

1 RR_UNC - Calculate uncertainties in reaction rates
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 4 Version Jul. 2019
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6
 7 Reference x.s. file :
 ..\IRDFF-II.g725
 8 Source spectrum file :
 ..\IRDFF-II_sp.g
 9 Reaction rate integ.flag : 1
 10 Reaction rate norm. flag : 1
 11
 12 Spectrum MAT No. : 9107
 13 Spectrum Integral : 1.118E+04
 14 Spectrum average energy [eV] : 1.681E+06
 15 Spectrum peak energy [eV] : 2.349E+05
 16 Reaction rate RR = spectrum integral
 17

	No.	Mat.	MT	E(50%) [MeV]	<RR> +/- [mb]	Unc	Unc. x.s. [%]	Unc. Sp. [%]	Unc. Total [%]
18									
19									
20									
21									
22	1	3000	1	1.20077	2.0919E+07 +/-	3.599E+03	0.00	0.02	0.02
23	2	3000	2	1.11233	1.8916E+07 +/-	3.326E+03	0.00	0.02	0.02
24	3	3000	205	0.82206	5.8336E+05 +/-	5.247E+03	0.90	0.02	0.90
25	4	3000	207	1.70254	6.8250E+05 +/-	2.034E+04	2.98	0.02	2.98
26	5	3006	1	0.56248	2.4996E+07 +/-	4.554E+03	0.00	0.02	0.02
27	6	3006	2	0.59634	1.8470E+07 +/-	3.332E+03	0.00	0.02	0.02
28	7	3006	105	0.30232	5.1635E+06 +/-	3.428E+04	0.66	0.02	0.66
29	8	3006	205	0.30232	5.1635E+06 +/-	3.428E+04	0.66	0.02	0.66
30	9	3006	207	0.44054	6.4660E+06 +/-	2.618E+05	4.05	0.02	4.05
31	10	3007	1	1.25578	2.0585E+07 +/-	3.555E+03	0.00	0.02	0.02
32	11	3007	2	1.15177	1.8953E+07 +/-	3.346E+03	0.00	0.02	0.02
33	12	3007	205	5.99836	2.0717E+05 +/-	4.930E+03	2.38	0.06	2.38
34	13	3007	207	5.99756	2.0748E+05 +/-	4.930E+03	2.38	0.06	2.38
35	14	5000	1	0.73474	3.0821E+07 +/-	4.667E+03	0.00	0.02	0.02
36	15	5000	2	0.73971	2.9110E+07 +/-	4.423E+03	0.00	0.02	0.02
37	16	5000	101	0.43193	1.4151E+06 +/-	2.585E+02	0.00	0.02	0.02
38	17	5000	205	3.49244	8.9747E+04 +/-	1.112E+04	12.39	0.02	12.39
39	18	5000	207	0.47573	1.5086E+06 +/-	8.098E+04	5.37	0.02	5.37
40	19	5010	1	0.64614	3.3659E+07 +/-	5.121E+03	0.00	0.02	0.02
41	20	5010	2	0.69071	2.6200E+07 +/-	3.985E+03	0.00	0.02	0.02
42	21	5010	101	0.43165	7.1080E+06 +/-	1.299E+03	0.00	0.02	0.02
43	22	5010	107	0.38356	6.6235E+06 +/-	4.125E+05	6.23	0.02	6.23
44	23	5010	205	3.49041	4.5069E+05 +/-	5.589E+04	12.40	0.02	12.40
45	24	5010	207	0.47449	7.5687E+06 +/-	4.070E+05	5.38	0.02	5.38
46	25	5010	800	1.56233	1.9684E+06 +/-	3.941E+05	20.02	0.02	20.02
47	26	5010	801	0.25801	4.6551E+06 +/-	1.857E+05	3.99	0.02	3.99
48	27	5011	1	0.77392	3.0116E+07 +/-	4.595E+03	0.00	0.02	0.02
49	28	5011	2	0.75705	2.9833E+07 +/-	4.572E+03	0.00	0.02	0.02
50	29	5011	205	12.735	7.3823E+01 +/-	1.254E+01	16.98	0.63	16.99
51	30	5011	207	11.355	2.9764E+03 +/-	4.325E+02	14.53	0.36	14.53
52	31	9019	16	13.9158	1.0549E+02 +/-	3.307E+00	2.99	0.93	3.14
