

## EXFORに変換したデータ

札幌学院大学 千葉 正喜

1990年度にNRDFに収集されたデータの中から日本で生産されたものを選択してEXFORに変換した。変換したデータはTRANSテープE009に編集してIAEAに送った。TRANS E009には19エントリーのデータが入っている。1990年度はNRDFに59のデータストリーム( EXFOR というエントリーに相等する) がコンパイルされているので、EXFORに変換できたのはエントリーの数にして約30%であった。以下にTRANS E009のデータのインデックス・リスティングを掲げる。

REACTION-UNIT	ENERGY RANGE(EV)	LAB	YR	AUTHOR	REFERENCE	ACC.#	PTS
1-H-1(5-B-11,N)6-C-11,PAR,DA	5.00+07 6.40+07	2JPNJAE	89	CHIBA+	J,NIM,1281,581,89	E1239002	8
1-H-1(5-B-11,N)6-C-11,PAR,DA	5.00+07	2JPNJAE	89	CHIBA+	J,NIM,1281,581,89	E1239003	15
1-H-1(5-B-11,N)6-C-11,PAR,DA	6.10+07	2JPNJAE	89	CHIBA+	J,NIM,1281,581,89	E1239004	15
6-C-12(D,P+N)6-C-12,PAR,DA	5.60+07	2JPNKTO	89	OKAMURA+	J,PL/B,227,204,89	E1280004	6
6-C-12(D,P+N)6-C-12,PAR,DA	5.60+07	2JPNKTO	89	OKAMURA+	J,PL/B,227,204,89	E1280005	6
6-C-12(D,P+N)6-C-12,PAR,DA	5.60+07	2JPNKTO	89	OKAMURA+	J,PL/B,227,204,89	E1280006	3
6-C-12(D,P+N)6-C-12,PAR,POL/DA	5.60+07	2JPNKTO	89	OKAMURA+	J,PL/B,227,204,89	E1280007	5
6-C-12(D,P+N)6-C-12,PAR,POL/DA	5.60+07	2JPNKTO	89	OKAMURA+	J,PL/B,227,204,89	E1280008	5
6-C-12(D,P+N)6-C-12,PAR,POL/DA	5.60+07	2JPNKTO	89	OKAMURA+	J,PL/B,227,204,89	E1280009	3
6-C-12(3-LI-6,EL)6-C-12,PAR,DA	1.24+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229002	46
6-C-12(3-LI-6,EL)6-C-12,PAR,DA	1.69+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229006	44
6-C-12(3-LI-6,EL)6-C-12,PAR,DA	1.24+08	2JPNOSA	88	KATORI+	J,NP/A,480,33,88	E1277002	42
6-C-12(3-LI-6,INL)6-C-12,PAR,DA	1.24+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229003	48
6-C-12(3-LI-6,INL)6-C-12,PAR,DA	1.24+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229004	25
6-C-12(3-LI-6,INL)6-C-12,PAR,DA	1.24+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229005	23
6-C-12(3-LI-6,INL)6-C-12,PAR,DA	1.69+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229007	45
6-C-12(3-LI-6,INL)6-C-12,PAR,DA	1.69+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229008	26
6-C-12(3-LI-6,INL)6-C-12,PAR,DA	1.69+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229009	25
6-C-12(3-LI-6,INL)6-C-12,PAR,DA	1.24+08	2JPNOSA	88	KATORI+	J,NP/A,480,33,88	E1277003	45
6-C-12(3-LI-6,INL)6-C-12,PAR,DA	1.24+08	2JPNOSA	88	KATORI+	J,NP/A,480,33,88	E1277004	24
6-C-12(3-LI-6,INL)6-C-12,PAR,DA	1.24+08	2JPNOSA	88	KATORI+	J,NP/A,480,33,88	E1277005	25
6-C-12(3-LI-7,EL)6-C-12,PAR,DA	1.32+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229010	46
6-C-12(3-LI-7,EL)6-C-12,PAR,DA	1.32+08	2JPNOSA	88	KATORI+	J,NP/A,480,33,88	E1277006	49
6-C-12(3-LI-7,INL)6-C-12,PAR,DA	1.32+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229011	47
6-C-12(3-LI-7,INL)6-C-12,PAR,DA	1.32+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229012	44
6-C-12(3-LI-7,INL)6-C-12,PAR,DA	1.32+08	2JPNOSA	88	KATORI+	J,NP/A,480,323,88	E1229013	48
6-C-12(3-LI-7,INL)6-C-12,PAR,DA	1.32+08	2JPNOSA	88	KATORI+	J,NP/A,480,33,88	E1277007	50
6-C-12(3-LI-7,INL)6-C-12,PAR,DA	1.32+08	2JPNOSA	88	KATORI+	J,NP/A,480,33,88	E1277008	45
6-C-12(3-LI-7,INL)6-C-12,PAR,DA	1.32+08	2JPNOSA	88	KATORI+	J,NP/A,480,33,88	E1277009	47
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281002	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281003	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281004	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281005	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281006	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281007	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281008	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281009	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281010	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281011	8
6-C-12(3-LI-7,4-BE-7)5-B-12,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281012	8
6-C-12(4-BE-7,EL)6-C-12,PAR,DA	1.44+08	2JPNKON	89	YAMAGATA+	J,PR/C,39,873,89	E1232002	16
6-C-12(9-F-19,INL)6-C-12,PAR,DA	4.03+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264010	29
6-C-13(3-LI-7,4-BE-7)5-B-13,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281013	2
6-C-13(3-LI-7,4-BE-7)5-B-13,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281014	5
6-C-13(3-LI-7,4-BE-7)5-B-13,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281015	5
6-C-13(3-LI-7,4-BE-7)5-B-13,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281016	5
6-C-13(3-LI-7,4-BE-7)5-B-13,,DA	2.10+01	2JPNJPN	90	NAKAYAMA+	J,NP/A,507,515,90	E1281017	5
9-F-19(6-C-12,INL)9-F-19,PAR,DA	3.00+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264006	58
9-F-19(6-C-12,INL)9-F-19,PAR,DA	4.03+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264007	114
9-F-19(6-C-12,INL)9-F-19,PAR,DA	4.03+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264008	28
9-F-19(6-C-12,INL)9-F-19,PAR,DA	4.03+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264009	9
9-F-19(6-C-12,INL)9-F-19,PAR,DA	5.00+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264011	71
9-F-19(6-C-12,INL)9-F-19,PAR,DA	5.00+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264012	55
9-F-19(6-C-12,INL)9-F-19,PAR,DA	5.00+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264013	28
9-F-19(6-C-12,INL)9-F-19,PAR,DA	6.01+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264014	50

