 110
33.J.A.NELSON ET.AL.PHYS.REV.C3,307(1971) 1379 1 111
34.M.LINDNER ET.AL. NUCL.SCI ENG.59,381(1976) AND PRIVATE 1379 1 112
COMMUNICATION 1379 1 113
35.W.P.POENITZ,NUCL.SCI.ENG.57,300,(1975) 1379 1 114
36.E.FORT ET.AL. NBS SPECIAL PUPLICATION 425,2,957(1975) 1379 1 115
37.A.PAULSEN ET.AL.A.K.E.,26,80(1975) 1379 1 116
38.C.L.LERIGOLEUR ET.AL. CEAN-N-1662(1973) 1379 1 117
39.J.B.CZIRR ET.AL.NUCL.SCI.ENG.52,299(1973);UCLR-74447 JUNE1973 1379 1 118
JUNE 1973 1379 1 119
40.M.P.FRICKE ET.AL.PROC.NUCLEAR DATA FOR REACTORS,HELSINKI CON. 1379 1 120
VOL.2,281(1970) 1379 1 121

3	3	89	0	1292	1	181
3	4	30	0	1292	1	182
3	16	8	0	1292	1	183

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX

TEXT & DICT.

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41.J.C.ROBERTSON ET.AL. J.NUCLEAR ENERGY 23,205(1969)	1379	1	122
42.D.KOMPE,NUCL.PHYS.A133,513(1969)	1379	1	123
43.K.K.HARRIS NUCL.PHYS.69,37(1965).NCSAC-31,118(1970).	1379	1	124
44.J.F.BARRY J.NUCL.ENERGY 18,491(1964)	1379	1	125
45.I.BERQVIST,ARK.FYS.23,425(1963)	1379	1	126
46.S.A. COX PHYS.REV.122,1280(1961)	1379	1	127
47.J.A.MISKEL ET.AL.PHYS. REV.128,2717(1962)	1379	1	128
48.DIVEN ET.AL. PHYS.REV.120,556(1960)	1379	1	129
49.A.E.JOHNSRUD ET.AL. PHYS.REV.116,927(1959)+PRIVATE	1379	1	130
COMMUNICATION	1379	1	131
50.D.DRAKE ET.AL. PHYS.LETTERS,36B,557(1971)	1379	1	132
51.O.SCHWERER ET.AL.NUCL.PHYS.A264,105(1976)	1379	1	133
52.R.R.KINSEY DUMMY-5,PRIVATE COMMUNICATION	1379	1	134
53.E.H.AUERBACH ABACUS-2(REV) BNL-6562(1962)	1379	1	135
54.B.HOLMQVIST AND T.WIEDLING,NUCL.PHYS.A188,24(1972)AE-430(1971)	1379	1	136
55.S.A.BUCCINO ET.AL. ZEIT.F.PHYSIK,196,103(1966)	1379	1	137
56.F.T.KUCHNIR ET.AL. PHYS.REV.176,1405(1968)	1379	1	138
57.R.C.ALLEN ET.AL.PHYS.REV.104,731(1956)	1379	1	139
58.M.WALT AND J.R.BEYSTER, PHYS.REV.98,677(1955)	1379	1	140
59.M.WALT AND H.H.BARSHALL,PHYS.REV.93,1062(1954)	1379	1	141
60.J.A.M. DEVILLIERS ET.AL. ZEIT.F.PHYSIK,183,323(1965)	1379	1	142
**********	1379	1	143

1	451	195	3	1379	1	144
2	151	268	2	1379	1	145
3	1	230	2	1379	1	146
3	2	230	2	1379	1	147
3	4	55	0	1379	1	148
3	16	12	1	1379	1	149
3	17	7	0	1379	1	150
3	51	17	0	1379	1	151
3	52	16	0	1379	1	152
3	53	16	0	1379	1	153
3	54	17	0	1379	1	154
3	55	16	0	1379	1	155
3	56	16	0	1379	1	156
3	57	12	0	1379	1	157
3	58	15	0	1379	1	158
3	59	15	0	1379	1	159
3	60	14	0	1379	1	160
3	61	13	0	1379	1	161
3	62	13	0	1379	1	162
3	63	10	0	1379	1	163
3	64	10	0	1379	1	164
3	91	22	0	1379	1	165
3	102	196	2	1379	1	166
3	103	10	0	1379	1	167
3	107	9	0	1379	1	168
3	251	12	0	1379	1	169
3	252	12	0	1379	1	170
3	253	12	0	1379	1	171
4	2	157	0	1379	1	172
4	16	10	1	1379	1	173
4	17	10	0	1379	1	174
4	51	10	0	1379	1	175
4	52	10	0	1379	1	176
4	53	10	0	1379	1	177
4	54	10	0	1379	1	178
4	55	10	0	1379	1	179
4	56	10	0	1379	1	180
4	57	10	0	1379	1	181
4	58	10	0	1379	1	182

1292 3 2304
1292 4 2651

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX TEXT & DICT.

			MAT	MF	REC.
4	59	10	0 1379	1	183
4	60	10	0 1379	1	184
4	61	10	0 1379	1	185
4	62	10	0 1379	1	186
4	63	10	0 1379	1	187
4	64	10	0 1379	1	188
4	91	10	0 1379	1	189
5	16	19	2 1379	1	190
5	17	19	0 1379	1	191
5	91	12	0 1379	1	192
8	16	3	3 1379	1	193
10	16	8	1 1379	1	194
33	102	12	2 1379	1	195
			1379	1	196
			1379	2	466
			1379	3	698
			1379	3	929
			1379	3	985
			1379	3	998
			1379	3	1006
			1379	3	1024
			1379	3	1041
			1379	3	1058
			1379	3	1076
			1379	3	1093
			1379	3	1110
			1379	3	1123
			1379	3	1139
			1379	3	1155
			1379	3	1170
			1379	3	1184
			1379	3	1198
			1379	3	1209
			1379	3	1220
			1379	3	1243
			1379	3	1440
			1379	3	1451
			1379	3	1461
			1379	3	1474
			1379	3	1487
			1379	3	1500
			1379	4	1659
			1379	4	1670
			1379	4	1681
			1379	4	1692
			1379	4	1703
			1379	4	1714
			1379	4	1725
			1379	4	1736
			1379	4	1747
			1379	4	1758
			1379	4	1769
			1379	4	1780
			1379	4	1791
			1379	4	1802
			1379	4	1813
			1379	4	1824
			1379	4	1835
			1379	4	1846
			1379	5	1867
			1379	5	1887

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX TEXT & DICT.

MAT	MF	REC.
1379	5	1900
1379	8	1905
1379	10	1915
1379	33	1929

```
COMPARE TWO BCD FILES (COMPARE 82-1)
-------------------------------------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST-------      70 (  1 TO 80 )
COLUMNS TO COMPARE-------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (  1 TO 70 )
SPECIAL FILE FLAG--------------       2
ACCEPTABLE DIFFERENCE----------       0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
-------------------------------------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
-------------------------------------------------------------------------------------------------------------------------------
FILE 1 =ST1379  OLD
FILE 2 =ST1379  NEW
-------------------------------------------------------------------------------------------------------------------------------
 FILE  CARD  CONTENTS
-------------------------------------------------------------------------------------------------------------------------------
                      1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
-------------------------------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------------------------------
    1     2  7.91970+ 4 1.95274+ 2          1         0         0         21379 1451     1
    2     2  7.91970+ 4 1.95274+ 2          1         0         0         31379 1451     1
 DIFFERENCES                                                             $
-------------------------------------------------------------------------------------------------------------------------------
    1     6                          DIST-MAY79                          790126     1379 1451     5
    2     6                          DIST-MAR83 REV1-OCT80               801027     1379 1451     5
 DIFFERENCES                              $$$ $$$$$$$$$$                 $$$$ $
-------------------------------------------------------------------------------------------------------------------------------
    1   145                                  1       451       195       21379 1451   144
    2   145                                  1       451       195       31379 1451   144
 DIFFERENCES                                                             $
-------------------------------------------------------------------------------------------------------------------------------
    1   194                                  8        16         3       21379 1451   193
    2   194                                  8        16         3       31379 1451   193
 DIFFERENCES                                                             $
-------------------------------------------------------------------------------------------------------------------------------
    1  1905   3.49200+ 5 0.00000+ 0 7.91960+ 4 1.00000+ 0 1.75000+ 5 2.05000+ 01379 8 16 1904
    2  1905   3.49200+ 4 0.00000+ 0 7.91960+ 4 1.00000+ 0 1.75000+ 5 2.05000+ 01379 8 16 1904
 DIFFERENCES          $
-------------------------------------------------------------------------------------------------------------------------------
SUMMARY OF ENDF/B DIFFERENCES BY SECTION
-------------------------------------------------------------------------------------------------------------------------------
 MAT  MF  MT       FILE 1       FILE 2
                CARDS  DIFFER  CARDS  DIFFER
-------------------------------------------------------------------------------------------------------------------------------
   0   0   0        1       0      1       0
-------------------------------------------------------------------------------------------------------------------------------
1379   1 451      196       4    196       4 (DIFFERENCES)
1379   2 151      270       0    270       0
1379   3   1      232       0    232       0
1379   3   2      231       0    231       0
1379   3   4       56       0     56       0
1379   3  16       13       0     13       0
1379   3  17        8       0      8       0
1379   3  51       18       0     18       0
1379   3  52       17       0     17       0
1379   3  53       17       0     17       0
1379   3  54       18       0     18       0
1379   3  55       17       0     17       0
1379   3  56       17       0     17       0
1379   3  57       13       0     13       0
1379   3  58       16       0     16       0
1379   3  59       16       0     16       0
1379   3  60       15       0     15       0
1379   3  61       14       0     14       0
```

1379	3	62	14	0	14	0	
1379	3	63	11	0	11	0	
1379	3	64	11	0	11	0	
1379	3	91	23	0	23	0	
1379	3	102	197	0	197	0	
1379	3	103	11	0	11	0	
1379	3	107	10	0	10	0	
1379	3	251	13	0	13	0	
1379	3	252	13	0	13	0	
1379	3	253	13	0	13	0	
1379	4	2	159	0	159	0	
1379	4	16	11	0	11	0	
1379	4	17	11	0	11	0	
1379	4	51	11	0	11	0	
1379	4	52	11	0	11	0	
1379	4	53	11	0	11	0	
1379	4	54	11	0	11	0	
1379	4	55	11	0	11	0	
1379	4	56	11	0	11	0	
1379	4	57	11	0	11	0	
1379	4	58	11	0	11	0	
1379	4	59	11	0	11	0	
1379	4	60	11	0	11	0	
1379	4	61	11	0	11	0	
1379	4	62	11	0	11	0	
1379	4	63	11	0	11	0	
1379	4	64	11	0	11	0	
1379	4	91	11	0	11	0	
1379	5	16	21	0	21	0	
1379	5	17	20	0	20	0	
1379	5	91	13	0	13	0	
1379	8	16	5	1	5	1	(DIFFERENCES)
1379	10	16	10	0	10	0	
1379	33	102	14	0	14	0	
1379	33	102	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	1933	5	1933	5

END OF RUN

65

1292
1292
1292
1292
1292
1292
1292
1292
1292

SUMMARY

END OF

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SECTIONS WERE CALCULATED USING THE ABACUS-2 CODE (6) OF THE      1293  1  58
OPTICAL MODEL. THE OPTICAL PARAMETERS USED IN THE CALCULATION    1293  1  59
WILL BE SHOWN IN THE LATER SECTION. ABOVE 2.5 MEV, THE TOTAL     1293  1  60
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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

```
                                                                 MAT  MF REC.
 9.12330+ 4 2.31038+ 2          1          1          0          2 1391  1   1
 0.00000+ 0 1.00000+ 0          0          0          0          0 1391  1   2
 0.00000+ 0 1.00000+ 0          0          0        115         36 1391  1   3
 91-PA-233 HEDL,INEL  EVAL-MAY78 MANN,SCHENTER,REICH               1391  1   4
                      DIST-MAR83                  830316          1391  1   5
ENDF/B-V SAME AS EVALUATION OF P.C. YOUNG (JAN70) EXCEPT FOR       1391  1   6
     DECAY DATA.  NO NEW DATA AVAILABLE. (N,G) ADEQUATE.           1391  1   7
     *          *          *          *          *          *      1391  1   8
 DATA MODIFIED OCTOBER 70 TO CONFORM TO ENDF/B-VERSION II FORMATS   1391  1   9
     *          *          *          *          *          *      1391  1  10
 DATA MODIFIED JAN 74 AT GENERAL ATOMIC(DRM) TO USE BNL-325 (ED.3) 1391  1  11
 RESOLVED RESONANCE PARAMETERS BELOW 18EV.  0.0253EV CAPT XSECT =   1391  1  12
 41.4605 B.                                                        1391  1  13
     *          *          *          *          *          *      1391  1  14
 DATA MODIFIED MAY 74 AT BROOKHAVEN (BNL) BY R. KINSEY             1391  1  15
  DECAY DATA ADDED, FILES EXTENDED TO 20 MEV, AND INITIAL POINT    1391  1  16
     OF THRESHOLD REACTIONS CORRECTED.                             1391  1  17
     *          *          *          *          *          *      1391  1  18
MF=1,MT=451  COMMENTS AND DICTIONARY                               1391  1  19
MF=1,MT=452  NU(E) BASED ON SYSTEMATICS OF HOWERTON (REF. 11)      1391  1  20
MF=1,MT=458 ENERGY OF FISSION BASED ON SYSTEMATICS OF SHER(REF.12) 1391  1  21
MF=2,MT=151  RESON PARAMETERS FROM * REF.1(28 RESON,UP TO 17.5EV), 1391  1  22
   REF.2(12 RESON,17.5-37.5EV). RESOLVED RESON ENERGY RANGE- 0.001 1391  1  23
   TO 38.5 EV. AVE RESON PARAMETERS DEDUCED FROM THE 27 POSITIVE   1391  1  24
   RESON GIVEN IN REF.1. UNRESOLVED RESON ENERGY RANGE- 38.5 EV TO 1391  1  25
   10 KEV. THE 12 GNO FROM REF.2 ADJUSTED TO YIELD SAME RESON INT  1391  1  26
   CONTRIB INPLIED BY THE AVE RESON PARAMETERS. THE RESULTING GNO  1391  1  27
   FOR THE 40 RESOLVED RESON AND THE AVE GNO FOR THE UNRESOLVED    1391  1  28
   RESON ADJUSTED TO YIELD A CAPT RESON INT(0.5EV-10MEV)=859.96BN( 1391  1  29
   INCLUDING THE CONTRIB OF THE MF=3,MT=102 DATA). THE GNO FOR THE 1391  1  30
   NEG RESON THEN ADJUSTED TO YIELD A 0.0253EV CAPT XSECT= 39.79BN 1391  1  31
 FILE 3 CONTAINS SMOOTH DATA IN THE ENERGY RANGE 10 KEV TO 15 MEV  1391  1  32
MF=3,MT=1    TOTAL CROSS SECTION - REQUIRED TO BE CONSISTENT IN    1391  1  33
   BOTH MAGNITUDE AND ENERGY VARIATION WITH THE TOTAL X-SECTION    1391  1  34
   OF NEIGHBORING NUCLIDES, E.G. TH232,U233,U235,U238, AND PU239.  1391  1  35
MF=3,MT=2    ELASTIC SCATTERING CROSS SECTION = TOTAL X-SECTION    1391  1  36
   MINUS NONELASTIC X-SECTION. IN ADDITION, REQUIRED TO BE CONSIS- 1391  1  37
   TENT IN ENERGY VARIATION WITH ELASTIC SCATTERING X-SECTION OF   1391  1  38
   NEIGHBORING NUCLIDES (TH232,U235,U238) AND TO JOIN SMOOTHLY AT  1391  1  39
   10 KEV WITH A VALUE NEARLY EQUAL TO THE POTENTIAL SCATTERING    1391  1  40
   X-SECTION (=9.995 BARNS, REF.2).                                1391  1  41
MF=3,MT=3    NONELASTIC CROSS SECTION = SUM OF THE (N,F),          1391  1  42
   (N,NPRIME),(N,2N),(N,3N) AND (N,GAMMA) CROSS SECTIONS.          1391  1  43
MF=3,MT=4    INELASTIC SCAT XSECT  - TAKEN FROM REF.3 . Q-VALUE =  1391  1  44
   - 18.7 KEV ( ENERGY OF THE FIRST EXCITED STATE IN 91PA233 )     1391  1  45
MF=3,MT=16 AND 17   (N,2N) AND (N,3N) XSECT - TAKEN FROM REF.3     1391  1  46
   Q-VALUE CALCULATED USING ATOMIC MASSES FROM REF.4.              1391  1  47
MF=3,MT=18   FISSION CROSS SECTION - COMPOSITE CURVE AS FOLLOWS -  1391  1  48
   0.48-1.00MEV 233PA(N,F)= 238U(N,F) FROM REF.5.                  1391  1  49
   1.00-1.50MEV LOG(233PA(N,F)) LINEAR IN LOG(E)                   1391  1  50
   1.50-5.00MEV 233PA(N,F)= (C1/C2)*238U(N,F) FROM REF.5.          1391  1  51
   C1=0.832 = CALC. PLATEAU VALUE OF 233PA(N,F) REF.6.             1391  1  52
   C2=0.511 = AVG. VALUE OF 238U(N,F) (REF.5),2.6-5.6 MEV          1391  1  53
   5.00-9.00MEV 233PA(N,F) HAS ENERGY VARIATION SIMILAR TO THAT    1391  1  54
   FOR (N,F) OF U234,U236 AND NP237 FROM REF.5.                    1391  1  55
   9.00-12.5MEV 233PA(N,F)=(C1/C2)*238U(N,F) FROM REF.7.           1391  1  56
   C1=1.56 = DERIVED VALUE OF 233PA(N,F) FOR THE SECOND PLATEAU    1391  1  57
             NEAR 9.0 MEV.                                         1391  1  58
   C2=1.02 = 238U(N,F)(REF.7) AT THE SECOND PLATEAU.               1391  1  59
   12.5-15.0MEV 233PA(N,F) HAS SAME ENERGY VARIATION AS THAT FOR   1391  1  60
```

WAS TAKEN INTO ACCOUNT IN THE CALCULATION. FROM 3 MEV TO 20 MEV, 1293 1 [illegible]
THE CAPTURE CROSS SECTION WAS OBTAINED BY GROGI-3 FOR COMPOUND 1293 1 121

	MAT	MF	REC.
236U(N,F)(REF.7)	1391	1	61
Q-VALUE = CALCULATED ENERGY RELEASE PER FISSION	1391	1	62
MF=3,MT=51,52,53,54,55,91 PARTIAL INELASTIC SCAT XSECT-FROM REF.3	1391	1	63
MT'S REVISED IN VER. 5, CORRECTING DISCONTINUITY AT 200 KEV 3	1391	1	64
MF=3,MT=102 CAPTURE CROSS SECTION - COMPOSITE CURVE AS FOLLOWS -	1391	1	65
0.01-0.08MEV 233PA(N,GAMMA) SELECTED TO JOIN SMOOTHLY WITH THE	1391	1	66
(N,GAMMA) CALCULATED FROM AVERAGE RESONANCE PARAMETERS	1391	1	67
0.08-15.0MEV 233PA(N,GAMMA) = 2*238U(N,GAMMA) FROM REF.8.	1391	1	68
NORMALIZATION FACTOR(=2) CHOSEN SO THAT 233PA(N,GAMMA) =	1391	1	69
236U(N,GAMMA)(REF.8) AT 0.9 MEV	1391	1	70
MF=3,MT=251 MU-BAR (AVG.COSINE OF THE SCATTERING ANGLE IN THE LAB	1391	1	71
SYSTEM FOR ELASTIC SCATTERING), CALCULATED FROM THE U(1,M) AND	1391	1	72
LEGENDRE COEFFICIENTS GIVEN IN FILE 4	1391	1	73
MF=3,MT=252 XI (AVG.LOGARITHMIC ENERGY DECREMENT).	1391	1	74
MF=3,MT=253 GAMMA (SLOWING DOWN PARAMETER).	1391	1	75
THE ENERGY DEPENDENCE OF THE TWO ABOVE QUANTITIES IS DETERMINED	1391	1	76
BY THE LEGENDRE COEFFICIENTS GIVEN IN FILE 4. COMPLETELY	1391	1	77
GENERAL EXPRESSIONS IN POWERS OF AWR**-1 HAVE BEEN DERIVED FOR	1391	1	78
THE CONSTANTS WHICH DETERMINE THE CONTRIBUTION OF EACH OF THE	1391	1	79
LEGENDRE COEFFICIENTS.	1391	1	80
MF=4,MT=2 TRANSFER MATRIX U (FROM C.M. TO LAB). A GENERAL EX-	1391	1	81
PRESSION FOR U(L,M) IN POWERS OF AWR**-1 HAS BEEN DERIVED. THE	1391	1	82
LEGENDRE COEFFICIENTS WERE TAKEN DIRECTLY FROM REF.3, AND ARE	1391	1	83
BASED ON THE DATA FOR TH232.	1391	1	84
MF=4,MT=51,52,53,54,55 ANG DIST OF NEUTRONS SCAT INELASTICALLY	1391	1	85
FROM 5 DISCRETE LEVELS ASSUMED ISOTROPIC IN THE CM SYSTEM	1391	1	86
MF=5,MT=16,17,91 ENERGY DEPENDENCE OF SECONDARY NEUTRONS DEFINED	1391	1	87
BY AN EVAPORATION SPECTRUM . ENERGY DEPENDENCE OF THETA CALCU-	1391	1	88
LATED USING THE FORMULATION IN REF.9	1391	1	89
MF=5,MT=18 SIMPLE FISSION SPECTRUM - THETA (CONSTANT) CALCULATED	1391	1	90
USING THE FORMULATION GIVEN IN REF.10.	1391	1	91
MF=8,MT=457 DECAY DATA EVAL-AUG78 C.W.REICH ANC	1391	1	92
REFERENCES Q(BETA)- A.H. WAPSTRA AND K. BOS, AT. DATA AND NUCL.	1391	1	93
DATA TABLES 19, 175 (1977).	1391	1	94
OTHER- Y.A. ELLIS, NUCL. DATA SHEETS 6,NO.3, 257	1391	1	95
(1971) AND TABLE OF ISOTOPES, 7TH ED. (PRE-	1391	1	96
LIMINARY DATA, PRIV. COMM. FROM C.M. LEDERER)	1391	1	97
NOTE THE K-X-RAY INTENSITIES REPRESENT MEASURED VALUES.	1391	1	98
NOTE THE GAMMA-RAY DATA SUMMARIZED BY Y.A. ELLIS (NUCL.	1391	1	99
DATA SHEETS, TO BE PUBLISHED) HAVE BEEN NORMALIZED TO	1391	1	100
A VALUE OF (38.6+/-0.5)% FOR THE INTENSITY OF THE	1391	1	101
311.9-KEV GAMMA RAY. THIS VALUE HAS RECENTLY BEEN	1391	1	102
MEASURED BY R.J. GEHRKE AND R.G. HELMER (PRIV. COMM.	1391	1	103
FROM R.J. GEHRKE, MARCH, 1978).	1391	1	104
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 8/78	1391	1	105
REFERENCES	1391	1	106
1. SIMPSON AND CODDING, NUCL SCI AND ENG, 28, 133 (1967)	1391	1	107
2. HARRIS D.R. , WAPD-TM-814 (1969)	1391	1	108
3. DRAKE AND NICHOLS, GA-7462 (1967)	1391	1	109
4. MATTAUCH, ET AL, NUCLEAR PHYSICS, 67, 1 (1965)	1391	1	110
5. DAVEY , NUCL SCI AND ENG , 32, 35 (1968)	1391	1	111
6. LALOVIC , LECTURES ON NUCL INTERACTIONS, VOL II,207 (1962)	1391	1	112
7. HART , AHSB(S) R 169 (1969)	1391	1	113
8. STEHN,ET AL, BNL-325, 2ND ED, SUPPL 2 , VOL III (1965)	1391	1	114
9. SMITH AND GRIMESEY, IN-1182 (1969)	1391	1	115
10.TERRELL, PHYS AND CHEM OF FISS, VOL II, 3 (1965)	1391	1	116
11.R.J. HOWERTON, NUCL. SCI. AND ENG. 61(1977)438	1391	1	117
12.SHER + BECK EPRI NP-1771/81 + REV.1/83 + PC TO MAGURNO 2/83	1391	1	118
1 451 154 2	1391	1	119
1 452 3 1	1391	1	120
1 458 5 2	1391	1	121

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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

			MAT	MF	REC.
2	151	49	0 1391	1	122
3	1	56	0 1391	1	123
3	2	53	0 1391	1	124
3	3	56	0 1391	1	125
3	4	52	0 1391	1	126
3	16	15	0 1391	1	127
3	17	8	0 1391	1	128
3	18	37	2 1391	1	129
3	51	16	0 1391	1	130
3	52	11	0 1391	1	131
3	53	10	0 1391	1	132
3	54	9	0 1391	1	133
3	55	8	0 1391	1	134
3	91	42	0 1391	1	135
3	102	53	0 1391	1	136
3	251	15	0 1391	1	137
3	252	15	0 1391	1	138
3	253	15	0 1391	1	139
4	2	154	1 1391	1	140
4	16	10	0 1391	1	141
4	17	10	0 1391	1	142
4	18	10	0 1391	1	143
4	51	10	0 1391	1	144
4	52	10	0 1391	1	145
4	53	10	0 1391	1	146
4	54	10	0 1391	1	147
4	55	10	0 1391	1	148
4	91	10	0 1391	1	149
5	16	9	0 1391	1	150
5	17	8	0 1391	1	151
5	18	9	1 1391	1	152
5	91	8	0 1391	1	153
8	457	137	1 1391	1	154
			1391	1	155
			1391	1	159
			1391	1	165
			1391	2	216
			1391	3	274
			1391	3	328
			1391	3	385
			1391	3	438
			1391	3	454
			1391	3	463
			1391	3	501
			1391	3	518
			1391	3	530
			1391	3	541
			1391	3	551
			1391	3	560
			1391	3	603
			1391	3	657
			1391	3	673
			1391	3	689
			1391	3	705
			1391	4	861
			1391	4	872
			1391	4	883
			1391	4	894
			1391	4	905
			1391	4	916
			1391	4	927

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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

MAT	MF	REC.
1391	4	938
1391	4	949
1391	4	960
1391	5	971
1391	5	980
1391	5	990
1391	5	999
1391	8	1138

```
COMPARE TWO BCD FILES (COMPARE 82-1)
-------------------------------------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST--------      70 (  1 TO 80 )
COLUMNS TO COMPARE--------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE----      66 (  1 TO 70 )
SPECIAL FILE FLAG---------------       2
ACCEPTABLE DIFFERENCE-----------      0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
-------------------------------------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
-------------------------------------------------------------------------------------------------------------------------------
FILE 1 =ACT1391 OLD
FILE 2 =ACT1391 NEW
-------------------------------------------------------------------------------------------------------------------------------
 FILE   CARD  CONTENTS
-------------------------------------------------------------------------------------------------------------------------------
                        1         2         3         4         5         6         7         8
 FILE   CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
-------------------------------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------------------------------
    1      2  9.12330+ 4 2.31038+ 2          1         1         0          11391 1451     1
    2      2  9.12330+ 4 2.31038+ 2          1         1         0          21391 1451     1
DIFFERENCES                                                                 $
-------------------------------------------------------------------------------------------------------------------------------
    1      3  0.0     + 0 1.00000+ 0          0         0         0          01391 1451     2
    2      3  0.00000+ 0 1.00000+ 0          0         0         0          01391 1451     2
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------------------------------------
    1      4  0.0     + 0 1.00000+ 0          0         0       115         361391 1451     3
    2      4  0.00000+ 0 1.00000+ 0          0         0       115         361391 1451     3
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------------------------------------
    1      6                          DIST-MAY79                    781102    1391 1451     5
    2      6                          DIST-MAR83                    830316    1391 1451     5
DIFFERENCES                                $$$                      $$$$$$
-------------------------------------------------------------------------------------------------------------------------------
    1    119  12.R. SHER (PRIV. COMM., 1977)                                  1391 1451   118
    2    119  12.SHER + BECK EPRI NP-1771/81 + REV.1/83 + PC TO MAGURNO 2/83  1391 1451   118
DIFFERENCES    $$$$$$$$$$$$$$$$$$$$$$$$$$$$ $ $$$$$$$$ $ $$ $$ $$$$$$$ $$$$
-------------------------------------------------------------------------------------------------------------------------------
    1    120                                  1       451       154          01391 1451   119
    2    120                                  1       451       154          21391 1451   119
DIFFERENCES                                                                 $
-------------------------------------------------------------------------------------------------------------------------------
    1    122                                  1       458         5          11391 1451   121
    2    122                                  1       458         5          21391 1451   121
DIFFERENCES                                                                 $
-------------------------------------------------------------------------------------------------------------------------------
    1    130                                  3        18        37          11391 1451   129
    2    130                                  3        18        37          21391 1451   129
DIFFERENCES                                                                 $
-------------------------------------------------------------------------------------------------------------------------------
    1    158  0.0     + 0 0.0     + 0          0         0         2          01391 1452   157
    2    158  0.00000+ 0 0.00000+ 0          0         0         2          01391 1452   157
DIFFERENCES     $$$$       $$$$
-------------------------------------------------------------------------------------------------------------------------------
    1    162  0.0     + 0 0.0     + 0          0         0        18          91391 1458   161
    2    162  0.00000+ 0 0.00000+ 0          0         0        18          91391 1458   161
DIFFERENCES     $$$$       $$$$
-------------------------------------------------------------------------------------------------------------------------------
    1    163  1.67090+ 8 3.72210+ 6 5.00000+ 6 4.00000+ 5 5.00000+ 2 5.00000+ 21391 1458   162
    2    163  1.63500+ 8 2.00000+ 6 5.04000+ 6 4.00000+ 5 1.00000+ 4 2.50000+ 31391 1458   162
DIFFERENCES     $$$     $ $$$$       $                   $         $ $ $       $
-------------------------------------------------------------------------------------------------------------------------------
    1    164  6.00000+ 0 2.00000+ 0 8.42420+ 6 6.73940+ 5 8.66270+ 6 7.36330+ 51391 1458   163
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```
   2   164    7.03000+ 6 1.00000+ 6 7.06000+ 6 7.50000+ 5 7.20000+ 6 5.00000+ 51391 1458   163
 DIFFERENCES  $  $      $ $          $ $ $$$$     $ $$$$       $ $$$$       $ $$$$
------------------------------------------------------------------------------------------------
   1   165    1.16450+ 7 6.98700+ 5 1.89180+ 8 1.22330+ 6 2.00830+ 8 1.00410+ 61391 1458   164
   2   165    9.66000+ 6 1.10000+ 6 1.89840+ 8 1.28280+ 6 1.99500+ 8 6.60000+ 51391 1458   164
 DIFFERENCES  $ $ $$    $ $ $$$     $          $$         $$$       $ $$$$       $ $ $$   $
------------------------------------------------------------------------------------------------
   1   172    2.31038+ 2 0.0     + 0          0          0         204          341391 2151   171
   2   172    2.31038+ 2 0.00000+ 0          0          0         204          341391 2151   171
 DIFFERENCES               $$$$
------------------------------------------------------------------------------------------------
   1   173   -2.00000- 1 1.50000+ 0 5.00004- 2 4.11200- 6 5.00000- 2 0.0     + 01391 2151   172
   2   173   -2.00000- 1 1.50000+ 0 5.00004- 2 4.11200- 6 5.00000- 2 0.00000+ 01391 2151   172
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   174    7.95000- 1 1.50000+ 0 5.00014- 2 1.40000- 6 5.00000- 2 0.0     + 01391 2151   173
   2   174    7.95000- 1 1.50000+ 0 5.00014- 2 1.40000- 6 5.00000- 2 0.00000+ 01391 2151   173
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   175    1.34100+ 0 1.50000+ 0 4.01390- 2 1.39000- 4 4.00000- 2 0.0     + 01391 2151   174
   2   175    1.34100+ 0 1.50000+ 0 4.01390- 2 1.39000- 4 4.00000- 2 0.00000+ 01391 2151   174
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   176    1.64400+ 0 1.50000+ 0 4.23800- 2 3.80000- 4 4.20000- 2 0.0     + 01391 2151   175
   2   176    1.64400+ 0 1.50000+ 0 4.23800- 2 3.80000- 4 4.20000- 2 0.00000+ 01391 2151   175
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   177    2.35600+ 0 1.50000+ 0 5.00117- 2 1.17000- 5 5.00000- 2 0.0     + 01391 2151   176
   2   177    2.35600+ 0 1.50000+ 0 5.00117- 2 1.17000- 5 5.00000- 2 0.00000+ 01391 2151   176
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   178    2.83000+ 0 1.50000+ 0 4.62070- 2 2.07000- 4 4.60000- 2 0.0     + 01391 2151   177
   2   178    2.83000+ 0 1.50000+ 0 4.62070- 2 2.07000- 4 4.60000- 2 0.00000+ 01391 2151   177
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   179    3.38600+ 0 1.50000+ 0 5.03900- 2 3.90000- 4 5.00000- 2 0.0     + 01391 2151   178
   2   179    3.38600+ 0 1.50000+ 0 5.03900- 2 3.90000- 4 5.00000- 2 0.00000+ 01391 2151   178
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   180    4.28800+ 0 1.50000+ 0 4.81130- 2 1.13000- 4 4.80000- 2 0.0     + 01391 2151   179
   2   180    4.28800+ 0 1.50000+ 0 4.81130- 2 1.13000- 4 4.80000- 2 0.00000+ 01391 2151   179
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   181    5.15200+ 0 1.50000+ 0 5.55240- 2 5.24000- 4 5.50000- 2 0.0     + 01391 2151   180
   2   181    5.15200+ 0 1.50000+ 0 5.55240- 2 5.24000- 4 5.50000- 2 0.00000+ 01391 2151   180
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   182    7.18100+ 0 1.50000+ 0 6.02100- 2 2.10000- 4 6.00000- 2 0.0     + 01391 2151   181
   2   182    7.18100+ 0 1.50000+ 0 6.02100- 2 2.10000- 4 6.00000- 2 0.00000+ 01391 2151   181
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   183    8.26000+ 0 1.50000+ 0 6.50673- 2 6.73000- 5 6.50000- 2 0.0     + 01391 2151   182
   2   183    8.26000+ 0 1.50000+ 0 6.50673- 2 6.73000- 5 6.50000- 2 0.00000+ 01391 2151   182
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   184    8.97000+ 0 1.50000+ 0 7.02200- 2 2.20000- 4 7.00000- 2 0.0     + 01391 2151   183
   2   184    8.97000+ 0 1.50000+ 0 7.02200- 2 2.20000- 4 7.00000- 2 0.00000+ 01391 2151   183
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   185    9.37000+ 0 1.50000+ 0 7.15000- 2 1.50000- 3 7.00000- 2 0.0     + 01391 2151   184
   2   185    9.37000+ 0 1.50000+ 0 7.15000- 2 1.50000- 3 7.00000- 2 0.00000+ 01391 2151   184
 DIFFERENCES                                                            $$$$
------------------------------------------------------------------------------------------------
   1   186    1.03500+ 1 1.50000+ 0 5.01400- 2 1.40000- 4 5.00000- 2 0.0     + 01391 2151   185
   2   186    1.03500+ 1 1.50000+ 0 5.01400- 2 1.40000- 4 5.00000- 2 0.00000+ 01391 2151   185
 DIFFERENCES                                                            $$$$
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COMPAR
COLUMN
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FILE 2
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 1  1098   1.00000+ 0 0.0      + 0 1.12000+ 0 1.40000- 1 0.0      + 0 0.0      + 01391 8457 1097
 2  1098   1.00000+ 0 0.00000+ 0 1.12000+ 0 1.40000- 1 0.00000+ 0 0.00000+ 01391 8457 1097
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1100   1.00000+ 0 0.0      + 0 2.59000+ 0 1.80000- 1 0.0      + 0 0.0      + 01391 8457 1099
 2  1100   1.00000+ 0 0.00000+ 0 2.59000+ 0 1.80000- 1 0.00000+ 0 0.00000+ 01391 8457 1099
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1102   1.00000+ 0 0.0      + 0 8.30000- 1 3.00000- 2 0.0      + 0 0.0      + 01391 8457 1101
 2  1102   1.00000+ 0 0.00000+ 0 8.30000- 1 3.00000- 2 0.00000+ 0 0.00000+ 01391 8457 1101
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1104   1.00000+ 0 0.0      + 0 2.60000+ 0 3.00000- 1 0.0      + 0 0.0      + 01391 8457 1103
 2  1104   1.00000+ 0 0.00000+ 0 2.60000+ 0 3.00000- 1 0.00000+ 0 0.00000+ 01391 8457 1103
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1106   1.00000+ 0 0.0      + 0 2.10000+ 0 3.00000- 1 0.0      + 0 0.0      + 01391 8457 1105
 2  1106   1.00000+ 0 0.00000+ 0 2.10000+ 0 3.00000- 1 0.00000+ 0 0.00000+ 01391 8457 1105
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1108   1.00000+ 0 0.0      + 0 4.00000- 1 3.00000- 1 0.0      + 0 0.0      + 01391 8457 1107
 2  1108   1.00000+ 0 0.00000+ 0 4.00000- 1 3.00000- 1 0.00000+ 0 0.00000+ 01391 8457 1107
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1110   1.00000+ 0 0.0      + 0 6.40000- 1 1.40000- 1 0.0      + 0 0.0      + 01391 8457 1109
 2  1110   1.00000+ 0 0.00000+ 0 6.40000- 1 1.40000- 1 0.00000+ 0 0.00000+ 01391 8457 1109
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1112   1.00000+ 0 0.0      + 0 5.60000+ 0 3.00000- 1 0.0      + 0 0.0      + 01391 8457 1111
 2  1112   1.00000+ 0 0.00000+ 0 5.60000+ 0 3.00000- 1 0.00000+ 0 0.00000+ 01391 8457 1111
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1114   1.00000+ 0 0.0      + 0 2.94000+ 1 1.00000+ 0 0.0      + 0 0.0      + 01391 8457 1113
 2  1114   1.00000+ 0 0.00000+ 0 2.94000+ 1 1.00000+ 0 0.00000+ 0 0.00000+ 01391 8457 1113
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1116   1.00000+ 0 0.0      + 0 2.40000+ 0 6.00000- 1 0.0      + 0 0.0      + 01391 8457 1115
 2  1116   1.00000+ 0 0.00000+ 0 2.40000+ 0 6.00000- 1 0.00000+ 0 0.00000+ 01391 8457 1115
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1118   1.00000+ 0 0.0      + 0 9.70000- 1 5.00000- 2 0.0      + 0 0.0      + 01391 8457 1117
 2  1118   1.00000+ 0 0.00000+ 0 9.70000- 1 5.00000- 2 0.00000+ 0 0.00000+ 01391 8457 1117
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1120   1.00000+ 0 0.0      + 0 5.05000+ 0 1.70000- 1 0.0      + 0 0.0      + 01391 8457 1119
 2  1120   1.00000+ 0 0.00000+ 0 5.05000+ 0 1.70000- 1 0.00000+ 0 0.00000+ 01391 8457 1119
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1122   1.00000+ 0 0.0      + 0 6.30000- 1 2.00000- 2 0.0      + 0 0.0      + 01391 8457 1121
 2  1122   1.00000+ 0 0.00000+ 0 6.30000- 1 2.00000- 2 0.00000+ 0 0.00000+ 01391 8457 1121
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1124   1.00000+ 0 0.0      + 0 1.38000+ 0 4.00000- 2 0.0      + 0 0.0      + 01391 8457 1123
 2  1124   1.00000+ 0 0.00000+ 0 1.38000+ 0 4.00000- 2 0.00000+ 0 0.00000+ 01391 8457 1123
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1126   1.00000+ 0 0.0      + 0 4.10000- 1 1.00000- 1 0.0      + 0 0.0      + 01391 8457 1125
 2  1126   1.00000+ 0 0.00000+ 0 4.10000- 1 1.00000- 1 0.00000+ 0 0.00000+ 01391 8457 1125
DIFFERENCES                $$$$                                 $$$$       $$$$
--------------------------------------------------------------------------------------------
 1  1127   0.0      + 0 9.00000+ 0          0          0          6          51391 8457 1126
 2  1127   0.00000+ 0 9.00000+ 0          0          0          6          51391 8457 1126
DIFFERENCES    $$$$
--------------------------------------------------------------------------------------------
 1  1128   1.00000- 2 0.0      + 0 4.50000+ 4 5.00000+ 2 0.0      + 0 0.0      + 01391 8457 1127
```



```
1293
1293
1293
1293
1293
1293
1293
1293
1293
--------
SUMMARY
--------

--------

--------
END OF
--------
```

MT=107 (N,ALPHA) CROSS SECTION BASED ON THE DATA OF REF 25. 1379 1 60


```
  2  1128    1.00000- 2 0.00000+ 0 4.50000+ 4 5.00000+ 2 0.00000+ 0 0.00000+ 01391 8457 1127
DIFFERENCES               $$$$                                  $$$$        $$$$
---------------------------------------------------------------------------------------------
  1  1129    1.72200+ 4 0.0     + 0          0          0          6          01391 8457 1128
  2  1129    1.72200+ 4 0.00000+ 0          0          0          6          01391 8457 1128
DIFFERENCES               $$$$
---------------------------------------------------------------------------------------------
  1  1130    1.00000+ 0 0.0     + 0 4.90000+ 1 3.00000+ 0 0.0     + 0 0.0     + 01391 8457 1129
  2  1130    1.00000+ 0 0.00000+ 0 4.90000+ 1 3.00000+ 0 0.00000+ 0 0.00000+ 01391 8457 1129
DIFFERENCES               $$$$                                  $$$$        $$$$
---------------------------------------------------------------------------------------------
  1  1131    9.46585+ 4 0.0     + 0          0          0          6          01391 8457 1130
  2  1131    9.46585+ 4 0.00000+ 0          0          0          6          01391 8457 1130
DIFFERENCES               $$$$
---------------------------------------------------------------------------------------------
  1  1132    1.00000+ 0 0.0     + 0 9.80000+ 0 0.0     + 0 0.0     + 0 0.0     + 01391 8457 1131
  2  1132    1.00000+ 0 0.00000+ 0 9.80000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01391 8457 1131
DIFFERENCES               $$$$                      $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------
  1  1133    9.84397+ 4 0.0     + 0          0          0          6          01391 8457 1132
  2  1133    9.84398+ 4 0.00000+ 0          0          0          6          01391 8457 1132
DIFFERENCES        $      $$$$
---------------------------------------------------------------------------------------------
  1  1134    1.00000+ 0 0.0     + 0 1.80000+ 1 0.0     + 0 0.0     + 0 0.0     + 01391 8457 1133
  2  1134    1.00000+ 0 0.00000+ 0 1.80000+ 1 0.00000+ 0 0.00000+ 0 0.00000+ 01391 8457 1133
DIFFERENCES               $$$$                      $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------
  1  1135    1.10863+ 5 0.0     + 0          0          0          6          01391 8457 1134
  2  1135    1.10863+ 5 0.00000+ 0          0          0          6          01391 8457 1134
DIFFERENCES               $$$$
---------------------------------------------------------------------------------------------
  1  1136    1.00000+ 0 0.0     + 0 6.10000+ 0 0.0     + 0 0.0     + 0 0.0     + 01391 8457 1135
  2  1136    1.00000+ 0 0.00000+ 0 6.10000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01391 8457 1135
DIFFERENCES               $$$$                      $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------
  1  1137    1.15606+ 5 0.0     + 0          0          0          6          01391 8457 1136
  2  1137    1.15606+ 5 0.00000+ 0          0          0          6          01391 8457 1136
DIFFERENCES               $$$$
---------------------------------------------------------------------------------------------
  1  1138    1.00000+ 0 0.0     + 0 2.40000+ 0 0.0     + 0 0.0     + 0 0.0     + 01391 8457 1137
  2  1138    1.00000+ 0 0.00000+ 0 2.40000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01391 8457 1137
DIFFERENCES               $$$$                      $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1391	1	451	155	8	155	8	(DIFFERENCES)
1391	1	452	4	1	4	1	(DIFFERENCES)
1391	1	458	6	4	6	4	(DIFFERENCES)
1391	2	151	51	43	51	43	(DIFFERENCES)
1391	3	1	58	2	58	2	(DIFFERENCES)
1391	3	2	54	2	54	2	(DIFFERENCES)
1391	3	3	57	2	57	2	(DIFFERENCES)
1391	3	4	53	2	53	2	(DIFFERENCES)
1391	3	16	16	2	16	2	(DIFFERENCES)
1391	3	17	9	2	9	2	(DIFFERENCES)
1391	3	18	38	2	38	2	(DIFFERENCES)
1391	3	51	17	4	17	4	(DIFFERENCES)
1391	3	52	12	4	12	4	(DIFFERENCES)
1391	3	53	11	4	11	4	(DIFFERENCES)
1391	3	54	10	4	10	4	(DIFFERENCES)
1391	3	55	9	4	9	4	(DIFFERENCES)

1391	3	91	43	2	43	2	(DIFFERENCES)
1391	3	102	54	2	54	2	(DIFFERENCES)
1391	3	251	16	1	16	1	(DIFFERENCES)
1391	3	252	16	1	16	1	(DIFFERENCES)
1391	3	253	16	1	16	1	(DIFFERENCES)
1391	4	2	156	97	156	97	(DIFFERENCES)
1391	4	16	11	4	11	4	(DIFFERENCES)
1391	4	17	11	4	11	4	(DIFFERENCES)
1391	4	18	11	4	11	4	(DIFFERENCES)
1391	4	51	11	4	11	4	(DIFFERENCES)
1391	4	52	11	4	11	4	(DIFFERENCES)
1391	4	53	11	4	11	4	(DIFFERENCES)
1391	4	54	11	4	11	4	(DIFFERENCES)
1391	4	55	11	4	11	4	(DIFFERENCES)
1391	4	91	11	4	11	4	(DIFFERENCES)
1391	5	16	11	2	11	2	(DIFFERENCES)
1391	5	17	9	2	9	2	(DIFFERENCES)
1391	5	18	10	2	10	2	(DIFFERENCES)
1391	5	91	9	2	9	2	(DIFFERENCES)
1391	8	457	139	81	139	81	(DIFFERENCES)
1391	8	457	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	1142	319	1142	319

END OF RUN

75 Pb

90

JUNE 1973
40.M.P.FRICKE ET.AL.PROC.NUCLEAR DATA FOR REACTORS,HELSINKI CON.
VOL.2,281(1970)

1379 1 120
1379 1 121

4	58	10	0	1379	1	182		


```
                                                                    MAT  MF REC.
9.22340+ 4 2.32030+ 2          1          1          0          3 1394  1   1
0.00000+ 0 1.00000+ 0          0          0          0          0 1394  1   2
0.00000+ 0 0.00000+ 0          0          0         80         49 1394  1   3
92-U -234 BNL,HEDL,+ EVAL-JUL78 DIVADEENAM,MANN,DRAKE,REICH,ET.AL 1394  1   4
                     DIST-MAR83 REV1-OCT80              830316     1394  1   5
 ********************************                               1394  1   6
          BNL        EVAL-JUL78 M. DIVADEENAM (NU, FILE 2)       1394  1   7
          HEDL       EVAL-APR78 MANN AND SCHENTER (FAST N,F)     1394  1   8
          INEL       EVAL-AUG78 REICH (DECAY)                    1394  1   9
          GGA        EVAL-JAN67 DRAKE AND NICHOLS                1394  1  10
 EXTENDED TO 20 MEV FOR ENDF/B VERSION-IV   (APR74)              1394  1  11
 DATA MODIFIED FOR ENDF/B-II FORMATS (APRIL, 1970)               1394  1  12
 PARAMETERS FOR NEGATIVE LEVEL CHANGED(JULY,1978)                1394  1  13
MF=1                   GENERAL INFORMATION                       1394  1  14
 MT=452 MEATHER ET. AL'S NU-BAR DATA(REF.9) NORMALIZED TO CF252  1394  1  15
         NU-BAR = 3.75                                           1394  1  16
  MT=458 ENERGY FROM FISSION, BASED ON SHER (REF. 10)            1394  1  17
MF=2                   RESONANCE PARAMETERS                      1394  1  18
 ********************                                           1394  1  19
  MT=151   RESOLVED RESONANCE PARAMETERS FROM REF.7.BOUND LEVEL  1394  1  20
           PARAMETERS MODIFIED TO FIT BNL-325 VOL I (REF.11)     1394  1  21
           THERMAL AND RESONANCE INTEGRAL CROSS SECTIONS.        1394  1  22
           UNRESOLVED RESONANCE PARAMETERS OBTAINED BY FITTING   1394  1  23
           AVERAGED (N,F) DATA OF JAMES ET.AL.(REF.7) AND ENDF-IV 1394 1  24
           CAPTURE CROSS SECTIONS FROM 1.5 KEV TO 100 KEV.CODE UR 1394 1  25
           (REF.12)WAS USED FOR THIS PURPOSE.                    1394  1  26
MF=3                   SMOOTH CROSS SECTIONS                     1394  1  27
  MT=1 TOTAL  SUM OF PARTIAL CROSS SECTIONS                      1394  1  28
  MT=2 ELASTIC  SAME AS U-238 (REF. 1)                           1394  1  29
  MT=4 INELASTIC   FROM PARKER (REF. 2)                          1394  1  30
  MT=16 (N-2N)  FROM PARKER (REF. 2)                             1394  1  31
  MT=17 (N-3N)  FROM PARKER (REF. 2)                             1394  1  32
  MT=18 FISSION  ABOVE 100 KEV BASED ON BEHRENS ET AL (REF. 3)   1394  1  33
        NORMALIZED TO U-235 (ENDF/B-V)                           1394  1  34
  MT=19 SAME AS MT=18, UNTIL (N,NF) THRESHOLD, THEREAFTER        1394  1  35
        CONSTANT                                                 1394  1  36
  MT=20 IS (MT=18)-(MT=19) UNTIL (N,NNF) THRESHOLD, CONSTANT     1394  1  37
         THERAFTER.                                              1394  1  38
  MT=21 IS (MT=18)-(MT=19)-(MT=20)                               1394  1  39
  MT=51,....56,91 FROM PARKER (REF. 2)                           1394  1  40
  MT=102 (N-GAMMA) (REF. 5)  ALSO MT=27 ABSORPTION               1394  1  41
  MT=251,252,253 CALCULATED BY CHAD                              1394  1  42
MF=4                   ANGULAR DISTRIBUTIONS                     1394  1  43
  MT=2  DIFF ELASTIC (REF. 5)  SAME AS THORIUM (REF. 6)          1394  1  44
  MT=2  ASSUMED ISOTROPIC                                        1394  1  45
MF=5                   ENERGY DISTRIBUTIONS                      1394  1  46
  MT=16,17,18,19,20,21,91 FROM REF. 5                            1394  1  47
                    REFERENCES                                   1394  1  48
              1.  GA-6087                                        1394  1  49
              2.  K. PARKER, AWRE-0-37/64 (1964)                 1394  1  50
              3.  J.W. BEHRENS, G.W.CARLSON, AND R.W. BAUER,     1394  1  51
                  NUCLEAR CROSS SECTION AND TECHNOLOGY, NBS 425  1394  1  52
                  (1975) P. 591                                  1394  1  53
              4.  F.M. MANN AND R.E. SCHENTER TRANS.AMER.NUCL.SOC. 1394 1  54
                  23(1976)546 AND TO BE PUBLISHED                1394  1  55
              5.  M.K. DRAKE AND P.F. NICHOLS GA-8135 (1967)     1394  1  56
              6.  M.K. DRAKE AND P.F. NICHOLS GA-6404 (1966)     1394  1  57
              7.  G.D.JAMES,J.W.DABBS,J.A.HARVEY,N.W.HILL,AND    1394  1  58
                  R.H.SCHINDLER,PHY.REV.C.15,2083(1977)          1394  1  59
              8.  J.A. HARVEY AND D.J. HUGHES, PHYS. REV.        1394  1  60
```

```
                                                              MAT  MF REC.
                109(1958)471.                                 1394  1   61
             9. D.S. MATHER, P. FIELDHOUSE, AND A. MOAT,      1394  1   62
                NUCL. PHYS. 66(1965)149.                      1394  1   63
            10.SHER+BECK EPRI NP1771+REV.1/83+PC TO MAGURNO 2/83 1394  1   64
            11. S.F.MUGHABGHAB AND D.I.GARBER,BNL-325 VOL I(1973 1394  1   65
            12. UR:E.PENNINGTON,PRIVATE COMMUNICATION.        1394  1   66
******************************                                1394  1   67
*                                                             1394  1   68
MF=8 MT=457 DECAY DATA                                        1394  1   69
REFERENCES  Q(ALPHA)-1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLE 1394  1   70
            HALF-LIFE- SEE R. VANINBROUKX, EURATOM REPORT EUR- 1394  1   71
                 5194E (1974).                                1394  1   72
            OTHER - SEE Y.A. ELLIS, NUCLEAR DATA SHEETS B 4,  1394  1   73
                 NO. 6, 581 (1970) AND  TABLE OF ISOTOPES,    1394  1   74
                 7TH ED.,(PRELIMINARY DATA, PRIV. COMM. FROM  1394  1   75
                 C.M. LEDERER).                               1394  1   76
       NOTE THE L-X-RAY DATA REPRESENT MEASURED VALUES. SEE C.E. 1394  1   77
            BEMIS, JR. AND L. TUBBS, ORNL-5297, 93 (SEPT., 1977). 1394  1   78
       NOTE THE GAMMA-RAY INTENSITY NORMALIZATION AND ITS     1394  1   79
            UNCERTAINTY HAVE BEEN DERIVED FROM INTENSITY-SUM  1394  1   80
            CONSIDERATIONS, USING  THEORETICAL VALUES FOR THE 1394  1   81
            INTERNAL-CONVERSION COEFFICIENTS.                 1394  1   82
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND  SCHENTER (HEDL) 8/78 1394  1   83
                              1       451       132          3 1394  1   84
                              1       452         3          1 1394  1   85
                              1       458         5          3 1394  1   86
                              2       151       189          2 1394  1   87
                              3         1        27          1 1394  1   88
                              3         2        27          1 1394  1   89
                              3         4        24          0 1394  1   90
                              3        16        10          0 1394  1   91
                              3        17         6          0 1394  1   92
                              3        18        20          3 1394  1   93
                              3        19        14          3 1394  1   94
                              3        20         8          3 1394  1   95
                              3        21         7          3 1394  1   96
                              3        51        13          0 1394  1   97
                              3        52        11          0 1394  1   98
                              3        53         9          0 1394  1   99
                              3        54         7          0 1394  1  100
                              3        55         7          0 1394  1  101
                              3        56         6          0 1394  1  102
                              3        91        16          0 1394  1  103
                              3       102        20          1 1394  1  104
                              3       251        31          0 1394  1  105
                              3       252        31          0 1394  1  106
                              3       253        31          0 1394  1  107
                              4         2       279          0 1394  1  108
                              4        16         2          1 1394  1  109
                              4        17         2          1 1394  1  110
                              4        18         2          1 1394  1  111
                              4        19         2          2 1394  1  112
                              4        20         2          1 1394  1  113
                              4        21         2          1 1394  1  114
                              4        51         2          0 1394  1  115
                              4        52         2          0 1394  1  116
                              4        53         2          0 1394  1  117
                              4        54         2          0 1394  1  118
                              4        55         2          0 1394  1  119
                              4        56         2          0 1394  1  120
                              4        91         2          0 1394  1  121
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04/06/86

ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX
TEXT & DICT.

			MAT	MF	REC.
5	16	7	0 1394	1	122
5	17	7	0 1394	1	123
5	18	7	0 1394	1	124
5	19	7	0 1394	1	125
5	20	7	0 1394	1	126
5	21	7	0 1394	1	127
5	91	7	0 1394	1	128
8	16	2	0 1394	1	129
8	17	2	0 1394	1	130
8	102	2	0 1394	1	131
8	457	62	1 1394	1	132
			1394	1	133
			1394	1	137
			1394	1	143
			1394	2	334
			1394	3	363
			1394	3	391
			1394	3	416
			1394	3	427
			1394	3	434
			1394	3	455
			1394	3	470
			1394	3	479
			1394	3	487
			1394	3	501
			1394	3	513
			1394	3	523
			1394	3	531
			1394	3	539
			1394	3	546
			1394	3	563
			1394	3	584
			1394	3	616
			1394	3	648
			1394	3	680
			1394	4	961
			1394	4	964
			1394	4	967
			1394	4	970
			1394	4	973
			1394	4	976
			1394	4	979
			1394	4	982
			1394	4	985
			1394	4	988
			1394	4	991
			1394	4	994
			1394	4	997
			1394	4	1000
			1394	5	1009
			1394	5	1017
			1394	5	1025
			1394	5	1033
			1394	5	1041
			1394	5	1049
			1394	5	1057
			1394	8	1061
			1394	8	1064
			1394	8	1067
			1394	8	1130

COMPARE TWO BCD FILES (COMPARE 82-1)

```
COLUMNS TO READ AND LIST-------      70 (  1 TO 80 )
COLUMNS TO COMPARE-------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (  1 TO 70 )
SPECIAL FILE FLAG--------------       2
ACCEPTABLE DIFFERENCE----------      0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
```

DESCRIPTION OF TWO FILES TO BE COMPARED

FILE 1 =ACT1394 OLD
FILE 2 =ACT1394 NEW

```
 FILE   CARD  CONTENTS
                        1         2         3         4         5         6         7         8
 FILE   CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
-------------------------------------------------------------------------------------------------
    1      2  9.22340+ 4 2.32030+ 2         1         1         0     11394 1451     1
    2      2  9.22340+ 4 2.32030+ 2         1         1         0     31394 1451     1
 DIFFERENCES                                                                $
-------------------------------------------------------------------------------------------------
    1      3  0.0     + 0 1.00000+ 0         0         0         0     01394 1451     2
    2      3  0.00000+ 0 1.00000+ 0         0         0         0     01394 1451     2
 DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
    1      4  0.0     + 0 0.0     + 0         0         0        80    481394 1451     3
    2      4  0.00000+ 0 0.00000+ 0         0         0        80    491394 1451     3
 DIFFERENCES     $$$$       $$$$                                            $
-------------------------------------------------------------------------------------------------
    1      6                      DIST-MAY79                          790524     1394 1451     5
    2      6                      DIST-MAR83 REV1-OCT80               830316     1394 1451     5
 DIFFERENCES                          $$$ $$$$$$$$$$                  $$ $$$
-------------------------------------------------------------------------------------------------
    1     65                10. R. SHER, S. FIARAM,  AND C. BECK (P.C. 1976)     1394 1451    64
    2     65                10.SHER+BECK EPRI NP1771+REV.1/83+PC TO MAGURNO 2/831394 1451    64
 DIFFERENCES                   $$$$$$ $$ $$$$$$$$$$$$$$$$$$$$$$$$$ $$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
    1     85                                  1       451       131     11394 1451    84
    2     85                                  1       451       132     31394 1451    84
 DIFFERENCES                                                    $       $
-------------------------------------------------------------------------------------------------
    1     87                                  1       458         5     11394 1451    86
    2     87                                  1       458         5     31394 1451    86
 DIFFERENCES                                                            $
-------------------------------------------------------------------------------------------------
    1     88                                  2       151       189     11394 1451    87
    2     88                                  2       151       189     21394 1451    87
 DIFFERENCES                                                            $
-------------------------------------------------------------------------------------------------
    1     94                                  3        18        20     11394 1451    93
    2     94                                  3        18        20     31394 1451    93
 DIFFERENCES                                                            $
-------------------------------------------------------------------------------------------------
    1     95                                  3        19        14     11394 1451    94
    2     95                                  3        19        14     31394 1451    94
 DIFFERENCES                                                            $
-------------------------------------------------------------------------------------------------
    1     96                                  3        20         8     11394 1451    95
    2     96                                  3        20         8     31394 1451    95
 DIFFERENCES                                                            $
-------------------------------------------------------------------------------------------------
    1     97                                  3        21         7     11394 1451    96
```

```
    2   97                                     3         21          7          31394 1451    96
  DIFFERENCES                                                                   $
-----------------------------------------------------------------------------------------------------------------
    2  113                                     4         19          2          21394 1451   112
  DIFFERENCES ON     1 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-----------------------------------------------------------------------------------------------------------------
    1  136   0.0      + 0 0.0      + 0          0          0          2          01394 1452   134
    2  136   0.00000+ 0 0.00000+ 0          0          0          2          01394 1452   135
  DIFFERENCES   $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------
    1  139   0.0      + 0 0.0      + 0          0          0         18          91394 1458   138
    2  140   0.00000+ 0 0.00000+ 0          0          0         18          91394 1458   139
  DIFFERENCES   $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------
    1  140   1.66960+ 8 1.50000+ 6 5.34000+ 6 1.00000+ 5 4.80000+ 3 1.00000+ 31394 1458   139
    2  141   1.67100+ 8 2.00000+ 6 4.85000+ 6 4.30000+ 5 5.00000+ 3 1.00000+ 31394 1458   140
  DIFFERENCES   $$$       $ $        $ $$       $ $        $ $
-----------------------------------------------------------------------------------------------------------------
    1  141   6.60000+ 6 2.00000+ 6 5.60000+ 6 3.00000+ 5 5.80000+ 6 3.00000+ 51394 1458   140
    2  142   7.50000+ 6 1.00000+ 6 6.13000+ 6 7.50000+ 5 6.25000+ 6 5.00000+ 51394 1458   141
  DIFFERENCES $ $         $          $ $$       $ $        $ $$       $
-----------------------------------------------------------------------------------------------------------------
    1  142   7.80000+ 6 4.00000+ 5 1.90300+ 8 1.10000+ 6 1.98100+ 8 1.00000+ 61394 1458   141
    2  143   8.38000+ 6 1.10000+ 6 1.91840+ 8 1.27769+ 6 2.00220+ 8 6.50000+ 51394 1458   142
  DIFFERENCES $ $$        $ $        $    $$$       $$$$$      $ $$$$     $ $       $
-----------------------------------------------------------------------------------------------------------------
    1  147   1.00000- 5 1.49900+ 3          1          2          0          01394 2151   146
    2  148   1.00000- 5 1.50000+ 3          1          2          0          01394 2151   147
  DIFFERENCES              $$$
-----------------------------------------------------------------------------------------------------------------
    1  148   0.0      + 0 8.93000- 1          0          0          1          01394 2151   147
    2  149   0.00000+ 0 8.93000- 1          0          0          1          01394 2151   14ᴗ
  DIFFERENCES   $$$$
-----------------------------------------------------------------------------------------------------------------
    1  149   2.32029+ 2 0.0      + 0          0          0        714        1191394 2151   148
    2  150   2.32029+ 2 0.00000+ 0          0          0        714        1191394 2151   149
  DIFFERENCES               $$$$
-----------------------------------------------------------------------------------------------------------------
    1  156   4.85600+ 1 5.00000- 1 4.87300- 2 8.73000- 3 4.00000- 2 0.0      + 01394 2151   155
    2  157   4.85600+ 1 5.00000- 1 4.87300- 2 8.73000- 3 4.00000- 2 0.00000+ 01394 2151   156
  DIFFERENCES                                                       $$$$
-----------------------------------------------------------------------------------------------------------------
    1  166   1.94350+ 2 5.00000- 1 4.05260- 2 5.26000- 4 4.00000- 2 0.0      + 01394 2151   165
    2  167   1.94350+ 2 5.00000- 1 4.05260- 2 5.26000- 4 4.00000- 2 0.00000+ 013ᴖ4 2151   166
  DIFFERENCES                                                       $$$$
-----------------------------------------------------------------------------------------------------------------
    1  210   7.09100+ 2 5.00000- 1 5.43000- 2 1.43000- 2 4.00000- 2 0.0      + 01394 2151   209
    2  211   7.09100+ 2 5.00000- 1 5.43000- 2 1.43000- 2 4.00000- 2 0.00000+ 01394 2151   210
  DIFFERENCES                                                       $$$$
-----------------------------------------------------------------------------------------------------------------
    1  241   1.15940+ 3 5.00000- 1 4.74000- 2 7.40000- 3 4.00000- 2 0.0      + 01394 2151   240
    2  242   1.15940+ 3 5.00000- 1 4.74000- 2 7.40000- 3 4.00000- 2 0.00000+ 01394 2151   241
  DIFFERENCES                                                       $$$$
-----------------------------------------------------------------------------------------------------------------
    1  250   1.27290+ 3 5.00000- 1 8.04000- 2 4.04000- 2 4.00000- 2 0.0      + 01394 2151   249
    2  251   1.27290+ 3 5.00000- 1 8.04000- 2 4.04000- 2 4.00000- 2 0.00000+ 01394 2151   250
  DIFFERENCES                                                       $$$$
-----------------------------------------------------------------------------------------------------------------
    1  253   1.29530+ 3 5.00000- 1 5.19000- 2 1.19000- 2 4.00000- 2 0.0      + 01394 2151   252
    2  254   1.29530+ 3 5.00000- 1 5.19000- 2 1.19000- 2 4.00000- 2 0.00000+ 01394 2151   253
  DIFFERENCES                                                       $$$$
-----------------------------------------------------------------------------------------------------------------
    1  269   1.49900+ 3 1.00000+ 5          2          2          0          01394 2151   268
    2  270   1.50000+ 3 1.00000+ 5          2          2          0          01394 2151   269
  DIFFERENCES  $$$
-----------------------------------------------------------------------------------------------------------------
```

```
    1   339    1.00000- 5 0.0    + 0 1.00000+ 3 0.0    + 0 4.41900+ 4 0.0    + 01394 3  1  338
    2   340    1.00000- 5 0.00000+ 0 1.00000+ 3 0.00000+ 0 4.41900+ 4 0.00000+ 01394 3  1  339
DIFFERENCES                   $$$$                  $$$$                  $$$$
-----------------------------------------------------------------------------------------------------------------
    1   362    2.00000+ 7 5.74622+ 0                                            1394 3  1  361
    2   363    2.00000+ 7 5.74622+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01394 3  1  362
DIFFERENCES                          $$$$$$$$ $ $$$$$$$$ $ $$$$$$$$ $ $$$$$$$$ $
-----------------------------------------------------------------------------------------------------------------
    1   365    0.0    + 0 0.0    + 0          0          0          1        701394 3  2  364
    2   366    0.0000E+00 0.0000E+00          0          0          1        701394 3  2  365
DIFFERENCES       $$$$ $     $$$$ $
-----------------------------------------------------------------------------------------------------------------
    1   366            70          2                                            1394 3  2  365
    2   367            70          2          0          0          0          01394 3  2  366
DIFFERENCES                                   $          $          $          $
-----------------------------------------------------------------------------------------------------------------
    1   367    1.00000- 5 0.0    + 0 1.00000+ 3 0.0    + 0 4.41900+ 4 0.0    + 01394 3  2  366
    2   368    1.00000- 5 0.00000+ 0 1.00000+ 3 0.00000+ 0 4.41900+ 4 0.00000+ 01394 3  2  367
DIFFERENCES                   $$$$                  $$$$                  $$$$
-----------------------------------------------------------------------------------------------------------------
    1   368    6.00000+ 4 0.0    + 0 7.00000+ 4 0.0    + 0 8.00000+ 4 0.0    + 01394 3  2  367
    2   369    6.00000+ 4 0.00000+ 0 7.00000+ 4 0.00000+ 0 8.00000+ 4 0.00000+ 01394 3  2  368
DIFFERENCES                   $$$$                  $$$$                  $$$$
-----------------------------------------------------------------------------------------------------------------
    1   369    9.00000+ 4 0.0    + 0 1.00000+ 5 0.0    + 0 1.00000+ 5 1.05781+ 11394 3  2  368
    2   370    9.00000+ 4 0.00000+ 0 1.00000+ 5 0.00000+ 0 1.00000+ 5 1.05781+ 11394 3  2  369
DIFFERENCES                   $$$$                  $$$$
-----------------------------------------------------------------------------------------------------------------
    1   390    2.00000+ 7 3.07687+ 0                                            1394 3  2  389
    2   391    2.00000+ 7 3.07687+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01394 3  2  390
DIFFERENCES                          $$$$$$$$ $ $$$$$$$$ $ $$$$$$$$ $ $$$$$$$$ $
-----------------------------------------------------------------------------------------------------------------
    1   393    0.0    + 0-4.40000+ 4          0          0          1        621394 3  4  392
    2   394    0.00000+ 0-4.40000+ 4          0          0          1        621394 3  4  393
DIFFERENCES        $$$$
-----------------------------------------------------------------------------------------------------------------
    1   395    4.41900+ 4 0.0    + 0 6.00000+ 4 8.00000- 2 7.00000+ 4 1.70000- 11394 3  4  394
    2   396    4.41900+ 4 0.00000+ 0 6.00000+ 4 8.00000- 2 7.00000+ 4 1.70000- 11394 3  4  395
DIFFERENCES                   $$$$
-----------------------------------------------------------------------------------------------------------------
    1   418    0.0    + 0-6.77100+ 6          0          0          1        191394 3 16  417
    2   419    0.00000+ 0-6.77100+ 6          0          0          1        191394 3 16  418
DIFFERENCES        $$$$
-----------------------------------------------------------------------------------------------------------------
    1   420    6.80020+ 6 0.0    + 0 7.00000+ 6 1.00000- 2 7.50000+ 6 4.00000- 21394 3 16  419
    2   421    6.80020+ 6 0.00000+ 0 7.00000+ 6 1.00000- 2 7.50000+ 6 4.00000- 21394 3 16  420
DIFFERENCES                   $$$$
-----------------------------------------------------------------------------------------------------------------
    1   429    0.0    + 0-1.26700+ 7          0          0          1         71394 3 17  428
    2   430    0.00000+ 0-1.26700+ 7          0          0          1         71394 3 17  429
DIFFERENCES        $$$$
-----------------------------------------------------------------------------------------------------------------
    1   431    1.27250+ 7 0.0    + 0 1.30000+ 7 2.00000- 2 1.35000+ 7 6.00000- 21394 3 17  430
    2   432    1.27250+ 7 0.00000+ 0 1.30000+ 7 2.00000- 2 1.35000+ 7 6.00000- 21394 3 17  431
DIFFERENCES                   $$$$
-----------------------------------------------------------------------------------------------------------------
    1   436    0.0    + 0 1.90300+ 8          0          0          1        491394 3 18  435
    2   437    0.00000+ 0 1.91840+ 8          0          0          1        491394 3 18  436
DIFFERENCES        $$$$        $$$
-----------------------------------------------------------------------------------------------------------------
    1   438    1.00000- 5 0.0    + 0 1.00000+ 3 0.0    + 0 1.00000+ 5 0.0    + 01394 3 18  437
    2   439    1.00000- 5 0.00000+ 0 1.00000+ 3 0.00000+ 0 1.00000+ 5 0.00000+ 01394 3 18  438
DIFFERENCES                   $$$$                  $$$$                  $$$$
-----------------------------------------------------------------------------------------------------------------
    1   457    0.0    + 0 1.90300+ 8          0          0          1        311394 3 19  456
    2   458    0.00000+ 0 1.91840+ 8          0          0          1        311394 3 19  457
```

```
DIFFERENCES      $$$$       $$$
------------------------------------------------------------------------------------------------
    1   459   1.00000- 5 0.0    + 0 1.00000+ 3 0.0    + 0 1.00000+ 5 0.0    + 01394 3 19   458
    2   460   1.00000- 5 0.00000+ 0 1.00000+ 3 0.00000+ 0 1.00000+ 5 0.00000+ 01394 3 19   459
DIFFERENCES                 $$$$                  $$$$                  $$$$
------------------------------------------------------------------------------------------------
    1   472   0.0    + 0 1.90300+ 8          0          0          1        141394 3 20   471
    2   473   0.00000+ 0 1.91840+ 8          0          0          1        141394 3 20   472
DIFFERENCES      $$$$       $$$
------------------------------------------------------------------------------------------------
    1   474   1.00000- 5 0.0    + 0 5.50000+ 6 0.0    + 0 6.00000+ 6 1.08000- 11394 3 20   473
    2   475   1.00000- 5 0.00000+ 0 5.50000+ 6 0.00000+ 0 6.00000+ 6 1.08000- 11394 3 20   474
DIFFERENCES                 $$$$                  $$$$
------------------------------------------------------------------------------------------------
    1   481   0.0    + 0 2.00000+ 8          0          0          1        101394 3 21   480
    2   482   0.00000+ 0 1.91840+ 8          0          0          1        101394 3 21   481
DIFFERENCES      $$$$    $ $$$$
------------------------------------------------------------------------------------------------
    1   483   1.00000- 5 0.0    + 0 1.15000+ 7 0.0    + 0 1.20000+ 7 1.90000- 21394 3 21   482
    2   484   1.00000- 5 0.00000+ 0 1.15000+ 7 0.00000+ 0 1.20000+ 7 1.90000- 21394 3 21   483
DIFFERENCES                 $$$$                  $$$$
------------------------------------------------------------------------------------------------
    1   489   0.0    + 0-4.40000+ 4          0          0          1        281394 3 51   488
    2   490   0.00000+ 0-4.40000+ 4          0          0          1        281394 3 51   489
DIFFERENCES      $$$$
------------------------------------------------------------------------------------------------
    1   491   4.41900+ 4 0.0    + 0 6.00000+ 4 8.00000- 2 7.00000+ 4 1.70000- 11394 3 51   490
    2   492   4.41900+ 4 0.00000+ 0 6.00000+ 4 8.00000- 2 7.00000+ 4 1.70000- 11394 3 51   491
DIFFERENCES                 $$$$
------------------------------------------------------------------------------------------------
    1   499   1.80000+ 6 3.00000- 2 2.00000+ 6 1.00000- 2 2.00000+ 6 0.0    + 01394 3 51   498
    2   500   1.80000+ 6 3.00000- 2 2.00000+ 6 1.00000- 2 2.00000+ 6 0.00000+ 01394 3 51   499
DIFFERENCES                                                             $$$$
------------------------------------------------------------------------------------------------
    1   500   2.00000+ 7 0.0    + 0                                            1394 3 51   499
    2   501   2.00000+ 7 0.00000+ 0                                            1394 3 51   500
DIFFERENCES                 $$$$
------------------------------------------------------------------------------------------------
    1   503   0.0    + 0-1.44000+ 5          0          0          1        221394 3 52   502
    2   504   0.00000+ 0-1.44000+ 5          0          0          1        221394 3 52   503
DIFFERENCES      $$$$
------------------------------------------------------------------------------------------------
    1   505   1.44620+ 5 0.0    + 0 1.50000+ 5 1.00000- 2 2.00000+ 5 2.00000- 21394 3 52   504
    2   506   1.44620+ 5 0.00000+ 0 1.50000+ 5 1.00000- 2 2.00000+ 5 2.00000- 21394 3 52   505
DIFFERENCES                 $$$$
------------------------------------------------------------------------------------------------
    1   511   1.80000+ 6 5.00000- 2 2.00000+ 6 1.00000- 2 2.00000+ 6 0.0    + 01394 3 52   510
    2   512   1.80000+ 6 5.00000- 2 2.00000+ 6 1.00000- 2 2.00000+ 6 0.00000+ 01394 3 52   511
DIFFERENCES                                                             $$$$
------------------------------------------------------------------------------------------------
    1   512   2.00000+ 7 0.0    + 0                                            1394 3 52   511
    2   513   2.00000+ 7 0.00000+ 0                                            1394 3 52   512
DIFFERENCES                 $$$$
------------------------------------------------------------------------------------------------
    1   515   0.0    + 0-2.97000+ 5          0          0          1        181394 3 53   514
    2   516   0.00000+ 0-2.97000+ 5          0          0          1        181394 3 53   515
DIFFERENCES      $$$$
------------------------------------------------------------------------------------------------
    1   517   2.98280+ 5 0.0    + 0 4.00000+ 5 1.70000- 2 5.00000+ 5 3.00000- 21394 3 53   516
    2   518   2.98280+ 5 0.00000+ 0 4.00000+ 5 1.70000- 2 5.00000+ 5 3.00000- 21394 3 53   517
DIFFERENCES                 $$$$
------------------------------------------------------------------------------------------------
    1   522   2.00000+ 6 1.00000- 3 2.00000+ 6 0.0    + 0 2.00000+ 7 0.0    + 01394 3 53   521
    2   523   2.00000+ 6 1.00000- 3 2.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01394 3 53   522
DIFFERENCES                                       $$$$                  $$$$
------------------------------------------------------------------------------------------------
```