53	32	11023	1	0.85354	3.7903E+07 +/-	6.084E+03	0.00	0.02	0.02
54	33	11023	2	0.75789	3.3197E+07 +/-	5.563E+03	0.00	0.02	0.02
55	34	11023	16	15.421	5.0791E+01 +/-	1.069E+00	1.30	1.66	2.10
56	35	11023	102	0.42235	3.9872E+03 +/-	2.296E+02	5.76	0.05	5.76
57	36	12000	11024g	8.21082	1.2955E+04 +/-	1.067E+02	0.81	0.13	0.82
58	37	12024	103	8.21047	1.6397E+04 +/-	1.351E+02	0.81	0.13	0.82
59	38	13027	16	15.9803	4.3969E+01 +/-	1.817E+00	3.61	2.02	4.13
60	39	13027	103	5.82531	3.7902E+04 +/-	7.793E+02	2.06	0.06	2.06
61	40	13027	107	8.59567	7.8645E+03 +/-	5.764E+01	0.72	0.14	0.73
62	41	13027	11024g	8.59567	7.8645E+03 +/-	5.764E+01	0.72	0.14	0.73
63	42	13027	13026g	15.8341	3.9852E+01 +/-	1.709E+00	3.83	1.92	4.29
64	43	13027	13026m	17.5178	4.1172E+00 +/-	4.553E-01	10.46	3.59	11.06
65	44	14000	13028g	7.19569	5.2041E+04 +/-	1.293E+03	2.48	0.09	2.48
66	45	14028	103	7.1956	5.6427E+04 +/-	1.402E+03	2.48	0.09	2.49
67	46	14029	13028g	15.7365	5.3386E+01 +/-	2.541E+00	4.40	1.81	4.76

68	47	15031	103	3.71086	3.0917E+05	+/-	1.059E+04	3.43	0.03	3.43
69	48	16000	15032g	4.05872	5.6920E+05	+/-	1.416E+04	2.49	0.03	2.49
70	49	16032	103	4.05871	5.9922E+05	+/-	1.490E+04	2.49	0.03	2.49
71	50	21045	1	1.05487	3.9549E+07	+/-	6.568E+03	0.00	0.02	0.02
72	51	21045	2	0.78655	3.2886E+07	+/-	5.792E+03	0.00	0.02	0.02
73	52	21045	102	0.28602	8.3552E+04	+/-	6.765E+03	8.10	0.03	8.10
74	53	22000	21046g	0	9.1087E+03	+/-	2.799E+02	3.07	0.06	3.07
75	54	22000	21047g	0	1.1897E+04	+/-	3.245E+02	2.73	0.03	2.73
76	55	22000	21048g	0	2.4378E+03	+/-	1.314E+02	5.39	0.13	5.39
77	56	22000	22045g	15.9705	5.9558E+00	+/-	2.884E-01	4.41	2.00	4.84
78	57	22046	16	15.9705	7.2191E+01	+/-	3.495E+00	4.41	2.00	4.84
79	58	22046	103	6.06305	1.1030E+05	+/-	3.392E+03	3.08	0.06	3.08
80	59	22047	103	3.76853	1.5965E+05	+/-	4.361E+03	2.73	0.03	2.73
81	60	22048	103	8.26477	3.3056E+03	+/-	1.782E+02	5.39	0.13	5.39
82	61	23051	107	9.85521	2.8725E+02	+/-	8.941E+00	3.10	0.22	3.11
83	62	23051	21048g	9.85521	2.8725E+02	+/-	8.941E+00	3.10	0.22	3.11
84	63	24000	24051g	14.5778	5.1266E+02	+/-	1.500E+01	2.66	1.21	2.93
85	64	25055	1	1.00969	4.1601E+07	+/-	7.576E+03	0.00	0.02	0.02
86	65	25055	2	0.79065	3.1445E+07	+/-	6.533E+03	0.00	0.02	0.02
87	66	25055	16	12.8294	3.2066E+03	+/-	8.062E+01	2.43	0.63	2.51
88	67	25055	102	0.3657	4.3289E+04	+/-	9.750E+03	22.52	0.08	22.52
89	68	26000	24051g	0	5.1174E+02	+/-	1.869E+01	3.65	0.09	3.65
90	69	26000	25054g	0	4.0823E+04	+/-	1.252E+03	3.07	0.03	3.07
91	70	26000	25056g	0	1.0557E+04	+/-	2.783E+02	2.63	0.10	2.64
92	71	26000	26053g	16.4256	1.1935E+00	+/-	6.555E-02	4.96	2.37	5.49