REACTION-UNIT	ENERGY RANGE(EV)	LAB	YR	AUTHOR	REFERENCE	ACC.#	PTS
9-F-19(6-C-12, INL)9-F-19, PAR, DA	6.01+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264015	63
9-F-19(6-C-12, INL)9-F-19, PAR, DA	6.01+07	2JPNJPN	88	TACHIKAWA+	J,NP/A,484,125,88	E1264016	44
10-NE-20(HE3, T)11-NA-20, PAR, DA	5.53+07	2JPNTOK	88	KUBONO+	J,ZP/A,331,359,88	E1258002	16
10-NE-20(HE3, T)11-NA-20, PAR, DA	5.53+07	2JPNTOK	88	KUBONO+	J,ZP/A,331,359,88	E1258003	16
12-MG-24(A, D)13-AL-26, PAR, DA	6.37+07	2JPNTOK	89	YASUE+	J,PR/C,40,1933,89	E1283002	11
12-MG-24(A, D)13-AL-26, PAR, DA	6.37+07	2JPNTOK	89	YASUE+	J,PR/C,40,1933,89	E1283003	11
12-MG-24(A, D)13-AL-26, PAR, DA	6.37+07	2JPNTOK	89	YASUE+	J,PR/C,40,1933,89	E1283004	11
12-MG-24(A, D)13-AL-26, PAR, DA	6.37+07	2JPNTOK	89	YASUE+	J,PR/C,40,1933,89	E1283005	11
12-MG-24(A, D)13-AL-26, PAR, DA	6.37+07	2JPNTOK	89	YASUE+	J,PR/C,40,1933,89	E1283006	11
12-MG-24(A, D)13-AL-26, PAR, DA	6.37+07	2JPNTOK	89	YASUE+	J,PR/C,40,1933,89	E1283007	9
12-MG-25(A, EL)12-MG-25, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282002	31
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282004	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282005	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282006	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282007	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282008	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282009	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282010	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282011	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282012	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282013	4
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282014	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282015	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282016	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282017	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282018	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282019	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282020	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282021	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282022	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282023	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282024	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282025	5
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282026	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282027	5
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282028	5
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282029	6
12-MG-25(A, T)13-AL-26, PAR, DA	5.00+07	2JPNTOK	89	YASUE+	J,PR/C,39,2159,89	E1282030	6
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253002	21
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253004	13
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253005	13
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253006	11
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253007	12
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253008	12
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253009	13
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253010	13
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253011	12
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253012	13
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253013	14
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.53+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253014	15
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.53+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253015	14
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.53+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253016	13
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.53+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253017	10
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.53+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253018	10
12-MG-25(HE3, D)13-AL-26, PAR, DA	5.53+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253019	12