1	920	2.00000- 4	0.0	+ 0							1394	4	2	919	
2	921	2.00000- 4	0.00000	+ 0							1394	4	2	920	
DIFFERENCES			$$$$												
1	921	0.0	+ 0	7.50000	+ 6	0		0		14	01394	4	2	920	
2	922	0.00000	+ 0	7.50000	+ 6	0		0		14	01394	4	2	921	
DIFFERENCES		$$$$													
1	924	5.00000- 4	0.0	+ 0							1394	4	2	923	
2	925	5.00000- 4	0.00000	+ 0							1394	4	2	924	
DIFFERENCES			$$$$												
1	925	0.0	+ 0	8.00000	+ 6	0		0		14	01394	4	2	924	
2	926	0.00000	+ 0	8.00000	+ 6	0		0		14	01394	4	2	925	
DIFFERENCES		$$$$													
1	929	0.0	+ 0	9.00000	+ 6	0		0		14	01394	4	2	928	
2	930	0.00000	+ 0	9.00000	+ 6	0		0		14	01394	4	2	929	
DIFFERENCES		$$$$													
1	933	0.0	+ 0	1.00000	+ 7	0		0		14	01394	4	2	932	
2	934	0.00000	+ 0	1.00000	+ 7	0		0		14	01394	4	2	933	
DIFFERENCES		$$$$													
1	937	0.0	+ 0	1.10000	+ 7	0		0		16	01394	4	2	936	
2	938	0.00000	+ 0	1.10000	+ 7	0		0		16	01394	4	2	937	
DIFFERENCES		$$$$													
1	940	1.32000- 2	5.40000-	3	0.0	+ 0	0.0	+ 0			1394	4	2	939	
2	941	1.32000- 2	5.40000-	3	0.00000	+ 0	0.00000	+ 0			1394	4	2	940	
DIFFERENCES					$$$$		$$$$								
1	941	0.0	+ 0	1.20000	+ 7	0		0		16	01394	4	2	940	
2	942	0.00000	+ 0	1.20000	+ 7	0		0		16	01394	4	2	941	
DIFFERENCES		$$$$													
1	944	2.17000- 2	7.70000-	3	1.10000-	3	0.0	+ 0			1394	4	2	943	
2	945	2.17000- 2	7.70000-	3	1.10000-	3	0.00000	+ 0			1394	4	2	944	
DIFFERENCES							$$$$								
1	945	0.0	+ 0	1.30000	+ 7	0		0		16	01394	4	2	944	
2	946	0.00000	+ 0	1.30000	+ 7	0		0		16	01394	4	2	945	
DIFFERENCES		$$$$													
1	948	3.28000- 2	1.10000-	2	3.00000-	3	0.0	+ 0			1394	4	2	947	
2	949	3.28000- 2	1.10000-	2	3.00000-	3	0.00000	+ 0			1394	4	2	948	
DIFFERENCES							$$$$								
1	949	0.0	+ 0	1.40000	+ 7	0		0		16	01394	4	2	948	
2	950	0.00000	+ 0	1.40000	+ 7	0		0		16	01394	4	2	949	
DIFFERENCES		$$$$													
1	952	4.50000- 2	1.60000-	2	4.80000-	3	0.0	+ 0			1394	4	2	951	
2	953	4.50000- 2	1.60000-	2	4.80000-	3	0.00000	+ 0			1394	4	2	952	
DIFFERENCES							$$$$								
1	953	0.0	+ 0	1.50000	+ 7	0		0		16	01394	4	2	952	
2	954	0.00000	+ 0	1.50000	+ 7	0		0		16	01394	4	2	953	
DIFFERENCES		$$$$													
1	956	5.60000- 2	2.20000-	2	7.00000-	3	0.0	+ 0			1394	4	2	955	
2	957	5.60000- 2	2.20000-	2	7.00000-	3	0.00000	+ 0			1394	4	2	956	
DIFFERENCES							$$$$								
1	957	0.0	+ 0	2.00000	+ 7	0		0		16	01394	4	2	956	
2	958	0.00000	+ 0	2.00000	+ 7	0		0		16	01394	4	2	957	

```
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   960    5.60000- 2 2.20000- 2 7.00000- 3 0.0     + 0                        1394 4  2  959
   2   961    5.60000- 2 2.20000- 2 7.00000- 3 0.00000+ 0                        1394 4  2  960
DIFFERENCES                                         $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   963    0.0     + 0 2.32030+ 2          1          1          0          01394 4 16  962
   2   964    0.00000+ 0 2.32030+ 2          1          1          0          01394 4 16  963
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   966    0.0     + 0 2.32030+ 2          1          1          0          01394 4 17  965
   2   967    0.00000+ 0 2.32030+ 2          1          1          0          01394 4 17  966
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   969    0.0     + 0 2.32030+ 2          1          1          0          01394 4 18  968
   2   970    0.00000+ 0 2.32030+ 2          1          1          0          01394 4 18  969
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
MAT/MF/MT= 1394   4   19 ONLY ON FILE 2...SECTION SKIPPED
--------------------------------------------------------------------------------------------------------------------------------------
   1   972    0.0     + 0 2.32030+ 2          1          1          0          01394 4 20  971
   2   976    0.00000+ 0 2.32030+ 2          1          1          0          01394 4 20  975
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   975    0.0     + 0 2.32030+ 2          1          1          0          01394 4 21  974
   2   979    0.00000+ 0 2.32030+ 2          1          1          0          01394 4 21  978
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   978    0.0     + 0 2.32030+ 2          1          2          0          01394 4 51  977
   2   982    0.00000+ 0 2.32030+ 2          1          2          0          01394 4 51  981
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   981    0.0     + 0 2.32030+ 2          1          2          0          01394 4 52  980
   2   985    0.00000+ 0 2.32030+ 2          1          2          0          01394 4 52  984
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   984    0.0     + 0 2.32030+ 2          1          2          0          01394 4 53  983
   2   988    0.00000+ 0 2.32030+ 2          1          2          0          01394 4 53  987
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   987    0.0     + 0 2.32030+ 2          1          2          0          01394 4 54  986
   2   991    0.00000+ 0 2.32030+ 2          1          2          0          01394 4 54  990
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   990    0.0     + 0 2.32030+ 2          1          2          0          01394 4 55  989
   2   994    0.00000+ 0 2.32030+ 2          1          2          0          01394 4 55  993
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   993    0.0     + 0 2.32030+ 2          1          2          0          01394 4 56  992
   2   997    0.00000+ 0 2.32030+ 2          1          2          0          01394 4 56  996
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1   996    0.0     + 0 2.32030+ 2          1          1          0          01394 4 91  995
   2  1000    0.00000+ 0 2.32030+ 2          1          1          0          01394 4 91  999
DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1  1000    6.77100+ 6 0.0     + 0          0          9          1          21394 5 16  999
   2  1004    6.77100+ 6 0.00000+ 0          0          9          1          21394 5 16 1003
DIFFERENCES                 $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1  1003    0.0     + 0 0.0     + 0          0          0          1          31394 5 16 1002
   2  1007    0.00000+ 0 0.00000+ 0          0          0          1          31394 5 16 1006
DIFFERENCES      $$$$        $$$$
--------------------------------------------------------------------------------------------------------------------------------------
   1  1008    1.26700+ 7 0.0     + 0          0          9          1          21394 5 17 1007
   2  1012    1.26700+ 7 0.00000+ 0          0          9          1          21394 5 17 1011
```

```
DIFFERENCES                $$$$
---------------------------------------------------------------------------------------------------
    1 1090  4.00000+ 0 0.0     + 0 4.50000- 5 0.0     + 0 0.0     + 0 0.0     + 01394 8457 1089
    2 1094  4.00000+ 0 0.00000+ 0 4.50000- 5 0.00000+ 0 0.00000+ 0 0.00000+ 01394 8457 1093
DIFFERENCES                $$$$                  $$$$       $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1092  4.00000+ 0 0.0     + 0 3.00000- 1 0.0     + 0 0.0     + 0 0.0     + 01394 8457 1091
    2 1096  4.00000+ 0 0.00000+ 0 3.00000- 1 0.00000+ 0 0.00000+ 0 0.00000+ 01394 8457 1095
DIFFERENCES                $$$$                  $$$$       $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1094  4.00000+ 0 0.0     + 0 2.75000+ 1 1.50000+ 0 0.0     + 0 0.0     + 01394 8457 1093
    2 1098  4.00000+ 0 0.00000+ 0 2.75000+ 1 1.50000+ 0 0.00000+ 0 0.00000+ 01394 8457 1097
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1096  4.00000+ 0 0.0     + 0 7.25000+ 1 3.00000+ 0 0.0     + 0 0.0     + 01394 8457 1095
    2 1100  4.00000+ 0 0.00000+ 0 7.25000+ 1 3.00000+ 0 0.00000+ 0 0.00000+ 01394 8457 1099
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1097  0.0     + 0 8.00000+ 0          0          0          6          51394 8457 1096
    2 1101  0.00000+ 0 8.00000+ 0          0          0          6          51394 8457 1100
DIFFERENCES     $$$$
---------------------------------------------------------------------------------------------------
    1 1098  1.00000- 2 0.0     + 0 1.09000+ 4 5.00000+ 2 0.0     + 0 0.0     + 01394 8457 1097
    2 1102  1.00000- 2 0.00000+ 0 1.09000+ 4 5.00000+ 2 0.00000+ 0 0.00000+ 01394 8457 1101
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1100  4.00000+ 0 0.0     + 0 9.80000+ 0 8.00000- 1 0.0     + 0 0.0     + 01394 8457 1099
    2 1104  4.00000+ 0 0.00000+ 0 9.80000+ 0 8.00000- 1 0.00000+ 0 0.00000+ 01394 8457 1103
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1102  4.00000+ 0 0.0     + 0 3.50000- 1 3.00000- 2 0.0     + 0 0.0     + 01394 8457 1101
    2 1106  4.00000+ 0 0.00000+ 0 3.50000- 1 3.00000- 2 0.00000+ 0 0.00000+ 01394 8457 1105
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1104  4.00000+ 0 0.0     + 0 1.07000+ 1 1.00000+ 0 0.0     + 0 0.0     + 01394 8457 1103
    2 1108  4.00000+ 0 0.00000+ 0 1.07000+ 1 1.00000+ 0 0.00000+ 0 0.00000+ 01394 8457 1107
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1106  4.00000+ 0 0.0     + 0 9.20000+ 0 8.00000- 1 0.0     + 0 0.0     + 01394 8457 1105
    2 1110  4.00000+ 0 0.00000+ 0 9.20000+ 0 8.00000- 1 0.00000+ 0 0.00000+ 01394 8457 1109
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1108  4.00000+ 0 0.0     + 0 5.50000+ 0 5.00000- 1 0.0     + 0 0.0     + 01394 8457 1107
    2 1112  4.00000+ 0 0.00000+ 0 5.50000+ 0 5.00000- 1 0.00000+ 0 0.00000+ 01394 8457 1111
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1109  0.0     + 0 9.00000+ 0          0          0          6          81394 8457 1108
    2 1113  0.00000+ 0 9.00000+ 0          0          0          6          81394 8457 1112
DIFFERENCES     $$$$
---------------------------------------------------------------------------------------------------
    1 1110  1.00000- 2 0.0     + 0 1.50000+ 3 2.00000+ 1 0.0     + 0 0.0     + 01394 8457 1109
    2 1114  1.00000- 2 0.00000+ 0 1.50000+ 3 2.00000+ 1 0.00000+ 0 0.00000+ 01394 8457 1113
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1111  1.11190+ 4 0.0     + 0          0          0          6          01394 8457 1110
    2 1115  1.11190+ 4 0.00000+ 0          0          0          6          01394 8457 1114
DIFFERENCES                $$$$
---------------------------------------------------------------------------------------------------
    1 1112  4.00000+ 0 0.0     + 0 2.20000- 1 1.00000- 2 0.0     + 0 0.0     + 01394 8457 1111
    2 1116  4.00000+ 0 0.00000+ 0 2.20000- 1 1.00000- 2 0.00000+ 0 0.00000+ 01394 8457 1115
DIFFERENCES                $$$$                             $$$$       $$$$
---------------------------------------------------------------------------------------------------
    1 1113  1.29690+ 4 0.0     + 0          0          0          6          01394 8457 1112
    2 1117  1.29690+ 4 0.00000+ 0          0          0          6          01394 8457 1116
DIFFERENCES                $$$$
---------------------------------------------------------------------------------------------------
```

```
    1  1114    4.00000+ 0 0.0      + 0 3.66000+ 0 8.00000- 2 0.0      + 0 0.0      + 01394 8457 1113
    2  1118    4.00000+ 0 0.00000+ 0 3.66000+ 0 8.00000- 2 0.00000+ 0 0.00000+ 01394 8457 1117
 DIFFERENCES                 $$$$                               $$$$       $$$$
-----------------------------------------------------------------------------------------------------
    1  1115    1.62020+ 4 0.0      + 0          0          0          6          01394 8457 1114
    2  1119    1.62020+ 4 0.00000+ 0          0          0          6          01394 8457 1118
 DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------
    1  1116    4.00000+ 0 0.0      + 0 4.87000+ 0 1.00000- 1 0.0      + 0 0.0      + 01394 8457 1115
    2  1120    4.00000+ 0 0.00000+ 0 4.87000+ 0 1.00000- 1 0.00000+ 0 0.00000+ 01394 8457 1119
 DIFFERENCES                 $$$$                               $$$$       $$$$
-----------------------------------------------------------------------------------------------------
    1  1117    1.89830+ 4 0.0      + 0          0          0          6          01394 8457 1116
    2  1121    1.89830+ 4 0.00000+ 0          0          0          6          01394 8457 1120
 DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------
    1  1118    4.00000+ 0 0.0      + 0 1.05000+ 0 4.00000- 2 0.0      + 0 0.0      + 01394 8457 1117
    2  1122    4.00000+ 0 0.00000+ 0 1.05000+ 0 4.00000- 2 0.00000+ 0 0.00000+ 01394 8457 1121
 DIFFERENCES                 $$$$                               $$$$       $$$$
-----------------------------------------------------------------------------------------------------
    1  1119    8.99577+ 4 0.0      + 0          0          0          6          01394 8457 1118
    2  1123    8.99577+ 4 0.00000+ 0          0          0          6          01394 8457 1122
 DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------
    1  1120    4.00000+ 0 0.0      + 0 3.10000- 3 5.00000- 4 0.0      + 0 0.0      + 01394 8457 1119
    2  1124    4.00000+ 0 0.00000+ 0 3.10000- 3 5.00000- 4 0.00000+ 0 0.00000+ 01394 8457 1123
 DIFFERENCES                 $$$$                               $$$$       $$$$
-----------------------------------------------------------------------------------------------------
    1  1121    9.33506+ 4 0.0      + 0          0          0          6          01394 8457 1120
    2  1125    9.33506+ 4 0.00000+ 0          0          0          6          01394 8457 1124
 DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------
    1  1122    4.00000+ 0 0.0      + 0 5.00000- 3 7.00000- 4 0.0      + 0 0.0      + 01394 8457 1121
    2  1126    4.00000+ 0 0.00000+ 0 5.00000- 3 7.00000- 4 0.00000+ 0 0.00000+ 01394 8457 1125
 DIFFERENCES                 $$$$                               $$$$       $$$$
-----------------------------------------------------------------------------------------------------
    1  1123    1.05212+ 5 0.0      + 0          0          0          6          01394 8457 1122
    2  1127    1.05212+ 5 0.00000+ 0          0          0          6          01394 8457 1126
 DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------
    1  1124    4.00000+ 0 0.0      + 0 1.70000- 3 3.00000- 4 0.0      + 0 0.0      + 01394 8457 1123
    2  1128    4.00000+ 0 0.00000+ 0 1.70000- 3 3.00000- 4 0.00000+ 0 0.00000+ 01394 8457 1127
 DIFFERENCES                 $$$$                               $$$$       $$$$
-----------------------------------------------------------------------------------------------------
    1  1125    1.09650+ 5 0.0      + 0          0          0          6          01394 8457 1124
    2  1129    1.09650+ 5 0.00000+ 0          0          0          6          01394 8457 1128
 DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------
    1  1126    4.00000+ 0 0.0      + 0 5.90000- 4 9.00000- 5 0.0      + 0 0.0      + 01394 8457 1125
    2  1130    4.00000+ 0 0.00000+ 0 5.90000- 4 9.00000- 5 0.00000+ 0 0.00000+ 01394 8457 1129
 DIFFERENCES                 $$$$                               $$$$       $$$$
-----------------------------------------------------------------------------------------------------
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1394	1	451	132	12	133	13	(DIFFERENCES)
1394	1	452	4	1	4	1	(DIFFERENCES)
1394	1	458	6	4	6	4	(DIFFERENCES)
1394	2	151	191	74	191	74	(DIFFERENCES)
1394	3	1	29	4	29	4	(DIFFERENCES)
1394	3	2	28	6	28	6	(DIFFERENCES)
1394	3	4	25	2	25	2	(DIFFERENCES)

1394	3	16	11	2	11	2	(DIFFERENCES)
1394	3	17	7	2	7	2	(DIFFERENCES)
1394	3	18	21	2	21	2	(DIFFERENCES)
1394	3	19	15	2	15	2	(DIFFERENCES)
1394	3	20	9	2	9	2	(DIFFERENCES)
1394	3	21	8	2	8	2	(DIFFERENCES)
1394	3	51	14	4	14	4	(DIFFERENCES)
1394	3	52	12	4	12	4	(DIFFERENCES)
1394	3	53	10	3	10	3	(DIFFERENCES)
1394	3	54	8	3	8	3	(DIFFERENCES)
1394	3	55	8	4	8	4	(DIFFERENCES)
1394	3	56	7	3	7	3	(DIFFERENCES)
1394	3	91	17	2	17	2	(DIFFERENCES)
1394	3	102	21	4	21	4	(DIFFERENCES)
1394	3	251	32	1	32	1	(DIFFERENCES)
1394	3	252	32	1	32	1	(DIFFERENCES)
1394	3	253	32	1	32	1	(DIFFERENCES)
1394	4	2	281	164	281	164	(DIFFERENCES)
1394	4	16	3	1	3	1	(DIFFERENCES)
1394	4	17	3	1	3	1	(DIFFERENCES)
1394	4	18	3	1	3	1	(DIFFERENCES)
1394	4	19	ONLY ON FILE 2				
1394	4	20	2	1	2	1	(DIFFERENCES)
1394	4	21	3	1	3	1	(DIFFERENCES)
1394	4	51	3	1	3	1	(DIFFERENCES)
1394	4	52	3	1	3	1	(DIFFERENCES)
1394	4	53	3	1	3	1	(DIFFERENCES)
1394	4	54	3	1	3	1	(DIFFERENCES)
1394	4	55	3	1	3	1	(DIFFERENCES)
1394	4	56	3	1	3	1	(DIFFERENCES)
1394	4	91	3	1	3	1	(DIFFERENCES)
1394	5	16	9	2	9	2	(DIFFERENCES)
1394	5	17	8	2	8	2	(DIFFERENCES)
1394	5	18	8	2	8	2	(DIFFERENCES)
1394	5	19	8	2	8	2	(DIFFERENCES)
1394	5	20	8	2	8	2	(DIFFERENCES)
1394	5	21	8	2	8	2	(DIFFERENCES)
1394	5	91	8	2	8	2	(DIFFERENCES)
1394	8	16	4	1	4	1	(DIFFERENCES)
1394	8	17	3	1	3	1	(DIFFERENCES)
1394	8	102	3	1	3	1	(DIFFERENCES)
1394	8	457	63	48	63	48	(DIFFERENCES)
1394	8	457	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	1130	386	1134	387

END OF RUN

	MAT	MF	REC.
9.22350+ 4 2.33025+ 2 1 1 0 3	1395	1	1
0.00000+ 0 1.00000+ 0 0 0 0 0	1395	1	2
0.00000+ 0 0.00000+ 0 0 0 239 88	1395	1	3
92-U -235 BNL EVAL-APR77 M.R.BHAT	1395	1	4
DIST-MAR83 REV1-OCT80 830316	1395	1	5
PRINCIPAL EVALUATOR - M.R.BHAT(BNL)	1395	1	6
	1395	1	7
CONTRIBUTING EVALUATORS	1395	1	8
	1395	1	9
NU-BAR(PROMPT) - M.R.BHAT(BNL)	1395	1	10
F.P.YIELDS - F.P.YIELDS SUBCOMMITTEE	1395	1	11
DELAYED NEUTRONS - R.E.KAISER AND S.G.CARPENTER(ANL)	1395	1	12
RADIOACTIVE DECAY DATA - C.W.REICH(EG AND G,IDAHO,INC)	1395	1	13
THERMAL RANGE - B.R.LEONARD JR,D.A.KOTTWITZ,J.K.THOMPSON(BNW	1395	1	14
(REF 2)	1395	1	15
RESOLVED RESONANCE REGION(1EV-82EV)-J.R.SMITH AND R.C.YOUNG	1395	1	16
(EG AND G)(ENDF/B-IV)	1395	1	17
UNRESOLVED RESONANCE REGION(82EV-25KEV)-M.S.MOORE(LASL) AND	1395	1	18
M.R.BHAT(BNL)	1395	1	19
FISSION CROSS-SECTION(100KEV-20MEV)-W.P.POENITZ(ANL)(REF 31)	1395	1	20
IN CONJUNCTION WITH THE NORMALISATION AND STANDARDS SUBCOMM.	1395	1	21
OF CSEWG.	1395	1	22
INELASTIC SCATTERING - R.E.HUNTER,L.STEWART AND T.J.HIRONS	1395	1	23
(REF 26)(ENDF/B-IV)	1395	1	24
FISSION NEUTRON SPECTRUM - M.R.BHAT(BNL)	1395	1	25
GAMMA PRODUCTION(1.0E-05EV TO 1.09MEV)-L.STEWART ET.AL.	1395	1	26
(REF 1,30)(ENDF/B-IV)	1395	1	27
GAMMA PRODUCTION(ABOVE 1.09MEV) - M.R.BHAT(BNL)	1395	1	28
COVARIANCE FILES - R.W.PEELLE(ORNL)	1395	1	29
**********	1395	1	30
THIS EVALUATION IS THE SAME AS THE ENDF/B-IV(MAT=1261) BY	1395	1	31
L.STEWART(LASL),H.ALTER(AI) AND R.HUNTER(LASL) EXCEPT FOR CHANGES	1395	1	32
IN THE FOLLOWING MF/MT 1/451,1/452,1/456,2/151,3/1,3/2,3/18,	1395	1	33
3/19,3/20,3/21,3/102,3/251,3/252,3/253,4/2,5/18,5/19,5/20,5/21,	1395	1	34
5/455,8/16,8/17,8/102,8/454,8/457,13/3,15/3	1395	1	35
**********	1395	1	36
	1395	1	37
THE NORMALIZATION AND STANDARDS SUBCOMMITTEE OF CSEWG RECOMMENDS	1395	1	38
U-235(N,F) AS A NEUTRON CROSS-SECTION STANDARD AT THERMAL AND	1395	1	39
FROM 100KEV - 20MEV	1395	1	40
	1395	1	41
**********	1395	1	42
	1395	1	43
MF = 1	1395	1	44
	1395	1	45
MT=452(NU-BAR TOTAL) CONSISTENT WITH MT=455 AND 456	1395	1	46
	1395	1	47
MT=455DELAYED NEUTRON YIELDS.KAISER AND CARPENTER(ANL) (REF 19)	1395	1	48
	1395	1	49
MT=456(PROMPT NEUTRONS)BASED ON CF-252NU-BAR(PROMPT)=3.757+-0.015	1395	1	50
AND U-235 THERMALNU-BAR(PROMPT)=2.420+-0.012EVALUATION BASED	1395	1	51
ON A LEAST-SQUARES FIT OVER A NUMBER OF ENERGY RANGES.DATA	1395	1	52
LISTED IN REF3 USED.	1395	1	53
	1395	1	54
MT=458(ENERGY RELEASE IN FISSION)EVALUATION BY R.SHER(STANFORD)	1395	1	55
REF4.	1395	1	56
	1395	1	57
MF = 2	1395	1	58
	1395	1	59
RESOLVED RESONANCE REGION - J.R.SMITH AND R.C.YOUNG(EG AND G)	1395	1	60

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX TEXT & DICT.

	MAT	MF	REC.
(ENDF/B-IV)(REF 5)	1395	1	61
	1395	1	62
UNRESOVED RESONANCE REGION - FINE STRUCTURE IN FISSION CROSS-SECT	1395	1	63
ION DETERMINED BY ENERGY SHIFTING THE DATA OF BLONS(REF 6),	1395	1	64
ORNL-RPI(REF7),GWIN(REF 8),WITH RESPECT TO THE LEMLEY(REF9)	1395	1	65
DATA TO MAXIMISE CORRELATION COEFFICIENT BETWEEN EACH DATA	1395	1	66
SET AND THE LEMLEY DATA AND AVERAGING THE STRUCTURE.THE	1395	1	67
STRUCTURE IN CAPTURE CROSS-SECTION SIMILARLY DETERMINED.THIS	1395	1	68
STRUCTURE NORMALISED TO GIVE EVALUATED AVERAGE CROSS-SECTION	1395	1	69
S IN WIDE BINS AS GIVEN IN REF11.PARAMETERS OF UNRESOLVED	1395	1	70
RESONANCE REGION DETERMINED USING THE POLARISATION DATA OF	1395	1	71
REF 12.	1395	1	72
	1395	1	73
MF = 3	1395	1	74
	1395	1	75
THERMAL REGION(1.0E-05 TO 1.0EV) EVALUATION BY B.R.LEONARD JR ET.	1395	1	76
AL DESCRIBED IN REF 2. THIS FIT MODIFIED BETWEEN 0.85 TO	1395	1	77
1.0EV TO JOIN SMOOTHLY WITH THE RESONANCE REGION.	1395	1	78
2.53E-02EV CROSS-SECTIONS FISSION 583.54+-1.7B (REF 2)	1395	1	79
CAPTURE 98.38+-0.76B(REF 2)	1395	1	80
RESONANCE INTEGRALS FISSION 281.7B	1395	1	81
(0.5EV-2.0E+07EV) CAPTURE 139.2B	1395	1	82
	1395	1	83
25KEV TO 100KEV FISSION CROSS-SECTION FROM ENDF/B-IV MULTIPLIED	1395	1	84
BY 0.9781 TO GIVE AVERAGE CROSS-SECTION AS GIVEN IN REF11,3	1395	1	85
	1395	1	86
100KEV-20MEV FISSION CROSS-SECTION EVALUATION-W.P.POENITZ(REF31)	1395	1	87
	1395	1	88
25KEV TO 20MEV CAPTURE CROSS-SECTION OBTAINED USING CAPTURE-TO-	1395	1	89
FISSION RATIO FROM ENDF/B-IV AND THE VERSION V FISSION.	1395	1	90
	1395	1	91
TOTAL CROSS-SECTION SAME AS IN ENDF/B-IV EXCEPT FOR THE REGION	1395	1	92
BELOW 1.0EV WHERE THE LEONARD FIT IS USED.	1395	1	93
TOTAL CROSS-SECTION ABOVE 0.5MEV IN ENDF/B-V OBTAINED BY A	1395	1	94
SPLINE FIT TO THE DATA OF REF 27 AND 28. BETWEEN 25KEV AND	1395	1	95
0.5MEV A SMOOTH CURVE WAS FIT TO THE TOTAL CROSS-SECTION OF	1395	1	96
ENDF/B-III.	1395	1	97
	1395	1	98
MT=2 MODIFIED TO CONFORM TO NEW FISSION AND CAPTURE CROSS-SECTION	1395	1	99
	1395	1	100
MT=4,16,17,51-66,91 SAME AS IN ENDF/B-IV(REF 1)	1395	1	101
	1395	1	102
MF = 4	1395	1	103
	1395	1	104
ANGULAR DISTRIBUTIONS -SAME AS IN ENDF/B-IV(REF 1)	1395	1	105
ELASTIC SCATTERING ANGULAR DISTRIBUTIONS FROM REF 26.ANGULAR	1395	1	106
DISTRIBUTION DATA FOR NONISOTROPIC INELASTIC LEVELS(MT=61-66	1395	1	107
BASED MAINLY ON THE DATA OF KAMMERDIENER(REF 29).	1395	1	108
ALL INELASTIC DISTRIBUTIONS BELOW 5MEV TAKEN TO BE ISOTROPIC	1395	1	109
ANGULAR DISTRIBUTIONS FOR ALL OTHER NEUTRON REACTIONS ARE	1395	1	110
ASSUMED ISOTROPIC EXCEPT FOR DIRECT INTERACTION CROSS-	1395	1	111
SECTIONS ABOVE 4MEV FOR MT=61-66.	1395	1	112
	1395	1	113
MF = 5	1395	1	114
	1395	1	115
MT=18,19,20,21 ENERGY DISTRIBUTION OF PROMPT NEUTRONS BASED ON	1395	1	116
THE EVALUATION OF J.M. ADAMS (REF10)	1395	1	117
	1395	1	118
MT=455 EVALUATION BY KAISER AND CARPENTER(ANL)(REF 19)	1395	1	119
	1395	1	120
MT=16,17,91 SAME AS IN ENDF/B-IV(REF 1)	1395	1	121

7. G.D.JAMES,J.W.DABBS,J.A.HARVEY,N.W.HILL,AND R.H.SCHINDLER,PHY.REV.C.15,2083(1977) 1394 1 58 59
8. J.A. HARVEY AND D.J. HUGHES, PHYS. REV. 1394 1 60

1395 1 122
MF = 8 1395 1 123
* * * * * * 1395 1 124
MT = 454 AND 459 INSERTED INTO FILE AT BNL BY R. KINSEY 9/78 1395 1 125
ENDF/B-V YIELD DATA 1395 1 126
FISSION PRODUCT YIELD DATA FOR PHASE ONE REVIEW 1395 1 127
SET 5E,7/78. VALUES OBTAINED FROM THE RECOMMENDATIONS OF THE 1395 1 128
YIELDS SUBCOMMITTEE, T.R.ENGLAND (CHAIRMAN), D.M.GILLIAM, 1395 1 129
Y.HARKER, J.R.LIAW, W.J.MAECK, D.G.MADLAND, V.MCLANE MAY, 1395 1 130
P.L.REEDER, B.F.RIDER, R.E.SCHENTER, B.I.SPINRAD, J.P.UNIK, 1395 1 131
A.WAHL, W.WALKER, B.W.WEHRING, K.WOLFSBERG 1395 1 132
1395 1 133
UNCERTAINTIES ARE BASED ON THE TOTAL YIELD TO EACH ZA. 1395 1 134
WHEN THERE IS AN ISOMERIC STATE, THE INDEPENDENT NUCLIDE 1395 1 135
YIELD TO EACH STATE HAS A LARGER UNCERTAINTY THAN THE TOTAL 1395 1 136
YIELD IN STATE DISTRIBUTIONS (UNCERTAINTIES AVERAGE 1395 1 137
APPROXIMATELY 50 PERCENT BUT CAN BE LARGER). ANY YIELD 1395 1 138
HAVING A LARGE UNCERTAINTY (45-64 PERCENT) MAY BE A MODEL 1395 1 139
ESTIMATE OR A VALUE ASSIGNED TO THE YIELDS ON THE WINGS OR 1395 1 140
VALLEY OF THE MASS YIELD DISTRIBUTION. THESE SMALL YIELDS 1395 1 141
MAY ONLY BE ACCURATE TO WITHIN A FACTOR OF 2. 1395 1 142
1395 1 143
MT454 CONTAINS DIRECT YIELDS BEFORE DELAYED NEUTRON EMISSION 1395 1 144
1395 1 145
MT459 CONTAINS CUMULATIVE YIELDS ALONG EACH ISOBARIC CHAIN 1395 1 146
AFTER DELAYED NEUTRON EMISSION. 1395 1 147
1395 1 148
DIRECT AND CUMULATIVE YIELDS ARE NORMALIZED BY THE SAME FACTORS 1395 1 149
BASED ON B.F.RIDER EVALUATION. THE ISOMERIC STATE MODEL, 1395 1 150
LA-6595-MS (ENDF-241), AND DELAYED NEUTRON EMISSION BRANCHINGS 1395 1 151
(PN VALUES) FOR 102 EMITTERS, AND PAIRING EFFECTS, LA-6430-MS 1395 1 152
EFFECTS,LA-6430-MS (ENDF-240), HAVE BEEN INCORPORATED. 1395 1 153
1395 1 154
DATA PREPARED FOR FILES BY T.R.ENGLAND (LASL LTR. T-2-L-2891) 1395 1 155
* * * * * * 1395 1 156
1395 1 157
92-U -235 INEL EVAL-AUG78 REICH 1395 1 158
DATA ADDED TO FILE BY R. KINSEY AT BNL 9/78 1395 1 159
MF=8, MT=457 RADIOACTIVE DECAY DATA 1395 1 160
REFERENCES Q(ALPHA)-1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLES 1395 1 161
HALF-LIFE - A.H. JAFFEY ET AL., PHYS. REV. C 8, 1889 1395 1 162
(1971).SEE ALSO, R. VANINBROUKX, EURATOM 1395 1 163
REPORT EUR-5194E (1974). 1395 1 164
ALPHA ENERGIES AND INTENSITIES FROM E. VANO ET AL., 1395 1 165
NUCL. PHYS. A251, 225(1975).(SEE ALSO,A.ARTNA- 1395 1 166
COHEN, NUCLEAR DATA B 6,NO.3, 287 (1971)). 1395 1 167
NOTE ALPHA ENERGIES HAVE BEEN ADJUSTED TO BE 1395 1 168
CONSISTENT WITH LEVEL-ENERGY DIFFERENCES AND 1395 1 169
Q-VALUE. 1395 1 170
GAMMA-RAY DATA FROM E.VANO ET AL. (REF. ABOVE). 1395 1 171
L X-RAY DATA ARE MEASURED VALUES FROM E. VANO ET AL., 1395 1 172
SEE REF. ABOVE. 1395 1 173
NOTE MIXING RATIO OF 31.59-KEV GAMMA RAY ESTIMATED FROM 1395 1 174
THEORETICAL CONSIDERATIONS OF CROSSOVER/CASCADE 1395 1 175
INTENSITY RATIOS WITHIN ROTATIONAL BANDS. 1395 1 176
NOTE THE INTENSITY OF THE 185-KEV GAMMA RAY AND ITS 1395 1 177
UNCERTAINTY ARE MEASURED VALUES (C.E. BEMIS, PRIV. 1395 1 178
COMM., DEC., 1976). 1395 1 179
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 8/78 1395 1 180
1395 1 181
MF = 12 1395 1 182

4	91	2	0	1394	1	121

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX
TEXT & DICT.

	MAT	MF	REC.
	1395	1	183
BASED ON THE EVALUATION OF HUNTER(REF30)(ENDF/B-IV)	1395	1	184
	1395	1	185
MF = 13	1395	1	186
	1395	1	187
MT=3 GAMMA PRODUCTION FROM 1.09 TO 20.0 MEV BASED ON THE DATA IN	1395	1	188
REF 14,15,16 AND 17	1395	1	189
	1395	1	190
MF = 14	1395	1	191
	1395	1	192
SAME AS IN ENDF/B-IV(REF 1)	1395	1	193
	1395	1	194
MF = 15	1395	1	195
	1395	1	196
MT=3 BASED ON THE DATA IN REF 14 AND 15	1395	1	197
	1395	1	198
MT=18 AND 102 SAME AS IN ENDF/B-IV(REF 1)	1395	1	199
	1395	1	200
MF = 33	1395	1	201
	1395	1	202
COVARIANCE FILE BY R.W.PEELE REF18,MODIFIED TO INCLUDE RATIOS TO	1395	1	203
PU-240,PU-241 BY L.W.WESTON NOV.1982 REF32.	1395	1	204
	1395	1	205
PRINCIPAL REFERENCES	1395	1	206
	1395	1	207
1 L.STEWART,H.ALTER AND R.HUNTER, ENDF-201 (1976)	1395	1	208
2 B.R.LEONARD JR,D.A.KOTTWITZ AND J.K.THOMPSON EPRI NP-167(1976)	1395	1	209
3 M.R.BHAT U-235 EVALUATION FOR ENDF/B-V(ENDF-248)TO BE PUBLISHED	1395	1	210
4 R.SHER AND C.BECK EPRI-NP-1771 1981 REV.JAN 1983	1395	1	211
5 J.R.SMITH AND R.C.YOUNG ANCR-1044(ENDF-161)(DEC.1971)	1395	1	212
6 J.BLONS NUC.SCI AND ENG.51,130(1973)	1395	1	213
7 G.DE SAUSSURE ET.AL. ORNL-TM-1804(1967)	1395	1	214
8 R.GWIN,E.G.SILVER,R.W.INGLE AND H.WEAVER NUC.SCI.ENG.59,79,76	1395	1	215
9 J.R.LEMLEY,G.A.KEYWORTH AND B.C.DIVEN NUC.SCI AND ENG.43,281,71	1395	1	216
10J.M. ADAMS, AERE-R8636, APPENDIX A (1977)	1395	1	217
11M.R.BHAT,ANL-76-90(ERDA-NDC-5/L)P307(1976)	1395	1	218
12M.S.MOORE,J.D.MOSES,G.A.KEYWORTH,J.W.T.DABBS AND N.W.HILL TO BE	1395	1	219
PUBLISHED	1395	1	220
13L.STEWART AND R.E.HUNTER LA-4918(JULY 1972)	1395	1	221
14D.M.DRAKE NUC.SCI AND ENG.55,427(1974)	1395	1	222
15D.M.DRAKE,E.D.ARTHUR AND M.G.SILBERT TO BE PUBLISHED	1395	1	223
16D.O.NELLIS AND I.L.MORGAN ORO-2791-17(JUNE 1966)	1395	1	224
17P.S.BUCHANAN,D.O.NELLIS AND W.E.TUCKER ORO-2791-32(FEB.1971)	1395	1	225
18R.W.PEELLE(APP.B OF EPRI PROJ 612 REPORT)BY E.T.TOMLINSON ET.AL	1395	1	226
19R.E.KAISER AND S.G.CARPENTER(ANL-WEST)PRIV.COMM.MARCH78	1395	1	227
**DATA INSERTED INTO FILE AT BNL BY R. KINSEY 4/18/78	1395	1	228
20 1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLES	1395	1	229
21A.H.JAFFEY ET.AL.PHYS.REV.C8,1889(1971)	1395	1	230
22R.VANINBROUKX,EURATOM REPORT EUR-5194E(1974)	1395	1	231
23E.VANO ET.AL.NUC.PHYS.A251,225(1975)	1395	1	232
24A.ARTNA-COHEN,NUCLEAR DATA B6,NO3,287(1971)	1395	1	233
25C.W.REICH,REPORT ANCR-1299(1976)	1395	1	234
26R.E.HUNTER,L.STEWART AND T.J.HIRONS LA-5172(1973)	1395	1	235
27P.C.HEATON ET.AL.PRIVATE COMMUNICATION (NBS,1972)	1395	1	236
28D.G.FOSTER JR.AND D.W.GLASGOW,PHYS.REV C3,576(1971)	1395	1	237
29J.L.KAMMERDIENER,UCRL-51232(1972)	1395	1	238
30R.E.HUNTER AND L.STEWART,LA-4901(1972)	1395	1	239
31W.P.POENITZ,ANL/NDM-45(1978) TO BE PUBLISHED	1395	1	240
32L.W.WESTON P.C. TO B.A.MAGURNO NOV.1982	1395	1	241
	1395	1	242
1 451 330 3	1395	1	243

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX
TEXT & DICT.

			MAT	MF	REC.
1	452	7	1 1395	1	244
1	455	8	1 1395	1	245
1	456	6	1 1395	1	246
1	458	5	3 1395	1	247
2	151	973	1 1395	1	248
3	1	470	1 1395	1	249
3	2	470	1 1395	1	250
3	4	128	0 1395	1	251
3	16	26	0 1395	1	252
3	17	9	0 1395	1	253
3	18	300	3 1395	1	254
3	19	286	3 1395	1	255
3	20	13	3 1395	1	256
3	21	9	3 1395	1	257
3	51	11	0 1395	1	258
3	52	15	0 1395	1	259
3	53	14	0 1395	1	260
3	54	14	0 1395	1	261
3	55	13	0 1395	1	262
3	56	13	0 1395	1	263
3	57	12	0 1395	1	264
3	58	12	0 1395	1	265
3	59	11	0 1395	1	266
3	60	10	0 1395	1	267
3	61	40	0 1395	1	268
3	62	34	0 1395	1	269
3	63	31	0 1395	1	270
3	64	28	0 1395	1	271
3	65	24	0 1395	1	272
3	66	18	0 1395	1	273
3	91	44	0 1395	1	274
3	102	371	1 1395	1	275
3	251	10	1 1395	1	276
3	252	10	1 1395	1	277
3	253	10	1 1395	1	278
4	2	146	1 1395	1	279
4	16	10	0 1395	1	280
4	17	10	0 1395	1	281
4	18	10	0 1395	1	282
4	19	10	0 1395	1	283
4	20	10	0 1395	1	284
4	21	10	0 1395	1	285
4	51	10	0 1395	1	286
4	52	10	0 1395	1	287
4	53	10	0 1395	1	288
4	54	10	0 1395	1	289
4	55	10	0 1395	1	290
4	56	10	0 1395	1	291
4	57	10	0 1395	1	292
4	58	10	0 1395	1	293
4	59	10	0 1395	1	294
4	60	10	0 1395	1	295
4	61	31	0 1395	1	296
4	62	31	0 1395	1	297
4	63	31	0 1395	1	298
4	64	31	0 1395	1	299
4	65	31	0 1395	1	300
4	66	31	0 1395	1	301
4	91	10	0 1395	1	302
5	16	15	0 1395	1	303
5	17	11	0 1395	1	304

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX
TEXT & DICT.

			MAT	MF	REC.
5	18	24	1	1395	1 305
5	19	24	1	1395	1 306
5	20	41	1	1395	1 307
5	21	26	1	1395	1 308
5	91	7	0	1395	1 309
5	455	109	1	1395	1 310
8	16	2	2	1395	1 311
8	17	2	1	1395	1 312
8	102	2	1	1395	1 313
8	454	2305	1	1395	1 314
8	457	216	1	1395	1 315
8	459	2305	1	1395	1 316
12	4	253	0	1395	1 317
12	18	5	0	1395	1 318
12	102	5	0	1395	1 319
13	3	8	1	1395	1 320
14	3	1	0	1395	1 321
14	4	1	0	1395	1 322
14	18	1	0	1395	1 323
14	102	1	0	1395	1 324
15	3	127	1	1395	1 325
15	18	54	0	1395	1 326
15	102	58	0	1395	1 327
31	452	56	1	1395	1 328
33	18	78	3	1395	1 329
33	102	42	1	1395	1 330
				1395	1 331
				1395	1 339
				1395	1 348
				1395	1 355
				1395	1 361
				1395	2 1336
				1395	3 1808
				1395	3 2279
				1395	3 2408
				1395	3 2435
				1395	3 2445
				1395	3 2746
				1395	3 3033
				1395	3 3047
				1395	3 3057
				1395	3 3069
				1395	3 3085
				1395	3 3100
				1395	3 3115
				1395	3 3129
				1395	3 3143
				1395	3 3156
				1395	3 3169
				1395	3 3181
				1395	3 3192
				1395	3 3233
				1395	3 3268
				1395	3 3300
				1395	3 3329
				1395	3 3354
				1395	3 3373
				1395	3 3418
				1395	3 3790
				1395	3 3801
				1395	3 3812

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ENDF/B-V: MODS FOR V.1 & V.2.STANDARDS:INDEX TEXT & DICT.

MAT	MF	REC.
1395	3	3823
1395	4	3971
1395	4	3982
1395	4	3993
1395	4	4004
1395	4	4015
1395	4	4026
1395	4	4037
1395	4	4048
1395	4	4059
1395	4	4070
1395	4	4081
1395	4	4092
1395	4	4103
1395	4	4114
1395	4	4125
1395	4	4136
1395	4	4147
1395	4	4179
1395	4	4211
1395	4	4243
1395	4	4275
1395	4	4307
1395	4	4339
1395	4	4350
1395	5	4367
1395	5	4379
1395	5	4404
1395	5	4429
1395	5	4471
1395	5	4498
1395	5	4506
1395	5	4616
1395	8	4620
1395	8	4623
1395	8	4626
1395	8	6932
1395	8	7149
1395	8	9455
1395	12	9710
1395	12	9716
1395	12	9722
1395	13	9732
1395	14	9735
1395	14	9737
1395	14	9739
1395	14	9741
1395	15	9870
1395	15	9925
1395	15	9984
1395	31	10042
1395	33	10122
1395	33	10165

```
COMPARE TWO BCD FILES (COMPARE 82-1)
------------------------------------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST-------          70 (  1 TO 80 )
COLUMNS TO COMPARE-------------          66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---          66 (  1 TO 70 )
SPECIAL FILE FLAG--------------           2
ACCEPTABLE DIFFERENCE----------           0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
------------------------------------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
------------------------------------------------------------------------------------------------------------------------------
FILE 1 =ST1395  OLD
FILE 2 =ST1395  NEW
------------------------------------------------------------------------------------------------------------------------------
 FILE  CARD  CONTENTS
------------------------------------------------------------------------------------------------------------------------------
                      1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
------------------------------------------------------------------------------------------------------------------------------
------------------------------------------------------------------------------------------------------------------------------
    1     2   9.22350+ 4 2.33025+ 2          1          1          0          11395 1451    1
    2     2   9.22350+ 4 2.33025+ 2          1          1          0          31395 1451    1
 DIFFERENCES                                                                  $
------------------------------------------------------------------------------------------------------------------------------
    1     4   0.00000+ 0 0.00000+ 0          0          0        237         881395 1451    3
    2     4   0.00000+ 0 0.00000+ 0          0          0        239         881395 1451    3
 DIFFERENCES                                                   $
------------------------------------------------------------------------------------------------------------------------------
    1     5   92-U -2350BNL         EVAL-APR77 M.R.BHAT                         1395 1451    4
    2     5   92-U -235 BNL         EVAL-APR77 M.R.BHAT                         1395 1451    4
 DIFFERENCES           $
------------------------------------------------------------------------------------------------------------------------------
    1     6                         DIST-MAY79 REV1-NOV77            790518     1395 1451    5
    2     6                         DIST-MAR83 REV1-OCT80            830316     1395 1451    5
 DIFFERENCES                               $$$      $$$$$            $$ $ $
------------------------------------------------------------------------------------------------------------------------------
    1   204   COVARIANCE FILE BY R.W.PEELLE FROM REF18                          1395 1451  203
 DIFFERENCES ON     1 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
    2   204  COVARIANCE FILE BY R.W.PEELE REF18,MODIFIED TO INCLUDE RATIOS TO   1395 1451  203
    2   205  PU-240,PU-241 BY L.W.WESTON NOV.1982 REF32.                        1395 1451  204
 DIFFERENCES ON     2 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
------------------------------------------------------------------------------------------------------------------------------
    1   211   4 R.SHER,S.FIARMAN AND C.BECK(PRIVATE COMMUNICATION)              1395 1451  210
    2   212   4 R.SHER AND C.BECK EPRI-NP-1771 1981 REV.JAN 1983                1395 1451  211
 DIFFERENCES         $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$ $$$$$$$$$$$$$$
------------------------------------------------------------------------------------------------------------------------------
    1   242                                  1        451        328       11395 1451  241
 DIFFERENCES ON     1 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
    2   242   32L.W.WESTON P.C. TO B.A.MAGURNO NOV.1982                         1395 1451  241
    2   244                                  1        451        330       31395 1451  243
 DIFFERENCES ON     2 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
------------------------------------------------------------------------------------------------------------------------------
    1   246                                  1        458          5       11395 1451  245
    2   248                                  1        458          5       31395 1451  247
 DIFFERENCES                                                               $
------------------------------------------------------------------------------------------------------------------------------
    1   253                                  3         18        300       11395 1451  252
    2   255                                  3         18        300       31395 1451  254
 DIFFERENCES                                                               $
------------------------------------------------------------------------------------------------------------------------------
    1   254                                  3         19        286       11395 1451  253
    2   256                                  3         19        286       31395 1451  255
 DIFFERENCES                                                               $
------------------------------------------------------------------------------------------------------------------------------
    1   255                                  3         20         13       11395 1451  254
```

```
   2   257                                   3         20         13          31395 1451   256
 DIFFERENCES                                                                  $
------------------------------------------------------------------------------------------------
   1   256                                   3         21          9          11395 1451   255
   2   258                                   3         21          9          31395 1451   257
 DIFFERENCES                                                                  $
------------------------------------------------------------------------------------------------
   1   310                                   8         16          2          11395 1451   309
   2   312                                   8         16          2          21395 1451   311
 DIFFERENCES                                                                  $
------------------------------------------------------------------------------------------------
   1   328                                  33         18         74          11395 1451   327
   2   330                                  33         18         78          31395 1451   329
 DIFFERENCES                                                       $          $
------------------------------------------------------------------------------------------------
   1   357    1.69580+ 8 6.80000+ 5 4.79000+ 6 7.00000+ 4 7.10000+ 3 7.10000+ 21395 1458   356
   2   359    1.69120+ 8 4.90000+ 5 4.79000+ 6 7.00000+ 4 7.40000+ 3 1.11000+ 31395 1458   358
 DIFFERENCES      $$     $ $                                $        $  $     $
------------------------------------------------------------------------------------------------
   1   358    6.96000+ 6 7.00000+ 5 6.26000+ 6 5.00000+ 4 6.43000+ 6 5.00000+ 41395 1458   357
   2   360    6.97000+ 6 5.00000+ 5 6.33000+ 6 5.00000+ 4 6.50000+ 6 5.00000+ 41395 1458   359
 DIFFERENCES     $       $            $$                    $$
------------------------------------------------------------------------------------------------
   1   359    8.68000+ 6 6.00000+ 4 1.94020+ 8 1.20000+ 5 2.02700+ 8 1.00000+ 51395 1458   358
   2   361    8.75000+ 6 7.00000+ 4 1.93720+ 8 1.50000+ 5 2.02470+ 8 1.30000+ 51395 1458   360
 DIFFERENCES    $$       $             $$        $             $$      $
------------------------------------------------------------------------------------------------
   1  2446    0.00000+ 0 1.94020+ 8          0          0          2        8891395 3 18 2445
   2  2448    0.00000+ 0 1.93720+ 8          0          0          2        8891395 3 18 2447
 DIFFERENCES                $$
------------------------------------------------------------------------------------------------
   1  2747    0.00000+ 0 1.94020+ 8          0          0          2        8471395 3 19 2746
   2  2749    0.00000+ 0 1.93720+ 8          0          0          2        8471395 3 19 2748
 DIFFERENCES                $$
------------------------------------------------------------------------------------------------
   1  3034    0.00000+ 0 1.94020+ 8          0          0          1          281395 3 20 3033
   2  3036    0.00000+ 0 1.93720+ 8          0          0          1          281395 3 20 3035
 DIFFERENCES                $$
------------------------------------------------------------------------------------------------
   1  3048    0.00000+ 0 1.94020+ 8          0          0          1          181395 3 21 3047
   2  3050    0.00000+ 0 1.93720+ 8          0          0          1          181395 3 21 3049
 DIFFERENCES                $$
------------------------------------------------------------------------------------------------
   1  4618    9.12340+ 4 0.00000+ 0          3          0          0        13941395 8 16 4617
   2  4620    9.22340+ 4 0.00000+ 0          3          0          0        13941395 8 16 4619
 DIFFERENCES    $
------------------------------------------------------------------------------------------------
   1 10043    9.22350+ 4 2.33025+ 2          0          0          0           5139533 1810042
   2 10045    9.22350+ 4 2.33025+ 2          0          0          0           6139533 1810044
 DIFFERENCES                                                                   $
------------------------------------------------------------------------------------------------
   1 10044    0.00000+00 0.00000+00          0         18          0           1139533 1810043
   2 10046    0.00000+ 0 0.00000+ 0          0         18          0           1139533 1810045
 DIFFERENCES          $          $
------------------------------------------------------------------------------------------------
   1 10045    0.00000+00 0.00000+00          1          5        325          25139533 1810044
   2 10047    0.00000+ 0 0.00000+ 0          1          5        325          25139533 1810046
 DIFFERENCES          $          $
------------------------------------------------------------------------------------------------
   1 10046    0.10000-04 0.62500+00 0.10000+01 0.18000+01 0.50000+01 0.10000+02139533 1810045
   2 10048    1.00000- 5 6.25000- 1 1.00000+ 0 1.80000+ 0 5.00000+ 0 1.00000+ 1139533 1810047
 DIFFERENCES  $ $     $$ $ $$$  $$$ $ $     $$ $ $$    $$ $ $     $$ $ $     $$
------------------------------------------------------------------------------------------------
   1 10047    0.20000+02 0.40000+02 0.80000+02 0.20000+03 0.40000+03 0.10000+04139533 1810046
   2 10049    2.00000+ 1 4.00000+ 1 8.00000+ 1 2.00000+ 2 4.00000+ 2 1.00000+ 3139533 1810048
 DIFFERENCES  $ $     $$ $ $     $$ $ $     $$ $ $     $$ $ $     $$ $ $     $$
```

```
   1 10048   0.30000+04 0.10000+05 0.30000+05 0.10000+06 0.15000+06 0.20000+06139533 1810047
   2 10050   3.00000+ 3 1.00000+ 4 3.00000+ 4 1.00000+ 5 1.50000+ 5 2.00000+ 5139533 1810049
DIFFERENCES  $ $      $$ $ $      $$ $ $      $$ $ $      $$ $ $$     $$ $ $      $$
-------------------------------------------------------------------------------------------------
   1 10049   0.40000+06 0.10000+07 0.20000+07 0.40000+07 0.10000+08 0.15000+08139533 1810048
   2 10051   4.00000+ 5 1.00000+ 6 2.00000+ 6 4.00000+ 6 1.00000+ 7 1.50000+ 7139533 1810050
DIFFERENCES  $ $      $$ $ $      $$ $ $      $$ $ $      $$ $ $      $$ $ $$     $$
-------------------------------------------------------------------------------------------------
   1 10050   0.20000+08 0.99982-05 0.99984-05 0.99994-05 0.99994-05 0.10002-04139533 1810049
   2 10052   2.00000+ 7 9.99820- 6 9.99840- 6 9.99940- 6 9.99940- 6 1.00020- 5139533 1810051
DIFFERENCES  $ $      $$ $    $$$ $$ $    $$$ $$ $     $$ $$ $     $$ $$ $ $  $$ $$
-------------------------------------------------------------------------------------------------
   1 10051   0.10002-04 0.99998-05 0.99982-05 0.99982-05 0.99982-05 0.99982-05139533 1810050
   2 10053   1.00020- 5 9.99980- 6 9.99820- 6 9.99820- 6 9.99820- 6 9.99820- 6139533 1810052
DIFFERENCES  $ $  $$ $$ $     $$ $$ $    $$$ $$ $    $$$ $$ $    $$$ $$ $    $$$ $$
-------------------------------------------------------------------------------------------------
   1 10052   0.10000-04 0.10000-04 0.10002-04 0.49977-05 0.00000+00 0.00000+00139533 1810051
   2 10054   1.00000- 5 1.00000- 5 1.00020- 5 4.99770- 6 0.00000+ 0 0.00000+ 0139533 1810053
DIFFERENCES  $ $      $$ $ $      $$ $ $  $$ $$ $ $ $ $ $$         $          $
-------------------------------------------------------------------------------------------------
   1 10053   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810052
   2 10055   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810054
DIFFERENCES          $          $          $          $          $          $
-------------------------------------------------------------------------------------------------
   1 10054   0.00000+00 0.19994-03 0.19999-03 0.19999-03 0.20001-03 0.20001-03139533 1810053
   2 10056   0.00000+ 0 1.99940- 4 1.99990- 4 1.99990- 4 2.00010- 4 2.00010- 4139533 1810055
DIFFERENCES          $  $ $  $$ $$ $ $    $ $$ $ $    $ $$ $ $  $$ $$ $ $  $$ $$
-------------------------------------------------------------------------------------------------
   1 10055   0.19997-03 0.20000-03 0.20000-03 0.20000-03 0.20000-03 0.20000-03139533 1810054
   2 10057   1.99970- 4 2.00000- 4 2.00000- 4 2.00000- 4 2.00000- 4 2.00000- 4139533 1810056
DIFFERENCES  $ $  $$ $$ $ $      $$ $ $      $$ $ $      $$ $ $      $$
-------------------------------------------------------------------------------------------------
   1 10056   0.20000-03 0.20000-03 0.99984-04 0.00000+00 0.00000+00 0.00000+00139533 1810055
   2 10058   2.00000- 4 2.00000- 4 9.99840- 5 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810057
DIFFERENCES  $ $      $$ $ $      $$ $    $$$ $$         $          $          $
-------------------------------------------------------------------------------------------------
   1 10057   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810056
   2 10059   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810058
DIFFERENCES          $          $          $          $          $          $
-------------------------------------------------------------------------------------------------
   1 10058   0.49997-03 0.40002-03 0.40008-03 0.40008-03 0.39988-03 0.39999-03139533 1810057
   2 10060   4.99970- 4 4.00020- 4 4.00080- 4 4.00080- 4 3.99880- 4 3.99990- 4139533 1810059
DIFFERENCES  $ $  $$ $$ $ $  $$ $$ $ $  $$ $$ $ $  $$ $$ $ $ $ $ $$ $ $    $ $$
-------------------------------------------------------------------------------------------------
   1 10059   0.39999-03 0.39999-03 0.39999-03 0.40001-03 0.40000-03 0.40015-03139533 1810058
   2 10061   3.99990- 4 3.99990- 4 3.99990- 4 4.00010- 4 4.00000- 4 4.00150- 4139533 1810060
DIFFERENCES  $ $    $ $$ $ $    $ $$ $ $    $ $$ $ $  $$ $$ $ $      $$ $ $ $$$ $$
-------------------------------------------------------------------------------------------------
   1 10060   0.19997-03 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810059
   2 10062   1.99970- 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810061
DIFFERENCES  $ $  $$ $$          $          $          $          $          $
-------------------------------------------------------------------------------------------------
   1 10061   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.49997-03 0.40008-03139533 1810060
   2 10063   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 4.99970- 4 4.00080- 4139533 1810062
DIFFERENCES          $          $          $          $  $ $  $$ $$ $ $  $$ $$
-------------------------------------------------------------------------------------------------
   1 10062   0.40008-03 0.39988-03 0.39999-03 0.39999-03 0.39999-03 0.39999-03139533 1810061
   2 10064   4.00080- 4 3.99880- 4 3.99990- 4 3.99990- 4 3.99990- 4 3.99990- 4139533 1910063
DIFFERENCES  $ $  $$ $$ $ $ $ $ $$ $ $    $ $$ $ $    $ $$ $ $    $ $$ $ $    $ $$
-------------------------------------------------------------------------------------------------
   1 10063   0.40001-03 0.40000-03 0.40015-03 0.19997-03 0.00000+00 0.00000+00139533 1810062
   2 10065   4.00010- 4 4.00000- 4 4.00150- 4 1.99970- 4 0.00000+ 0 0.00000+ 0139533 1810064
DIFFERENCES  $ $  $$ $$ $ $      $$ $ $ $$$ $$ $ $  $$ $$          $          $
-------------------------------------------------------------------------------------------------
   1 10064   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810063
```

```
   2 10066   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810065
DIFFERENCES          $          $          $          $          $          $
-----------------------------------------------------------------------------------------------
   1 10065   0.00000+00 0.70013-03 0.60011-03 0.59982-03 0.59983-03 0.59983-03139533 1810064
   2 10067   0.00000+ 0 7.00130- 4 6.00110- 4 5.99820- 4 5.99830- 4 5.99830- 4139533 1810066
DIFFERENCES          $  $ $ $$$ $$ $ $ $ $ $$ $ $ $$$ $$ $ $ $$$ $$ $ $ $$$ $$
-----------------------------------------------------------------------------------------------
   1 10066   0.59983-03 0.59983-03 0.60001-03 0.60000-03 0.60004-03 0.29986-03139533 1810065
   2 10068   5.99830- 4 5.99830- 4 6.00010- 4 6.00000- 4 6.00040- 4 2.99860- 4139533 1810067
DIFFERENCES  $ $ $$$ $$ $ $ $$$ $$ $ $  $$ $$ $ $     $$ $ $  $$ $$ $ $ $$$ $$
-----------------------------------------------------------------------------------------------
   1 10067   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810066
   2 10069   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810068
DIFFERENCES          $          $          $          $          $          $
-----------------------------------------------------------------------------------------------
   1 10068   0.00000+00 0.00000+00 0.00000+00 0.70013-03 0.59982-03 0.59983-03139533 1810067
   2 10070   0.00000+ 0 0.00000+ 0 0.00000+ 0 7.00130- 4 5.99820- 4 5.99830- 4139533 1810069
DIFFERENCES          $          $          $  $ $ $$$ $$ $ $ $$$ $$ $ $ $$$ $$
-----------------------------------------------------------------------------------------------
   1 10069   0.59983-03 0.59983-03 0.59983-03 0.60001-03 0.60000-03 0.60004-03139533 1810068
   2 10071   5.99830- 4 5.99830- 4 5.99830- 4 6.00010- 4 6.00000- 4 6.00040- 4139533 1810070
DIFFERENCES  $ $ $$$ $$ $ $ $$$ $$ $ $ $$$ $$ $ $  $$ $$ $ $     $$ $ $  $$ $$
-----------------------------------------------------------------------------------------------
   1 10070   0.29986-03 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810069
   2 10072   2.99860- 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810071
DIFFERENCES  $ $ $$$ $$          $          $          $          $          $
-----------------------------------------------------------------------------------------------
   1 10071   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.79976-03 0.70007-03139533 1810070
   2 10073   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 7.99760- 4 7.00070- 4139533 1810072
DIFFERENCES          $          $          $          $  $ $ $$$ $$ $ $  $$ $$
-----------------------------------------------------------------------------------------------
   1 10072   0.70007-03 0.70007-03 0.70007-03 0.69972-03 0.70000-03 0.69998-03139533 1810071
   2 10074   7.00070- 4 7.00070- 4 7.00070- 4 6.99720- 4 7.00000- 4 6.99980- 4139533 1810073
DIFFERENCES  $ $  $$ $$ $ $  $$ $$ $ $  $$ $$ $ $ $$$ $$ $ $     $$ $ $  $$ $$
-----------------------------------------------------------------------------------------------
   1 10073   0.34999-03 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810072
   2 10075   3.49990- 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810074
DIFFERENCES  $ $$  $ $$          $          $          $          $          $
-----------------------------------------------------------------------------------------------
   1 10074   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.99982-03 0.89991-03139533 1810073
   2 10076   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 9.99820- 4 8.99910- 4139533 1810075
DIFFERENCES          $          $          $          $  $   $$$ $$ $ $  $$ $$
-----------------------------------------------------------------------------------------------
   1 10075   0.89991-03 0.89991-03 0.89972-03 0.90000-03 0.89987-03 0.44994-03139533 1810074
   2 10077   8.99910- 4 8.99910- 4 8.99720- 4 9.00000- 4 8.99870- 4 4.49940- 4139533 1810076
DIFFERENCES  $ $  $$ $$ $ $  $$ $$ $ $ $$$ $$ $ $     $$ $ $ $$$ $$ $  $ $$ $$
-----------------------------------------------------------------------------------------------
   1 10076   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810075
   2 10078   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810077
DIFFERENCES          $          $          $          $          $          $
-----------------------------------------------------------------------------------------------
   1 10077   0.00000+00 0.00000+00 0.00000+00 0.99982-03 0.89991-03 0.89991-03139533 1810076
   2 10079   0.00000+ 0 0.00000+ 0 0.00000+ 0 9.99820- 4 8.99910- 4 8.99910- 4139533 1810078
DIFFERENCES          $          $          $  $   $$$ $$ $ $  $$ $$ $ $  $$ $$
-----------------------------------------------------------------------------------------------
   1 10078   0.89972-03 0.90000-03 0.89987-03 0.44994-03 0.00000+00 0.00000+00139533 1810077
   2 10080   8.99720- 4 9.00000- 4 8.99870- 4 4.49940- 4 0.00000+ 0 0.00000+ 0139533 1810079
DIFFERENCES  $ $ $$$ $$ $ $     $$ $ $ $$$ $$ $  $ $$ $$          $          $
-----------------------------------------------------------------------------------------------
   1 10079   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810078
   2 10081   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810080
DIFFERENCES          $          $          $          $          $          $
-----------------------------------------------------------------------------------------------
   1 10080   0.00000+00 0.99982-03 0.89991-03 0.89972-03 0.90000-03 0.89987-03139533 1810079
   2 10082   0.00000+ 0 9.99820- 4 8.99910- 4 8.99720- 4 9.00000- 4 8.99870- 4139533 1810081
DIFFERENCES            $  $   $$$ $$ $ $  $$ $$ $ $ $$$ $$ $ $     $$ $ $ $$$ $$
```

```
 1 10081   0.44994-03 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810080
 2 10083   4.49940- 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810082
DIFFERENCES $  $ $$ $$          $           $           $           $           $
-----------------------------------------------------------------------------------------
 1 10082   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.99982-03 0.89972-03139533 1810081
 2 10084   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 9.99820- 4 8.99720- 4139533 1810083
DIFFERENCES           $           $           $           $  $   $$$ $$ $ $ $$$ $$
-----------------------------------------------------------------------------------------
 1 10083   0.90000-03 0.89987-03 0.44994-03 0.00000+00 0.00000+00 0.00000+00139533 1810082
 2 10085   9.00000- 4 8.99870- 4 4.49940- 4 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810084
DIFFERENCES $ $      $$ $ $ $$$ $$ $  $ $$ $$          $           $
-----------------------------------------------------------------------------------------
 1 10084   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810083
 2 10086   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810085
DIFFERENCES           $           $           $           $           $
-----------------------------------------------------------------------------------------
 1 10085   0.34001-02 0.27600-02 0.18001-02 0.11997-02 0.00000+00 0.00000+00139533 1810084
 2 10087   3.40010- 3 2.76000- 3 1.80010- 3 1.19970- 3 0.00000+ 0 0.00000+ 0139533 1810086
DIFFERENCES $ $$ $$ $$ $ $$$    $$ $ $$ $$ $$ $  $ $$ $$          $           $
-----------------------------------------------------------------------------------------
 1 10086   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810085
 2 10088   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810087
DIFFERENCES           $           $           $           $           $
-----------------------------------------------------------------------------------------
 1 10087   0.00000+00 0.25000-02 0.17002-02 0.11997-02 0.00000+00 0.00000+00139533 1810086
 2 10089   0.00000+ 0 2.50000- 3 1.70020- 3 1.19970- 3 0.00000+ 0 0.00000+ 0139533 1810088
DIFFERENCES           $  $ $$     $$ $ $$ $$ $$ $  $ $$ $$          $           $
-----------------------------------------------------------------------------------------
 1 10088   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810087
 2 10090   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810089
DIFFERENCES           $           $           $           $           $
-----------------------------------------------------------------------------------------
 1 10089   0.00000+00 0.13601-02 0.76997-03 0.40000-03 0.39990-03 0.39990-03139533 1810088
 2 10091   0.00000+ 0 1.36010- 3 7.69970- 4 4.00000- 4 3.99900- 4 3.99900- 4139533 1810090
DIFFERENCES           $  $ $$$$$ $$ $ $$ $$ $$ $ $      $$ $ $  $  $$ $ $  $  $$
-----------------------------------------------------------------------------------------
 1 10090   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.00000+00139533 1810089
 2 10092   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0139533 1810091
DIFFERENCES           $           $           $           $           $
-----------------------------------------------------------------------------------------
 1 10091   0.87972-03 0.40000-03 0.39990-03 0.39990-03 0.00000+00 0.00000+00139533 1810090
 2 10093   8.79720- 4 4.00000- 4 3.99900- 4 3.99900- 4 0.00000+ 0 0.00000+ 0139533 1810092
DIFFERENCES $ $$$$$ $$ $ $      $$ $ $  $  $$ $ $  $  $$          $           $
-----------------------------------------------------------------------------------------
 1 10092   0.00000+00 0.00000+00 0.00000+00 0.00000+00 0.16000-02 0.72000-03139533 1810091
 2 10094   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 1.60000- 3 7.20000- 4139533 1810093
DIFFERENCES           $           $           $           $  $ $$     $$ $ $$     $$
-----------------------------------------------------------------------------------------
 1 10093   0.30000-03 0.49000-03 0.70000-04 0.60000-04 0.00000+00 0.00000+00139533 1810092
 2 10095   3.00000- 4 4.90000- 4 7.00000- 5 6.00000- 5 0.00000+ 0 0.00000+ 0139533 1810094
DIFFERENCES $ $      $$ $ $$     $$ $ $      $$ $ $$          $           $
-----------------------------------------------------------------------------------------
 1 10094   0.00000+00 0.90000-03 0.54000-03 0.52500-03 0.75000-04 0.90000-04139533 1810093
 2 10096   0.00000+ 0 9.00000- 4 5.40000- 4 5.25000- 4 7.50000- 5 9.00000- 5139533 1810095
DIFFERENCES           $  $ $      $$ $ $$     $$ $ $$$    $$ $ $$     $$ $ $      $$
-----------------------------------------------------------------------------------------
 1 10095   0.00000+00 0.00000+00 0.00000+00 0.90000-03 0.63000-03 0.11000-03139533 1810094
 2 10097   0.00000+ 0 0.00000+ 0 0.00000+ 0 9.00000- 4 6.30000- 4 1.10000- 4139533 1810096
DIFFERENCES           $           $           $  $ $      $$ $ $$     $$ $  $      $$
-----------------------------------------------------------------------------------------
 1 10096   0.14001-03 0.00000+00 0.00000+00 0.00000+00 0.12250-02 0.26000-03139533 1810095
 2 10098   1.40010- 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 1.22500- 3 2.60000- 4139533 1810097
DIFFERENCES $ $$ $$ $$          $           $           $  $ $ $$  $$ $ $$     $$
-----------------------------------------------------------------------------------------
 1 10097   0.26001-03 0.61005-04 0.00000+00 0.00000+00 0.62500-03 0.30000-03139533 1810096
```

```
   2 10099   2.60010- 4 6.10050- 5 0.00000+ 0 0.00000+ 0 6.25000- 4 3.00000- 4139533 1810098
DIFFERENCES  $ $$ $$ $$ $ $$ $$ $$          $           $  $ $$$    $$ $ $      $$
-----------------------------------------------------------------------------------------------
   1 10098   0.26002-03 0.50000-04 0.45000-04 0.90000-03 0.42000-03 0.30000-03139533 1810097
   2 10100   2.60020- 4 5.00000- 5 4.50000- 5 9.00000- 4 4.20000- 4 3.00000- 4139533 1810099
DIFFERENCES  $ $$ $$ $$ $ $      $$ $ $$     $$ $ $      $$ $ $$     $$ $ $      $$
-----------------------------------------------------------------------------------------------
   1 10099   0.36000-03 0.12250-02 0.63000-03 0.84000-03 0.16000-02 0.19200-02139533 1810098
   2 10101   3.60000- 4 1.22500- 3 6.30000- 4 8.40000- 4 1.60000- 3 1.92000- 3139533 1810100
DIFFERENCES  $ $$     $$ $ $ $$  $$ $ $$     $$ $ $$     $$ $ $$     $$ $ $$$    $$
-----------------------------------------------------------------------------------------------
   1 10100   0.36000-02                                                        139533 1810099
   2 10102   3.60000- 3                                                        139533 1810101
DIFFERENCES  $ $$     $$
-----------------------------------------------------------------------------------------------
   1 10109   0.00000+ 0 0.00000+ 0       1399          18           1          0139533 1810108
   2 10111   0.00000+ 0 0.00000+ 0       1380          18           1          0139533 1810110
DIFFERENCES                              $$
-----------------------------------------------------------------------------------------------
   1 10111   2.00000+ 5 1.50000+ 7       1395          18           4          2139533 1810110
   2 10113   2.00000+ 5 2.00000+ 7       1395          18           4          2139533 1810112
DIFFERENCES               $ $
-----------------------------------------------------------------------------------------------
   1 10112   2.00000+ 5 1.00000+ 0 1.50000+ 7 0.00000+ 0                        139533 1810111
   2 10114   2.00000+ 5 1.00000+ 0 2.00000+ 7 0.00000+ 0                        139533 1810113
DIFFERENCES                       $ $
-----------------------------------------------------------------------------------------------
   1 10113   0.00000+ 0 0.00000+ 0       1399          102          1          0139533 1810112
   2 10115   0.00000+ 0 0.00000+ 0       1381          18           1          0139533 1810114
DIFFERENCES                              $$            $$$
-----------------------------------------------------------------------------------------------
   2 10117   2.00000+ 5 2.00000+ 7       1395          18           4          2139533 1810116
   2 10118   2.00000+ 5 1.00000+ 0 2.00000+ 7 0.00000+ 0                          139533 1810117
   2 10119   0.00000+ 0 0.00000+ 0       1399          18           1          0139533 1810118
   2 10120   0.00000+ 0 0.00000+ 0          0           3            0          0139533 1810119
DIFFERENCES ON     4 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1395	1	451	329	14	331	16	(DIFFERENCES)
1395	1	452	8	0	8	0	
1395	1	455	9	0	9	0	
1395	1	456	7	0	7	0	
1395	1	458	6	3	6	3	(DIFFERENCES)
1395	2	151	975	0	975	0	
1395	3	1	472	0	472	0	
1395	3	2	471	0	471	0	
1395	3	4	129	0	129	0	
1395	3	16	27	0	27	0	
1395	3	17	10	0	10	0	
1395	3	18	301	1	301	1	(DIFFERENCES)
1395	3	19	287	1	287	1	(DIFFERENCES)
1395	3	20	14	1	14	1	(DIFFERENCES)
1395	3	21	10	1	10	1	(DIFFERENCES)
1395	3	51	12	0	12	0	
1395	3	52	16	0	16	0	
1395	3	53	15	0	15	0	
1395	3	54	15	0	15	0	
1395	3	55	14	0	14	0	
1395	3	56	14	0	14	0	
1395	3	57	13	0	13	0	

1395	3	58	13	0	13	0	
1395	3	59	12	0	12	0	
1395	3	60	11	0	11	0	
1395	3	61	41	0	41	0	
1395	3	62	35	0	35	0	
1395	3	63	32	0	32	0	
1395	3	64	29	0	29	0	
1395	3	65	25	0	25	0	
1395	3	66	19	0	19	0	
1395	3	91	45	0	45	0	
1395	3	102	372	0	372	0	
1395	3	251	11	0	11	0	
1395	3	252	11	0	11	0	
1395	3	253	11	0	11	0	
1395	4	2	148	0	148	0	
1395	4	16	11	0	11	0	
1395	4	17	11	0	11	0	
1395	4	18	11	0	11	0	
1395	4	19	11	0	11	0	
1395	4	20	11	0	11	0	
1395	4	21	11	0	11	0	
1395	4	51	11	0	11	0	
1395	4	52	11	0	11	0	
1395	4	53	11	0	11	0	
1395	4	54	11	0	11	0	
1395	4	55	11	0	11	0	
1395	4	56	11	0	11	0	
1395	4	57	11	0	11	0	
1395	4	58	11	0	11	0	
1395	4	59	11	0	11	0	
1395	4	60	11	0	11	0	
1395	4	61	32	0	32	0	
1395	4	62	32	0	32	0	
1395	4	63	32	0	32	0	
1395	4	64	32	0	32	0	
1395	4	65	32	0	32	0	
1395	4	66	32	0	32	0	
1395	4	91	11	0	11	0	
1395	5	16	17	0	17	0	
1395	5	17	12	0	12	0	
1395	5	18	25	0	25	0	
1395	5	19	25	0	25	0	
1395	5	20	42	0	42	0	
1395	5	21	27	0	27	0	
1395	5	91	8	0	8	0	
1395	5	455	110	0	110	0	
1395	8	16	4	1	4	1	(DIFFERENCES)
1395	8	17	3	0	3	0	
1395	8	102	3	0	3	0	
1395	8	454	2306	0	2306	0	
1395	8	457	217	0	217	0	
1395	8	459	2306	0	2306	0	
1395	12	4	255	0	255	0	
1395	12	18	6	0	6	0	
1395	12	102	6	0	6	0	
1395	13	3	10	0	10	0	
1395	14	3	3	0	3	0	
1395	14	4	2	0	2	0	
1395	14	18	2	0	2	0	
1395	14	102	2	0	2	0	
1395	15	3	129	0	129	0	
1395	15	18	55	0	55	0	
1395	15	102	59	0	59	0	
1395	31	452	58	0	58	0	
1395	33	18	76	62	80	66	(DIFFERENCES)
1395	33	102	43	0	43	0	

1395 33 102 3 0 3 0

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	10163	84	10169	90

END OF RUN

9.22360+ 4 2.34018+ 2	1	1	0	3	1396	1	1
0.00000+ 0 1.00000+ 0	0	0	0	0	1396	1	2
0.00000+ 0 0.00000+ 0	0	0	129	51	1396	1	3
92-U -236 BNL,HEDL,+ EVAL-JUL78 DIVADEENAM,MANN,MCCROSSON,REICH,+					1396	1	4
DIST-MAR83 REV1-OCT80 830316					1396	1	5
**********					1396	1	6
BNL EVAL-JUL78 M. DIVADEENAM (NU, FILE 2)					1396	1	7
HEDL EVAL-APR78 MANN AND SCHENTER (FAST(N,F))					1396	1	8
INEL EVAL-AUG78 REICH (DECAY)					1396	1	9
SRL EVAL-OCT71 J. MCCROSSON					1396	1	10
EXTENDED TO 20 MEV FOR ENDF/B VERSION-IV (APR74)					1396	1	11
PARAMETERS FOR NEGATIVE LEVEL CHANGED(JULY,1978)					1396	1	12
MF=1 GENERAL INFORMATION					1396	1	13
MT=452 CONDE+HOLMBERG'S NU-BAR DATA RENORMALIZED TO CF252 NU=3.75					1396	1	14
MT=458 ENERGY FROM FISSION BASED ON SHER (REF. 11)					1396	1	15
MF=2 RESONANCE PARAMETERS					1396	1	16
MT=151 RESOLVED RESONANCE PARAMETERS FROM REFS.2A TO 2D					1396	1	17
BOUND LEVEL PARAMETERS MODIFIED TO FIT BNL-325 VOL I					1396	1	18
(REF.13) THERMAL AND RESONANCE INTEGRAL CROSS SECTIONS.					1396	1	19
UNRESOLVED RESONANCE PARAMETERS OBTAINED BY FITTING					1396	1	20
CARLSON'S AVERAGE CAPTURE DATA (REF. 2A).ENERGY					1396	1	21
DEPENDENT UNRESOLVED PARAMETERS RANGE FROM 4.11 KEV TO					1396	1	22
100 KEV. UR CODE (REF.14) WAS USED TO OBTAIN THE					1396	1	23
PARAMETERS.					1396	1	24
MF=3 SMOOTH CROSS SECTIONS					1396	1	25
MF=3 SMOOTH BACKGROUND CROSS SECTION (DUE TO MISSED P-WAVE					1396	1	26
LEVELS) CALCULATED WITH AVERAGE PARAMETERS USING UR					1396	1	27
CODE(REF.14).					1396	1	28
MT= 1 TOTAL TAKEN FROM REF. 1 AND 4.					1396	1	29
MT= 2 ELASTIC, REF. 1 AND 4.					1396	1	30
MT= 4 INELAS., REF. 1 AND 4, Q-VALUE, REF. 5.					1396	1	31
MT= 16 (N,2N), REF. 1 AND 4, Q-VALUE, REF. 6.					1396	1	32
MT= 17 (N,3N), REF. 1 AND 4, Q-VALUE, REF. 7.					1396	1	33
MT= 18 FISSION, ABOVE 100 KEV DATA OF BEHRENS ET AL					1396	1	34
(REF. 8) WAS USED, NORMALIZED TO U-235 (N,F) OF					1396	1	35
ENDF/B-V.					1396	1	36
MT=19 SAME AS MT=18 BELOW (N,NF) THRESHOLD, THEREAFTER					1396	1	37
CONSTANT					1396	1	38
MT=20 IS DIFFERENCE OF MT=18 AND MT=19 UNTIL (N,2NF)					1396	1	39
THRESHOLD, THEREAFTER A CONSTANT.					1396	1	40
MT=21 DIFFERENCE OF MT=18 AND MT=19 AND 20					1396	1	41
MT=51,...56,91 REF. 1 AND 4					1396	1	42
MT=102 (N,GAMMA), REF. 1.					1396	1	43
MT=251,252,253 CALCULATED BY CHAD					1396	1	44
MF=4 ANGULAR DISTRIBUTIONS					1396	1	45
MT= 2 DIFF. ELAST. SAME AS FOR TH-232, REF. 10.					1396	1	46
MT=2 ASSUMED ISOTROPIC					1396	1	47
MF=5 ENERGY DISTRIBUTIONS					1396	1	48
MT=16 (N,2N) ENERGY DIST DESCRIBED BY MAXWELLIAN.					1396	1	49
MT=17 (N,3N) ENERGY DIST DESCRIBED BY MAXWELLIAN.					1396	1	50
MT=18,19,20 NEUTRON ENERGY DISTRIBUTION GIVEN BY SIMPLE FISSION					1396	1	51
SPECTRUM PLUS MAXWELLIAN.					1396	1	52
MT=91 EVAPORATION TEMP. FROM GILBERT AND CAMERON (REF. 12)					1396	1	53
* * * REFERENCES * * *					1396	1	54
1. DRAKE AND NICHOLS,GA-8135 (1967).					1396	1	55
2. CARLSON ET AL.,GA-9057 (1968).					1396	1	56
2A. A.D.CARLSON,S.J.EISENHAHN,W.M.LOPEZ AND M.P.FRICKE,					1396	1	57
NUCL.PHYS.141,577(1970).					1396	1	58
2B. G.CARRARO AND A.BRUESGAN,NUCL.PHYS.A257,333(1976).					1396	1	59
2C. L.MEWISSEN,F.POORTMANS,G.ROHR,J.THEOBALD,H.WEIGMANN AND					1396	1	60

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	MAT	MF	REC.
G.VANPREAT,'NEUTRON CROSS SECTION TECHNOLOGY'VOL I ,729 (1975).	1396	1	61
	1396	1	62
2D. J.P.THEOBALD,J.A.WARTENA,H.WEIGMANN AND F.POORTMANS, NUCL.PHYS. A181,639(1972).	1396	1	63
	1396	1	64
3. H.CONDE AND N.HOLMBERG, JOUR.NUCL. ENERGY 25,331(1971).	1396	1	65
4. PARKER,AWRE-O-30/64 (1964).	1396	1	66
5. LEDERER ET AL.,TABLE OF ISOTOPES,WILEY,6TH ED.(1968).	1396	1	67
6. MAPLES ET AL.,UCRL-16964 (1966).	1396	1	68
7. HOWERTON ET AL.,UCRL-14000 (1964).	1396	1	69
8. J.W. BEHRENS,G.W. CARLSON, AND R.W. BAUER, NUCL.CROSS SECTION AND TECHNOLOGY, NBS 425 (1975) P. 591	1396	1	70
	1396	1	71
9. F.M. MANN AND R.E. SCHENTER, TRANS.AMER.NUCL.SOC. 23 (1976)546 AND TO BE PUBLISHED.	1396	1	72
	1396	1	73
10. DRAKE AND NICHOLS,GA-6404 (1966).	1396	1	74
11.SHER+BECK EPRI NP-1771+REV. 1/83+PC TO MAGURNO 2/83	1396	1	75
12. A. GILBERT AND A.G.W. CAMERON, CAN. J. PHYS. 43(1965)1446	1396	1	76
13. S.F.MUGHABGHAB AND D.I.GARBER,BNL-325 VOL I (1973).	1396	1	77
14. UR: E.PENNINGTON,PRIVETE COMMUNICATION.	1396	1	78
MF=8 RADIOACTIVITY INFORMATION	1396	1	79
MT = 454 FISSION YIELD DATA	1396	1	80
FISSION PRODUCT YIELD DATA FOR PHASE ONE REVIEW FOR ENDF/B-V	1396	1	81
**********	1396	1	82
*	1396	1	83
MF=8 RADIOACTIVITY INFORMATION	1396	1	84
MT = 454 AND 459 FISSION YIELD DATA	1396	1	85
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Y HARKER, J R LIAW, W J MAECK, D G MADLAND, V MCLANE MAY,	1396	1	88
P L REEDER, B F RIDER, R E SCHENTER, B I SPINRAD, J P UNIK,	1396	1	89
A WAHL, W WALKER, B W WEHRING, K WOLFSBERG	1396	1	90
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WHEN THERE IS AN ISOMERIC STATE,THE INDEPENDENT NUCLIDE	1396	1	93
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YIELD IN STATE DISTRIBUTIONS (UNCERTAINTIES AVERAGE	1396	1	95
APPROXIMATELY 50 PERCENT BUT CAN BE LARGER),ANY YIELD	1396	1	96
HAVING A LARGER UNCERTAINTY (45-64 PERCENT) MAY BE A MODEL	1396	1	97
ESTIMATE OR A VALUE ASSIGNED TO THE YIELDS ON THE WINGS OR	1396	1	98
VALLEY OF THE MASS YIELD DISTRIBUTION. THESE SMALL YIELDS	1396	1	99
MAY ONLY BE ACCURATE TO WITHIN A FACTOR OF 2.	1396	1	100
	1396	1	101
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	1396	1	103
MT459 CONTAINS CUMULATIVE YIELDS ALONG EACH ISOBARIC CHAIN	1396	1	104
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(PN VALUES) FOR 102 EMITTERS, LA-UR-78-688, AND A PAIRING	1396	1	110
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	1396	1	112
DATA PREPARED FOR FILES BY T.R.ENGLAND (LASL LTS. T-2-L-2891)	1396	1	113
MT=457 DECAY DATA	1396	1	114
REFERENCES Q(ALPHA)-1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLE	1396	1	115
HALF-LIFE- K.F. FLYNN ET AL., J. INORG. NUCL. CHEM.	1396	1	116
34, 1121 (1972).	1396	1	117
OTHER - SEE M.R. SCHMORAK, NUCLEAR DATA SHEETS B 4,	1396	1	118
NO. 6, 623 (1970), AND TABLE OF ISOTOPES,	1396	1	119
7TH ED.,(PRELIMINARY DATA, PRIV. COMM. FROM	1396	1	120
C.M. LEDERER). SEE ALSO M.R. SCHMORAK, NUCLEAR	1396	1	121

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	DATA SHEETS 20, 192 (1977).					1396	1	122
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	ENERGY ALPHA GROUPS ARE THOSE RECOMMENDED BY A. RYTZ,					1396	1	124
	AT. DATA AND NUCL. DATA TABLES 12, NO. 5, 479 (1973).					1396	1	125
NOTE	THE GAMMA-RAY INTENSITY NORMALIZATION HAS BEEN					1396	1	126
	DERIVED FROM INTENSITY-BALANCE CONSIDERATIONS AT THE					1396	1	127
	GROUND STATE. WHILE THIS GIVES AGREEMENT BETWEEN THE					1396	1	128
	ALPHA AND 49.3-KEV GAMMA-RAY INTENSITIES, THE					1396	1	129
	CORRESPONDING DATA FOR THE 112-KEV GAMMA ARE NOT					1396	1	130
	CONSISTENT.					1396	1	131
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 8/78						1396	1	132
	1	451	183		3	1396	1	133
	1	452	3		1	1396	1	134
	1	458	5		3	1396	1	135
	2	151	266		1	1396	1	136
	3	1	31		1	1396	1	137
	3	2	24		1	1396	1	138
	3	4	23		1	1396	1	139
	3	16	9		1	1396	1	140
	3	17	6		1	1396	1	141
	3	18	24		3	1396	1	142
	3	19	18		3	1396	1	143
	3	20	8		3	1396	1	144
	3	21	7		3	1396	1	145
	3	51	12		1	1396	1	146
	3	52	10		1	1396	1	147
	3	53	9		1	1396	1	148
	3	54	7		1	1396	1	149
	3	55	6		1	1396	1	150
	3	56	6		1	1396	1	151
	3	91	16		1	1396	1	152
	3	102	24		1	1396	1	153
	3	251	31		1	1396	1	154
	3	252	31		1	1396	1	155
	3	253	31		1	1396	1	156
	4	2	279		1	1396	1	157
	4	16	2		1	1396	1	158
	4	17	2		1	1396	1	159
	4	18	2		1	1396	1	160
	4	19	2		2	1396	1	161
	4	20	2		1	1396	1	162
	4	21	2		1	1396	1	163
	4	51	2		1	1396	1	164
	4	52	2		1	1396	1	165
	4	53	2		1	1396	1	166
	4	54	2		1	1396	1	167
	4	55	2		1	1396	1	168
	4	56	2		1	1396	1	169
	4	91	2		1	1396	1	170
	5	16	7		1	1396	1	171
	5	17	7		1	1396	1	172
	5	18	7		1	1396	1	173
	5	19	7		1	1396	1	174
	5	20	7		1	1396	1	175
	5	21	7		1	1396	1	176
	5	91	7		1	1396	1	177
	8	16	2		1	1396	1	178
	8	17	2		1	1396	1	179
	8	102	2		1	1396	1	180
	8	454	782		1	1396	1	181
	8	457	46		1	1396	1	182

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TEXT & DICT.