93	72	26054	1	0.9012	4.3343E+07	+/-	8.311E+03	0.00	0.02	0.02
94	73	26054	2	0.73085	3.8843E+07	+/-	7.893E+03	0.00	0.02	0.02
95	74	26054	16	16.4256	2.0418E+01	+/-	1.121E+00	4.96	2.37	5.49
96	75	26054	103	4.42325	6.9842E+05	+/-	2.142E+04	3.07	0.03	3.07
97	76	26054	107	7.3724	8.7552E+03	+/-	3.198E+02	3.65	0.09	3.65
98	77	26056	103	7.51816	1.1506E+04	+/-	3.033E+02	2.63	0.10	2.64
99	78	26058	1	0.79567	5.9110E+07	+/-	9.675E+03	0.00	0.02	0.02
100	79	26058	2	0.57146	4.3217E+07	+/-	8.013E+03	0.00	0.02	0.02
101	80	26058	102	0.42967	3.0978E+04	+/-	3.285E+03	10.60	0.03	10.60
102	81	27059	1	0.89474	4.4740E+07	+/-	7.276E+03	0.00	0.02	0.02
103	82	27059	2	0.68372	3.8275E+07	+/-	6.594E+03	0.00	0.02	0.02
104	83	27059	16	12.9993	2.7461E+03	+/-	4.793E+01	1.61	0.68	1.75
105	84	27059	17	19.755	1.4767E-02	+/-	7.370E-03	43.70	24.10	49.91
106	85	27059	102	0.50069	6.9770E+04	+/-	1.956E+03	2.80	0.15	2.80
107	86	27059	103	5.91765	1.3651E+04	+/-	4.757E+02	3.48	0.06	3.49
108	87	27059	107	8.28833	1.7145E+03	+/-	6.209E+01	3.62	0.12	3.62
109	88	27059	25056g	8.28833	1.7145E+03	+/-	6.209E+01	3.62	0.12	3.62
110	89	28000	27058g	0	6.4802E+05	+/-	1.124E+04	1.73	0.03	1.73
111	90	28000	27060g	0	5.8061E+03	+/-	1.062E+02	1.83	0.08	1.83
112	91	28000	28057g	14.8372	3.6221E+01	+/-	6.742E-01	1.30	1.33	1.86
113	92	28058	16	14.8372	5.3206E+01	+/-	9.904E-01	1.30	1.33	1.86
114	93	28058	103	4.17795	9.5189E+05	+/-	1.651E+04	1.73	0.03	1.73
115	94	28060	103	7.00388	2.2138E+04	+/-	4.052E+02	1.83	0.08	1.83
116	95	29000	27060g	7.21535	3.7768E+03	+/-	1.132E+02	2.99	0.09	3.00
117	96	29000	29062g	13.7196	8.9700E+02	+/-	1.508E+01	1.43	0.88	1.68
118	97	29000	29064g	0.54688	1.0273E+05	+/-	9.990E+03	9.72	0.03	9.72
119	98	29063	1	0.85446	4.4221E+07	+/-	6.630E+03	0.00	0.01	0.01
120	99	29063	2	0.64382	3.7213E+07	+/-	5.849E+03	0.00	0.02	0.02
121	100	29063	16	13.7196	1.2972E+03	+/-	2.180E+01	1.43	0.88	1.68
122	101	29063	102	0.53388	1.4657E+05	+/-	1.445E+04	9.86	0.03	9.86
123	102	29063	107	7.21535	5.4618E+03	+/-	1.636E+02	2.99	0.09	3.00
124	103	29065	16	12.5889	4.4701E+03	+/-	9.036E+01	1.94	0.58	2.02
125	104	30000	29064g	4.15104	1.6939E+05	+/-	2.865E+03	1.69	0.03	1.69
126	105	30000	29067g	4.68394	3.6299E+02	+/-	1.914E+01	5.27	0.04	5.27
127	106	30064	103	4.15104	3.4450E+05	+/-	5.827E+03	1.69	0.03	1.69
128	107	30067	103	4.66111	8.9145E+03	+/-	4.735E+02	5.31	0.04	5.31
129	108	30068	1	0.77578	4.9754E+07	+/-	7.590E+03	0.00	0.02	0.02
130	109	30068	2	0.63316	4.3711E+07	+/-	6.991E+03	0.00	0.02	0.02
131	110	30068	29067g	15.1965	1.5454E+01	+/-	2.371E+00	15.26	1.54	15.34