REACTION-UNIT	ENERGY RANGE(EV)	LAB	YR	AUTHOR	REFERENCE	ACC.#	PTS
12-MG-25(HE3,D)13-AL-26,PAR,DA	5.53+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253020	14
12-MG-25(HE3,D)13-AL-26,PAR,DA	5.53+07	2JPNTOK	88	PETERSON+	J,PR/C,38,1130,88	E1253021	10
12-MG-25(HE3,D)13-AL-26,PAR,DA	5.52+07	2JPNTOK	89	YASUE+	J,PR/C,40,1933,89	E1283008	11
12-MG-26(HE3,A)12-MG-25,PAR,DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255019	15
12-MG-26(HE3,A)12-MG-25,PAR,DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255020	15
12-MG-26(HE3,A)12-MG-25,PAR,DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255021	15
12-MG-26(HE3,A)12-MG-25,PAR,DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255022	15
12-MG-26(HE3,A)12-MG-25,PAR,DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255023	15
12-MG-26(HE3,A)12-MG-25,PAR,DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255024	14
12-MG-26(HE3,A)12-MG-25,PAR,DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255025	15
12-MG-26(HE3,A)12-MG-25,PAR,DA	5.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255026	15
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255005	19
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255006	19
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255007	19
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255008	15
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255009	15
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255010	14
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255011	15
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255012	15
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255013	11
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255014	19
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255015	15
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255016	15
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255017	15
12-MG-26(P,D)12-MG-25,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255018	15
13-AL-27(P,D)13-AL-26,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255027	6
13-AL-27(P,D)13-AL-26,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255028	6
13-AL-27(P,D)13-AL-26,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255029	6
13-AL-27(P,D)13-AL-26,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255030	5
13-AL-27(P,D)13-AL-26,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255031	5
13-AL-27(P,D)13-AL-26,PAR,DA	3.52+07	2JPNTOK	88	PETERSON+	J,PR/C,38,2026,88	E1255032	5
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230002	14
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230003	14
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230004	14
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230005	12
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230006	13
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230007	14
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230008	14
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230009	14
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230010	14
20-CA-40(P,D)20-CA-39,PAR,POL/DA	6.50+07	2JPNKYU	89	MATOBA+	J,PR/C,39,1658,89	E1230011	14
20-CA-40(P,INL)20-CA-40,PAR,DA	6.50+07	2JPNTOH	89	SASITO+	J,PR/C,40,R1108,89	E1237002	15
20-CA-40(P,INL)20-CA-40,PAR,DA	6.50+07	2JPNTOH	89	SASITO+	J,PR/C,40,R1108,89	E1237003	14
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233002	9
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233003	9
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233004	14
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233005	14
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233006	14
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233007	15
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233008	10
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233009	15
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233010	15
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233011	17
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233020	14
22-TI-48(P,INL)22-TI-48,PAR,DA	6.50+07	2JPNOSA	89	HIGASHI+	J,PR/C,39,1286,89	E1233021	15



REACTION-UNIT	ENERGY RANGE(EV)	LAB	YR	AUTHOR	REFERENCE	ACC.#	PTS
22-TI-48(P, INL)22-TI-48, PAR, POL/DA	6.50+07	2JPNOSA	89	HIGASHI+	J, PR/C, 39, 1286, 89	E1233069	12
22-TI-48(P, INL)22-TI-48, PAR, POL/DA	6.50+07	2JPNOSA	89	HIGASHI+	J, PR/C, 39, 1286, 89	E1233070	6
22-TI-48(P, INL)22-TI-48, PAR, POL/DA	6.50+07	2JPNOSA	89	HIGASHI+	J, PR/C, 39, 1286, 89	E1233071	6
28-NI-58(14-SI-28, EL)28-NI-58, PAR, DA	5.48+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294002	22
28-NI-58(14-SI-28, EL)28-NI-58, PAR, DA	5.73+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294003	16
28-NI-58(14-SI-28, EL)28-NI-58, PAR, DA	5.99+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294004	15
28-NI-58(14-SI-28, EL)28-NI-58, PAR, DA	7.42+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294005	18
28-NI-58(14-SI-28, 14-SI-28)28-NI-58, PAR, DA	5.73+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294013	15
28-NI-58(14-SI-28, 14-SI-28)28-NI-58, PAR, DA	7.42+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294015	18
28-NI-58(14-SI-28, 14-SI-29)28-NI-57, PAR, DA	7.42+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294018	4
28-NI-64(14-SI-28, EL)28-NI-64, PAR, DA	5.00+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294006	17
28-NI-64(14-SI-28, EL)28-NI-64, PAR, DA	5.24+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294007	18
28-NI-64(14-SI-28, EL)28-NI-64, PAR, DA	5.48+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294008	21
28-NI-64(14-SI-28, EL)28-NI-64, PAR, DA	5.73+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294009	20
28-NI-64(14-SI-28, EL)28-NI-64, PAR, DA	5.99+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294010	16
28-NI-64(14-SI-28, EL)28-NI-64, PAR, DA	7.65+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294011	16
28-NI-64(14-SI-28, 14-SI-28)28-NI-64, PAR, DA	5.00+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294012	14
28-NI-64(14-SI-28, 14-SI-28)28-NI-64, PAR, DA	5.73+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294014	17
28-NI-64(14-SI-28, 14-SI-28)28-NI-64, PAR, DA	7.65+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294016	10
28-NI-64(14-SI-28, 14-SI-29)28-NI-63, PAR, DA	7.65+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294017	5
28-NI-64(14-SI-28, 14-SI-29)28-NI-63, PAR, DA	5.00+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294019	3
28-NI-64(14-SI-28, 14-SI-29)28-NI-63, PAR, DA	5.48+07	2JPNJAE	89	SUGIYAMA+	J, PRL, 62, 1727, 89	E1294020	3
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302002	23
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302003	23
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302004	22
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302005	17
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302006	16
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302007	18
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302008	18
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302009	18
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302010	17
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302011	14
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302012	22
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302013	19
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302014	22
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302015	21
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302016	23
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302017	15
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302018	14
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302019	15
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302020	21
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302021	20
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302022	19
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302023	16
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302024	20
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302025	18
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302026	17
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302027	15
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302028	15
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302029	22
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302030	22
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302031	15
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302032	17
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302033	17
30-ZN-67(D, P)30-ZN-68, PAR, DA	6.00+06	2JPNKYU	85	DOJO	J, PR/C, 31, 1691, 85	E1302034	19