				MAT	MF	REC.
8	459	782	1	1396	1	183
				1396	1	184
				1396	1	188
				1396	1	194
				1396	2	462
				1396	3	495
				1396	3	520
				1396	3	544
				1396	3	554
				1396	3	561
				1396	3	586
				1396	3	605
				1396	3	614
				1396	3	622
				1396	3	635
				1396	3	646
				1396	3	656
				1396	3	664
				1396	3	671
				1396	3	678
				1396	3	695
				1396	3	720
				1396	3	752
				1396	3	784
				1396	3	816
				1396	4	1097
				1396	4	1100
				1396	4	1103
				1396	4	1106
				1396	4	1109
				1396	4	1112
				1396	4	1115
				1396	4	1118
				1396	4	1121
				1396	4	1124
				1396	4	1127
				1396	4	1130
				1396	4	1133
				1396	4	1136
				1396	5	1145
				1396	5	1153
				1396	5	1161
				1396	5	1169
				1396	5	1177
				1396	5	1185
				1396	5	1193
				1396	8	1197
				1396	8	1200
				1396	8	1203
				1396	8	1986
				1396	8	2033
				1396	8	2816

COMPARE TWO BCD FILES (COMPARE 82-1)

```
COLUMNS TO READ AND LIST-------      70 (  1 TO 80 )
COLUMNS TO COMPARE-------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (  1 TO 70 )
SPECIAL FILE FLAG--------------       2
ACCEPTABLE DIFFERENCE----------       0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
```

DESCRIPTION OF TWO FILES TO BE COMPARED

```
FILE 1 =ACT1396 OLD
FILE 2 =ACT1396 NEW
```

```
 FILE   CARD  CONTENTS
                        1         2         3         4         5         6         7         8
 FILE   CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
-------------------------------------------------------------------------------------------------
    1      2  9.22360+ 4 2.34018+ 2          1         1         0        11396 1451     1
    2      2  9.22360+ 4 2.34018+ 2          1         1         0        31396 1451     1
 DIFFERENCES                                                              $
-------------------------------------------------------------------------------------------------
    1      3  0.0     + 0 1.00000+ 0          0         0         0        01396 1451     2
    2      3  0.00000+ 0 1.00000+ 0          0         0         0        01396 1451     2
 DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
    1      4  0.0     + 0 0.0     + 0          0         0       129       501396 1451     3
    2      4  0.00000+ 0 0.00000+ 0          0         0       129       511396 1451     3
 DIFFERENCES     $$$$        $$$$                                          $
-------------------------------------------------------------------------------------------------
    1      6                          DIST-MAY79                  790524    1396 1451     5
    2      6                          DIST-MAR83 REV1-OCT80       830316    1396 1451     5
 DIFFERENCES                              $$$ $$$$$$$$$$          $$ $$$
-------------------------------------------------------------------------------------------------
    1     76     11. R. SHER, S. FIARMAN, AND C. BECK (PRIV. COMM. OCT., 1976)                1396 1451    75
    2     76     11.SHER+BECK EPRI NP-1771+REV. 1/83+PC TO MAGURNO 2/83                       1396 1451    75
 DIFFERENCES       $$$$$$ $$ $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$ $$$$$ $$$$$
-------------------------------------------------------------------------------------------------
    1    134                                    1       451       182        11396 1451   133
    2    134                                    1       451       183        31396 1451   133
 DIFFERENCES                                                        $         $
-------------------------------------------------------------------------------------------------
    1    136                                    1       458         5        11396 1451   135
    2    136                                    1       458         5        31396 1451   135
 DIFFERENCES                                                                  $
-------------------------------------------------------------------------------------------------
    1    143                                    3        18        24        11396 1451   142
    2    143                                    3        18        24        31396 1451   142
 DIFFERENCES                                                                  $
-------------------------------------------------------------------------------------------------
    1    144                                    3        19        18        11396 1451   143
    2    144                                    3        19        18        31396 1451   143
 DIFFERENCES                                                                  $
-------------------------------------------------------------------------------------------------
    1    145                                    3        20         8        11396 1451   144
    2    145                                    3        20         8        31396 1451   144
 DIFFERENCES                                                                  $
-------------------------------------------------------------------------------------------------
    1    146                                    3        21         7        11396 1451   145
    2    146                                    3        21         7        31396 1451   145
 DIFFERENCES                                                                  $
-------------------------------------------------------------------------------------------------
    2    162                                    4        19         2        21396 1451   161
```

```
DIFFERENCES ON    1 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
------------------------------------------------------------------------------------------------------
     1   186    0.0     + 0 0.0     + 0          0           0           2          01396 1452   185
     2   187    0.00000+ 0 0.00000+ 0          0           0           2          01396 1452   186
DIFFERENCES        $$$$       $$$$
------------------------------------------------------------------------------------------------------
     1   190    0.0     + 0 0.0     + 0          0           0          18          91396 1458   189
     2   191    0.00000+ 0 0.00C00+ 0          0           0          18          91396 1458   190
DIFFERENCES        $$$$       $$$$
------------------------------------------------------------------------------------------------------
     1   191    1.66040+ 8 1.50000+ 6 5.35000+ 6 1.50000+ 5 1.05000+ 4 2.0000()+ 31396 1458   190
     2   192    1.67500+ 8 2.00000+ 6 4.70000+ 6 2.90000+ 5 1.00000+ 4 2.00000+ 31396 1458   191
DIFFERENCES        $$$        $ $        $ $$       $ $         $
------------------------------------------------------------------------------------------------------
     1   192    7.60000+ 6 2.00000+ 6 6.80000+ 6 4.00000+ 5 7.00000+ 6 4.00000+ 51396 1458   191
     2   193    7.30000+ 6 1.00000+ 6 7.42000+ 6 7.50000+ 5 7.56000+ 6 5.00000+ 51396 1458   192
DIFFERENCES       $          $          $ $$       $ $        $$         $
------------------------------------------------------------------------------------------------------
     1   193    9.40000+ 6 5.00000+ 5 1.92800+ 8 1.10000+ 6 2.02200+ 8 1.00000+ 61396 1458   192
     2   194    1.01500+ 7 1.10000+ 6 1.94490+ 8 1.10650+ 6 2.04640+ 8 1.20000+ 51396 1458   193
DIFFERENCES     $ $$$      $ $ $      $    $$$          $$        $$$        $        $
------------------------------------------------------------------------------------------------------
     1   199    0.0     + 0 9.35400- 1          0           0           1          01396 2151   198
     2   200    0.0000U+ 0 9.35400- 1          0           0           1          01396 2151   199
DIFFERENCES        $$$$
------------------------------------------------------------------------------------------------------
     1   200    2.34017+ 2 0.0     + 0          0           0        1146        1911396 2151   199
     2   201    2.34017+ 2 0.00000+ 0          0           0        1146        1911396 2151   200
DIFFERENCES                   $$$$
------------------------------------------------------------------------------------------------------
     1   201   -9.70000+ 0 5.00000- 1 2.83330- 2 4.98300- 3 2.33000- 2 5.00000- 51396 2151   200
     2   202   -9.70000+ 0 5.00000- 1 2.83330- 2 4.98300- 3 2.33000- 2 0.50000- 41396 2151   201
DIFFERENCES                                                              $ $        $
------------------------------------------------------------------------------------------------------
     1   393    0.0     + 0 9.35400- 1          0           0           3          01396 2151   392
     2   394    0.00000+ 0 9.35400- 1          0           0           3          01396 2151   393
DIFFERENCES        $$$$
------------------------------------------------------------------------------------------------------
     1   394    2.34018+ 2 0.0     + 0          0           0           1          01396 2151   393
     2   395    2.34018+ 2 0.00000+ 0          0           0           1          01396 2151   394
DIFFERENCES                   $$$$
------------------------------------------------------------------------------------------------------
     1   395    5.00000- 1 0.0     + 0          2           0          72         111396 2151   394
     2   396    5.00000- 1 0.00000+ 0          2           0          72         111396 2151   395
DIFFERENCES                   $$$$
------------------------------------------------------------------------------------------------------
     1   396    0.0     + 0 0.0     + 0 0.0     + 0 1.00000+ 0 0.0     + 0 1.00000+ 01396 2151   395
     2   397    0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 1.00000+ 01396 2151   396
DIFFERENCES        $$$$       $$$$       $$$$                  $$$$
------------------------------------------------------------------------------------------------------
     1   397    4.11000+ 3 1.62000+ 1 0.0     + 0 1.61000- 3 2.33000- 2 3.50000- 41396 2151   396
     2   398    4.11000+ 3 1.62000+ 1 0.00000+ 0 1.61000- 3 2.33000- 2 3.50000- 41396 2151   397
DIFFERENCES                              $$$$
------------------------------------------------------------------------------------------------------
     1   398    4.40000+ 3 1.62000+ 1 0.0     + 0 1.61000- 3 2.33000- 2 3.50000- 41396 2151   397
     2   399    4.40000+ 3 1.62000+ 1 0.00000+ 0 1.61000- 3 2.33000- 2 3.50000- 41396 2151   398
DIFFERENCES                              $$$$
------------------------------------------------------------------------------------------------------
     1   399    5.40000+ 3 1.62000+ 1 0.0     + 0 1.61000- 3 2.33000- 2 3.50000- 41396 2151   398
     2   400    5.40000+ 3 1.62000+ 1 0.00000+ 0 1.61000- 3 2.33000- 2 3.50000- 41396 2151   399
DIFFERENCES                              $$$$
------------------------------------------------------------------------------------------------------
     1   400    6.80000+ 3 1.62000+ 1 0.0     + 0 1.61000- 3 2.33000- 2 3.50000- 41396 2151   399
     2   401    6.80000+ 3 1.62000+ 1 0.00000+ 0 1.61000- 3 2.33000- 2 3.50000- 41396 2151   400
DIFFERENCES                              $$$$
------------------------------------------------------------------------------------------------------
```

```
  1   503   4.11001+ 3 0.0     + 0 1.00000+ 5 0.0     + 0 1.00001+ 5 1.30822+ 11396 3  2  502
  2   504   4.11001+ 3 0.00000+ 0 1.00000+ 5 0.00000+ 0 1.00001+ 5 1.30822+ 11396 3  2  503
DIFFERENCES                $$$$                 $$$$
------------------------------------------------------------------------------------------------------------
  1   522   0.0     + 0-4.52800+ 4          0          0          1         601396 3  4  521
  2   523   0.00000+ 0-4.52800+ 4          0          0          1         601396 3  4  522
DIFFERENCES     $$$$
------------------------------------------------------------------------------------------------------------
  1   524   4.54730+ 4 0.0     + 0 5.00000+ 4 2.50000- 2 6.00000+ 4 1.00000- 11396 3  4  523
  2   525   4.54730+ 4 0.00000+ 0 5.00000+ 4 2.50000- 2 6.00000+ 4 1.00000- 11396 3  4  524
DIFFERENCES                $$$$
------------------------------------------------------------------------------------------------------------
  1   546   0.0     + 0-6.91040+ 6          0          0          1         171396 3 16  545
  2   547   0.00000+ 0-6.91040+ 6          0          0          1         171396 3 16  546
DIFFERENCES     $$$$
------------------------------------------------------------------------------------------------------------
  1   548   6.93990+ 6 0.0     + 0 7.00000+ 6 1.50000- 1 7.50000+ 6 5.10000- 11396 3 16  547
  2   549   6.93990+ 6 0.00000+ 0 7.00000+ 6 1.50000- 1 7.50000+ 6 5.10000- 11396 3 16  548
DIFFERENCES                $$$$
------------------------------------------------------------------------------------------------------------
  1   556   0.0     + 0-1.16400+ 7          0          0          1          91396 3 17  555
  2   557   0.00000+ 0-1.16400+ 7          0          0          1          91396 3 17  556
DIFFERENCES     $$$$
------------------------------------------------------------------------------------------------------------
  1   558   1.16900+ 7 0.0     + 0 1.20000+ 7 4.00000- 2 1.25000+ 7 1.30000- 11396 3 17  557
  2   559   1.16900+ 7 0.00000+ 0 1.20000+ 7 4.00000- 2 1.25000+ 7 1.30000- 11396 3 17  558
DIFFERENCES                $$$$
------------------------------------------------------------------------------------------------------------
  1   563   0.0     + 0 1.92800+ 8          0          0          1         621396 3 18  562
  2   564   0.00000+ 0 1.94490+ 8          0          0          1         621396 3 18  563
DIFFERENCES     $$$$       $$$
------------------------------------------------------------------------------------------------------------
  1   569   4.11001+ 3 0.0     + 0 1.00000+ 4 0.0     + 0 5.00000+ 4 0.0     + 01396 3 18  568
  2   570   4.11001+ 3 0.00000+ 0 1.00000+ 4 0.00000+ 0 5.00000+ 4 0.00000+ 01396 3 18  569
DIFFERENCES                $$$$                 $$$$                 $$$$
------------------------------------------------------------------------------------------------------------
  1   570   1.00000+ 5 0.0     + 0 1.00001+ 5 2.47167- 3 1.05000+ 5 2.40000- 31396 3 18  569
  2   571   1.00000+ 5 0.00000+ 0 1.00001+ 5 2.47167- 3 1.05000+ 5 2.40000- 31396 3 18  570
DIFFERENCES                $$$$
------------------------------------------------------------------------------------------------------------
  1   588   0.0     + 0 1.92800+ 8          0          0          1         431396 3 19  587
  2   589   0.00000+ 0 1.94490+ 8          0          0          1         431396 3 19  588
DIFFERENCES     $$$$       $$$
------------------------------------------------------------------------------------------------------------
  1   594   4.11001+ 3 0.0     + 0 1.00000+ 4 0.0     + 0 5.00000+ 4 0.0     + 01396 3 19  593
  2   595   4.11001+ 3 0.00000+ 0 1.00000+ 4 0.00000+ 0 5.00000+ 4 0.00000+ 01396 3 19  594
DIFFERENCES                $$$$                 $$$$                 $$$$
------------------------------------------------------------------------------------------------------------
  1   595   1.00000+ 5 0.0     + 0 1.00001+ 5 2.47167- 3 1.05000+ 5 2.40000- 31396 3 19  594
  2   596   1.00000+ 5 0.00000+ 0 1.00001+ 5 2.47167- 3 1.05000+ 5 2.40000- 31396 3 19  595
DIFFERENCES                $$$$
------------------------------------------------------------------------------------------------------------
  1   607   0.0     + 0 1.92800+ 8          0          0          1         141396 3 20  606
  2   608   0.00000+ 0 1.94490+ 8          0          0          1         141396 3 20  607
DIFFERENCES     $$$$       $$$
------------------------------------------------------------------------------------------------------------
  1   609   1.00000- 5 0.0     + 0 5.50000+ 6 0.0     + 0 6.00000+ 6 1.34000- 11396 3 20  608
  2   610   1.00000- 5 0.00000+ 0 5.50000+ 6 0.00000+ 0 6.00000+ 6 1.34000- 11396 3 20  609
DIFFERENCES                $$$$                 $$$$
------------------------------------------------------------------------------------------------------------
  1   616   0.0     + 0 2.00000+ 8          0          0          1         111396 3 21  615
  2   617   0.00000+ 0 1.94490+ 8          0          0          1         111396 3 21  616
DIFFERENCES     $$$$     $ $$$$
------------------------------------------------------------------------------------------------------------
  1   618   1.00000- 5 0.0     + 0 1.10000+ 7 0.0     + 0 1.15000+ 7 2.50000- 21396 3 21  617
  2   619   1.00000- 5 0.00000+ 0 1.10000+ 7 0.00000+ 0 1.15000+ 7 2.50000- 21396 3 21  618
```

```
 DIFFERENCES                $$$$                   $$$$
--------------------------------------------------------------------------------------------------------
    1   624   0.0     + 0-4.52800+ 4       0          0         1               261396 3 51   623
    2   625   0.00000+ 0-4.52800+ 4        0          0         1               261396 3 51   624
 DIFFERENCES     $$$$
--------------------------------------------------------------------------------------------------------
    1   626   4.54730+ 4 0.0     + 0 5.00000+ 4 2.50000- 2 6.00000+ 4 1.00000- 11396 3 51   625
    2   627   4.54730+ 4 0.00000+ 0 5.00000+ 4 2.50000- 2 6.00000+ 4 1.00000- 11396 3 51   626
 DIFFERENCES                $$$$
--------------------------------------------------------------------------------------------------------
    1   634   2.00000+ 6 0.0     + 0 2.00000+ 7 0.0     + 0                      1396 3 51   633
    2   635   2.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                      1396 3 51   634
 DIFFERENCES                $$$$                   $$$$
--------------------------------------------------------------------------------------------------------
    1   637   0.0     + 0-1.46000+ 5       0          0         1               191396 3 52   636
    2   638   0.00000+ 0-1.46000+ 5        0          0         1               191396 3 52   637
 DIFFERENCES     $$$$
--------------------------------------------------------------------------------------------------------
    1   639   1.46620+ 5 0.0     + 0 2.00000+ 5 1.00000- 2 2.50000+ 5 4.00000- 21396 3 52   638
    2   640   1.46620+ 5 0.00000+ 0 2.00000+ 5 1.00000- 2 2.50000+ 5 4.00000- 21396 3 52   639
 DIFFERENCES                $$$$
--------------------------------------------------------------------------------------------------------
    1   644   1.80000+ 6 2.10000- 1 2.00000+ 6 1.00000- 3 2.00000+ 6 0.0     + 01396 3 52   643
    2   645   1.80000+ 6 2.10000- 1 2.00000+ 6 1.00000- 3 2.00000+ 6 0.00000+ 01396 3 52   644
 DIFFERENCES                                                          $$$$
--------------------------------------------------------------------------------------------------------
    1   645   2.00000+ 7 0.0     + 0                                                1396 3 52   644
    2   646   2.00000+ 7 0.00000+ 0                                                1396 3 52   645
 DIFFERENCES                $$$$
--------------------------------------------------------------------------------------------------------
    1   648   0.0     + 0-2.98000+ 5       0          0         1               161396 3 53   647
    2   649   0.00000+ 0-2.98000+ 5        0          0         1               161396 3 53   648
 DIFFERENCES     $$$$
--------------------------------------------------------------------------------------------------------
    1   650   2.99270+ 5 0.0     + 0 4.00000+ 5 2.00000- 2 5.00000+ 5 4.00000- 21396 3 53   649
    2   651   2.99270+ 5 0.00000+ 0 4.00000+ 5 2.00000- 2 5.00000+ 5 4.00000- 21396 3 53   650
 DIFFERENCES                $$$$
--------------------------------------------------------------------------------------------------------
    1   654   1.80000+ 6 2.00000- 2 2.00000+ 6 1.00000- 3 2.00000+ 6 0.0     + 01396 3 53   653
    2   655   1.80000+ 6 2.00000- 2 2.00000+ 6 1.00000- 3 2.00000+ 6 0.00000+ 01396 3 53   654
 DIFFERENCES                                                          $$$$
--------------------------------------------------------------------------------------------------------
    1   655   2.00000+ 7 0.0     + 0                                                1396 3 53   654
    2   656   2.00000+ 7 0.00000+ 0                                                1396 3 53   655
 DIFFERENCES                $$$$
--------------------------------------------------------------------------------------------------------
    1   658   0.0     + 0-6.95000+ 5       0          0         1               121396 3 54   657
    2   659   0.00000+ 0-6.95000+ 5        0          0         1               121396 3 54   658
 DIFFERENCES     $$$$
--------------------------------------------------------------------------------------------------------
    1   660   6.97970+ 5 0.0     + 0 8.00000+ 5 1.78000- 1 9.00000+ 5 3.84000- 11396 3 54   659
    2   661   6.97970+ 5 0.00000+ 0 8.00000+ 5 1.78000- 1 9.00000+ 5 3.84000- 11396 3 54   660
 DIFFERENCES                $$$$
--------------------------------------------------------------------------------------------------------
    1   663   2.00000+ 6 1.00000- 3 2.00000+ 6 0.0     + 0 2.00000+ 7 0.0     + 01396 3 54   662
    2   664   2.00000+ 6 1.00000- 3 2.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01396 3 54   663
 DIFFERENCES                                       $$$$                  $$$$
--------------------------------------------------------------------------------------------------------
    1   666   0.0     + 0-9.80000+ 5       0          0         1                91396 3 55   665
    2   667   0.00000+ 0-9.80000+ 5        0          0         1                91396 3 55   666
 DIFFERENCES     $$$$
--------------------------------------------------------------------------------------------------------
    1   668   9.84190+ 5 0.0     + 0 1.07000+ 6 3.00000- 1 1.20000+ 6 4.50000- 11396 3 55   667
    2   669   9.84190+ 5 0.00000+ 0 1.07000+ 6 3.00000- 1 1.20000+ 6 4.50000- 11396 3 55   668
 DIFFERENCES                $$$$
--------------------------------------------------------------------------------------------------------
```

```
DIFFERENCES      $$$$        $$$$                    $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------
   1  2805   7.01690+ 4 1.00000+ 0 0.0       + 0 0.0       + 0 7.01700+ 4 0.0       + 01396 8459 2804
   2  2809   7.01690+ 4 1.00000+ 0 0.00000+ 0 0.00000+ 0 7.01700+ 4 0.00000+ 01396 8459 2808
DIFFERENCES                          $$$$        $$$$                    $$$$
---------------------------------------------------------------------------------------------
   1  2806   1.33999-14 8.57591-15 7.01710+ 4 0.0       + 0 2.94997-10 9.43990-111396 8459 2805
   2  2810   1.33999-14 8.57591-15 7.01710+ 4 0.00000+ 0 2.94997-10 9.43990-111396 8459 2809
DIFFERENCES                                      $$$$
---------------------------------------------------------------------------------------------
   1  2807   7.01720+ 4 0.0       + 0 7.93992-11 2.54077-11 7.11690+ 4 0.0       + 01396 8459 2806
   2  2811   7.01720+ 4 0.00000+ 0 7.93992-11 2.54077-11 7.11690+ 4 0.00000+ 01396 8459 2810
DIFFERENCES              $$$$                                            $$$$
---------------------------------------------------------------------------------------------
   1  2808   0.0       + 0 0.0       + 0 7.11690+ 4 1.00000+ 0 0.0       + 0 0.0       + 01396 8459 2807
   2  2812   0.00000+ 0 0.00000+ 0 7.11690+ 4 1.00000+ 0 0.00000+ 0 0.00000+ 01396 8459 2811
DIFFERENCES      $$$$        $$$$                                $$$$        $$$$
---------------------------------------------------------------------------------------------
   1  2809   7.11710+ 4 0.0       + 0 0.0       + 0 0.0       + 0 7.11710+ 4 1.00000+ 01396 8459 2808
   2  2813   7.11710+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 7.11710+ 4 1.00000+ 01396 8459 2812
DIFFERENCES              $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------
   1  2810   0.0       + 0 0.0       + 0 7.11720+ 4 0.0       + 0 0.0       + 0 0.0       + 01396 8459 2809
   2  2814   0.00000+ 0 0.00000+ 0 7.11720+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 01396 8459 2813
DIFFERENCES      $$$$        $$$$                    $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------
   1  2811   7.11720+ 4 1.00000+ 0 0.0       + 0 0.0       + 0 7.21710+ 4 0.0       + 01396 8459 2810
   2  2815   7.11720+ 4 1.00000+ 0 0.00000+ 0 0.00000+ 0 7.21710+ 4 0.00000+ 01396 8459 2814
DIFFERENCES                          $$$$        $$$$                    $$$$
---------------------------------------------------------------------------------------------
   1  2812   0.0       + 0 0.0       + 0 7.21720+ 4 0.0       + 0 0.0       + 0 0.0       + 01396 8459 2811
   2  2816   0.00000+ 0 0.00000+ 0 7.21720+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 01396 8459 2815
DIFFERENCES      $$$$        $$$$                    $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1396	1	451	183	11	184	12	(DIFFERENCES)
1396	1	452	4	1	4	1	(DIFFERENCES)
1396	1	458	6	4	6	4	(DIFFERENCES)
1396	2	151	268	72	268	72	(DIFFERENCES)
1396	3	1	33	2	33	2	(DIFFERENCES)
1396	3	2	25	4	25	4	(DIFFERENCES)
1396	3	4	24	2	24	2	(DIFFERENCES)
1396	3	16	10	2	10	2	(DIFFERENCES)
1396	3	17	7	2	7	2	(DIFFERENCES)
1396	3	18	25	3	25	3	(DIFFERENCES)
1396	3	19	19	3	19	3	(DIFFERENCES)
1396	3	20	9	2	9	2	(DIFFERENCES)
1396	3	21	8	2	8	2	(DIFFERENCES)
1396	3	51	13	3	13	3	(DIFFERENCES)
1396	3	52	11	4	11	4	(DIFFERENCES)
1396	3	53	10	4	10	4	(DIFFERENCES)
1396	3	54	8	3	8	3	(DIFFERENCES)
1396	3	55	7	3	7	3	(DIFFERENCES)
1396	3	56	7	3	7	3	(DIFFERENCES)
1396	3	91	17	2	17	2	(DIFFERENCES)
1396	3	102	25	2	25	2	(DIFFERENCES)
1396	3	251	32	1	32	1	(DIFFERENCES)
1396	3	252	32	1	32	1	(DIFFERENCES)
1396	3	253	32	1	32	1	(DIFFERENCES)
1396	4	2	281	165	281	165	(DIFFERENCES)

1396 4 16 3 1 3 1 (DIFFERENCES)
1396 4 17 3 1 3 1 (DIFFERENCES)
1396 4 18 3 1 3 1 (DIFFERENCES)
1396 4 19 ONLY ON FILE 2
1396 4 20 2 1 2 1 (DIFFERENCES)
1396 4 21 3 1 3 1 (DIFFERENCES)
1396 4 51 3 1 3 1 (DIFFERENCES)
1396 4 52 3 1 3 1 (DIFFERENCES)
1396 4 53 3 1 3 1 (DIFFERENCES)
1396 4 54 3 1 3 1 (DIFFERENCES)
1396 4 55 3 1 3 1 (DIFFERENCES)
1396 4 56 3 1 3 1 (DIFFERENCES)
1396 4 91 3 1 3 1 (DIFFERENCES)
1396 5 16 9 2 9 2 (DIFFERENCES)
1396 5 17 8 2 8 2 (DIFFERENCES)
1396 5 18 8 2 8 2 (DIFFERENCES)
1396 5 19 8 2 8 2 (DIFFERENCES)
1396 5 20 8 2 8 2 (DIFFERENCES)
1396 5 21 8 2 8 2 (DIFFERENCES)
1396 5 91 8 2 8 2 (DIFFERENCES)
1396 8 16 4 1 4 1 (DIFFERENCES)
1396 8 17 3 1 3 1 (DIFFERENCES)
1396 8 102 3 1 3 1 (DIFFERENCES)
1396 8 454 783 745 783 745 (DIFFERENCES)
1396 8 457 47 32 47 32 (DIFFERENCES)
1396 8 459 783 742 783 742 (DIFFERENCES)
1396 8 459 3 0 3 0

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	2816	1650	2820	1851

END OF RUN

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							MAT	MF	REC.
9.32370+ 4	2.35012+ 2		1	1	0	2	1337	1	1
0.00000+ 0	1.00000+ 0		0	0	0	0	1337	1	2
0.00000+ 0	0.00000+ 0		0	0	194	54	1337	1	3
93-NP-237 HEDL,SRL,+		EVAL-APR78 MANN,BENJAMIN,SMITH,STEIN,REICH,+					1337	1	4
HEDL TME 77-54		DIST-MAR83			830316		1337	1	5
	HEDL	EVAL-APR78 MANN AND SCHENTER (FAST)					1337	1	6
	SRL	EVAL-OCT75 BENJAMIN					1337	1	7
	INEL	EVAL-AUG78 REICH (DECAY)					1337	1	8
	ANC,LASL	EVAL-JUN73 J.R.SMITH (ANC), W.E.STEIN (LASL)					1337	1	9
THE BASIC CHANGES FROM THE VERSION III EVALUATION ARE							1337	1	10
1. A NEW FISSION EVALUATION BY W.E.STEIN, FROM 40 KEV TO							1337	1	11
20 MEV.							1337	1	12
2. NEW RESONANCE PARAMETERS, BOTH RESOLVED AND UNRESOLVED							1337	1	13
3. REVISED CAPTURE CROSS SECTIONS.							1337	1	14
4. RENORMALIZED (N,2N)AND (N,3N) DATA.							1337	1	15
5. READJUSTMENT OF THE INELASTIC CROSS SECTIONS TO							1337	1	16
ACCOMMODATE THE ABOVE CHANGES.							1337	1	17
CROSS SECTION VALUES AT E=0.0253 EV ARE							1337	1	18
TOTAL	195.06 BARNS						1337	1	19
SCATTER	14.13 BARNS						1337	1	20
CAPTURE	180.91 BARNS						1337	1	21
FISSION	18.45 MILLIBARNS						1337	1	22
MF=1 MT=452 BASED ON REF 1.							1337	1	23
MT=458 ENERGY FROM FISSION BASED ON SHER (REF. 22)							1337	1	24
MF=2 MT=151 BELOW 10-EV RESUBMITTED BY MANN(HEDL) REENTERED BY							1337	1	25
MAGURNO(BNL) FOR ENDF/B-V.2.RESOLVED PARAMETERS BELOW 10-EV							1337	1	26
ARE TAKEN FROM THE EVAL. OF DERRIEN ET.AL.(23).THE THERMAL							1337	1	27
GAMMA CROSS SECT. IS 181 BNS.FROM 10-130 EV,RESOLVED PARA-							1337	1	28
METERS OF PAYA(2) ARE USED WITH FISSION WIDTHS MULTIPLIED							1337	1	29
BY 0.625 IN KEEPING WITH THE RENORMALIZATION							1337	1	30
RECOMMENDED BY PAYA IN A PRIVATE COMMUNICATION.							1337	1	31
UNRESOLVED PARAMETERS WERE FITTED BY J.R.SMITH AND							1337	1	32
M.K.BHAT TO THE PAYA DATA FROM 130 EV TO 5 KEV, USING							1337	1	33
THE UR CODE DEVELOPED BY E.PENNINGTON (ANL). THE							1337	1	34
UNRESOLVED PARAMETERS ARE DESIGNED TO YIELD HISTOGRAMS							1337	1	35
IN THE FISSION CROSS SECTION, WITH AREAS EQUAL TO							1337	1	36
THOSE OF THE -CLASS 2- RESONANCE AREAS DETERMINED BY							1337	1	37
PAYA (RENORMALIZED BY FACTOR 0.625).							1337	1	38
MF=3 MT=1	FROM 10*E-05 EV TO 40 KEV THE RESOLVED						1337	1	39
AND UNRESOLVED PARAMETERS YIELD THE TOTAL XSEC, WITH A							1337	1	40
SMALL CORRECTION FOR INELASTIC SCATTERING BEGINNING AT							1337	1	41
33.34 KEV. FROM 40 KEV TO 1 MEV THE TOTAL IS THE SUM							1337	1	42
OF THE PARTIALS. ABOVE 1 MEV, THE TOTAL IS ALSO							1337	1	43
THE SUM OF THE PARTIALS, BUT ALL CROSS SECTIONS HAVE							1337	1	44
BEEN CONSTRAINED TO KEEP THE TOTAL CLOSE TO THE RECENT							1337	1	45
MEASUREMENTS MADE AT RPI ON PU-239 (3).							1337	1	46
MT=2	A 10.5 BARN POTENTIAL SCATTERING CROSS SECTION IS						1337	1	47
ASSUMED. ABOVE THE RESONANCE RANGE THE ELASTIC							1337	1	48
XSEC FOLLOWS AN EXTRAPOLATION OF THE UNRESOLVED							1337	1	49
CALCULATION TO 1 MEV, ABOVE WHICH IT FOLLOWS A CURVE							1337	1	50
BASED ON CROSS SECTIONS OF NEIGHBORING NUCLEI.							1337	1	51
MT=4	THE INELASTIC CROSS SECTIONS FOR ENDF/B-I WERE BASED						1337	1	52
ON A CALCULATION BY D.T.GOLDMAN(4). THEY							1337	1	53
HAVE BEEN PROGRESSIVELY MODIFIED SINCE.							1337	1	54
FOR VERSION III THE INELASTIC CROSS SECTIONS WERE							1337	1	55
REDUCED SO THE TOTAL CROSS SECTION WOULD BE							1337	1	56
CONSISTENT WITH MEASUREMENTS ON NEIGHBORING NUCLEI							1337	1	57
ABOVE 1 MEV.							1337	1	58
FOR VERSION IV THE INELASTIC CROSS SECTIONS HAVE							1337	1	59
BEEN AGAIN ADJUSTED TO INSURE THAT THE TOTAL INELASTIC							1337	1	60
WAS EQUAL TO THE SUM OF ITS PARTS, AND TO ACCOMMODATE							1337	1	61

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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX
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		MAT	MF	REC.
	REEVALUATED (N,2N),(N,3N),AND CAPTURE CROSS SECTIONS	1337	1	62
	IN THE CONSTRAINED TOTAL CROSS SECTION.	1337	1	63
	FOR VERSION V, THE CROSS SECTIONS WERE SMOOTHLY	1337	1	64
	CONTINUED ABOVE 1.0 MEV (STEWART AND YOUNG,LASL)	1337	1	65
MT=16	BOTH (N.2N) AND (N,3N) CROSS SECTIONS ARE BASED ON	1337	1	66
MT=17	CALCULATIONS MADE BY S.PEARLSTEIN(4). THE (N,2N)	1337	1	67
	CROSS SECTION WAS NORMALIZED TO THE INTEGRAL MEASURE-	1337	1	68
	MENT OF PAULSON AND HENNELLY (REF. 6, TO OBTAIN	1337	1	69
	CROSS SECTION TO SHORT LIVED STATE) AND OF MYERS ET AL	1337	1	70
	(REF. 7, TO OBTAIN RATIO OF SHORT-LIVED TO LONG-LIVED	1337	1	71
	STATE). MT=16 - CONTAINS (N,2N) ONLY TO STATES WHICH	1337	1	72
	POPULATE PU-236. SUCH AN EVALUATION DIFFERS FROM	1337	1	73
	DIFFERENTIAL MEASUREMENTS OF LINDEKE ET AL (REF. 8)	1337	1	74
	AND OF LANDRUM ET AL (REF. 9) AS WELL AS HAUSER	1337	1	75
	FESHBACH CALCULATIONS (REF. 10) *****	1337	1	76
	THE (N,3N) CROSS SECTION KEEPS THE PEARLSTEIN SHAPE	1337	1	77
	AND WAS RENORMALIZED TO A MAXIMUM VALUE OF .203 BARN	1337	1	78
	TO MAINTAIN THE CONSTRAINTS ON THE TOTAL CROSS	1337	1	79
	SECTION.	1337	1	80
MT=18	BELOW 40 KEV THE CROSS SECTION IS CALCULATED FROM	1337	1	81
	RESOLVED AND UNRESOLVED RESONANCE PARAMETERS.	1337	1	82
	ABOVE 40 KEV THE DATA IS AN AVERAGE OF EXPERIMENTAL	1337	1	83
	DATA (REF. 11-19)	1337	1	84
MT=51,...61,91	SEE COMMENT UNDER MT=4	1337	1	85
MT=102	THE CAPTURE CROSS SECTIONMT=181 B. FROM 10*E-05 EV TO	1337	1	86
	40 KEV THE CAPTURE IS GIVEN BY THE RESOLVED AND	1337	1	87
	UNRESOLVED RESONANCE PARAMETERS. FROM 120 KEV TO	1337	1	88
	20 MEV THE CAPTURE IS FROM A SMOOTH CURVE DRAWN	1337	1	89
	THROUGH THE MEASUREMENTS OF NAGLE ET AL (20).	1337	1	90
	BETWEEN 40 AND 120 KEV THE CAPTURE IS POINTWISE,	1337	1	91
	TAKEN FROM AN UNRESOLVED CALCULATION WHICH HAD BEEN	1337	1	92
	EXTENDED TO 120 KEV USING PARAMETERS ADJUSTED TO	1337	1	93
	YIELD THE EVALUATED CAPTURE CROSS SECTION AT THAT	1337	1	94
	POINT. THE NAGLE MEASUREMENTS ARE APPRECIABLY LOWER	1337	1	95
	THAN THE STUPEGIA DATA ON WHICH PREVIOUS ENDF/B FILES	1337	1	96
	WERE BASED, AND TIE IN MUCH MORE SMOOTHLY WITH THE	1337	1	97
	EXTRAPOLATION OF THE UNRESOLVED CALCULATION.	1337	1	98
MF=4 MT=2	ANGULAR DISTRIBUTIONS WERE SUPPLIED BY E. ALTER,	1337	1	99
	THEN OF AI. BASED ON OPTICAL MODEL CALCULATIONS	1337	1	100
	MADE ON NEIGHBORING NUCLEI.	1337	1	101
MF=4 MT%2	ASSUMED ISOTROPIC	1337	1	102
MF=5 MT=16	NUCLEAR TEMP CALCULATED FOR MAXWELL DIST, LF=9. CALC.	1337	1	103
AND 17	OF TEMP DISTRIBUTION FOLLOWS PRESCRIPTION USED FOR	1337	1	104
	THE PU240 FILE OF ENDF/B-I.	1337	1	105
MF=5 MT=18	FISSION SPECTRUM HAS MAXWELLIAN DENSITY WITH THE TEMP	1337	1	106
	BASED ON TERRELLS PRESCRIPTION (20).	1337	1	107
MT=91	INELASTIC SECONDARIES BASED ON D.T. GOLDMAN DATA (11).	1337	1	108
	BOTH DISCRETE LEVEL AND EVAPORATION SPECTRA ARE	1337	1	109
	INCLUDED.	1337	1	110
MF=8 MT=16	BASED ON ENDF/B-V DECAY DATA OF NP-237(S) AND (L)	1337	1	111
MT = 454 AND 459	FISSION YIELD DATA	1337	1	112
SET 5E,7/78.	VALUES OBTAINED FROM THE RECOMMENDATIONS OF THE	1337	1	113
YIELDS SUBCOMMITTEE,	T R ENGLAND (CHAIRMAN), D M GILLIAM,	1337	1	114
Y HARKER,	J R LIAW, W J MAECK, D G MADLAND, V MCLANE MAY,	1337	1	115
P L REEDER,	B F RIDER, R E SCHENTER, B I SPINRAD, J P UNIK,	1337	1	116
A WAHL,	W WALKER, B W WEHRING, K WOLFSBERG	1337	1	117
		1337	1	118
UNCERTAINTIES	ARE BASED ON THE TOTAL YIELD TO EACH ZA.	1337	1	119
WHEN THERE IS	AN ISOMERIC STATE,THE INDEPENDENT NUCLIDE	1337	1	120
YIELD TO EACH	STATE HAS A LARGER UNCERTAINTY THAN THE TOTAL	1337	1	121
YIELD IN STATE	DISTRIBUTIONS (UNCERTAINTIES AVERAGE	1337	1	122

	MAT	MF	REC.
APPROXIMATELY 50 PERCENT BUT CAN BE LARGER),ANY YIELD	1337	1	123
HAVING A LARGER UNCERTAINTY (45-64 PERCENT) MAY BE A MODEL	1337	1	124
ESTIMATE OR A VALUE ASSIGNED TO THE YIELDS ON THE WINGS OR	1337	1	125
VALLEY OF THE MASS YIELD DISTRIBUTION. THESE SMALL YIELDS	1337	1	126
MAY ONLY BE ACCURATE TO WITHIN A FACTOR OF 2.	1337	1	127
	1337	1	128
MT454 CONTAINS DIRECT YIELDS BEFORE DELAYED NEUTRON EMISSION	1337	1	129
	1337	1	130
MT459 CONTAINS CUMULATIVE YIELDS ALONG EACH ISOBARIC CHAIN	1337	1	131
AFTER DELAYED NEUTRON EMISSION.	1337	1	132
	1337	1	133
DIRECT AND CUMULATIVE YIELDS ARE NORMALIZED BY THE SAME FACTORS	1337	1	134
BASED ON B.F.RIDER EVALUATION. THE ISOMERIC STATE MODEL,	1337	1	135
LA-6595-MS (ENDF-241), AND DELAYED NEUTRON EMISSION BRANCHINGS	1337	1	136
(PN VALUES) FOR 102 EMITTERS, LA-UR-78-688, AND A PAIRING	1337	1	137
EFFECTS,LA-6430-MS (ENDF-240), HAVE BEEN INCORPORATED.	1337	1	138
	1337	1	139
DATA PREPARED FOR FILES BY T.R.ENGLAND (LASL LTS. T-2-L-2891)	1337	1	140
DATA FOR 93-NP-237 DECAYS BY REICH	1337	1	141
INSERTED INTO FILE AT BNL BY R. KINSEY IN SEP 1978	1337	1	142
MF=8, MT=457 RADIOACTIVE DECAY DATA	1337	1	143
REFERENCES Q(ALPHA)-1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLE	1337	1	144
OTHER- SEE Y.A. ELLIS, NUCLEAR DATA SHEETS 6, NO. 6,	1337	1	145
539 (1971) AND ALSO TABLE OF ISOTOPES, 7TH	1337	1	146
ED. (PRELIMINARY DATA, PRIV. COMM. FROM	1337	1	147
C.M. LEDERER).	1337	1	148
THE GAMMA-RAY ENERGY AND RELATIVE-INTENSITY VALUES	1337	1	149
ARE THOSE OF M. SKALSEY AND R.D. CONNOR, CAN. J.	1337	1	150
PHYS. 54, 1409 (1976).	1337	1	151
NOTE THE DATA ON THE MORE PROMINENT ALPHA GROUPS ARE THOSE	1337	1	152
RECOMMENDED BY A. RYTZ, AT. DATA AND NUCL. DATA	1337	1	153
TABLES 12,NO. 5, 479 (1973).	1337	1	154
NOTE THE K X-RAY INTENSITIES REPRESENT MEASURED VALUES	1337	1	155
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 8/78	1337	1	156
MF=9 MT=16 BASED ON MEYERS ET AL (REF.35). HAUSER FESHBACH CALCU-	1337	1	157
LATIONS (REF. 38) GIVE ENERGY DEPENDENT RATIOS	1337	1	158
*** REFERENCES ***	1337	1	159
1. KEYWORTH AND VESSER, LASL MEMO P-3-2080(U),1976	1337	1	160
2. D.PAYA, THESIS, UNIVERSITY OF PARIS-SOUTH, CENTER	1337	1	161
D-ORSAY (1972)	1337	1	162
3. R.C.BLOCK, PRIVATE COMMUNICATION	1337	1	163
4. D.T.GOLDMAN, TRANS AM NUCL SOC. VOL 7, P84 (1964)	1337	1	164
5. S.PEARLSTEIN, NUCL SCI ENGR, VOL 23, P238(1965)	1337	1	165
6. C.K. PAULSON AND E.J. HENNELLY, NUCL. SCI. ENG. 55	1337	1	166
(1974) 24	1337	1	167
7. W.A. MYERS, M. LINDER, AND R.S. NEWBURY, J. INORG.	1337	1	168
NUCL. CHEM. 37(1975)637	1337	1	169
8. K. LINDEKE, S. SPECHT, AND H.-J. BORN, PHYS. REV.	1337	1	170
C12 (1975) 1507	1337	1	171
9. J.H. LANDRUM, R.J. NAGLE, AND M. LINDER, PHYS. REV.	1337	1	172
C8 (1973) 1938	1337	1	173
10. F. M. MANN, PRIVATE COMMUNICATION (1977)	1337	1	174
11. P.H.WHITE ET AL, PHYS AND CHEM OF FISSION, P219,	1337	1	175
IAEA, SALZBURG (1965)	1337	1	176
12. E.D.KLEMA, PHYS REV VOL 72, P88 (1947)	1337	1	177
13. W.E.STEIN ET AL, CONF-660303. P623, WASHINGTON 1966	1337	1	178
14. V.M. PANKRATOV, SOV JOURN ATOMIC ENERGY, VOL 14,	1337	1	179
P.197 (1963)	1337	1	180
15. P.H.WHITE AND G.P.WARNER, J NUCL ENERGY VOL 21,	1337	1	181
P671 (1967)	1337	1	182
16. W.K.BROWN, D.R.DIXON, AND D.M.DRAKE, NUCL. PHYS.	1337	1	183

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	MAT	MF	REC.
A156(1970)609, LA-4372(1970)	1337	1	184
17. R.J.JIACOLETTI, W.K.BROWN, AND H.G.OLSON. NUCL.	1337	1	185
SCI. AND ENG. 48(1972)412	1337	1	186
18. K.KOBAYASHI, I.KIMURA, H.GOTOH, AND H.YAGI,	1337	1	187
EANDC(J)26L(1972)39	1337	1	188
19. S.PLATTARD, Y.PRANAL, J.BLONS, C.MAZUR, KIEV	1337	1	189
CONFERENCE (1975)	1337	1	190
20. J.J.NAGLE ET AL. CONF-710301, V1, P259,	1337	1	191
KNOXVILLE (1971)	1337	1	192
21. J.TERRELL, PHYS CHEM OF FISSION, VOL2, P3,	1337	1	193
IAEA, VIENNA (1965)	1337	1	194
22.SHER+BECK EPRI NP1771/81+REV1/83+PC TO MAGURNO 2/83	1337	1	195
23. H.DERRIEN, J.P. DONT, E.FORT,AND D. LAFOND	1337	1	196
INDC(FR)-42/L,1980	1337	1	197

1	451	251	2	1337	1	198
1	452	3	1	1337	1	199
1	458	5	2	1337	1	200
2	151	994	2	1337	1	201
3	1	61	2	1337	1	202
3	2	57	2	1337	1	203
3	4	46	1	1337	1	204
3	16	29	1	1337	1	205
3	17	17	1	1337	1	206
3	18	54	2	1337	1	207
3	51	24	1	1337	1	208
3	52	22	1	1337	1	209
3	53	21	1	1337	1	210
3	54	18	1	1337	1	211
3	55	17	1	1337	1	212
3	56	14	1	1337	1	213
3	57	14	1	1337	1	214
3	58	14	1	1337	1	215
3	59	13	1	1337	1	216
3	60	13	1	1337	1	217
3	61	13	1	1337	1	218
3	91	32	1	1337	1	219
3	102	57	2	1337	1	220
3	251	16	1	1337	1	221
3	252	16	1	1337	1	222
3	253	16	1	1337	1	223
4	2	186	1	1337	1	224
4	16	2	1	1337	1	225
4	17	2	1	1337	1	226
4	18	2	1	1337	1	227
4	51	2	1	1337	1	228
4	52	2	1	1337	1	229
4	53	2	1	1337	1	230
4	54	2	1	1337	1	231
4	55	2	1	1337	1	232
4	56	2	1	1337	1	233
4	57	2	1	1337	1	234
4	58	2	1	1337	1	235
4	59	2	1	1337	1	236
4	60	2	1	1337	1	237
4	61	2	1	1337	1	238
4	91	2	1	1337	1	239
5	16	8	1	1337	1	240
5	17	8	1	1337	1	241
5	18	7	1	1337	1	242
5	91	11	1	1337	1	243
8	16	9	2	1337	1	244

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			MAT	MF	REC.
8	102	2	1 1337	1	245
8	454	768	1 1337	1	246
8	457	175	1 1337	1	247
8	459	768	1 1337	1	248
9	16	7	1 1337	1	249
32	151	56	2 1337	1	250
33	18	5	1 1337	1	251
			1337	1	252
			1337	1	256
			1337	1	262
			1337	2	1258
			1337	3	1321
			1337	3	1379
			1337	3	1426
			1337	3	1456
			1337	3	1474
			1337	3	1529
			1337	3	1554
			1337	3	1577
			1337	3	1599
			1337	3	1618
			1337	3	1636
			1337	3	1651
			1337	3	1666
			1337	3	1681
			1337	3	1695
			1337	3	1709
			1337	3	1723
			1337	3	1756
			1337	3	1814
			1337	3	1831
			1337	3	1848
			1337	3	1865
			1337	4	2053
			1337	4	2056
			1337	4	2059
			1337	4	2062
			1337	4	2065
			1337	4	2068
			1337	4	2071
			1337	4	2074
			1337	4	2077
			1337	4	2080
			1337	4	2083
			1337	4	2086
			1337	4	2089
			1337	4	2092
			1337	4	2095
			1337	4	2098
			1337	5	2108
			1337	5	2117
			1337	5	2125
			1337	5	2137
			1337	8	2148
			1337	8	2151
			1337	8	2920
			1337	8	3096
			1337	8	3865
			1337	9	3874
			1337	32	3932
			1337	33	3939

```
COMPARE TWO BCD FILES (COMPARE 82-1)
--------------------------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST-------      70 (  1 TO 80 )
COLUMNS TO COMPARE-------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (  1 TO 70 )
SPECIAL FILE FLAG--------------       2
ACCEPTABLE DIFFERENCE----------       0 (  1 TO 70 )
COMMENT CARDS-----------------COMPARED
--------------------------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
--------------------------------------------------------------------------------------------------------------------
FILE 1 =ACT1337 OLD
FILE 2 =ACT1337 NEW
--------------------------------------------------------------------------------------------------------------------
 FILE  CARD  CONTENTS
--------------------------------------------------------------------------------------------------------------------
                      1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
--------------------------------------------------------------------------------------------------------------------
--------------------------------------------------------------------------------------------------------------------
    1     2   9.32370+ 4 2.35012+ 2          1          1          0          11337 1451     1
    2     2   9.32370+ 4 2.35012+ 2          1          1          0          21337 1451     1
 DIFFERENCES                                                                  $
--------------------------------------------------------------------------------------------------------------------
    1     3   0.0     + 0 1.00000+ 0          0          0          0          01337 1451     2
    2     3   0.00000+ 0 1.00000+ 0          0          0          0          01337 1451     2
 DIFFERENCES     $$$$
--------------------------------------------------------------------------------------------------------------------
    1     4   0.0     + 0 0.0     + 0          0          0        198          541337 1451     3
    2     4   0.00000+ 0 0.00000+ 0          0          0        194          541337 1451     3
 DIFFERENCES     $$$$       $$$$                                    $
--------------------------------------------------------------------------------------------------------------------
    1     6   HEDL TME 77-54        DIST-MAY79                      790524       1337 1451     5
    2     6   HEDL TME 77-54        DIST-MAR83                      830316       1337 1451     5
 DIFFERENCES                              $$$                        $$ $$$
--------------------------------------------------------------------------------------------------------------------
    1    19    FILES I, IV, AND V  AND THE LOW ENERGY POINTWISE DATA IN          1337 1451    18
    1    20    FILE III ARE UNCHANGED.                                            1337 1451    19
 DIFFERENCES ON    2 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
--------------------------------------------------------------------------------------------------------------------
    1    22                    TOTAL        186.63 BARNS                         1337 1451    21
    2    20                    TOTAL        195.06 BARNS                         1337 1451    19
 DIFFERENCES                                $$ $$
--------------------------------------------------------------------------------------------------------------------
    1    23                    SCATTER       17.51 BARNS                         1337 1451    22
    2    21                    SCATTER       14.13 BARNS                         1337 1451    20
 DIFFERENCES                                 $ $$
--------------------------------------------------------------------------------------------------------------------
    1    24                    CAPTURE      169.10 BARNS                         1337 1451    23
    2    22                    CAPTURE      180.91 BARNS                         1337 1451    21
 DIFFERENCES                                $$ $$
--------------------------------------------------------------------------------------------------------------------
    1    25                    FISSION       16.63 MILLIBARNS                    1337 1451    24
    2    23                    FISSION       18.45 MILLIBARNS                    1337 1451    22
 DIFFERENCES                                 $ $$
--------------------------------------------------------------------------------------------------------------------
    1    28  MF=2 MT=151 RESOLVED RESONANCE PARAMETERS BELOW 1 EV ARE UNCHANGED1337 1451    27
    2    26   MF=2 MT=151     BELOW 10-EV RESUBMITTED BY MANN(HEDL) REENTERED BY1337 1451    25
 DIFFERENCES $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$ $$$$$$$$$$$$$$$$$$$$$$$$$$  $$$$$$$$$$
--------------------------------------------------------------------------------------------------------------------
    1    29              FROM VERSION III, INCLUDING NEGATIVE ENERGY RESONANCES1337 1451    28
    2    27      MAGURNO(BNL) FOR  ENDF/B-V.2.RESOLVED PARAMETERS BELOW 10-EV 1337 1451    26
 DIFFERENCES      $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
--------------------------------------------------------------------------------------------------------------------
    1    30              FITTED BY LEONARD AND THE .485 EV LEVEL FROM BNL 325. 1337 1451    29
```

```
  2   28          ARE TAKEN FROM THE EVAL. OF DERRIEN ET.AL.(23).THE THERMAL   1337 1451   27
DIFFERENCES       $$$ $$$$$$$$$$$$$$$$$ $$ $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
  1   31                  FROM 1 TO 130 EV THE RESOLVED RESONANCE PARAMETERS OF 1337 1451   30
  2   29          GAMMA CROSS SECT. IS 181 BNS.FROM 10-130 EV,RESOLVED PARA-    1337 1451   28
DIFFERENCES       $$$$$ $$$$$ $$$$$$$$ $$$$$$$$$$ $$$$$$$$$$$$$ $$$$$$$$$ $$$$
-------------------------------------------------------------------------------------------------
  1   32                  PAYA(2) ARE USED, WITH THE FISSION WIDTHS MULTIPLIED  1337 1451   31
  2   30          METERS OF PAYA(2) ARE USED WITH FISSION WIDTHS MULTIPLIED     1337 1451   29
DIFFERENCES       $$$$$$ $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
  1   42    MF=3 MT=1     BELOW 0.3 EV THE TOTAL CROSS SECTION IS UNCHANGED     1337 1451   41
  1   43                  FROM VERSION III.  FROM 0.3 EV TO 40 KEV THE RESOLVED 1337 1451   42
DIFFERENCES ON     2 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
  2   40    MF=3 MT=1                   FROM 10*E-05 EV TO 40 KEV THE RESOLVED  1337 1451   39
DIFFERENCES ON     1 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
  1   76                  STATE).                                               1337 1451   75
  2   73                  STATE). MT=16 - CONTAINS (N,2N) ONLY TO STATES WHICH  1337 1451   72
DIFFERENCES                       $$$$$ $ $$$$$$$$ $$$$$$ $$$$ $$ $$$$$$ $$$$$
-------------------------------------------------------------------------------------------------
  1   77                  ***** THIS EVALUATION DISAGREES (FACTOR OF 3 LOW) WITH1337 1451   76
  2   74                  POPULATE PU-236. SUCH AN EVALUATION DIFFERS FROM      1337 1451   73
DIFFERENCES               $$$$$$ $$$$$$$$$$$$$$ $$$$$$$$$$$$$$$$$$$$$$$$$ $$ $$$$
-------------------------------------------------------------------------------------------------
  1   85          MT=18   BELOW 0.3 EV THE FISSION CROSS SECTION IS GIVEN BY    1337 1451   84
  1   86                  THE SAME POINTWISE FILE THAT WAS USED IN VERSION III. 1337 1451   85
  1   87                  THE FISSION CROSS SECTION AT 0.0253 EV IS 16.63 MB.   1337 1451   86
  1   88                  ABOVE 10 KEV THE DATA IS AN AVERAGE OF EXPERIMENTAL   1337 1451   87
DIFFERENCES ON     4 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
  2   82          MT=18 BELOW 40 KEV THE CROSS SECTION IS CALCULATED FROM       1337 1451   81
  2   83                RESOLVED AND UNRESOLVED RESONANCE PARAMETERS.           1337 1451   82
  2   84                  ABOVE 40 KEV THE DATA IS AN AVERAGE OF EXPERIMENTAL   1337 1451   83
DIFFERENCES ON     3 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
  1   91          MT=102 BELOW 0.3 EV THE CAPTURE CROSS SECTION IS GIVEN BY     1337 1451   90
  1   92                  THE POINTWISE DATA IN FILE 3, WHICH IS NORMALIZED TO  1337 1451   91
  1   93                  A VALUE OF 169.1 BARNS AT 0.0253 EV.  FROM 0.3 EV TO  1337 1451   92
DIFFERENCES ON     3 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
  2   87          MT=102 THE CAPTURE CROSS SECTIONMT=181 B. FROM 10*E-05 EV TO  1337 1451   86
DIFFERENCES ON     1 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
  1  202                22. R. SHER, S. FIARMAN, AND C. BECK (P.C. OCT. 1976)   1337 1451  201
  1  203                                 1          451          255         11337 1451  202
DIFFERENCES ON     2 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
  2  196                22.SHER+BECK EPRI NP1771/81+REV1/83+PC TO MAGURNO 2/83 1337 1451  195
  2  197                23. H.DERRIEN, J.P. DONT, E.FORT,AND D. LAFOND          1337 1451  196
  2  198                 INDC(FR)-42/L,1980                                     1337 1451  197
  2  199                                 1          451          251         21337 1451  198
DIFFERENCES ON     4 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
  1  205                                 1          458            5         11337 1451  204
  2  201                                 1          458            5         21337 1451  200
DIFFERENCES                                                                  $
-------------------------------------------------------------------------------------------------
  1  206                                 2          151          995         11337 1451  205
  2  202                                 2          151          994         21337 1451  201
DIFFERENCES                                                        $         $
-------------------------------------------------------------------------------------------------
  1  207                                 3            1          112         11337 1451  206
  2  203                                 3            1           61         21337 1451  202
DIFFERENCES                                                      $$$         $
-------------------------------------------------------------------------------------------------
  1  208                                 3            2          108         11337 1451  207
  2  204                                 3            2           57         21337 1451  203
DIFFERENCES                                                      $$$         $
```

```
-----------------------------------------------------------------------------------------------------------------
   1   212                                     3         18        105        11337 1451  211
   2   208                                     3         18         54        21337 1451  207
 DIFFERENCES                                                       $$$        $
-----------------------------------------------------------------------------------------------------------------
   1   225                                     3        102        108        11337 1451  224
   2   221                                     3        102         57        21337 1451  220
 DIFFERENCES                                                       $$$        $
-----------------------------------------------------------------------------------------------------------------
   1   249                                     8         16          9        11337 1451  248
   2   245                                     8         16          9        21337 1451  244
 DIFFERENCES                                                                  $
-----------------------------------------------------------------------------------------------------------------
   1   255                                    32        151         56        11337 1451  254
   2   251                                    32        151         56        21337 1451  250
 DIFFERENCES                                                                  $
-----------------------------------------------------------------------------------------------------------------
   1   259   0.0     + 0 0.0     + 0           0          0          2        01337 1452  258
   2   255   0.00000+ 0 0.00000+ 0             0          0          2        01337 1452  254
 DIFFERENCES    $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------
   1   263   0.0     + 0 0.0     + 0           0          0         18        91337 1458  262
   2   259   0.00000+ 0 0.00000+ 0             0          0         18        91337 1458  258
 DIFFERENCES    $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------
   1   264   1.70230+ 8 1.50000+ 6 5.87000+ 6 1.40000+ 5 4.00000+ 3 1.00000+ 31337 1458  263
   2   260   1.70600+ 8 2.00000+ 6 5.94000+ 6 4.80000+ 5 5.00000+ 3 1.25000+ 31337 1458  259
 DIFFERENCES     $$       $ $        $$        $ $       $            $$
-----------------------------------------------------------------------------------------------------------------
   1   265   7.20000+ 6 2.00000+ 6 5.80000+ 6 3.00000+ 5 6.00000+ 6 3.00000+ 51337 1458  264
   2   261   7.13000+ 6 1.00000+ 6 6.28000+ 6 7.50000+ 5 6.41000+ 6 5.00000+ 51337 1458  260
 DIFFERENCES    $$        $          $ $$      $ $        $$         $
-----------------------------------------------------------------------------------------------------------------
   1   266   8.00000+ 6 4.00000+ 5 1.95100+ 8 1.10000+ 6 2.03100+ 8 1.10000+ 61337 1458  265
   2   262   8.60000+ 6 1.10000+ 6 1.96370+ 8 1.36000+ 6 2.04970+ 8 8.00000+ 51337 1458  261
 DIFFERENCES     $        $ $        $   $$$       $$        $$$       $ $        $
-----------------------------------------------------------------------------------------------------------------
   1   271   3.00000- 1 1.30000+ 2             1          1          0        01337 2151  270
   2   267   1.00000- 5 1.30000+ 2             1          1          0        01337 2151  266
 DIFFERENCES $          $
-----------------------------------------------------------------------------------------------------------------
   1   273   2.35012+ 2 0.0     + 0            0          0       1020      1701337 2151  272
   1   274  -2.50000+ 0 2.50000+ 0 4.09570- 2 8.95460- 3 3.20000- 2 2.77000- 61337 2151  273
   1   275  -2.22000- 1 2.50000+ 0 3.20410- 2 3.76930- 5 3.20000- 2 3.50000- 61337 2151  274
   1   276   4.90000- 1 2.50000+ 0 3.30340- 2 3.25500- 5 3.30000- 2 1.24000- 61337 2151  275
   1   277   1.32000+ 0 2.50000+ 0 3.98410- 2 3.73400- 5 3.98000- 2 3.49000- 61337 2151  276
   1   278   1.48000+ 0 2.50000+ 0 4.83460- 2 1.45010- 4 4.82000- 2 9.80000- 71337 2151  277
   1   279   1.97000+ 0 2.50000+ 0 4.12190- 2 1.65620- 5 4.12000- 2 2.36000- 61337 2151  278
   1   280   3.86000+ 0 2.50000+ 0 4.16480- 2 2.44010- 4 4.14000- 2 3.71000- 61337 2151  279
   1   281   4.26000+ 0 2.50000+ 0 3.75280- 2 2.64190- 5 3.75000- 2 1.88000- 61337 2151  280
   1   282   4.86000+ 0 2.50000+ 0 3.87350- 2 3.43910- 5 3.87000- 2 5.90000- 71337 2151  281
   1   283   5.77000+ 0 2.50000+ 0 4.48280- 2 6.21900- 4 4.42000- 2 6.56000- 61337 2151  282
   1   284   6.37000+ 0 2.50000+ 0 3.81940- 2 9.28790- 5 3.81000- 2 9.60001- 71337 2151  283
   1   285   6.67000+ 0 2.50000+ 0 4.79230- 2 1.18800- 5 4.79000- 2 1.11100- 51337 2151  284
   1   286   7.18000+ 0 2.50000+ 0 3.54110- 2 7.77070- 6 3.54000- 2 2.78000- 61337 2151  285
   1   287   7.41000+ 0 2.50000+ 0 3.98500- 2 1.45910- 4 3.97000- 2 4.39000- 61337 2151  286
   1   288   8.30000+ 0 2.50000+ 0 3.78080- 2 1.06880- 4 3.77000- 2 9.70001- 71337 2151  287
   1   289   8.97000+ 0 2.50000+ 0 3.85290- 2 1.21000- 4 3.84000- 2 8.37000- 61337 2151  288
   1   290   9.30000+ 0 2.50000+ 0 4.27220- 2 5.22090- 4 4.22000- 2 2.80000- 71337 2151  289
 DIFFERENCES ON    18 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2   269   2.35012+ 2 0.00000+ 0             0          0       1014      1691337 2151  268
   2   270  -1.00000+ 0 2.50000+ 0 4.19000- 2 1.89600- 3 4.00000- 2 4.41000- 61337 2151  269
   2   271   4.90000- 1 2.50000+ 0 4.00400- 2 3.84000- 5 4.00000- 2 8.94000- 71337 2151  270
   2   272   1.32000+ 0 2.50000+ 0 3.98400- 2 3.70000- 5 3.98000- 2 3.50000- 61337 2151  271
   2   273   1.48000+ 0 2.50000+ 0 4.83160- 2 1.45000- 4 4.81700- 2 9.80000- 71337 2151  272
   2   274   1.97000+ 0 2.50000+ 0 4.12293- 2 1.69980- 5 4.12100- 2 2.30000- 61337 2151  273
```

