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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      :
8 ..\IRDFF-II.g725
9 Source spectrum file    :
10 ..\IRDFF-II_sp.g
11
12 Reaction rate integ.flag :      1
13 Reaction rate norm. flag :      1
14
15 Spectrum MAT No.       :    9102
16 Spectrum Integral      :    7.582E+03
17 Spectrum average energy [eV] :    1.343E+06
18 Spectrum peak energy [eV] :    1.749E+05
19 Reaction rate RR = spectrum integral

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No.	Mat.	MT	E(50%) [MeV]	<RR> +/- [mb]	Unc	Unc. x.s. [%]	Unc. Sp. [%]	Unc. Total [%]
22	1	3000	1	0.70434	1.4406E+07 +/- 5.829E+03	0.00	0.04	0.04
23	2	3000	2	0.61712	1.3212E+07 +/- 5.446E+03	0.00	0.04	0.04
24	3	3000	205	0.33384	4.1403E+05 +/- 2.924E+03	0.70	0.05	0.71
25	4	3000	207	0.41677	4.6131E+05 +/- 9.821E+03	2.13	0.05	2.13
26	5	3006	1	0.35667	1.8808E+07 +/- 7.782E+03	0.00	0.04	0.04
27	6	3006	2	0.38207	1.3835E+07 +/- 5.691E+03	0.00	0.04	0.04
28	7	3006	105	0.2706	4.3245E+06 +/- 2.689E+04	0.62	0.05	0.62
29	8	3006	205	0.2706	4.3245E+06 +/- 2.689E+04	0.62	0.05	0.62
30	9	3006	207	0.2976	4.9450E+06 +/- 1.268E+05	2.56	0.04	2.56
31	10	3007	1	0.77635	1.4044E+07 +/- 5.728E+03	0.00	0.04	0.04
32	11	3007	2	0.65614	1.3161E+07 +/- 5.462E+03	0.00	0.04	0.04
33	12	3007	205	5.94306	9.2845E+04 +/- 2.265E+03	2.43	0.17	2.44
34	13	3007	207	5.94086	9.3047E+04 +/- 2.266E+03	2.43	0.17	2.43
35	14	5000	1	0.49425	2.2743E+07 +/- 7.723E+03	0.00	0.03	0.03
36	15	5000	2	0.50147	2.1482E+07 +/- 7.315E+03	0.00	0.03	0.03
37	16	5000	101	0.30227	1.1215E+06 +/- 4.404E+02	0.00	0.04	0.04
38	17	5000	205	3.06272	4.7661E+04 +/- 6.355E+03	13.33	0.06	13.33
39	18	5000	207	0.32429	1.1736E+06 +/- 4.411E+04	3.76	0.04	3.76
40	19	5010	1	0.47929	2.5280E+07 +/- 8.574E+03	0.00	0.03	0.03
41	20	5010	2	0.52629	1.9466E+07 +/- 6.637E+03	0.00	0.03	0.03
42	21	5010	101	0.30218	5.6346E+06 +/- 2.213E+03	0.00	0.04	0.04
43	22	5010	107	0.28329	5.3963E+06 +/- 2.240E+05	4.15	0.04	4.15
44	23	5010	205	3.06121	2.3940E+05 +/- 3.194E+04	13.34	0.06	13.34
45	24	5010	207	0.32389	5.8934E+06 +/- 2.217E+05	3.76	0.04	3.76
46	25	5010	800	1.13916	1.2930E+06 +/- 2.130E+05	16.48	0.04	16.48
47	26	5010	801	0.21996	4.1033E+06 +/- 1.024E+05	2.50	0.05	2.50
48	27	5011	1	0.49923	2.2112E+07 +/- 7.573E+03	0.00	0.03	0.03
49	28	5011	2	0.495	2.1983E+07 +/- 7.548E+03	0.00	0.03	0.03
50	29	5011	205	12.655	2.4304E+01 +/- 4.140E+00	16.90	2.14	17.03
51	30	5011	207	11.1922	1.0628E+03 +/- 1.495E+02	14.02	1.17	14.07
52	31	9019	16	13.8053	3.3551E+01 +/- 1.483E+00	3.04	3.21	4.42