132	111	33075	16	12.8296	4.2041E+03	+/-	2.534E+02	5.99	0.64	6.03
133	112	39089	16	13.802	2.2527E+03	+/-	3.556E+01	1.29	0.91	1.58
134	113	40000	40089g	14.305	7.1216E+02	+/-	1.024E+01	0.92	1.10	1.44
135	114	40090	16	14.305	1.3842E+03	+/-	1.991E+01	0.92	1.10	1.44
136	115	41093	1	0.76726	7.1316E+07	+/-	1.058E+04	0.00	0.01	0.01

137	116	41093	2	0.61132	5.9855E+07	+/-	9.457E+03	0.00	0.02	0.02
138	117	41093	102	0.40613	3.9236E+05	+/-	6.953E+03	1.77	0.02	1.77
139	118	41093	41093m	2.55732	1.2673E+06	+/-	3.288E+04	2.59	0.02	2.59
140	119	41093	41092m	11.2511	5.6779E+03	+/-	5.271E+01	0.85	0.37	0.93
141	120	41093	41094g	0.40613	9.7987E+04	+/-	1.736E+03	1.77	0.02	1.77
142	121	41093	41094m	0.40613	2.9438E+05	+/-	5.217E+03	1.77	0.02	1.77
143	122	42000	41092m	5.3772	9.1206E+03	+/-	3.317E+02	3.64	0.05	3.64
144	123	42092	41092m	5.37719	6.2771E+04	+/-	2.283E+03	3.64	0.05	3.64
145	124	45103	45103m	2.14682	6.6107E+06	+/-	2.623E+05	3.97	0.02	3.97
146	125	47109	1	0.87152	6.9368E+07	+/-	1.015E+04	0.00	0.01	0.01
147	126	47109	2	0.61628	4.8472E+07	+/-	7.526E+03	0.00	0.02	0.02
148	127	47109	47110n	0.42597	1.4510E+05	+/-	1.026E+04	7.07	0.02	7.07
149	128	48000	1	0.9123	6.9624E+07	+/-	1.018E+04	0.00	0.01	0.01
150	129	48000	2	0.70714	5.5559E+07	+/-	8.445E+03	0.00	0.02	0.02
151	130	48000	101	0.51764	8.7777E+05	+/-	1.489E+02	0.00	0.02	0.02
152	131	49000	49114m	0.90621	1.0650E+05	+/-	2.765E+03	2.60	0.05	2.60
153	132	49113	1	1.00003	6.3955E+07	+/-	9.320E+03	0.00	0.01	0.01
154	133	49113	2	0.84738	5.3507E+07	+/-	8.022E+03	0.00	0.01	0.01
155	134	49113	102	0.75472	2.7903E+06	+/-	4.639E+02	0.00	0.02	0.02
156	135	49113	49113m	2.65305	1.3418E+06	+/-	1.589E+04	1.18	0.02	1.18
157	136	49113	49114g	0.69097	5.6506E+05	+/-	1.570E+04	2.78	0.02	2.78
158	137	49113	49114m	0.77074	2.2253E+06	+/-	6.307E+04	2.83	0.02	2.83
159	138	49115	1	1.00126	6.3918E+07	+/-	9.314E+03	0.00	0.01	0.01
160	139	49115	2	0.8394	5.3574E+07	+/-	8.032E+03	0.00	0.01	0.01
161	140	49115	102	0.69084	2.0469E+06	+/-	3.419E+02	0.00	0.02	0.02
162	141	49115	49115m	2.58262	1.6285E+06	+/-	2.714E+04	1.67	0.02	1.67
163	142	49115	49114m	11.7259	1.1525E+04	+/-	5.966E+02	5.16	0.43	5.18
164	143	49115	49116g	0.63889	4.0451E+05	+/-	8.915E+03	2.20	0.02	2.20
165	144	49115	49116m	0.70441	1.6424E+06	+/-	3.672E+04	2.24	0.02	2.24
166	145	53127	16	11.4989	1.4977E+04	+/-	4.704E+02	3.12	0.40	3.14
167	146	57139	1	1.17435	6.5641E+07	+/-	9.616E+03	0.00	0.01	0.01
168	147	57139	2	0.9755	5.3591E+07	+/-	7.889E+03	0.00	0.01	0.01
169	148	57139	102	0.79432	8.4835E+04	+/-	4.229E+03	4.99	0.02	4.99
170	149	59141	16	11.7658	1.4016E+04	+/-	1.609E+03	11.47	0.44	11.48