```
 2   275   3.86000+ 0 2.50000+ 0 4.16816- 2 2.47903- 4 4.14300- 2 3.71000- 61337 2151   274
 2   276   4.26000+ 0 2.50000+ 0 3.75162- 2 2.60000- 5 3.74900- 2 1.88000- 71337 2151   275
 2   277   4.86000+ 0 2.50000+ 0 3.87241- 2 3.40000- 5 3.86900- 2 7.00000- 81337 2151   276
 2   278   5.77000+ 0 2.50000+ 0 4.49170- 2 6.21950- 4 4.42900- 2 5.00000- 61337 2151   277
 2   279   6.37000+ 0 2.50000+ 0 3.82044- 2 9.29950- 5 3.81100- 2 1.40000- 61337 2151   278
 2   280   6.67000+ 0 2.50000+ 0 4.79149- 2 1.20000- 5 4.79000- 2 2.90000- 61337 2151   279
 2   281   7.18000+ 0 2.50000+ 0 3.54095- 2 8.00000- 6 3.54000- 2 1.50000- 61337 2151   280
 2   282   7.41000+ 0 2.50000+ 0 3.98702- 2 1.45950- 4 3.97200- 2 4.20000- 61337 2151   281
 2   283   8.30000+ 0 2.50000+ 0 3.78290- 2 1.06995- 4 3.77200- 2 2.10000- 61337 2151   282
 2   284   8.97000+ 0 2.50000+ 0 3.85498- 2 1.20983- 4 3.84200- 2 8.80000- 61337 2151   283
 2   285   9.30000+ 0 2.50000- 0 4.26223- 2 5.22000- 4 4.21000- 2 3.00000- 71337 2151   284
DIFFERENCES ON   17 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
 1   293   1.08400+ 1 2.50000+ 0 4.53810- 2 8.80060- 4 4.45000- 2 6.10001- 71337 2151   292
 2   288   1.08400+ 1 2.50000+ 0 4.53810- 2 8.80060- 4 4.45000- 2 6.10000- 71337 2151   287
DIFFERENCES                                                       $
-------------------------------------------------------------------------------------------------
 1   310   2.20100+ 1 2.50000+ 0 4.15610- 2 1.26010- 3 4.03000- 2 7.40001- 71337 2151   309
 2   305   2.20100+ 1 2.50000+ 0 4.15610- 2 1.26010- 3 4.03000- 2 7.40000- 71337 2151   304
DIFFERENCES                                                       $
-------------------------------------------------------------------------------------------------
 1   344   4.73100+ 1 2.50000+ 0 4.57010- 2 2.39980- 3 4.33000- 2 9.40001- 71337 2151   343
 2   339   4.73100+ 1 2.50000+ 0 4.57010- 2 2.39980- 3 4.33000- 2 9.40000- 71337 2151   338
DIFFERENCES                                                       $
-------------------------------------------------------------------------------------------------
 1   374   7.14400+ 1 2.50000+ 0 4.39810- 2 2.68020- 3 4.13000- 2 7.40001- 71337 2151   373
 2   369   7.14400+ 1 2.50000+ 0 4.39810- 2 2.68020- 3 4.13000- 2 7.40000- 71337 2151   368
DIFFERENCES                                                       $
-------------------------------------------------------------------------------------------------
 1   420   1.09120+ 2 2.50000+ 0 4.35910- 2 2.28980- 3 4.13000- 2 9.40001- 71337 2151   419
 2   415   1.09120+ 2 2.50000+ 0 4.35910- 2 2.28980- 3 4.13000- 2 9.40000- 71337 2151   414
DIFFERENCES                                                       $
-------------------------------------------------------------------------------------------------
OVER 200 CARDS DIFFERENT STARTING AT
     FILE 1...MAT/MF/MT/SEQUENCE= 1337  2 151   445
     FILE 2...MAT/MF/MT/SEQUENCE= 1337  2 151   440
     REMAINDER OF SECTION SKIPPED
-------------------------------------------------------------------------------------------------
 1  1267   0.0      + 0 0.0      + 0        0         0         2          3261337 3  1 1266
 1  1268        155         5      326         2                              1337 3  1 1267
 1  1269   1.00000- 5 9.01878+ 3 1.20000- 4 2.76221+ 3 1.40000- 4 2.55838+ 31337 3  1 1268
 1  1270   1.60000- 4 2.39406+ 3 1.80000- 4 2.25794+ 3 2.00000- 4 2.14277+ 31337 3  1 1269
 1  1271   2.20000- 4 2.04368+ 3 2.40000- 4 1.95724+ 3 2.53000- 4 1.90663+ 31337 3  1 1270
 1  1272   2.60000- 4 1.88096+ 3 2.80000- 4 1.81301+ 3 3.00000- 4 1.75197+ 31337 3  1 1271
 1  1273   3.20000- 4 1.69673+ 3 3.40000- 4 1.64645+ 3 3.60000- 4 1.60040+ 31337 3  1 1272
 1  1274   3.80000- 4 1.55804+ 3 4.00000- 4 1.51888+ 3 4.20000- 4 1.48257+ 31337 3  1 1273
 1  1275   4.40000- 4 1.44875+ 3 4.60000- 4 1.41715+ 3 4.80000- 4 1.38756+ 31337 3  1 1274
 1  1276   5.00000- 4 1.35975+ 3 5.20000- 4 1.33355+ 3 5.40000- 4 1.30883+ 31337 3  1 1275
 1  1277   5.60000- 4 1.28545+ 3 5.80000- 4 1.26328+ 3 6.00000- 4 1.24222+ 31337 3  1 1276
 1  1278   6.20000- 4 1.22219+ 3 6.40000- 4 1.20310+ 3 6.60000- 4 1.18489+ 31337 3  1 1277
 1  1279   6.80000- 4 1.16748+ 3 7.00000- 4 1.15083+ 3 7.20000- 4 1.13487+ 31337 3  1 1278
 1  1280   7.40000- 4 1.11957+ 3 7.60000- 4 1.10487+ 3 7.80000- 4 1.09073+ 31337 3  1 1279
 1  1281   8.00000- 4 1.07712+ 3 8.20000- 4 1.06402+ 3 8.40000- 4 1.05139+ 31337 3  1 1280
 1  1282   8.60000- 4 1.03920+ 3 8.80000- 4 1.02743+ 3 9.00000- 4 1.01605+ 31337 3  1 1281
 1  1283   9.20000- 4 1.00504+ 3 9.40000- 4 9.94388+ 2 9.60000- 4 9.84067+ 21337 3  1 1282
 1  1284   9.80000- 4 9.74062+ 2 1.00000- 3 9.64358+ 2 1.20000- 3 8.81033+ 21337 3  1 1283
 1  1285   1.40000- 3 8.16212+ 2 1.60000- 3 7.63913+ 2 1.80000- 3 7.20552+ 21337 3  1 1284
 1  1286   2.00000- 3 6.83837+ 2 2.20000- 3 6.52220+ 2 2.40000- 3 6.24618+ 21337 3  1 1285
 1  1287   2.53000- 3 6.08448+ 2 2.60000- 3 6.00245+ 2 2.80000- 3 5.78511+ 21337 3  1 1286
 1  1288   3.00000- 3 5.58973+ 2 3.20000- 3 5.41280+ 2 3.40000- 3 5.25159+ 21337 3  1 1287
 1  1289   3.60000- 3 5.10388+ 2 3.80000- 3 4.96787+ 2 4.00000- 3 4.84210+ 21337 3  1 1288
 1  1290   4.20000- 3 4.72531+ 2 4.40000- 3 4.61650+ 2 4.60000- 3 4.51478+ 21337 3  1 1289
 1  1291   4.80000- 3 4.41941+ 2 5.00000- 3 4.32975+ 2 5.20000- 3 4.24524+ 21337 3  1 1290
 1  1292   5.33610- 3 4.19042+ 2 5.40000- 3 4.16541+ 2 5.60000- 3 4.08984+ 21337 3  1 1291
 1  1293   5.80000- 3 4.01815+ 2 6.00000- 3 3.95003+ 2 6.20000- 3 3.88518+ 21337 3  1 1292
 1  1294   6.40000- 3 3.82335+ 2 6.60000- 3 3.76431+ 2 6.80000- 3 3.70785+ 21337 3  1 1293
```

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1  1295   7.00000- 3 3.85379+ 2 7.20000- 3 3.60197+ 2 7.40000- 3 3.55221+ 21337 3   1 1294
1  1296   7.60000- 3 3.50440+ 2 7.80000- 3 3.45842+ 2 8.00000- 3 3.41413+ 21337 3   1 1295
1  1297   8.20000- 3 3.37146+ 2 8.40000- 3 3.33028+ 2 8.60000- 3 3.29051+ 21337 3   1 1296
1  1298   8.80000- 3 3.25210+ 2 9.00000- 3 3.21494+ 2 9.20000- 3 3.17898+ 21337 3   1 1297
1  1299   9.40000- 3 3.14414+ 2 9.60000- 3 3.11039+ 2 9.80000- 3 3.07765+ 21337 3   1 1298
1  1300   1.00000- 2 3.04587+ 2 1.20000- 2 2.77232+ 2 1.40000- 2 2.55852+ 21337 3   1 1299
1  1301   1.60000- 2 2.38530+ 2 1.80000- 2 2.24117+ 2 2.00000- 2 2.11874+ 21337 3   1 1300
1  1302   2.20000- 2 2.01304+ 2 2.40000- 2 1.92057+ 2 2.53000- 2 1.86630+ 21337 3   1 1301
1  1303   2.60000- 2 1.83875+ 2 2.80000- 2 1.76570+ 2 3.00000- 2 1.69995+ 21337 3   1 1302
1  1304   3.20000- 2 1.64038+ 2 3.40000- 2 1.58607+ 2 3.60000- 2 1.53631+ 21337 3   1 1303
1  1305   3.80000- 2 1.49050+ 2 4.00000- 2 1.44815+ 2 4.20000- 2 1.40886+ 21337 3   1 1304
1  1306   4.40000- 2 1.37230+ 2 4.60000- 2 1.33815+ 2 4.80000- 2 1.30619+ 21337 3   1 1305
1  1307   5.00000- 2 1.27619+ 2 5.20000- 2 1.24796+ 2 5.40000- 2 1.22135+ 21337 3   1 1306
1  1308   5.60000- 2 1.19623+ 2 5.80000- 2 1.17246+ 2 6.00000- 2 1.14992+ 21337 3   1 1307
1  1309   6.20000- 2 1.12853+ 2 6.40000- 2 1.10819+ 2 6.60000- 2 1.08884+ 21337 3   1 1308
1  1310   6.80000- 2 1.07039+ 2 7.00000- 2 1.05279+ 2 7.20000- 2 1.03597+ 21337 3   1 1309
1  1311   7.40000- 2 1.01989+ 2 7.60000- 2 1.00450+ 2 7.80000- 2 9.89756+ 11337 3   1 1310
1  1312   8.00000- 2 9.75617+ 1 8.20000- 2 9.62049+ 1 8.40000- 2 9.49018+ 11337 3   1 1311
1  1313   8.60000- 2 9.36492+ 1 8.80000- 2 9.24448+ 1 9.00000- 2 9.12855+ 11337 3   1 1312
1  1314   9.04500- 2 9.10304+ 1 9.04510- 2 9.10298+ 1 9.20000- 2 9.01692+ 11337 3   1 1313
1  1315   9.40000- 2 8.90936+ 1 9.60000- 2 8.80566+ 1 9.80000- 2 8.70564+ 11337 3   1 1314
1  1316   1.00000- 1 8.60913+ 1 1.20000- 1 7.80471+ 1 1.40000- 1 7.22068+ 11337 3   1 1315
1  1317   1.57110- 1 6.84508+ 1 1.60000- 1 6.79090+ 1 1.80000- 1 6.47733+ 11337 3   1 1316
1  1318   2.00000- 1 6.25791+ 1 2.20000- 1 6.12106+ 1 2.40000- 1 6.06311+ 11337 3   1 1317
1  1319   2.47520- 1 6.06224+ 1 2.53000- 1 6.06920+ 1 2.60000- 1 6.08781+ 11337 3   1 1318
1  1320   2.80000- 1 6.20749+ 1 3.00000- 1 6.44629+ 1 3.00000- 1 0.0      + 01337 3   1 1319
1  1321   3.33400+ 4 0.0      + 0 3.34000+ 4 1.00000- 2 3.50000+ 4 1.90000- 11337 3   1 1320
DIFFERENCES ON   55 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
2  1262   0.00000+ 0 0.00000+ 0          0          0          1          1731337 3   1 1261
2  1263          173          2                                                1337 3   1 1262
2  1264   1.00000- 5 0.00000+ 0 2.50000- 2 0.00000+ 0 3.00000- 1 0.00000+ 01337 3   1 1263
2  1265   3.33400+ 4 0.00000+ 0 3.34000+ 4 1.00000- 2 3.50000+ 4 1.90000- 11337 3   1 1264
DIFFERENCES ON    4 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
------------------------------------------------------------------------------------------------
1  1380   0.0      + 0 0.0      + 0          0          0          3          3151337 3   2 1379
1  1381          154          5        157          2        315            51337 3   2 1380
1  1382   1.00000- 5 1.77769+ 1 1.20000- 4 1.77757+ 1 1.40000- 4 1.77754+ 11337 3   2 1381
1  1383   1.60000- 4 1.77752+ 1 1.80000- 4 1.77750+ 1 2.00000- 4 1.77748+ 11337 3   2 1382
1  1384   2.20000- 4 1.77745+ 1 2.40000- 4 1.77743+ 1 2.53000- 4 1.77742+ 11337 3   2 1383
1  1385   2.60000- 4 1.77741+ 1 2.80000- 4 1.77739+ 1 3.00000- 4 1.77737+ 11337 3   2 1384
1  1386   3.20000- 4 1.77734+ 1 3.40000- 4 1.77732+ 1 3.60000- 4 1.77730+ 11337 3   2 1385
1  1387   3.80000- 4 1.77728+ 1 4.00000- 4 1.77725+ 1 4.20000- 4 1.77723+ 11337 3   2 1386
1  1388   4.40000- 4 1.77721+ 1 4.60000- 4 1.77719+ 1 4.80000- 4 1.77717+ 11337 3   2 1387
1  1389   5.00000- 4 1.77714+ 1 5.20000- 4 1.77712+ 1 5.40000- 4 1.77710+ 11337 3   2 1388
1  1390   5.60000- 4 1.77708+ 1 5.80000- 4 1.77705+ 1 6.00000- 4 1.77703+ 11337 3   2 1389
1  1391   6.20000- 4 1.77701+ 1 6.40000- 4 1.77699+ 1 6.60000- 4 1.77697+ 11337 3   2 1390
1  1392   6.80000- 4 1.77694+ 1 7.00000- 4 1.77692+ 1 7.20000- 4 1.77690+ 11337 3   2 1391
1  1393   7.40000- 4 1.77688+ 1 7.60000- 4 1.77686+ 1 7.80000- 4 1.77683+ 11337 3   2 1392
1  1394   8.00000- 4 1.77681+ 1 8.20000- 4 1.77679+ 1 8.40000- 4 1.77677+ 11337 3   2 1393
1  1395   8.60000- 4 1.77674+ 1 8.80000- 4 1.77672+ 1 9.00000- 4 1.77670+ 11337 3   2 1394
1  1396   9.20000- 4 1.77668+ 1 9.40000- 4 1.77666+ 1 9.60000- 4 1.77663+ 11337 3   2 1395
1  1397   9.80000- 4 1.77661+ 1 1.00000- 3 1.77659+ 1 1.20000- 3 1.77637+ 11337 3   2 1396
1  1398   1.40000- 3 1.77615+ 1 1.60000- 3 1.77593+ 1 1.80000- 3 1.77571+ 11337 3   2 1397
1  1399   2.00000- 3 1.77549+ 1 2.20000- 3 1.77527+ 1 2.40000- 3 1.77505+ 11337 3   2 1398
1  1400   2.53000- 3 1.77490+ 1 2.60000- 3 1.77483+ 1 2.80000- 3 1.77461+ 11337 3   2 1399
1  1401   3.00000- 3 1.77439+ 1 3.20000- 3 1.77417+ 1 3.40000- 3 1.77395+ 11337 3   2 1400
1  1402   3.60000- 3 1.77373+ 1 3.80000- 3 1.77351+ 1 4.00000- 3 1.77329+ 11337 3   2 1401
1  1403   4.20000- 3 1.77308+ 1 4.40000- 3 1.77286+ 1 4.60000- 3 1.77264+ 11337 3   2 1402
1  1404   4.80000- 3 1.77242+ 1 5.00000- 3 1.77221+ 1 5.20000- 3 1.77199+ 11337 3   2 1403
1  1405   5.33610- 3 1.77184+ 1 5.40000- 3 1.77177+ 1 5.60000- 3 1.77156+ 11337 3   2 1404
1  1406   5.80000- 3 1.77134+ 1 6.00000- 3 1.77113+ 1 6.20000- 3 1.77091+ 11337 3   2 1405
1  1407   6.40000- 3 1.77070+ 1 6.60000- 3 1.77048+ 1 6.80000- 3 1.77027+ 11337 3   2 1406
1  1408   7.00000- 3 1.77005+ 1 7.20000- 3 1.76984+ 1 7.40000- 3 1.76962+ 11337 3   2 1407
1  1409   7.60000- 3 1.76941+ 1 7.80000- 3 1.76919+ 1 8.00000- 3 1.76898+ 11337 3   2 1408
1  1410   8.20000- 3 1.76877+ 1 8.40000- 3 1.76855+ 1 8.60000- 3 1.76834+ 11337 3   2 1409
1  1411   8.80000- 3 1.76813+ 1 9.00000- 3 1.76792+ 1 9.20000- 3 1.76770+ 11337 3   2 1410
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   1  1412   9.40000- 3 1.76749+ 1 9.60000- 3 1.76728+ 1 9.80000- 3 1.76707+ 11337 3  2 1411
   1  1413   1.00000- 2 1.76686+ 1 1.20000- 2 1.76475+ 1 1.40000- 2 1.76267+ 11337 3  2 1412
   1  1414   1.60000- 2 1.76060+ 1 1.80000- 2 1.75856+ 1 2.00000- 2 1.75650+ 11337 3  2 1413
   1  1415   2.20000- 2 1.75453+ 1 2.40000- 2 1.75254+ 1 2.53000- 2 1.75125+ 11337 3  2 1414
   1  1416   2.60000- 2 1.75056+ 1 2.80000- 2 1.74861+ 1 3.00000- 2 1.74667+ 11337 3  2 1415
   1  1417   3.20000- 2 1.74474+ 1 3.40000- 2 1.74284+ 1 3.60000- 2 1.74094+ 11337 3  2 1416
   1  1418   3.80000- 2 1.73907+ 1 4.00000- 2 1.73720+ 1 4.20000- 2 1.73535+ 11337 3  2 1417
   1  1419   4.40000- 2 1.73352+ 1 4.60000- 2 1.73169+ 1 4.80000- 2 1.72989+ 11337 3  2 1418
   1  1420   5.00000- 2 1.72809+ 1 5.20000- 2 1.72631+ 1 5.40000- 2 1.72453+ 11337 3  2 1419
   1  1421   5.60000- 2 1.72277+ 1 5.80000- 2 1.72103+ 1 6.00000- 2 1.71929+ 11337 3  2 1420
   1  1422   6.20000- 2 1.71756+ 1 6.40000- 2 1.71585+ 1 6.60000- 2 1.71414+ 11337 3  2 1421
   1  1423   6.80000- 2 1.71245+ 1 7.00000- 2 1.71076+ 1 7.20000- 2 1.70909+ 11337 3  2 1422
   1  1424   7.40000- 2 1.70742+ 1 7.60000- 2 1.70576+ 1 7.80000- 2 1.70412+ 11337 3  2 1423
   1  1425   8.00000- 2 1.70248+ 1 8.20000- 2 1.70085+ 1 8.40000- 2 1.69923+ 11337 3  2 1424
   1  1426   8.60000- 2 1.69761+ 1 8.80000- 2 1.69601+ 1 9.00000- 2 1.69441+ 11337 3  2 1425
   1  1427   9.04500- 2 1.69405+ 1 9.20000- 2 1.69282+ 1 9.40000- 2 1.69123+ 11337 3  2 1426
   1  1428   9.60000- 2 1.68966+ 1 9.80000- 2 1.68809+ 1 1.00000- 1 1.68653+ 11337 3  2 1427
   1  1429   1.20000- 1 1.67123+ 1 1.40000- 1 1.65643+ 1 1.57110- 1 1.64404+ 11337 3  2 1428
   1  1430   1.60000- 1 1.64197+ 1 1.80000- 1 1.62771+ 1 2.00000- 1 1.61350+ 11337 3  2 1429
   1  1431   2.20000- 1 1.59919+ 1 2.40000- 1 1.58463+ 1 2.47520- 1 1.57904+ 11337 3  2 1430
   1  1432   2.53000- 1 1.57493+ 1 2.60000- 1 1.56960+ 1 2.80000- 1 1.55385+ 11337 3  2 1431
   1  1433   3.00000- 1 1.53700+ 1 3.00000- 1 0.0      + 0 4.00000+ 4 0.0      + 01337 3  2 1432
DIFFERENCES ON   54 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2  1324   0.00000+ 0 0.00000+ 0          0          0          1          1621337 3  2 1323
   2  1325         162          2                                                 1337 3  2 1324
   2  1326   1.00000- 5 0.00000+ 0 2.50000- 2 0.00000+ 0 4.00000+ 4 0.00000+ 01337 3  2 1325
DIFFERENCES ON    3 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-----------------------------------------------------------------------------------------------------------
   1  1489   0.0      + 0-3.32000+ 4          0          0          1          1271337 3  4 1488
   2  1382   0.00000+ 0-3.32000+ 4          0          0          1          1271337 3  4 1381
DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------------
   1  1491   3.33400+ 4 0.0      + 0 3.34000+ 4 1.00000- 2 3.50000+ 4 1.90000- 11337 3  4 1490
   2  1384   3.33400+ 4 0.00000+ 0 3.34000+ 4 1.00000- 2 3.50000+ 4 1.90000- 11337 3  4 1383
DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------------
   1  1536   0.0      + 0-6.76000+ 6          0          0          1           771337 3 16 1535
   2  1429   0.00000+ 0-6.76000+ 6          0          0          1           771337 3 16 1428
DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------------
   1  1538   6.78900+ 6 0.0      + 0 6.80000+ 6 4.38430- 5 6.85700+ 6 9.23900- 41337 3 16 1537
   2  1431   6.78900+ 6 0.00000+ 0 6.80000+ 6 4.38430- 5 6.85700+ 6 9.23900- 41337 3 16 1430
DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------------
   1  1542   7.80000+ 6 8.92970- 2 7.90000+ 6 9.97511- 2 8.00000+ 6 1.09790- 11337 3 16 1541
   2  1435   7.80000+ 6 8.92970- 2 7.90000+ 6 9.97510- 2 8.00000+ 6 1.09790- 11337 3 16 1434
DIFFERENCES                                    $
-----------------------------------------------------------------------------------------------------------
   1  1566   0.0      + 0-1.22900+ 7          0          0          1           411337 3 17 1565
   2  1459   0.00000+ 0-1.22900+ 7          0          0          1           411337 3 17 1458
DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------------
   1  1568   1.23420+ 7 0.0      + 0 1.24000+ 7 7.81410- 5 1.25700+ 7 2.99190- 41337 3 17 1567
   2  1461   1.23420+ 7 0.00000+ 0 1.24000+ 7 7.81410- 5 1.25700+ 7 2.99190- 41337 3 17 1460
DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------------
   1  1584   0.0      + 0 1.95100+ 8          0          0          3          3051337 3 18 1583
   1  1585         154          5        157          2        305              51337 3 18 1584
   1  1586   1.00000- 5 1.00000+ 0 1.20000- 4 2.75200- 1 1.40000- 4 2.54760- 11337 3 18 1585
   1  1587   1.60000- 4 2.38280- 1 1.80000- 4 2.24630- 1 2.00000- 4 2.13080- 11337 3 18 1586
   1  1588   2.20000- 4 2.03140- 1 2.40000- 4 1.94470- 1 2.53000- 4 1.89390- 11337 3 18 1587
   1  1589   2.60000- 4 1.86820- 1 2.80000- 4 1.80000- 1 3.00000- 4 1.73880- 11337 3 18 1588
   1  1590   3.20000- 4 1.68340- 1 3.40000- 4 1.63290- 1 3.60000- 4 1.58670- 11337 3 18 1589
   1  1591   3.80000- 4 1.54420- 1 4.00000- 4 1.50500- 1 4.20000- 4 1.46850- 11337 3 18 1590
   1  1592   4.40000- 4 1.43460- 1 4.60000- 4 1.40290- 1 4.80000- 4 1.37320- 11337 3 18 1591
   1  1593   5.00000- 4 1.34530- 1 5.20000- 4 1.31900- 1 5.40000- 4 1.29430- 11337 3 18 1592
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   1  1594  5.60000- 4 1.27080- 1 5.80000- 4 1.24850- 1 6.00000- 4 1.22740- 11337 3 18 1593
   1  1595  6.20000- 4 1.20730- 1 6.40000- 4 1.18820- 1 6.60000- 4 1.16990- 11337 3 18 1594
   1  1596  6.80000- 4 1.15240- 1 7.00000- 4 1.13570- 1 7.20000- 4 1.11970- 11337 3 18 1595
   1  1597  7.40000- 4 1.10430- 1 7.60000- 4 1.08960- 1 7.80000- 4 1.07540- 11337 3 18 1596
   1  1598  8.00000- 4 1.06180- 1 8.20000- 4 1.04860- 1 8.40000- 4 1.03590- 11337 3 18 1597
   1  1599  8.60000- 4 1.02370- 1 8.80000- 4 1.01190- 1 9.00000- 4 1.00050- 11337 3 18 1598
   1  1600  9.20000- 4 9.89440- 2 9.40000- 4 9.78751- 2 9.60000- 4 9.68390- 21337 3 18 1599
   1  1601  9.80000- 4 9.58350- 2 1.00000- 3 9.48610- 2 1.20000- 3 8.64980- 21337 3 18 1600
   1  1602  1.40000- 3 7.99920- 2 1.60000- 3 7.47420- 2 1.80000- 3 7.03680- 21337 3 18 1601
   1  1603  2.00000- 3 6.67010- 2 2.20000- 3 6.35260- 2 2.40000- 3 6.07540- 21337 3 18 1602
   1  1604  2.53000- 3 5.91290- 2 2.60000- 3 5.83050- 2 2.80000- 3 5.61220- 21337 3 18 1603
   1  1605  3.00000- 3 5.41590- 2 3.20000- 3 5.23810- 2 3.40000- 3 5.07600- 21337 3 18 1604
   1  1606  3.60000- 3 4.92760- 2 3.80000- 3 4.79090- 2 4.00000- 3 4.66440- 21337 3 18 1605
   1  1607  4.20000- 3 4.54700- 2 4.40000- 3 4.43760- 2 4.60000- 3 4.33520- 21337 3 18 1606
   1  1608  4.80000- 3 4.23930- 2 5.00000- 3 4.14910- 2 5.20000- 3 4.06410- 21337 3 18 1607
   1  1609  5.33610- 3 4.00900- 2 5.40000- 3 3.98380- 2 5.60000- 3 3.90770- 21337 3 18 1608
   1  1610  5.80000- 3 3.83560- 2 6.00000- 3 3.76700- 2 6.20000- 3 3.70170- 21337 3 18 1609
   1  1611  6.40000- 3 3.63950- 2 6.60000- 3 3.58010- 2 6.80000- 3 3.52320- 21337 3 18 1610
   1  1612  7.00000- 3 3.46880- 2 7.20000- 3 3.41660- 2 7.40000- 3 3.36650- 21337 3 18 1611
   1  1613  7.60000- 3 3.31830- 2 7.80000- 3 3.27200- 2 8.00000- 3 3.22740- 21337 3 18 1612
   1  1614  8.20000- 3 3.18430- 2 8.40000- 3 3.14280- 2 8.60000- 3 3.10280- 21337 3 18 1613
   1  1615  8.80000- 3 3.06400- 2 9.00000- 3 3.02660- 2 9.20000- 3 2.99030- 21337 3 18 1614
   1  1616  9.40000- 3 2.95520- 2 9.60000- 3 2.92120- 2 9.80000- 3 2.86820- 21337 3 18 1615
   1  1617  1.00000- 2 2.85610- 2 1.20000- 2 2.58010- 2 1.40000- 2 2.36410- 21337 3 18 1616
   1  1618  1.60000- 2 2.18910- 2 1.80000- 2 2.04330- 2 2.00000- 2 1.91930- 21337 3 18 1617
   1  1619  2.20000- 2 1.81220- 2 2.40000- 2 1.71850- 2 2.53000- 2 1.66340- 21337 3 18 1618
   1  1620  2.60000- 2 1.63550- 2 2.80000- 2 1.56130- 2 3.00000- 2 1.49450- 21337 3 18 1619
   1  1621  3.20000- 2 1.43390- 2 3.40000- 2 1.37870- 2 3.60000- 2 1.32800- 21337 3 18 1620
   1  1622  3.80000- 2 1.28140- 2 4.00000- 2 1.23820- 2 4.20000- 2 1.19820- 21337 3 18 1621
   1  1623  4.40000- 2 1.16080- 2 4.60000- 2 1.12600- 2 4.80000- 2 1.09330- 21337 3 18 1622
   1  1624  5.00000- 2 1.06260- 2 5.20000- 2 1.03370- 2 5.40000- 2 1.00650- 21337 3 18 1623
   1  1625  5.60000- 2 9.80750- 3 5.80000- 2 9.56370- 3 6.00000- 2 9.33240- 31337 3 18 1624
   1  1626  6.20000- 2 9.11260- 3 6.40000- 2 8.90360- 3 6.60000- 2 8.70440- 31337 3 18 1625
   1  1627  6.80000- 2 8.51440- 3 7.00000- 2 8.33290- 3 7.20000- 2 8.15940- 31337 3 18 1626
   1  1628  7.40000- 2 7.99330- 3 7.60000- 2 7.83410- 3 7.80000- 2 7.68140- 31337 3 18 1627
   1  1629  8.00000- 2 7.53490- 3 8.20000- 2 7.39410- 3 8.40000- 2 7.25870- 31337 3 18 1628
   1  1630  8.60000- 2 7.12840- 3 8.80000- 2 7.00290- 3 9.00000- 2 6.88190- 31337 3 18 1629
   1  1631  9.04500- 2 8.85530- 3 9.20000- 2 6.76530- 3 9.40000- 2 6.65270- 31337 3 18 1630
   1  1632  9.60000- 2 6.54400- 3 9.80000- 2 6.43890- 3 1.00000- 1 6.33740- 31337 3 18 1631
   1  1633  1.20000- 1 5.48140- 3 1.40000- 1 4.84120- 3 1.57110- 1 4.41140- 31337 3 18 1632
   1  1634  1.60000- 1 4.34740- 3 1.80000- 1 3.95850- 3 2.00000- 1 3.64850- 31337 3 18 1633
   1  1635  2.20000- 1 3.40070- 3 2.40000- 1 3.20420- 3 2.47520- 1 3.14220- 31337 3 18 1634
   1  1636  2.53000- 1 3.10090- 3 2.60000- 1 3.05280- 3 2.80000- 1 2.94390- 31337 3 18 1635
   1  1637  3.00000- 1 2.87900- 3 3.00000- 1 0.0     + 0 4.00000+ 4 0.0     + 01337 3 18 1636
DIFFERENCES ON   54 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2  1477  0.00000+ 0 1.96370+ 8          0          0          1          1521337 3 18 1476
   2  1478          152          2                                               1337 3 18 1477
   2  1479  1.00000- 5 0.00000+ 0 2.50000- 2 0.00000+ 0 4.00000+ 4 0.00000+ 01337 3 18 1478
DIFFERENCES ON    3 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-----------------------------------------------------------------------------------------------------------
   1  1690  0.0     + 0-3.32000+ 4          0          0          1          621337 3 51 1689
   2  1532  0.00000+ 0-3.32000+ 4          0          0          1          621337 3 51 1531
DIFFERENCES      $$$$
-----------------------------------------------------------------------------------------------------------
   1  1692  3.33400+ 4 0.0     + 0 3.34000+ 4 1.00000- 2 3.50000+ 4 1.90000- 11337 3 51 1691
   2  1534  3.33400+ 4 0.00000+ 0 3.34000+ 4 1.00000- 2 3.50000+ 4 1.90000- 11337 3 51 1533
DIFFERENCES                $$$$
-----------------------------------------------------------------------------------------------------------
   1  1712  1.60000+ 6 0.0     + 0 2.00000+ 7 0.0     + 0                      1337 3 51 1711
   2  1554  1.60000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                      1337 3 51 1553
DIFFERENCES                $$$$                  $$$$
-----------------------------------------------------------------------------------------------------------
   1  1715  0.0     + 0-5.96000+ 4          0          0          1          561337 3 52 1714
   2  1557  0.00000+ 0-5.96000+ 4          0          0          1          561337 3 52 1556
DIFFERENCES      $$$$
-----------------------------------------------------------------------------------------------------------
```

```
   1  1717   5.98500+ 4 0.0     + 0 6.00000+ 4 9.80850- 3 6.20000+ 4 7.32260- 21337 3 52 1716
   2  1559   5.98500+ 4 0.00000+ 0 6.00000+ 4 9.80850- 3 6.20000+ 4 7.32260- 21337 3 52 1558
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1  1735   2.20000+ 6 0.0     + 0 2.00000+ 7 0.0     + 0                     1337 3 52 1734
   2  1577   2.20000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                     1337 3 52 1576
DIFFERENCES                $$$$                $$$$
-------------------------------------------------------------------------------------------
   1  1738   0.0     + 0-7.60000+ 4           0           0           1          521337 3 53 1737
   2  1580   0.00000+ 0-7.60000+ 4           0           0           1          521337 3 53 1579
DIFFERENCES    $$$$
-------------------------------------------------------------------------------------------
   1  1740   7.63200+ 4 0.0     + 0 8.00000+ 4 7.38460- 3 8.80000+ 4 2.21710- 21337 3 53 1739
   2  1582   7.63200+ 4 0.00000+ 0 8.00000+ 4 7.38460- 3 8.80000+ 4 2.21710- 21337 3 53 1581
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1  1756   2.20000+ 6 1.20000- 2 2.40000+ 6 6.70000- 3 2.60000+ 6 0.0     + 01337 3 53 1755
   2  1598   2.20000+ 6 1.20000- 2 2.40000+ 6 6.70000- 3 2.60000+ 6 0.00000+ 01337 3 53 1597
DIFFERENCES                                                  $$$$
-------------------------------------------------------------------------------------------
   1  1757   2.00000+ 7 0.0     + 0                                         1337 3 53 1756
   2  1599   2.00000+ 7 0.00000+ 0                                         1337 3 53 1598
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1  1760   0.0     + 0-1.03000+ 5           0           0           1          431337 3 54 1759
   2  1602   0.00000+ 0-1.03000+ 5           0           0           1          431337 3 54 1601
DIFFERENCES    $$$$
-------------------------------------------------------------------------------------------
   1  1762   1.03440+ 5 0.0     + 0 1.05000+ 5 2.92750- 2 1.10000+ 5 1.13080- 11337 3 54 1761
   2  1604   1.03440+ 5 0.00000+ 0 1.05000+ 5 2.92750- 2 1.10000+ 5 1.13080- 11337 3 54 1603
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1  1775   1.60000+ 6 2.30000- 2 1.80000+ 6 1.20000- 2 2.00000+ 6 0.0     + 01337 3 54 1774
   2  1617   1.60000+ 6 2.30000- 2 1.80000+ 6 1.20000- 2 2.00000+ 6 0.00000+ 01337 3 54 1616
DIFFERENCES                                                  $$$$
-------------------------------------------------------------------------------------------
   1  1776   2.00000+ 7 0.0     + 0                                         1337 3 54 1775
   2  1618   2.00000+ 7 0.00000+ 0                                         1337 3 54 1617
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1  1779   0.0     + 0-1.59000+ 5           0           0           1          401337 3 55 1778
   2  1621   0.00000+ 0-1.59000+ 5           0           0           1          401337 3 55 1620
DIFFERENCES    $$$$
-------------------------------------------------------------------------------------------
   1  1781   1.59680+ 5 0.0     + 0 1.80000+ 5 3.74110- 2 2.00000+ 5 4.81740- 21337 3 55 1780
   2  1623   1.59680+ 5 0.00000+ 0 1.80000+ 5 3.74110- 2 2.00000+ 5 4.81740- 21337 3 55 1622
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1  1793   2.20000+ 6 6.30000- 3 2.40000+ 6 3.40000- 3 2.60000+ 6 0.0     + 01337 3 55 1792
   2  1635   2.20000+ 6 6.30000- 3 2.40000+ 6 3.40000- 3 2.60000+ 6 0.00000+ 01337 3 55 1634
DIFFERENCES                                                  $$$$
-------------------------------------------------------------------------------------------
   1  1794   2.00000+ 7 0.0     + 0                                         1337 3 55 1793
   2  1636   2.00000+ 7 0.00000+ 0                                         1337 3 55 1635
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1  1797   0.0     + 0-2.24000+ 5           0           0           1          331337 3 56 1796
   2  1639   0.00000+ 0-2.24000+ 5           0           0           1          331337 3 56 1638
DIFFERENCES    $$$$
-------------------------------------------------------------------------------------------
   1  1799   2.24950+ 5 0.0     + 0 2.50000+ 5 2.07500- 3 2.68000+ 5 3.89980- 31337 3 56 1798
   2  1641   2.24950+ 5 0.00000+ 0 2.50000+ 5 2.07500- 3 2.68000+ 5 3.89980- 31337 3 56 1640
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1  1809   1.60000+ 6 1.03000- 2 1.80000+ 6 0.0     + 0 2.00000+ 7 0.0     + 01337 3 56 1808
   2  1651   1.60000+ 6 1.03000- 2 1.80000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01337 3 56 1650
```

```
DIFFERENCES                                      $$$$                  $$$$
----------------------------------------------------------------------------------------------------
    1  1812  0.0     + 0-2.68000+ 5         0          0          1         321337 3 57 1811
    2  1654  0.00000+ 0-2.68000+ 5         0          0          1         321337 3 57 1653
DIFFERENCES     $$$$
----------------------------------------------------------------------------------------------------
    1  1814  2.69140+ 5 0.0     + 0 3.00000+ 5 5.84460- 2 3.06300+ 5 6.60250- 21337 3 57 1813
    2  1656  2.69140+ 5 0.00000+ 0 3.00000+ 5 5.84460- 2 3.06300+ 5 6.60250- 21337 3 57 1655
DIFFERENCES                $$$$
----------------------------------------------------------------------------------------------------
    1  1824  2.20000+ 6 0.0     + 0 2.00000+ 7 0.0     + 0                     1337 3 57 1823
    2  1666  2.20000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                     1337 3 57 1665
DIFFERENCES                $$$$                  $$$$
----------------------------------------------------------------------------------------------------
    1  1827  0.0     + 0-3.05000+ 5         0          0          1         311337 3 58 1826
    2  1669  0.00000+ 0-3.05000+ 5         0          0          1         311337 3 58 1668
DIFFERENCES     $$$$
----------------------------------------------------------------------------------------------------
    1  1829  3.06300+ 5 0.0     + 0 3.33400+ 5 0.0     + 0 3.50000+ 5 2.02250- 31337 3 58 1828
    2  1671  3.06300+ 5 0.00000+ 0 3.33400+ 5 0.00000+ 0 3.50000+ 5 2.02250- 31337 3 58 1670
DIFFERENCES                $$$$                  $$$$
----------------------------------------------------------------------------------------------------
    1  1838  2.00000+ 6 1.15000- 2 2.20000+ 6 5.70000- 3 2.40000+ 6 0.0     + 01337 3 58 1837
    2  1680  2.00000+ 6 1.15000- 2 2.20000+ 6 5.70000- 3 2.40000+ 6 0.00000+ 01337 3 58 1679
DIFFERENCES                                                            $$$$
----------------------------------------------------------------------------------------------------
    1  1839  2.00000+ 7 0.0     + 0                                            1337 3 58 1838
    2  1681  2.00000+ 7 0.00000+ 0                                            1337 3 58 1680
DIFFERENCES                $$$$
----------------------------------------------------------------------------------------------------
    1  1842  0.0     + 0-3.32000+ 5         0          0          1         301337 3 59 1841
    2  1684  0.00000+ 0-3.32000+ 5         0          0          1         301337 3 59 1683
DIFFERENCES     $$$$
----------------------------------------------------------------------------------------------------
    1  1844  3.33400+ 5 0.0     + 0 3.50000+ 5 8.58720- 3 3.69000+ 5 1.90420- 21337 3 59 1843
    2  1686  3.33400+ 5 0.00000+ 0 3.50000+ 5 8.58720- 3 3.69000+ 5 1.90420- 21337 3 59 1685
DIFFERENCES                $$$$
----------------------------------------------------------------------------------------------------
    1  1853  2.20000+ 6 6.80000- 3 2.40000+ 6 0.0     + 0 2.00000+ 7 0.0     + 01337 3 59 1852
    2  1695  2.20000+ 6 6.80000- 3 2.40000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01337 3 59 1694
DIFFERENCES                                      $$$$                  $$$$
----------------------------------------------------------------------------------------------------
    1  1856  0.0     + 0-3.69000+ 5         0          0          1         291337 3 60 1855
    2  1698  0.00000+ 0-3.69000+ 5         0          0          1         291337 3 60 1697
DIFFERENCES     $$$$
----------------------------------------------------------------------------------------------------
    1  1858  3.70600+ 5 0.0     + 0 3.71000+ 5 1.34830- 3 3.72600+ 5 6.36190- 31337 3 60 1857
    2  1700  3.70600+ 5 0.00000+ 0 3.71000+ 5 1.34830- 3 3.72600+ 5 6.36190- 31337 3 60 1699
DIFFERENCES                $$$$
----------------------------------------------------------------------------------------------------
    1  1867  2.80000+ 6 0.0     + 0 2.00000+ 7 0.0     + 0                     1337 3 60 1866
    2  1709  2.80000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                     1337 3 60 1708
DIFFERENCES                $$$$                  $$$$
----------------------------------------------------------------------------------------------------
    1  1870  0.0     + 0-3.71000+ 5         0          0          1         281337 3 61 1869
    2  1712  0.00000+ 0-3.71000+ 5         0          0          1         281337 3 61 1711
DIFFERENCES     $$$$
----------------------------------------------------------------------------------------------------
    1  1872  3.72600+ 5 0.0     + 0 4.00000+ 5 1.13150- 2 4.50000+ 5 3.04590- 21337 3 61 1871
    2  1714  3.72600+ 5 0.00000+ 0 4.00000+ 5 1.13150- 2 4.50000+ 5 3.04590- 21337 3 61 1713
DIFFERENCES                $$$$
----------------------------------------------------------------------------------------------------
    1  1880  2.60000+ 6 1.75000- 2 2.80000+ 6 8.70000- 3 3.00000+ 6 0.0     + 01337 3 61 1879
    2  1722  2.60000+ 6 1.75000- 2 2.80000+ 6 8.70000- 3 3.00000+ 6 0.00000+ 01337 3 61 1721
DIFFERENCES                                                            $$$$
----------------------------------------------------------------------------------------------------
```

```
  1  1881   2.00000+ 7 0.0      + 0                                                         1337 3 61 1880
  2  1723   2.00000+ 7 0.00000+ 0                                                           1337 3 61 1722
DIFFERENCES               $$$$
-----------------------------------------------------------------------------------------------------------------------------
  1  1884   0.0      + 0-3.32000+ 5          0           0           1                    871337 3 91 1883
  2  1726   0.00000+ 0-3.32000+ 5          0           0           1                    871337 3 91 1725
DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------------------------------
  1  1886   3.33400+ 5 0.0      + 0 3.50000+ 5 0.0      + 0 3.69000+ 5 1.47590- 21337 3 91 1885
  2  1728   3.33400+ 5 0.00000+ 0 3.50000+ 5 0.00000+ 0 3.69000+ 5 1.47590- 21337 3 91 1727
DIFFERENCES               $$$$                  $$$$
-----------------------------------------------------------------------------------------------------------------------------
  1  1917   0.0      + 0 5.49000+ 6          0           0           3          3151337 3102 1916
  1  1918          154           5        157           2         315           51337 3102 1917
  1  1919   1.00000- 5 9.00000+ 3 1.20000- 4 2.74416+ 3 1.40000- 4 2.54035+ 31337 3102 1918
  1  1920   1.60000- 4 2.37605+ 3 1.80000- 4 2.23994+ 3 2.00000- 4 2.12478+ 31337 3102 1919
  1  1921   2.20000- 4 2.02570+ 3 2.40000- 4 1.93927+ 3 2.53000- 4 1.88867+ 31337 3102 1920
  1  1922   2.60000- 4 1.86300+ 3 2.80000- 4 1.79506+ 3 3.00000- 4 1.73402+ 31337 3102 1921
  1  1923   3.20000- 4 1.67879+ 3 3.40000- 4 1.62851+ 3 3.60000- 4 1.58247+ 31337 3102 1922
  1  1924   3.80000- 4 1.54011+ 3 4.00000- 4 1.50096+ 3 4.20000- 4 1.46465+ 31337 3102 1923
  1  1925   4.40000- 4 1.43083+ 3 4.60000- 4 1.39924+ 3 4.80000- 4 1.36965+ 31337 3102 1924
  1  1926   5.00000- 4 1.34184+ 3 5.20000- 4 1.31565+ 3 5.40000- 4 1.29093+ 31337 3102 1925
  1  1927   5.60000- 4 1.26755+ 3 5.80000- 4 1.24538+ 3 6.00000- 4 1.22433+ 31337 3102 1926
  1  1928   6.20000- 4 1.20430+ 3 6.40000- 4 1.18521+ 3 6.60000- 4 1.16700+ 31337 3102 1927
  1  1929   6.80000- 4 1.14960+ 3 7.00000- 4 1.13295+ 3 7.20000- 4 1.11699+ 31337 3102 1928
  1  1930   7.40000- 4 1.10169+ 3 7.60000- 4 1.08699+ 3 7.80000- 4 1.07285+ 31337 3102 1929
  1  1931   8.00000- 4 1.05925+ 3 8.20000- 4 1.04615+ 3 8.40000- 4 1.03352+ 31337 3102 1930
  1  1932   8.60000- 4 1.02133+ 3 8.80000- 4 1.00956+ 3 9.00000- 4 9.98185+ 21337 3102 1931
  1  1933   9.20000- 4 9.87178+ 2 9.40000- 4 9.76524+ 2 9.60000- 4 9.66204+ 21337 3102 1932
  1  1934   9.80000- 4 9.56200+ 2 1.00000- 3 9.46497+ 2 1.20000- 3 8.63183+ 21337 3102 1933
  1  1935   1.40000- 3 7.98371+ 2 1.60000- 3 7.46079+ 2 1.80000- 3 7.02725+ 21337 3102 1934
  1  1936   2.00000- 3 6.66015+ 2 2.20000- 3 6.34404+ 2 2.40000- 3 6.06807+ 21337 3102 1935
  1  1937   2.53000- 3 5.90640+ 2 2.60000- 3 5.82438+ 2 2.80000- 3 5.60709+ 21337 3102 1936
  1  1938   3.00000- 3 5.41175+ 2 3.20000- 3 5.23486+ 2 3.40000- 3 5.07369+ 21337 3102 1937
  1  1939   3.60000- 3 4.92601+ 2 3.80000- 3 4.79004+ 2 4.00000- 3 4.66430+ 21337 3102 1938
  1  1940   4.20000- 3 4.54755+ 2 4.40000- 3 4.43877+ 2 4.60000- 3 4.33708+ 21337 3102 1939
  1  1941   4.80000- 3 4.24174+ 2 5.00000- 3 4.15211+ 2 5.20000- 3 4.06763+ 21337 3102 1940
  1  1942   5.33610- 3 4.01284+ 2 5.40000- 3 3.98783+ 2 5.60000- 3 3.91229+ 21337 3102 1941
  1  1943   5.80000- 3 3.84063+ 2 6.00000- 3 3.77254+ 2 6.20000- 3 3.70772+ 21337 3102 1942
  1  1944   6.40000- 3 3.64592+ 2 6.60000- 3 3.58690+ 2 6.80000- 3 3.53047+ 21337 3102 1943
  1  1945   7.00000- 3 3.47644+ 2 7.20000- 3 3.42464+ 2 7.40000- 3 3.37491+ 21337 3102 1944
  1  1946   7.60000- 3 3.32713+ 2 7.80000- 3 3.28117+ 2 8.00000- 3 3.23691+ 21337 3102 1945
  1  1947   8.20000- 3 3.19426+ 2 8.40000- 3 3.15311+ 2 8.60000- 3 3.11337+ 21337 3102 1946
  1  1948   8.80000- 3 3.07498+ 2 9.00000- 3 3.03785+ 2 9.20000- 3 3.00191+ 21337 3102 1947
  1  1949   9.40000- 3 2.96710+ 2 9.60000- 3 2.93337+ 2 9.80000- 3 2.90065+ 21337 3102 1948
  1  1950   1.00000- 2 2.86890+ 2 1.20000- 2 2.59559+ 2 1.40000- 2 2.38202+ 21337 3102 1949
  1  1951   1.60000- 2 2.20902+ 2 1.80000- 2 2.06511+ 2 2.00000- 2 1.94290+ 21337 3102 1950
  1  1952   2.20000- 2 1.83741+ 2 2.40000- 2 1.74514+ 2 2.53000- 2 1.69101+ 21337 3102 1951
  1  1953   2.60000- 2 1.66353+ 2 2.80000- 2 1.59068+ 2 3.00000- 2 1.52513+ 21337 3102 1952
  1  1954   3.20000- 2 1.46576+ 2 3.40000- 2 1.41165+ 2 3.60000- 2 1.36208+ 21337 3102 1953
  1  1955   3.80000- 2 1.31646+ 2 4.00000- 2 1.27431+ 2 4.20000- 2 1.23521+ 21337 3102 1954
  1  1956   4.40000- 2 1.19883+ 2 4.60000- 2 1.16487+ 2 4.80000- 2 1.13309+ 21337 3102 1955
  1  1957   5.00000- 2 1.10327+ 2 5.20000- 2 1.07523+ 2 5.40000- 2 1.04880+ 21337 3102 1956
  1  1958   5.60000- 2 1.02385+ 2 5.80000- 2 1.00026+ 2 6.00000- 2 9.77897+ 11337 3102 1957
  1  1959   6.20000- 2 9.56681+ 1 6.40000- 2 9.36520+ 1 6.60000- 2 9.17336+ 11337 3102 1958
  1  1960   6.80000- 2 8.99060+ 1 7.00000- 2 8.81627+ 1 7.20000- 2 8.64981+ 11337 3102 1959
  1  1961   7.40000- 2 8.49070+ 1 7.60000- 2 8.33846+ 1 7.80000- 2 8.19267+ 11337 3102 1960
  1  1962   8.00000- 2 8.05294+ 1 8.20000- 2 7.91890+ 1 8.40000- 2 7.79022+ 11337 3102 1961
  1  1963   8.60000- 2 7.66660+ 1 8.80000- 2 7.54777+ 1 9.00000- 2 7.43345+ 11337 3102 1962
  1  1964   9.04500- 2 7.40830+ 1 9.20000- 2 7.32342+ 1 9.40000- 2 7.21746+ 11337 3102 1963
  1  1965   9.60000- 2 7.11535+ 1 9.80000- 2 7.01691+ 1 1.00000- 1 6.92197+ 11337 3102 1964
  1  1966   1.20000- 1 6.13293+ 1 1.40000- 1 5.56377+ 1 1.57110- 1 5.20060+ 11337 3102 1965
  1  1967   1.60000- 1 5.14850+ 1 1.80000- 1 4.84922+ 1 2.00000- 1 4.64405+ 11337 3102 1966
  1  1968   2.20000- 1 4.52153+ 1 2.40000- 1 4.47816+ 1 2.47520- 1 4.48289+ 11337 3102 1967
  1  1969   2.53000- 1 4.49396+ 1 2.60000- 1 4.51790+ 1 2.80000- 1 4.65335+ 11337 3102 1968
  1  1970   3.00000- 1 4.90900+ 1 3.00000- 1 0.0      + 0 4.00000+ 4 0.0      + 01337 3102 1969
```

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DIFFERENCES ON   54 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2  1759   0.00000+ 0 5.49000+ 6          0          0          1          1621337 3102 1758
   2  1760        162          2                                                1337 3102 1759
   2  1761   1.00000- 5 0.00000+ 0 2.50000- 2 0.00000+ 0 4.00000+ 4 0.00000+ 01337 3102 1760
DIFFERENCES ON    3 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
----------------------------------------------------------------------------------------------------------------
   1  2026   0.0     + 0 0.0     + 0          0          0          1          391337 3251 2025
   2  1817   0.00000+ 0 0.00000+ 0          0          0          1          391337 3251 1816
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2043   0.0     + 0 0.0     + 0          0          0          1          391337 3252 2042
   2  1834   0.00000+ 0 0.00000+ 0          0          0          1          391337 3252 1833
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2060   0.0     + 0 0.0     + 0          0          0          1          391337 3253 2059
   2  1851   0.00000+ 0 0.00000+ 0          0          0          1          391337 3253 1850
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2078   0.0     + 0 2.35012+ 2          0          2        361          181337 4  2 2077
   2  1869   0.00000+ 0 2.35012+ 2          0          2        361          181337 4  2 1868
DIFFERENCES     $$$$
----------------------------------------------------------------------------------------------------------------
   1  2079   1.00000+ 0 2.83673- 3 3.61734- 6-2.28448-11 0.0     + 0 0.0     + 01337 4  2 2078
   2  1870   1.00000+ 0 2.83673- 3 3.61734- 6-2.28448-11 0.00000+ 0 0.00000+ 01337 4  2 1869
DIFFERENCES                                                $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2080   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01337 4  2 2079
   2  1871   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4  2 1870
DIFFERENCES     $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2081   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01337 4  2 2080
   2  1872   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4  2 1871
DIFFERENCES     $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2082   0.0     + 0 0.0     + 0 9.99989- 1 5.10610- 3 1.23977- 5 1.45509- 81337 4  2 2081
   2  1873   0.00000+ 0 0.00000+ 0 9.99989- 1 5.10610- 3 1.23977- 5 1.45509- 81337 4  2 1872
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2083   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01337 4  2 2082
   2  1874   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4  2 1873
DIFFERENCES     $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2084   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01337 4  2 2083
   2  1875   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4  2 1874
DIFFERENCES     $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2085   0.0     + 0 0.0     + 0 0.0     + 0-2.83669- 3 9.99972- 1 7.29436- 31337 4  2 2084
   2  1876   0.00000+ 0 0.00000+ 0 0.00000+ 0-2.83669- 3 9.99972- 1 7.29436- 31337 4  2 1875
DIFFERENCES     $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2086   2.58236- 5 5.32933- 8-3.76157- 8 2.26635-10 0.0     + 0 0.0     + 01337 4  2 2085
   2  1877   2.58236- 5 5.32933- 8-3.76157- 8 2.26635-10 0.00000+ 0 0.00000+ 01337 4  2 1876
DIFFERENCES                                                $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2087   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01337 4  2 2086
   2  1878   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4  2 1877
DIFFERENCES     $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2088   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 1.08634- 5-5.10598- 31337 4  2 2087
   2  1879   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 1.08634- 5-5.10598- 31337 4  2 1878
DIFFERENCES     $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
   1  2090   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01337 4  2 2089
   2  1881   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4  2 1880
DIFFERENCES     $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------------------

   1  2091   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0-4.40235- 81337 4  2 2090
   2  1882   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0-4.40235- 81337 4  2 1881
DIFFERENCES     $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------------------
```

```
   1  2091    0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0-4.40235- 81337 4   2 2090
   2  1882    0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0-4.40235- 81337 4   2 1881
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2093   -9.79229- 8 2.85279-10 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01337 4   2 2092
   2  1884   -9.79229- 8 2.85279-10 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4   2 1883
DIFFERENCES                             $$$$        $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2094    0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01337 4   2 2093
   2  1885    0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4   2 1884
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2096    9.34288- 5 4.10111- 7-1.86000- 7-1.58330- 9 0.0      + 0 0.0      + 01337 4   2 2095
   2  1887    9.34288- 5 4.10111- 7-1.86000- 7-1.58330- 9 0.00000+ 0 0.00000+ 01337 4   2 1886
DIFFERENCES                                                     $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2097    0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01337 4   2 2096
   2  1888    0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4   2 1887
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2098    0.0      + 0-7.60853-13 5.44938-10-2.33452- 7 6.58356- 5-1.16037- 21337 4   2 2097
   2  1889    0.00000+ 0-7.60853-13 5.44938-10-2.33452- 7 6.58356- 5-1.16037- 21337 4   2 1888
DIFFERENCES     $$$$
---------------------------------------------------------------------------------------------------------
   1  2100    0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01337 4   2 2099
   2  1891    0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4   2 1890
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2101    0.0      + 0 0.0      + 0 3.19600-15-2.49711-12 1.20350- 9-4.02250- 71337 4   2 2100
   2  1892    0.00000+ 0 0.00000+ 0 3.19600-15-2.49711-12 1.20350- 9-4.02250- 71337 4   2 1891
DIFFERENCES     $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2102    9.30541- 5-1.37455- 2 9.99745- 1 1.80193- 2 1.61147- 4 9.42301- 71337 4   2 2101
   2  1893    9.30541- 5-1.37455- 2 9.99745- 1 1.80193- 2 1.61147- 4 9.42300- 71337 4   2 1892
DIFFERENCES                                                                   $
---------------------------------------------------------------------------------------------------------
   1  2103   -1.94115- 7-1.96610- 9 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01337 4   2 2102
   2  1894   -1.94115- 7-1.96610- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4   2 1893
DIFFERENCES                             $$$$        $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2104    0.0      + 0 0.0      + 0 0.0      + 0-1.34698-17 1.13339-14-6.00859-121337 4   2 2103
   2  1895    0.00000+ 0 0.00000+ 0 0.00000+ 0-1.34698-17 1.13339-14-6.00859-121337 4   2 1894
DIFFERENCES     $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2105    2.28216- 9-6.33533- 7 1.24778- 4-1.58831- 2 9.99673- 1 2.01525- 21337 4   2 2104
   2  1896    2.28216- 9-6.33532- 7 1.24778- 4-1.58831- 2 9.99673- 1 2.01525- 21337 4   2 1895
DIFFERENCES                   $
---------------------------------------------------------------------------------------------------------
   1  2106    2.01873- 4 1.32836- 6-2.21741- 7-2.47500- 9 0.0      + 0 0.0      + 01337 4   2 2105
   2  1897    2.01873- 4 1.32836- 6-2.21741- 7-2.47500- 9 0.00000+ 0 0.00000+ 01337 4   2 1896
DIFFERENCES                                                     $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2107    0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 5.68939-20-2.96709-171337 4   2 2106
   2  1898    0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 5.68939-20-2.96709-171337 4   2 1897
DIFFERENCES     $$$$        $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2108    2.93273-14-1.23383-11 3.92470- 9-9.36970- 7 1.61014- 4-1.80179- 21337 4   2 2107
   2  1899    2.93273-14-1.23383-11 3.92470- 9-9.36969- 7 1.61014- 4-1.80179- 21337 4   2 1898
DIFFERENCES                                         $$
---------------------------------------------------------------------------------------------------------
   1  2110    0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01337 4   2 2109
   2  1901    0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4   2 1900
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$        $$$$
---------------------------------------------------------------------------------------------------------
   1  2113   -2.24444- 7-5.91454- 9 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01337 4   2 2112
   2  1904   -2.24444- 7-5.91454- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01337 4   2 1903
```

```
DIFFERENCES    $$$$       $$$$                  $$$$
--------------------------------------------------------------------------------------------
    1  4053  6.81650+ 4 0.0    + 0 1.76002-14 1.12642-14 6.81660+ 4 0.0    + 01337 8459 4052
    2  3844  6.81650+ 4 0.00000+ 0 1.76002-14 1.12642-14 6.81660+ 4 0.00000+ 01337 8459 3843
DIFFERENCES               $$$$                                        $$$$
--------------------------------------------------------------------------------------------
    1  4054  1.16002- 7 9.28013- 9 6.81670+ 4 0.0    + 0 1.61002- 8 1.28802- 91337 8459 4053
    2  3845  1.16002- 7 9.28013- 9 6.81670+ 4 0.00000+ 0 1.61002- 8 1.28802- 91337 8459 3844
DIFFERENCES                                     $$$$
--------------------------------------------------------------------------------------------
    1  4055  6.81670+ 4 1.00000+ 0 1.61002- 9 7.24510-10 6.81680+ 4 0.0    + 01337 8459 4054
    2  3846  6.81670+ 4 1.00000+ 0 1.61002- 9 7.24510-10 6.81680+ 4 0.00000+ 01337 8459 3845
DIFFERENCES                                                           $$$$
--------------------------------------------------------------------------------------------
    1  4056  4.12006- 9 3.29605-10 6.81690+ 4 0.0    + 0 1.34002- 9 1.07202-101337 8459 4055
    2  3847  4.12006- 9 3.29605-10 6.81690+ 4 0.00000+ 0 1.34002- 9 1.07202-101337 8459 3846
DIFFERENCES                                     $$$$
--------------------------------------------------------------------------------------------
    1  4057  6.81700+ 4 0.0    + 0 4.22006- 9 3.37605-10 6.81710+ 4 0.0    + 01337 8459 4056
    2  3848  6.81700+ 4 0.00000+ 0 4.22006- 9 3.37605-10 6.81710+ 4 0.00000+ 01337 8459 3847
DIFFERENCES               $$$$                                        $$$$
--------------------------------------------------------------------------------------------
    1  4058  1.25002- 9 1.37502-10 6.81720+ 4 0.0    + 0 4.76007- 9 5.23607-101337 8459 4057
    2  3849  1.25002- 9 1.37502-10 6.81720+ 4 0.00000+ 0 4.76007- 9 5.23607-101337 8459 3848
DIFFERENCES                                     $$$$
--------------------------------------------------------------------------------------------
    1  4059  6.91650+ 4 0.0    + 0 0.0    + 0 0.0    + 0 6.91660+ 4 0.0    + 01337 8459 4058
    2  3850  6.91650+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 6.91660+ 4 0.00000+ 01337 8459 3849
DIFFERENCES               $$$$       $$$$       $$$$                  $$$$
--------------------------------------------------------------------------------------------
    1  4060  0.0    + 0 0.0    + 0 6.91670+ 4 0.0    + 0 0.0    + 0 0.0    + 01337 8459 4059
    2  3851  0.00000+ 0 0.00000+ 0 6.91670+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 01337 8459 3850
DIFFERENCES    $$$$       $$$$                  $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
    1  4061  6.91680+ 4 0.0    + 0 0.0    + 0 0.0    + 0 6.91690+ 4 0.0    + 01337 8459 4060
    2  3852  6.91680+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 6.91690+ 4 0.00000+ 01337 8459 3851
DIFFERENCES               $$$$       $$$$       $$$$                  $$$$
--------------------------------------------------------------------------------------------
    1  4062  1.34002- 9 1.07202-10 6.91700+ 4 0.0    + 0 8.44013-13 5.40168-131337 8459 4061
    2  3853  1.34002- 9 1.07202-10 6.91700+ 4 0.00000+ 0 8.44012-13 5.40168-131337 8459 3852
DIFFERENCES                                     $$$$           $
--------------------------------------------------------------------------------------------
    1  4063  6.91710+ 4 0.0    + 0 1.25002- 9 1.00001-10 6.91720+ 4 0.0    + 01337 8459 4062
    2  3854  6.91710+ 4 0.00000+ 0 1.25002- 9 1.00001-10 6.91720+ 4 0.00000+ 01337 8459 3853
DIFFERENCES               $$$$                                        $$$$
--------------------------------------------------------------------------------------------
    1  4064  4.84007- 9 3.87205-10 7.01660+ 4 0.0    + 0 0.0    + 0 0.0    + 01337 8459 4063
    2  3855  4.84007- 9 3.87205-10 7.01660+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 01337 8459 3854
DIFFERENCES                                     $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
    1  4065  7.01670+ 4 0.0    + 0 0.0    + 0 0.0    + 0 7.01680+ 4 0.0    + 01337 8459 4064
    2  3856  7.01670+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 7.01680+ 4 0.00000+ 01337 8459 3855
DIFFERENCES               $$$$       $$$$       $$$$                  $$$$
--------------------------------------------------------------------------------------------
    1  4066  0.0    + 0 0.0    + 0 7.01690+ 4 0.0    + 0 0.0    + 0 0.0    + 01337 8459 4065
    2  3857  0.00000+ 0 0.00000+ 0 7.01690+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 01337 8459 3856
DIFFERENCES    $$$$       $$$$                  $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
    1  4067  7.01690+ 4 1.00000+ 0 0.0    + 0 0.0    + 0 7.01700+ 4 0.0    + 01337 8459 4066
    2  3858  7.01690+ 4 1.00000+ 0 0.00000+ 0 0.00000+ 0 7.01700+ 4 0.00000+ 01337 8459 3857
DIFFERENCES                          $$$$       $$$$                  $$$$
--------------------------------------------------------------------------------------------
    1  4068  8.42013-13 5.38888-13 7.01710+ 4 0.0    + 0 1.25002- 9 1.00001-101337 8459 4067
    2  3859  8.42012-13 5.38888-13 7.01710+ 4 0.00000+ 0 1.25002- 9 1.00001-101337 8459 3858
DIFFERENCES        $                            $$$$
--------------------------------------------------------------------------------------------
```

```
   1  4069   7.01720+ 4 0.0     + 0 4.84007- 9 3.87205-10 7.11690+ 4 0.0     + 01337 8459 4068
   2  3860   7.01720+ 4 0.00000+ 0 4.84007- 9 3.87205-10 7.11690+ 4 0.00000+ 01337 8459 3859
DIFFERENCES                 $$$$                                        $$$$
-------------------------------------------------------------------------------------------
   1  4070   0.0     + 0 0.0     + 0 7.11690+ 4 1.00000+ 0 0.0     + 0 0.0     + 01337 8459 4069
   2  3861   0.00000+ 0 0.00000+ 0 7.11690+ 4 1.00000+ 0 0.00000+ 0 0.00000+ 01337 8459 3860
DIFFERENCES     $$$$        $$$$                                $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4071   7.11710+ 4 0.0     + 0 0.0     + 0 0.0     + 0 7.11710+ 4 1.00000+ 01337 8459 4070
   2  3862   7.11710+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 0 7.11710+ 4 1.00000+ 01337 8459 3861
DIFFERENCES                 $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4072   0.0     + 0 0.0     + 0 7.11720+ 4 0.0     + 0 0.0     + 0 0.0     + 01337 8459 4071
   2  3863   0.00000+ 0 0.00000+ 0 7.11720+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 01337 8459 3862
DIFFERENCES     $$$$        $$$$                    $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4073   7.11720+ 4 1.00000+ 0 0.0     + 0 0.0     + 0 7.21710+ 4 0.0     + 01337 8459 4072
   2  3864   7.11720+ 4 1.00000+ 0 0.00000+ 0 0.00000+ 0 7.21710+ 4 0.00000+ 01337 8459 3863
DIFFERENCES                         $$$$        $$$$                    $$$$
-------------------------------------------------------------------------------------------
   1  4074   0.0     + 0 0.0     + 0 7.21720+ 4 0.0     + 0 0.0     + 0 0.0     + 01337 8459 4073
   2  3865   0.00000+ 0 0.00000+ 0 7.21720+ 4 0.00000+ 0 0.00000+ 0 0.00000+ 01337 8459 3864
DIFFERENCES     $$$$        $$$$                    $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4078   0.0     + 0-6.76000+ 6           0           0           1          21337 9 16 4077
   2  3869   0.00000+ 0-6.76000+ 6           0           0           1          21337 9 16 3868
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1  4081   0.0     + 0-6.76000+ 6           0           1           1          21337 9 16 4080
   2  3872   0.00000+ 0-6.76000+ 6           0           1           1          21337 9 16 3871
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1  4090   2.35010+ 2 0.0     + 0           0           0         306        17133732151 4089
   2  3881   2.35010+ 2 0.00000+ 0           0           0         306        17133732151 3880
DIFFERENCES                 $$$$
-------------------------------------------------------------------------------------------
   1  4092   1.00000+ 0 1.00000- 6 0.0     + 0 1.00000- 6 0.0     + 0 0.0     + 0133732151 4091
   2  3883   1.00000+ 0 1.00000-12 0.00000+ 0 1.00000- 6 0.00000+ 0 0.00000+ 0133732151 3882
DIFFERENCES                   $$     $$$$                    $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4093   1.00000-12 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4092
   2  3884   1.00000-12 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3883
DIFFERENCES                 $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4095   1.00000+ 0 1.00000- 6 0.0     + 0 1.00000- 6 0.0     + 0 0.0     + 0133732151 4094
   2  3886   1.00000- 2 1.00000-12 0.00000+ 0 1.00000- 6 0.00000+ 0 0.00000+ 0133732151 3885
DIFFERENCES       $ $         $$     $$$$                    $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4096   1.00000-12 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4095
   2  3887   1.00000-12 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3886
DIFFERENCES                 $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4098   4.00000- 6 4.00000- 6 0.0     + 0 4.00000+ 0 0.0     + 0 0.0     + 0133732151 4097
   2  3889   1.00000- 4 4.00000-12 0.00000+ 0 4.00000- 6 0.00000+ 0 0.00000+ 0133732151 3888
DIFFERENCES   $       $         $$     $$$$          $ $     $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4099   6.76000- 2 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4098
   2  3890   6.80000-14 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3889
DIFFERENCES     $$  $$       $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4101   1.00000- 4 1.60000- 5 0.0     + 0 6.40000- 1 0.0     + 0 0.0     + 0133732151 4100
   2  3892   1.00000- 4 1.60000-11 0.00000+ 0 6.40000- 7 0.00000+ 0 0.00000+ 0133732151 3891
DIFFERENCES                   $$     $$$$          $     $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4102   1.04040+ 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4101
   2  3893   1.00000-12 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3892
```

DIFFERENCES	$ $ $$$	$$$$	$$$$	$$$$	$$$$	$$$$	
1 4104	1.00000- 4	4.00000- 6	0.0 + 0	1.00000+ 0	0.0 + 0	0.0 + 0	0133732151 4103
2 3895	1.00000- 4	4.00000-12	0.00000+ 0	1.00000- 6	0.00000+ 0	0.00000+	0133732151 3894
DIFFERENCES		$$	$$$$	$ $	$$$$	$$$$	
1 4105	1.02400- 1	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0133732151 4104
2 3896	1.00000-12	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+	0133732151 3895
DIFFERENCES	$$ $$	$$$$	$$$$	$$$$	$$$$	$$$$	
1 4107	1.00000- 4	9.00000- 8	0.0 + 0	1.69000+ 0	0.0 + 0	0.0 + 0	0133732151 4106
2 3898	1.00000- 4	9.00000-14	0.00000+ 0	1.70000- 6	0.00000+ 0	0.00000+	0133732151 3897
DIFFERENCES		$$	$$$$	$$ $ $	$$$$	$$$$	
1 4108	2.75560+ 0	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0133732151 4107
2 3899	2.80000-12	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+	0133732151 3898
DIFFERENCES	$$$$ $$$	$$$$	$$$$	$$$$	$$$$	$$$$	
1 4109	3.86000+ 0	2.50000+ 0	4.16480- 2	2.44010- 4	4.14000- 2	3.71000-	6133732151 4108
2 3900	3.86000+ 0	2.50000+ 0	4.16480- 2	2.44010- 4	4.14000- 2	2.37000-	6133732151 3899
DIFFERENCES						$ $$	
1 4110	1.00000- 4	1.60000- 5	0.0 + 0	1.69000+ 0	0.0 + 0	0.0 + 0	0133732151 4109
2 3901	1.00000- 4	1.60000-11	0.00000+ 0	1.70000- 6	0.00000+ 0	0.00000+	0133732151 3900
DIFFERENCES		$$	$$$$	$$ $ $	$$$$	$$$$	
1 4111	2.50000- 1	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0133732151 4110
2 3902	2.50000-13	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+	0133732151 3901
DIFFERENCES	$$	$$$$	$$$$	$$$$	$$$$	$$$$	
1 4113	1.00000- 4	1.00000- 6	0.0 + 0	3.61000+ 0	0.0 + 0	0.0 + 0	0133732151 4112
2 3904	1.00000- 4	1.00000-12	0.00000+ 0	3.60000- 6	0.00000+ 0	0.00000+	0133732151 3903
DIFFERENCES		$$	$$$$	$ $ $	$$$$	$$$$	
1 4114	4.00000- 2	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0133732151 4113
2 3905	4.00000-14	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+	0133732151 3904
DIFFERENCES	$$	$$$$	$$$$	$$$$	$$$$	$$$$	
1 4116	1.00000- 4	4.00000- 6	0.0 + 0	3.61000+ 0	0.0 + 0	0.0 + 0	0133732151 4115
2 3907	1.00000- 4	4.00000-12	0.00000+ 0	3.60000- 6	0.00000+ 0	0.00000+	0133732151 3906
DIFFERENCES		$$	$$$$	$ $ $	$$$$	$$$$	
1 4117	4.90000- 3	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0133732151 4116
2 3908	3.60000-13	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+	0133732151 3907
DIFFERENCES	$ $ $	$$$$	$$$$	$$$$	$$$$	$$$$	
1 4119	1.00000- 4	1.44000- 4	0.0 + 0	3.24000+ 0	0.0 + 0	0.0 + 0	0133732151 4118
2 3910	1.00000- 4	1.40000-10	0.00000+ 0	3.20000- 6	0.00000+ 0	0.00000+	0133732151 3909
DIFFERENCES	$	$$	$$$$	$ $ $	$$$$	$$$$	
1 4120	2.50000- 1	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0133732151 4119
2 3911	4.30000-13	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+	0133732151 3910
DIFFERENCES	$ $ $$	$$$$	$$$$	$$$$	$$$$	$$$$	
1 4121	6.37000+ 0	2.50000+ 0	3.81940- 2	9.28790- 5	3.81000- 2	9.60001-	7133732151 4120
2 3912	6.37000+ 0	2.50000+ 0	3.81940- 2	9.28790- 5	3.81000- 2	9.60000-	7133732151 3911
DIFFERENCES						$	
1 4122	4.00000- 4	1.60000- 5	0.0 + 0	3.61000+ 0	0.0 + 0	0.0 + 0	0133732151 4121
2 3913	4.00000- 4	1.60000-11	0.00000+ 0	3.60000- 6	0.00000+ 0	0.00000+	0133732151 3912
DIFFERENCES		$$	$$$$	$ $ $	$$$$	$$$$	
1 4123	6.40000- 1	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0.0 + 0	0133732151 4122
2 3914	2.30000-13	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+ 0	0.00000+	0133732151 3913
DIFFERENCES	$ $ $$	$$$$	$$$$	$$$$	$$$$	$$$$	

```
   1  4124   6.67000+ 0 2.50000+ 0 4.79230- 2 1.18800- 5 4.79000- 2 1.11100- 5133732151 4123
   2  3915   6.67000+ 0 2.50000+ 0 4.79320- 2 1.18800- 5 4.79000- 2 1.11100- 5133732151 3914
DIFFERENCES                          $$
-------------------------------------------------------------------------------------------
   1  4125   4.00000- 4 4.00000- 6 0.0     + 0 1.44000+ 2 0.0     + 0 0.0     + 0133732151 4124
   2  3916   4.00000- 4 4.00000-12 0.00000+ 0 1.44000- 4 0.00000+ 0 0.00000+ 0133732151 3915
DIFFERENCES                 $$     $$$$          $ $     $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4126   2.56000+ 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4125
   2  3917   1.20000-12 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3916
DIFFERENCES $ $$    $$$     $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4128   4.00000- 4 1.44000- 6 0.0     + 0 1.96000+ 2 0.0     + 0 0.0     + 0133732151 4127
   2  3919   4.00000- 4 1.40000-12 0.00000+ 0 1.96000- 6 0.00000+ 0 0.00000+ 0133732151 3918
DIFFERENCES                 $     $$     $$$$          $ $     $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4129   2.25000+ 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4128
   2  3920   7.70000-12 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3919
DIFFERENCES $ $$    $$$     $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4131   4.00000- 4 4.00000- 6 0.0     + 0 4.00000+ 0 0.0     + 0 0.0     + 0133732151 4130
   2  3922   4.00000- 4 4.00000-12 0.00000+ 0 4.00000- 6 0.00000+ 0 0.00000+ 0133732151 3921
DIFFERENCES                 $$     $$$$          $ $     $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4132   1.00000+ 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4131
   2  3923   1.00000-12 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3922
DIFFERENCES       $$$     $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4133   8.30000+ 0 2.50000+ 0 3.78080- 2 1.06880- 4 3.77000- 2 9.70001- 7133732151 4132
   2  3924   8.30000+ 0 2.50000+ 0 3.78080- 2 1.06880- 4 3.77000- 2 9.70000- 7133732151 3923
DIFFERENCES                                                                 $
-------------------------------------------------------------------------------------------
   1  4134   4.00000- 4 1.60000- 5 0.0     + 0 4.00000+ 0 0.0     + 0 0.0     + 0133732151 4133
   2  3925   4.00000- 4 1.60000-11 0.00000+ 0 4.00000- 6 0.00000+ 0 0.00000+ 0133732151 3924
DIFFERENCES                 $$     $$$$          $ $     $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4135   3.60000- 1 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4134
   2  3926   4.00000-14 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3925
DIFFERENCES $ $     $$     $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4137   4.00000- 4 3.60000- 5 0.0     + 0 6.25000+ 0 0.0     + 0 0.0     + 0133732151 4136
   2  3928   4.00000- 4 3.60000-11 0.00000+ 0 6.30000- 6 0.00000+ 0 0.00000+ 0133732151 3927
DIFFERENCES                 $$     $$$$          $$    $ $     $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4138   1.44000+ 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4137
   2  3929   1.00000-12 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3928
DIFFERENCES    $$    $$$     $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4140   4.00000- 4 2.50000- 5 0.0     + 0 6.76000+ 0 0.0     + 0 0.0     + 0133732151 4139
   2  3931   4.00000- 4 2.50000-11 0.00000+ 0 6.80000- 6 0.00000+ 0 0.00000+ 0133732151 3930
DIFFERENCES                 $$     $$$$          $$    $ $     $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4141   1.00000- 2 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0133732151 4140
   2  3932   1.00000-14 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0133732151 3931
DIFFERENCES          $$     $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4145   0.0     + 0 0.0     + 0           0          18          0          1133733 18 4144
   2  3936   0.00000+ 0 0.00000+ 0           0          18          0          1133733 18 3935
DIFFERENCES    $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4146   0.0     + 0 0.0     + 0           0           1         10          5133733 18 4145
   2  3937   0.00000+ 0 0.00000+ 0           0           1         10          5133733 18 3936
DIFFERENCES    $$$$        $$$$
-------------------------------------------------------------------------------------------
   1  4147   1.00000- 5 0.0     + 0 1.00000+ 1 9.00000- 2 1.00000+ 5 1.00000- 2133733 18 4146
   2  3938   1.00000- 5 0.00000+ 0 1.00000+ 1 9.00000- 2 1.00000+ 5 1.00000- 2133733 18 3937
```

DIFFERENCES $$$$

```
    1  4148   5.00000+ 6 2.25000- 2 2.00000+ 7 0.0     + 0          133733 18 4147
    2  3939   5.00000+ 6 2.25000- 2 2.00000+ 7 0.00000+ 0          133733 18 3938
DIFFERENCES                                          $$$$
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1337	1	451	256	36	252	32	(DIFFERENCES)
1337	1	452	4	1	4	1	(DIFFERENCES)
1337	1	458	6	4	6	4	(DIFFERENCES)
1337	2	151	997	1021	996	1019	(DIFFERENCES)
1337	3	1	114	55	63	4	(DIFFERENCES)
1337	3	2	109	54	58	3	(DIFFERENCES)
1337	3	4	47	2	47	2	(DIFFERENCES)
1337	3	16	30	3	30	3	(DIFFERENCES)
1337	3	17	18	2	18	2	(DIFFERENCES)
1337	3	18	106	54	55	3	(DIFFERENCES)
1337	3	51	25	3	25	3	(DIFFERENCES)
1337	3	52	23	3	23	3	(DIFFERENCES)
1337	3	53	22	4	22	4	(DIFFERENCES)
1337	3	54	19	4	19	4	(DIFFERENCES)
1337	3	55	18	4	18	4	(DIFFERENCES)
1337	3	56	15	3	15	3	(DIFFERENCES)
1337	3	57	15	3	15	3	(DIFFERENCES)
1337	3	58	15	4	15	4	(DIFFERENCES)
1337	3	59	14	3	14	3	(DIFFERENCES)
1337	3	60	14	3	14	3	(DIFFERENCES)
1337	3	61	14	4	14	4	(DIFFERENCES)
1337	3	91	33	2	33	2	(DIFFERENCES)
1337	3	102	109	54	58	3	(DIFFERENCES)
1337	3	251	17	1	17	1	(DIFFERENCES)
1337	3	252	17	1	17	1	(DIFFERENCES)
1337	3	253	17	1	17	1	(DIFFERENCES)
1337	4	2	188	120	188	120	(DIFFERENCES)
1337	4	16	3	1	3	1	(DIFFERENCES)
1337	4	17	3	1	3	1	(DIFFERENCES)
1337	4	18	3	1	3	1	(DIFFERENCES)
1337	4	51	3	1	3	1	(DIFFERENCES)
1337	4	52	3	1	3	1	(DIFFERENCES)
1337	4	53	3	1	3	1	(DIFFERENCES)
1337	4	54	3	1	3	1	(DIFFERENCES)
1337	4	55	3	1	3	1	(DIFFERENCES)
1337	4	56	3	1	3	1	(DIFFERENCES)
1337	4	57	3	1	3	1	(DIFFERENCES)
1337	4	58	3	1	3	1	(DIFFERENCES)
1337	4	59	3	1	3	1	(DIFFERENCES)
1337	4	60	3	1	3	1	(DIFFERENCES)
1337	4	61	3	1	3	1	(DIFFERENCES)
1337	4	91	3	1	3	1	(DIFFERENCES)
1337	5	16	10	2	10	2	(DIFFERENCES)
1337	5	17	9	2	9	2	(DIFFERENCES)
1337	5	18	8	2	8	2	(DIFFERENCES)
1337	5	91	12	2	12	2	(DIFFERENCES)
1337	8	16	11	3	11	3	(DIFFERENCES)
1337	8	102	3	1	3	1	(DIFFERENCES)
1337	8	454	769	730	769	730	(DIFFERENCES)
1337	8	457	176	93	176	93	(DIFFERENCES)
1337	8	459	769	731	769	731	(DIFFERENCES)
1337	9	16	9	2	9	2	(DIFFERENCES)
1337	32	151	58	39	58	39	(DIFFERENCES)

```
1337   33   18        7        4        7        4 (DIFFERENCES)
1337   33   18        3        0        3        0
```

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	4152	3075	3943	2865

END OF RUN

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							MAT	MF	REC.
9.42380+ 4	2.36167+ 2	1	1	0	3		1338	1	1
0.00000+ 0	1.00000+ 0	0	0	0	0		1338	1	2
0.00000+ 0	0.00000+ 0	0	0	105	63		1338	1	3
94-PU-238 HEDL,AI,+		EVAL-APR78 MANN,SCHENTER,ALTER,DUNFORD,+					1338	1	4
HEDL TME 77-54		DIST-MAR83 REV1-OCT80			830316		1338	1	5
	HEDL	EVAL-APR78 MANN AND SCHENTER (FAST)					1338	1	6
	INEL	EVAL-AUG78 REICH (DECAY)					1338	1	7
	AI	EVAL-MAY67 ALTER AND DUNFORD					1338	1	8
EXTENDED TO 20 MEV FOR ENDF/B VERSION-IV (APR74)							1338	1	9
DATA MODIFIED FOR ENDF/B-II FORMATS (APRIL 1970)							1338	1	10
							1338	1	11
MF=1		GENERAL INFORMATION					1338	1	12
MT=452 NU.		THERMAL VALUE BASED ON JAFFEY ET AL (REF. 16) AND					1338	1	13
		KROSHKIN ET AL (REF. 17). ENERGY DEPENDENCE FROM					1338	1	14
		HOWERTON (REF. 1)					1338	1	15
MT=458 ENERGY FROM FISSION BASED ON SHER (REF. 18)							1338	1	16
							1338	1	17
MF=2		RESONANCE PARAMETERS					1338	1	18
MT=151		RESOLVED PARAMETERS TAKEN FROM YOUNG ET AL (REF. 2)					1338	1	19
		UNRESOLVED PARAMETERS ARE FROM RESOLVED REGION AND					1338	1	20
		OPTICAL MODEL (UNCHANGED FROM ENDF/B-1)					1338	1	21
		THERMAL CROSS SECTION_					1338	1	22
		TOTAL = 590. B (REF.5 = 590)					1338	1	23
		CAPTURE = 552.4 B					1338	1	24
		FISSION = 17.0 B (REF.7 = 16.6)					1338	1	25
		RESONANCE INTEGRAL (0.5 EV CUTOFF)					1338	1	26
		CAPTURE = 276.3					1338	1	27
		FISSION = 14.3					1338	1	28
							1338	1	29
MF=3		SMOOTH CROSS SECTIONS					1338	1	30
MT=1	TOTAL	FROM OPTICAL MODEL					1338	1	31
MT=2	ELASTIC	FROM OPTICAL MODEL					1338	1	32
MT=4	INELASTIC SCATTERING	DATA RESULTS FROM THE SCATTERING					1338	1	33
TO 15 LEVELS PLUS CONTINUUM. STATISTICAL COMPOUND NUCLEUS							1338	1	34
MODEL IS USED (REF. 15).							1338	1	35
MT=16 N,2N BASED ON STATISTICAL MODEL CALCULATIONS (REF. 15)							1338	1	36
MT=17 N,3N BASED ON STATISTICAL MODEL CALCULATIONS (REF. 15)							1338	1	37
MT=18	FISSION BASED ON EXPERIMENTS OF ERMAGAMBETOV(REF. 11),						1338	1	38
	FOMUSHKIN (REF. 12), DRAKE (REF. 13), AND						1338	1	39
	SILBERT (REF. 14)						1338	1	40
MT=51,...,65,91	INELASTIC SCATTERING DATA RESULTS FROM THE						1338	1	41
SCATTERING TO 15 LEVELS PLUS CONTINUUM. STATISTICAL COM-							1338	1	42
POUND NUCLEUS MODEL IS USED (REF. 15).							1338	1	43
MT=102	CAPTURE FROM STATISTICAL MODEL (REF. 16)						1338	1	44
MT=251 MUBAR	CALCULATED FROM DOM ANGULAR DISTRIBUTIONS						1338	1	45
MT=252 XIBAR	CALCULATED FROM DOM ANGULAR DISTRIBUTIONS						1338	1	46
MT=253 GAMMA	CALCULATED FROM DOM ANGULAR DISTRIBUTIONS						1338	1	47
							1338	1	48
MF=4		LEGENDRE POLYNOMIALS					1338	1	49
MT=2	ELASTIC SCATTERING LEGENDRE COEFFICIENTS FOR 15TH						1338	1	50
ORDER FIT TO CALCULATED ANGULAR DISTRIBUTIONS (DOM) ARE							1338	1	51
PROVIDED BETWEEN 10 KEV AND 11 MEV AND 19TH ORDER BETWEEN							1338	1	52
12 AND 15 MEV.							1338	1	53
MT%2 ARE ASSUMED ISOTROPIC							1338	1	54
							1338	1	55
MF=5		SECONDARY ENERGY DISTRIBUTIONS					1338	1	56
MT=16	N,2N NUCLEAR TEMPERATURE WITH ENERGY DEPENDENCE AS IN						1338	1	57
REFERENCE 9.							1338	1	58
MT=17 SAME,AS MT=17							1338	1	59
MT=18	FISSION MAXWELLIAN WITH CONSTANT TEMPERATURE FROM						1338	1	60

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	MAT	MF	REC.
CORRELATION OF REF. 1.	1338	1	61
MT=19,20 SAME AS MT=18	1338	1	62
MT=91 (N,N') TEMPERATURE FROM GILBERT AND CAMERON (REF. 6)	1338	1	63
	1338	1	64
DATA FOR 94-PU-238 DECAYS BY REICH	1338	1	65
INSERTED INTO FILE AT BNL BY R. KINSEY IN SEP 1978	1338	1	66
MF=8, MT=457 RADIOACTIVE DECAY DATA	1338	1	67
REFERENCES Q(ALPHA)-1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLE.	1338	1	68
SPONTANEOUS-FISSION BRANCHING RATIO FROM DATA OF J.D.	1338	1	69
HASTINGS AND W.W. STROHM, J. INORG. NUCL. CHEM. 34,	1338	1	70
25 (1972).	1338	1	71
OTHER- SEE TABLE OF ISOTOPES, 7TH ED. (PRELIMINARY	1338	1	72
DATA, PRIV. COMM. FROM C.M. LEDERER) AND Y.A.	1338	1	73
ELLIS, NUCLEAR DATA SHEETS B 4, NO. 6, 635	1338	1	74
(1970).	1338	1	75
NOTE THE INTENSITY VALUES OF THE K-X-RAYS AND OF THE GAMMA	1338	1	76
RAYS BELOW 852 KEV (EXCEPT THOSE AT 258 AND 299 KEV)	1338	1	77
ARE THOSE OF R. GUNNINK, J.E. EVANS AND A.L. PRINDLE,	1338	1	78
UCRL-52139 (1976).	1338	1	79
NOTE THE L-X-RAY DATA REPRESENT MEASURED VALUES. SEE C.E.	1338	1	80
BEMIS, JR. AND L. TUBBS, ORNL-5297, 93 (SEPT., 1977).	1338	1	81
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 8/78	1338	1	82
	1338	1	83
REFERENCES	1338	1	84
1. R.J. HOWERTON, NUCL. SCI. ENG. 62(1977)438	1338	1	85
2. T.E. YOUNG, F.B. SIMPSON, J.R. BERRETH, AND M.S. COOPS, NUCL	1338	1	86
SCI AND ENG 30(1967)355	1338	1	87
3. STUBBINS, W., ET.AL., UCRL-70033(1966)	1338	1	88
5. YOUNG, T., WASH 1068(1966)	1338	1	89
6. A.GILBERT AND A.G.W. CAMERON, CAN. J. PHYS. 43(1965)1446)	1338	1	90
7. HULET, E., ET.AL., PHYS.REV. 107,1294(1957)	1338	1	91
8. HILL, D., WHEELER, J., PHYS.REV. 89,1102(1953)	1338	1	92
9. PARKER, K., AWRE0-79/63(1964)	1338	1	93
10. BARNARD, E., ET.AL., NUCL.PHYS. 71,228(1965)	1338	1	94
11. S.B.ERMAGAMBETOV AND G.N.SMIRENKIN, SOV. J. ATOM. ENERGY	1338	1	95
25(1968)1364, JETP LETTERS 9(1969)309, SOV. J. ATOM.	1338	1	96
ENERGY 29(1970)1190	1338	1	97
12. E.F.FOMUSHKIN AND E.K.GUTNIKOVA, SOV. J. NUCL. PHYS.	1338	1	98
10(1970)529	1338	1	99
13. D.M.DRAKE, C.D.BOWMAN, M.S.COOPS, AND R.W.HOFF LA-4420	1338	1	100
(1970)101	1338	1	101
14. M.G.SILBERT, A.MOAT, AND T.E.YOUNG, NUCL. SCI. ENG.	1338	1	102
52(1973)176.	1338	1	103
15. F.M.MANN AND R.E.SCHENTER, TRANS. AMER. NUCL. SOC.	1338	1	104
23(1976)546 AND HEDL TME-77-54 (1977)	1338	1	105
16. JAFFEY ET AL, NUCL.PHYS. A145(1970)1	1338	1	106
17. KROSHKIN ET AL, SOV.AT.EN. 29(1970)790	1338	1	107
18. R. SHER AND C. BECK EPRI NP-1771 AND REV. 1 JAN. 1983	1338	1	108
1 451 171 3	1338	1	109
1 452 3 1	1338	1	110
1 458 5 3	1338	1	111
2 151 35 1	1338	1	112
3 1 39 2	1338	1	113
3 2 16 1	1338	1	114
3 4 33 2	1338	1	115
3 16 6 1	1338	1	116
3 17 5 1	1338	1	117
3 18 16 3	1338	1	118
3 19 14 3	1338	1	119
3 20 6 3	1338	1	120
3 51 16 1	1338	1	121

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			MAT	MF	REC.
3	52	14	1 1338	1	122
3	53	14	1 1338	1	123
3	54	12	1 1338	1	124
3	55	12	1 1338	1	125
3	56	11	1 1338	1	126
3	57	13	1 1338	1	127
3	58	11	1 1338	1	128
3	59	12	1 1338	1	129
3	60	11	1 1338	1	130
3	61	11	1 1338	1	131
3	62	11	1 1338	1	132
3	63	11	1 1338	1	133
3	64	9	2 1338	1	134
3	65	8	2 1338	1	135
3	91	9	1 1338	1	136
3	102	18	3 1338	1	137
3	251	16	0 1338	1	138
3	252	16	0 1338	1	139
3	253	16	0 1338	1	140
4	2	235	0 1338	1	141
4	16	2	1 1338	1	142
4	17	2	1 1338	1	143
4	18	2	1 1338	1	144
4	19	2	1 1338	1	145
4	20	2	1 1338	1	146
4	51	2	1 1338	1	147
4	52	2	1 1338	1	148
4	53	2	1 1338	1	149
4	54	2	1 1338	1	150
4	55	2	1 1338	1	151
4	56	2	1 1338	1	152
4	57	2	1 1338	1	153
4	58	2	1 1338	1	154
4	59	2	1 1338	1	155
4	60	2	1 1338	1	156
4	61	2	1 1338	1	157
4	62	2	1 1338	1	158
4	63	2	1 1338	1	159
4	64	2	1 1338	1	160
4	65	2	1 1338	1	161
4	91	2	1 1339	1	162
5	16	17	1 1338	1	163
5	17	7	1 1338	1	164
5	18	7	1 1338	1	165
5	19	7	1 1338	1	166
5	20	7	1 1338	1	167
5	91	10	1 1338	1	168
8	16	2	1 1338	1	169
8	102	2	1 1338	1	170
8	457	115	1 1338	1	171
			1338	1	172
			1338	1	176
			1338	1	182
			1338	2	219
			1338	3	260
			1338	3	277
			1338	3	311
			1338	3	318
			1338	3	324
			1338	3	341
			1338	3	356

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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