53	32	11023	1	0.70161	2.6900E+07 +/- 9.698E+03	0.00	0.04	0.04
54	33	11023	2	0.6462	2.4324E+07 +/- 8.976E+03	0.00	0.04	0.04
55	34	11023	16	15.364	1.5569E+01 +/- 9.341E-01	1.28	5.86	6.00
56	35	11023	102	0.25043	3.1890E+03 +/- 2.250E+02	7.05	0.10	7.05
57	36	12000	11024g	8.1343	5.3409E+03 +/- 4.874E+01	0.83	0.38	0.91
58	37	12024	103	8.13405	6.7603E+03 +/- 6.170E+01	0.83	0.38	0.91
59	38	13027	16	15.9083	1.3509E+01 +/- 1.066E+00	3.47	7.09	7.89
60	39	13027	103	5.74913	1.7031E+04 +/- 3.521E+02	2.06	0.16	2.07
61	40	13027	107	8.47572	3.1988E+03 +/- 2.717E+01	0.74	0.42	0.85
62	41	13027	11024g	8.47572	3.1988E+03 +/- 2.717E+01	0.74	0.42	0.85
63	42	13027	13026g	15.7856	1.2190E+01 +/- 9.392E-01	3.70	6.76	7.70
64	43	13027	13026m	17.8327	1.3191E+00 +/- 2.126E-01	9.62	12.94	16.12
65	44	14000	13028g	7.11532	2.2354E+04 +/- 5.649E+02	2.51	0.27	2.53
66	45	14028	103	7.11526	2.4238E+04 +/- 6.125E+02	2.51	0.27	2.53
67	46	14029	13028g	15.715	1.6635E+01 +/- 1.266E+00	4.32	6.27	7.61

68	47	15031	103	3.63534	1.5005E+05	+/-	5.190E+03	3.46	0.08	3.46
69	48	16000	15032g	3.98479	2.7292E+05	+/-	6.867E+03	2.51	0.09	2.52
70	49	16032	103	3.98478	2.8731E+05	+/-	7.229E+03	2.51	0.09	2.52
71	50	21045	1	0.63518	2.7834E+07	+/-	1.047E+04	0.00	0.04	0.04
72	51	21045	2	0.49871	2.4174E+07	+/-	9.442E+03	0.00	0.04	0.04
73	52	21045	102	0.22671	7.1576E+04	+/-	5.579E+03	7.80	0.05	7.80
74	53	22000	21046g	0	4.0709E+03	+/-	1.284E+02	3.15	0.17	3.15
75	54	22000	21047g	0	5.7845E+03	+/-	1.592E+02	2.75	0.08	2.75
76	55	22000	21048g	0	9.9997E+02	+/-	5.571E+01	5.56	0.38	5.57
77	56	22000	22045g	15.8951	1.8236E+00	+/-	1.505E-01	4.31	7.03	8.25
78	57	22046	16	15.8951	2.2104E+01	+/-	1.824E+00	4.31	7.03	8.25
79	58	22046	103	5.95079	4.9309E+04	+/-	1.556E+03	3.15	0.17	3.16
80	59	22047	103	3.63272	7.7667E+04	+/-	2.139E+03	2.75	0.08	2.75
81	60	22048	103	8.11797	1.3561E+03	+/-	7.557E+01	5.56	0.38	5.57
82	61	23051	107	9.66502	1.1003E+02	+/-	3.625E+00	3.22	0.68	3.29
83	62	23051	21048g	9.66502	1.1003E+02	+/-	3.625E+00	3.22	0.68	3.29
84	63	24000	24051g	14.5614	1.5925E+02	+/-	8.037E+00	2.74	4.24	5.05
85	64	25055	1	0.63098	2.9280E+07	+/-	1.194E+04	0.00	0.04	0.04
86	65	25055	2	0.49255	2.3035E+07	+/-	1.042E+04	0.00	0.05	0.05
87	66	25055	16	12.7633	1.0579E+03	+/-	3.533E+01	2.55	2.15	3.34
88	67	25055	102	0.27138	3.5468E+04	+/-	7.167E+03	20.21	0.14	20.21
89	68	26000	24051g	0	2.1779E+02	+/-	8.391E+00	3.84	0.27	3.85
90	69	26000	25054g	0	1.9352E+04	+/-	6.058E+02	3.13	0.10	3.13
91	70	26000	25056g	0	4.4603E+03	+/-	1.206E+02	2.69	0.29	2.70