REACTION-UNIT	ENERGY RANGE(EV)	LAB	YR	AUTHOR	REFERENCE	ACC.#	PTS
30-ZN-67(D,P)30-ZN-68,PAR,DA	6.00+06	2JPNKYU	85	DOJO	J,PR/C,31,1691,85	E1302035	21
30-ZN-67(D,P)30-ZN-68,PAR,DA	6.00+06	2JPNKYU	85	DOJO	J,PR/C,31,1691,85	E1302036	19
30-ZN-67(D,P)30-ZN-68,PAR,DA	6.00+06	2JPNKYU	85	DOJO	J,PR/C,31,1691,85	E1302037	8
42-MO-98(P,A)41-NB-95,,DA/DE	1.80+07	2JPNKYU	87	KUMABE+	J,PR/C,35,467,87	E1303002	70
42-MO-98(P,A)41-NB-95,,DA/DE	1.80+07	2JPNKYU	87	KUMABE+	J,PR/C,35,467,87	E1303003	59
42-MO-98(P,A)41-NB-95,,DA/DE	1.80+07	2JPNKYU	87	KUMABE+	J,PR/C,35,467,87	E1303004	60
42-MO-98(P,A)41-NB-95,,DA/DE	1.80+07	2JPNKYU	87	KUMABE+	J,PR/C,35,467,87	E1303005	59
42-MO-98(P,A)41-NB-95,,DA/DE	1.80+07	2JPNKYU	87	KUMABE+	J,PR/C,35,467,87	E1303006	57
42-MO-98(P,A)41-NB-95,,DA/DE	1.80+07	2JPNKYU	87	KUMABE+	J,PR/C,35,467,87	E1303007	57
42-MO-98(P,A)41-NB-95,,DA/DE	1.80+07	2JPNKYU	87	KUMABE+	J,PR/C,35,467,87	E1303008	57
42-MO-98(P,A)41-NB-95,,DA/DE	1.80+07	2JPNKYU	87	KUMABE+	J,PR/C,35,467,87	E1303009	55
67-HO-165(A,D)68-ER-167,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268007	20
67-HO-165(A,D)68-ER-167,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268008	21
67-HO-165(A,D)68-ER-167,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268009	19
67-HO-165(A,D)68-ER-167,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268010	19
67-HO-165(A,D)68-ER-167,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268011	17
67-HO-165(A,D)68-ER-167,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268012	11
67-HO-165(A,P)68-ER-168,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268013	22
67-HO-165(A,P)68-ER-168,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268014	21
67-HO-165(A,P)68-ER-168,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268015	21
67-HO-165(A,P)68-ER-168,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268016	20
67-HO-165(A,P)68-ER-168,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268017	17
67-HO-165(A,P)68-ER-168,,DA/DE	1.10+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268018	13
67-HO-165(HE3,D)68-ER-166,,DA/DE	1.40+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268002	19
67-HO-165(HE3,D)68-ER-166,,DA/DE	1.40+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268003	19
67-HO-165(HE3,D)68-ER-166,,DA/DE	1.40+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268004	17
67-HO-165(HE3,D)68-ER-166,,DA/DE	1.40+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268005	12
67-HO-165(HE3,D)68-ER-166,,DA/DE	1.40+08	2JPNOSA	87	FUKUDA+	J,JPJ,56,1248,87	E1268006	7