MAT	MF	REC.
1338	3	363
1338	3	380
1338	3	395
1338	3	410
1338	3	423
1338	3	436
1338	3	448
1338	3	462
1338	3	474
1338	3	487
1338	3	499
1338	3	511
1338	3	523
1338	3	535
1338	3	545
1338	3	554
1338	3	564
1338	3	583
1338	3	600
1338	3	617
1338	3	634
1338	4	871
1338	4	874
1338	4	877
1338	4	880
1338	4	883
1338	4	886
1338	4	889
1338	4	892
1338	4	895
1338	4	898
1338	4	901
1338	4	904
1338	4	907
1338	4	910
1338	4	913
1338	4	916
1338	4	919
1338	4	922
1338	4	925
1338	4	928
1338	4	931
1338	4	934
1338	5	953
1338	5	961
1338	5	969
1338	5	977
1338	5	985
1338	5	996
1338	8	1000
1338	8	1003
1338	8	1119

```
COMPARE TWO BCD FILES (COMPARE 82-1)
----------------------------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST-------       70 (   1 TO 80 )
COLUMNS TO COMPARE------------        66 (   1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---       66 (   1 TO 70 )
SPECIAL FILE FLAG-------------         2
ACCEPTABLE DIFFERENCE---------         0 (   1 TO 70 )
COMMENT CARDS-----------------COMPARED
----------------------------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
----------------------------------------------------------------------------------------------------------------------
FILE 1 =ACT1338 OLD
FILE 2 =ACT1338 NEW
----------------------------------------------------------------------------------------------------------------------
 FILE  CARD  CONTENTS
----------------------------------------------------------------------------------------------------------------------
                      1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
----------------------------------------------------------------------------------------------------------------------
----------------------------------------------------------------------------------------------------------------------
    1     2   9.42380+ 4 2.36167+ 2          1           1          0          11338 1451    1
    2     2   9.42380+ 4 2.36167+ 2          1           1          0          31338 1451    1
 DIFFERENCES                                                                   $
----------------------------------------------------------------------------------------------------------------------
    1     3   0.0     + 0 1.00000+ 0         0           0          0          01338 1451    2
    2     3   0.00000+ 0 1.00000+ 0 .        0           0          0          01338 1451    2
 DIFFERENCES     $$$$
----------------------------------------------------------------------------------------------------------------------
    1     4   0.0     + 0 0.0     + 0        0           0        105         631338 1451    3
    2     4   0.00000+ 0 0.00000+ 0          0           0        105         631338 1451    3
 DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------------------------
    1     6  HEDL TME 77-54       DIST-MAY79                       781102       1338 1451    5
    2     6   HEDL TME 77-54      DIST-MAR83 REV1-OCT80            830316       1338 1451    5
 DIFFERENCES $$$$$$$$$$ $$$$             $$$ $$$$$$$$$$            $$$$$$
----------------------------------------------------------------------------------------------------------------------
    1   109     18. R. SHER, S. FIARMAN, AND C. BECK (PRIV. COMM., OCT. 1976)   1338 1451  108
    2   109     18. R. SHER AND C. BECK   EPRI NP-1771 AND REV. 1 JAN. 1983     1338 1451  108
 DIFFERENCES              $$$$ $$$$$$$$ $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
----------------------------------------------------------------------------------------------------------------------
    1   110                                  1         451        171          11338 1451  109
    2   110                                  1         451        171          31338 1451  109
 DIFFERENCES                                                                   $
----------------------------------------------------------------------------------------------------------------------
    1   112                                  1         458          5          11338 1451  111
    2   112                                  1         458          5          31338 1451  111
 DIFFERENCES                                                                   $
----------------------------------------------------------------------------------------------------------------------
    1   114                                  3           1         39          11338 1451  113
    2   114                                  3           1         39          21338 1451  113
 DIFFERENCES                                                                   $
----------------------------------------------------------------------------------------------------------------------
    1   116                                  3           4         33          11338 1451  115
    2   116                                  3           4         33          21338 1451  115
 DIFFERENCES                                                                   $
----------------------------------------------------------------------------------------------------------------------
    1   119                                  3          18         16          11338 1451  118
    2   119                                  3          18         16          31338 1451  118
 DIFFERENCES                                                                   $
----------------------------------------------------------------------------------------------------------------------
    1   120                                  3          19         14          11338 1451  119
    2   120                                  3          19         14          31338 1451  119
 DIFFERENCES                                                                   $
----------------------------------------------------------------------------------------------------------------------
    1   121                                  3          20          6          11338 1451  120
```

```
   2   121                                                3            20            6            31338 1451   120
 DIFFERENCES                                                                                      $
--------------------------------------------------------------------------------------------------------------------
   1   135                                                3            64            9            11338 1451   134
   2   135                                                3            64            9            21338 1451   134
 DIFFERENCES                                                                                      $
--------------------------------------------------------------------------------------------------------------------
   1   136                                                3            65            8            11338 1451   135
   2   136                                                3            65            8            21338 1451   135
 DIFFERENCES                                                                                      $
--------------------------------------------------------------------------------------------------------------------
   1   138                                                3           102           18            11338 1451   137
   2   138                                                3           102           18            31338 1451   137
 DIFFERENCES                                                                                      $
--------------------------------------------------------------------------------------------------------------------
   1   175    0.0      + 0 0.0      + 0                   0             0            2            01338 1452   174
   2   175    0.00000+ 0 0.00000+ 0                       0             0            2            01338 1452   174
 DIFFERENCES     $$$$         $$$$
--------------------------------------------------------------------------------------------------------------------
   1   179    0.0      + 0 0.0      + 0                   0             0           18            91338 1458   178
   2   179    0.00000+ U 0.00000+ 0                       0             0           18            91338 1458   178
 DIFFERENCES     $$$$         $$$$
--------------------------------------------------------------------------------------------------------------------
   1   180    1.76300+ 8 1.50000+ 6 5.89000+ 6 1.50000+ 5 2.10000+ 3 4.00000+ 21338 1458   179
   2   180    1.73600+ 8 2.00000+ 6 5.92000+ 6 3.40000+ 5 2.00000+ 3 4.00000+ 21338 1458   179
 DIFFERENCES     $$         $ $         $$         $ $         $
--------------------------------------------------------------------------------------------------------------------
   1   181    5.40000+ 8 2.00000+ 6 5.00000+ 6 3.00000+ 5 5.20000+ 6 3.00000+ 51338 1458   180
   2   181    7.13000+ 6 1.00000+ 6 5.31000+ 6 7.50000+ 5 5.42000+ 6 5.00000+ 51338 1458   180
 DIFFERENCES  $ $$          $           $$         $ $         $$         $
--------------------------------------------------------------------------------------------------------------------
   1   182    6.90000+ 6 4.00000+ 5 1.97800+ 8 1.10000+ 6 2.04700+ 8 1.00000+ 61338 1458   181
   2   182    7.28000+ 6 1.10000+ 6 1.97380+ 8 1.13000+ 6 2.04660+ 8 2.40000+ 51338 1458   181
 DIFFERENCES  $ $$          $ $    $     $$          $             $$     $ $      $
--------------------------------------------------------------------------------------------------------------------
   1   188    0.0      + 0 9.30900- 1                     0             0            1            01338 2151   187
   2   188    0.00000+ 0 9.30900- 1                       0             0            1            01338 2151   187
 DIFFERENCES     $$$$
--------------------------------------------------------------------------------------------------------------------
   1   189    2.36167+ 2 0.0      + 0                     0             0           96           161338 2151   188
   2   189    2.36167+ 2 0.00000+ 0                       0             0           96           161338 2151   188
 DIFFERENCES                  $$$$
--------------------------------------------------------------------------------------------------------------------
   1   203    1.71200+ 2 5.00000- 1 1.00220- 1 6.54?00- 2 3.48000- 2 0.0      + 01338 2151   202
   2   203    1.71200+ 2 5.00000- 1 1.00220- 1 6.54200- 2 3.48000- 2 0.00000+ 01338 2151   202
 DIFFERENCES                                                              $$$$
--------------------------------------------------------------------------------------------------------------------
   1   207    0.0      + 0 9.30900- 1                     0             0            3            21338 2151   206
   2   207    0.00000+ 0 9.30900- 1                       0             0            3            21338 2151   206
 DIFFERENCES     $$$$
--------------------------------------------------------------------------------------------------------------------
   1   209    2.36167+ 2 0.0      + 0                     0             0            1            01338 2151   208
   2   209    2.36167+ 2 0.00000+ 0                       0             0            1            01338 2151   208
 DIFFERENCES                  $$$$
--------------------------------------------------------------------------------------------------------------------
   1   210    0.0      + 0 0.0      + 0                   0             3            9            01338 2151   209
   2   210    0.00000+ 0 0.00000+ 0                       0             3            9            01338 2151   209
 DIFFERENCES     $$$$         $$$$
--------------------------------------------------------------------------------------------------------------------
   1   211    1.37000+ 1 5.00000- 1 1.00000+ 0 2.55600- 3 3.48000- 2 0.0      + 01338 2151   210
   2   211    1.37000+ 1 5.00000- 1 1.00000+ 0 2.55600- 3 3.48000- 2 0.00000+ 01338 2151   210
 DIFFERENCES                                                              $$$$
--------------------------------------------------------------------------------------------------------------------
   1   213    2.36167+ 2 0.0      + 0                     1             0            2            01338 2151   212
   2   213    2.36167+ 2 0.00000+ 0                       1             0            2            01338 2151   212
 DIFFERENCES                  $$$$
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```
   1   214   0.0     + 0 0.0     + 0         1          3          9          01338 2151   213
   2   214   0.00000+ 0 0.00000+ 0          1          3          9          01338 2151   213
 DIFFERENCES    $$$$        $$$$
   1   215   1.37000+ 1 5.00000- 1 1.00000+ 0 1.61000- 3 3.48000- 2 0.0     + 01338 2151   214
   2   215   1.37000+ 1 5.00000- 1 1.00000+ 0 1.61000- 3 3.48000- 2 0.00000+ 01338 2151   214
 DIFFERENCES                                                           $$$$
   1   217   0.0     + 0 0.0     + 0         1          3          9          01338 2151   216
   2   217   0.00000+ 0 0.00000+ 0          1          3          9          01338 2151   216
 DIFFERENCES    $$$$        $$$$
   1   218   6.85000+ 0 1.50000+ 0 1.00000+ 0 8.39000- 4 3.48000- 2 0.0     + 01338 2151   217
   2   218   6.85000+ 0 1.50000+ 0 1.00000+ 0 8.39000- 4 3.48000- 2 0.00000+ 01338 2151   217
 DIFFERENCES                                                           $$$$
   1   223   0.0     + 0 0.0     + 0         0          0          1        1061338 3    1   222
   2   223   0.00000+ 0 0.00000+ 0          0          0          1        1081338 3    1   222
 DIFFERENCES    $$$$        $$$$                                          $
   1   224           106          2                                         1338 3    1   223
   2   224           108          2                                         1338 3    1   223
 DIFFERENCES          $
   1   225   1.00000- 5 0.0     + 0 2.53000- 2 0.0     + 0 1.50000+ 3 0.0     + 01338 3    1   224
   2   225   1.00000- 5 0.00000+ 0 2.53000- 2 0.00000+ 0 1.50000+ 3 0.00000+ 01338 3    1   224
 DIFFERENCES                $$$$                   $$$$                   $$$$
   1   250   1.04000+ 6 6.64364+ 0 1.05000+ 6 6.63347+ 0 1.06400+ 6 6.62801+ 01338 3    1   249
   2   250   1.04000+ 6 6.64364+ 0 1.05000+ 6 6.63347+ 0 1.06400+ 6 6.61801+ 01338 3    1   249
 DIFFERENCES                                                            $
   1   251   1.07000+ 6 6.62328+ 0 1.08000+ 6 6.62204+ 0 1.09000+ 6 6.61668+ 01338 3    1   250
   2   251   1.06400+ 6 6.62801+ 0 1.07000+ 6 6.62228+ 0 1.07000+ 6 6.62328+ 01338 3    1   250
 DIFFERENCES    $$          $$$     $             $$         $            $$$
   1   252   1.10000+ 6 6.60651+ 0 1.15000+ 6 6.55927+ 0 1.20000+ 6 6.52186+ 01338 3    1   251
   2   252   1.08000+ 6 6.62204+ 0 1.09000+ 6 6.61668+ 0 1.10000+ 6 6.60651+ 01338 3    1   251
 DIFFERENCES    $$          $$$$    $$           $$$$$       $           $$$$$
   1   253   1.40000+ 6 6.66343+ 0 1.75000+ 6 7.15350+ 0 2.00000+ 6 7.45972+ 01338 3    1   252
   2   253   1.15000+ 6 6.55927+ 0 1.20000+ 6 6.52186+ 0 1.40000+ 6 6.66343+ 01338 3    1   252
 DIFFERENCES    $$         $$$$$    $$          $ $$$$$     $ $         $ $$$$$
   1   254   2.20000+ 6 7.45718+ 0 2.50000+ 6 7.59812+ 0 2.75000+ 6 7.72343+ 01338 3    1   253
   2   254   1.75000+ 6 7.15350+ 0 2.00000+ 6 7.45972+ 0 2.20000+ 6 7.45718+ 01338 3    1   253
 DIFFERENCES   $ $$        $ $$$    $             $$$$      $$           $$$$$
   1   255   3.00000+ 6 7.76741+ 0 3.50000+ 6 7.88302+ 0 4.00000+ 6 7.55303+ 01338 3    1   254
   2   255   2.50000+ 6 7.59812+ 0 2.75000+ 6 7.72343+ 0 3.00000+ 6 7.76741+ 01338 3    1   254
 DIFFERENCES   $ $         $$$$$   $ $$          $$ $$      $            $$$$$
   1   256   4.50000+ 6 7.23938+ 0 5.00000+ 6 7.09510+ 0 5.50000+ 6 6.95090+ 01338 3    1   255
   2   256   3.50000+ 6 7.88302+ 0 4.00000+ 6 7.55303+ 0 4.50000+ 6 7.23938+ 01338 3    1   255
 DIFFERENCES   $           $$$$$    $            $$$$$      $           $ $$$$$
   1   257   6.00000+ 6 7.00067+ 0 7.00000+ 6 6.76225+ 0 7.50000+ 6 6.68254+ 01338 3    1   256
   2   257   5.00000+ 6 7.09510+ 0 5.50000+ 6 6.95090+ 0 6.00000+ 6 7.00067+ 01338 3    1   256
 DIFFERENCES   $            $$$$   $ $           $$$$$      $ $         $ $$$$$
   1   258   8.00000+ 6 6.72683+ 0 9.00000+ 6 6.80343+ 0 9.99960+ 6 6.86790+ 01338 3    1   257
   2   258   7.00000+ 6 6.76225+ 0 7.50000+ 6 6.68254+ 0 8.00000+ 6 6.72683+ 01338 3    1   257
 DIFFERENCES   $            $$$$   $ $           $$$$$      $ $$$$       $$$$$
   1   259   1.29110+ 7 7.01920+ 0 1.40000+ 7 7.07580+ 0 1.50000+ 7 7.12778+ 01338 3    1   258
```

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```
   2   259   9.00000+ 6 6.80343+ 0 9.99960+ 6 6.86790+ 0 1.29110+ 7 7.01920+ 01338 3    1   258
 DIFFERENCES   $ $$$$     $ $ $$$$$   $ $$$$     $ $ $$$$       $$$$         $$$$$
   1   260   2.00000+ 7 7.41000+ 0                                          1338 3    1   259
                                   1.50000+ 7 7.12778+ 0 2.00000+ 7 7.41000+ 01338 3    1   259
```

```
   2   259   9.00000+ 6 6.80343+ 0 9.99960+ 6 6.86790+ 0 1.29110+ 7 7.01920+ 01338 3  1  258
DIFFERENCES  $ $$$$    $ $ $$$$$    $ $$$$    $ $ $$$$       $$$$       $$$$$
-------------------------------------------------------------------------------------------
   1   260   2.00000+ 7 7.41000+ 0                                                1338 3  1  259
   2   260   1.40000+ 7 7.07580+ 0 1.50000+ 7 7.12778+ 0 2.00000+ 7 7.41000+ 01338 3  1  259
DIFFERENCES  $ $           $$$$     $$$$$$$$ $ $$$$$$$$ $ $$$$$$$$ $ $$$$$$$$ $
-------------------------------------------------------------------------------------------
   1   263   0.0    + 0 0.0    + 0          0          0          1          381338 3  2  262
   2   263   0.00000+ 0 0.00000+ 0          0          0          1          381338 3  2  262
DIFFERENCES     $$$$       $$$$
-------------------------------------------------------------------------------------------
   1   265   1.00000- 5 0.0    + 0 2.53000- 2 0.0    + 0 1.00000+ 4 0.0    + 01338 3  2  264
   2   265   1.00000- 5 0.00000+ 0 2.53000- 2 0.00000+ 0 1.00000+ 4 0.00000+ 01338 3  2  264
DIFFERENCES              $$$$                   $$$$                 $$$$
-------------------------------------------------------------------------------------------
   1   280   0.0    + 0-4.38140+ 4          0          0          1          881338 3  4  279
   2   280   0.00000+ 0-4.38140+ 4          0          0          1          901338 3  4  279
DIFFERENCES     $$$$                                                         $$
-------------------------------------------------------------------------------------------
   1   281            88          2                                          1338 3  4  280
   2   281            90          2                                          1338 3  4  280
DIFFERENCES           $$
-------------------------------------------------------------------------------------------
   1   282   4.40000+ 4 0.0    + 0 4.60000+ 4 6.00000- 3 5.00000+ 4 1.90000- 21338 3  4  281
   2   282   4.40000+ 4 0.00000+ 0 4.60000+ 4 6.00000- 3 5.00000+ 4 1.90000- 21338 3  4  281
DIFFERENCES              $$$$
-------------------------------------------------------------------------------------------
   1   303   1.04000+ 6 6.72032- 1 1.05000+ 6 6.78801- 1 1.06400+ 6 6.97043- 11338 3  4  302
   2   303   1.04000+ 6 6.72032- 1 1.05000+ 6 6.78801- 1 1.06400+ 6 6.87043- 11338 3  4  302
DIFFERENCES                                                                $
-------------------------------------------------------------------------------------------
   1   304   1.07000+ 6 7.02467- 1 1.08000+ 6 7.18161- 1 1.09000+ 6 7.29730- 11338 3  4  303
   2   304   1.06400+ 6 6.97043- 1 1.07000+ 6 7.01467- 1 1.07000+ 6 7.02467- 11338 3  4  303
DIFFERENCES     $$       $ $$$$$      $          $$$ $       $        $$$$$
-------------------------------------------------------------------------------------------
   1   305   1.10000+ 6 7.36593- 1 1.15000+ 6 7.74501- 1 1.20000+ 6 8.17475- 11338 3  4  304
   2   305   1.08000+ 6 7.18161- 1 1.09000+ 6 7.29730- 1 1.10000+ 6 7.36593- 11338 3  4  304
DIFFERENCES     $$         $$$$$      $$         $$$$$       $          $ $$$$$
-------------------------------------------------------------------------------------------
   1   306   1.40000+ 6 1.26923+ 0 1.75000+ 6 1.50728+ 0 2.00000+ 6 1.51882+ 01338 3  4  305
   2   306   1.15000+ 6 7.74501- 1 1.20000+ 6 8.17475- 1 1.40000+ 6 1.26923+ 01338 3  4  305
DIFFERENCES     $$       $ $$$$$$ $    $$       $ $$$$$$ $ $ $       $$$$$
-------------------------------------------------------------------------------------------
   1   307   2.20000+ 6 1.26607+ 0 2.50000+ 6 1.05455+ 0 2.75000+ 6 9.28676- 11338 3  4  306
   2   307   1.75000+ 6 1.50728+ 0 2.00000+ 6 1.51882+ 0 2.20000+ 6 1.26607+ 01338 3  4  306
DIFFERENCES  $ $$           $$$$$      $          $$$$$       $$         $  $ $$$ $
-------------------------------------------------------------------------------------------
   1   308   3.00000+ 6 8.16001- 1 3.50000+ 6 6.10011- 1 4.00000+ 6 3.45330- 11338 3  4  307
   2   308   2.50000+ 6 1.05455+ 0 2.75000+ 6 9.28676- 1 3.00000+ 6 8.16001- 11338 3  4  307
DIFFERENCES  $ $         $ $$$$$$ $ $ $$       $ $$$$$    $          $ $$$$$
-------------------------------------------------------------------------------------------
   1   309   4.50000+ 6 2.99480- 1 5.00000+ 6 2.53630- 1 6.00000+ 6 1.61930- 11338 3  4  308
   2   309   3.50000+ 6 6.10011- 1 4.00000+ 6 3.45330- 1 4.50000+ 6 2.99480- 11338 3  4  308
DIFFERENCES  $           $ $$$$$    $          $ $$$       $ $        $ $$$$
-------------------------------------------------------------------------------------------
   1   310   7.00000+ 6 1.12570- 1 8.00000+ 6 1.01480- 1 9.00000+ 6 0.0    + 01338 3  4  309
   2   310   5.00000+ 6 2.53630- 1 6.00000+ 6 1.61930- 1 7.00000+ 6 1.12570- 11338 3  4  309
DIFFERENCES  $           $ $$$$     $            $ $$       $          $ $$$$$$ $
-------------------------------------------------------------------------------------------
   1   311   2.00000+ 7 0.0    + 0                                                1338 3  4  310
   2   311   8.00000+ 6 1.01480- 1 9.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01338 3  4  310
DIFFERENCES  $         $ $  $$$$$ $ $$$$$$$$ $ $$$$$$$$ $ $$$$$$$$ $ $$$$$$$$ $
-------------------------------------------------------------------------------------------
   1   314   0.0    + 0-6.97050+ 6          0          0          1          91338 3 16  313
   2   314   0.00000+ 0-6.97050+ 6          0          0          1          91338 3 16  313
DIFFERENCES     $$$$
```

```
-----------------------------------------------------------------------------------------------------------
    1   474   3.50000+ 6 0.0      + 0 2.00000+ 7 0.0      + 0                          1338 3 58   473
    2   474   3.50000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                          1338 3 58   473
 DIFFERENCES              $$$$                    $$$$
-----------------------------------------------------------------------------------------------------------
    1   477   0.0      + 0-9.79850+ 5          0          0          1          261338 3 59   476
    2   477   0.00000+ 0-9.79850+ 5          0          0          1          261338 3 59   476
 DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------------
    1   479   9.84000+ 5 0.0      + 0 9.85000+ 5 1.00000- 3 9.87000+ 5 2.00000- 31338 3 59   478
    2   479   9.84000+ 5 0.00000+ 0 9.85000+ 5 1.00000- 3 9.87000+ 5 2.00000- 31338 3 59   478
 DIFFERENCES              $$$$
-----------------------------------------------------------------------------------------------------------
    1   487   4.00000+ 6 0.0      + 0 2.00000+ 7 0.0      + 0                          1338 3 59   486
    2   487   4.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                          1338 3 59   486
 DIFFERENCES              $$$$                    $$$$
-----------------------------------------------------------------------------------------------------------
    1   490   0.0      + 0-9.80840+ 5          0          0          1          231338 3 60   489
    2   490   0.00000+ 0-9.80840+ 5          0          0          1          231338 3 60   489
 DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------------
    1   492   9.85000+ 5 0.0      + 0 9.87000+ 5 3.00000- 3 9.90000+ 5 5.00000- 31338 3 60   491
    2   492   9.85000+ 5 0.00000+ 0 9.87000+ 5 3.00000- 3 9.90000+ 5 5.00000- 31338 3 60   491
 DIFFERENCES              $$$$
-----------------------------------------------------------------------------------------------------------
    1   499   4.00000+ 6 0.0      + 0 2.00000+ 7 0.0      + 0                          1338 3 60   498
    2   499   4.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                          1338 3 60   498
 DIFFERENCES              $$$$                    $$$$
-----------------------------------------------------------------------------------------------------------
    1   502   0.0      + 0-9.82840+ 5          0          0          1          231338 3 61   501
    2   502   0.00000+ 0-9.82840+ 5          0          0          1          231338 3 61   501
 DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------------
    1   504   9.87000+ 5 0.0      + 0 9.90000+ 5 4.00000- 3 9.99960+ 5 9.00000- 31338 3 61   503
    2   504   9.87000+ 5 0.00000+ 0 9.90000+ 5 4.00000- 3 9.99960+ 5 9.00000- 31338 3 61   503
 DIFFERENCES              $$$$
-----------------------------------------------------------------------------------------------------------
    1   511   4.00000+ 6 0.0      + 0 2.00000+ 7 0.0      + 0                          1338 3 61   510
    2   511   4.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                          1338 3 61   510
 DIFFERENCES              $$$$                    $$$$
-----------------------------------------------------------------------------------------------------------
    1   514   0.0      + 0-1.01570+ 6          0          0          1          241338 3 62   513
    2   514   0.00000+ 0-1.01570+ 6          0          0          1          241338 3 62   513
 DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------------
    1   516   1.02000+ 6 0.0      + 0 1.02600+ 6 2.50000- 3 1.02800+ 6 3.00000- 31338 3 62   515
    2   516   1.02000+ 6 0.00000+ 0 1.02600+ 6 2.50000- 3 1.02800+ 6 3.00000- 31338 3 62   515
 DIFFERENCES              $$$$
-----------------------------------------------------------------------------------------------------------
    1   523   3.50000+ 6 9.87340- 4 4.00000+ 6 0.0      + 0 2.00000+ 7 0.0      + 01338 3 62   522
    2   523   3.50000+ 6 9.87340- 4 4.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01338 3 62   522
 DIFFERENCES                                      $$$$                    $$$$
-----------------------------------------------------------------------------------------------------------
    1   526   0.0      + 0-1.02170+ 6          0          0          1          221338 3 63   525
    2   526   0.00000+ 0-1.02170+ 6          0          0          1          221338 3 63   525
 DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------------
    1   528   1.02600+ 6 0.0      + 0 1.02800+ 6 1.00000- 3 1.03000+ 6 2.00000- 31338 3 63   527
    2   528   1.02600+ 6 0.00000+ 0 1.02800+ 6 1.00000- 3 1.03000+ 6 2.00000- 31338 3 63   527
 DIFFERENCES              $$$$
-----------------------------------------------------------------------------------------------------------
    1   534   3.00000+ 6 2.00000- 3 3.50000+ 6 1.00000- 3 4.00000+ 6 0.0      + 01338 3 63   533
    2   534   3.00000+ 6 2.00000- 3 3.50000+ 6 1.00000- 3 4.00000+ 6 0.00000+ 01338 3 63   533
 DIFFERENCES                                                          $$$$
-----------------------------------------------------------------------------------------------------------
    1   535   2.00000+ 7 0.0      + 0                                                  1338 3 63   534
```

```
   2    535  2.00000+ 7 0.00000+ 0                                            1338 3 63  534
DIFFERENCES                $$$$
---------------------------------------------------------------------------------------------------------------------
   1    538  0.0    + 0-1.05950+ 6          0          0          1         171338 3 64  537
   2    538  0.00000+ 0-1.05950+ 6          0          0          1         181338 3 64  537
DIFFERENCES     $$$$                                                         $
---------------------------------------------------------------------------------------------------------------------
   1    539          17          2                                            1338 3 64  538
   2    539          18          2                                            1338 3 64  538
DIFFERENCES           $
---------------------------------------------------------------------------------------------------------------------
   1    540  1.06400+ 6 1.00000- 2 1.07000+ 6 1.10000- 2 1.08000+ 6 1.40000- 21338 3 64  539
   2    540  1.06400+ 6 0.00000+ 0 1.06400+ 6 1.00000- 2 1.07000+ 6 1.10000- 21338 3 64  539
DIFFERENCES             $      $ $    $$        $           $         $
---------------------------------------------------------------------------------------------------------------------
   1    541  1.09000+ 6 1.60000- 2 1.10000+ 6 1.90000- 2 1.15000+ 6 3.30000- 21338 3 64  540
   2    541  1.08000+ 6 1.40000- 2 1.09000+ 6 1.60000- 2 1.10000+ 6 1.90000- 21338 3 64  540
DIFFERENCES     $         $          $$         $           $       $ $
---------------------------------------------------------------------------------------------------------------------
   1    542  1.20000+ 6 4.10000- 2 1.40000+ 6 4.50000- 2 1.75000+ 6 2.90000- 21338 3 64  541
   2    542  1.15000+ 6 3.30000- 2 1.20000+ 6 4.10000- 2 1.40000+ 6 4.50000- 21338 3 64  541
DIFFERENCES    $$       $ $          $          $          $$       $ $
---------------------------------------------------------------------------------------------------------------------
   1    543  2.00000+ 6 2.10000- 2 2.20000+ 6 1.30000- 2 2.50000+ 6 8.00000- 31338 3 64  542
   2    543  1.75000+ 6 2.90000- 2 2.00000+ 6 2.10000- 2 2.20000+ 6 1.30000- 21338 3 64  542
DIFFERENCES  $ $$         $          $        $ $          $        $ $      $
---------------------------------------------------------------------------------------------------------------------
   1    544  2.75000+ 6 5.00000- 3 3.00000+ 6 3.00000- 3 3.50000+ 6 1.00000- 31338 3 64  543
   2    544  2.50000+ 6 8.00000- 3 2.75000+ 6 5.00000- 3 3.00000+ 6 3.00000- 31338 3 64  543
DIFFERENCES    $$       $          $ $$       $            $        $
---------------------------------------------------------------------------------------------------------------------
   1    545  4.00000+ 6 0.0    + 0 2.00000+ 7 0.0    + 0                      1338 3 64  544
   2    545  3.50000+ 6 1.00000- 3 4.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01338 3 64  544
DIFFERENCES  $ $        $  $$$$$ $ $        $    $$$$    $$$$$$$$ $ $$$$$$$$ $
---------------------------------------------------------------------------------------------------------------------
   1    548  0.0    + 0-1.06550+ 6          0          0          1         141338 3 65  547
   2    548  0.00000+ 0-1.06550+ 6          0          0          1         151338 3 65  547
DIFFERENCES     $$$$                                                         $
---------------------------------------------------------------------------------------------------------------------
   1    549          14          2                                            1338 3 65  548
   2    549          15          2                                            1338 3 65  548
DIFFERENCES           $
---------------------------------------------------------------------------------------------------------------------
   1    550  1.07000+ 6 1.00000- 3 1.08000+ 6 2.00000- 3 1.09000+ 6 3.00000- 31338 3 65  549
   2    550  1.07000+ 6 0.00000+ 0 1.07000+ 6 1.00000- 3 1.08000+ 6 2.00000- 31338 3 65  549
DIFFERENCES             $      $ $    $       $             $       $
---------------------------------------------------------------------------------------------------------------------
   1    551  1.15000+ 6 5.00000- 3 1.20000+ 6 7.00000- 3 1.40000+ 6 9.00000- 31338 3 65  550
   2    551  1.09000+ 6 3.00000- 3 1.15000+ 6 5.00000- 3 1.20000+ 6 7.00000- 31338 3 65  550
DIFFERENCES    $$       $            $$       $            $        $
---------------------------------------------------------------------------------------------------------------------
   1    552  1.75000+ 6 8.00000- 3 2.00000+ 6 7.00000- 3 2.20000+ 6 5.00000- 31338 3 65  551
   2    552  1.40000+ 6 9.00000- 3 1.75000+ 6 8.00000- 3 2.00000+ 6 7.00000- 31338 3 65  551
DIFFERENCES    $$       $          $ $$       $            $        $
---------------------------------------------------------------------------------------------------------------------
   1    553  2.50000+ 6 3.00000- 3 2.75000+ 6 2.00000- 3 3.00000+ 6 1.00000- 31338 3 65  552
   2    553  2.20000+ 6 5.00000- 3 2.50000+ 6 3.00000- 3 2.75000+ 6 2.00000- 31338 3 65  552
DIFFERENCES    $        $            $$       $          $ $$       $
---------------------------------------------------------------------------------------------------------------------
   1    554  4.00000+ 6 0.0    + 0 2.00000+ 7 0.0    + 0                      1338 3 65  553
   2    554  3.00000+ 6 1.00000- 3 4.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01338 3 65  553
DIFFERENCES  $          $  $$$$$ $ $        $    $$$$    $$$$$$$$ $ $$$$$$$$ $
---------------------------------------------------------------------------------------------------------------------
   1    557  0.0    + 0-1.06550+ 6          0          0          1         171338 3 91  556
   2    557  0.00000+ 0-1.06550+ 6          0          0          1         171338 3 91  556
DIFFERENCES     $$$$
```

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148

```
  1  559   1.07000+ 6 0.0      + 0 1.15000+ 6 5.14640- 2 1.20000+ 6 1.06460- 11338 3 91   558
  2  559   1.07000+ 6 0.00000+ 0 1.15000+ 6 5.14640- 2 1.20000+ 6 1.06460- 11338 3 91   558
DIFFERENCES              $$$$
  1  564   9.00000+ 6 0.0      + 0 2.00000+ 7 0.0      + 0                         1338 3 91   563
  2  564   9.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                         1338 3 91   563
DIFFERENCES              $$$$                 $$$$
  1  567   0.0      + 0 0.0      + 0          0          0          1          441338 3102   566
  2  567   0.00000+ 0 4.80600+ 6          0          0          1          441338 3102   566
DIFFERENCES   $$$$      $ $$$$$  $
  1  569   1.00000- 5 0.0      + 0 2.53000- 2 0.0      + 0 1.50000+ 3 0.0      + 01338 3102   568
  2  569   1.00000- 5 0.00000+ 0 2.53000- 2 0.00000+ 0 1.50000+ 3 0.00000+ 01338 3102   568
DIFFERENCES              $$$$                 $$$$                 $$$$
  1  586   0.0      + 0 0.0      + 0          0          0          1          391338 3251   585
  2  586   0.00000+ 0 0.00000+ 0          0          0          1          391338 3251   585
DIFFERENCES   $$$$       $$$$
  1  603   0.0      + 0 0.0      + 0          0          0          1          391338 3252   602
  2  603   0.00000+ 0 0.00000+ 0          0          0          1          391338 3252   602
DIFFERENCES   $$$$       $$$$
  1  620   0.0      + 0 0.0      + 0          0          0          1          391338 3253   619
  2  620   0.00000+ 0 0.00000+ 0          0          0          1          391338 3253   619
DIFFERENCES   $$$$       $$$$
  1  638   0.0      + 0 2.36005+ 2          0          2        441          201338 4   2   637
  2  638   0.00000+ 0 2.36005+ 2          0          2        441          201338 4   2   637
DIFFERENCES   $$$$
  1  639   1.00000+ 0 2.82286- 3 3.57888- 6-7.01323-11 0.0      + 0 0.0      + 01338 4   2   638
  2  639   1.00000+ 0 2.82286- 3 3.57888- 6-7.01323-11 0.00000+ 0 0.00000+ 01338 4   2   638
DIFFERENCES                                             $$$$       $$$$
  1  640   0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01338 4   2   639
  2  640   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4   2   639
DIFFERENCES   $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
  1  641   0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01338 4   2   640
  2  641   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4   2   640
DIFFERENCES   $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
  1  642   0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 9.99989- 1 5.08112- 31338 4   2   641
  2  642   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 9.99989- 1 5.08112- 31338 4   2   641
DIFFERENCES   $$$$       $$$$       $$$$       $$$$
  1  643   1.22742- 5 1.42081- 8 2.82496- 9 7.50981-11 0.0      + 0 0.0      + 01338 4   2   642
  2  643   1.22742- 5 1.42081- 8 2.82496- 9 7.50981-11 0.00000+ 0 0.00000+ 01338 4   2   642
DIFFERENCES                                             $$$$       $$$$
  1  644   0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01338 4   2   643
  2  644   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4   2   643
DIFFERENCES   $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
  1  645   0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01338 4   2   644
  2  645   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4   2   644
DIFFERENCES   $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
  1  646   0.0      + 0-2.82282- 3 9.99972- 1 7.25868- 3 2.55945- 5 5.23080- 81338 4   2   645
  2  646   0.00000+ 0-2.82282- 3 9.99972- 1 7.25868- 3 2.55945- 5 5.23080- 81338 4   2   645
DIFFERENCES   $$$$
  1  647  -1.53990- 8 1.56929-10 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 01338 4   2   646
```

```
   2   647  -1.53990- 8 1.56929-10 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  646
DIFFERENCES                          $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   648   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  647
   2   648   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  647
DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   649   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 1.07574- 5-5.08101- 31338 4  2  648
   2   649   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 1.07574- 5-5.08101- 31338 4  2  648
DIFFERENCES      $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   651   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  650
   2   651   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  650
DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   652   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  651
   2   652   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  651
DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   653   0.0     + 0-4.33807- 8 2.45880- 5-7.25845- 3 9.99909- 1 1.15475- 21338 4  2  652
   2   653   0.00000+ 0-4.33807- 8 2.45880- 5-7.25845- 3 9.99909- 1 1.15475- 21338 4  2  652
DIFFERENCES      $$$$
-------------------------------------------------------------------------------------------------
   1   654   6.57259- 5 2.36869- 7-6.16810- 8 2.48466-10 0.0     + 0 0.0     + 01338 4  2  653
   2   654   6.57259- 5 2.36869- 7-6.16810- 8 2.48466-10 0.00000+ 0 0.00000+ 01338 4  2  653
DIFFERENCES                                              $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   655   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  654
   2   655   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  654
DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   656   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 1.78584-10-1.15681- 71338 4  2  655
   2   656   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 1.78584-10-1.15681- 71338 4  2  655
DIFFERENCES      $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   658  -1.39717- 7-1.34359- 9 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  657
   2   658  -1.39717- 7-1.34359- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  657
DIFFERENCES                          $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   659   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  658
   2   659   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  658
DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   660   0.0     + 0-7.42429-13 5.34356-10-2.30044- 7 6.51933- 5-1.15470- 21338 4  2  659
   2   660   0.00000+ 0-7.42429-13 5.34356-10-2.30044- 7 6.51933- 5-1.15470- 21338 4  2  659
DIFFERENCES      $$$$
-------------------------------------------------------------------------------------------------
   1   662   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  661
   2   662   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  661
DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   663   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 3.10336-15-2.43665-121338 4  2  662
   2   663   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 3.10336-15-2.43665-121338 4  2  662
DIFFERENCES      $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   665   1.59641- 4 9.28049- 7-1.48696- 7-1.67352- 9 0.0     + 0 0.0     + 01338 4  2  664
   2   665   1.59641- 4 9.28048- 7-1.48696- 7-1.67352- 9 0.00000+ 0 0.00000+ 01338 4  2  664
DIFFERENCES                          $                                  $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   666   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  665
   2   666   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  665
DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   667   0.0     + 0-1.30154-17 1.10054-14-5.86310-12 2.23784- 9-6.24284- 71338 4  2  666
   2   667   0.00000+ 0-1.30154-17 1.10054-14-5.86310-12 2.23784- 9-6.24283- 71338 4  2  666
DIFFERENCES      $$$$                                                         $
```

```
    1    669  -1.67564- 7-2.78868- 9 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  668
    2    669  -1.67564- 7-2.78868- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  668
DIFFERENCES                          $$$$        $$$$        $$$$        $$$$

    1    670   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 5.47056-20-2.86699-171338 4  2  669
    2    670   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 5.47056-20-2.86699-171338 4  2  669
DIFFERENCES      $$$$        $$$$        $$$$        $$$$

    1    671   2.84772-14-1.20395-11 3.84849- 9-9.23291- 7 1.59444- 4-1.79298- 21338 4  2  670
    2    671   2.84772-14-1.20395-11 3.84849- 9-9.23290- 7 1.59444- 4-1.79298- 21338 4  2  670
DIFFERENCES                                              $

    1    673   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  672
    2    673   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  672
DIFFERENCES      $$$$        $$$$        $$$$        $$$$        $$$$        $$$$

    1    674   0.0     + 0 0.0     + 0 8.74770-20-8.36459-17 6.26065-14-2.22991-111338 4  2  673
    2    674   0.00000+ 0 0.00000+ 0 8.74770-20-8.36459-17 6.26065-14-2.22991-111338 4  2  673
DIFFERENCES      $$$$        $$$$

    1    676   2.94014- 4 2.34671- 6-1.88566- 7-5.61143- 9 0.0     + 0 0.0     + 01338 4  2  675
    2    676   2.94014- 4 2.34671- 6-1.88566- 7-5.61143- 9 0.00000+ 0 0.00000+ 01338 4  2  675
DIFFERENCES                                                  $$$$        $$$$

    1    677   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  676
    2    677   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  676
DIFFERENCES      $$$$        $$$$        $$$$        $$$$        $$$$        $$$$

    1    680  -1.24475- 7-2.39199- 9 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  679
    2    680  -1.24475- 7-2.39199- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  679
DIFFERENCES                          $$$$        $$$$        $$$$        $$$$

    1    681   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 6.27536-19-5.30715-161338 4  2  680
    2    681   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 6.27536-19-5.30715-161338 4  2  680
DIFFERENCES      $$$$        $$$$        $$$$        $$$$

    1    684   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  683
    2    684   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  683
DIFFERENCES      $$$$        $$$$        $$$$        $$$$        $$$$        $$$$

    1    685   0.0     + 0 0.0     + 0 1.61654-18-1.14477-15 3.88318-13-9.65736-111338 4  2  684
    2    685   0.00000+ 0 0.00000+ 0 1.61654-18-1.14477-15 3.88318-13-9.65736-111338 4  2  684
DIFFERENCES      $$$$        $$$$

    1    687   4.68727- 4 4.74288- 6-9.52195- 9-1.96044- 9 0.0     + 0 0.0     + 01338 4  2  686
    2    687   4.68727- 4 4.74288- 6-9.52195- 9-1.96044- 9 0.00000+ 0 0.00000+ 01338 4  2  686
DIFFERENCES                                                  $$$$        $$$$

    1    688   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  687
    2    688   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  687
DIFFERENCES      $$$$        $$$$        $$$$        $$$$        $$$$        $$$$

    1    691  -8.19521- 8-5.44245- 9 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  690
    2    691  -8.19521- 8-5.44245- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  690
DIFFERENCES                          $$$$        $$$$        $$$$        $$$$

    1    692   0.0     + 0 0.0     + 0 0.0     + 0-1.14997-20 6.15658-18-3.84150-151338 4  2  691
    2    692   0.00000+ 0 0.00000+ 0 0.00000+ 0-1.14997-20 6.15658-18-3.84150-151338 4  2  691
DIFFERENCES      $$$$        $$$$        $$$$

    1    695   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  694
    2    695   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  694
DIFFERENCES      $$$$        $$$$        $$$$        $$$$        $$$$        $$$$

    1    696   0.0     + 0-2.12991-20 1.06240-17-6.42162-15 1.52351-12-2.95082-101338 4  2  695
```

```
   2   696   0.00000+ 0-2.12991-20 1.06240-17-6.42162-15 1.52351-12-2.95082-101338 4  2  695
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1   698   6.83750- 4 8.38161- 6-1.78485- 8 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  697
   2   698   6.83750- 4 8.38161- 6-1.78485- 8 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  697
DIFFERENCES                                    $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1   699   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0-3.67566-201338 4  2  698
   2   699   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0-3.67566-201338 4  2  698
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1   702   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  701
   2   702   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  701
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1   703   0.0     + 0 0.0     + 0 0.0     + 0-6.02851-20 2.75530-17-1.59696-141338 4  2  702
   2   703   0.00000+ 0 0.00000+ 0 0.00000+ 0-6.02851-20 2.75530-17-1.59696-141338 4  2  702
DIFFERENCES     $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1   705   9.98467- 1 4.12256- 2 8.49487- 4 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  704
   2   705   9.98467- 1 4.12256- 2 8.49487- 4 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  704
DIFFERENCES                                    $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1   706   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  705
   2   706   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  705
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1   707   0.0     + 0-9.50420-20 4.21568-17-2.40690-14 4.58482-12-7.30671-101338 4  2  706
   2   707   0.00000+ 0-9.50420-20 4.21568-17-2.40690-14 4.58482-12-7.30671-101338 4  2  706
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1   708   9.56603- 8-9.91112- 6 7.64267- 4-3.91052- 2 9.98296- 1 4.33387- 21338 4  2  707
   2   708   9.56602- 8-9.91112- 6 7.64267- 4-3.91052- 2 9.98296- 1 4.33387- 21338 4  2  707
DIFFERENCES         $
-------------------------------------------------------------------------------------------
   1   709   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01338 4  2  708
   2   709   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01338 4  2  708
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1   710   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0-1.45089-191338 4  2  709
   2   710   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0-1.45089-191338 4  2  709
DIFFERENCES     $$$$        $$$$        $$$$        $$$$        $$$$
-------------------------------------------------------------------------------------------
   1   713   0.0     + 0 0.0     + 0           0           0           1          391338 4  2  712
   2   713   0.00000+ 0 0.00000+ 0           0           0           1          391338 4  2  712
DIFFERENCES     $$$$        $$$$
-------------------------------------------------------------------------------------------
   1   715   0.0     + 0 1.00000- 5           0           0           1          01338 4  2  714
   2   715   0.00000+ 0 1.00000- 5           0           0           1          01338 4  2  714
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1   716   0.0     + 0                                                        1338 4  2  715
   2   716   0.00000+ 0                                                        1338 4  2  715
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1   717   0.0     + 0 1.00000+ 4           0           0           1          01338 4  2  716
   2   717   0.00000+ 0 1.00000+ 4           0           0           1          01338 4  2  716
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1   718   0.0     + 0                                                        1338 4  2  717
   2   718   0.00000+ 0                                                        1338 4  2  717
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1   719   0.0     + 0 2.00000+ 4           0           0          16          01338 4  2  718
   2   719   0.00000+ 0 2.00000+ 4           0           0          16          01338 4  2  718
DIFFERENCES     $$$$
```


133
133
SUM
END

1	721	1.91670- 7	-8.40645- 7	2.51781- 7	-9.49117- 8	8.48204- 7	2.60361- 7	71338	4	2	720					
2	721	1.91670- 7	-8.40644- 7	2.51781- 7	-9.49117- 8	8.48203- 7	2.60361- 7	71338	4	2	720					
DIFFERENCES			$			$										
1	722	-6.71356- 7	7.15889- 7	-3.74881- 9	0.0 + 0			1338	4	2	721					
2	722	-6.71355- 7	7.15888- 7	-3.74881- 9	0.00000+ 0			1338	4	2	721					
DIFFERENCES		$	$		$$$$											
1	723	0.0 + 0	3.00000+ 4	0	0	16	01338	4	2	722						
2	723	0.00000+ 0	3.00000+ 4	0	0	16	01338	4	2	722						
DIFFERENCES		$$$$														
1	725	-6.91981- 8	1.86092- 6	-8.61866- 7	3.49122- 7	1.45140- 6	-2.27741- 7	71338	4	2	724					
2	725	-6.91981- 8	1.86092- 6	-8.61865- 7	3.49122- 7	1.45140- 6	-2.27741- 7	71338	4	2	724					
DIFFERENCES				$												
1	726	3.02836- 8	-1.04743- 6	4.58994- 8	0.0 + 0			1338	4	2	725					
2	726	3.02836- 8	-1.04743- 6	4.58994- 8	0.00000+ 0			1338	4	2	725					
DIFFERENCES					$$$$											
1	727	0.0 + 0	5.50000+ 4	0	0	16	01338	4	2	726						
2	727	0.00000+ 0	5.50000+ 4	0	0	16	01338	4	2	726						
DIFFERENCES		$$$$														
1	728	8.00362- 2	8.73515- 3	1.11192- 4	3.56674- 6	2.92270- 7	7.88654- 7	71338	4	2	727					
2	728	8.00362- 2	8.73515- 3	1.11192- 4	3.56674- 6	2.92270- 7	7.88653- 7	71338	4	2	727					
DIFFERENCES							$									
1	729	1.63239- 7	-5.00029- 7	-5.30255- 7	-7.73720- 7	-5.91859- 7	6.72649- 8	1338	4	2	728					
2	729	1.63239- 7	-5.00029- 7	-5.30255- 7	-7.73719- 7	-5.91859- 7	6.72649- 8	1338	4	2	728					
DIFFERENCES					$$											
1	730	6.67164- 7	5.74592- 7	2.69193- 8	0.0 + 0			1338	4	2	729					
2	730	6.67163- 7	5.74592- 7	2.69193- 8	0.00000+ 0			1338	4	2	729					
DIFFERENCES		$			$$$$											
1	731	0.0 + 0	6.50000+ 4	0	0	16	01338	4	2	730						
2	731	0.00000+ 0	6.50000+ 4	0	0	16	01338	4	2	730						
DIFFERENCES		$$$$														
1	732	9.34957- 2	9.48400- 3	1.86790- 4	5.84164- 6	-9.59900- 7	-1.42433- 6	1338	4	2	731					
2	732	9.34957- 2	9.48400- 3	1.86790- 4	5.84164- 6	-9.59899- 7	-1.42433- 6	1338	4	2	731					
DIFFERENCES						$$$										
1	733	-3.50888- 7	1.14121- 7	1.13427- 7	-2.99803- 7	-7.79294- 7	-2.06861- 7	71338	4	2	732					
2	733	-3.50888- 7	1.14121- 7	1.13427- 7	-2.99803- 7	-7.79293- 7	-2.06861- 7	71338	4	2	732					
DIFFERENCES						$										
1	734	4.19266- 7	5.01388- 7	3.25438- 7	0.0 + 0			1338	4	2	733					
2	734	4.19266- 7	5.01388- 7	3.25438- 7	0.00000+ 0			1338	4	2	733					
DIFFERENCES					$$$$											
1	735	0.0 + 0	7.50000+ 4	0	0	16	01338	4	2	734						
2	735	0.00000+ 0	7.50000+ 4	0	0	16	01338	4	2	734						
DIFFERENCES		$$$$														
1	736	1.06384- 1	1.10177- 2	2.86136- 4	1.02108- 5	7.44063- 7	6.87174- 7	71338	4	2	735					
2	736	1.06384- 1	1.10177- 2	2.86136- 4	1.02108- 5	7.44062- 7	6.87173- 7	71338	4	2	735					
DIFFERENCES						$	$									
1	738	-6.43268- 7	-8.88225- 7	-8.44113- 7	0.0 + 0			1338	4	2	737					
2	738	-6.43267- 7	-8.88224- 7	-8.44112- 7	0.00000+ 0			1338	4	2	737					
DIFFERENCES		$	$	$	$$$$											
1	739	0.0 + 0	9.00000+ 4	0	0	16	01338	4	2	738						

```
   2   739   0.00000+ 0 9.00000+ 4          0          0          16          01338 4  2  738
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
   1   740   1.24657- 1 1.41494- 2 4.94009- 4 1.81852- 5-1.73544- 7-8.53678- 71338 4  2  739
   2   740   1.24657- 1 1.41494- 2 4.94009- 4 1.81852- 5-1.73544- 7-8.53677- 71338 4  2  739
DIFFERENCES                                                              $
-------------------------------------------------------------------------------------------------
   1   741  -8.70386- 7-6.19646- 7-8.39158- 7-6.41726- 7-5.97853- 8-2.62544- 81338 4  2  740
   2   741  -8.70385- 7-6.19645- 7-8.39157- 7-6.41725- 7-5.97853- 8-2.62544- 81338 4  2  740
DIFFERENCES        $          $          $          $
-------------------------------------------------------------------------------------------------
   1   742   1.53242- 7 3.69386- 7 2.68772- 7 0.0    + 0                      1338 4  2  741
   2   742   1.53242- 7 3.69386- 7 2.68772- 7 0.00000+ 0                      1338 4  2  741
DIFFERENCES                                  $$$$
-------------------------------------------------------------------------------------------------
   1   743   0.0    + 0 1.00000+ 5          0          0          16          01338 4  2  742
   2   743   0.00000+ 0 1.00000+ 5          0          0          16          01338 4  2  742
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
   1   744   1.36141- 1 1.66305- 2 6.75044- 4 2.72698- 5 1.07404- 6 7.80505- 71338 4  2  743
   2   744   1.36141- 1 1.66305- 2 6.75044- 4 2.72698- 5 1.07404- 6 7.80504- 71338 4  2  743
DIFFERENCES                                                              $
-------------------------------------------------------------------------------------------------
   1   745   9.25734- 7 5.82251- 7 2.20031- 7 3.18083- 7 4.21235- 7 3.79004- 71338 4  2  744
   2   745   9.25733- 7 5.82251- 7 2.20031- 7 3.18083- 7 4.21235- 7 3.79004- 71338 4  2  744
DIFFERENCES        $
-------------------------------------------------------------------------------------------------
   1   746   1.48101- 7-5.59686- 7-6.76622- 7 0.0    + 0                      1338 4  2  745
   2   746   1.48101- 7-5.59686- 7-6.76621- 7 0.00000+ 0                      1338 4  2  745
DIFFERENCES                     $            $$$$
-------------------------------------------------------------------------------------------------
   1   747   0.0    + 0 1.50000+ 5          0          0          16          01338 4  2  746
   2   747   0.00000+ 0 1.50000+ 5          0          0          16          01338 4  2  746
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
   1   750   4.21980- 7 4.61120- 7 2.82421- 7 0.0    + 0                      1338 4  2  749
   2   750   4.21980- 7 4.61120- 7 2.82421- 7 0.00000+ 0                      1338 4  2  749
DIFFERENCES                                  $$$$
-------------------------------------------------------------------------------------------------
   1   751   0.0    + 0 2.00000+ 5          0          0          16          01338 4  2  750
   2   751   0.00000+ 0 2.00000+ 5          0          0          16          01338 4  2  750
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
   1   754   4.36804- 7 2.91483- 7 2.39326- 7 0.0    + 0                      1338 4  2  753
   2   754   4.36804- 7 2.91483- 7 2.39326- 7 0.00000+ 0                      1338 4  2  753
DIFFERENCES                                  $$$$
-------------------------------------------------------------------------------------------------
   1   755   0.0    + 0 3.00000+ 5          0          0          16          01338 4  2  754
   2   755   0.00000+ 0 3.00000+ 5          0          0          16          01338 4  2  754
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
   1   758   2.16908- 7 1.76052- 7-1.60877- 7 0.0    + 0                      1338 4  2  757
   2   758   2.16908- 7 1.76052- 7-1.60877- 7 0.00000+ 0                      1338 4  2  757
DIFFERENCES                                  $$$$
-------------------------------------------------------------------------------------------------
   1   759   0.0    + 0 4.00000+ 5          0          0          16          01338 4  2  758
   2   759   0.00000+ 0 4.00000+ 5          0          0          16          01338 4  2  758
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
   1   761   1.59603- 6 9.37347- 7 7.18905- 7 4.72099- 7 4.21372- 8-4.24166- 71338 4  2  760
   2   761   1.59603- 6 9.37346- 7 7.18904- 7 4.72099- 7 4.21372- 8-4.24166- 71338 4  2  760
DIFFERENCES           $          $
-------------------------------------------------------------------------------------------------
   1   762  -9.14155- 7-9.60517- 7-4.81370- 7 0.0    + 0                      1338 4  2  761
   2   762  -9.14154- 7-9.60517- 7-4.81370- 7 0.00000+ 0                      1338 4  2  761
DIFFERENCES        $                         $$$$
```

```
------------------------------------------------------------------------------------------------
   1   763   0.0    + 0 5.00000+ 5          0          0         16          01338 4  2  762
   2   763   0.00000+ 0 5.00000+ 5          0          0         16          01338 4  2  762
 DIFFERENCES   $$$$
------------------------------------------------------------------------------------------------
   1   766   3.10804- 7 4.08611- 7 8.87767- 8 0.0    + 0                      1338 4  2  765
   2   766   3.10804- 7 4.08611- 7 8.87767- 8 0.00000+ 0                      1338 4  2  765
 DIFFERENCES                                     $$$$
------------------------------------------------------------------------------------------------
   1   767   0.0    + 0 6.00000+ 5          0          0         16          01338 4  2  766
   2   767   0.00000+ 0 6.00000+ 5          0          0         16          01338 4  2  766
 DIFFERENCES   $$$$
------------------------------------------------------------------------------------------------
   1   769   2.36046- 6 2.68393- 7-3.04052- 7-6.70391- 7-5.79076- 7-3.36937- 71338 4  2  768
   2   769   2.36046- 6 2.68393- 7-3.04052- 7-6.70390- 7-5.79076- 7-3.36937- 71338 4  2  768
 DIFFERENCES                                        $
------------------------------------------------------------------------------------------------
   1   770  -2.14126- 7 3.12544- 7 8.15634- 7 0.0    + 0                      1338 4  2  769
   2   770  -2.14126- 7 3.12544- 7 8.15633- 7 0.00000+ 0                      1338 4  2  769
 DIFFERENCES                             $       $$$$
------------------------------------------------------------------------------------------------
   1   771   0.0    + 0 7.00000+ 5          0          0         16          01338 4  2  770
   2   771   0.00000+ 0 7.00000+ 5          0          0         16          01338 4  2  770
 DIFFERENCES   $$$$
------------------------------------------------------------------------------------------------
   1   773   3.52000- 6-2.06241- 7-2.58568- 7 1.10647- 7 6.54107- 7 8.27317- 71338 4  2  772
   2   773   3.52000- 6-2.06241- 7-2.58568- 7 1.10647- 7 6.54106- 7 8.27316- 71338 4  2  772
 DIFFERENCES                                                   $          $
------------------------------------------------------------------------------------------------
   1   774   7.60865- 7 7.18026- 7 5.09645- 7 0.0    + 0                      1338 4  2  773
   2   774   7.60864- 7 7.18025- 7 5.09645- 7 0.00000+ 0                      1338 4  2  773
 DIFFERENCES       $          $                  $$$$
------------------------------------------------------------------------------------------------
   1   775   0.0    + 0 8.00000+ 5          0          0         16          01338 4  2  774
   2   775   0.00000+ 0 8.00000+ 5          0          0         16          01338 4  2  774
 DIFFERENCES   $$$$
------------------------------------------------------------------------------------------------
   1   777   1.13493- 5 9.66226- 7 1.76158- 7-2.06614- 7-1.37957- 7-8.00006- 71338 4  2  776
   2   777   1.13493- 5 9.66226- 7 1.76158- 7-2.06614- 7-1.37957- 7-8.00005- 71338 4  2  776
 DIFFERENCES                                                              $
------------------------------------------------------------------------------------------------
   1   778  -7.22243- 7-3.04895- 7-4.23165- 7 0.0    + 0                      1338 4  2  777
   2   778  -7.22242- 7-3.04895- 7-4.23165- 7 0.00000+ 0                      1338 4  2  777
 DIFFERENCES       $                             $$$$
------------------------------------------------------------------------------------------------
   1   779   0.0    + 0 9.00000+ 5          0          0         16          01338 4  2  778
   2   779   0.00000+ 0 9.00000+ 5          0          0         16          01338 4  2  778
 DIFFERENCES   $$$$
------------------------------------------------------------------------------------------------
   1   781   2.07257- 5-3.33904- 7-1.04771- 6 5.89038- 7 9.79578- 7 1.01762- 61338 4  2  780
   2   781   2.07257- 5-3.33904- 7-1.04771- 6 5.89038- 7 9.79577- 7 1.01762- 61338 4  2  780
 DIFFERENCES                                                   $
------------------------------------------------------------------------------------------------
   1   782   1.25850- 6 8.62369- 7 1.31009- 6 0.0    + 0                      1338 4  2  781
   2   782   1.25850- 6 8.62368- 7 1.31009- 6 0.00000+ 0                      1338 4  2  781
 DIFFERENCES                  $                  $$$$
------------------------------------------------------------------------------------------------
   1   783   0.0    + 0 1.00000+ 6          0          0         16          01338 4  2  782
   2   783   0.00000+ 0 1.00000+ 6          0          0         16          01338 4  2  782
 DIFFERENCES   $$$$
------------------------------------------------------------------------------------------------
   1   786   2.34605- 7 2.90627- 7 7.60654- 7 0.0    + 0                      1338 4  2  785
   2   786   2.34605- 7 2.90627- 7 7.60653- 7 0.00000+ 0                      1338 4  2  785
 DIFFERENCES                             $       $$$$
------------------------------------------------------------------------------------------------
   1   787   0.0    + 0 1.15000+ 6          0          0         16          01338 4  2  786
```

1338 3 341
1338 3 356

```
   2  787  0.00000+ 0 1.15000+ 6          0          0         16           01338 4  2  786
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------
   1  790  3.35101- 7-3.22983- 7-6.62949- 7 0.0     + 0                        1338 4  2  789
   2  790  3.35101- 7-3.22983- 7-6.62948- 7 0.00000+ 0                        1338 4  2  789
DIFFERENCES                             $        $$$$
-----------------------------------------------------------------------------------------------------------------
   1  791  0.0     + 0 1.25000+ 6          0          0         16           01338 4  2  790
   2  791  0.00000+ 0 1.25000+ 6          0          0         16           01338 4  2  790
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------
   1  793  1.89207- 4 2.25075- 5 9.22139- 7 2.28091- 7 2.25842- 7 1.96347- 71338 4  2  792
   2  793  1.89207- 4 2.25075- 5 9.22138- 7 2.28091- 7 2.25842- 7 1.96347- 71338 4  2  792
DIFFERENCES                             $
-----------------------------------------------------------------------------------------------------------------
   1  794  5.30396- 7 8.07704- 7 1.17765- 6 0.0     + 0                        1338 4  2  793
   2  794  5.30396- 7 8.07703- 7 1.17765- 6 0.00000+ 0                        1338 4  2  793
DIFFERENCES                   $                  $$$$
-----------------------------------------------------------------------------------------------------------------
   1  795  0.0     + 0 1.50000+ 6          0          0         16           01338 4  2  794
   2  795  0.00000+ 0 1.50000+ 6          0          0         16           01338 4  2  794
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------
   1  798  1.15093- 6 5.24813- 7 3.44318- 8 0.0     + 0                        1338 4  2  797
   2  798  1.15093- 6 5.24813- 7 3.44318- 8 0.00000+ 0                        1338 4  2  797
DIFFERENCES                                      $$$$
-----------------------------------------------------------------------------------------------------------------
   1  799  0.0     + 0 1.75000+ 6          0          0         16           01338 4  2  798
   2  799  0.00000+ 0 1.75000+ 6          0          0         16           01338 4  2  798
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------
   1  802  9.60977- 7 3.13285- 7 1.30099- 7 0.0     + 0                        1338 4  2  801
   2  802  9.60977- 7 3.13285- 7 1.30099- 7 0.00000+ 0                        1338 4  2  801
DIFFERENCES                                      $$$$
-----------------------------------------------------------------------------------------------------------------
   1  803  0.0     + 0 2.00000+ 6          0          0         16           01338 4  2  802
   2  803  0.00000+ 0 2.00000+ 6          0          0         16           01338 4  2  802
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------
   1  806  1.58936- 6 8.32424- 7-2.29317- 7 0.0     + 0                        1338 4  2  805
   2  806  1.58936- 6 8.32423- 7-2.29317- 7 0.00000+ 0                        1338 4  2  805
DIFFERENCES                   $                  $$$$
-----------------------------------------------------------------------------------------------------------------
   1  807  0.0     + 0 2.50000+ 6          0          0         16           01338 4  2  806
   2  807  0.00000+ 0 2.50000+ 6          0          0         16           01338 4  2  806
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------
   1  810  2.22079- 6 1.67199- 6 1.72901- 6 0.0     + 0                        1338 4  2  809
   2  810  2.22079- 6 1.67199- 6 1.72901- 6 0.00000+ 0                        1338 4  2  809
DIFFERENCES                                      $$$$
-----------------------------------------------------------------------------------------------------------------
   1  811  0.0     + 0 3.00000+ 6          0          0         16           01338 4  2  810
   2  811  0.00000+ 0 3.00000+ 6          0          0         16           01338 4  2  810
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------
   1  814  7.74489- 7 5.22329- 7 7.59610- 7 0.0     + 0                        1338 4  2  813
   2  814  7.74488- 7 5.22329- 7 7.59609- 7 0.00000+ 0                        1338 4  2  813
DIFFERENCES      $                     $$        $$$$
-----------------------------------------------------------------------------------------------------------------
   1  815  0.0     + 0 4.00000+ 6          0          0         16           01338 4  2  814
   2  815  0.00000+ 0 4.00000+ 6          0          0         16           01338 4  2  814
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------
   1  818  1.29288- 5 4.71170- 6 3.58624- 6 0.0     + 0                        1338 4  2  817
   2  818  1.29288- 5 4.71170- 6 3.58624- 6 0.00000+ 0                        1338 4  2  817
DIFFERENCES                                      $$$$
```

```
-------------------------------------------------------------------------------------------------------------------
  1  1114   9.84397+ 4 0.0     + 0           0           0           6          01338 8457 1113
  2  1114   9.84398+ 4 0.00000+ 0           0           0           6          01338 8457 1113
DIFFERENCES      $        $$$$
-------------------------------------------------------------------------------------------------------------------
  1  1115   4.00000+ 0 0.0     + 0 1.69000- 4 2.00000- 6 0.0     + 0 0.0     + 01338 8457 1114
  2  1115   4.00000+ 0 0.00000+ 0 1.69000- 4 2.00000- 6 0.00000+ 0 0.00000+ 01338 8457 1114
DIFFERENCES               $$$$                               $$$$        $$$$
-------------------------------------------------------------------------------------------------------------------
  1  1116   1.10863+ 5 0.0     + 0           0           0           6          01338 8457 1115
  2  1116   1.10863+ 5 0.00000+ 0           0           0           6          01338 8457 1115
DIFFERENCES               $$$$
-------------------------------------------------------------------------------------------------------------------
  1  1117   4.00000+ 0 0.0     + 0 5.90000- 5 2.00000- 6 0.0     + 0 0.0     + 01338 8457 1116
  2  1117   4.00000+ 0 0.00000+ 0 5.90000- 5 2.00000- 6 0.00000+ 0 0.00000+ 01338 8457 1116
DIFFERENCES               $$$$                               $$$$        $$$$
-------------------------------------------------------------------------------------------------------------------
  1  1118   1.15606+ 5 0.0     + 0           0           0           6          01338 8457 1117
  2  1118   1.15606+ 5 0.00000+ 0           0           0           6          01338 8457 1117
DIFFERENCES               $$$$
-------------------------------------------------------------------------------------------------------------------
  1  1119   4.00000+ 0 0.0     + 0 1.60000- 5 2.00000- 6 0.0     + 0 0.0     + 01338 8457 1118
  2  1119   4.00000+ 0 0.00000+ 0 1.60000- 5 2.00000- 6 0.00000+ 0 0.00000+ 01338 8457 1118
DIFFERENCES               $$$$                               $$$$        $$$$
-------------------------------------------------------------------------------------------------------------------
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1338	1	451	172	15	172	15	(DIFFERENCES)
1338	1	452	4	1	4	1	(DIFFERENCES)
1338	1	458	6	4	6	4	(DIFFERENCES)
1338	2	151	37	12	37	12	(DIFFERENCES)
1338	3	1	41	14	41	14	(DIFFERENCES)
1338	3	2	17	2	17	2	(DIFFERENCES)
1338	3	4	34	12	34	12	(DIFFERENCES)
1338	3	16	7	2	7	2	(DIFFERENCES)
1338	3	17	6	2	6	2	(DIFFERENCES)
1338	3	18	17	2	17	2	(DIFFERENCES)
1338	3	19	15	2	15	2	(DIFFERENCES)
1338	3	20	7	2	7	2	(DIFFERENCES)
1338	3	51	17	3	17	3	(DIFFERENCES)
1338	3	52	15	4	15	4	(DIFFERENCES)
1338	3	53	15	3	15	3	(DIFFERENCES)
1338	3	54	13	3	13	3	(DIFFERENCES)
1338	3	55	13	3	13	3	(DIFFERENCES)
1338	3	56	12	3	12	3	(DIFFERENCES)
1338	3	57	14	3	14	3	(DIFFERENCES)
1338	3	58	12	3	12	3	(DIFFERENCES)
1338	3	59	13	3	13	3	(DIFFERENCES)
1338	3	60	12	3	12	3	(DIFFERENCES)
1338	3	61	12	3	12	3	(DIFFERENCES)
1338	3	62	12	3	12	3	(DIFFERENCES)
1338	3	63	12	4	12	4	(DIFFERENCES)
1338	3	64	10	8	10	8	(DIFFERENCES)
1338	3	65	9	7	9	7	(DIFFERENCES)
1338	3	91	10	3	10	3	(DIFFERENCES)
1338	3	102	19	2	19	2	(DIFFERENCES)
1338	3	251	17	1	17	1	(DIFFERENCES)
1338	3	252	17	1	17	1	(DIFFERENCES)
1338	3	253	17	1	17	1	(DIFFERENCES)
1338	4	2	237	149	237	149	(DIFFERENCES)
1338	4	16	3	1	3	1	(DIFFERENCES)

1338	4	17	3	1	3	1	(DIFFERENCES)
1338	4	18	3	1	3	1	(DIFFERENCES)
1338	4	19	3	1	3	1	(DIFFERENCES)
1338	4	20	3	1	3	1	(DIFFERENCES)
1338	4	51	3	1	3	1	(DIFFERENCES)
1338	4	52	3	1	3	1	(DIFFERENCES)
1338	4	53	3	1	3	1	(DIFFERENCES)
1338	4	54	3	1	3	1	(DIFFERENCES)
1338	4	55	3	1	3	1	(DIFFERENCES)
1338	4	56	3	1	3	1	(DIFFERENCES)
1338	4	57	3	1	3	1	(DIFFERENCES)
1338	4	58	3	1	3	1	(DIFFERENCES)
1338	4	59	3	1	3	1	(DIFFERENCES)
1338	4	60	3	1	3	1	(DIFFERENCES)
1338	4	61	3	1	3	1	(DIFFERENCES)
1338	4	62	3	1	3	1	(DIFFERENCES)
1338	4	63	3	1	3	1	(DIFFERENCES)
1338	4	64	3	1	3	1	(DIFFERENCES)
1338	4	65	3	1	3	1	(DIFFERENCES)
1338	4	91	3	1	3	1	(DIFFERENCES)
1338	5	16	19	4	19	4	(DIFFERENCES)
1338	5	17	8	2	8	2	(DIFFERENCES)
1338	5	18	8	2	8	2	(DIFFERENCES)
1338	5	19	8	2	8	2	(DIFFERENCES)
1338	5	20	8	2	8	2	(DIFFERENCES)
1338	5	91	11	2	11	2	(DIFFERENCES)
1338	8	16	4	1	4	1	(DIFFERENCES)
1338	8	102	3	1	3	1	(DIFFERENCES)
1338	8	457	116	77	116	77	(DIFFERENCES)
1338	8	457	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	1123	397	1123	397

END OF RUN

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							MAT	MF	REC.
9.42420+ 4	2.39979+ 2		1	1	0	2	1342	1	1
0.00000+ 0	1.00000+ 0		0	0	0	0	1342	1	2
0.00000+ 0	0.00000+ 0		0	0	163	85	1342	1	3
94-PU-242 HEDL,SRL,+		EVAL-OCT78 MANN,BENJAMIN,MADLAND,HOWERTON,+					1342	1	4
		DIST-MAR83			830316		1342	1	5
	HEDL	EVAL-APR78 MANN AND SCHENTER (UNRESOLVED)					1342	1	6
	LASL	EVAL-MAY78 MADLAND AND YOUNG (0.01-20 MEV)					1342	1	7
	SRL	EVAL-OCT75 BENJAMIN (THERMAL)					1342	1	8
	INEL	EVAL-APR78 REICH (DECAY)					1342	1	9
	LLL	EVAL-APR78 HOWERTON (GAMMA PRODUCTION)					1342	1	10
							1342	1	11
MF=1	GENERAL INFORMATION						1342	1	12
MT=452	NUBAR TOTAL. SUM OF MT=456 AND A DELAYED NUBAR OF 0.015						1342	1	13
	FROM THE MEASUREMENT OF KR70 AS COMPILED BY MA72.						1342	1	14
MT=456	NUBAR PROMPT.BASED ON A FIT TO PU-240 EXP. DATA BY FR74,						1342	1	15
	USING SYSTEMATICS TO INFER DELTA NUBAR TO PU-242, AND RENOR-						1342	1	16
	MALIZED TO CF-252 THERMAL NUBAR OF 3.757.						1342	1	17
MT=458	ENERGY OF FISSION. BASED ON WORK OF SH83.						1342	1	18
MF=2	RESONANCE PARAMETERS (0 TO 10 KEV)						1342	1	19
MT=151	RESOLVED RESONANCES 67 RESOLVED RESONANCES AND ONE						1342	1	20
	BOUND LEVEL DESCRIBE THE CROSS SECTION DATA FROM ZERO TO						1342	1	21
	986 EV. EXCEPT FOR THE BOUND AND 2.68 EV LEVELS, PARA-						1342	1	22
	METERS ARE FROM BNL-325 (MU76). PARAMETERS FOR THE BOUND						1342	1	23
	AND 2.68 EV LEVELS HAVE BEEN MODIFIED TO PRESERVE						1342	1	24
	THE CROSS SECTION VALUES AND SHAPES IN THE THERMAL REGION						1342	1	25
	AS DESCRIBED BY YO70 AND YO71, ALONG WITH THE HIGHER RESO-						1342	1	26
	NANCE CAPTURE INTEGRAL SUGGESTED BY INTEGRAL AND PRODUCTION						1342	1	27
	EXPERIMENTS(BU57, HA64, BE75). RESOLVED REGION 0 TO 986 EV.						1342	1	28
	UNRESOLVED RESONANCES. AVERAGE RESONANCE PARAMETERS						1342	1	29
	FOR L=0 RESONANCES FROM RESOLVED RESONANCES. THE REST ARE						1342	1	30
	FROM MAT 1161. UNRESOLVED REGION - 986 EV TO 10 KEV.						1342	1	31
MF=3	SMOOTH CROSS SECTIONS						1342	1	32
GENERAL.	EVALUATION FROM 0.01 - 20 MEV DESCRIBED IN MA78.						1342	1	33
	STATISTICAL COMPOUND NUCLEUS AND DIRECT REACTION						1342	1	34
	THEORY CALCULATIONS PERFORMED WITH LASL VERSIONS OF						1342	1	35
	COMNUC (DU70, 3/29/78 VERSION) AND JUKARL (RE71). ALL						1342	1	36
	CALCULATIONS USED LASL PRELIMINARY GLOBAL ACTINIDE OP-						1342	1	37
	TICAL POTENTIAL (MA77). COMPLETE SET OF CALCULATIONS						1342	1	38
	PERFORMED BUT ELASTIC AND FISSION CROSS SECTION EVALUA-						1342	1	39
	TIONS DIFFER SLIGHTLY (LESS THAN 5PC) FROM CALCULATIONS						1342	1	40
	BECAUSE OF INFLUENCE OF FISSION MEASUREMENTS. (N,F),						1342	1	41
	(N,NF), AND (N,2NF) X/S CALCULATED SUBJECT TO CONSTRAINT						1342	1	42
	THAT THEIR SUM EQUALS MEASURED (BE78) TOTAL FISSION X/S						1342	1	43
	WITHIN 5PC. DISCRETE FISSION CHANNELS (UP TO 12) AND						1342	1	44
	DEFORMED LEVEL DENSITY CONTINUUM FISSION CHANNELS USED.						1342	1	45
MT=1	TOTAL. SPHERICAL OPTICAL MODEL CALCULATION WITH NUCLEAR						1342	1	46
	DEFORMATION EFFECTS ACCOUNTED FOR BY COUPLED-CHANNEL CALCU-						1342	1	47
	LATIONS OF UP TO 5 STATES OF GROUND STATE BAND.						1342	1	48
MT=2	ELASTIC. DIFFERENCE BETWEEN MT=1 AND MT=4+16+17+18+102.						1342	1	49
	AGREES WITH MODEL CALCULATION TO WITHIN FEW PERCENT.						1342	1	50
MT=4	INELASTIC SCATTERING. SUM OF MT=51-69 AND MT=91.						1342	1	51
MT=16,17	(N,2N) AND (N,3N). BASED ON COMPOUND NUCLEUS STATIS-						1342	1	52
	TICAL MODEL CALCULATIONS.						1342	1	53
MT=18	FISSION. BELOW 100 KEV BASED ON EXP. DATA OF AU71. FROM						1342	1	54
	0.1 TO 20 MEV, BASED ON EXP. DATA OF BE78.						1342	1	55
MT=51-54	DISCRETE INELASTIC. BASED ON HAUSER-FESHBACH COMPOUND						1342	1	56
	NUCLEUS CALCULATION AND COUPLED-CHANNEL CALCULATION OF						1342	1	57
	DIRECT INELASTIC SCAT. FOR FIRST 5 LEVELS OF GROUND STATE						1342	1	58
	ROTATIONAL BAND USING DEFORMATION PARAMETERS OF BE73.						1342	1	59
MT=55-69	DISCRETE INELASTIC. BASED ON HAUSER-FESHBACH COMPOUND						1342	1	60

	MAT	MF	REC.
NUCLEUS CALCULATION.	1342	1	61
MT=102 CAPTURE. BASED ON COMPOUND NUC. STATISTICAL CALCULATION	1342	1	62
WITH GAMMA STRENGTH FUNCTION ADJUSTED TO AGREE WITH HO75	1342	1	63
MEASUREMENTS (2*PI*GAMMA/D = 0.01045, MU73). ABOVE 4 MEV,	1342	1	64
SEMI-DIRECT CONTRIBUTION ADDED FROM PREEQUILIBRIUM CASCADE	1342	1	65
CALCULATION WITH GAMMA-RAY EMISSION PROB. CALCULATED AT EACH	1342	1	66
STAGE (AR78).	1342	1	67
MF=4 ANGULAR DISTRIBUTIONS (LEGENDRE COEFFICIENTS)	1342	1	68
MT=2 SHAPE ELASTIC COMPONENT BASED ON DEFORMED OPTICAL MODEL	1342	1	69
CALCULATION. COMPOUND NUCLEUS COMPONENT ASSUMED ISOTROPIC.	1342	1	70
MT=16,17,18 ASSUMED ISOTROPIC IN LAB SYSTEM	1342	1	71
MT=51-54 DIRECT COMPONENT TAKEN FROM DEFORMED OPT. MOD. CALC.	1342	1	72
COMPOUND NUCLEUS COMPONENT ASSUMED ISOTROPIC.	1342	1	73
MT=55-69 ASSUMED ISOTROPIC IN C.M. SYSTEM.	1342	1	74
MT=91 ASSUMED ISOTROPIC IN LAB SYSTEM.	1342	1	75
MF=5 SECONDARY NEUTRON ENERGY DISTRIBUTIONS	1342	1	76
MT=16,17 NUCLEAR TEMPERATURES CALCULATED FROM LEVEL DENSITY	1342	1	77
PARAMETERS USED IN MODEL CALCULATIONS (GI65,CO67).	1342	1	78
MT=18 FISSION MAXWELLIAN USING ENERGY-DEPENDENT TEMPERATURES	1342	1	79
FROM TERRELL (TE65).	1342	1	80
MT=91 SAME COMMENT AS FOR MT=16,17	1342	1	81
MF=32	1342	1	82
MT=151 FROM BNL-325 (REF. 4)	1342	1	83
MF=33 SMOOTH X/S COVARIANCES (HEDL AND LASL)	1342	1	84
APPROXIMATE ERROR FILES DETERMINED FROM ESTIMATED UNCERTAINTIES	1342	1	85
IN MODEL CALCULATIONS (MT=1,2,4,16,17,102) AND IN EXPERIMENTAL	1342	1	86
UNCERTAINTIES (MT=18,102).	1342	1	87
	1342	1	88
REFERENCES	1342	1	89
AR78 E.D.ARTHUR, PRIVATE COMMUNICATION, 1978.	1342	1	90
AU71 G.F. AUCHAMPAUGH, J.A. FARREL, AND D.W. BERGEN, NUCL.PHYS.	1342	1	91
A171(1971)31	1342	1	92
BE73 C.E.BEMIS ET AL., PHYS.REV.C8, 1466 (1973).	1342	1	93
BE75 BENJAMIN, R. ET AL., DP-1394(1975)	1342	1	94
BE78 J.W.BEHRENS ET AL., NUC.SCI.ENG. 66, 433 (1978).	1342	1	95
BU57 BUTLER, J., ET.AL., CAN.J.PHYS. 35,147 (1957)	1342	1	96
CO67 J.L.COOK ET AL., AUST.J.PHYS. 20, 477 (1967).	1342	1	97
DU70 C.L.DUNFORD, AI-AEC-12931,1970	1342	1	98
FR74 J. FREHAUT ET AL., CEA-R-4626, 1974.	1342	1	99
GI65 A. GILBERT AND A.G.W. CAMERON, CAN. J. PHYS. 43(1965)1446	1342	1	100
HA64 HALPERIN, J., ET AL.,ORNL-3679,13(1964)	1342	1	101
HO75 R.W.HOCKENBURY ET AL., NBS SPECIAL PUBLICATION 425,	1342	1	102
VOL 2, P.584, (1975).	1342	1	103
KR70 M.S.KRICK, A.E.EVANS, TRANS.AM.NUCL.SOC. 13, 746 (1970).	1342	1	104
MA72 MANERO, F., KONSHIN, V., AT.EN.REV.10,637(1972)	1342	1	105
MA77 D.MADLAND, LA-7066-PR, 1977, P12	1342	1	106
MA78 D.G.MADLAND, P.G.YOUNG, TO BE ISSUED IN LASL REPORT, 1978	1342	1	107
MU73 MUGHABGHAB, S., GARBER, D., BNL-325,THIRD ED.,VOL.1, 1973	1342	1	108
RE71 H.REBEL, G.W.SCHWEIMER, KFK-133,1971	1342	1	109
SH83 SHER+BECK EPRI NP-1771/81 +REV.1 1/83 +PC TO MAGURNO 2/83	1342	1	110
YO70 YOUNG, T., REEDER, S., NUCL.SCI.ENG.40,389(1970)	1342	1	111
YO71 YOUNG, T., ET AL., NUCL.SCI.ENG.43,341(1971)	1342	1	112
	1342	1	113
MF=8	1342	1	114
MT = 454 AND 459 INSERTED INTO FILE AT BNL BY R. KINSEY 9/78	1342	1	115
ENDF/B-V YIELD DATA	1342	1	116
	1342	1	117
SET 5E,7/78. VALUES OBTAINED FROM THE RECOMMENDATIONS OF THE	1342	1	118
YIELDS SUBCOMMITTEE, T.R.ENGLAND (CHAIRMAN), D.M.GILLIAM,	1342	1	119
Y.HARKER, J.R.LIAW, W.J.MAECK, D.G.MADLAND, V.MCLANE MAY,	1342	1	120
P.L.REEDER, B.F.RIDER, R.E.SCHENTER, B.I.SPINRAD, J.P.UNIK,	1342	1	121