92	71	26000	26053g	16.371	3.6315E-01	+/-	3.535E-02	5.14	8.27	9.73
93	72	26054	1	0.5961	3.0727E+07	+/-	1.348E+04	0.00	0.04	0.04
94	73	26054	2	0.53901	2.8476E+07	+/-	1.297E+04	0.00	0.05	0.05
95	74	26054	16	16.371	6.2131E+00	+/-	6.047E-01	5.14	8.27	9.73
96	75	26054	103	4.32595	3.3108E+05	+/-	1.037E+04	3.13	0.10	3.13
97	76	26054	107	7.25286	3.7262E+03	+/-	1.436E+02	3.84	0.27	3.85
98	77	26056	103	7.39789	4.8610E+03	+/-	1.314E+02	2.69	0.29	2.70
99	78	26058	1	0.54232	4.3403E+07	+/-	1.611E+04	0.00	0.04	0.04
100	79	26058	2	0.3798	3.3479E+07	+/-	1.373E+04	0.00	0.04	0.04
101	80	26058	102	0.31448	2.5378E+04	+/-	2.780E+03	10.95	0.06	10.95
102	81	27059	1	0.57825	3.2063E+07	+/-	1.154E+04	0.00	0.04	0.04
103	82	27059	2	0.48453	2.8768E+07	+/-	1.071E+04	0.00	0.04	0.04
104	83	27059	16	12.9433	8.9791E+02	+/-	2.588E+01	1.71	2.32	2.88
105	84	27059	17	21.7652	7.2577E-02	+/-	4.832E-02	8.70	66.00	66.57
106	85	27059	102	0.36314	5.5251E+04	+/-	1.256E+03	2.27	0.04	2.27
107	86	27059	103	5.7904	6.1062E+03	+/-	2.179E+02	3.56	0.16	3.57
108	87	27059	107	8.14609	7.0494E+02	+/-	2.732E+01	3.86	0.37	3.88
109	88	27059	25056g	8.14609	7.0494E+02	+/-	2.732E+01	3.86	0.37	3.88
110	89	28000	27058g	0	3.1042E+05	+/-	5.408E+03	1.74	0.09	1.74
111	90	28000	27060g	0	2.5034E+03	+/-	4.826E+01	1.91	0.24	1.93
112	91	28000	28057g	14.8607	1.1202E+01	+/-	5.440E-01	1.31	4.68	4.86
113	92	28058	16	14.8607	1.6455E+01	+/-	7.991E-01	1.31	4.68	4.86
114	93	28058	103	4.06651	4.5598E+05	+/-	7.944E+03	1.74	0.09	1.74
115	94	28060	103	6.87728	9.5456E+03	+/-	1.840E+02	1.91	0.24	1.93
116	95	29000	27060g	7.08127	1.6172E+03	+/-	4.967E+01	3.06	0.25	3.07
117	96	29000	29062g	13.597	2.8667E+02	+/-	9.641E+00	1.47	3.02	3.36
118	97	29000	29064g	0.38346	7.9872E+04	+/-	8.509E+03	10.65	0.05	10.65
119	98	29063	1	0.56031	3.1856E+07	+/-	1.077E+04	0.00	0.03	0.03
120	99	29063	2	0.46893	2.8177E+07	+/-	9.789E+03	0.00	0.03	0.03
121	100	29063	16	13.597	4.1457E+02	+/-	1.394E+01	1.47	3.02	3.36
122	101	29063	102	0.37981	1.1484E+05	+/-	1.231E+04	10.72	0.05	10.72
123	102	29063	107	7.08127	2.3386E+03	+/-	7.183E+01	3.06	0.25	3.07
124	103	29065	16	12.5061	1.4888E+03	+/-	4.153E+01	1.98	1.97	2.79
125	104	30000	29064g	4.06068	8.0701E+04	+/-	1.392E+03	1.72	0.09	1.73
126	105	30000	29067g	4.48279	1.6975E+02	+/-	9.267E+00	5.46	0.12	5.46
127	106	30064	103	4.06068	1.6413E+05	+/-	2.831E+03	1.72	0.09	1.73
128	107	30067	103	4.46805	4.1797E+03	+/-	2.294E+02	5.49	0.11	5.49
129	108	30068	1	0.5301	3.6387E+07	+/-	1.244E+04	0.00	0.03	0.03
130	109	30068	2	0.46625	3.3307E+07	+/-	1.171E+04	0.00	0.04	0.04