171	150	64000	1	1.03011	7.7689E+07	+/-	1.129E+04	0.00	0.01	0.01
172	151	64000	2	0.76292	5.1702E+07	+/-	7.735E+03	0.00	0.01	0.01
173	152	64000	101	0.42554	1.4057E+06	+/-	2.861E+02	0.00	0.02	0.02
174	153	69169	16	10.3155	4.6275E+04	+/-	1.523E+03	3.28	0.26	3.29
175	154	69169	17	17.9476	6.5255E+01	+/-	5.234E+00	6.62	4.52	8.02
176	155	73181	1	1.10627	7.9753E+07	+/-	1.160E+04	0.00	0.01	0.01
177	156	73181	2	0.94437	5.4850E+07	+/-	8.052E+03	0.00	0.01	0.01
178	157	73181	102	0.41744	1.2718E+06	+/-	7.242E+04	5.69	0.02	5.69
179	158	74186	1	1.07588	8.0207E+07	+/-	1.169E+04	0.00	0.01	0.01
180	159	74186	2	0.76629	5.7120E+07	+/-	8.576E+03	0.00	0.02	0.02
181	160	74186	102	0.61484	4.4996E+05	+/-	1.028E+04	2.28	0.02	2.28
182	161	79197	1	1.10075	7.6727E+07	+/-	1.123E+04	0.00	0.01	0.01
183	162	79197	2	0.83228	5.6856E+07	+/-	8.495E+03	0.00	0.01	0.01
184	163	79197	16	10.4651	4.0637E+04	+/-	7.841E+02	1.91	0.28	1.93
185	164	79197	102	0.38317	1.1744E+06	+/-	5.540E+03	0.47	0.02	0.47
186	165	80199	80199m	3.00205	2.4936E+06	+/-	8.988E+04	3.60	0.02	3.60
187	166	82204	82204m	5.03177	1.6350E+05	+/-	7.483E+03	4.58	0.04	4.58
188	167	83209	16	9.80566	7.5219E+04	+/-	3.060E+03	4.06	0.22	4.07
189	168	83209	17	17.7278	8.7155E+01	+/-	6.303E+00	6.03	3.99	7.23
190	169	90232	1	0.97251	9.1032E+07	+/-	1.326E+04	0.00	0.01	0.01
191	170	90232	2	0.64839	6.2613E+07	+/-	9.567E+03	0.00	0.02	0.02
192	171	90232	18	2.93063	6.9488E+05	+/-	4.018E+04	5.78	0.02	5.78
193	172	90232	102	0.61964	1.2577E+06	+/-	2.340E+04	1.86	0.02	1.86
194	173	92235	1	0.98841	9.0724E+07	+/-	1.321E+04	0.00	0.01	0.01
195	174	92235	18	1.15982	1.3882E+07	+/-	1.671E+05	1.20	0.01	1.20
196	175	92238	1	0.99353	9.1221E+07	+/-	1.328E+04	0.00	0.01	0.01
197	176	92238	2	0.68188	6.1570E+07	+/-	9.347E+03	0.00	0.02	0.02
198	177	92238	16	8.165	1.6508E+05	+/-	8.415E+03	5.10	0.13	5.10
199	178	92238	18	2.69319	2.6984E+06	+/-	3.304E+04	1.22	0.02	1.22
200	179	92238	102	0.61851	9.4590E+05	+/-	1.756E+04	1.86	0.03	1.86
201	180	93237	1	0.99162	8.8698E+07	+/-	1.291E+04	0.00	0.01	0.01
202	181	93237	2	0.69749	5.4663E+07	+/-	8.270E+03	0.00	0.02	0.02
203	182	93237	18	1.82427	1.2729E+07	+/-	2.181E+05	1.71	0.02	1.71
204	183	94239	1	0.97504	9.1426E+07	+/-	1.331E+04	0.00	0.01	0.01
205	184	94239	2	0.71698	5.4516E+07	+/-	8.207E+03	0.00	0.02	0.02

206	185	94239	18	1.31053	1.9520E+07	+/-	2.430E+05	1.24	0.01	1.24
207	186	95241	1	0.93792	9.2550E+07	+/-	1.349E+04	0.00	0.01	0.01
208	187	95241	2	0.68571	6.1487E+07	+/-	9.299E+03	0.00	0.02	0.02
209	188	95241	18	2.0703	1.2483E+07	+/-	3.433E+05	2.75	0.02	2.75
210										
211										