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	MAT	MF	REC.
A.WAHL, W.WALKER, B.W.WEHRING, K.WOLFSBERG	1342	1	122
	1342	1	123
UNCERTAINTIES ARE BASED ON THE TOTAL YIELD TO EACH ZA.	1342	1	124
WHEN THERE IS AN ISOMERIC STATE, THE INDEPENDENT NUCLIDE	1342	1	125
YIELD TO EACH STATE HAS A LARGER UNCERTAINTY THAN THE TOTAL	1342	1	126
YIELD IN STATE DISTRIBUTIONS (UNCERTAINTIES AVERAGE	1342	1	127
APPROXIMATELY 50 PERCENT BUT CAN BE LARGER). ANY YIELD	1342	1	128
HAVING A LARGE UNCERTAINTY (45-64 PERCENT) MAY BE A MODEL	1342	1	129
ESTIMATE OR A VALUE ASSIGNED TO THE YIELDS ON THE WINGS OR	1342	1	130
VALLEY OF THE MASS YIELD DISTRIBUTION. THESE SMALL YIELDS	1342	1	131
MAY ONLY BE ACCURATE TO WITHIN A FACTOR OF 2.	1342	1	132
	1342	1	133
MT454 CONTAINS DIRECT YIELDS BEFORE DELAYED NEUTRON EMISSION	1342	1	134
	1342	1	135
MT459 CONTAINS CUMULATIVE YIELDS ALONG EACH ISOBARIC CHAIN	1342	1	136
AFTER DELAYED NEUTRON EMISSION.	1342	1	137
	1342	1	138
DIRECT AND CUMULATIVE YIELDS ARE NORMALIZED BY THE SAME FACTOR	1342	1	139
BASED ON B.F.RIDER EVALUATION. THE ISOMERIC STATE MODEL,	1342	1	140
LA-6595-MS (ENDF-241), AND DELAYED NEUTRON EMISSION BRANCHINGS	1342	1	141
(PN VALUES) FOR 102 EMITTERS, LA-UR-78-688, AND PAIRING	1342	1	142
EFFECTS,LA-6430-MS (ENDF-240), HAVE BEEN INCORPORATED.	1342	1	143
	1342	1	144
DATA PREPARED FOR FILES BY T.R.ENGLAND (LASL LTR. T-2-L-2891)	1342	1	145
* * * * * *	1342	1	146
	1342	1	147
94-PU-242 INEL EVAL-AUG78 REICH	1342	1	148
DATA ADDED TO FILE BY R. KINSEY AT BNL 9/78	1342	1	149
MF=8, MT=457 RADIOACTIVE DECAY DATA	1342	1	150
REFERENCES A(ALPHA)- A.H. WAPSTRA AND K. BOS, AT. DATA AND NUCL.	1342	1	151
DATA TABLES 19, 175(1977).	1342	1	152
OTHER- SEE TABLE OF ISOTOPES, 7TH ED. (PRELIMINARY	1342	1	153
DATA, PRIV. COMM. FROM C.M. LEDERER) AND	1342	1	154
Y.A. ELLIS AND R.L. HAESE, NUCLEAR DATA SHEETS	1342	1	155
21, 615 (1977).	1342	1	156
NOTE THE L-X-RAY DATA REPRESENT MEASURED VALUES. SEE C.E.	1342	1	157
BEMIS, JR. AND L. TUBBS, ORNL-5297, 93 (SEPT., 1977).	1342	1	158
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 8/78	1342	1	159
MF=12,13,14,15 PHOTON PRODUCTION	1342	1	160
FILES TAKEN FROM THE LLL ELAVUATIONS OF R. HOWERTON	1342	1	161
DOCUMENTED IN UCRL 50400, VOL. 15, PART A (METHODS) SEPT 75	1342	1	162
AND PART B (CURVES) APR 76. FILES EXTENDED TO THE ENERGY	1342	1	163
RANGE 1.-5 EV TO 20 MEV AND MERGED TO THIS EVALUATION	1342	1	164
AT BNL BY R. KINSEY.	1342	1	165
	1342	1	166
1 451 251 2	1342	1	167
1 452 3 1	1342	1	168
1 456 3 1	1342	1	169
1 458 5 2	1342	1	170
2 151 98 1	1342	1	171
3 1 54 1	1342	1	172
3 2 53 1	1342	1	173
3 4 50 1	1342	1	174
3 16 21 1	1342	1	175
3 17 12 1	1342	1	176
3 18 47 2	1342	1	177
3 51 50 1	1342	1	178
3 52 47 1	1342	1	179
3 53 44 1	1342	1	180
3 54 41 1	1342	1	181
3 55 29 1	1342	1	182

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			MAT	MF	REC.
3	56	29	1 1342	1	183
3	57	28	1 1342	1	184
3	58	28	1 1342	1	185
3	59	27	1 1342	1	186
3	60	26	1 1342	1	187
3	61	26	1 1342	1	188
3	62	26	1 1342	1	189
3	63	25	1 1342	1	190
3	64	25	1 1342	1	191
3	65	24	1 1342	1	192
3	66	22	1 1342	1	193
3	67	23	1 1342	1	194
3	68	23	1 1342	1	195
3	69	22	1 1342	1	196
3	91	43	1 1342	1	197
3	102	47	1 1342	1	198
3	251	10	1 1342	1	199
3	252	10	1 1342	1	200
3	253	10	1 1342	1	201
4	2	143	1 1342	1	202
4	16	2	1 1342	1	203
4	17	2	1 1342	1	204
4	18	2	1 1342	1	205
4	51	65	1 1342	1	206
4	52	61	1 1342	1	207
4	53	59	1 1342	1	208
4	54	2	1 1342	1	209
4	55	2	1 1342	1	210
4	56	2	1 1342	1	211
4	57	2	1 1342	1	212
4	58	2	1 1342	1	213
4	59	2	1 1342	1	214
4	60	2	1 1342	1	215
4	61	2	1 1342	1	216
4	62	2	1 1342	1	217
4	63	2	1 1342	1	218
4	64	2	1 1342	1	219
4	65	2	1 1342	1	220
4	66	2	1 1342	1	221
4	67	2	1 1342	1	222
4	68	2	1 1342	1	223
4	69	2	1 1342	1	224
4	91	2	1 1342	1	225
5	16	10	1 1342	1	226
5	17	9	1 1342	1	227
5	18	8	1 1342	1	228
5	91	23	1 1342	1	229
8	16	2	1 1342	1	230
8	102	2	1 1342	1	231
8	454	784	1 1342	1	232
8	457	57	1 1342	1	233
8	459	784	1 1342	1	234
12	18	5	1 1342	1	235
12	102	5	1 1342	1	236
13	3	9	1 1342	1	237
14	3	1	1 1342	1	238
14	18	1	1 1342	1	239
14	102	1	1 1342	1	240
15	3	414	1 1342	1	241
15	18	87	1 1342	1	242
15	102	33	1 1342	1	243

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			MAT	MF	REC.
32	151	209	1 1342	1	244
33	1	5	1 1342	1	245
33	2	6	1 1342	1	246
33	4	5	1 1342	1	247
33	16	5	1 1342	1	248
33	17	4	1 1342	1	249
33	18	26	1 1342	1	250
33	102	5	1 1342	1	251
			1342	1	252
			1342	1	256
			1342	1	260
			1342	1	266
			1342	2	366
			1342	3	422
			1342	3	476
			1342	3	527
			1342	3	549
			1342	3	562
			1342	3	610
			1342	3	661
			1342	3	709
			1342	3	754
			1342	3	796
			1342	3	826
			1342	3	856
			1342	3	885
			1342	3	914
			1342	3	942
			1342	3	969
			1342	3	996
			1342	3	1023
			1342	3	1049
			1342	3	1075
			1342	3	1100
			1342	3	1123
			1342	3	1147
			1342	3	1171
			1342	3	1194
			1342	3	1238
			1342	3	1286
			1342	3	1297
			1342	3	1308
			1342	3	1319
			1342	4	1464
			1342	4	1467
			1342	4	1470
			1342	4	1473
			1342	4	1539
			1342	4	1601
			1342	4	1661
			1342	4	1664
			1342	4	1667
			1342	4	1670
			1342	4	1673
			1342	4	1676
			1342	4	1679
			1342	4	1682
			1342	4	1685
			1342	4	1688
			1342	4	1691
			1342	4	1694

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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

MAT	MF	REC.
1342	4	1697
1342	4	1700
1342	4	1703
1342	4	1706
1342	4	1709
1342	4	1712
1342	5	1724
1342	5	1734
1342	5	1743
1342	5	1767
1342	8	1771
1342	8	1774
1342	8	2559
1342	8	2617
1342	8	3402
1342	12	3409
1342	12	3415
1342	13	3426
1342	14	3429
1342	14	3431
1342	14	3433
1342	15	3849
1342	15	3937
1342	15	3971
1342	32	4182
1342	33	4189
1342	33	4196
1342	33	4202
1342	33	4208
1342	33	4213
1342	33	4240
1342	33	4246

```
COMPARE TWO BCD FILES (COMPARE 82-1)
-------------------------------------------------------------------------------
COLUMNS TO READ AND LIST-------      70 (  1 TO 80 )
COLUMNS TO COMPARE-------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---      66 (  1 TO 70 )
SPECIAL FILE FLAG--------------       2
ACCEPTABLE DIFFERENCE----------       0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
-------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
-------------------------------------------------------------------------------
FILE 1 =ACT1342 OLD
FILE 2 =ACT1342 NEW
-------------------------------------------------------------------------------
 FILE  CARD  CONTENTS
-------------------------------------------------------------------------------
                    1         2         3         4         5         6         7         8
 FILE  CARD 12345678901234567890123456789012345678901234567890123456789012345678901234567890
-------------------------------------------------------------------------------
   1     2  9.42420+ 4 2.39979+ 2          1         1         0        11342 1451    1
   2     2  9.42420+ 4 2.39979+ 2          1         1         0        21342 1451    1
DIFFERENCES                                                                $
-------------------------------------------------------------------------------
   1     3  0.0     + 0 1.00000+ 0          0         0         0        01342 1451    2
   2     3  0.00000+ 0 1.00000+ 0          0         0         0        01342 1451    2
DIFFERENCES     $$$$
-------------------------------------------------------------------------------
   1     4  0.0     + 0 0.0     + 0          0         0       163       851342 1451    3
   2     4  0.00000+ 0 0.00000+ 0          0         0       163       851342 1451    3
DIFFERENCES     $$$$       $$$$
-------------------------------------------------------------------------------
   1     6                        DIST-MAY79                    790314    1342 1451    5
   2     6                        DIST-MAR83                    830316    1342 1451    5
DIFFERENCES                          $$$                       $$  $                  DIFF
-------------------------------------------------------------------------------
   1    19  MT=458  ENERGY OF FISSION.  BASED ON WORK OF SH76.                1342 1451   18
   2    19  MT=458  ENERGY OF FISSION.  BASED ON WORK OF SH83.                1342 1451   18
DIFFERENCES                                        $$                                  DIFF
-------------------------------------------------------------------------------
   1   111  SH76  R. SHER, S. FIARMAN, AND C. BECK, PRIV. COMM. (OCT.1976)    1342 1451  110
   2   111  SH83  SHER+BECK EPRI NP-1771/81 +REV.1 1/83 +PC TO MAGURNO 2/83   1342 1451  110
DIFFERENCES    $$  $$$$$$$$$$$$$ $$$$$$$$$$$$$$$$$$$$$$$$$$ $$$$$$$$$$$$$$$$                 DIFF
-------------------------------------------------------------------------------
   1   168                                  1       451       251        11342 1451  167
   2   168                                  1       451       251        21342 1451  167
DIFFERENCES                                                                $                 DIFF
-------------------------------------------------------------------------------
   1   171                                  1       458         5        11342 1451  170
   2   171                                  1       458         5        21342 1451  170
DIFFERENCES                                                                $                 DIFF
-------------------------------------------------------------------------------
   1   178                                  3        18        47        11342 1451  177
   2   178                                  3        18        47        21342 1451  177
DIFFERENCES                                                                $                 DIFF
-------------------------------------------------------------------------------
   1   255  0.0     + 0 0.0     + 0          0         0         2        01342 1452  254
   2   255  0.00000+ 0 0.00000+ 0          0         0         2        01342 1452  254
DIFFERENCES     $$$$       $$$$                                                           DIFF
-------------------------------------------------------------------------------
   1   259  0.0     + 0 0.0     + 0          0         0         2        01342 1456  258
   2   259  0.00000+ 0 0.00000+ 0          0         0         2        01342 1456  258
DIFFERENCES     $$$$       $$$$                                                           DIFF
-------------------------------------------------------------------------------
   1   263  0.0     + 0 0.0     + 0          0         0        18        91342 1458  262
```

```
   2   263   0.00000+ 0 0.00000+ 0          0          0          18          91342 1458  262
DIFFERENCES     $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   264   1.73000+ 8 1.50000+ 6 6.50000+ 6 1.50000+ 5 1.00000+ 4 2.00000+ 31342 1458  263
   2   264   1.74000+ 8 2.00000+ 6 6.76000+ 6 5.40000+ 5 1.00000+ 4 2.00000+ 31342 1458  263
DIFFERENCES      $       $ $         $$        $ $
-------------------------------------------------------------------------------------------------
   1   265   6.50000+ 6 2.20000+ 6 7.20000+ 6 4.00000+ 5 7.40000+ 6 4.00000+ 51342 1458  264
   2   265   5.22000+ 6 1.00000+ 6 7.72000+ 6 7.50000+ 5 7.87000+ 6 5.00000+ 51342 1458  264
DIFFERENCES  $ $$        $ $         $$        $ $         $$        $
-------------------------------------------------------------------------------------------------
   1   266   1.00000+ 7 5.00000+ 5 2.00610+ 8 1.10000+ 6 2.10610+ 8 1.00000+ 61342 1458  265
   2   266   1.05700+ 7 1.10000+ 6 2.01580+ 8 1.37200+ 6 2.12150+ 8 8.20000+ 51342 1458  265
DIFFERENCES     $$       $ $       $    $$$      $$$       $$$     $ $      $
-------------------------------------------------------------------------------------------------
   1   272   0.0     + 0 9.22500- 1          0          0          1           01342 2151  271
   2   272   0.00000+ 0 9.22500- 1          0          0          1           01342 2151  271
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
   1   273   2.40145+ 2 0.0     + 0          0          0          408         681342 2151  272
   2   273   2.40145+ 2 0.00000+ 0          0          0          408         681342 2151  272
DIFFERENCES               $$$$
-------------------------------------------------------------------------------------------------
   1   274  -7.00000+ 1 5.00000- 1 1.82370- 1 1.58970- 1 2.34000- 2 0.0     + 01342 2151  273
   2   274  -7.00000+ 1 5.00000- 1 1.82370- 1 1.58970- 1 2.34000- 2 0.00000+ 01342 2151  273
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   275   2.67000+ 0 5.00000- 1 2.43250- 2 2.32500- 3 2.20000- 2 0.0     + 01342 2151  274
   2   275   2.67000+ 0 5.00000- 1 2.43250- 2 2.32500- 3 2.20000- 2 0.00000+ 01342 2151  274
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   276   1.46000+ 1 5.00000- 1 2.34610- 2 6.10000- 5 2.34000- 2 0.0     + 01342 2151  275
   2   276   1.46000+ 1 5.00000- 1 2.34610- 2 6.10000- 5 2.34000- 2 0.00000+ 01342 2151  275
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   277   2.25700+ 1 5.00000- 1 2.32900- 2 2.90000- 4 2.30000- 2 0.0     + 01342 2151  276
   2   277   2.25700+ 1 5.00000- 1 2.32900- 2 2.90000- 4 2.30000- 2 0.00000+ 01342 2151  276
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   278   4.09500+ 1 5.00000- 1 2.74500- 2 4.50000- 4 2.70000- 2 0.0     + 01342 2151  277
   2   278   4.09500+ 1 5.00000- 1 2.74500- 2 4.50000- 4 2.70000- 2 0.00000+ 01342 2151  277
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   284   1.41430+ 2 5.00000- 1 2.35190- 2 1.18920- 4 2.34000- 2 0.0     + 01342 2151  283
   2   284   1.41430+ 2 5.00000- 1 2.35190- 2 1.18920- 4 2.34000- 2 0.00000+ 01342 2151  283
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   286   1.63500+ 2 5.00000- 1 2.39240- 2 5.24260- 4 2.34000- 2 0.0     + 01342 2151  285
   2   286   1.63500+ 2 5.00000- 1 2.39240- 2 5.24260- 4 2.34000- 2 0.00000+ 01342 2151  285
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   288   2.10000+ 2 5.00000- 1 2.38200- 2 4.20250- 4 2.34000- 2 0.0     + 01342 2151  287
   2   288   2.10000+ 2 5.00000- 1 2.38200- 2 4.20250- 4 2.34000- 2 0.00000+ 01342 2151  287
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   289   2.15300+ 2 5.00000- 1 2.86530- 2 5.25300- 3 2.34000- 2 0.0     + 01342 2151  288
   2   289   2.15300+ 2 5.00000- 1 2.86530- 2 5.25300- 3 2.34000- 2 0.00000+ 01342 2151  288
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   290   2.19300+ 2 5.00000- 1 2.37000- 2 3.00000- 4 2.34000- 2 0.0     + 01342 2151  289
   2   290   2.19300+ 2 5.00000- 1 2.37000- 2 3.00000- 4 2.34000- 2 0.00000+ 01342 2151  289
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   292   2.64500+ 2 5.00000- 1 2.37600- 2 3.60000- 4 2.34000- 2 0.0     + 01342 2151  291
   2   292   2.64500+ 2 5.00000- 1 2.37600- 2 3.60000- 4 2.34000- 2 0.00000+ 01342 2151  291
DIFFERENCES                                                          $$$$
```

```
  1  4222   2.00000+ 7 0.0     + 0                                                     134233 18 4221
  2  4222   2.00000+ 7 0.00000+ 0                                                      134233 18 4221
DIFFERENCES             $$$$
  1  4223   0.0     + 0 0.0     + 0           1           5           78            12134233 18 4222
  2  4223   0.00000+ 0 0.00000+ 0             1           5           78            12134233 18 4222
DIFFERENCES   $$$$        $$$$
  1  4226   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0134233 18 4225
  2  4226   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0134233 18 4225
DIFFERENCES   $$$$        $$$$        $$$$        $$$$        $$$$        $$$$
  1  4227   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 9.50000- 2134233 18 4226
  2  4227   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 9.50000- 2134233 18 4226
DIFFERENCES   $$$$        $$$$        $$$$        $$$$        $$$$
  2  4237   0.00000+ 0 0.00000+ 0          1395          18           1            0134233 18 4236
  2  4238   0.00000+ 0 0.00000+ 0             0           2           0            0134233 18 4237
  2  4239   2.00000+ 5 2.00000+ 7          1395          18           4            2134233 18 4238
  2  4240   2.00000+ 5 1.00000+ 0 2.00000+ 7 0.00000+ 0                             134233 18 4239
DIFFERENCES ON    4 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
  1  4239   0.0     + 0 0.0     + 0             0         102           0           1134233102 4238
  2  4243   0.00000+ 0 0.00000+ 0               0         102           0           1134233102 4242
DIFFERENCES   $$$$        $$$$
  1  4240   0.0     + 0 0.0     + 0             0           1          12           6134233102 4239
  2  4244   0.00000+ 0 0.00000+ 0               0           1          12           6134233102 4243
DIFFERENCES   $$$$        $$$$
  1  4241   1.00000- 5 0.0     + 0 1.00000+ 4 8.10000- 3 3.00000+ 5 2.25000- 2134233102 4240
  2  4245   1.00000- 5 0.00000+ 0 1.00000+ 4 8.10000- 3 3.00000+ 5 2.25000- 2134233102 4244
DIFFERENCES               $$$$
  1  4242   1.00000+ 6 6.25000- 2 3.00000+ 6 1.00000+ 0 2.00000+ 7 0.0     + 0134233102 4241
  2  4246   1.00000+ 6 6.25000- 2 3.00000+ 6 1.00000+ 0 2.00000+ 7 0.00000+ 0134233102 4245
DIFFERENCES                                                            $$$$
SUMMARY OF ENDF/B DIFFERENCES BY SECTION
 MAT  MF  MT         FILE 1           FILE 2
                 CARDS  DIFFER    CARDS  DIFFER

   0   0   0         1       0        1       0

1342   1 451       252       9      252       9 (DIFFERENCES)
1342   1 452         4       1        4       1 (DIFFERENCES)
1342   1 456         4       1        4       1 (DIFFERENCES)
1342   1 458         6       4        6       4 (DIFFERENCES)
1342   2 151       100      63      100      63 (DIFFERENCES)
1342   3   1        56       2       56       2 (DIFFERENCES)
1342   3   2        54       2       54       2 (DIFFERENCES)
1342   3   4        51       2       51       2 (DIFFERENCES)
1342   3  16        22       2       22       2 (DIFFERENCES)
1342   3  17        13       2       13       2 (DIFFERENCES)
1342   3  18        48       2       48       2 (DIFFERENCES)
1342   3  51        51       2       51       2 (DIFFERENCES)
1342   3  52        48       2       48       2 (DIFFERENCES)
1342   3  53        45       2       45       2 (DIFFERENCES)
1342   3  54        42       2       42       2 (DIFFERENCES)
1342   3  55        30       6       30       6 (DIFFERENCES)
1342   3  56        30       4       30       4 (DIFFERENCES)
1342   3  57        29       4       29       4 (DIFFERENCES)
1342   3  58        29       5       29       5 (DIFFERENCES)
1342   3  59        28       4       28       4 (DIFFERENCES)
```

1342	3	60	27	5	27	5	(DIFFERENCES)
1342	3	61	27	4	27	4	(DIFFERENCES)
1342	3	62	27	5	27	5	(DIFFERENCES)
1342	3	63	26	4	26	4	(DIFFERENCES)
1342	3	64	26	5	26	5	(DIFFERENCES)
1342	3	65	25	4	25	4	(DIFFERENCES)
1342	3	66	23	4	23	4	(DIFFERENCES)
1342	3	67	24	4	24	4	(DIFFERENCES)
1342	3	68	24	5	24	5	(DIFFERENCES)
1342	3	69	23	4	23	4	(DIFFERENCES)
1342	3	91	44	2	44	2	(DIFFERENCES)
1342	3	102	48	2	48	2	(DIFFERENCES)
1342	3	251	11	1	11	1	(DIFFERENCES)
1342	3	252	11	1	11	1	(DIFFERENCES)
1342	3	253	11	1	11	1	(DIFFERENCES)
1342	4	2	145	78	145	78	(DIFFERENCES)
1342	4	16	3	1	3	1	(DIFFERENCES)
1342	4	17	3	1	3	1	(DIFFERENCES)
1342	4	18	3	1	3	1	(DIFFERENCES)
1342	4	51	66	22	66	22	(DIFFERENCES)
1342	4	52	62	21	62	21	(DIFFERENCES)
1342	4	53	60	20	60	20	(DIFFERENCES)
1342	4	54	3	1	3	1	(DIFFERENCES)
1342	4	55	3	1	3	1	(DIFFERENCES)
1342	4	56	3	1	3	1	(DIFFERENCES)
1342	4	57	3	1	3	1	(DIFFERENCES)
1342	4	58	3	1	3	1	(DIFFERENCES)
1342	4	59	3	1	3	1	(DIFFERENCES)
1342	4	60	3	1	3	1	(DIFFERENCES)
1342	4	61	3	1	3	1	(DIFFERENCES)
1342	4	62	3	1	3	1	(DIFFERENCES)
1342	4	63	3	1	3	1	(DIFFERENCES)
1342	4	64	3	1	3	1	(DIFFERENCES)
1342	4	65	3	1	3	1	(DIFFERENCES)
1342	4	66	3	1	3	1	(DIFFERENCES)
1342	4	67	3	1	3	1	(DIFFERENCES)
1342	4	68	3	1	3	1	(DIFFERENCES)
1342	4	69	3	1	3	1	(DIFFERENCES)
1342	4	91	3	1	3	1	(DIFFERENCES)
1342	5	16	12	2	12	2	(DIFFERENCES)
1342	5	17	10	2	10	2	(DIFFERENCES)
1342	5	18	9	2	9	2	(DIFFERENCES)
1342	5	91	24	6	24	6	(DIFFERENCES)
1342	8	16	4	1	4	1	(DIFFERENCES)
1342	8	102	3	1	3	1	(DIFFERENCES)
1342	8	454	785	754	785	754	(DIFFERENCES)
1342	8	457	58	41	58	41	(DIFFERENCES)
1342	8	459	785	752	785	752	(DIFFERENCES)
1342	12	18	7	3	7	3	(DIFFERENCES)
1342	12	102	6	3	6	3	(DIFFERENCES)
1342	13	3	11	2	11	2	(DIFFERENCES)
1342	14	3	3	0	3	0	
1342	14	18	2	0	2	0	
1342	14	102	2	0	2	0	
1342	15	3	416	91	416	91	(DIFFERENCES)
1342	15	18	88	38	88	38	(DIFFERENCES)
1342	15	102	34	11	34	11	(DIFFERENCES)
1342	32	151	211	175	211	175	(DIFFERENCES)
1342	33	1	7	4	7	4	(DIFFERENCES)
1342	33	2	7	2	7	2	(DIFFERENCES)
1342	33	4	6	4	6	4	(DIFFERENCES)
1342	33	16	6	4	6	4	(DIFFERENCES)
1342	33	17	5	3	5	3	(DIFFERENCES)
1342	33	18	23	9	27	13	(DIFFERENCES)
1342	33	102	6	4	6	4	(DIFFERENCES)
1342	33	102	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

FILE 1		FILE 2	
CARDS	DIFFER	CARDS	DIFFER
4246	2247	4250	2251

END OF RUN

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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

						MAT	MF	REC.
9.52410+ 4	2.38986+ 2	1	1	0	2	1361	1	1
0.00000+ 0	1.00000+ 0	0	0	0	0	1361	1	2
0.00000+ 0	0.00000+ 0	0	0	109	87	1361	1	3

95-AM-241 HEDL,ORNL EVAL-APR78 MANN,SCHENTER, AND WESTON 1361 1 4
DIST-MAR83 630316 1361 1 5
INEL EVAL-AUG78 REICH (DECAY) 1361 1 6
MF=1 GENERAL INFORMATION 1361 1 7
MT=452 NU A WEIGHTED AVERAGE OF THE INDIVIDUAL DETERMINA- 1361 1 8
TIONS OF NU ASSIGNS MOST OF THE WEIGHT TO THE DATA OF V.I. 1361 1 9
LEBEDEV ET. AL. (REF. 1). USING THE VALUE OF NU FOR 235 OF 1361 1 10
2.43, NU=3.09 IS OBTAINED FOR THE CONSTANT TERM. THE SLOPE 1361 1 11
IS THAT OF THE UNIVERSAL CURVE OF J.C. HOPKINS AND B.C. 1361 1 12
DIVEN (REF. 2) FROM ENDF/B-I SMITH GRIMESEY EVAL. 1361 1 13
MT=458 ENERGY FROM FISSION BASED ON SHER (REF. 13) 1361 1 14
MF=2 RESONANCE INFORMATION 1361 1 15
MT=151 RESOLVED RESONANCE PARAMETERS (0-50 EV) FROM REF. 10 1361 1 16
AND 11. UNRESOLVED PARAMETERS OBTAINED USING METHODS FROM 1361 1 17
REF. 3 AND DATA FROM REF. 10 AND 11. 1361 1 18
MF=3 SMOOTH CROSS SECTION 1361 1 19
MT=1 TOTAL SUM OF PARTIAL CROSS SECTIONS 1361 1 20
MT=2 ELASTIC RESULT OF OPTICAL MODEL CALCULATION 1361 1 21
(REF. 5) 1361 1 22
MT=4 INELASTIC RESULT OF STATISTICAL MODEL CALCULATIONS. 1361 1 23
18 LEVELS WERE INCLUDED (REF. 3) 1361 1 24
MT=16 N,2N BASED ON STATISTICAL MODEL CALCULATIONS (REF. 3) 1361 1 25
MT=17 N,3N BASED ON STATISTICAL MODEL CALCULATIONS (REF. 3) 1361 1 26
MT=18 FISSION BELOW 400 KEV, RESULT OF STATISTICAL 1361 1 27
MODEL CALCULATION (REF. 3) GUIDED BY DATA OF BOWMAN ET. AL. 1361 1 28
(REF. 4) AND SPHAK ET, AL. (REF. 5). ABOVE 400 KEV, AVERAGE 1361 1 29
OF DATA OF SPHAK ET. AL. (REF. 5), SEEGER ET. AL. (REF.6), 1361 1 30
FOMUSHKIN ET. AL. (REF. 7,8), AND IVER ET. AL. (REF. 9) 1361 1 31
MT=19 (N,F) SAME AS MT=18 UNTIL (N,NF) THRESHOLD, CONSTANT 1361 1 32
THEREAFTER. 1361 1 33
MT=20 (N,NF) DIFFERENCE BETWEEN MT=18 AND 19. 1361 1 34
MT=51,...,68,91 RESULT OF STATISTICAL MODEL CALCULATIONS USING 1361 1 35
18 EXCITED LEVELS PLUS CONTINUUM (REF. 3) 1361 1 36
MT=102 CAPTURE STATISTICAL MODEL CALCULATION (REF. 3) BASED 1361 1 37
ON DATA OF WESTON AND TODD (REF. 10). IN RESOLVED RESONANCE 1361 1 38
BACKGROUND OF 20.5/SQRT(E) FROM REF. 10. 1361 1 39
MF=4 ANGULAR DISTRIBUTIONS 1361 1 40
MT=2 EVALUATION BASED ON OPTICAL MODEL (REF. 3) 1361 1 41
MT=2 INELASTIC ASSUMED ISOTROPIC 1361 1 42
MF=5 ENERGY DISTRIBUTION 1361 1 43
MT=16 EVAPORATION TEMP. FROM GILBERT AND CAMERON (REF. 12) 1361 1 44
MT=17 SAME REFERENCE AS MT=16 1361 1 45
MT=18 SIMPLE MAXWELLIAN WITH ENERGY DEPENDENT TEMPERATURE 1361 1 46
MT=19 SAME REFERENCE AS MT=18 1361 1 47
MT=20 SAME REFERENCE AS MT=18 1361 1 48
MT=91 SAME REFERENCE AS MT=16 1361 1 49
MF=8 RADIOACTIVITY 1361 1 50
MT=102 (N,G) DECAY CHAIN FROM ENDF/B-V 1361 1 51
DATA FOR 95-AM-241 DECAYS BY REICH 1361 1 52
INSERTED INTO FILE AT BNL BY R. KINSEY IN SEP 1978 1361 1 53
MF=8, MT=457 RADIOACTIVE DECAY DATA 1361 1 54
REFERENCES Q(ALPHA)-1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLE 1361 1 55
HALF-LIFE- WEIGHTED AVERAGE OF DATA OF H. RAMTHUN AND 1361 1 56
W. MULLER, INT L. J. APPL. RAD. AND 1361 1 57
ISOTOPES 26, 589 (1975) AND OF F.L. 1361 1 58
OETTING AND S.R. GUNN, J. INORG. NUCL. 1361 1 59
CHEM. 29, 2659 (1967). 1361 1 60

	MAT	MF	REC.
SPONTANEOUS-FISSION BRANCHING RATIO DERIVED FROM	1361	1	61
LISTED HALF-LIFE AND WEIGHTED AVERAGE OF	1361	1	62
S.-F. HALF-LIFE VALUES OF R. GOLD ET AL.,	1361	1	63
PHYS. REV. C 1, 738 (1970) AND OF D.	1361	1	64
GALLIKER ET AL., HELV. PHYS. ACTA 43, 593	1361	1	65
(1970).	1361	1	66
OTHER- SEE TABLE OF ISOTOPES, 7TH. ED. (PRELIMINARY	1361	1	67
DATA, PRIV. COMM. FROM C.M. LEDERER) AND Y.A.	1361	1	68
ELLIS, NUCLEAR DATA SHEETS 6, NO. 6, 621(1971)	1361	1	69
NOTE THE K-X-RAY INTENSITIES LISTED ARE MEASURED VALUES.	1361	1	70
NOTE ENERGIES AND INTENSITIES OF THE GROUND-STATE ALPHA	1361	1	71
AND THE TWO MOST INTENSE ALPHAS ARE TAKEN FROM	1361	1	72
A. RYTZ, AT. DATA AND NUCL. DATA TABLES 12, NO. 5,	1361	1	73
479 (1973).	1361	1	74
NOTE THE L-X-RAY DATA ARE THOSE OF J.L. CAMPBELL AND L.A.	1361	1	75
MCNELLES, NUCL. INSTRUM. AND METHODS 117, 519 (1974).	1361	1	76
NOTE THE GAMMA-RAY INTENSITIES (EXCEPT THOSE OF THE 55-	1361	1	77
AND 67-KEV GAMMAS) ARE THOSE REPORTED BY R. GUNNINK,	1361	1	78
J.E. EVANS AND A.L. PRINDLE, UCRL-52139 (OCT.,;976).	1361	1	79
THOSE OF THE 55- AND 67-KEV GAMMAS ARE DEDUCED FROM	1361	1	80
THE INTERNAL-CONVERSION COEFFICIENTS AND INTENSITY-	1361	1	81
BALANCE CONSIDERATIONS.	1361	1	82
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 8/78	1361	1	83
MF=9 CROSS SECTION BRANCHING	1361	1	84
MT=102 (N,G) FROM STATISTICAL MODEL CALCULATION (REF. 3)	1361	1	85
	1361	1	86
REFERENCES	1361	1	87
1. V.I. LEBEDEV ET.AL. ATOMNAYA ENERGIYA 52(1958)176.	1361	1	88
2. J.C. HOPKINS AND B.C. DIVEN, NUCL. PHYS. 48(1963)433.	1361	1	89
3. F.M.MANN AND R.E. SCHENTER, TRANS.AMER.NUCL.SOC. 23(1976)546	1361	1	90
AND HEDL TME 77-54 (1977)	1361	1	91
4. C.D. BOWMAN, M.S. COOPS, G.F. AUCHAMPAUGH, AND S.C. FULTZ.	1361	1	92
PHYS REV 137B(1965)326	1361	1	93
5. D.L. SPHAK, JV.B. OSTAPENKO,AND G.N. SMIRENKIN, ZEP 9(1969)196	1361	1	94
6. P.A. SEEGER, A.HEMMENDINGER, AND B.C. DIVEN, NUCL. PHYS. A96	1361	1	95
(1967)605, LA-3586(1966)	1361	1	96
7. E.F. FOMUSHKIN ET.AL. YF 5(1967)966	1361	1	97
8. V.F. FOMUSHKIN AND E.K. GUTNIKOVA, SOV.J NUCL.PHYS.10(1970)529	1361	1	98
9. R.H. IYER AND R. SAMPATHKUMAR, BARC 474(1970)	1361	1	99
10.L.W. WESTON AND J.H. TODD, NUCL. PHYS. (TO BE PUBLISHED)	1361	1	100
11.H. DERRIEN AND B. LUCAS, NUCL. CROSS SECT. AND TECH.,	1361	1	101
NBS 425, 2(1975)637	1361	1	102
12.A. GILBERT AND A.G.W. CAMERON, CAN. J. PHYS. 43(1965)1446	1361	1	103
13.R.SHER AND C.BECK EPRI NP-1771 1981 AND REV.1 JAN. 1983	1361	1	104
MF=12,13,14,15 PHOTON PRODUCTION	1361	1	105
FILES TAKEN FROM THE LLL EVALUATIONS OF R. HOWERTON	1361	1	106
DOCUMENTED IN UCRL 50400, VOL. 15, PART A (METHODS) SEPT 75	1361	1	107
AND PART B (CURVES) APR 76. FILES EXTENDED TO THE ENERGY	1361	1	108
RANGE 1.-5 EV TO 20 MEV AND MERGED TO THIS EVALUATION	1361	1	109
AT BNL BY R. KINSEY.	1361	1	110
MF=32,33 ERROR FILES	1361	1	111
MT=1,2,4,16,17,18,102, AND 151	1361	1	112
1 451 199 2	1361	1	113
1 452 3 0	1361	1	114
1 458 5 2	1361	1	115
2 151 101 1	1361	1	116
3 1 43 1	1361	1	117
3 2 16 1	1361	1	118
3 4 38 1	1361	1	119
3 16 8 1	1361	1	120
3 17 5 1	1361	1	121

ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

			MAT	MF	REC.
3	18	24	2 1361	1	122
3	19	21	2 1361	1	123
3	20	7	2 1361	1	124
3	51	15	1 1361	1	125
3	52	15	1 1361	1	126
3	53	15	1 1361	1	127
3	54	14	1 1361	1	128
3	55	15	1 1361	1	129
3	56	13	1 1361	1	130
3	57	13	1 1361	1	131
3	58	14	1 1361	1	132
3	59	13	1 1361	1	133
3	60	13	1 1361	1	134
3	61	12	1 1361	1	135
3	62	12	1 1361	1	136
3	63	11	1 1361	1	137
3	64	10	1 1361	1	138
3	65	10	1 1361	1	139
3	66	9	1 1361	1	140
3	67	9	1 1361	1	141
3	68	8	1 1361	1	142
3	91	12	1 1361	1	143
3	102	22	1 1361	1	144
3	251	10	1 1361	1	145
3	252	10	1 1361	1	146
3	253	10	1 1361	1	147
4	2	144	1 1361	1	148
4	16	2	1 1361	1	149
4	17	2	1 1361	1	150
4	18	2	1 1361	1	151
4	19	2	1 1361	1	152
4	20	2	1 1361	1	153
4	51	2	1 1361	1	154
4	52	2	1 1361	1	155
4	53	2	1 1361	1	156
4	54	2	1 1361	1	157
4	55	2	1 1361	1	158
4	56	2	1 1361	1	159
4	57	2	1 1361	1	160
4	58	2	1 1361	1	161
4	59	2	1 1361	1	162
4	60	2	1 1361	1	163
4	61	2	1 1361	1	164
4	62	2	1 1361	1	165
4	63	2	1 1361	1	166
4	64	2	1 1361	1	167
4	65	2	1 1361	1	168
4	66	2	1 1361	1	169
4	67	2	1 1361	1	170
4	68	2	1 1361	1	171
4	91	2	1 1361	1	172
5	16	17	1 1361	1	173
5	17	7	1 1361	1	174
5	18	7	1 1361	1	175
5	19	7	1 1361	1	176
5	20	7	1 1361	1	177
5	91	10	1 1361	1	178
8	16	2	1 1361	1	179
8	102	17	1 1361	1	180
8	457	300	1 1361	1	181
9	102	11	1 1361	1	182

MT=55-69 DISCRETE INELASTIC. BASED ON HAUSER-FESHBACH COMPOUND 1342 1 60

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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

			MAT	MF	REC.
12	18	5	1 1361	1	183
12	102	5	1 1361	1	184
13	3	7	1 1361	1	185
14	3	1	1 1361	1	186
14	18	1	1 1361	1	187
14	102	1	1 1361	1	188
15	3	281	1 1361	1	189
15	18	87	1 1361	1	190
15	102	33	1 1361	1	191
32	151	203	1 1361	1	192
33	1	4	1 1361	1	193
33	2	6	1 1361	1	194
33	4	5	1 1361	1	195
33	16	4	1 1361	1	196
33	17	4	1 1361	1	197
33	18	26	1 1361	1	198
33	102	5	1 1361	1	199
			1361	1	200
			1361	1	204
			1361	1	210
			1361	2	313
			1361	3	358
			1361	3	375
			1361	3	414
			1361	3	423
			1361	3	429
			1361	3	454
			1361	3	476
			1361	3	484
			1361	3	500
			1361	3	516
			1361	3	532
			1361	3	547
			1361	3	563
			1361	3	577
			1361	3	591
			1361	3	606
			1361	3	620
			1361	3	634
			1361	3	647
			1361	3	660
			1361	3	672
			1361	3	683
			1361	3	694
			1361	3	704
			1361	3	714
			1361	3	723
			1361	3	736
			1361	3	759
			1361	3	770
			1361	3	781
			1361	3	792
			1361	4	938
			1361	4	941
			1361	4	944
			1361	4	947
			1361	4	950
			1361	4	953
			1361	4	956
			1361	4	959
			1361	4	962

Y.HARKER, J.R.LIAW, W.J.MAECK, D.G.MADLAND, [illegible]
P.L.REEDER, B.F.RIDER, R.E.SCHENTER, B.I.SPINRAD, J.P.UNIK, 1342 1 121

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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

MAT	MF	REC.
1361	4	965
1361	4	968
1361	4	971
1361	4	974
1361	4	977
1361	4	980
1361	4	983
1361	4	986
1361	4	989
1361	4	992
1361	4	995
1361	4	998
1361	4	1001
1361	4	1004
1361	4	1007
1361	4	1010
1361	5	1029
1361	5	1037
1361	5	1045
1361	5	1053
1361	5	1061
1361	5	1072
1361	8	1076
1361	8	1094
1361	8	1395
1361	9	1408
1361	12	1415
1361	12	1421
1361	13	1430
1361	14	1433
1361	14	1435
1361	14	1437
1361	15	1720
1361	15	1808
1361	15	1842
1361	32	2047
1361	33	2053
1361	33	2060
1361	33	2066
1361	33	2071
1361	33	2076
1361	33	2103
1361	33	2109

COMPARE TWO BCD FILES (COMPARE 82-1)

```
COLUMNS TO READ AND LIST--------      70 (  1 TO 80 )
COLUMNS TO COMPARE--------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE----      66 (  1 TO 70 )
SPECIAL FILE FLAG---------------       2
ACCEPTABLE DIFFERENCE-----------      0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
```

DESCRIPTION OF TWO FILES TO BE COMPARED

FILE 1 =ACT1361 OLD
FILE 2 =ACT1361 NEW

```
 FILE   CARD  CONTENTS
                        1         2         3         4         5         6         7         8
 FILE   CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
-------------------------------------------------------------------------------------------------
    1      2  9.52410+ 4 2.38986+ 2          1         1         0        11361 1451     1
    2      2  9.52410+ 4 2.38986+ 2          1         1         0        21361 1451     1
 DIFFERENCES                                                             $
-------------------------------------------------------------------------------------------------
    1      3  0.0     + 0 1.00000+ 0          0         0         0        01361 1451     2
    2      3  0.00000+ 0 1.00000+ 0          0         0         0        01361 1451     2
 DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------------
    1      4  0.0     + 0 0.0     + 0          0         0       109       871361 1451     3
    2      4  0.00000+ 0 0.00000+ 0          0         0       109       871361 1451     3
 DIFFERENCES     $$$$       $$$$
-------------------------------------------------------------------------------------------------
    1      6                          DIST-MAY79                  781214    1361 1451     5
    2      6                          DIST-MAR83                  830316    1361 1451     5
 DIFFERENCES                              $$$                     $$$$ $
-------------------------------------------------------------------------------------------------
    1    105  13.R. SHER, S. FIARMAN, AND C. BECK (PRIV. COMM., OCT. 1976)     1361 1451   104
    2    105  13.R.SHER AND C.BECK    EPRI NP-1771 1981 AND REV.1 JAN. 1983    1361 1451   104
 DIFFERENCES     $$$$$$$$$$$$$$$$$$ $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
    1    114                                  1       451       199        11361 1451   113
    2    114                                  1       451       199        21361 1451   113
 DIFFERENCES                                                             $
-------------------------------------------------------------------------------------------------
    1    116                                  1       458         5        11361 1451   115
    2    116                                  1       458         5        21361 1451   115
 DIFFERENCES                                                             $
-------------------------------------------------------------------------------------------------
    1    123                                  3        18        24        11361 1451   122
    2    123                                  3        18        24        21361 1451   122
 DIFFERENCES                                                             $
-------------------------------------------------------------------------------------------------
    1    124                                  3        19        21        11361 1451   123
    2    124                                  3        19        21        21361 1451   123
 DIFFERENCES                                                             $
-------------------------------------------------------------------------------------------------
    1    125                                  3        20         7        11361 1451   124
    2    125                                  3        20         7        21361 1451   124
 DIFFERENCES                                                             $
-------------------------------------------------------------------------------------------------
    1    203  0.0     + 0 0.0     + 0          0         0         2        01361 1452   202
    2    203  0.00000+ 0 0.00000+ 0          0         0         2        01361 1452   202
 DIFFERENCES     $$$$       $$$$
-------------------------------------------------------------------------------------------------
    1    207  0.0     + 0 0.0     + 0          0         0        18        91361 1458   206
```



```
    2    207  0.00000+ 0 0.00000+ 0          0         0        18        91361 1458   206
 DIFFERENCES     $$$$       $$$$
```

```
   2   207   0.00000+ 0 0.00000+ 0          0          0          18          91361 1458  206
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   208   1.79500+ 8 1.50000+ 6 6.30000+ 6 1.50000+ 5 5.00000+ 3 5.00000+ 31361 1458  207
   2   208   1.76400+ 8 2.00000+ 6 6.53000+ 6 3.60000+ 5 2.00000+ 3 4.00000+ 21361 1458  207
DIFFERENCES      $$         $ $        $$       $ $        $          $          $
-------------------------------------------------------------------------------------------------
   1   209   6.00000+ 6 2.00000+ 6 5.20000+ 6 3.00000+ 5 5.30000+ 6 3.00000+ 51361 1458  208
   2   209   7.90000+ 6 1.00000+ 6 5.51000+ 6 7.50000+ 5 5.62000+ 6 5.00000+ 51361 1458  208
DIFFERENCES   $ $          $          $$       $ $        $$         $
-------------------------------------------------------------------------------------------------
   1   210   7.20000+ 6 4.00000+ 5 2.02300+ 8 1.10000+ 6 2.09500+ 8 1.00000+ 61361 1458  209
   2   210   7.54000+ 6 1.10000+ 6 2.01960+ 8 1.12588+ 6 2.09500+ 8 2.40000+ 51361 1458  209
DIFFERENCES      $$         $ $        $    $$$       $$$$                $ $        $
-------------------------------------------------------------------------------------------------
   1   217   2.38950+ 2 0.0     + 0          0          0          396         661361 2151  216
   2   217   2.38950+ 2 0.00000+ 0          0          0          396         661361 2151  216
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------------
   1   288   2.38950+ 2 0.0     + 0          0          0          2           01361 2151  287
   2   288   2.38950+ 2 0.00000+ 0          0          0          2           01361 2151  287
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------------
   1   289   0.0     + 0 0.0     + 0          0          4          16          01361 2151  288
   2   289   0.00000+ 0 0.00000+ 0          0          4          16          01361 2151  288
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   290   1.32000+ 0 2.00000+ 0 1.00000+ 0 1.10000- 4 4.70000- 2 0.0     + 01361 2151  289
   2   290   1.32000+ 0 2.00000+ 0 1.00000+ 0 1.10000- 4 4.70000- 2 0.00000+ 01361 2151  289
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   293   0.0     + 0 0.0     + 0          0          4          16          01361 2151  292
   2   293   0.00000+ 0 0.00000+ 0          0          4          16          01361 2151  292
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   294   9.43000- 1 3.00000+ 0 1.00000+ 0 1.10000- 4 4.70000- 2 0.0     + 01361 2151  293
   2   294   9.43000- 1 3.00000+ 0 1.00000+ 0 1.10000- 4 4.70000- 2 0.00000+ 01361 2151  293
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   297   2.38950+ 2 0.0     + 0          1          0          4           01361 2151  296
   2   297   2.38950+ 2 0.00000+ 0          1          0          4           01361 2151  296
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------------
   1   298   0.0     + 0 0.0     + 0          1          4          16          01361 2151  297
   2   298   0.00000+ 0 0.00000+ 0          1          4          16          01361 2151  297
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   299   2.20000+ 0 1.00000+ 0 1.00000+ 0 2.76000- 4 6.00000- 2 0.0     + 01361 2151  298
   2   299   2.20000+ 0 1.00000+ 0 1.00000+ 0 2.76000- 4 6.00000- 2 0.00000+ 01361 2151  298
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   302   0.0     + 0 0.0     + 0          1          4          16          01361 2151  301
   2   302   0.00000+ 0 0.00000+ 0          1          4          16          01361 2151  301
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   303   1.32000+ 0 2.00000+ 0 1.00000+ 0 2.76000- 4 6.00000- 2 0.0     + 01361 2151  302
   2   303   1.32000+ 0 2.00000+ 0 1.00000+ 0 2.76000- 4 6.00000- 2 0.00000+ 01361 2151  302
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
   1   306   0.0     + 0 0.0     + 0          1          4          16          01361 2151  305
   2   306   0.00000+ 0 0.00000+ 0          1          4          16          01361 2151  305
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1   307   9.43000- 1 3.00000+ 0 1.00000+ 0 2.76000- 4 6.00000- 2 0.0     + 01361 2151  306
   2   307   9.43000- 1 3.00000+ 0 1.00000+ 0 2.76000- 4 6.00000- 2 0.00000+ 01361 2151  306
DIFFERENCES                                                          $$$$
```

```
----------------------------------------------------------------------------------------------------
   1  2043    2.37850- 1 2.54080-10 0.0      + 0 6.40001- 7 0.0      + 0 0.0      + 0136132151 2042
   2  2043    2.37850- 1 2.54080-10 0.00000+ 0 6.40000- 7 0.00000+ 0 0.00000+ 0136132151 2042
DIFFERENCES                             $$$$           $          $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2044    2.06120- 9 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0136132151 2043
   2  2044    2.06120- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0136132151 2043
DIFFERENCES                $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2046    2.43840- 1 3.60000-11 0.0      + 0 7.67381- 7 0.0      + 0 0.0      + 0136132151 2045
   2  2046    2.43840- 1 3.60000-11 0.00000+ 0 7.67380- 7 0.00000+ 0 0.00000+ 0136132151 2045
DIFFERENCES                             $$$$           $          $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2047    2.06120- 9 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0 0.0      + 0136132151 2046
   2  2047    2.06120- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0136132151 2046
DIFFERENCES                $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2051    0.0      + 0 0.0      + 0          0          1          0          1136133   1 2050
   2  2051    0.00000+ 0 0.00000+ 0          0          1          0          1136133   1 2050
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2052    0.0      + 0 0.0      + 0          0          1          6          3136133   1 2051
   2  2052    0.00000+ 0 0.00000+ 0          0          1          6          3136133   1 2051
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2053    1.00000- 5 0.0      + 0 1.00000+ 4 2.50000- 3 2.00000+ 7 0.0      + 0136133   1 2052
   2  2053    1.00000- 5 0.00000+ 0 1.00000+ 4 2.50000- 3 2.00000+ 7 0.00000+ 0136133   1 2052
DIFFERENCES                $$$$                                          $$$$
----------------------------------------------------------------------------------------------------
   1  2056    0.0      + 0 0.0      + 0          0          2          1          0136133   2 2055
   2  2056    0.00000+ 0 0.00000+ 0          0          2          1          0136133   2 2055
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2057    0.0      + 0 0.0      + 0          0          0          0          0136133   2 2056
   2  2057    0.00000+ 0 0.00000+ 0          0          0          0          0136133   2 2056
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2063    0.0      + 0 0.0      + 0          0          4          0          1136133   4 2062
   2  2063    0.00000+ 0 0.00000+ 0          0          4          0          1136133   4 2062
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2064    0.0      + 0 0.0      + 0          0          1          8          4136133   4 2063
   2  2064    0.00000+ 0 0.00000+ 0          0          1          8          4136133   4 2063
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2065    1.00000- 5 0.0      + 0 1.00000+ 4 6.25000- 2 1.00000+ 6 1.00000+ 0136133   4 2064
   2  2065    1.00000- 5 0.00000+ 0 1.00000+ 4 6.25000- 2 1.00000+ 6 1.00000+ 0136133   4 2064
DIFFERENCES                $$$$
----------------------------------------------------------------------------------------------------
   1  2066    2.00000+ 7 0.0      + 0                                            136133   4 2065
   2  2066    2.00000+ 7 0.00000+ 0                                            136133   4 2065
DIFFERENCES                $$$$
----------------------------------------------------------------------------------------------------
   1  2069    0.0      + 0 0.0      + 0          0         16          0          1136133  16 2068
   2  2069    0.00000+ 0 0.00000+ 0          0         16          0          1136133  16 2068
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2070    0.0      + 0 0.0      + 0          0          1          6          3136133  16 2069
   2  2070    0.00000+ 0 0.00000+ 0          0          1          6          3136133  16 2069
DIFFERENCES     $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1  2071    1.00000- 5 0.0      + 0 6.66000+ 6 1.00000+ 0 2.00000+ 7 0.0      + 0136133  16 2070
   2  2071    1.00000- 5 0.00000+ 0 6.66000+ 6 1.00000+ 0 2.00000+ 7 0.00000+ 0136133  16 2070
DIFFERENCES                $$$$                                          $$$$
----------------------------------------------------------------------------------------------------
   1  2074    0.0      + 0 0.0      + 0          0         17          0          1136133  17 2073
```


1342 4 1691
1342 4 1694

```
   2  2074   0.00000+ 0 0.00000+ 0          0          17          0          1136133 17 2073
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1  2075   0.0     + 0 0.0     + 0          0           1          6          3136133 17 2074
   2  2075   0.00000+ 0 0.00000+ 0          0           1          6          3136133 17 2074
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1  2076   1.00000- 5 0.0     + 0 1.26500+ 7 1.00000+ 0 2.00000+ 7 0.0     + 0136133 17 2075
   2  2076   1.00000- 5 0.00000+ 0 1.26500+ 7 1.00000+ 0 2.00000+ 7 0.00000+ 0136133 17 2075
DIFFERENCES                $$$$                                          $$$$
-------------------------------------------------------------------------------------------------
   1  2079   0.0     + 0 0.0     + 0          0          18          1          2136133 18 2078
   2  2079   0.00000+ 0 0.00000+ 0          0          18          1          2136133 18 2078
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1  2080   0.0     + 0 0.0     + 0          0           1          0          0136133 18 2079
   2  2080   0.00000+ 0 0.00000+ 0          0           1          0          0136133 18 2079
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1  2082   2.00000+ 5 1.00000+ 0 2.00000+ 7 0.0     + 0                     136133 18 2081
   2  2082   2.00000+ 5 1.00000+ 0 2.00000+ 7 0.00000+ 0                     136133 18 2081
DIFFERENCES                                  $$$$
-------------------------------------------------------------------------------------------------
   1  2083   0.0     + 0 0.0     + 0          0           1          8          4136133 18 2082
   2  2083   0.00000+ 0 0.00000+ 0          0           1          8          4136133 18 2082
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1  2084   1.00000- 5 0.0     + 0 1.00000+ 4 6.25000- 2 2.00000+ 5 0.0     + 0136133 18 2083
   2  2084   1.00000- 5 0.00000+ 0 1.00000+ 4 6.25000- 2 2.00000+ 5 0.00000+ 0136133 18 2083
DIFFERENCES                $$$$                                          $$$$
-------------------------------------------------------------------------------------------------
   1  2085   2.00000+ 7 0.0     + 0                                         136133 18 2084
   2  2085   2.00000+ 7 0.00000+ 0                                         136133 18 2084
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------------
   1  2086   0.0     + 0 0.0     + 0          1           5         78          12136133 18 2085
   2  2086   0.00000+ 0 0.00000+ 0          1           5         78          12136133 18 2085
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1  2089   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0136133 18 2088
   2  2089   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0136133 18 2088
DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1  2090   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 9.50000- 2136133 18 2089
   2  2090   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 9.50000- 2136133 18 2089
DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$
-------------------------------------------------------------------------------------------------
   2  2100   0.00000+ 0 0.00000+ 0       1395          18          1          0136133 18 2099
   2  2101   0.00000+ 0 0.00000+ 0          0           2          0          0136133 18 2100
   2  2102   2.00000+ 5 2.00000+ 7       1395          18          4          2136133 18 2101
   2  2103   2.00000+ 5 1.00000+ 0 2.00000+ 7 0.00000+ 0                     136133 18 2102
DIFFERENCES ON     4 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
   1  2101   9.52410+ 4 2.38986+ 2          0           0          0          1136133102 2100
   2  2105   9.52410+ 4 2.38986+ 2          0                      0          1136133102 2104
DIFFERENCES                                              $
-------------------------------------------------------------------------------------------------
   1  2102   0.0     + 0 0.0     + 0          0         102          0          1136133102 2101
   2  2106   0.00000+ 0 0.00000+ 0          0         102          0          1136133102 2105
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1  2103   0.0     + 0 0.0     + 0          0           1         12          6136133102 2102
   2  2107   0.00000+ 0 0.00000+ 0          0           1         12          6136133102 2106
DIFFERENCES      $$$$       $$$$
-------------------------------------------------------------------------------------------------
   1  2104   1.00000- 5 0.0     + 0 1.00000+ 4 8.10000- 3 3.00000+ 5 2.25000- 2136133102 2103
```

```
   2  2108   1.00000- 5 0.00000+ 0 1.00000+ 4 8.10000- 3 3.00000+ 5 2.25000- 2136133102 2107
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------------
   1  2105   1.00000+ 6 6.25000- 2 3.00000+ 6 1.00000+ 0 2.00000+ 7 0.0     + 0136133102 2104
   2  2109   1.00000+ 6 6.25000- 2 3.00000+ 6 1.00000+ 0 2.00000+ 7 0.00000+ 0136133102 2108
DIFFERENCES                                                          $$$$
-------------------------------------------------------------------------------------------------
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1361	1	451	200	10	200	10	(DIFFERENCES)
1361	1	452	4	1	4	1	(DIFFERENCES)
1361	1	458	6	4	6	4	(DIFFERENCES)
1361	2	151	103	15	103	15	(DIFFERENCES)
1361	3	1	45	1	45	1	(DIFFERENCES)
1361	3	2	17	2	17	2	(DIFFERENCES)
1361	3	4	39	3	39	3	(DIFFERENCES)
1361	3	16	9	2	9	2	(DIFFERENCES)
1361	3	17	6	2	6	2	(DIFFERENCES)
1361	3	18	25	2	25	2	(DIFFERENCES)
1361	3	19	22	2	22	2	(DIFFERENCES)
1361	3	20	8	2	8	2	(DIFFERENCES)
1361	3	51	16	3	16	3	(DIFFERENCES)
1361	3	52	16	4	16	4	(DIFFERENCES)
1361	3	53	16	3	16	3	(DIFFERENCES)
1361	3	54	15	3	15	3	(DIFFERENCES)
1361	3	55	16	4	16	4	(DIFFERENCES)
1361	3	56	14	3	14	3	(DIFFERENCES)
1361	3	57	14	4	14	4	(DIFFERENCES)
1361	3	58	15	4	15	4	(DIFFERENCES)
1361	3	59	14	4	14	4	(DIFFERENCES)
1361	3	60	14	3	14	3	(DIFFERENCES)
1361	3	61	13	4	13	4	(DIFFERENCES)
1361	3	62	13	4	13	4	(DIFFERENCES)
1361	3	63	12	3	12	3	(DIFFERENCES)
1361	3	64	11	3	11	3	(DIFFERENCES)
1361	3	65	11	4	11	4	(DIFFERENCES)
1361	3	66	10	3	10	3	(DIFFERENCES)
1361	3	67	10	3	10	3	(DIFFERENCES)
1361	3	68	9	3	9	3	(DIFFERENCES)
1361	3	91	13	3	13	3	(DIFFERENCES)
1361	3	102	23	1	23	1	(DIFFERENCES)
1361	3	251	11	1	11	1	(DIFFERENCES)
1361	3	252	11	1	11	1	(DIFFERENCES)
1361	3	253	11	1	11	1	(DIFFERENCES)
1361	4	2	146	82	146	82	(DIFFERENCES)
1361	4	16	3	1	3	1	(DIFFERENCES)
1361	4	17	3	1	3	1	(DIFFERENCES)
1361	4	18	3	1	3	1	(DIFFERENCES)
1361	4	19	3	1	3	1	(DIFFERENCES)
1361	4	20	3	1	3	1	(DIFFERENCES)
1361	4	51	3	1	3	1	(DIFFERENCES)
1361	4	52	3	1	3	1	(DIFFERENCES)
1361	4	53	3	1	3	1	(DIFFERENCES)
1361	4	54	3	1	3	1	(DIFFERENCES)
1361	4	55	3	1	3	1	(DIFFERENCES)
1361	4	56	3	1	3	1	(DIFFERENCES)
1361	4	57	3	1	3	1	(DIFFERENCES)
1361	4	58	3	1	3	1	(DIFFERENCES)
1361	4	59	3	1	3	1	(DIFFERENCES)
1361	4	60	3	1	3	1	(DIFFERENCES)
1361	4	61	3	1	3	1	(DIFFERENCES)

1361	4	62	3	1	3	1	(DIFFERENCES)
1361	4	63	3	1	3	1	(DIFFERENCES)
1361	4	64	3	1	3	1	(DIFFERENCES)
1361	4	65	3	1	3	1	(DIFFERENCES)
1361	4	66	3	1	3	1	(DIFFERENCES)
1361	4	67	3	1	3	1	(DIFFERENCES)
1361	4	68	3	1	3	1	(DIFFERENCES)
1361	4	91	3	1	3	1	(DIFFERENCES)
1361	5	16	19	4	19	4	(DIFFERENCES)
1361	5	17	8	2	8	2	(DIFFERENCES)
1361	5	18	8	2	8	2	(DIFFERENCES)
1361	5	19	8	2	8	2	(DIFFERENCES)
1361	5	20	8	2	8	2	(DIFFERENCES)
1361	5	91	11	2	11	2	(DIFFERENCES)
1361	8	16	4	1	4	1	(DIFFERENCES)
1361	8	102	18	2	18	2	(DIFFERENCES)
1361	8	457	301	162	301	162	(DIFFERENCES)
1361	9	102	13	2	13	2	(DIFFERENCES)
1361	12	18	7	3	7	3	(DIFFERENCES)
1361	12	102	6	3	6	3	(DIFFERENCES)
1361	13	3	9	2	9	2	(DIFFERENCES)
1361	14	3	3	0	3	0	
1361	14	18	2	0	2	0	
1361	14	102	2	0	2	0	
1361	15	3	283	67	283	67	(DIFFERENCES)
1361	15	18	88	38	88	38	(DIFFERENCES)
1361	15	102	34	11	34	11	(DIFFERENCES)
1361	32	151	205	133	205	133	(DIFFERENCES)
1361	33	1	6	3	6	3	(DIFFERENCES)
1361	33	2	7	2	7	2	(DIFFERENCES)
1361	33	4	6	4	6	4	(DIFFERENCES)
1361	33	16	5	3	5	3	(DIFFERENCES)
1361	33	17	5	3	5	3	(DIFFERENCES)
1361	33	18	23	9	27	13	(DIFFERENCES)
1361	33	102	6	5	6	5	(DIFFERENCES)
1361	33	102	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	2109	688	2113	692

END OF RUN

182

9.52430+ 4	2.40973+ 2	1	1	0	2	1363	1	1
0.00000+ 0	1.00000+ 0	0	0	0	0	1363	1	2
0.00000+ 0	0.00000+ 0	0	0	100	79	1363	1	3

95-AM-243 HEDLSRLLLL EVAL-APR78 MANN,BENJAMIN,HOWERTON,ET AL. 1363 1 4
HEDL TME 77-54 DIST-MAR83 830316 1363 1 5
HEDL EVAL-APR78 MANN AND SCHENTER (FAST) 1363 1 6
SRL EVAL-OCT75 BENJAMIN (THERMAL) 1363 1 7
LLL EVAL-APR78 HOWERTON (GAMMA PRODUCTION) 1363 1 8
INEL EVAL-AUG78 REICH (DECAY) 1363 1 9
MF=1 GENERAL INFORMATION 1363 1 10
MT=452 NUBAR THERMAL VALUE COMPUTED FROM SEMI-EMPIRICAL WORK OF 1363 1 11
GORDEEVA AND SMIRENKIN(REF.1) AS REVISED BY MANERO AND 1363 1 12
KONSHIN(REF.2). ENERGY DEPENDENCE BASED ON WORK OF HOWERTON 1363 1 13
(REF.3). 1363 1 14
MT=458 ENERGY FROM FISSION BASED ON SHER (REF. 12) 1363 1 15
MF=2 RESONANCE PARAMETERS(0 TO 10 KEV) 1363 1 16
MT=151 RESOLVED RESONANCES 219 RESOLVED RESONANCES PLUS ONE 1363 1 17
BOUND LEVEL ARE INCLUDED BASED UPON THE TOTAL CROSS SECTION 1363 1 18
MEASUREMENTS OF SIMPSON ET AL.(REF.4) AND THE PRODUCTION 1363 1 19
RESULTS OF BENJAMIN ET AL.(REF. 5). RESOLVED REGION - 0 TO 1363 1 20
250 EV. 1363 1 21
UNRESOLVED RESONANCES AVERAGE RESONANCE PARAMETERS BASED 1363 1 22
ON THE MEASUREMENTS OF SIMPSON ET AL.(REF.4) WERE USED. 1363 1 23
UNRESOLVED REGION - 250 EV TO 10 KEV. 1363 1 24
MF=3 SMOOTH CROSS SECTIONS(0 TO 20 MEV) 1363 1 25
MT=1 TOTAL SUM OF PARTIAL CROSS SECTIONS 1363 1 26
MT=2 ELASTIC BASED UPON OPTICAL MODEL CALCULATIONS (REF. 7) 1363 1 27
MT=4 INELASTIC BASED ON STATISTICAL MODEL CALCULATIONS TO 17 1363 1 28
EXCITED LEVELS PLUS CONTINUUM (REF. 7) 1363 1 29
MT=16 N,2N BASED ON STATISTICAL MODEL CALCULATION (REF. 7) 1363 1 30
MT=17 N,3N BASED ON STATISTICAL MODEL CALCULATIONS (REF. 7) 1363 1 31
MT=18 FISSION BASED ON DATA OF SEEGER ET AL (REF. 8) 1363 1 32
MT=19 SAME AS MT=18 UNTIL (N,NF) THRESHOLD, AFTER WHICH CROSS 1363 1 33
SECTION CONSTANT. 1363 1 34
MT=20 IS (MT=18) - (MT=19) 1363 1 35
MT=37 N,4N BASED ON STATISTICAL MODEL CALCULATIONS (REF. 7) 1363 1 36
MT=51,...,67,91 BASED ON STATISTICAL MODEL CALCULATIONS TO 17 1363 1 37
EXCITED LEVELS PLUS CONTINUUM (REF. 7) 1363 1 38
MT=102 CAPTURE BASED ON STATISTICAL MODEL CALCULATIONS NORMA- 1363 1 39
LIZED TO DATA OF WISSHAK AND KAPPELER (REF.13) 1363 1 40
MT=251,252,253 MU-BAR(L-SYSTEM),XI,GAMMA CALCULATED BY CHAD 1363 1 41
MF=4 SECONDARY NEUTRON ANGULAR DISTRIBUTIONS 1363 1 42
MT=2 ELASTIC ANGULAR DISTRIBUTIONS SUPPLIED BY H.ALTER OF AI, 1363 1 43
COMPOSED OF A MIXTURE OF MEASURED DATA FOR U235,U238, AND PU- 1363 1 44
239,VALUES OF GAMMA SLOWING DOWN PARAMETER ABOVE 10 KEV ARE 1363 1 45
SUSPECT AND ARE NOT TO BE USED WITHOUT STUDY. 1363 1 46
MT%2 ASSUMED ISOTROPIC 1363 1 47
MF=5 SECONDARY NEUTRON ENERGY DISTRIBUTIONS 1363 1 48
MT=16 BASED ON PARAMETERS OF GILBERT AND CAMERON (REF. 9) 1363 1 49
MT=17 SAME REFERENCE AS MT=16 1363 1 50
MT=18 FISSION SPECTRUM HAS MAXWELLIAN DENSITY WITH THE TEMP 1363 1 51
BASED ON TERRELL S PRESCRIPTION (REF. 6) THE THERMAL VALUE 1363 1 52
OF NU WAS USED TO DETERMINE THE TEMPERATURE. 1363 1 53
MT=19,20 SAME AS MT=18 1363 1 54
MT=37 SAME REFERENCE AS MT=16 1363 1 55
MT=91 SAME REFERENCE AS MT=16 1363 1 56
MF=8 1363 1 57
MT=102 USED DECAY DATA OF ENDF/B-V, MAT NUMBERS = 7544 AND 7554 1363 1 58
MT=454 USED AM-241 YIELD CURVE (REF. 10,11) 1363 1 59
DATA FOR 95-AM-243 DECAYS BY REICH 1363 1 60

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ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX
TEXT & DICT.

```
                                                                    MAT  MF REC.
  INSERTED INTO FILE AT BNL BY R. KINSEY IN SEP 1978               1363  1   61
MF=8, MT=457   RADIOACTIVE DECAY DATA                              1363  1   62
 REFERENCES  Q(ALPHA)-1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLE  1363  1   63
             OTHER- SEE TABLE OF ISOTOPES, 7TH ED. (PRELIMINARY    1363  1   64
                    DATA, PRIV. COMM. FROM C.M. LEDERER). SEE ALSO 1363  1   65
                    Y.A. ELLIS AND A.H. WAPSTRA, NUCLEAR DATA      1363  1   66
                    SHEETS B, 3,NO.2, 1(1969) AND Y.A. ELLIS,IBID. 1363  1   67
                    19, NO. 1, 103 (1976)                          1363  1   68
             SPONTANEOUS-FISSION BRANCHING RATIO DERIVED FROM      1363  1   69
                    LISTED HALF-LIFE VALUE AND S.-F. HALF-LIFE     1363  1   70
                    DATA OF B.M. ALEKSANDROV ET AL., SOV. AT.      1363  1   71
                    ENERGY 20, 352 (1966).                         1363  1   72
       NOTE  THE LISTED L-X-RAY INTENSITY IS A MEASURED VALUE.     1363  1   73
        NOTE  THE ENERGIES AND INTENSITIES OF THE GROUND-STATE     1363  1   74
              ALPHA AND THE TWO MOST INTENSE ALPHA GROUPS ARE      1363  1   75
              THE RECOMMENDED VALUES OF A. RYTZ, AT. DATA AND      1363  1   76
              NUCL. DATA TABLES 12, NO. 5, 479 (1973).             1363  1   77
 TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 8/78  1363  1   78
MF=9, MT = 102 BASED ON STATISTICAL MODEL CALCULATIONS (REF. 7)    1363  1   79
MF=12,13,14,15      PHOTON PRODUCTION                              1363  1   80
     FILES TAKEN FROM THE LLL EVALUATIONS OF R. HOWERTON           1363  1   81
     DOCUMENTED IN UCRL 50400, VOL. 15, PART A (METHODS) SEPT 75   1363  1   82
     AND PART B (CURVES) APR 76. FILES EXTENDED TO THE ENERGY      1363  1   83
     RANGE 1.-5 EV TO 20 MEV AND MERGED TO THIS EVALUATION         1363  1   84
     AT BNL BY R. KINSEY.                                          1363  1   85
                    REFERENCES                                     1363  1   86
  1. L.GORDEEVA AND G. SMIRENKIN,SOV.AT.EN.14(1963)562.            1363  1   87
  2. F.MANERO AND V.KONSHIN,AT.EN.REV.10(1972)637.                 1363  1   88
  3. R.HOWERTON,NUCL.SCI.ENG.46(1971)42.                           1363  1   89
  4. O.SIMPSON,F.SIMPSON,J.HARVEY,G.SLAUGHTER,R.BENJAMIN, AND C.    1363  1   90
     AHLFELD,NUCL.SCI.ENG.55(1974)273.                             1363  1   91
  5. R.BENJAMIN,F.MCCROSSON,V.VANDERVELDE,AND T.GORRELL,USERDA     1363  1   92
     REPORT DP-1394(1976).                                         1363  1   93
  6. J.TERRELL,PHYS.AND CHEM.OF FISSION,VOL2,IAEA(1965).           1363  1   94
  7. F. M. MANN AND R.E. SCHENTER TANS. AM. NUC. SOC. 23(1976)546  1363  1   95
         AND HEDL TME-77-54 (1977)                                 1363  1   96
  8. P.A.SEEGER LA-4420(1970)                                      1363  1   97
  9. A. GILBERT AND A.G.W. CAMERON, CAN. J. PHYS. 43(1965)1446     1363  1   98
 10. J.G. CUNINGHAME, J. INORG. NUCL. CHEM. 4(1957)7               1363  1   99
 11. R.R. RICHARD ET. AL., TRANS. AM. NUC. SOC. 6(1963)2           1363  1  100
 12.SHER +BECK EPRI NP-1771/81 +REV 1/83 +PC TO MAGURNO 2/83       1363  1  101
 13. K. WISSHAK AND F. KAPPELER PROC. NUC. DATA FOR  SCI. AND      1363  1  102
       TECH.,ANTWERP BELGIUM 1982.                                 1363  1  103
                              1       451       182          2 1363  1  104
                              1       452         3          1 1363  1  105
                              1       458         5          2 1363  1  106
                              2       151       238          1 1363  1  107
                              3         1        41          1 1363  1  108
                              3         2        41          2 1363  1  109
                              3         4        34          1 1363  1  110
                              3        16         7          1 1363  1  111
                              3        17         5          1 1363  1  112
                              3        18        23          2 1363  1  113
                              3        19        21          2 1363  1  114
                              3        20         6          2 1363  1  115
                              3        37         4          1 1363  1  116
                              3        51        15          1 1363  1  117
                              3        52        15          1 1363  1  118
                              3        53        16          1 1363  1  119
                              3        54        14          1 1363  1  120
                              3        55        14          1 1363  1  121
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SUMMARY

END OF

04/06/86

ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

			MAT	MF	REC.
3	56	14	1 1363	1	122
3	57	15	1 1363	1	123
3	58	16	1 1363	1	124
3	59	16	1 1363	1	125
3	60	15	1 1363	1	126
3	61	14	1 1363	1	127
3	62	13	1 1363	1	128
3	63	13	1 1363	1	129
3	64	12	1 1363	1	130
3	65	12	1 1363	1	131
3	66	12	1 1363	1	132
3	67	11	1 1363	1	133
3	91	12	1 1363	1	134
3	102	23	2 1363	1	135
3	251	16	1 1363	1	136
3	252	16	1 1363	1	137
3	253	16	1 1363	1	138
4	2	199	1 1363	1	139
4	16	2	1 1363	1	140
4	17	2	1 1363	1	141
4	18	2	1 1363	1	142
4	19	2	1 1363	1	143
4	20	2	1 1363	1	144
4	37	2	1 1363	1	145
4	51	2	1 1363	1	146
4	52	2	1 1363	1	147
4	53	2	1 1363	1	148
4	54	2	1 1363	1	149
4	55	2	1 1363	1	150
4	56	2	1 1363	1	151
4	57	2	1 1363	1	152
4	58	2	1 1363	1	153
4	59	2	1 1363	1	154
4	60	2	1 1363	1	155
4	61	2	1 1363	1	156
4	62	2	1 1363	1	157
4	63	2	1 1363	1	158
4	64	2	1 1363	1	159
4	65	2	1 1363	1	160
4	66	2	1 1363	1	161
4	67	2	1 1363	1	162
4	91	2	1 1363	1	163
5	16	17	1 1363	1	164
5	17	7	1 1363	1	165
5	18	7	1 1363	1	166
5	19	7	1 1363	1	167
5	20	7	1 1363	1	168
5	37	7	1 1363	1	169
5	91	10	1 1363	1	170
8	102	7	1 1363	1	171
8	457	109	1 1363	1	172
9	102	13	1 1363	1	173
12	18	5	1 1363	1	174
12	102	5	1 1363	1	175
13	3	9	1 1363	1	176
14	3	1	1 1363	1	177
14	18	1	1 1363	1	178
14	102	1	1 1363	1	179
15	3	412	1 1363	1	180
15	18	87	1 1363	1	181
15	102	33	1 1363	1	182

OETTING AND S.R. GUNN, J. INORG. NUCL. 1361 1 59
CHEM. 29, 2659 (1967). 1361 1 60

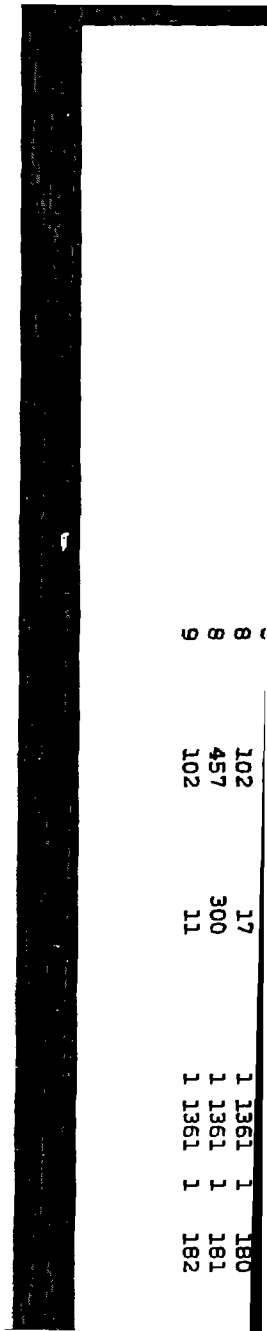
MAT	MF	REC.
1363	1	183
1363	1	187
1363	1	193
1363	2	433
1363	3	476
1363	3	518
1363	3	553
1363	3	561
1363	3	567
1363	3	591
1363	3	613
1363	3	620
1363	3	625
1363	3	641
1363	3	657
1363	3	674
1363	3	689
1363	3	704
1363	3	719
1363	3	735
1363	3	752
1363	3	769
1363	3	785
1363	3	800
1363	3	814
1363	3	828
1363	3	841
1363	3	854
1363	3	867
1363	3	879
1363	3	892
1363	3	916
1363	3	933
1363	3	950
1363	3	967
1363	4	1168
1363	4	1171
1363	4	1174
1363	4	1177
1363	4	1180
1363	4	1183
1363	4	1186
1363	4	1189
1363	4	1192
1363	4	1195
1363	4	1198
1363	4	1201
1363	4	1204
1363	4	1207
1363	4	1210
1363	4	1213
1363	4	1216
1363	4	1219
1363	4	1222
1363	4	1225
1363	4	1228
1363	4	1231
1363	4	1234
1363	4	1237
1363	4	1240
1363	5	1259

04/06/86

ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

MAT	MF	REC.
1363	5	1267
1363	5	1275
1363	5	1283
1363	5	1291
1363	5	1299
1363	5	1310
1363	8	1319
1363	8	1429
1363	9	1444
1363	12	1451
1363	12	1457
1363	13	1468
1363	14	1471
1363	14	1473
1363	14	1475
1363	15	1889
1363	15	1977
1363	15	2011

```
COMPARE TWO BCD FILES (COMPARE 82-1)
------------------------------------------------------------------------------
COLUMNS TO READ AND LIST--------      70 (  1 TO 80 )
COLUMNS TO COMPARE--------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE----      66 (  1 TO 70 )
SPECIAL FILE FLAG---------------       2
ACCEPTABLE DIFFERENCE-----------       0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
------------------------------------------------------------------------------
FILE 1 =ACT1363 OLD
FILE 2 =ACT1363 NEW
------------------------------------------------------------------------------
 FILE  CARD  CONTENTS
------------------------------------------------------------------------------
                     1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
------------------------------------------------------------------------------
   1     2   9.52430+ 4 2.40973+ 2         1         1         0        11363 1451     1
   2     2   9.52430+ 4 2.40973+ 2         1         1         0        21363 1451     1
DIFFERENCES                                                                 $
------------------------------------------------------------------------------
   1     3   0.0     + 0 1.00000+ 0         0         0         0        01363 1451     2
   2     3   0.00000+ 0 1.00000+ 0         0         0         0        01363 1451     2
DIFFERENCES     $$$$
------------------------------------------------------------------------------
   1     4   0.0     + 0 0.0     + 0         0         0        98        791363 1451    3
   2     4   0.00000+ 0 0.00000+ 0         0         0       100        791363 1451    3
DIFFERENCES     $$$$       $$$$                              $$$
------------------------------------------------------------------------------
   1     6   HEDL TME 77-54       DIST-MAY79                    790524     1363 1451     5
   2     6   HEDL TME 77-54       DIST-MAR83                    830316     1363 1451     5
DIFFERENCES                          $$$                        $$ $$$
------------------------------------------------------------------------------
   1    41       LIZED TO MATCH FILE 2 AT 10 KEV (REF. 7)                    1363 1451    40
   2    41       LIZED TO DATA OF WISSHAK AND KAPPELER (REF.13)              1363 1451    40
DIFFERENCES               $  $$$ $$$$$$ $ $$$$$$$$$$$ $$$$$$$$
------------------------------------------------------------------------------
   1   102   12. R. SHER, S. FIARMAN, AND C. BECK, PRIV.COMM. (OCT. 1976)     1363 1451   101
   1   103                                 1       451       180        11363 1451   102
DIFFERENCES ON    2 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2   102   12.SHER +BECK EPRI NP-1771/81 +REV 1/83 +PC TO MAGURNO 2/83     1363 1451   101
   2   103   13. K. WISSHAK AND F. KAPPELER PROC. NUC. DATA FOR  SCI. AND     1363 1451   102
   2   104         TECH.,ANTWERP BELGIUM 1982.                               1363 1451   103
   2   105                                 1       451       182        21363 1451   104
DIFFERENCES ON    4 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
------------------------------------------------------------------------------
   1   105                                 1       458         5        11363 1451   104
   2   107                                 1       458         5        21363 1451   106
DIFFERENCES                                                                 $
------------------------------------------------------------------------------
   1   108                                 3         2        15        11363 1451   107
   2   110                                 3         2        41        21363 1451   109
DIFFERENCES                                                $$           $
------------------------------------------------------------------------------
   1   112                                 3        18        23        11363 1451   111
   2   114                                 3        18        23        21363 1451   113
DIFFERENCES                                                                 $
------------------------------------------------------------------------------
   1   113                                 3        19        21        11363 1451   112
   2   115                                 3        19        21        21363 1451   114
DIFFERENCES                                                                 $
------------------------------------------------------------------------------
```

```
    1   114                                       3        20         6          11363 1451   113
    2   '16                                       3        20         6          21363 1451   115
 DIFFEREN.:ES                                                                    $
----------------------------------------------------------------------------------------------------
    1   134                                       3       102        24          11363 1451   133
    2   136                                       3       102        23          21363 1451   135
 DIFFERENCES                                                          $          $
----------------------------------------------------------------------------------------------------
    1   184    0.0     + 0 0.0     + 0            0         0         2          01363 1452   183
    2   186    0.00000+ 0 0.00000+ 0              0         0         2          01363 1452   185
 DIFFERENCES      $$$$        $$$$
----------------------------------------------------------------------------------------------------
    1   188    0.0     + 0 0.0     + 0            0         0        18          91363 1458   187
    2   190    0.00000+ 0 0.00000+ 0              0         0        18          91363 1458   189
 DIFFERENCES      $$$$        $$$$
----------------------------------------------------------------------------------------------------
    1   189    1.75990+ 8 1.50000+ 6 7.00000+ 6 5.00000+ 5 5.00000+ 3 5.00000+ 31363 1458   188
    2   191    1.76300+ 8 2.00000+ 6 7.53000+ 6 5.90000+ 5 4.00000+ 3 8.00000+ 21363 1458   190
 DIFFERENCES      $$$        $ $         $$         $          $          $       $
----------------------------------------------------------------------------------------------------
    1   190    6.70000+ 6 2.10000+ 6 6.10000+ 6 3.00000+ 5 6.30000+ 6 3.00000+ 51363 1458   189
    2   192    6.42000+ 6 1.00000+ 6 6.62000+ 6 7.50000+ 5 6.75000+ 6 5.00000+ 51363 1458   191
 DIFFERENCES     $$          $ $         $$         $ $         $$         $
----------------------------------------------------------------------------------------------------
    1   191    8.50000+ 6 4.00000+ 5 2.02100+ 8 1.10000+ 6 2.10600+ 8 1.00000+ 61363 1458   190
    2   193    9.06000+ 6 1.10000+ 6 2.03620+ 8 1.40900+ 6 2.12680+ 8 8.80000+ 51363 1458   192
 DIFFERENCES   $ $$          $ $       $       $$$          $ $         $ $       $ $       $
----------------------------------------------------------------------------------------------------
OVER 200 CARDS DIFFERENT STARTING AT
       FILE 1...MAT/MF/MT/SEQUENCE= 1363  2 151    197
       FILE 2...MAT/MF/MT/SEQUENCE= 1363  2 151    199
       REMAINDER OF SECTION SKIPPED
----------------------------------------------------------------------------------------------------
    1   435    0.0     + 0 0.0     + 0            0         0         1        1141363 3   1   434
    2   437    0.00000+ 0 0.00000+ 0              0         0         1        1141363 3   1   436
 DIFFERENCES      $$$$        $$$$
----------------------------------------------------------------------------------------------------
    1   437    1.00000- 5 0.0     + 0 4.20000- 1 0.0     + 0 9.83000- 1 0.0     + 01363 3   1   436
    2   439    1.00000- 5 0.00000+ 0 4.20000- 1 0.00000+ 0 9.83000- 1 0.00000+ 01363 3   1   438
 DIFFERENCES                  $$$$                  $$$$                  $$$$
----------------------------------------------------------------------------------------------------
    1   438    1.00000+ 3 0.0     + 0 1.00000+ 4 0.0     + 0 1.00000+ 4 1.35210+ 11363 3   1   437
    2   440    1.00000+ 3 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 1.35210+ 11363 3   1   439
 DIFFERENCES                  $$$$                  $$$$
----------------------------------------------------------------------------------------------------
    1   476    9.52430+ 4 2.40973+ 2              0         0         0          01363 3   2   475
    1   477    0.0     + 0 0.0     + 0            0         0         1        341363 3   2   476
    1   478             34          2                                           1363 3   2   477
    1   479    1.00000- 5 0.0     + 0 1.00000+ 4 0.0     + 0 1.00000+ 4 1.12640+ 11363 3   2   478
    1   480    2.00000+ 4 1.28600+ 1 7.00000+ 4 1.20440+ 1 1.05000+ 5 1.13870+ 11363 3   2   479
    1   481    1.35000+ 5 1.06130+ 1 1.70000+ 5 1.00440+ 1 2.20000+ 5 9.42320+ 01363 3   2   480
    1   482    2.55000+ 5 8.95040+ 0 2.98000+ 5 8.46600+ 0 3.36000+ 5 7.92730+ 01363 3   2   481
    1   483    3.75000+ 5 7.44820+ 0 4.25000+ 5 6.95150+ 0 4.70000+ 5 6.58840+ 01363 3   2   482
    1   484    5.20000+ 5 6.15280+ 0 6.00000+ 5 5.51000+ 0 6.50000+ 5 5.21130+ 01363 3   2   483
    1   485    7.00000+ 5 4.93620+ 0 8.00000+ 5 4.40310+ 0 9.00000+ 5 3.90560+ 01363 3   2   484
    1   486    1.00000+ 6 3.60860+ 0 1.10000+ 6 3.41840+ 0 2.00000+ 6 3.67710+ 01363 3   2   485
    1   487    2.20000+ 6 3.89820+ 0 2.50000+ 6 4.21380+ 0 3.00000+ 6 4.63410+ 01363 3   2   486
    1   488    3.50000+ 6 4.89420+ 0 6.00000+ 6 4.55680+ 0 7.00000+ 6 4.19890+ 01363 3   2   487
    1   489    8.00000+ 6 3.84370+ 0 9.00000+ 6 3.49010+ 0 1.00000+ 7 3.19340+ 01363 3   2   488
    1   490    2.00000+ 7 3.19000+ 0                                            1363 3   2   489
 DIFFERENCES ON   15 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
    2   478    9.52430+ 4 2.40973+ 2              0        93         0          01363 3   2   477
    2   479    0.0000E+00 0.0000E+00              0         0         1        1141363 3   2   478
    2   480            114          2             0         0         0          01363 3   2   479
    2   481    1.00000- 5 0.00000+ 0 4.20000- 1 0.00000+ 0 9.83000- 1 0.00000+ 01363 3   2   480
    2   482    1.00000+ 3 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 1.05153+ 11363 3   2   481

    2   483    1.50000+ 4 1.14788+ 1 2.00000+ 4 1.24267+ 1 3.00000+ 4 1.21481+ 11363 3   2   482
    2   484    4.00000+ 4 1.20206+ 1 4.20000+ 4 1.19900+ 1 4.30000+ 4 1.19747+ 11363 3   2   483
                                     5.00000+ 4 1.18694+ 1 6.00000+ 4 1.17052+ 11363 3   2   484
```

```
 2   483   1.50000+ 4 1.14788+ 1 2.00000+ 4 1.24267+ 1 3.00000+ 4 1.21481+ 11363 3  2  482
 2   484   4.00000+ 4 1.20206+ 1 4.20000+ 4 1.19900+ 1 4.30000+ 4 1.19747+ 11363 3  2  483
 2   485   4.50000+ 4 1.19445+ 1 5.00000+ 4 1.18694+ 1 6.00000+ 4 1.17052+ 11363 3  2  484
 2   486   7.00000+ 4 1.15680+ 1 8.00000+ 4 1.14003+ 1 8.40000+ 4 1.13308+ 11363 3  2  485
 2   487   8.50000+ 4 1.13134+ 1 8.70000+ 4 1.12795+ 1 9.00000+ 4 1.12286+ 11363 3  2  486
 2   488   9.50000+ 4 1.11433+ 1 9.70000+ 4 1.11091+ 1 9.99950+ 4 1.10517+ 11363 3  2  487
 2   489   1.00000+ 5 1.10516+ 1 1.05000+ 5 1.09300+ 1 1.15000+ 5 1.07660+ 11363 3  2  488
 2   490   1.26000+ 5 1.05172+ 1 1.30000+ 5 1.04100+ 1 1.35000+ 5 1.02900+ 11363 3  2  489
 2   491   1.40000+ 5 1.02178+ 1 1.50000+ 5 1.00741+ 1 1.61000+ 5 9.90827+ 01363 3  2  490
 2   492   1.63000+ 5 9.87667+ 0 1.65000+ 5 9.84509+ 0 1.70000+ 5 9.76595+ 01363 3  2  491
 2   493   1.80000+ 5 9.64703+ 0 1.95000+ 5 9.46861+ 0 2.00000+ 5 9.40971+ 01363 3  2  492
 2   494   2.20000+ 5 9.17420+ 0 2.45000+ 5 8.85446+ 0 2.50000+ 5 8.78919+ 01363 3  2  493
 2   495   2.52000+ 5 8.76309+ 0 2.55000+ 5 8.72388+ 0 2.65000+ 5 8.61579+ 01363 3  2  494
 2   496   2.67000+ 5 8.59413+ 0 2.70000+ 5 8.56175+ 0 2.75000+ 5 8.50781+ 01363 3  2  495
 2   497   2.80000+ 5 8.45375+ 0 2.90000+ 5 8.34556+ 0 2.98000+ 5 8.25903+ 01363 3  2  496
 2   498   3.00000+ 5 8.23186+ 0 3.05000+ 5 8.16387+ 0 3.10000+ 5 8.09594+ 01363 3  2  497
 2   499   3.20000+ 5 7.96007+ 0 3.36000+ 5 7.74234+ 0 3.40000+ 5 7.69515+ 01363 3  2  498
 2   500   3.42000+ 5 7.67162+ 0 3.45000+ 5 7.63627+ 0 3.50000+ 5 7.57732+ 01363 3  2  499
 2   501   3.60000+ 5 7.45947+ 0 3.75000+ 5 7.27719+ 0 4.00000+ 5 7.03235+ 01363 3  2  500
 2   502   4.25000+ 5 6.78750+ 0 4.50000+ 5 6.58689+ 0 4.64000+ 5 6.47455+ 01363 3  2  501
 2   503   4.65000+ 5 6.46652+ 0 4.66000+ 5 6.45850+ 0 4.70000+ 5 6.42640+ 01363 3  2  502
 2   504   4.72000+ 5 6.40890+ 0 4.75000+ 5 6.38264+ 0 4.80000+ 5 6.33888+ 01363 3  2  503
 2   505   4.82000+ 5 6.32138+ 0 4.85000+ 5 6.29512+ 0 4.90000+ 5 6.25136+ 01363 3  2  504
 2   506   5.00000+ 5 6.16384+ 0 5.20000+ 5 5.98880+ 0 5.50000+ 5 5.78075+ 01363 3  2  505
 2   507   6.00000+ 5 5.39200+ 0 6.50000+ 5 5.10330+ 0 7.00000+ 5 4.83620+ 01363 3  2  506
 2   508   8.00000+ 5 4.32210+ 0 9.00000+ 5 3.83560+ 0 9.99950+ 5 3.54674+ 01363 3  2  507
 2   509   1.00000+ 6 3.54660+ 0 1.10000+ 6 3.36340+ 0 1.25000+ 6 3.41152+ 01363 3  2  508
 2   510   1.50000+ 6 3.49238+ 0 1.75000+ 6 3.57424+ 0 2.00000+ 6 3.65010+ 01363 3  2  509
 2   511   2.20000+ 6 3.87620+ 0 2.50000+ 6 4.19580+ 0 3.00000+ 6 4.62110+ 01363 3  2  510
 2   512   3.50000+ 6 4.88420+ 0 4.00000+ 6 4.81872+ 0 4.50000+ 6 4.75225+ 01363 3  2  511
 2   513   5.00000+ 6 4.68530+ 0 5.50000+ 6 4.61828+ 0 6.00000+ 6 4.55080+ 01363 3  2  512
 2   514   6.35060+ 6 4.42532+ 0 6.37700+ 6 4.41587+ 0 7.00000+ 6 4.19290+ 01363 3  2  513
 2   515   8.00000+ 6 3.83775+ 0 9.00000+ 6 3.48410+ 0 9.99950+ 6 3.18755+ 01363 3  2  514
 2   516   1.00000+ 7 3.18740+ 0 1.20000+ 7 3.18670+ 0 1.26520+ 7 3.18650+ 01363 3  2  515
 2   517   1.30000+ 7 3.18638+ 0 1.40000+ 7 3.18600+ 0 1.60000+ 7 3.18536+ 01363 3  2  516
 2   518   1.86470+ 7 3.18518+ 0 1.99170+ 7 3.18763+ 0 2.00000+ 7 3.18200+ 01363 3  2  517
DIFFERENCES ON   41 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
------------------------------------------------------------------------------------------------------------
 1   493   0.0     + 0-4.18260+ 4          0          0          1          921363 3  4  492
 2   521   0.00000+ 0-4.18260+ 4          0          0          1          921363 3  4  520
DIFFERENCES      $$$$
------------------------------------------------------------------------------------------------------------
 1   495   4.20000+ 4 0.0     + 0 4.50000+ 4 7.00000- 2 5.00000+ 4 1.64000- 11363 3  4  494
 2   523   4.20000+ 4 0.00000+ 0 4.50000+ 4 7.00000- 2 5.00000+ 4 1.64000- 11363 3  4  522
DIFFERENCES                 $$$$
------------------------------------------------------------------------------------------------------------
 1   528   0.0     + 0-6.35060+ 6          0          0          1          111363 3 16  527
 2   556   0.00000+ 0-6.35060+ 6          0          0          1          111363 3 16  555
DIFFERENCES      $$$$
------------------------------------------------------------------------------------------------------------
 1   530   6.37700+ 6 0.0     + 0 7.00000+ 6 2.05800- 2 8.00000+ 6 4.10620- 21363 3 16  529
 2   558   6.37700+ 6 0.00000+ 0 7.00000+ 6 2.05800- 2 8.00000+ 6 4.10620- 21363 3 16  557
DIFFERENCES                 $$$$
------------------------------------------------------------------------------------------------------------
 1   536   0.0     + 0-1.26000+ 7          0          0          1           61363 3 17  535
 2   564   0.00000+ 0-1.26000+ 7          0          0          1           61363 3 17  563
DIFFERENCES      $$$$
------------------------------------------------------------------------------------------------------------
 1   538   1.26520+ 7 0.0     + 0 1.30000+ 7 1.00000- 2 1.40000+ 7 1.00000- 11363 3 17  537
 2   566   1.26520+ 7 0.00000+ 0 1.30000+ 7 1.00000- 2 1.40000+ 7 1.00000- 11363 3 17  565
DIFFERENCES                 $$$$
------------------------------------------------------------------------------------------------------------
 1   542   0.0     + 0 2.02100+ 8          0          0          1          581363 3 18  541
 2   570   0.00000+ 0 2.03620+ 8          0          0          1          581363 3 18  569
DIFFERENCES      $$$$       $$$
------------------------------------------------------------------------------------------------------------

 1   544   1.00000- 5 0.0     + 0 1.00000+ 4 0.0     + 0 1.00000+ 4 2.67180- 21363 3 18  543
 2   572   1.00000- 5 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 2.67180- 21363 3 18  571
                           $$$$                $$$$
```

```
   1   544    1.00000- 5 0.0      + 0 1.00000+ 4 0.0      + 0 1.00000+ 4 2.67180- 21363 3 18   543
   2   572    1.00000- 5 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 2.67180- 21363 3 18   571
 DIFFERENCES               $$$$                   $$$$
-----------------------------------------------------------------------------------------------------
   1   566    0.0      + 0 2.02100+ 8          0          0          1          541363 3 19   565
   2   594    0.00000+ 0 2.03620+ 8          0          0          1          541363 3 19   593
 DIFFERENCES     $$$$       $$$
-----------------------------------------------------------------------------------------------------
   1   568    1.00000- 5 0.0      + 0 1.00000+ 4 0.0      + 0 1.00000+ 4 2.67180- 21363 3 19   567
   2   596    1.00000- 5 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 2.67180- 21363 3 19   595
 DIFFERENCES               $$$$                   $$$$
-----------------------------------------------------------------------------------------------------
   1   588    0.0      + 0 2.02100+ 8          0          0          1           71363 3 20   587
   2   616    0.00000+ 0 2.03620+ 8          0          0          1           71363 3 20   615
 DIFFERENCES     $$$$       $$$
-----------------------------------------------------------------------------------------------------
   1   590    1.00000- 5 0.0      + 0 4.50000+ 6 0.0      + 0 5.00000+ 6 5.98320- 21363 3 20   589
   2   618    1.00000- 5 0.00000+ 0 4 50000+ 6 0.00000+ 0 5.00000+ 6 5.98320- 21363 3 20   617
 DIFFERENCES               $$$$                   $$$$
-----------------------------------------------------------------------------------------------------
   1   595    0.0      + 0-1.85700+ 7          0          0          1           21363 3 37   594
   2   623    0.00000+ 0-1.85700+ 7          0          0          1           21363 3 37   622
 DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------
   1   597    1.86470+ 7 0.0      + 0 2.00000+ 7 5.00000- 2                        1363 3 37   596
   2   625    1.86470+ 7 0.00000+ 0 2.00000+ 7 5.00000- 2                        1363 3 37   624
 DIFFERENCES               $$$$
-----------------------------------------------------------------------------------------------------
   1   600    0.0      + 0-4.18260+ 4          0          0          1          341363 3 51   599
   2   628    0.00000+ 0-4.18260+ 4          0          0          1          341363 3 51   627
 DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------
   1   602    4.20000+ 4 0.0      + 0 4.50000+ 4 7.00000- 2 5.00000+ 4 1.64000- 11363 3 51   601
   2   630    4.20000+ 4 0.00000+ 0 4.50000+ 4 7.00000- 2 5.00000+ 4 1.64000- 11363 3 51   629
 DIFFERENCES               $$$$
-----------------------------------------------------------------------------------------------------
   1   612    2.50000+ 8 3.91530- 3 3.00000+ 6 7.83070- 4 3.50000+ 6 0.0      + 01363 3 51   611
   2   640    2.50000+ 6 3.91530- 3 3.00000+ 6 7.83070- 4 3.50000+ 6 0.00000+ 01363 3 51   639
 DIFFERENCES                                                        $$$$
-----------------------------------------------------------------------------------------------------
   1   613    2.00000+ 7 0.0      + 0                                            1363 3 51   612
   2   641    2.00000+ 7 0.00000+ 0                                            1363 3 51   640
 DIFFERENCES               $$$$
-----------------------------------------------------------------------------------------------------
   1   616    0.0      + 0-8.36530+ 4          0          0          1          361363 3 52   615
   2   644    0.00000+ 0-8.36530+ 4          0          0          1          361363 3 52   643
 DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------
   1   618    8.40000+ 4 0.0      + 0 8.50000+ 4 6.60000- 2 8.70000+ 4 1.07000- 11363 3 52   617
   2   646    8.40000+ 4 0.00000+ 0 8.50000+ 4 6.60000- 2 8.70000+ 4 1.07000- 11363 3 52   645
 DIFFERENCES               $$$$
-----------------------------------------------------------------------------------------------------
   1   629    3.00000+ 6 7.92500- 4 3.50000+ 6 0.0      + 0 2.00000+ 7 0.0      + 01363 3 52   628
   2   657    3.00000+ 6 7.92500- 4 3.50000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01363 3 52   656
 DIFFERENCES                                  $$$$                  $$$$
-----------------------------------------------------------------------------------------------------
   1   632    0.0      + 0-9.65990+ 4          0          0          1          381363 3 53   631
   2   660    0.00000+ 0-9.65990+ 4          0          0          1          381363 3 53   659
 DIFFERENCES     $$$$
-----------------------------------------------------------------------------------------------------
   1   634    9.70000+ 4 0.0      + 0 1.00000+ 5 1.00000- 2 1.05000+ 5 2.10000- 21363 3 53   633
   2   662    9.70000+ 4 0.00000+ 0 1.00000+ 5 1.00000- 2 1.05000+ 5 2.10000- 21363 3 53   661
 DIFFERENCES               $$$$
-----------------------------------------------------------------------------------------------------
   1   646    3.50000+ 6 0.0      + 0 2.00000+ 7 0.0      + 0                        1363 3 53   645
   2   674    3.50000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                        1363 3 53   673
```



```
COMPARE
-------
COLUMNS
COLUMNS
COLUMNS
SPECIAL
ACCEPTA
COMMENT
-------
DESCRIP
-------
FILE 1
FILE 2
-------
 FILE
-------
 FILE
-------
-------
    1
    2
 DIFFE
-------
    1
    2
 DIFFE
-------
    1
    2
 DIFFE
-------
    1
    2
 DIFF
-------
    1
    2
 DIFF
-------
    1
    2
 DIFF
-------
    1
    2
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    1
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DIFFERENCES                                                                   $$$$
----------------------------------------------------------------------------------------------------------------
   1   800   2.00000+ 7 0.0      + 0                                                1363 3 63   799
   2   828   2.00000+ 7 0.00000+ 0                                                  1363 3 63   827
DIFFERENCES                 $$$$
----------------------------------------------------------------------------------------------------------------
   1   803   0.0      + 0-4.62080+ 5           0          0          1            271363 3 64   802
   2   831   0.00000+ 0-4.62080+ 5             0          0          1            271363 3 64   830
DIFFERENCES      $$$$
----------------------------------------------------------------------------------------------------------------
   1   805   4.64000+ 5 0.0      + 0 4.66000+ 5 1.70000- 3 4.70000+ 5 3.40000- 31363 3 64   804
   2   833   4.64000+ 5 0.00000+ 0 4.66000+ 5 1.70000- 3 4.70000+ 5 3.40000- 31363 3 64   832
DIFFERENCES                 $$$$
----------------------------------------------------------------------------------------------------------------
   1   813   3.00000+ 6 1.02560- 3 3.50000+ 6 0.0      + 0 2.00000+ 7 0.0      + 01363 3 64   812
   2   841   3.00000+ 6 1.02560- 3 3.50000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01363 3 64   840
DIFFERENCES                                       $$$$                $$$$
----------------------------------------------------------------------------------------------------------------
   1   816   0.0      + 0-4.63080+ 5           0          0          1            251363 3 65   815
   2   844   0.00000+ 0-4.63080+ 5             0          0          1            251363 3 65   843
DIFFERENCES      $$$$
----------------------------------------------------------------------------------------------------------------
   1   818   4.65000+ 5 0.0      + 0 4.70000+ 5 1.35000- 2 4.72000+ 5 1.60000- 21363 3 65   817
   2   846   4.65000+ 5 0.00000+ 0 4.70000+ 5 1.35000- 2 4.72000+ 5 1.60000- 21363 3 65   845
DIFFERENCES                 $$$$
----------------------------------------------------------------------------------------------------------------
   1   825   2.50000+ 6 1.84620- 3 3.00000+ 6 9.23080- 4 3.50000+ 6 0.0      + 01363 3 65   824
   2   853   2.50000+ 6 1.84620- 3 3.00000+ 6 9.23080- 4 3.50000+ 6 0.00000+ 01363 3 65   852
DIFFERENCES                                                           $$$$
----------------------------------------------------------------------------------------------------------------
   1   826   2.00000+ 7 0.0      + 0                                                1363 3 65   825
   2   854   2.00000+ 7 0.00000+ 0                                                  1363 3 65   853
DIFFERENCES                 $$$$
----------------------------------------------------------------------------------------------------------------
   1   829   0.0      + 0-4.68060+ 5           0          0          1            261363 3 66   828
   2   857   0.00000+ 0-4.68060+ 5             0          0          1            261363 3 66   856
DIFFERENCES      $$$$
----------------------------------------------------------------------------------------------------------------
   1   831   4.70000+ 5 0.0      + 0 4.72000+ 5 3.80000- 3 4.75000+ 5 6.30000- 31363 3 66   830
   2   859   4.70000+ 5 0.00000+ 0 4.72000+ 5 3.80000- 3 4.75000+ 5 6.30000- 31363 3 66   858
DIFFERENCES                 $$$$
----------------------------------------------------------------------------------------------------------------
   1   839   3.50000+ 6 0.0      + 0 2.00000+ 7 0.0      + 0                        1363 3 66   838
   2   867   3.50000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                            1363 3 66   865
DIFFERENCES                 $$$$                  $$$$
----------------------------------------------------------------------------------------------------------------
   1   842   0.0      + 0-4.78020+ 5           0          0          1            231363 3 67   841
   2   870   0.00000+ 0-4.78020+ 5             0          0          1            231363 3 67   869
DIFFERENCES      $$$$
----------------------------------------------------------------------------------------------------------------
   1   844   4.80000+ 5 0.0      + 0 4.82000+ 5 2.20000- 3 4.85000+ 5 3.60000- 31363 3 67   843
   2   872   4.80000+ 5 0.00000+ 0 4.82000+ 5 2.20000- 3 4.85000+ 5 3.60000- 31363 3 67   871
DIFFERENCES                 $$$$
----------------------------------------------------------------------------------------------------------------
   1   851   3.50000+ 6 0.0      + 0 2.00000+ 7 0.0      + 0                        1363 3 67   850
   2   879   3.50000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 0                            1363 3 67   878
DIFFERENCES                 $$$$                  $$$$
----------------------------------------------------------------------------------------------------------------
   1   854   0.0      + 0-4.78020+ 5           0          0          1            271363 3 91   853
   2   882   0.00000+ 0-4.78020+ 5             0          0          1            271363 3 91   881
DIFFERENCES      $$$$
----------------------------------------------------------------------------------------------------------------
   1   856   4.80000+ 5 0.0      + 0 4.82000+ 5 9.93240- 3 4.85000+ 5 1.72680- 21363 3 91   855
   2   884   4.80000+ 5 0.00000+ 0 4.82000+ 5 9.93240- 3 4.85000+ 5 1.72680- 21363 3 91   883
DIFFERENCES                 $$$$
----------------------------------------------------------------------------------------------------------------

   1   867   0.0      + 0 5.36300+ 6           0          0          1            611363 3102   866
```

```
  1   867   0.0    + 0 5.36300+ 6          0          0          1         611363 3102   866
  1   868          61           2                                             1363 3102   867
  1   869   1.00000- 5 0.0    + 0 4.20000- 1 0.0    + 0 9.83000- 1 0.0     + 01363 3102   868
  1   870   1.00000+ 3 0.0    + 0 1.00000+ 4 0.0    + 0 1.00000+ 4 2.23010+ 01363 3102   869
  1   871   1.50000+ 4 1.76580+ 0 2.00000+ 4 1.65970+ 0 3.00000+ 4 1.44730+ 01363 3102   870
  1   872   4.00000+ 4 1.23500+ 0 4.30000+ 4 1.16900+ 0 5.00000+ 4 1.06900+ 01363 3102   871
  1   873   6.00000+ 4 9.90000- 1 7.00000+ 4 8.81000- 1 8.00000+ 4 8.12000- 11363 3102   872
  1   874   8.50000+ 4 7.68000- 1 9.00000+ 4 7.29000- 1 9.70000+ 4 6.87000- 11363 3102   873
  1   875   1.00000+ 5 6.66750- 1 1.05000+ 5 6.33000- 1 1.15000+ 5 5.71000- 11363 3102   874
  1   876   1.26000+ 5 5.20000- 1 1.30000+ 5 4.90000- 1 1.40000+ 5 4.47000- 11363 3102   875
  1   877   1.50000+ 5 4.17000- 1 1.61000+ 5 3.91000- 1 1.70000+ 5 3.67000- 11363 3102   876
  1   878   1.95000+ 5 3.28000- 1 2.20000+ 5 2.93000- 1 2.45000+ 5 2.67000- 11363 3102   877
  1   879   2.65000+ 5 2.52000- 1 2.80000+ 5 2.39000- 1 2.98000+ 5 2.27000- 11363 3102   878
  1   880   3.20000+ 5 2.08000- 1 3.36000+ 5 1.96000- 1 3.60000+ 5 1.81000- 11363 3102   879
  1   881   3.75000+ 5 1.70000- 1 4.25000+ 5 1.57000- 1 4.70000+ 5 1.49000- 11363 3102   880
  1   882   5.20000+ 5 1.39000- 1 5.50000+ 5 1.28000- 1 6.00000+ 5 1.15000- 11363 3102   881
  1   883   6.50000+ 5 1.05000- 1 7.00000+ 5 9.70000- 2 8.00000+ 5 7.80000- 21363 3102   882
  1   884   9.00000+ 5 6.60000- 2 1.00000+ 6 5.90000- 2 1.10000+ 6 5.20000- 21363 3102   883
  1   885   1.25000+ 6 4.70000- 2 1.50000+ 6 3.70000- 2 1.75000+ 6 2.90000- 21363 3102   884
  1   886   2.00000+ 6 2.50000- 2 2.20000+ 6 2.10000- 2 2.50000+ 6 1.70000- 21363 3102   885
  1   887   3.00000+ 6 1.30000- 2 3.50000+ 6 1.00000- 2 4.00000+ 6 8.00000- 31363 3102   886
  1   888   4.50000+ 6 7.00000- 3 5.50000+ 6 6.00000- 3 9.00000+ 6 5.00000- 31363 3102   887
  1   889   2.00000+ 7 5.00000- 3                                             1363 3102   888
DIFFERENCES ON   23 CARDS  $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
  2   895   0.00000+ 0 5.36300+ 6          0          0          1         581363 3102   894
  2   896          58           2                                             1363 3102   895
  2   897   1.00000+ 3 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 2.97900+ 01363 3102   896
  2   898   1.50000+ 4 2.34900+ 0 2.00000+ 4 2.09300+ 0 3.00000+ 4 1.99600+ 01363 3102   897
  2   899   4.00000+ 4 1.74800+ 0 4.30000+ 4 1.67900+ 0 5.00000+ 4 1.57000+ 01363 3102   898
  2   900   6.00000+ 4 1.49200+ 0 7.00000+ 4 1.35700+ 0 8.00000+ 4 1.26800+ 01363 3102   899
  2   901   8.50000+ 4 1.21700+ 0 9.00000+ 4 1.16900+ 0 9.70000+ 4 1.11500+ 01363 3102   900
  2   902   1.00000+ 5 1.09600+ 0 1.05000+ 5 1.09000+ 0 1.15000+ 5 0.93400+ 01363 3102   901
  2   903   1.26000+ 5 0.84800+ 0 1.30000+ 5 0.82200+ 0 1.40000+ 5 0.76100+ 01363 3102   902
  2   904   1.50000+ 5 0.71200+ 0 1.61000+ 5 0.67300+ 0 1.70000+ 5 0.64500+ 01363 3102   903
  2   905   1.95000+ 5 0.59300+ 0 2.20000+ 5 0.54200+ 0 2.45000+ 5 0.49800+ 01363 3102   904
  2   906   2.65000+ 5 0.47400+ 0 2.80000+ 5 0.45400+ 0 2.98000+ 5 0.43400+ 01363 3102   905
  2   907   3.20000+ 5 0.40200+ 0 3.36000+ 5 0.38100+ 0 3.60000+ 5 0.35400+ 01363 3102   906
  2   908   3.75000+ 5 0.34100+ 0 4.25000+ 5 0.32100+ 0 4.70000+ 5 0.31100+ 01363 3102   907
  2   909   5.20000+ 5 0.30300+ 0 5.50000+ 5 0.25900+ 0 6.00000+ 5 0.23300+ 01363 3102   908
  2   910   6.50000+ 5 0.21300+ 0 7.00000+ 5 0.19700+ 0 8.00000+ 5 0.15900+ 01363 3102   909
  2   911   9.00000+ 5 0.13600+ 0 1.00000+ 6 0.12100+ 0 1.10000+ 6 0.10700+ 01363 3102   910
  2   912   1.25000+ 6 9.70000- 2 1.50000+ 6 7.80000- 2 1.75000+ 6 6.00000- 21363 3102   911
  2   913   2.00000+ 6 5.20000- 2 2.20000+ 6 4.30000- 2 2.50000+ 6 3.50000- 21363 3102   912
  2   914   3.00000+ 6 2.60000- 2 3.50000+ 6 2.00000- 2 4.00000+ 6 1.60000- 21363 3102   913
  2   915   4.50000+ 6 1.40000- 2 5.50000+ 6 1.20000- 2 9.00000+ 6 1.10000- 21363 3102   914
  2   916   2.00000+ 7 1.10000- 2                                             1363 3102   915
DIFFERENCES ON   22 CARDS  $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
------------------------------------------------------------------------------------------------
  1   892   0.0    + 0 0.0    + 0          0          0          1         391363 3251   891
  2   919   0.00000+ 0 0.00000+ 0          0          0          1         391363 3251   918
DIFFERENCES    $$$$       $$$$
------------------------------------------------------------------------------------------------
  1   909   0.0    + 0 0.0    + 0          0          0          1         391363 3252   908
  2   936   0.00000+ 0 0.00000+ 0          0          0          1         391363 3252   935
DIFFERENCES    $$$$       $$$$
------------------------------------------------------------------------------------------------
  1   926   0.0    + 0 0.0    + 0          0          0          1         391363 3253   925
  2   953   0.00000+ 0 0.00000+ 0          0          0          1         391363 3253   952
DIFFERENCES    $$$$       $$$$
------------------------------------------------------------------------------------------------
  1   944   0.0    + 0 2.40973+ 2          0          2        441         201363 4   2   943
  2   971   0.00000+ 0 2.40973+ 2          0          2        441         201363 4   2   970
DIFFERENCES    $$$$
------------------------------------------------------------------------------------------------
  1   945   1.00000+ 0 2.76694- 3 3.44041- 6-6.86441-11 0.0    + 0 0.0     + 01363 4   2   944
  2   972   1.00000+ 0 2.76694- 3 3.44041- 6-6.86441-11 0.00000+ 0 0.00000+ 01363 4   2   971
```

```
DIFFERENCES                                              $$$$
------------------------------------------------------------------------------------------------------------------
   1  1976    0.0     + 0 2.00000+ 7          0          0          1          20136315102 1975
   2  2003    0.00000+ 0 2.00000+ 7          0          0          1          20136315102 2002
DIFFERENCES      $$$$
------------------------------------------------------------------------------------------------------------------
   1  1978    1.00000+ 3 9.28321- 7 2.50000+ 5 1.12530- 6 5.00000+ 5 6.55120- 7136315102 1977
   2  2005    1.00000+ 3 9.28320- 7 2.50000+ 5 1.12530- 6 5.00000+ 5 6.55120- 7136315102 2004
DIFFERENCES                    $
------------------------------------------------------------------------------------------------------------------
   1  1984    4.50000+ 6 2.64170- 9 4.75000+ 6 0.0     + 0                        136315102 1983
   2  2011    4.50000+ 6 2.64170- 9 4.75000+ 6 0.00000+ 0                        136315102 2010
DIFFERENCES                                              $$$$
------------------------------------------------------------------------------------------------------------------
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1363	1	451	181	13	183	15	(DIFFERENCES)
1363	1	452	4	1	4	1	(DIFFERENCES)
1363	1	458	6	4	6	4	(DIFFERENCES)
1363	2	151	240	240	240	240	(DIFFERENCES)
1363	3	1	43	3	43	3	(DIFFERENCES)
1363	3	2	16	15	42	41	(DIFFERENCES)
1363	3	4	35	2	35	2	(DIFFERENCES)
1363	3	16	8	2	8	2	(DIFFERENCES)
1363	3	17	6	2	6	2	(DIFFERENCES)
1363	3	18	24	2	24	2	(DIFFERENCES)
1363	3	19	22	2	22	2	(DIFFERENCES)
1363	3	20	7	2	7	2	(DIFFERENCES)
1363	3	37	5	2	5	2	(DIFFERENCES)
1363	3	51	16	4	16	4	(DIFFERENCES)
1363	3	52	16	3	16	3	(DIFFERENCES)
1363	3	53	17	3	17	3	(DIFFERENCES)
1363	3	54	15	4	15	4	(DIFFERENCES)
1363	3	55	15	4	15	4	(DIFFERENCES)
1363	3	56	15	4	15	4	(DIFFERENCES)
1363	3	57	16	3	16	3	(DIFFERENCES)
1363	3	58	17	3	17	3	(DIFFERENCES)
1363	3	59	17	3	17	3	(DIFFERENCES)
1363	3	60	16	3	16	3	(DIFFERENCES)
1363	3	61	15	3	15	3	(DIFFERENCES)
1363	3	62	14	3	14	3	(DIFFERENCES)
1363	3	63	14	4	14	4	(DIFFERENCES)
1363	3	64	13	3	13	3	(DIFFERENCES)
1363	3	65	13	4	13	4	(DIFFERENCES)
1363	3	66	13	3	13	3	(DIFFERENCES)
1363	3	67	12	3	12	3	(DIFFERENCES)
1363	3	91	13	2	13	2	(DIFFERENCES)
1363	3	102	25	23	24	22	(DIFFERENCES)
1363	3	251	17	1	17	1	(DIFFERENCES)
1363	3	252	17	1	17	1	(DIFFERENCES)
1363	3	253	17	1	17	1	(DIFFERENCES)
1363	4	2	201	129	201	129	(DIFFERENCES)
1363	4	16	3	1	3	1	(DIFFERENCES)
1363	4	17	3	1	3	1	(DIFFERENCES)
1363	4	18	3	1	3	1	(DIFFERENCES)
1363	4	19	3	1	3	1	(DIFFERENCES)
1363	4	20	3	1	3	1	(DIFFERENCES)
1363	4	37	3	1	3	1	(DIFFERENCES)
1363	4	51	3	1	3	1	(DIFFERENCES)
1363	4	52	3	1	3	1	(DIFFERENCES)
1363	4	53	3	1	3	1	(DIFFERENCES)

1363	4	54	3	1	3	1	(DIFFERENCES)
1363	4	55	3	1	3	1	(DIFFERENCES)
1363	4	56	3	1	3	1	(DIFFERENCES)
1363	4	57	3	1	3	1	(DIFFERENCES)
1363	4	58	3	1	3	1	(DIFFERENCES)
1363	4	59	3	1	3	1	(DIFFERENCES)
1363	4	60	3	1	3	1	(DIFFERENCES)
1363	4	61	3	1	3	1	(DIFFERENCES)
1363	4	62	3	1	3	1	(DIFFERENCES)
1363	4	63	3	1	3	1	(DIFFERENCES)
1363	4	64	3	1	3	1	(DIFFERENCES)
1363	4	65	3	1	3	1	(DIFFERENCES)
1363	4	66	3	1	3	1	(DIFFERENCES)
1363	4	67	3	1	3	1	(DIFFERENCES)
1363	4	91	3	1	3	1	(DIFFERENCES)
1363	5	16	19	4	19	4	(DIFFERENCES)
1363	5	17	8	2	8	2	(DIFFERENCES)
1363	5	18	8	2	8	2	(DIFFERENCES)
1363	5	19	8	2	8	2	(DIFFERENCES)
1363	5	20	8	2	8	2	(DIFFERENCES)
1363	5	37	8	2	8	2	(DIFFERENCES)
1363	5	91	11	2	11	2	(DIFFERENCES)
1363	8	102	9	1	9	1	(DIFFERENCES)
1363	8	457	110	73	110	73	(DIFFERENCES)
1363	9	102	15	2	15	2	(DIFFERENCES)
1363	12	18	7	3	7	3	(DIFFERENCES)
1363	12	102	6	3	6	3	(DIFFERENCES)
1363	13	3	11	2	11	2	(DIFFERENCES)
1363	14	3	3	0	3	0	
1363	14	18	2	0	2	0	
1363	14	102	2	0	2	0	
1363	15	3	414	99	414	99	(DIFFERENCES)
1363	15	18	88	38	88	38	(DIFFERENCES)
1363	15	102	34	11	34	11	(DIFFERENCES)
1363	15	102	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER
1988	776	2015	803

END OF RUN

04/06/86

ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX
TEXT & DICT.

```
                                                                       MAT  MF REC.

9.62440+ 4 2.41966+ 2          1          1          0          2 1344  1    1
0.00000+ 0 1.00000+ 0          0          0          0          0 1344  1    2
0.00000+ 0 0.00000+ 0          0          0        137         48 1344  1    3
96-CM-244 HEDLSRLLLL EVAL-APR78 MANN,BENJAMIN,HOWERTON,ET AL.     1344  1    4
HEDL TME 77-54       DIST-MAR83                       830316      1344  1    5
          HEDL       EVAL-APR78 MANN AND SCHENTER (FAST)          1344  1    6
          SRL        EVAL-JUL75 BENJAMIN (THERMAL)                1344  1    7
          LLL        EVAL-APR78 HOWERTON (GAMMA PRODUCTION)       1344  1    8
          INEL       EVAL-AUG78 REICH (DECAY)                     1344  1    9
          ANC+AI     EVAL-MAY67 DUNFORD + ALTER                   1344  1   10
                          APR74  EXTENDED TO 20 MEV FOR ENDF/B    1344  1   11
                                 VERSION IV                       1344  1   12
MF=1                      GENERAL INFORMATION                     1344  1   13
 MT=452 NUBAR   THERMAL VALUE COMPUTED FROM SEMI-EMPIRICAL WORK   1344  1   14
    OF GORDEEVA AND SMIRENKIN(REF.1) AS REVISED BY MANERO AND     1344  1   15
    KONSHIN(REF.2).  ENERGY DEPENDENCE BASED ON WORK OF HOWERTON  1344  1   16
    (REF.3).                                                      1344  1   17
 MT=458 ENERGY FROM FISSION  BASED ON SHER (REF. 17)              1344  1   18
MF=2                     RESONANCE PARAMETERS(0 EV TO 10 KEV)     1344  1   19
 MT=151 RESOLVED RESONANCES   PARAMETERS ARE INCLUDED FOR 37 RE-  1344  1   20
    SOLVED RESONANCES AND ONE BOUND LEVEL BASED ON ORELA, LASL,   1344  1   21
    AND MTR MEASUREMENTS(REFS.4-6) UP TO 520 EV.  PARAMETERS OF   1344  1   22
    THE BOUND LEVEL AND THE FIRST RESONANCE WERE MODIFIED WITHIN  1344  1   23
    REASONABLE EXPERIMENTAL LIMITS TO PROVIDE AGREEMENT WITH      1344  1   24
    INTEGRAL DATA (REFS. 7 + 8) AND PRODUCTION STUDIES (REFS.9 +  1344  1   25
    10).  THE POTENTIAL SCATTERING CROSS SECTION IS 10.32 BARNS   1344  1   26
    FROM OPTICAL MODEL CALCULATIONS.  2200 M/S CROSS SECTIONS     1344  1   27
    FROM RESONANCE PARAMETERS ARE  CAPTURE- 10.4 B, FISSION-      1344  1   28
    0.60 B, ELASTIC- 7.16 B, TOTAL- 18.13 B.  THIS VALUE DIFFERS  1344  1   29
    FROM THE TOTAL CROSS SECTION DETERMINED BY BERRETH ET AL.     1344  1   30
    (23+-3 B), BUT BERRETH S DATA WAS NOT CORRECTED FOR SMALL     1344  1   31
    ANGLE SCATTERING, A CORRECTION WHICH WOULD REDUCE THE MEAS-   1344  1   32
    URED 2200 M/S TOTAL CROSS SECTION SIGNIFICANTLY.  RESOLVED    1344  1   33
    RANGE- 0 TO 525 EV.                                           1344  1   34
        UNRESOLVED RESONANCES   PARAMETERS FOR S-WAVE RESONANCES  1344  1   35
    ARE AVERAGES FROM THE RESOLVED REGION, WITH THE FISSION       1344  1   36
    WIDTH FROM MOORE S MORE EXTENSIVE DATA FOR THE FISSION  RESO- 1344  1   37
    NANCES(REF. 5).  FOR THE P-WAVE RESONANCES- D, GG, AND GF     1344  1   38
    ARE ALSO BASED ON THE RESOLVED REGION, WHILE GNO IS DETERMIN- 1344  1   39
    ED FROM THE P-WAVE STRENGTH FUNCTIONS OF DUNFORD AND ALTER    1344  1   40
    (REF. 11).  UNRESOLVED RANGE- 525 EV TO 10 KEV.               1344  1   41
MF=3                     SMOOTH CROSS SECTIONS(ABOVE 10 KEV)      1344  1   42
 MT=1   TOTAL CROSS SECTION   FAST REGION FROM AN OPTICAL MODEL   1344  1   43
    CALCULATION (REF. 12).                                        1344  1   44
 MT=2   ELASTIC SCATTERING  DATA OBTAINED IN PROCEDURE            1344  1   45
      IDENTICAL TO MT=1.                                          1344  1   46
 MT=4   INELASTIC SCATTERING  DATA RESULTS FROM THE SCATTERING    1344  1   47
      TO 3 LEVELS PLUS CONTINUUM.  AGAIN AN OM IS USED WITH A     1344  1   48
      STATISTICAL COMPOUND NUCLEUS MODEL (REF. 12)                1344  1   49
 MT=16 N,2N BASED ON STATISTICAL MODEL CALCULATIONS (REF. 12)     1344  1   50
 MT=17 N,3N BASED ON STATISTICAL MODEL CALCULATIONS (REF. 12)     1344  1   51
   MT=18  FISSION   THERMAL REGION DATA CALCULATED FROM RESONANCE 1344  1   52
      PARAMETERS.  FAST REGION BASED ON DATA OF MOORE (REF 13),   1344  1   53
      WITH HIGHER ENERGY EVALUATIONS BASED ON STATISTICAL MODEL   1344  1   54
      CALCULATIONS (REF 12).                                      1344  1   55
 MT=19 (N,F) SAME AS MT=18 UNTIL (N,NF) THRESHOLD, CONSTANT       1344  1   56
       THEREAFTER.                                                1344  1   57
 MT=20 (N,NF) DIFFERENCE OF MT=18 AND MT=19                       1344  1   58
 MT=51,52,53,91 INELASTIC SCATTERING DATA RESULTS FROM THE        1344  1   59
       SCATTERING TO 3 LEVELS PLUS CONTINUUM.  AGAIN AN OM IS     1344  1   60
```

MT=102 USED DECAY DATA OF ENDF/B-V, MAT NUMBERS = 7544 AND 7554 1363 1 58
MT=454 USED AM-241 YIELD CURVE (REF. 10,11) 1363 1 59
DATA FOR 95-AM-243 DECAYS BY REICH 1363 1 60

	MAT	MF	REC.
USED WITH A STATISTICAL COMPOUND NUCLEUS MODEL (REF. 12)	1344	1	61
MT=102 CAPTURE THERMAL DATA CALCULATED FROM RESONANCE	1344	1	62
PARAMETERS. FAST REGION DATA FROM A STATISTICAL MODEL	1344	1	63
ASSUMING DIPOLE RADIATION.	1344	1	64
MT=251 MUBAR CALCULATED FROM DOM ANGULAR DISTRIBUTIONS	1344	1	65
MT=252 XIBAR CALCULATED FROM DOM ANGULAR DISTRIBUTIONS	1344	1	66
MT=253 GAMMA CALCULATED FROM DOM ANGULAR DISTRIBUTIONS	1344	1	67
	1344	1	68
MF=4 LEGENDRE POLYNOMIALS	1344	1	69
MT=2 ELASTIC SCATTERING LEGENDRE COEFFICINTS FOR 15TH	1344	1	70
ORDER FIT TO CALCULATED ANGULAR DISTRIBUTIONS (DOM) ARE	1344	1	71
PROVIDED BETWEEN 10 KEV AND 11 MEV AND 19TH ORDER BETWEEN	1344	1	72
12 AND 15 MEV.	1344	1	73
MT=2 ASSUMED ISOTROPIC	1344	1	74
	1344	1	75
MF=5 SECONDARY ENERGY DISTRIBUTIONS	1344	1	76
MT=16 N,2N NUCLEAR TEMPERATURE WITH ENERGY DEPENDENCE AS IN	1344	1	77
REFERENCE 14.	1344	1	78
MT=17 SAME REFERENCE AS MT=16	1344	1	79
MT=18 FISSION MAXWELLIAN WITH CONSTANT TEMPERATURE FROM	1344	1	80
CORRELATION OF REF. 15.	1344	1	81
MT=19 AND 20 SAME AS MT=18	1344	1	82
MT=91 BASED ON PARAMETERS OF GILBERT AND CAMERON (REF. 16)	1344	1	83
	1344	1	84
DATA FOR 96-CM-244 DECAYS BY REICH	1344	1	85
INSERTED INTO FILE AT BNL BY R. KINSEY IN SEP 1978	1344	1	86
MF=8, MT=457 RADIOACTIVE DECAY DATA	1344	1	87
REFERENCES Q(ALPHA)-1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLE	1344	1	88
HALF-LIFE- WEIGHTED AVERAGE OF VALUES REPORTED BY	1344	1	89
W.C. BENTLEY, J. INORG. NUCL. CHEM. 30,	1344	1	90
2007 (1968) AND W.J. KERRIGAN AND R.S.	1344	1	91
DORSETT, J. INORG. NUCL. CHEM. 34,3603(1972)	1344	1	92
OTHER- SEE M.R. SCHMORAK, NUCLEAR DATA SHEETS 17,	1344	1	93
NO. 3, 402 (1976) AND TABLE OF ISOTOPES,	1344	1	94
7TH ED. (PRELIMINARY DATA, PRIV. COMM. FROM	1344	1	95
C.M. LEDERER). SEE ALSO M.R. SCHMORAK, NUCLEAR	1344	1	96
DATA SHEETS 20, 218 (1977).	1344	1	97
NOTE THE L-X-RAY DATA REPRESENT MEASURED VALUES. SEE C.E.	1344	1	98
BEMIS, JR. AND L. TUBBS, ORNL-5297, 93 (SEPT., 1977).	1344	1	99
NOTE THE INTENSITIES OF THE GAMMA RAYS ABOVE 153 KEV ARE	1344	1	100
TAKEN FROM NDS 20,218 (1977) (REF. ABOVE). THE	1344	1	101
ENERGY VALUES ARE AS MEASURED FROM THE NP-240M DECAY.	1344	1	102
NOTE THE GAMMA-RAY INTENSITY NORMALIZATION WAS DERIVED	1344	1	103
FROM THE LISTED INFORMATION ON THE 42.8-KEV GAMMA	1344	1	104
RAY AND THE GROUND-STATE ALPHA BRANCH.	1344	1	105
NOTE THE ENERGIES AND INTENSITIES OF THE TWO HIGHEST-	1344	1	106
ENERGY ALPHA GROUPS ARE THOSE RECOMMENDED BY A. RYTZ,	1344	1	107
AT. DATA AND NUCL. DATA TABLES 12, NO. 5, 479 (1973).	1344	1	108
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 8/78	1344	1	109
	1344	1	110
REFERENCES	1344	1	111
1. L.GORDEEVA + G.SMIRENKIN,SOV.AT.EN411963)562	1344	1	112
2. F.MANERO + V.KONSHIN,AT.EN.REV.10(1972)637	1344	1	113
3. R.J.HOWERTON,NUCL.SCI.ENG.46(1971)42.	1344	1	114
4. O.SIMPSON,F.SIMPSON,T.YOUNG,J.HARVEY,N.HILL, + R.	1344	1	115
BENJAMIN(PRIVATE COMMUNICATION)	1344	1	116
5. M.MOORE + G.KEYWORTH,PHYS.REV.C3(1971)1656	1344	1	117
6. J.BERRETH,F.SIMPSON, + B.RUSCHE,NUCL.SCI.ENG.49(1972)145	1344	1	118
7. R.BENJAMIN,K.MACMURDO + J.SPENCER,NUCL.SCI.ENG.47(1972)203	1344	1	119
8. M.THOMPSON,M.HYDER, + R.REULAND,J.INORG.NUCL.CHEM.33(1971)	1344	1	120
1553	1344	1	121

3	53	16	1	1363	1	119
3	54	14	1	1363	1	120
3	55	14	1	1363	1	121

	MAT	MF	REC.
9. R.BENJAMIN,V.VANDERVELDE,T.GORRELL + F.MCCROSSON,PROC.CONF.	1344	1	122
NUCL.CROSS SECT. + TECH.,WASH.,D.C.,MAR.,1975	1344	1	123
10. R.BENJAMIN,V.VANDERVELDE,T.GORRELL + F.MCCROSSON,USERDA	1344	1	124
REPORT TO BE ISSUED(WILL SUPERCEDE REF. 12)	1344	1	125
11. C.DUNFORD + H.ALTER,USAEC REPORT NAA-SR-12271(1967)	1344	1	126
12. F.M.MANN + R.E.SCHENTER, TRANS. AMER. NUC. SOC. 23(1976)546	1344	1	127
AND HEDL TME 77-54 (1977)	1344	1	128
13. M.S.MOORE AND G.A.KEYWORTH, PHYS. REV. C3(1971)1656	1344	1	129
14. K.PARKER,AWRE0-79/63(1964)	1344	1	130
15. E.BARNARD ET AL.,NUCL.PHYS.71(1965)228	1344	1	131
16. A. GILBERT AND A.G.W. CAMERON, CAN. J. PHYS. 43(1965)1466	1344	1	132
17. R SHER AND C. BECK EPRI NP-1771 1981 AND REV.1 JAN. 1983	1344	1	133
	1344	1	134
MF=12,13,14,15 PHOTON PRODUCTION	1344	1	135
FILES TAKEN FROM THE LLL EVALUATIONS OF R. HOWERTON	1344	1	136
DOCUMENTED IN UCRL 50400, VOL. 15, PART A (METHODS) SEPT 75	1344	1	137
AND PART B (CURVES) APR 76. FILES EXTENDED TO THE ENERGY	1344	1	138
RANGE 1.-5 EV TO 20 MEV AND MERGED TO THIS EVALUATION	1344	1	139
AT BNL BY R. KINSEY.	1344	1	140

1	451	188	2	1344	1	141
1	452	3	1	1344	1	142
1	458	5	2	1344	1	143
2	151	74	1	1344	1	144
3	1	26	1	1344	1	145
3	2	15	1	1344	1	146
3	4	18	1	1344	1	147
3	16	7	1	1344	1	148
3	17	5	1	1344	1	149
3	18	18	2	1344	1	150
3	19	17	2	1344	1	151
3	20	5	2	1344	1	152
3	51	14	1	1344	1	153
3	52	13	1	1344	1	154
3	53	10	1	1344	1	155
3	91	12	1	1344	1	156
3	102	19	1	1344	1	157
3	251	16	0	1344	1	158
3	252	16	0	1344	1	159
3	253	16	0	1344	1	160
4	2	235	0	1344	1	161
4	16	2	1	1344	1	162
4	17	2	1	1344	1	163
4	18	2	1	1344	1	164
4	19	2	1	1344	1	165
4	20	2	1	1344	1	166
4	51	2	1	1344	1	167
4	52	2	1	1344	1	168
4	53	2	1	1344	1	169
4	91	2	1	1344	1	170
5	16	17	1	1344	1	171
5	17	7	1	1344	1	172
5	18	7	1	1344	1	173
5	19	7	1	1344	1	174
5	20	7	1	1344	1	175
5	91	10	1	1344	1	176
8	16	2	1	1344	1	177
8	102	2	1	1344	1	178
8	457	93	1	1344	1	179
12	18	5	1	1344	1	180
12	102	5	1	1344	1	181
13	3	9	1	1344	1	182

14	102	1	1	1363	1	179
15	3	412	1	1363	1	180
15	18	87	1	1363	1	181
15	102	33	1	1363	1	182

			MAT	MF	REC.
14	3	1	1	1344	1	183
14	18	1	1	1344	1	184
14	102	1	1	1344	1	185
15	3	412	1	1344	1	186
15	18	87	1	1344	1	187
15	102	33	1	1344	1	188
				1344	1	189
				1344	1	193
				1344	1	199
				1344	2	275
				1344	3	303
				1344	3	319
				1344	3	338
				1344	3	346
				1344	3	352
				1344	3	371
				1344	3	389
				1344	3	395
				1344	3	410
				1344	3	424
				1344	3	435
				1344	3	448
				1344	3	458
				1344	3	485
				1344	3	502
				1344	3	519
				1344	4	756
				1344	4	759
				1344	4	762
				1344	4	765
				1344	4	768
				1344	4	771
				1344	4	774
				1344	4	777
				1344	4	780
				1344	4	783
				1344	5	802
				1344	5	810
				1344	5	818
				1344	5	826
				1344	5	834
				1344	5	845
				1344	8	849
				1344	8	852
				1344	8	946
				1344	12	953
				1344	12	959
				1344	13	970
				1344	14	973
				1344	14	975
				1344	14	977
				1344	15	1391
				1344	15	1479
				1344	15	1513

```
COMPARE TWO BCD FILES (COMPARE 82-1)
------------------------------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST--------      70 (  1 TO 80 )
COLUMNS TO COMPARE--------------      66 (  1 TO 70 )
COLUMNS TO DEFINE BLANK LINE----      66 (  1 TO 70 )
SPECIAL FILE FLAG---------------       2
ACCEPTABLE DIFFERENCE-----------       0 (  1 TO 70 )
COMMENT CARDS------------------COMPARED
------------------------------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
------------------------------------------------------------------------------------------------------------------------
FILE 1 =ACT1344 OLD
FILE 2 =ACT1344 NEW
------------------------------------------------------------------------------------------------------------------------
 FILE   CARD  CONTENTS
------------------------------------------------------------------------------------------------------------------------
                      1         2         3         4         5         6         7         8
 FILE   CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
------------------------------------------------------------------------------------------------------------------------
------------------------------------------------------------------------------------------------------------------------
    1      2  9.62440+ 4 2.41966+ 2          1         1         0          11344 1451     1
    2      2  9.62440+ 4 2.41966+ 2          1         1         0          21344 1451     1
 DIFFERENCES                                                                 $
------------------------------------------------------------------------------------------------------------------------
    1      3  0.0     + 0 1.00000+ 0          0         0         0          01344 1451     2
    2      3  0.00000+ 0 1.00000+ 0          0         0         0          01344 1451     2
 DIFFERENCES     $$$$
------------------------------------------------------------------------------------------------------------------------
    1      4  0.0     + 0 0.0     + 0          0         0       137          481344 1451    3
    2      4  0.00000+ 0 0.00000+ 0          0         0       137          481344 1451    3
 DIFFERENCES     $$$$       $$$$
------------------------------------------------------------------------------------------------------------------------
    1      6  HEDL TME 77-54       DIST-MAY79                    790524      1344 1451     5
    2      6  HEDL TME 77-54       DIST-MAR83                    830316      1344 1451     5
 DIFFERENCES                          $$$                        $$ $$$
------------------------------------------------------------------------------------------------------------------------
    1    134  17. R. SHER, S. FIARMAN, AND C. BECK (PRIV. COMM., OCT. 1976)     1344 1451   133
    2    134  17. R SHER AND C. BECK EPRI NP-1771 1981 AND REV.1 JAN. 1983      1344 1451   133
 DIFFERENCES      $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$ $ $$$   $$$
------------------------------------------------------------------------------------------------------------------------
    1    142                                    1       451       188          11344 1451   141
    2    142                                    1       451       188          21344 1451   141
 DIFFERENCES                                                                 $
------------------------------------------------------------------------------------------------------------------------
    1    144                                    1       458         5          11344 1451   143
    2    144                                    1       458         5          21344 1451   143
 DIFFERENCES                                                                 $
------------------------------------------------------------------------------------------------------------------------
    1    151                                    3        18        18          11344 1451   150
    2    151                                    3        18        18          21344 1451   150
 DIFFERENCES                                                                 $
------------------------------------------------------------------------------------------------------------------------
    1    152                                    3        19        17          11344 1451   151
    2    152                                    3        19        17          21344 1451   151
 DIFFERENCES                                                                 $
------------------------------------------------------------------------------------------------------------------------
    1    153                                    3        20         5          11344 1451   152
    2    153                                    3        20         5          21344 1451   152
 DIFFERENCES                                                                 $
------------------------------------------------------------------------------------------------------------------------
    1    192  0.0     + 0 0.0     + 0          0         0         2          01344 1452   191
    2    192  0.00000+ 0 0.00000+ 0          0         0         2          01344 1452   191
 DIFFERENCES     $$$$       $$$$
------------------------------------------------------------------------------------------------------------------------
    1    196  0.0     + 0 0.0     + 0          0         0        18          91344 1458   195
```


1363 4 1237
1363 4 1240
1363 5 1259

```
   2   196  0.00000+ 0 0.00000+ 0          0          0         18          91344 1458  195
DIFFERENCES     $$$$       $$$$
-------------------------------------------------------------------------------------------
   1   197  1.82700+ 8 1.50000+ 6 6.70000+ 6 5.00000+ 5 5.00000+ 3 5.00000+ 31344 1458  196
   2   197  1.78500+ 8 2.00000+ 6 7.62000+ 6 5.80000+ 5 2.00000+ 3 4.00000+ 21344 1458  196
DIFFERENCES     $$$       $ $       $ $$       $         $         $         $
-------------------------------------------------------------------------------------------
   1   198  6.10000+ 6 2.10000+ 6 5.40000+ 6 3.00000+ 5 5.60000+ 6 3.00000+ 51344 1458  197
   2   198  4.37000+ 6 1.00000+ 6 6.20000+ 6 7.50000+ 5 6.33000+ 6 5.00000+ 51344 1458  197
DIFFERENCES  $ $$       $ $       $ $       $ $       $ $$      $
-------------------------------------------------------------------------------------------
   1   199  7.60000+ 6 4.00000+ 5 2.06600+ 8 1.10000+ 6 2.14100+ 8 1.00000+ 61344 1458  198
   2   199  8.50000+ 6 1.10000+ 6 2.03020+ 8 1.40000+ 6 2.11520+ 8 8.70000+ 51344 1458  198
DIFFERENCES  $ $        $ $       $    $$$       $         $$$       $ $       $
-------------------------------------------------------------------------------------------
   1   205  0.0    + 0 9.06223- 1          0          0          1          01344 2151  204
   2   205  0.00000+ 0 9.06223- 1          0          0          1          01344 2151  204
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1   206  2.41966+ 2 0.0    + 0          0          0        228          381344 2151  205
   2   206  2.41966+ 2 0.00000+ 0          0          0        228          381344 2151  205
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1   246  0.0    + 0 9.06223- 1          0          0          2          01344 2151  245
   2   246  0.00000+ 0 9.06223- 1          0          0          2          01344 2151  245
DIFFERENCES     $$$$
-------------------------------------------------------------------------------------------
   1   247  2.41966+ 2 0.0    + 0          0          0          1          01344 2151  246
   2   247  2.41966+ 2 0.00000+ 0          0          0          1          01344 2151  246
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1   248  5.00000- 1 0.0    + 0          5          0         48          71344 2151  247
   2   248  5.00000- 1 0.00000+ 0          5          0         48          71344 2151  247
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------
   1   249  0.0    + 0 0.0    + 0 0.0    + 0 1.00000+ 0 0.0    + 0 4.00000+ 01344 2151  248
   2   249  0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 4.00000+ 01344 2151  248
DIFFERENCES     $$$$       $$$$       $$$$                 $$$$
-------------------------------------------------------------------------------------------
   1   250  5.25000+ 2 1.41000+ 1 0.0    + 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  249
   2   250  5.25000+ 2 1.41000+ 1 0.00000+ 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  249
DIFFERENCES                       $$$$
-------------------------------------------------------------------------------------------
   1   251  7.00000+ 2 1.41000+ 1 0.0    + 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  250
   2   251  7.00000+ 2 1.41000+ 1 0.00000+ 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  250
DIFFERENCES                       $$$$
-------------------------------------------------------------------------------------------
   1   252  1.00000+ 3 1.41000+ 1 0.0    + 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  251
   2   252  1.00000+ 3 1.41000+ 1 0.00000+ 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  251
DIFFERENCES                       $$$$
-------------------------------------------------------------------------------------------
   1   253  2.00000+ 3 1.41000+ 1 0.0    + 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  252
   2   253  2.00000+ 3 1.41000+ 1 0.00000+ 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  252
DIFFERENCES                       $$$$
-------------------------------------------------------------------------------------------
   1   254  5.00000+ 3 1.41000+ 1 0.0    + 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  253
   2   254  5.00000+ 3 1.41000+ 1 0.00000+ 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  253
DIFFERENCES                       $$$$
-------------------------------------------------------------------------------------------
   1   255  7.00000+ 3 1.41000+ 1 0.0    + 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  254
   2   255  7.00000+ 3 1.41000+ 1 0.00000+ 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  254
DIFFERENCES                       $$$$
-------------------------------------------------------------------------------------------
   1   256  1.00000+ 4 1.41000+ 1 0.0    + 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  255
   2   256  1.00000+ 4 1.41000+ 1 0.00000+ 0 1.69500- 3 3.62400- 2 1.35000- 31344 2151  255
DIFFERENCES                       $$$$
```

```
------------------------------------------------------------------------------------------------------------------------
   1  257   2.41966+ 2 0.0     + 0           1          0          2          01344 2151   256
   2  257   2.41966+ 2 0.00000+ 0           1          0          2          01344 2151   256
 DIFFERENCES           $$$$
------------------------------------------------------------------------------------------------------------------------
   1  258   5.00000- 1 0.0     + 0           5          0         48          71344 2151   257
   2  258   5.00000- 1 0.00000+ 0           5          0         48          71344 2151   257
 DIFFERENCES           $$$$
------------------------------------------------------------------------------------------------------------------------
   1  259   0.0     + 0 0.0     + 0 0.0     + 0 1.00000+ 0 0.0     + 0 4.00000+ 01344 2151   258
   2  259   0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 4.00000+ 01344 2151   258
 DIFFERENCES  $$$$     $$$$         $$$$                  $$$$
------------------------------------------------------------------------------------------------------------------------
   1  260   5.25000+ 2 1.41000+ 1 0.0     + 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   259
   2  260   5.25000+ 2 1.41000+ 1 0.00000+ 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   259
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  261   7.00000+ 2 1.41000+ 1 0.0     + 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   260
   2  261   7.00000+ 2 1.41000+ 1 0.00000+ 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   260
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  262   1.00000+ 3 1.41000+ 1 0.0     + 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   261
   2  262   1.00000+ 3 1.41000+ 1 0.00000+ 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   261
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  263   2.00000+ 3 1.41000+ 1 0.0     + 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   262
   2  263   2.00000+ 3 1.41000+ 1 0.00000+ 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   262
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  264   5.00000+ 3 1.41000+ 1 0.0     + 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   263
   2  264   5.00000+ 3 1.41000+ 1 0.00000+ 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   263
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  265   7.00000+ 3 1.41000+ 1 0.0     + 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   264
   2  265   7.00000+ 3 1.41000+ 1 0.00000+ 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   264
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  266   1.00000+ 4 1.41000+ 1 0.0     + 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   265
   2  266   1.00000+ 4 1.41000+ 1 0.00000+ 0 1.23380- 3 3.62400- 2 1.35000- 31344 2151   265
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  267   1.50000+ 0 0.0     + 0           5          0         48          71344 2151   266
   2  267   1.50000+ 0 0.00000+ 0           5          0         48          71344 2151   266
 DIFFERENCES           $$$$
------------------------------------------------------------------------------------------------------------------------
   1  268   0.0     + 0 0.0     + 0 0.0     + 0 1.00000+ 0 0.0     + 0 4.00000+ 01344 2151   267
   2  268   0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 4.00000+ 01344 2151   267
 DIFFERENCES  $$$$     $$$$         $$$$                  $$$$
------------------------------------------------------------------------------------------------------------------------
   1  269   5.25000+ 2 7.05000+ 0 0.0     + 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151   268
   2  269   5.25000+ 2 7.05000+ 0 0.00000+ 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151   268
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  270   7.00000+ 2 7.05000+ 0 0.0     + 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151   269
   2  270   7.00000+ 2 7.05000+ 0 0.00000+ 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151   269
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  271   1.00000+ 3 7.05000+ 0 0.0     + 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151   270
   2  271   1.00000+ 3 7.05000+ 0 0.00000+ 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151   270
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  272   2.00000+ 3 7.05000+ 0 0.0     + 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151   271
   2  272   2.00000+ 3 7.05000+ 0 0.00000+ 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151   271
 DIFFERENCES                        $$$$
------------------------------------------------------------------------------------------------------------------------
   1  273   5.00000+ 3 7.05000+ 0 0.0     + 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151   272
```

```
   2   273   5.00000+ 3 7.05000+ 0 0.00000+ 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151  272
DIFFERENCES                           $$$$
------------------------------------------------------------------------------------------------------------------------
   1   274   7.00000+ 3 7.05000+ 0 0.0    + 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151  273
   2   274   7.00000+ 3 7.05000+ 0 0.00000+ 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151  273
DIFFERENCES                           $$$$
------------------------------------------------------------------------------------------------------------------------
   1   275   1.00000+ 4 7.05000+ 0 0.0    + 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151  274
   2   275   1.00000+ 4 7.05000+ 0 0.00000+ 0 7.24740- 4 3.62400- 2 6.75000- 41344 2151  274
DIFFERENCES                           $$$$
------------------------------------------------------------------------------------------------------------------------
   1   279   0.0    + 0 0.0    + 0          0          0          1        691344 3  1  278
   2   279   0.00000+ 0 0.00000+ 0          0          0          1        691344 3  1  278
DIFFERENCES     $$$$       $$$$
------------------------------------------------------------------------------------------------------------------------
   1   281   1.00000- 6 0.0    + 0 1.00000+ 3 0.0    + 0 2.00000+ 3 5.77000- 11344 3  1  280
   2   281   1.00000- 5 0.00000+ 0 1.00000+ 3 0.00000+ 0 2.00000+ 3 5.77000- 11344 3  1  280
DIFFERENCES                $$$$                  $$$$
------------------------------------------------------------------------------------------------------------------------
   1   306   0.0    + 0 0.0    + 0          0          0          1        341344 3  2  305
   2   306   0.00000+ 0 0.00000+ 0          0          0          1        341344 3  2  305
DIFFERENCES     $$$$       $$$$
------------------------------------------------------------------------------------------------------------------------
   1   308   1.00000- 5 0.0    + 0 1.00000+ 4 0.0    + 0 1.00000+ 4 1.41951+ 11344 3  2  307
   2   308   1.00000- 5 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 1.41951+ 11344 3  2  307
DIFFERENCES                $$$$                  $$$$
------------------------------------------------------------------------------------------------------------------------
   1   322   0.0    + 0-4.28230+ 4          0          0          1        451344 3  4  321
   2   322   0.00000+ 0-4.28230+ 4          0          0          1        451344 3  4  321
DIFFERENCES     $$$$
------------------------------------------------------------------------------------------------------------------------
   1   324   4.30000+ 4 0.0    + 0 4.50000+ 4 2.40000- 2 5.00000+ 4 9.10000- 21344 3  4  323
   2   324   4.30000+ 4 0.00000+ 0 4.50000+ 4 2.40000- 2 5.00000+ 4 9.10000- 21344 3  4  323
DIFFERENCES                $$$$
------------------------------------------------------------------------------------------------------------------------
   1   338   6.00000+ 6 1.37560- 1 7.00000+ 6 0.0    + 0 2.00000+ 7 0.0    + 01344 3  4  337
   2   338   6.00000+ 6 1.37560- 1 7.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01344 3  4  337
DIFFERENCES                                      $$$$                  $$$$
------------------------------------------------------------------------------------------------------------------------
   1   341   0.0    + 0-6.77100+ 6          0          0          1        121344 3 16  340
   2   341   0.00000+ 0-6.77100+ 6          0          0          1        121344 3 16  340
DIFFERENCES     $$$$
------------------------------------------------------------------------------------------------------------------------
   1   343   6.79900+ 6 0.0    + 0 7.00000+ 6 3.80000- 2 7.50000+ 6 1.10000- 11344 3 16  342
   2   343   6.79900+ 6 0.00000+ 0 7.00000+ 6 3.80000- 2 7.50000+ 6 1.10000- 11344 3 16  342
DIFFERENCES                $$$$
------------------------------------------------------------------------------------------------------------------------
   1   349   0.0    + 0-1.24987+ 7          0          0          1         51344 3 17  348
   2   349   0.00000+ 0-1.24987+ 7          0          0          1         51344 3 17  348
DIFFERENCES     $$$$
------------------------------------------------------------------------------------------------------------------------
   1   351   1.25500+ 7 0.0    + 0 1.30000+ 7 2.50000- 1 1.40000+ 7 4.70000- 11344 3 17  350
   2   351   1.25500+ 7 0.00000+ 0 1.30000+ 7 2.50000- 1 1.40000+ 7 4.70000- 11344 3 17  350
DIFFERENCES                $$$$
------------------------------------------------------------------------------------------------------------------------
   1   355   0.0    + 0 2.06600+ 8          0          0          1        441344 3 18  354
   2   355   0.00000+ 0 2.03020+ 8          0          0          1        441344 3 18  354
DIFFERENCES     $$$$       $$$
------------------------------------------------------------------------------------------------------------------------
   1   357   1.00000- 5 0.0    + 0 1.00000+ 3 0.0    + 0 2.00000+ 3 2.70000- 21344 3 18  356
   2   357   1.00000- 5 0.00000+ 0 1.00000+ 3 0.00000+ 0 2.00000+ 3 2.70000- 21344 3 18  356
DIFFERENCES                $$$$                  $$$$
------------------------------------------------------------------------------------------------------------------------
   1   374   0.0    + 0 2.06600+ 8          0          0          1        411344 3 19  373
   2   374   0.00000+ 0 2.03020+ 8          0          0          1        411344 3 19  373
DIFFERENCES     $$$$       $$$
```

```
--------------------------------------------------------------------------------------------------------------------
   1   376    1.00000- 5 0.0      + 0 1.00000+ 3 0.0      + 0 2.00000+ 3 2.70000- 21344 3 19   375
   2   376    1.00000- 5 0.00000+ 0 1.00000+ 3 0.00000+ 0 2.00000+ 3 2.70000- 21344 3 19   375
 DIFFERENCES             $$$$                    $$$$
--------------------------------------------------------------------------------------------------------------------
   1   392    0.0      + 0 2.06600+ 8          0          0          1          61344 3 20   391
   2   392    0.00000+ 0 2.03020+ 8          0          0          1          61344 3 20   391
 DIFFERENCES    $$$$       $$$
--------------------------------------------------------------------------------------------------------------------
   1   394    1.00000- 5 0.0      + 0 6.00000+ 6 0.0      + 0 7.00000+ 6 6.00000- 11344 3 20   393
   2   394    1.00000- 5 0.00000+ 0 6.00000+ 6 0.00000+ 0 7.00000+ 6 6.00000- 11344 3 20   393
 DIFFERENCES             $$$$                    $$$$
--------------------------------------------------------------------------------------------------------------------
   1   398    0.0      + 0-4.28230+ 4          0          0          1         331344 3 51   397
   2   398    0.00000+ 0-4.28230+ 4          0          0          1         331344 3 51   397
 DIFFERENCES    $$$$
--------------------------------------------------------------------------------------------------------------------
   1   400    4.30000+ 4 0.0      + 0 4.50000+ 4 2.40000- 2 5.00000+ 4 9.10000- 21344 3 51   399
   2   400    4.30000+ 4 0.00000+ 0 4.50000+ 4 2.40000- 2 5.00000+ 4 9.10000- 21344 3 51   399
 DIFFERENCES             $$$$
--------------------------------------------------------------------------------------------------------------------
   1   410    3.50000+ 6 6.34010- 4 4.00000+ 6 0.0      + 0 2.00000+ 7 0.0      + 01344 3 51   409
   2   410    3.50000+ 6 6.34010- 4 4.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01344 3 51   409
 DIFFERENCES                                     $$$$                 $$$$
--------------------------------------------------------------------------------------------------------------------
   1   413    0.0      + 0-1.41420+ 5          0          0          1         301344 3 52   412
   2   413    0.00000+ 0-1.41420+ 5          0          0          1         301344 3 52   412
 DIFFERENCES    $$$$
--------------------------------------------------------------------------------------------------------------------
   1   415    1.42000+ 5 0.0      + 0 1.45000+ 5 1.00000- 4 1.50000+ 5 3.00000- 41344 3 52   414
   2   415    1.42000+ 5 0.00000+ 0 1.45000+ 5 1.00000- 4 1.50000+ 5 3.00000- 41344 3 52   414
 DIFFERENCES             $$$$
--------------------------------------------------------------------------------------------------------------------
   1   424    3.50000+ 6 1.00000- 3 4.00000+ 6 0.0      + 0 2.00000+ 7 0.0      + 01344 3 52   423
   2   424    3.50000+ 6 1.00000- 3 4.00000+ 6 0.00000+ 0 2.00000+ 7 0.00000+ 01344 3 52   423
 DIFFERENCES                                     $$$$                 $$$$
--------------------------------------------------------------------------------------------------------------------
   1   427    0.0      + 0-2.94780+ 5          0          0          1         191344 3 53   426
   2   427    0.00000+ 0-2.94780+ 5          0          0          1         191344 3 53   426
 DIFFERENCES    $$$$
--------------------------------------------------------------------------------------------------------------------
   1   429    2.96000+ 5 0.0      + 0 5.00000+ 5 1.00000- 4 6.00000+ 5 3.00000- 41344 3 53   428
   2   429    2.96000+ 5 0.00000+ 0 5.00000+ 5 1.00000- 4 6.00000+ 5 3.00000- 41344 3 53   428
 DIFFERENCES             $$$$
--------------------------------------------------------------------------------------------------------------------
   1   434    3.50000+ 6 2.00000- 4 4.00000+ 6 1.00000- 4 4.50000+ 6 0.0      + 01344 3 53   433
   2   434    3.50000+ 6 2.00000- 4 4.00000+ 6 1.00000- 4 4.50000+ 6 0.00000+ 01344 3 53   433
 DIFFERENCES                                                          $$$$
--------------------------------------------------------------------------------------------------------------------
   1   435    2.00000+ 7 0.0      + 0                                                1344 3 53   434
   2   435    2.00000+ 7 0.00000+ 0                                                1344 3 53   434
 DIFFERENCES             $$$$
--------------------------------------------------------------------------------------------------------------------
   1   438    0.0      + 0-2.94780+ 5          0          0          1         251344 3 91   437
   2   438    0.00000+ 0-2.94780+ 5          0          0          1         251344 3 91   437
 DIFFERENCES    $$$$
--------------------------------------------------------------------------------------------------------------------
   1   440    2.96000+ 5 0.0      + 0 3.30000+ 5 4.58310- 2 3.50000+ 5 9.67920- 21344 3 91   439
   2   440    2.96000+ 5 0.00000+ 0 3.30000+ 5 4.58310- 2 3.50000+ 5 9.67920- 21344 3 91   439
 DIFFERENCES             $$$$
--------------------------------------------------------------------------------------------------------------------
   1   447    5.00000+ 6 7.25630- 1 6.00000+ 6 1.37560- 1 7.00000+ 6 0.0      + 01344 3 91   446
   2   447    5.00000+ 6 7.25630- 1 6.00000+ 6 1.37560- 1 7.00000+ 6 0.00000+ 01344 3 91   446
 DIFFERENCES                                                          $$$$
--------------------------------------------------------------------------------------------------------------------
   1   448    2.00000+ 7 0.0      + 0                                                1344 3 91   447
```

```
   2   448  2.00000+ 7 0.00000+ 0                                            1344 3 91  447
DIFFERENCES               $$$$
----------------------------------------------------------------------------------------------------
   1   451  0.0    + 0 6.45100+ 6          0          0          1         461344 3102  450
   2   451  0.00000+ 0 6.45100+ 6          0          0          1         461344 3102  450
DIFFERENCES    $$$$
----------------------------------------------------------------------------------------------------
   1   453  1.00000- 5 0.0    + 0 1.00000+ 3 0.0    + 0 2.00000+ 3 5.50000- 11344 3102  452
   2   453  1.00000- 5 0.00000+ 0 1.00000+ 3 0.00000+ 0 2.00000+ 3 5.50000- 11344 3102  452
DIFFERENCES               $$$$                  $$$$
----------------------------------------------------------------------------------------------------
   1   471  0.0    + 0 0.0    + 0          0          0          1         391344 3251  470
   2   471  0.00000+ 0 0.00000+ 0          0          0          1         391344 3251  470
DIFFERENCES    $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   475  7.50000+ 4 9.77246- 2 9.00000+ 4 1.14473- 1 1.00000+ 5 1.25051- 11344 3251  474
   2   475  7.50000+ 4 9.77245- 2 9.00000+ 4 1.14473- 1 1.00000+ 5 1.25051- 11344 3251  474
DIFFERENCES                  $
----------------------------------------------------------------------------------------------------
   1   488  0.0    + 0 0.0    + 0          0          0          1         391344 3252  487
   2   488  0.00000+ 0 0.00000+ 0          0          0          1         391344 3252  487
DIFFERENCES    $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   505  0.0    + 0 0.0    + 0          0          0          1         391344 3253  504
   2   505  0.00000+ 0 0.00000+ 0          0          0          1         391344 3253  504
DIFFERENCES    $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   523  0.0    + 0 2.41966+ 2          0          2        441         201344 4   2  522
   2   523  0.00000+ 0 2.41966+ 2          0          2        441         201344 4   2  522
DIFFERENCES    $$$$
----------------------------------------------------------------------------------------------------
   1   524  1.00000+ 0 2.75331- 3 3.40293- 6-1.06662-10 0.0    + 0 0.0    + 01344 4   2  523
   2   524  1.00000+ 0 2.75331- 3 3.40293- 6-1.06662-10 0.00000+ 0 0.00000+ 01344 4   2  523
DIFFERENCES                                                $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   525  0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 01344 4   2  524
   2   525  0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01344 4   2  524
DIFFERENCES    $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   526  0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 01344 4   2  525
   2   526  0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01344 4   2  525
DIFFERENCES    $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   527  0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 9.99990- 1 4.95593- 31344 4   2  526
   2   527  0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 9.99990- 1 4.95593- 31344 4   2  526
DIFFERENCES    $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   528  1.16572- 5 1.31387- 8 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 01344 4   2  527
   2   528  1.16572- 5 1.31387- 8 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01344 4   2  527
DIFFERENCES                          $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   529  0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 01344 4   2  528
   2   529  0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01344 4   2  528
DIFFERENCES    $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   530  0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 01344 4   2  529
   2   530  0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01344 4   2  529
DIFFERENCES    $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
----------------------------------------------------------------------------------------------------
   1   531  0.0    + 0-2.75327- 3 9.99973- 1 7.07984- 3 2.42950- 5 4.83102- 81344 4   2  530
   2   531  0.00000+ 0-2.75327- 3 9.99973- 1 7.07984- 3 2.42950- 5 4.83102- 81344 4   2  530
DIFFERENCES    $$$$
----------------------------------------------------------------------------------------------------
   1   532 -2.98999- 8-6.14570-11 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 01344 4   2  531
   2   532 -2.98999- 8-6.14570-11 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01344 4   2  531
DIFFERENCES                          $$$$       $$$$       $$$$       $$$$
```

```
    1   1504   4.50000+ 6 2.64170- 9 4.75000+ 6 0.0     + 0                                  134415102 1503
    2   1504   4.50000+ 6 2.64170- 9 4.75000+ 6 0.00000+ 0                                  134415102 1503
DIFFERENCES                                                $$$$
-------------------------------------------------------------------------------------------------------------
    1   1505   0.0     + 0 2.00000+ 7          0           0           1                   20134415102 1504
    2   1505   0.00000+ 0 2.00000+ 7          0           0           1                   20134415102 1504
DIFFERENCES      $$$$
-------------------------------------------------------------------------------------------------------------
    1   1507   1.00000+ 3 9.28321- 7 2.50000+ 5 1.12530- 6 5.00000+ 5 6.55120-           7134415102 1506
    2   1507   1.00000+ 3 9.28320- 7 2.50000+ 5 1.12530- 6 5.00000+ 5 6.55120-           7134415102 1506
DIFFERENCES                $
-------------------------------------------------------------------------------------------------------------
    1   1513   4.50000+ 6 2.64170- 9 4.75000+ 6 0.0     + 0                                  134415102 1512
    2   1513   4.50000+ 6 2.64170- 9 4.75000+ 6 0.00000+ 0                                  134415102 1512
DIFFERENCES                                                $$$$
-------------------------------------------------------------------------------------------------------------
```

SUMMARY OF ENDF/B DIFFERENCES BY SECTION

MAT	MF	MT	FILE 1 CARDS	FILE 1 DIFFER	FILE 2 CARDS	FILE 2 DIFFER	
0	0	0	1	0	1	0	
1344	1	451	189	10	189	10	(DIFFERENCES)
1344	1	452	4	1	4	1	(DIFFERENCES)
1344	1	458	6	4	6	4	(DIFFERENCES)
1344	2	151	76	32	76	32	(DIFFERENCES)
1344	3	1	28	2	28	2	(DIFFERENCES)
1344	3	2	16	2	16	2	(DIFFERENCES)
1344	3	4	19	3	19	3	(DIFFERENCES)
1344	3	16	8	2	8	2	(DIFFERENCES)
1344	3	17	6	2	6	2	(DIFFERENCES)
1344	3	18	19	2	19	2	(DIFFERENCES)
1344	3	19	18	2	18	2	(DIFFERENCES)
1344	3	20	6	2	6	2	(DIFFERENCES)
1344	3	51	15	3	15	3	(DIFFERENCES)
1344	3	52	14	3	14	3	(DIFFERENCES)
1344	3	53	11	4	11	4	(DIFFERENCES)
1344	3	91	13	4	13	4	(DIFFERENCES)
1344	3	102	20	2	20	2	(DIFFERENCES)
1344	3	251	17	2	17	2	(DIFFERENCES)
1344	3	252	17	1	17	1	(DIFFERENCES)
1344	3	253	17	1	17	1	(DIFFERENCES)
1344	4	2	237	147	237	147	(DIFFERENCES)
1344	4	16	3	1	3	1	(DIFFERENCES)
1344	4	17	3	1	3	1	(DIFFERENCES)
1344	4	18	3	1	3	1	(DIFFERENCES)
1344	4	19	3	1	3	1	(DIFFERENCES)
1344	4	20	3	1	3	1	(DIFFERENCES)
1344	4	51	3	1	3	1	(DIFFERENCES)
1344	4	52	3	1	3	1	(DIFFERENCES)
1344	4	53	3	1	3	1	(DIFFERENCES)
1344	4	91	3	1	3	1	(DIFFERENCES)
1344	5	16	19	4	19	4	(DIFFERENCES)
1344	5	17	8	2	8	2	(DIFFERENCES)
1344	5	18	8	2	8	2	(DIFFERENCES)
1344	5	19	8	2	8	2	(DIFFERENCES)
1344	5	20	8	2	8	2	(DIFFERENCES)
1344	5	91	11	2	11	2	(DIFFERENCES)
1344	8	16	4	1	4	1	(DIFFERENCES)
1344	8	102	3	1	3	1	(DIFFERENCES)
1344	8	457	94	55	94	55	(DIFFERENCES)
1344	12	18	7	3	7	3	(DIFFERENCES)
1344	12	102	6	3	6	3	(DIFFERENCES)
1344	13	3	11	2	11	2	(DIFFERENCES)

1344	14	3	3	0	3	0	
1344	14	18	2	0	2	0	
1344	14	102	2	0	2	0	
1344	15	3	414	93	414	93	(DIFFERENCES)
1344	15	18	88	38	88	38	(DIFFERENCES)
1344	15	102	34	11	34	11	(DIFFERENCES)
1344	15	102	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	1517	461	1517	461

END OF RUN

9.62450+ 4 2.42960+ 2	1	1	0	2	1345	1	1
0.00000+ 0 1.00000+ 0	0	0	0	0	1345	1	2
0.00000+ 0 0.00000+ 0	0	0	74	41	1345	1	3
96-CM-245 SRL,LLL	EVAL-JAN79 BENJAMIN AND HOWERTON				1345	1	4
EPRI NP-1067	DIST-MAR83 REV1-OCT80			801027	1345	1	5
*	*	*	*	*	1345	1	6
CURIUM-245 EVALUATION JANUARY 1979 - R.W. BENJAMIN(SRL) AND					1345	1	7
			R.J. HOWERTON(LLL)		1345	1	8
-BELOW 10 KEV - EVALUATION BY BENJAMIN					1345	1	9
-ABOVE 10 KEV - EVALUATION BY HOWERTON					1345	1	10
FILES CORRECTED AND CONVERTED TO ENDF/B-V FORMATS AND RADIOAC-					1345	1	11
TIVE DECAY DATA MERGED AT BNL BY R. KINSEY (JAN 79).					1345	1	12
MF=1	GENERAL INFORMATION				1345	1	13
MT=452 NUBAR TOTAL-- SUM OF 455 AND 456					1345	1	14
MT=455 NUBAR DELAYED-- VALUES OBTAINED FROM NUCLEAR SYSTEMATICS					1345	1	15
SEE REF. 1					1345	1	16
MT=456 NUBAR PROMPT-- VALUES OBTAINED FROM SYSTEMATICS OF REF. 2					1345	1	17
MF=2	RESONANCE PARAMETERS(0 EV TO 10KEV)				1345	1	18
MT=151 RESOLVED RESONANCES PARAMETERS FOR 38 RESOLVED RESO-					1345	1	19
NANCES AND ONE BOUND LEVEL ARE INCLUDED FROM REFERENCES 4					1345	1	20
AND 5. THE THERMAL REGION IS DESCRIBED IN FILE 2.					1345	1	21
RESOLVED RESONANCE RANGE - 0 TO 60.5 EV.					1345	1	22
UNRESOLVED RESONANCES S-WAVE PARAMETERS ARE AVERAGES					1345	1	23
FROM THE RESOLVED REGION. THE P-WAVE STRENGTH FUNCTION					1345	1	24
(2.0E-4) IS AN EXTRAPOLATION FROM LYNN(REF.6).					1345	1	25
MF=3	SMOOTH CROSS SECTIONS (10 KEV TO 20 MEV)				1345	1	26
MT=1 TOTAL A SUM OF ALL PARTIAL CROSS SECTIONS.					1345	1	27
MT=2,4,16,17,18,37,91,102 -- SEE REF. 1					1345	1	28
EXCEPT FOR MT=18 FROM .01 TO .1 MEV, FOR WHICH SEE REF. 3					1345	1	29
MT=251,252,253 CALCULATED AT BNL.					1345	1	30
MF=4	ANGULAR DISTRIBUTIONS				1345	1	31
MT=2 ELASTIC DATA FROM REF. 1 DATA CULLED TO 101 POINTS					1345	1	32
PER DISTRIBUTION AND RENORMALIZED AT BNL.					1345	1	33
MT=16,17,37,91 DUMMY ISOTROPIC DISTRIBUTIONS INSERTED AT BNL.					1345	1	34
MF=5	SECONDARY NEUTRON ENERGY				1345	1	35
VALUES WERE TAKEN FROM REF. 1					1345	1	36
MF=8					1345	1	37
MT=457 RADIOACTIVE DECAY DATA FROM C. REICH (ANC)					1345	1	38
REFERENCES Q(ALPHA)-1974 VERSION OF WAPSTRA-BOS-GOVE MASS TABLE					1345	1	39
HALF-LIFE- WEIGHTED AVERAGE OF VALUES REPORTED BY					1345	1	40
W.T. CARNALL ET AL., J. INORG. NUCL. CHEM.					1345	1	41
17, 12(1961), BY D.N. METTA ET AL., IBID.					1345	1	42
31, 1245(1969) AND BY K.W. MACMURDO ET AL.,					1345	1	43
IBID. 33, 1241 (1971).					1345	1	44
REPORTED VALUES, WHERE MEASURED RELATIVE TO					1345	1	45
OTHER HALF-LIVES, HAVE BEEN CORRECTED FOR					1345	1	46
CHANGES IN THE VALUE OF THE APPROPRIATE					1345	1	47
HALF-LIFE STANDARD.					1345	1	48
OTHER- SEE TABLE OF ISOTOPES, 7TH ED. (PRELIMINARY					1345	1	49
DATA, PRIV. COMM. FROM C.M. LEDERER).					1345	1	50
NOTE THE ENERGY AND INTENSITY DATA FOR THE GROUND-STATE					1345	1	51
ALPHA AND THE TWO MOST INTENSE ALPHA GROUPS ARE THE					1345	1	52
RECOMMENDED VALUES OF A. RYTZ, AT. DATA AND NUCL.					1345	1	53
DATA TABLES 12, NO. 5, 479 (1973).					1345	1	54
NOTE THE DECAY SCHEME IS QUITE INCOMPLETE. THE GAMMA-RAY					1345	1	55
INTENSITY NORMALIZATION WAS DERIVED BY REQUIRING THAT					1345	1	56
THE SUM OF THE TRANSITION INTENSITIES OF THE TWO					1345	1	57
GAMMA RAYS EQUAL THAT OF THE ALPHA BRANCH (87.6 ()					1345	1	58
FEEDING THE 174-KEV STATE. FROM LEVEL-SCHEME					1345	1	59
CONSIDERATIONS, THESE TWO GAMMA RAYS CAN BE MIXED					1345	1	60

	MAT	MF	REC.
M1+E2 MULTIPOLES. TO CALCULATE THE ICC S FOR THESE	1345	1	61
GAMMA RAYS,IT WAS ASSUMED THAT THEY ARE PURE M1.	1345	1	62
TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL) 6/76	1345	1	63
MF=12.13,14,15 PHOTON PRODUCTION	1345	1	64
DATA WERE PROVIDED FROM REF. 1 ENERGY RANGES WERE	1345	1	65
EXTENDED TO AGREE WITH MF=3 AT BNL.	1345	1	66
REFERENCES	1345	1	67
1. R.J. HOWERTON AND M.H. MACGREGOR, THE LLL EVALUATED NUCLEAR	1345	1	68
DATA LIBRARY (ENDL) DESCRIPTIONS OF INDIVIDUAL EVALUATIONS	1345	1	69
FOR Z=0-98, UCRL 50400 VOL 15, PART D REV. 1 (1978)	1345	1	70
2. R.J. HOWERTON, NUCL. SCI. AND ENG., 62,438,(1977)	1345	1	71
3. Y. NAKAGOME, PRIVATE COMMUNICATION (1978)	1345	1	72
4. M.S.MOORE AND G.A.KEYWORTH,PHYS.REV.C3(1971)1656.	1345	1	73
5. J.C.BROWNE,R.W.BENJAMIN,AND D.G.KARRAKER,NUCL.SCI.ENG.	1345	1	74
65(1978)166.	1345	1	75
6. J.E.LYNN,THE THEORY OF NEUTRON RESONANCE REACTIONS,CLARENDON	1345	1	76
PRESS,OXFORD,1968,P. 290.	1345	1	77
1 451 118 2	1345	1	78
1 452 5 2	1345	1	79
1 455 6 2	1345	1	80
1 456 5 2	1345	1	81
2 151 120 2	1345	1	82
3 1 24 2	1345	1	83
3 2 13 2	1345	1	84
3 4 12 1	1345	1	85
3 16 7 1	1345	1	86
3 17 6 1	1345	1	87
3 18 16 2	1345	1	88
3 37 4 1	1345	1	89
3 91 12 1	1345	1	90
3 102 8 2	1345	1	91
3 251 7 1	1345	1	92
3 252 7 1	1345	1	93
3 253 7 1	1345	1	94
4 2 339 1	1345	1	95
4 16 10 1	1345	1	96
4 17 10 1	1345	1	97
4 37 10 1	1345	1	98
4 91 10 1	1345	1	99
5 16 108 1	1345	1	100
5 17 122 1	1345	1	101
5 18 9 1	1345	1	102
5 37 80 1	1345	1	103
5 91 185 1	1345	1	104
8 16 2 1	1345	1	105
8 17 2 1	1345	1	106
8 37 2 1	1345	1	107
8 102 2 1	1345	1	108
8 457 67 1	1345	1	109
12 18 4 1	1345	1	110
12 102 4 1	1345	1	111
13 3 10 1	1345	1	112
14 3 1 1	1345	1	113
14 18 1 1	1345	1	114
14 102 1 1	1345	1	115
15 3 339 1	1345	1	116
15 18 32 1	1345	1	117
15 102 70 1	1345	1	118
	1345	1	119
	1345	1	125
	1345	1	132

04/06/86

ENDF/B-V: MODS FOR V.1 & V.2.ACTINIDES.:INDEX TEXT & DICT.

MAT	MF	REC.
1345	1	138
1345	2	260
1345	3	286
1345	3	300
1345	3	313
1345	3	321
1345	3	328
1345	3	345
1345	3	350
1345	3	363
1345	3	372
1345	3	380
1345	3	388
1345	3	396
1345	4	737
1345	4	748
1345	4	759
1345	4	770
1345	4	781
1345	5	891
1345	5	1014
1345	5	1024
1345	5	1105
1345	5	1291
1345	8	1295
1345	8	1298
1345	8	1301
1345	8	1304
1345	8	1372
1345	12	1378
1345	12	1383
1345	13	1395
1345	14	1398
1345	14	1400
1345	14	1402
1345	15	1743
1345	15	1776
1345	15	1847

```
COMPARE TWO BCD FILES (COMPARE 82-1)
------------------------------------------------------------------------------------------------
COLUMNS TO READ AND LIST-------        70 (   1 TO 80 )
COLUMNS TO COMPARE------------         66 (   1 TO 70 )
COLUMNS TO DEFINE BLANK LINE---        66 (   1 TO 70 )
SPECIAL FILE FLAG-------------          2
ACCEPTABLE DIFFERENCE----------         0 (   1 TO 70 )
COMMENT CARDS-----------------COMPARED
------------------------------------------------------------------------------------------------
DESCRIPTION OF TWO FILES TO BE COMPARED
------------------------------------------------------------------------------------------------
FILE 1 =ACT1345 OLD
FILE 2 =ACT1345 NEW
------------------------------------------------------------------------------------------------
 FILE  CARD  CONTENTS.
------------------------------------------------------------------------------------------------
                      1         2         3         4         5         6         7         8
 FILE  CARD  12345678901234567890123456789012345678901234567890123456789012345678901234567890
------------------------------------------------------------------------------------------------
------------------------------------------------------------------------------------------------
    1     2   9.62450+ 4 2.42960+ 2          1          1          0          11345 1451    1
    1     3   0.0     + 0 1.00000+ 0          0          0          0          01345 1451    2
    1     4   0.0     + 0 0.0     + 0          0          0         89         391345 1451    3
    1     5   96-CM-245 SRL         EVAL-SEP75 BENJAMIN AND MCCROSSON              1345 1451    4
    1     6                         DIST-MAY79                          781102     1345 1451    5
    1     7  *          *          *          *          *          *             1345 1451    6
    1     8   CURIUM-245 EVALUATION SEPTEMBER 1975 - R.W.BENJAMIN AND             1345 1451    7
    1     9                                       F.J.MCCROSSON AT SRL            1345 1451    8
 DIFFERENCES ON     8 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
    2     2   9.62450+ 4 2.42960+ 2          1          1          0          21345 1451    1
    2     3   0.00000+ 0 1.00000+ 0          0          0          0          01345 1451    2
    2     4   0.00000+ 0 0.00000+ 0          0          0         74         411345 1451    3
    2     5   96-CM-245 SRL,LLL     EVAL-JAN79 BENJAMIN AND HOWERTON               1345 1451    4
    2     6   EPRI NP-1067          DIST-MAR83 REV1-OCT80               801027     1345 1451    5
    2     7  *          *          *          *          *                        1345 1451    6
    2     8   CURIUM-245 EVALUATION JANUARY 1979   - R.W. BENJAMIN(SRL) AND       1345 1451    7
    2     9                                       R.J. HOWERTON(LLL)              1345 1451    8
    2    10  -BELOW 10 KEV - EVALUATION BY BENJAMIN                               1345 1451    9
    2    11  -ABOVE 10 KEV - EVALUATION BY HOWERTON                               1345 1451   10
 DIFFERENCES ON    10 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
------------------------------------------------------------------------------------------------
    1    11   TIVE DECAY DATA MERGED AT BNL BY R. KINSEY (JUL 76). IMPORTANT      1345 1451   10
    1    12  CHANGES OR ADDITIONS ARE NOTED BELOW.                                1345 1451   11
 DIFFERENCES ON     2 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
    2    13   TIVE DECAY DATA MERGED AT BNL BY R. KINSEY (JAN 79).                1345 1451   12
 DIFFERENCES ON     1 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
------------------------------------------------------------------------------------------------
    1    14    MT=452 NUBAR   THERMAL VALUE FROM MANERO AND KONSHIN(REF.1),       1345 1451   13
    1    15        RENORMALIZING WORK OF JAFFEY ET AL.(REF.2).  ENERGY DEPEN-     1345 1451   14
    1    16        DENCE BASED ON WORK OF HOWERTON(REF.3).                        1345 1451   15
    1    17  MF=2                   RESONANCE PARAMETERS(0.78 EV TO 10 EV)        1345 1451   16
    1    18    MT=151 RESOLVED RESONANCES  PARAMETERS ARE INCLUDED FOR 3 RE-      1345 1451   17
    1    19        SOLVED RESONANCES FROM THE SRL DATA SET.  THE THERMAL REGION 1345 1451   18
    1    20        IS INCLUDED IN FILE 3.  RESOLVED REGION - 0.78 TO 10 EV.       1345 1451   19
    1    21             UNRESOLVED RESONANCES    THESE HAVE BEEN INCORPORATED INTO1345 1451   20
    1    22        FILE 3 AND SPAN THE ENERGY REGION FROM 10 EV TO 10 KEV.        1345 1451   21
    1    23    ***      MUCH MORE RESOLVED AND UNRESOLVED DATA ARE AVAILABLE(SEE,1345 1451   22
    1    24        EG. REFS. 4 AND 5).  A BETTER EVALUATION AWAITS THE RESULTS    1345 1451   23
    1    25        OF EXPERIMENTS ON THE THERMAL AND RESONANCE REGION FISSION     1345 1451   24
    1    26        CROSS SECTIONS CURRENTLY IN PROGRESS AT LLL(JOHN BROWNE) AND 1345 1451   25
    1    27        AT ORNL(JOHN DABBS ET AL.).  CURRENT VALUES ARE BASED ON THE 1345 1451   26
    1    28        CONSISTENT SET APPROACH(REF.6).                                1345 1451   27
    1    29  CROSS SECTION          SIGMA(0.0253 EV)      I(0.5 EV - 20 MEV)      1345 1451   28
    1    30  TOTAL                  2555.98                                       1345 1451   29
    1    31  ELASTIC                  12.00                                       1345 1451   30
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  1    30  TOTAL                                                            1345 1451   30
  1    31  ELASTIC                 12.00
```

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     1    32  FISSION                 2161.00              835.018            1345 1451     31
     1    33  CAPTURE                  382.98              118.279            1345 1451     32
     1    34  MF=3                    SMOOTH CROSS SECTIONS (1.-5 EV TO 20 MEV)  1345 1451     33
 DIFFERENCES ON    21 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
     2    15     MT=452 NUBAR TOTAL-- SUM OF 455 AND 456                       1345 1451     14
     2    16     MT=455 NUBAR DELAYED-- VALUES OBTAINED FROM NUCLEAR SYSTEMATICS 1345 1451     15
     2    17            SEE REF. 1                                             1345 1451     16
     2    18     MT=456 NUBAR PROMPT-- VALUES OBTAINED FROM SYSTEMATICS OF REF. 21345 1451     17
     2    19  MF=2                    RESONANCE PARAMETERS(0 EV TO 10KEV)      1345 1451     18
     2    20     MT=151 RESOLVED RESONANCES  PARAMETERS FOR 38 RESOLVED RESO-  1345 1451     19
     2    21        NANCES AND ONE BOUND LEVEL ARE INCLUDED FROM REFERENCES 4   1345 1451     20
     2    22        AND 5.  THE THERMAL REGION IS DESCRIBED IN FILE 2.          1345 1451     21
     2    23        RESOLVED RESONANCE RANGE - 0 TO 60.5 EV.                    1345 1451     22
     2    24            UNRESOLVED RESONANCES  S-WAVE PARAMETERS ARE AVERAGES   1345 1451     23
     2    25        FROM THE RESOLVED REGION.  THE P-WAVE STRENGTH FUNCTION     1345 1451     24
     2    26        (2.0E-4) IS AN EXTRAPOLATION FROM LYNN(REF.6).              1345 1451     25
     2    27  MF=3                    SMOOTH CROSS SECTIONS (10 KEV TO 20 MEV)   1345 1451     26
 DIFFERENCES ON    13 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------------
     1    36     MT=2 ELASTIC   THERMAL AND UNRESOLVED DATA FROM SRL CONSISTENT  1345 1451     35
     1    37        SET.  DATA ABOVE 10 KEV WERE PROVIDED BY R.J.HOWERTON.      1345 1451     36
     1    38     MT=4,91 DATA PROVIDED BY R.J.HOWERTON. Q VALUE CALCULATED FROM  1345 1451     37
     1    39        THRESHOLD POINT AND INSERTED AT BNL.                        1345 1451     38
     1    40     MT=16,17,37 DATA PROVIDED BY R.J. HOWERTON. THRESHOLD CALCU-   1345 1451     39
     1    41        LATED FROM Q VALUE AND INSERTED AT BNL.                     1345 1451     40
     1    42     MT=18 FISSION   THERMAL AND UNRESOLVED DATA TO 10 KEV ARE FROM  1345 1451     41
     1    43        THE SRL DATA SET.  DATA ABOVE 10 KEV WERE PROVIDED BY R.J.  1345 1451     42
     1    44        HOWERTON.                                                   1345 1451     43
     1    45     MT=102 NG    SAME AS MT=18.                                    1345 1451     44
 DIFFERENCES ON    10 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
     2    29     MT=2,4,16,17,18,37,91,102 -- SEE REF. 1                       1345 1451     28
     2    30        EXCEPT FOR MT=18 FROM .01 TO .1 MEV, FOR WHICH SEE REF. 3   1345 1451     29
 DIFFERENCES ON     2 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------------
     1    48     MT=2 ELASTIC DATA FROM R.J. HOWERTON. DATA CULLED TO 101 POINTS 1345 1451     47
     2    33     MT=2 ELASTIC DATA FROM REF. 1          DATA CULLED TO 101 POINTS 1345 1451     32
 DIFFERENCES                                  $$   $$$$$$$$$
-------------------------------------------------------------------------------------------------------
     1    52        DATA WERE PROVIDED BY R.J.HOWERTON, EXCEPT FOR              1345 1451     51
     1    53        MF=5, MT=18. THE SECONDARY NEUTRON FISSION SPECTRUM IS A    1345 1451     52
     1    54        SIMPLE FISSION MAXWELLIAN WITH ENERGY -DEPENDENT TEMPERATURE.1345 1451     53
     1    55     DATA FOR 96-CM-245  DECAYS BY REICH                            1345 1451     54
     1    56     INSERTED INTO FILE AT BNL BY R. KINSEY IN SEP 1978             1345 1451     55
     1    57  MF=8, MT=457   RADIOACTIVE DECAY DATA                             1345 1451     56
 DIFFERENCES ON     6 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
     2    37        VALUES WERE TAKEN FROM REF. 1                               1345 1451     36
     2    38  MF=8                                                              1345 1451     37
     2    39     MT=457 RADIOACTIVE DECAY DATA FROM C. REICH (ANC)              1345 1451     38
 DIFFERENCES ON     3 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------------
     1    69                        DATA, PRIV. COMM. FROM C.M. LEDERER). SEE ALSO1345 1451     68
     1    70                  Y.A. ELLIS, NUCL. DATA SHEETS 19, 143 (1976).     1345 1451     69
     1    71            NOTE  THE L-X-RAY DATA REPRESENT MEASURED VALUES. SEE C.E. 1345 1451     70
     1    72                  BEMIS, JR. AND L. TUBBS, ORNL-5297, 93 (SEPT., 1977).1345 1451     71
 DIFFERENCES ON     4 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
     2    51                        DATA, PRIV. COMM. FROM C.M. LEDERER).       1345 1451     50
     2    52            NOTE  THE ENERGY AND INTENSITY DATA FOR THE GROUND-STATE 1345 1451     51
     2    53                  ALPHA AND THE TWO MOST INTENSE ALPHA GROUPS ARE THE 1345 1451     52
     2    54                  RECOMMENDED VALUES OF A. RYTZ, AT. DATA AND NUCL.  1345 1451     53
     2    55                  DATA TABLES 12, NO. 5, 479 (1973).                1345 1451     54
 DIFFERENCES ON     5 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------------
     1    76                  GAMMA RAYS EQUAL THAT OF THE ALPHA BRANCH (93.18()  1345 1451     75
     2    59                  GAMMA RAYS EQUAL THAT OF THE ALPHA BRANCH (87.6 ()  1345 1451     58
 DIFFERENCES                                                    $$ $$
-------------------------------------------------------------------------------------------------------
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   1    81   TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND SCHENTER (HEDL)  8/781345 1451    80
   2    64  TRANSLATED INTO ENDF/B-V FORMAT BY MANN AND  SCHENTER (HEDL) 6/76 1345 1451    63
 DIFFERENCES $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$ $$$$$              $$$$$
--------------------------------------------------------------------------------------------------
   1    83        DATA WERE PROVIDED BY R.J. HOWERTON. ENERGY RANGES WERE       1345 1451    82
   2    60        DATA WERE PROVIDED FROM REF. 1       ENERGY RANGES WERE       1345 1451    65
 DIFFERENCES                        $$$$$$$$$$$$$$$$$$
--------------------------------------------------------------------------------------------------
   1    86     1. F.MANERO AND V.A.KONSHIN,AT.EN.REV.10(1972)646.               1345 1451    85
   1    87     2. A.H.JAFFEY AND J.L.LERNER,NUCL.PHYS.A145(1970)1.              1345 1451    86
   1    88     3. R.J.HOWERTON,NUCL.SCI.ENG.46(1971)42.                         1345 1451    87
   1    89     4. J.R.BERRETH,F.B.SIMPSON,AND B.C.RUSCHE,NUCL.SCI.ENG.          1345 1451    88
   1    90        49(1972)145.                                                  1345 1451    89
   1    91     5. M.S.MOORE AND G.A.KEYWORTH,PHYS.REV.C3(1971)1656.             1345 1451    90
   1    92     6. R.W.BENJAMIN,F.J.MCCROSSON,V.D.VANDERVELDE,AND T.C.GORRELL,   1345 1451    91
   1    93        USERDA REPORT DP-1394(1975).                                  1345 1451    92
   1    94                                  1        451        131          11345 1451    93
   1    95                                  1        452          3          11345 1451    94
   1    96                                  2        151          8          11345 1451    95
   1    97                                  3          1         44          11345 1451    96
   1    98                                  3          2         19          11345 1451    97
 DIFFERENCES ON     13 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2    69     1. R.J. HOWERTON AND M.H. MACGREGOR, THE LLL EVALUATED NUCLEAR   1345 1451    68
   2    70        DATA LIBRARY (ENDL)  DESCRIPTIONS OF INDIVIDUAL EVALUATIONS   1345 1451    69
   2    71        FOR Z=0-98, UCRL 50400 VOL 15, PART D REV. 1 (1978)           1345 1451    70
   2    72     2. R.J. HOWERTON, NUCL. SCI. AND ENG., 62,438,(1977)             1345 1451    71
   2    73     3. Y. NAKAGOME, PRIVATE COMMUNICATION (1978)                     1345 1451    72
   2    74     4. M.S.MOORE AND G.A.KEYWORTH,PHYS.REV.C3(1971)1656.             1345 1451    73
   2    75     5. J.C.BROWNE,R.W.BENJAMIN,AND D.G.KARRAKER,NUCL.SCI.ENG.        1345 1451    74
   2    76        65(1978)166.                                                  1345 1451    75
   2    77     6. J.E.LYNN,THE THEORY OF NEUTRON RESONANCE REACTIONS,CLARENDON  1345 1451    76
   2    78        PRESS,OXFORD,1968,P. 290.                                     1345 1451    77
   2    79                                  1        451        118          21345 1451    78
   2    80                                  1        452          5          21345 1451    79
   2    81                                  1        455          6          21345 1451    80
   2    82                                  1        456          5          21345 1451    81
   2    83                                  2        151        120          21345 1451    82
   2    84                                  3          1         24          21345 1451    83
   2    85                                  3          2         13          21345 1451    84
 DIFFERENCES ON     17 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
--------------------------------------------------------------------------------------------------
   1   102                                  3         18         32          11345 1451   101
   2    89                                  3         18         16          21345 1451    88
 DIFFERENCES                                                     $$          $
--------------------------------------------------------------------------------------------------
   1   105                                  3        102         27          11345 1451   104
   2    92                                  3        102          8          21345 1451    91
 DIFFERENCES                                                     $$          $
--------------------------------------------------------------------------------------------------
   1   134   9.62450+ 4 2.42960+ 2          0          1          0          01345 1452   133
   1   135   0.0       + 0 0.0      + 0     0          0          2          01345 1452   134
   1   136   3.83000+ 0 1.90000- 7                                            1345 1452   135
 DIFFERENCES ON      3 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2   121   9.62450+ 4 2.42960+ 2          0          2          0          01345 1452   120
   2   122   0.00000+ 0 0.00000+ 0          0          0          1          61345 1452   121
   2   123              6          2                                          1345 1452   122
   2   124   1.00000- 5 3.60620+ 0 5.50000+ 6 4.65609+ 0 8.00000+ 6 5.05604+ 01345 1452   123
   2   125   1.15000+ 7 5.70597+ 0 1.40000+ 7 6.15592+ 0 2.00000+ 7 7.20580+ 01345 1452   124
 DIFFERENCES ON      5 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
--------------------------------------------------------------------------------------------------
MAT/MF/MT= 1345  1 455 ONLY ON FILE 2...SECTION SKIPPED
--------------------------------------------------------------------------------------------------
MAT/MF/MT= 1345  1 456 ONLY ON FILE 2...SECTION SKIPPED
--------------------------------------------------------------------------------------------------
   1   140   9.62450+ 4 1.00000+ 0          0          0          1          01345 2151   139
   2   142   9.62450+ 4 1.00000+ 0          0          1          2          01345 2151   141
```

```
DIFFERENCES                                                   $          $
-----------------------------------------------------------------------------------------------------------------------
  1   141   7.84930- 1 1.00000+ 1          1          1          0          01345 2151   140
  2   143   1.00000- 5 6.05000+ 1          1          1          0          01345 2151   142
DIFFERENCES $ $$$$    $ $  $
-----------------------------------------------------------------------------------------------------------------------
  1   143   2.42960+ 2 0.0     + 0          0          0          18         31345 2151   142
  1   144   1.96900+ 0 3.50000+ 0 2.70240- 1 2.38500- 4 4.00000- 2 2.30000- 11345 2151   143
  1   145   4.69600+ 0 3.50000+ 0 3.91960- 1 1.95500- 3 4.00000- 2 3.50000- 11345 2151   144
  1   146   9.16800+ 0 3.50000+ 0 1.50730- 1 7.26700- 4 4.00000- 2 1.10000- 11345 2151   145
DIFFERENCES ON    4 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
  2   145   2.42905+ 2 0.00000+ 0          0          0          234       391345 2151   144
  2   146  -1.00000- 1 3.50000+ 0 3.50050- 1 4.55000- 5 5.00000- 2 3.00000- 11345 2151   145
  2   147   8.50000- 1 3.50000+ 0 8.40100- 1 1.02000- 4 4.00000- 2 8.00000- 11345 2151   146
  2   148   1.98000+ 0 3.50000+ 0 2.15240- 1 2.40000- 4 4.00000- 2 1.75000- 11345 2151   147
  2   149   2.45000+ 0 3.50000+ 0 3.40110- 1 1.10000- 4 4.00000- 2 3.00000- 11345 2151   148
  2   150   4.68000+ 0 3.50000+ 0 3.67100- 1 2.10000- 3 4.00000- 2 3.25000- 11345 2151   149
  2   151   5.75000+ 0 3.50000+ 0 3.40110- 1 1.10000- 4 4.00000- 2 3.00000- 11345 2151   150
  2   152   7.53000+ 0 3.50000+ 0 3.41910- 1 1.91000- 3 4.00000- 2 3.00000- 11345 2151   151
  2   153   8.65000+ 0 3.50000+ 0 5.40530- 1 5.30000- 4 4.00000- 2 5.00000- 11345 2151   152
  2   154   9.15000+ 0 3.50000+ 0 2.40390- 1 3.90000- 4 4.00000- 2 2.00000- 11345 2151   153
  2   155   1.01500+ 1 3.50000+ 0 2.40400- 1 4.00000- 4 4.00000- 2 2.00000- 11345 2151   154
  2   156   1.13400+ 1 3.50000+ 0 1.90880- 1 8.80000- 4 4.00000- 2 1.50000- 11345 2151   155
  2   157   1.37500+ 1 3.50000+ 0 2.10340- 1 3.40000- 4 4.00000- 2 1.70000- 11345 2151   156
  2   158   1.60000+ 1 3.50000+ 0 4.40660- 1 6.60000- 4 4.00000- 2 4.00000- 11345 2151   157
  2   159   2.14000+ 1 3.50000+ 0 5.33410- 1 3.41000- 3 4.00000- 2 4.90000- 11345 2151   158
  2   160   2.48000+ 1 3.50000+ 0 2.69050- 1 4.05000- 3 4.00000- 2 2.25000- 11345 2151   159
  2   161   2.58000+ 1 3.50000+ 0 5.90040- 1 4.00000- 5 4.00000- 2 5.50000- 11345 2151   160
  2   162   2.68000+ 1 3.50000+ 0 1.70770- 1 7.70000- 4 4.00000- 2 1.30000- 11345 2151   161
  2   163   2.76000+ 1 3.50000+ 0 2.40730- 1 7.30000- 4 4.00000- 2 2.00000- 11345 2151   162
  2   164   2.94000+ 1 3.50000+ 0 3.93580- 1 3.58000- 3 4.00000- 2 3.50000- 11345 2151   163
  2   165   3.17000+ 1 3.50000+ 0 7.30500- 1 5.00000- 4 4.00000- 2 6.90000- 11345 2151   164
  2   166   3.30000+ 1 3.50000+ 0 4.43700- 2 3.70000- 4 4.00000- 2 4.00000- 31345 2151   165
  2   167   3.46000+ 1 3.50000+ 0 1.00230- 1 2.30000- 4 4.00000- 2 6.00000- 21345 2151   166
  2   168   3.53000+ 1 3.50000+ 0 4.24260+ 0 7.58000- 3 4.00000- 2 4.19500+ 01345 2151   167
  2   169   3.63000+ 1 3.50000+ 0 2.31540- 1 1.54000- 3 4.00000- 2 1.90000- 11345 2151   168
  2   170   3.95000+ 1 3.50000+ 0 1.42650- 1 6.53000- 4 4.00000- 2 1.02000- 11345 2151   169
  2   171   4.04000+ 1 3.50000+ 0 6.29480- 1 4.48000- 3 4.00000- 2 5.85000- 11345 2151   170
  2   172   4.25000+ 1 3.50000+ 0 5.53700- 2 5.37000- 3 4.00000- 2 1.00000- 21345 2151   171
  2   173   4.31000+ 1 3.50000+ 0 5.78730- 1 1.73000- 3 4.00000- 2 5.37000- 11345 2151   172
  2   174   4.46000+ 1 3.50000+ 0 7.36610- 1 2.61000- 3 4.00000- 2 6.94000- 11345 2151   173
  2   175   4.58000+ 1 3.50000+ 0 9.41590- 1 5.90000- 4 4.00000- 2 9.01000- 11345 2151   174
  2   176   4.75000+ 1 3.50000+ 0 3.23560- 1 3.56000- 3 4.00000- 2 2.80000- 11345 2151   175
  2   177   4.92000+ 1 3.50000+ 0 1.44400+ 0 5.04000- 3 4.00000- 2 1.39900+ 01345 2151   176
  2   178   5.05000+ 1 3.50000+ 0 7.92790- 1 1.79000- 3 4.00000- 2 7.51000- 11345 2151   177
  2   179   5.16000+ 1 3.50000+ 0 2.47620- 1 6.25000- 4 4.00000- 2 2.07000- 11345 2151   178
  2   180   5.36000+ 1 3.50000+ 0 9.48350- 1 1.23500- 2 4.00000- 2 8.96000- 11345 2151   179
  2   181   5.46000+ 1 3.50000+ 0 1.09730+ 0 3.30000- 4 4.00000- 2 1.05700+ 01345 2151   180
  2   182   5.63000+ 1 3.50000+ 0 5.46400- 1 1.40000- 3 4.00000- 2 5.05000- 11345 2151   181
  2   183   5.85000+ 1 3.50000+ 0 4.46850- 1 1.38500- 2 4.00000- 2 3.93000- 11345 2151   182
  2   184   6.00000+ 1 3.50000+ 0 5.58610- 1 6.10000- 4 4.00000- 2 5.18000- 11345 2151   183
  2   185   6.05000+ 1 1.00000+ 4          2          2          0          01345 2151   184
  2   186   3.50000+ 0 8.96510- 1          0          0          2          01345 2151   185
  2   187   2.42960+ 2 0.00000+ 0          0          0          2          01345 2151   186
  2   188   3.00000+ 0 0.00000+ 0          5          0          66        101345 2151   187
  2   189   0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 4.00000+ 01345 2151   188
  2   190   6.05000+ 1 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   189
  2   191   1.00000+ 2 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   190
  2   192   2.00000+ 2 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   191
  2   193   5.00000+ 2 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   192
  2   194   7.00000+ 2 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   193
  2   195   1.00000+ 3 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   194
  2   196   2.00000+ 3 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   195
  2   197   5.00000+ 3 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   196
  2   198   7.00000+ 3 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   197
  2   199   1.00000+ 4 2.57000+ 0 0.00000+ 0 3.00000- 4 4.00000- 2 5.19000- 11345 2151   198
```

```
2  200  4.00000+ 0 0.00000+ 0           5          0           66        101345 2151  199
2  201  0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 4.00000+ 01345 2151  200
2  202  6.05000+ 1 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  201
2  203  1.00000+ 2 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  202
2  204  2.00000+ 2 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  203
2  205  5.00000+ 2 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  204
2  206  7.00000+ 2 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  205
2  207  1.00000+ 3 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  206
2  208  2.00000+ 3 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  207
2  209  5.00000+ 3 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  208
2  210  7.00000+ 3 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  209
2  211  1.00000+ 4 2.00000+ 0 0.00000+ 0 2.30000- 4 4.00000- 2 5.19000- 11345 2151  210
2  212  2.42960+ 2 0.00000+ 0           1          0           4          01345 2151  211
2  213  2.00000+ 0 0.00000+ 0           5          0           66        101345 2151  212
2  214  0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 4.00000+ 01345 2151  213
2  215  6.05000+ 1 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  214
2  216  1.00000+ 2 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  215
2  217  2.00000+ 2 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  216
2  218  5.00000+ 2 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  217
2  219  7.00000+ 2 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  218
2  220  1.00000+ 3 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  219
2  221  2.00000+ 3 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  220
2  222  5.00000+ 3 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  221
2  223  7.00000+ 3 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  222
2  224  1.00000+ 4 3.59000+ 0 0.00000+ 0 7.00000- 4 4.00000- 2 5.19000- 11345 2151  223
2  225  3.00000+ 0 0.00000+ 0           5          0           66        101345 2151  224
2  226  0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 4.00000+ 01345 2151  225
2  227  6.05000+ 1 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  226
2  228  1.00000+ 2 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  227
2  229  2.00000+ 2 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  228
2  230  5.00000+ 2 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  229
2  231  7.00000+ 2 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  230
2  232  1.00000+ 3 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  231
2  233  2.00000+ 3 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  232
2  234  5.00000+ 3 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  233
2  235  7.00000+ 3 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  234
2  236  1.00000+ 4 2.57000+ 0 0.00000+ 0 5.10000- 4 4.00000- 2 5.19000- 11345 2151  235
2  237  4.00000+ 0 0.00000+ 0           5          0           66        101345 2151  236
2  238  0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 4.00000+ 01345 2151  237
2  239  6.05000+ 1 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  238
2  240  1.00000+ 2 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  239
2  241  2.00000+ 2 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  240
2  242  5.00000+ 2 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  241
2  243  7.00000+ 2 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  242
2  244  1.00000+ 3 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  243
2  245  2.00000+ 3 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  244
2  246  5.00000+ 3 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  245
2  247  7.00000+ 3 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  246
2  248  1.00000+ 4 2.00000+ 0 0.00000+ 0 4.00000- 4 4.00000- 2 5.19000- 11345 2151  247
2  249  5.00000+ 0 0.00000+ 0           5          0           66        101345 2151  248
2  250  0.00000+ 0 0.00000+ 0 0.00000+ 0 1.00000+ 0 0.00000+ 0 4.00000+ 01345 2151  249
2  251  6.05000+ 1 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  250
2  252  1.00000+ 2 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  251
2  253  2.00000+ 2 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  252
2  254  5.00000+ 2 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  253
2  255  7.00000+ 2 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  254
2  256  1.00000+ 3 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  255
2  257  2.00000+ 3 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  256
2  258  5.00000+ 3 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  257
2  259  7.00000+ 3 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  258
2  260  1.00000+ 4 1.63000+ 0 0.00000+ 0 3.30000- 4 4.00000- 2 5.19000- 11345 2151  259
DIFFERENCES ON  116 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-----------------------------------------------------------------------------------------------
1  150  0.0     + 0 0.0     + 0           0          0           2       1221345 3  1  149
1  151            4           5        122           2                     1345 3  1  150
1  152  1.00000- 5 1.45812+ 5 2.53000- 4 2.75466+ 4 1.01200- 3 1.36778+ 41345 3  1  151
```

```
   1   153   2.27700- 3 9.07300+ 3 4.04700- 3 6.77390+ 3 6.32500- 3 5.38801+ 31345 3   1   152
   1   154   9.10800- 3 4.45302+ 3 1.23970- 2 3.78149+ 3 1.61920- 2 3.27559+ 31345 3   1   153
   1   155   2.04930- 2 2.87433+ 3 2.53000- 2 2.55598+ 3 3.06130- 2 2.29162+ 31345 3   1   154
   1   156   3.64320- 2 2.07012+ 3 4.27570- 2 1.88056+ 3 4.95880- 2 1.71682+ 31345 3   1   155
   1   157   5.69250- 2 1.57523+ 3 6.51730- 2 1.44334+ 3 7.48470- 2 1.31878+ 31345 3   1   156
   1   158   8.61220- 2 1.19991+ 3 9.91860- 2 1.08921+ 3 1.13980- 1 9.79890+ 21345 3   1   157
   1   159   1.31230- 1 8.91880+ 2 1.52480- 1 7.98480+ 2 1.79010- 1 7.07860+ 21345 3   1   158
   1   160   2.12410- 1 6.21153+ 2 2.54640- 1 5.40142+ 2 3.08160- 1 4.66110+ 21345 3   1   159
   1   161   3.75980- 1 4.00349+ 2 4.61830- 1 3.43605+ 2 5.70230- 1 3.02408+ 21345 3   1   160
   1   162   7.06660- 1 2.63840+ 2 7.84930- 1 2.35280+ 2 7.84930- 1 2.23280+ 21345 3   1   161
   1   163   8.09130- 1 2.14449+ 2 9.74060- 1 1.75810+ 2 1.27760+ 0 1.48279+ 21345 3   1   162
   1   164   1.64090+ 0 1.28062+ 2 2.11070+ 0 1.11155+ 2 2.71010+ 0 9.53950+ 11345 3   1   163
   1   165   3.47990+ 0 8.39970+ 1 4.46830+ 0 7.42390+ 1 5.73740+ 0 6.55240+ 11345 3   1   164
   1   166   7.36690+ 0 5.77830+ 1 9.45930+ 0 5.10250+ 1 1.00000+ 1 6.05311+ 11345 3   1   165
   1   167   1.00000+ 1 7.18781+ 1 1.21460+ 1 1.09280+ 2 1.55960+ 1 9.75430+ 11345 3   1   166
   1   168   2.00250+ 1 8.70770+ 1 2.57130+ 1 7.80540+ 1 3.30160+ 1 7.00390+ 11345 3   1   167
   1   169   4.23940+ 1 6.30210+ 1 5.44350+ 1 5.67940+ 1 6.68950+ 1 5.23733+ 11345 3   1   168
   1   170   6.98950+ 1 5.13131+ 1 8.97470+ 1 4.64670+ 1 1.15240+ 2 4.20910+ 11345 3   1   169
   1   171   1.47970+ 2 3.84110+ 1 2.17820+ 2 3.35080+ 1 3.59130+ 2 2.84850+ 11345 3   1   170
   1   172   5.92100+ 2 2.41860+ 1 9.76210+ 2 2.10330+ 1 1.60950+ 3 1.86100+ 11345 3   1   171
   1   173   2.65360+ 3 1.69100+ 1 4.37510+ 3 1.53050+ 1 7.21330+ 3 1.44480+ 11345 3   1   172
   1   174   7.21330+ 3 1.44480+ 1 1.00000+ 4 1.50000+ 1 1.00000+ 4 1.50000+ 11345 3   1   173
   1   175   2.00000+ 4 1.36000+ 1 3.00000+ 4 1.30750+ 1 4.00000+ 4 1.28500+ 11345 3   1   174
   1   176   6.00000+ 4 1.27400+ 1 7.00000+ 4 1.27850+ 1 8.00000+ 4 1.29300+ 11345 3   1   175
   1   177   9.00000+ 4 1.31250+ 1 1.00000+ 5 1.34700+ 1 1.10000+ 5 1.34270+ 11345 3   1   176
   1   178   1.25000+ 5 1.34125+ 1 1.50000+ 5 1.32050+ 1 2.00000+ 5 1.26900+ 11345 3   1   177
   1   179   3.00000+ 5 1.20050+ 1 4.00000+ 5 1.11914+ 1 6.00000+ 5 9.90762+ 01345 3   1   178
   1   180   7.00000+ 5 9.32821+ 0 1.00000+ 6 8.26000+ 0 1.30000+ 6 7.83800+ 01345 3   1   179
DIFFERENCES ON    31 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2   264   0.00000+ 0 0.00000+ 0          0          0          1          621345 3   1   263
   2   265           62         2                                               1345 3   1   264
   2   266   1.00000- 5 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 1.60000+ 11345 3   1   265
   2   267   1.50000+ 4 1.48000+ 1 2.00000+ 4 1.42000+ 1 3.00000+ 4 1.33750+ 11345 3   1   266
   2   268   4.00000+ 4 1.28500+ 1 5.00000+ 4 1.25283+ 1 6.00000+ 4 1.22067+ 11345 3   1   267
   2   269   7.00000+ 4 1.20350+ 1 8.00000+ 4 1.20633+ 1 9.00000+ 4 1.22417+ 11345 3   1   268
   2   270   1.00000+ 5 1.25700+ 1 1.10000+ 5 1.24970+ 1 1.25000+ 5 1.24375+ 11345 3   1   269
   2   271   1.50000+ 5 1.21550+ 1 2.00000+ 5 1.16100+ 1 2.50000+ 5 1.13225+ 11345 3   1   270
   2   272   3.00000+ 5 1.10750+ 1 4.00000+ 5 1.04914+ 1 5.00000+ 5 9.99952+ 01345 3   1   271
   2   273   6.00000+ 5 9.50762+ 0 7.00000+ 5 9.02071+ 0 8.00000+ 5 8.74714+ 01345 3   1   272
   2   274   9.00000+ 5 8.48357+ 0 1.00000+ 6 8.26000+ 0 1.30000+ 6 7.83800+ 01345 3   1   273
DIFFERENCES ON    11 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-----------------------------------------------------------------------------------------------------------
   1   191   1.80000+ 7 5.88503+ 0 1.80942+ 7 5.88858+ 0 1.82000+ 7 5.89258+ 01345 3   1   190
   2   285   1.80000+ 7 5.88503+ 0 1.80942+ 7 5.88859+ 0 1.82000+ 7 5.89258+ 01345 3   1   284
DIFFERENCES                                  $
-----------------------------------------------------------------------------------------------------------
   1   195   0.0     + 0 0.0     + 0          0          0          1          461345 3   2   194
   1   196           46         2                                               1345 3   2   195
   1   197   1.00000- 5 1.20000+ 1 2.53000- 2 1.20000+ 1 7.84930- 1 1.20000+ 11345 3   2   196
   1   198   7.84930- 1 0.0     + 0 1.00000+ 1 0.0     + 0 1.00000+ 1 1.13470+ 11345 3   2   197
   1   199   1.21460+ 1 1.10200+ 1 1.55960+ 1 1.07500+ 1 2.00250+ 1 1.06200+ 11345 3   2   198
   1   200   2.57130+ 1 1.05300+ 1 3.30160+ 1 1.04800+ 1 4.23940+ 1 1.04400+ 11345 3   2   199
   1   201   5.44350+ 1 1.04100+ 1 6.68950+ 1 1.03600+ 1 8.97470+ 1 1.03000+ 11345 3   2   200
   1   202   1.15240+ 2 1.02500+ 1 1.47970+ 2 1.02000+ 1 2.17820+ 2 1.01500+ 11345 3   2   201
   1   203   3.59130+ 2 1.01000+ 1 5.92100+ 2 1.00000+ 1 1.00000+ 5 1.00000+ 11345 3   2   202
   1   204   2.00000+ 5 8.70000+ 0 4.00000+ 5 7.40000+ 0 7.00000+ 5 5.65000+ 01345 3   2   203
   1   205   1.00000+ 6 4.57000+ 0 2.00000+ 6 3.37000+ 0 2.20000+ 6 3.36000+ 01345 3   2   204
   1   206   2.60000+ 6 3.45000+ 0 3.00000+ 6 3.59000+ 0 4.00000+ 6 3.94000+ 01345 3   2   205
   1   207   5.00000+ 6 4.05000+ 0 6.00000+ 6 3.92000+ 0 7.00000+ 6 3.65000+ 01345 3   2   206
   1   208   8.00000+ 6 3.32000+ 0 9.00000+ 6 3.04000+ 0 1.00000+ 7 2.81000+ 01345 3   2   207
   1   209   1.10000+ 7 2.65000+ 0 1.20000+ 7 2.57000+ 0 1.30000+ 7 2.54000+ 01345 3   2   208
   1   210   1.40000+ 7 2.57000+ 0 1.50000+ 7 2.63000+ 0 1.60000+ 7 2.71000+ 01345 3   2   209
   1   211   1.70000+ 7 2.79000+ 0 1.80000+ 7 2.87000+ 0 1.90000+ 7 2.94000+ 01345 3   2   210
   1   212   2.00000+ 7 2.99000+ 0                                              1345 3   2   211
DIFFERENCES ON    18 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2   289   0.00000+ 0 0.00000+ 0          0          0          1          291345 3   2   288
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  2   290              29           2                                                           1345 3  2  289
  2   291     1.00000- 5 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 1.00000+ 11345 3  2  290
  2   292     1.00000+ 5 1.00000+ 1 2.00000+ 5 8.70000+ 0 4.00000+ 5 7.40000+ 01345 3  2  291
  2   293     7.00000+ 5 5.65000+ 0 1.00000+ 6 4.57000+ 0 2.00000+ 6 3.37000+ 01345 3  2  292
  2   294     2.20000+ 6 3.36000+ 0 2.60000+ 6 3.45000+ 0 3.00000+ 6 3.59000+ 01345 3  2  293
  2   295     4.00000+ 6 3.94000+ 0 5.00000+ 6 4.05000+ 0 6.00000+ 6 3.92000+ 01345 3  2  294
  2   296     7.00000+ 6 3.65000+ 0 8.00000+ 6 3.32000+ 0 9.00000+ 6 3.04000+ 01345 3  2  295
  2   297     1.00000+ 7 2.81000+ 0 1.10000+ 7 2.65000+ 0 1.20000+ 7 2.57000+ 01345 3  2  296
  2   298     1.30000+ 7 2.54000+ 0 1.40000+ 7 2.57000+ 0 1.50000+ 7 2.63000+ 01345 3  2  297
  2   299     1.60000+ 7 2.71000+ 0 1.70000+ 7 2.79000+ 0 1.80000+ 7 2.87000+ 01345 3  2  298
  2   300     1.90000+ 7 2.94000+ 0 2.00000+ 7 2.99000+ 0                       1345 3  2  299
DIFFERENCES ON    12 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-----------------------------------------------------------------------------------------------------------
  1   215     0.0      + 0-5.97540+ 4          0          0          1          261345 3  4  214
  2   303     0.00000+ 0-5.97540+ 4          0          0          1          261345 3  4  302
DIFFERENCES       $$$$
-----------------------------------------------------------------------------------------------------------
  1   217     6.00000+ 4 0.0      + 0 7.00000+ 4 1.00000- 1 8.00000+ 4 3.00000- 11345 3  4  216
  2   305     6.00000+ 4 0.00000+ 0 7.00000+ 4 1.00000- 1 8.00000+ 4 3.00000- 11345 3  4  304
DIFFERENCES                 $$$$
-----------------------------------------------------------------------------------------------------------
  1   228     0.0      + 0-5.52000+ 6          0          0          1          111345 3 16  227
  2   316     0.00000+ 0-5.52000+ 6          0          0          1          111345 3 16  315
DIFFERENCES       $$$$
-----------------------------------------------------------------------------------------------------------
  1   230     5.54272+ 6 0.0      + 0 5.60000+ 6 0.0      + 0 6.00000+ 6 4.50000- 11345 3 16  229
  2   318     5.54272+ 6 0.00000+ 0 5.60000+ 6 0.00000+ 0 6.00000+ 6 4.50000- 11345 3 16  317
DIFFERENCES                 $$$$                 $$$$
-----------------------------------------------------------------------------------------------------------
  1   236     0.0      + 0-1.23200+ 7          0          0          1           71345 3 17  235
  2   324     0.00000+ 0-1.23200+ 7          0          0          1           71345 3 17  323
DIFFERENCES       $$$$
-----------------------------------------------------------------------------------------------------------
  1   238     1.23707+ 7 0.0      + 0 1.24000+ 7 0.0      + 0 1.25000+ 7 2.00000- 21345 3 17  237
  2   326     1.23707+ 7 0.00000+ 0 1.24000+ 7 0.00000+ 0 1.25000+ 7 2.00000- 21345 3 17  325
DIFFERENCES                 $$$$                 $$$$
-----------------------------------------------------------------------------------------------------------
  1   242     9.62450+ 4 2.42960+ 2          0         99          0           01345 3 18  241
  1   243     0.0      + 0 2.00000+ 8          0          0          2          851345 3 18  242
  1   244              4          5         85          2                        1345 3 18  243
  1   245     1.00000- 5 1.24000+ 5 2.53000- 4 2.33540+ 4 1.01200- 3 1.15910+ 41345 3 18  244
  1   246     2.27700- 3 7.68560+ 3 4.04700- 3 5.73620+ 3 6.32500- 3 4.56120+ 31345 3 18  245
  1   247     9.10800- 3 3.76830+ 3 1.23970- 2 3.19890+ 3 1.61920- 2 2.76960+ 31345 3 18  246
  1   248     2.04930- 2 2.43050+ 3 2.53000- 2 2.16100+ 3 3.06130- 2 1.93660+ 31345 3 18  247
  1   249     3.64320- 2 1.74840+ 3 4.27570- 2 1.58770+ 3 4.95880- 2 1.44950+ 31345 3 18  248
  1   250     5.69250- 2 1.32900+ 3 6.51730- 2 1.21820+ 3 7.48470- 2 1.11140+ 31345 3 18  249
  1   251     8.61220- 2 1.01140+ 3 9.91860- 2 9.17130+ 2 1.13980- 1 8.24910+ 21345 3 18  250
  1   252     1.31230- 1 7.50330+ 2 1.52480- 1 6.71140+ 2 1.79010- 1 5.94400+ 21345 3 18  251
  1   253     2.12410- 1 5.20900+ 2 2.54640- 1 4.52100+ 2 3.08160- 1 3.89280+ 21345 3 18  252
  1   254     3.75980- 1 3.33510+ 2 4.61830- 1 2.85980+ 2 5.70230- 1 2.51000+ 21345 3 18  253
  1   255     7.06660- 1 2.19360+ 2 8.09130- 1 1.88310+ 2 9.74060- 1 1.54620+ 21345 3 18  254
  1   256     1.27760+ 0 1.30550+ 2 1.64090+ 0 1.12830+ 2 2.11070+ 0 9.79830+ 11345 3 18  255
  1   257     2.71010+ 0 8.41720+ 1 3.47990+ 0 7.41150+ 1 4.46830+ 0 6.55050+ 11345 3 18  256
  1   258     5.73740+ 0 5.78150+ 1 7.36690+ 0 5.09850+ 1 9.45930+ 0 4.50220+ 11345 3 18  257
  1   259     1.21460+ 1 8.67000+ 1 1.55960+ 1 7.65820+ 1 2.00250+ 1 6.74620+ 11345 3 18  258
  1   260     2.57130+ 1 5.95800+ 1 3.30160+ 1 5.25520+ 1 4.23940+ 1 4.63950+ 11345 3 18  259
  1   261     5.44350+ 1 4.09270+ 1 6.98950+ 1 3.61420+ 1 8.97470+ 1 3.19120+ 11345 3 18  260
  1   262     1.15240+ 2 2.80950+ 1 1.47970+ 2 2.48920+ 1 2.17820+ 2 2.06100+ 11345 3 18  261
  1   263     3.59130+ 2 1.62220+ 1 5.92100+ 2 1.25170+ 1 9.76210+ 2 9.73500+ 01345 3 18  262
  1   264     1.60950+ 3 7.59700+ 0 2.65360+ 3 5.91000+ 0 4.37510+ 3 4.30500+ 01345 3 18  263
  1   265     7.21330+ 3 3.47800+ 0 1.00000+ 4 4.00000+ 0 2.00000+ 4 3.00000+ 01345 3 18  264
  1   266     3.00000+ 4 2.60000+ 0 4.00000+ 4 2.50000+ 0 1.00000+ 5 2.30000+ 01345 3 18  265
  1   267     2.00000+ 5 2.20000+ 0 4.00000+ 5 1.90000+ 0 6.00000+ 5 1.80000+ 01345 3 18  266
  1   268     1.00000+ 6 1.75000+ 0 1.30000+ 6 1.90000+ 0 1.50000+ 6 2.05000+ 01345 3 18  267
  1   269     1.75000+ 6 2.15000+ 0 2.10000+ 6 2.20000+ 0 3.00000+ 6 2.00000+ 01345 3 18  268
  1   270     5.00000+ 6 1.80000+ 0 5.50000+ 6 1.75000+ 0 6.00000+ 6 2.05000+ 01345 3 18  269
```

```
   1    271   7.00000+ 6 2.10000+ 0 1.15000+ 7 2.00000+ 0 1.25000+ 7 2.20000+ 01345 3 18   270
   1    272   1.50000+ 7 2.15000+ 0 1.65000+ 7 2.10000+ 0 1.75000+ 7 2.20000+ 01345 3 18   271
   1    273   2.00000+ 7 2.15000+ 0                                            1345 3 18   272
DIFFERENCES ON    32 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
   2    330   9.62450+ 4 2.42960+ 2           0           0           0          01345 3 18   329
   2    331   0.00000+ 0 2.00000+ 8           0           0           1      381345 3 18   330
   2    332             38          2                                          1345 3 18   331
   2    333   1.00000- 5 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 5.00000+ 01345 3 18   332
   2    334   1.50000+ 4 4.00000+ 0 2.00000+ 4 3.60000+ 0 3.00000+ 4 2.90000+ 01345 3 18   333
   2    335   4.00000+ 4 2.50000+ 0 5.00000+ 4 2.20000+ 0 6.00000+ 4 1.90000+ 01345 3 18   334
   2    336   7.00000+ 4 1.65000+ 0 8.00000+ 4 1.50000+ 0 1.00000+ 5 1.40000+ 01345 3 18   335
   2    337   1.50000+ 5 1.20000+ 0 2.00000+ 5 1.12000+ 0 2.50000+ 5 1.10000+ 01345 3 18   336
   2    338   3.00000+ 5 1.12000+ 0 4.00000+ 5 1.20000+ 0 5.00000+ 5 1.30000+ 01345 3 18   337
   2    339   6.00000+ 5 1.40000+ 0 7.00000+ 5 1.48000+ 0 8.00000+ 5 1.55000+ 01345 3 18   338
   2    340   9.00000+ 5 1.63000+ 0 1.00000+ 6 1.75000+ 0 1.30000+ 6 1.90000+ 01345 3 18   339
   2    341   1.50000+ 6 2.05000+ 0 1.75000+ 6 2.15000+ 0 2.10000+ 6 2.20000+ 01345 3 18   340
   2    342   3.00000+ 6 2.00000+ 0 5.00000+ 6 1.80000+ 0 5.50000+ 6 1.75000+ 01345 3 18   341
   2    343   6.00000+ 6 2.05000+ 0 7.00000+ 6 2.10000+ 0 1.15000+ 7 2.00000+ 01345 3 18   342
   2    344   1.25000+ 7 2.20000+ 0 1.50000+ 7 2.15000+ 0 1.65000+ 7 2.10000+ 01345 3 18   343
   2    345   1.75000+ 7 2.20000+ 0 2.00000+ 7 2.15000+ 0                      1345 3 18   344
DIFFERENCES ON    16 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-------------------------------------------------------------------------------------------------
   1    276   0.0     + 0-1.80200+ 7           0           0           1          31345 3 37   275
   2    348   0.00000+ 0-1.80200+ 7           0           0           1          31345 3 37   347
DIFFERENCES      $$$$
-------------------------------------------------------------------------------------------------
   1    278   1.80942+ 7 0.0     + 0 1.82000+ 7 0.0     + 0 2.00000+ 7 1.00000- 11345 3 37   277
   2    350   1.80942+ 7 0.00000+ 0 1.82000+ 7 0.00000+ 0 2.00000+ 7 1.00000- 11345 3 37   349
DIFFERENCES                $$$$                $$$$
-------------------------------------------------------------------------------------------------
   1    281   0.0     + 0-5.97541+ 4           0           0           1         261345 3 91   280
   2    353   0.00000+ 0-5.97541+ 4           0           0           1         261345 3 91   352
DIFFERENCES      $$$$
-------------------------------------------------------------------------------------------------
   1    283   6.00000+ 4 0.0     + 0 7.00000+ 4 1.00000- 1 8.00000+ 4 3.00000- 11345 3 91   282
   2    355   6.00000+ 4 0.00000+ 0 7.00000+ 4 1.00000- 1 8.00000+ 4 3.00000- 11345 3 91   354
DIFFERENCES                $$$$
-------------------------------------------------------------------------------------------------
   1    293   9.62450+ 4 2.42960+ 2           0          99           0          01345 3102   292
   1    294   0.0     + 0 6.45070+ 6           0           0           2         721345 3102   293
   1    295             4          5          72           2                      1345 3102   294
   1    296   1.00000- 5 2.18000+ 4 2.53000- 4 4.18060+ 3 1.01200- 3 2.07480+ 31345 3102   295
   1    297   2.27700- 3 1.37540+ 3 4.04700- 3 1.02570+ 3 6.32500- 3 8.14810+ 21345 3102   296
   1    298   9.10800- 3 6.72720+ 2 1.23970- 2 5.70590+ 2 1.61920- 2 4.93990+ 21345 3102   297
   1    299   2.04930- 2 4.31830+ 2 2.53000- 2 3.82980+ 2 3.06130- 2 3.43020+ 21345 3102   298
   1    300   3.64320- 2 3.09720+ 2 4.27570- 2 2.80860+ 2 4.95880- 2 2.55320+ 21345 3102   299
   1    301   5.69250- 2 2.34230+ 2 6.51730- 2 2.13140+ 2 7.48470- 2 1.95380+ 21345 3102   300
   1    302   8.61220- 2 1.76510+ 2 9.91860- 2 1.60080+ 2 1.13980- 1 1.42980+ 21345 3102   301
   1    303   1.31230- 1 1.29550+ 2 1.52480- 1 1.15340+ 2 1.79010- 1 1.01460+ 21345 3102   302
   1    304   2.12410- 1 8.82530+ 1 2.54640- 1 7.60420+ 1 3.08160- 1 6.48300+ 11345 3102   303
   1    305   3.75980- 1 5.48390+ 1 4.61830- 1 4.56250+ 1 5.70230- 1 3.94080+ 11345 3102   304
   1    306   7.06660- 1 3.24800+ 1 8.09130- 1 2.61390+ 1 9.74060- 1 2.11900+ 11345 3102   305
   1    307   1.27760+ 0 1.77290+ 1 1.64090+ 0 1.52320+ 1 2.11070+ 0 1.31720+ 11345 3102   306
   1    308   2.71010+ 0 1.12230+ 1 3.47990+ 0 9.88200+ 0 4.46830+ 0 8.73400+ 01345 3102   307
   1    309   5.73740+ 0 7.70900+ 0 7.36690+ 0 6.79800+ 0 9.45930+ 0 6.00300+ 01345 3102   308
   1    310   1.21460+ 1 1.15600+ 1 1.55960+ 1 1.02110+ 1 2.00250+ 1 8.99500+ 01345 3102   309
   1    311   2.57130+ 1 7.94400+ 0 3.30160+ 1 7.00700+ 0 4.23940+ 1 6.18600+ 01345 3102   310
   1    312   5.44350+ 1 5.45700+ 0 6.98950+ 1 4.81900+ 0 8.97470+ 1 4.25500+ 01345 3102   311
   1    313   1.15240+ 2 3.74600+ 0 1.47970+ 2 3.31900+ 0 2.17820+ 2 2.74800+ 01345 3102   312
   1    314   3.59130+ 2 2.16300+ 0 5.92100+ 2 1.66900+ 0 9.76210+ 2 1.29800+ 01345 3102   313
   1    315   1.60950+ 3 1.01300+ 0 2.65360+ 3 1.00000+ 0 4.37510+ 3 1.00000+ 01345 3102   314
   1    316   7.21330+ 3 9.70000- 1 1.00000+ 4 1.00000+ 0 2.00000+ 4 6.00000- 11345 3102   315
   1    317   4.00000+ 4 3.50000- 1 1.00000+ 5 2.20000- 1 2.00000+ 5 1.90000- 11345 3102   316
   1    318   4.00000+ 5 1.20000- 1 6.00000+ 5 6.00000- 2 1.00000+ 6 4.00000- 21345 3102   317
   1    319   1.50000+ 6 2.00000- 2 3.00000+ 6 5.00000- 3 2.00000+ 7 5.00000- 41345 3102   318
DIFFERENCES ON    27 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
```

```
 2   365   9.62450+ 4 2.42960+ 2          0           0           0          01345 3102   364
 2   366   0.00000+ 0 6.45000+ 6          0           0           1         131345 3102   365
 2   367             13         2                                             1345 3102   366
 2   368   1.00000- 5 0.00000+ 0 1.00000+ 4 0.00000+ 0 1.00000+ 4 1.00000+ 01345 3102   367
 2   369   2.00000+ 4 6.00000- 1 4.00000+ 4 3.50000- 1 1.00000+ 5 2.20000- 11345 3102   368
 2   370   2.00000+ 5 1.90000- 1 4.00000+ 5 1.20000- 1 6.00000+ 5 6.00000- 21345 3102   369
 2   371   1.00000+ 6 4.00000- 2 1.50000+ 6 2.00000- 2 3.00000+ 6 5.00000- 31345 3102   370
 2   372   2.00000+ 7 5.00000- 4                                              1345 3102   371
DIFFERENCES ON     8 CARDS $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
-----------------------------------------------------------------------------------------------------------------------
 1   322   0.0     + 0 0.0     + 0          0           0           1         101345 3251   321
 2   375   0.00000+ 0 0.00000+ 0          0           0           1         101345 3251   374
DIFFERENCES    $$$$       $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   330   0.0     + 0 0.0     + 0          0           0           1         101345 3252   329
 2   383   0.00000+ 0 0.00000+ 0          0           0           1         101345 3252   382
DIFFERENCES    $$$$       $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   338   0.0     + 0 0.0     + 0          0           0           1         101345 3253   337
 2   391   0.00000+ 0 0.00000+ 0          0           0           1         101345 3253   390
DIFFERENCES    $$$$       $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   347   0.0     + 0 2.42960+ 2          0           2         441         201345 4   2   346
 2   400   0.00000+ 0 2.42960+ 2          0           2         441         201345 4   2   399
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   348   1.00000+ 0 2.74394- 3 3.38747- 6-5.65321-11 0.0     + 0 0.0     + 01345 4   2   347
 2   401   1.00000+ 0 2.74394- 3 3.38747- 6-5.65321-11 0.00000+ 0 0.00000+ 01345 4   2   400
DIFFERENCES                                              $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   349   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4   2   348
 2   402   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4   2   401
DIFFERENCES    $$$$       $$$$        $$$$        $$$$        $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   350   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4   2   349
 2   403   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4   2   402
DIFFERENCES    $$$$       $$$$        $$$$        $$$$        $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   351   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 9.99990- 1 4.93906- 31345 4   2   350
 2   404   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 9.99990- 1 4.93906- 31345 4   2   403
DIFFERENCES    $$$$       $$$$        $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   352   1.16122- 5 1.31601- 8 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4   2   351
 2   405   1.16122- 5 1.31601- 8 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4   2   404
DIFFERENCES                           $$$$        $$$$        $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   353   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4   2   352
 2   406   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4   2   405
DIFFERENCES    $$$$       $$$$        $$$$        $$$$        $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   354   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4   2   353
 2   407   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4   2   406
DIFFERENCES    $$$$       $$$$        $$$$        $$$$        $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   355   0.0     + 0-2.74390- 3 9.99973- 1 7.05574- 3 2.41750- 5 4.81994- 81345 4   2   354
 2   408   0.00000+ 0-2.74390- 3 9.99973- 1 7.05574- 3 2.41750- 5 4.81994- 81345 4   2   407
DIFFERENCES    $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   356  -8.42678- 9 1.48239-10 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4   2   355
 2   409  -8.42678- 9 1.48239-10 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4   2   408
DIFFERENCES                           $$$$        $$$$        $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------------
 1   357   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4   2   356
 2   410   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4   2   409
DIFFERENCES    $$$$       $$$$        $$$$        $$$$        $$$$        $$$$
-----------------------------------------------------------------------------------------------------------------------
```

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 DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------

   1   358   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 1.01642- 5-4.93895- 31345 4  2  357
   2   411   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 1.01642- 5-4.93895- 31345 4  2  410
 DIFFERENCES      $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   360   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4  2  359
   2   413   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4  2  412
 DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   361   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4  2  360
   2   414   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4  2  413
 DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   362   0.0     + 0-3.98429- 8 2.32323- 5-7.05553- 3 9.99914- 1 1.12247- 21345 4  2  361
   2   415   0.00000+ 0-3.98429- 8 2.32323- 5-7.05553- 3 9.99914- 1 1.12247- 21345 4  2  414
 DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------
   1   363   6.21159- 5 2.17639- 7-7.14668- 8 9.77774-11 0.0     + 0 0.0     + 01345 4  2  362
   2   416   6.21159- 5 2.17639- 7-7.14668- 8 9.77774-11 0.00000+ 0 0.00000+ 01345 4  2  415
 DIFFERENCES                                                $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   364   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4  2  363
   2   417   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4  2  416
 DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   365   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 1.59434-10-1.06247- 71345 4  2  364
   2   418   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 1.59434-10-1.06247- 71345 4  2  417
 DIFFERENCES      $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   367  -1.45308- 7-1.78747- 9 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4  2  366
   2   420  -1.45308- 7-1.78747- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4  2  419
 DIFFERENCES                          $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   368   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4  2  367
   2   421   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4  2  420
 DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   369   0.0     + 0-6.44284-13 4.77055-10-2.11283- 7 6.15989- 5-1.12242- 21345 4  2  368
   2   422   0.00000+ 0-6.44284-13 4.77055-10-2.11283- 7 6.15989- 5-1.12242- 21345 4  2  421
 DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------
   1   371   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4  2  370
   2   424   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4  2  423
 DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   372   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 2.61781-15-2.11454-121345 4  2  371
   2   425   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 2.61781-15-2.11454-121345 4  2  424
 DIFFERENCES      $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   374   1.50825- 4 8.51883- 7-1.47325- 7-1.97524- 9 0.0     + 0 0.0     + 01345 4  2  373
   2   427   1.50825- 4 8.51882- 7-1.47325- 7-1.97524- 9 0.00000+ 0 0.00000+ 01345 4  2  426
 DIFFERENCES                 $                                  $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   375   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4  2  374
   2   428   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4  2  427
 DIFFERENCES      $$$$       $$$$       $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   376   0.0     + 0-1.06721-17 9.28353-15-5.08804-12 1.99787- 9-5.73372- 71345 4  2  375
   2   429   0.00000+ 0-1.06721-17 9.28353-15-5.08804-12 1.99787- 9-5.73372- 71345 4  2  428
 DIFFERENCES      $$$$
--------------------------------------------------------------------------------------------
   1   378  -1.57393- 7-2.29293- 9 0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 01345 4  2  377
   2   431  -1.57393- 7-2.29293- 9 0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 01345 4  2  430
 DIFFERENCES                          $$$$       $$$$       $$$$       $$$$
--------------------------------------------------------------------------------------------
   1   379   0.0     + 0 0.0     + 0 0.0     + 0 0.0     + 0 4.36022-20-2.35081-171345 4  2  378
   2   432   0.00000+ 0 0.00000+ 0 0.00000+ 0 0.00000+ 0 4.36022-20-2.35081-171345 4  2  431
```

```
DIFFERENCES      $$$$
-----------------------------------------------------------------------------------------------------------------------
    1  1765   0.0     + 0 0.0     + 0 5.00000+ 3 6.57191- 7 1.50000+ 4 5.63090- 7134515102 1764
    2  1818   0.00000+ 0 0.00000+ 0 5.00000+ 3 6.57190- 7 1.50000+ 4 5.63090- 7134515102 1817
DIFFERENCES      $$$$       $$$$                  $
-----------------------------------------------------------------------------------------------------------------------
    1  1767   5.50000+ 4 6.55081- 7 6.50000+ 4 1.14390- 6 7.50000+ 4 2.17690- 6134515102 1766
    2  1820   5.50000+ 4 6.55080- 7 6.50000+ 4 1.14390- 6 7.50000+ 4 2.17690- 6134515102 1819
DIFFERENCES                  $
-----------------------------------------------------------------------------------------------------------------------
    1  1770   1.45000+ 5 8.47681- 7 1.55000+ 5 4.91630- 7 1.65000+ 5 3.63240- 7134515102 1769
    2  1823   1.45000+ 5 8.47680- 7 1.55000+ 5 4.91630- 7 1.65000+ 5 3.63240- 7134515102 1822
DIFFERENCES                  $
-----------------------------------------------------------------------------------------------------------------------
    1  1777   5.45000+ 5 7.01811- 7 5.55000+ 5 7.68351- 7 5.65000+ 5 8.20061- 7134515102 1776
    2  1830   5.45000+ 5 7.01810- 7 5.55000+ 5 7.68350- 7 5.65000+ 5 8.20060- 7134515102 1829
DIFFERENCES                  $                  $                  $
-----------------------------------------------------------------------------------------------------------------------
    1  1778   5.75000+ 5 8.46531- 7 5.85000+ 5 8.48101- 7 5.95000+ 5 8.07051- 7134515102 1777
    2  1831   5.75000+ 5 8.46530- 7 5.85000+ 5 8.48100- 7 5.95000+ 5 8.07050- 7134515102 1830
DIFFERENCES                  $                  $                  $
-----------------------------------------------------------------------------------------------------------------------
    1  1779   6.05000+ 5 7.60231- 7 6.25000+ 5 7.46471- 7 6.45000+ 5 6.99691- 7134515102 1778
    2  1832   6.05000+ 5 7.60230- 7 6.25000+ 5 7.46470- 7 6.45000+ 5 6.99690- 7134515102 1831
DIFFERENCES                  $                  $                  $
-----------------------------------------------------------------------------------------------------------------------
    1  1780   6.55000+ 5 8.24751- 7 6.65000+ 5 5.33230- 7 6.85000+ 5 3.77370- 7134515102 1779
    2  1833   6.55000+ 5 6.24750- 7 6.65000+ 5 5.33230- 7 6.85000+ 5 3.77370- 7134515102 1832
DIFFERENCES                  $
-----------------------------------------------------------------------------------------------------------------------
    1  1794   4.77500+ 6 4.78800-10 4.80000+ 6 0.0     + 0                                 134515102 1793
    2  1847   4.77500+ 6 4.78800-10 4.80000+ 6 0.00000+ 0                                 134515102 1846
DIFFERENCES                                          $$$$
-----------------------------------------------------------------------------------------------------------------------
SUMMARY OF ENDF/B DIFFERENCES BY SECTION
-----------------------------------------------------------------------------------------------------------------------
 MAT   MF   MT        FILE 1          FILE 2
                   CARDS  DIFFER   CARDS  DIFFER
-----------------------------------------------------------------------------------------------------------------------
   0    0    0        1       0       1       0
-----------------------------------------------------------------------------------------------------------------------
1345    1  451      132      70     119      57 (DIFFERENCES)
1345    1  452        4       3       6       5 (DIFFERENCES)
1345    1  455 ONLY ON FILE 2
1345    1  456 ONLY ON FILE 2
1345    2  151        8       6     120     118 (DIFFERENCES)
1345    3    1       46      32      26      12 (DIFFERENCES)
1345    3    2       20      18      14      12 (DIFFERENCES)
1345    3    4       13       2      13       2 (DIFFERENCES)
1345    3   16        8       2       8       2 (DIFFERENCES)
1345    3   17        7       2       7       2 (DIFFERENCES)
1345    3   18       33      32      17      16 (DIFFERENCES)
1345    3   37        5       2       5       2 (DIFFERENCES)
1345    3   91       13       2      13       2 (DIFFERENCES)
1345    3  102       28      27       9       8 (DIFFERENCES)
1345    3  251        8       1       8       1 (DIFFERENCES)
1345    3  252        6       1       8       1 (DIFFERENCES)
1345    3  253        8       1       8       1 (DIFFERENCES)
1345    4    2      341      64     341      64 (DIFFERENCES)
1345    4   16       11       4      11       4 (DIFFERENCES)
1345    4   17       11       4      11       4 (DIFFERENCES)
1345    4   37       11       4      11       4 (DIFFERENCES)
1345    4   91       11       4      11       4 (DIFFERENCES)
1345    5   16      110      28     110      28 (DIFFERENCES)
1345    5   17      123      32     123      32 (DIFFERENCES)
1345    5   18       10       2      10       2 (DIFFERENCES)
```

1345	5	37	81	14	81	14	(DIFFERENCES)
1345	5	91	186	63	186	63	(DIFFERENCES)
1345	8	16	4	1	4	1	(DIFFERENCES)
1345	8	17	3	1	3	1	(DIFFERENCES)
1345	8	37	3	1	3	1	(DIFFERENCES)
1345	8	102	3	1	3	1	(DIFFERENCES)
1345	8	457	68	50	68	50	(DIFFERENCES)
1345	12	18	6	1	6	1	(DIFFERENCES)
1345	12	102	5	1	5	1	(DIFFERENCES)
1345	13	3	12	2	12	2	(DIFFERENCES)
1345	14	3	3	0	3	0	
1345	14	18	2	0	2	0	
1345	14	102	2	0	2	0	
1345	15	3	341	90	341	90	(DIFFERENCES)
1345	15	18	33	12	33	12	(DIFFERENCES)
1345	15	102	71	20	71	20	(DIFFERENCES)
1345	15	102	3	0	3	0	

SUMMARY OF DIFFERENCES FOR ENTIRE FILES

	FILE 1		FILE 2	
	CARDS	DIFFER	CARDS	DIFFER
	1798	600	1851	640

END OF RUN