131	110	30068	29067g	15.1871	4.8560E+00	+/-	7.792E-01	15.09	5.46	16.05
132	111	33075	16	12.7674	1.3844E+03	+/-	9.110E+01	6.21	2.17	6.58
133	112	39089	16	13.7078	7.1833E+02	+/-	2.457E+01	1.34	3.15	3.42
134	113	40000	40089g	14.2792	2.2297E+02	+/-	8.823E+00	0.94	3.84	3.96
135	114	40090	16	14.279	4.3333E+02	+/-	1.715E+01	0.94	3.84	3.96
136	115	41093	1	0.55762	5.2310E+07	+/-	1.745E+04	0.00	0.03	0.03

137	116	41093	2	0.47747	4.6079E+07	+/-	1.599E+04	0.00	0.03	0.03
138	117	41093	102	0.31907	3.2763E+05	+/-	5.256E+03	1.60	0.04	1.60
139	118	41093	41093m	2.38435	6.7674E+05	+/-	1.786E+04	2.64	0.05	2.64
140	119	41093	41092m	11.1355	2.0209E+03	+/-	3.001E+01	0.87	1.20	1.48
141	120	41093	41094g	0.31907	8.1820E+04	+/-	1.313E+03	1.60	0.04	1.60
142	121	41093	41094m	0.31907	2.4581E+05	+/-	3.943E+03	1.60	0.04	1.60
143	122	42000	41092m	5.26548	4.1814E+03	+/-	1.577E+02	3.77	0.13	3.77
144	123	42092	41092m	5.26548	2.8778E+04	+/-	1.085E+03	3.77	0.13	3.77
145	124	45103	45103m	1.87627	3.7288E+06	+/-	1.496E+05	4.01	0.05	4.01
146	125	47109	1	0.62152	4.9748E+07	+/-	1.649E+04	0.00	0.03	0.03
147	126	47109	2	0.46399	3.7051E+07	+/-	1.271E+04	0.00	0.03	0.03
148	127	47109	47110n	0.33395	1.1951E+05	+/-	8.345E+03	6.98	0.04	6.98
149	128	48000	1	0.65921	4.9511E+07	+/-	1.644E+04	0.00	0.03	0.03
150	129	48000	2	0.53744	4.1469E+07	+/-	1.405E+04	0.00	0.03	0.03
151	130	48000	101	0.39049	6.8966E+05	+/-	2.514E+02	0.00	0.04	0.04
152	131	49000	49114m	0.60688	7.5549E+04	+/-	1.942E+03	2.57	0.08	2.57
153	132	49113	1	0.72356	4.4700E+07	+/-	1.488E+04	0.00	0.03	0.03
154	133	49113	2	0.64177	3.8696E+07	+/-	1.307E+04	0.00	0.03	0.03
155	134	49113	102	0.53999	2.1038E+06	+/-	7.613E+02	0.00	0.04	0.04
156	135	49113	49113m	2.54079	6.9846E+05	+/-	8.371E+03	1.20	0.06	1.20
157	136	49113	49114g	0.48393	4.3206E+05	+/-	1.151E+04	2.66	0.04	2.66
158	137	49113	49114m	0.55469	1.6717E+06	+/-	4.498E+04	2.69	0.04	2.69
159	138	49115	1	0.72456	4.4665E+07	+/-	1.487E+04	0.00	0.03	0.03
160	139	49115	2	0.63628	3.8804E+07	+/-	1.310E+04	0.00	0.03	0.03
161	140	49115	102	0.48703	1.5628E+06	+/-	5.676E+02	0.00	0.04	0.04
162	141	49115	49115m	2.45617	8.5464E+05	+/-	1.440E+04	1.68	0.06	1.68
163	142	49115	49114m	11.6104	4.0046E+03	+/-	2.254E+02	5.45	1.41	5.63
164	143	49115	49116g	0.45387	3.1291E+05	+/-	6.564E+03	2.10	0.04	2.10
165	144	49115	49116m	0.49585	1.2499E+06	+/-	2.639E+04	2.11	0.04	2.11
166	145	53127	16	11.3722	5.2589E+03	+/-	1.832E+02	3.23	1.32	3.48
167	146	57139	1	0.85704	4.4520E+07	+/-	1.503E+04	0.00	0.03	0.03
168	147	57139	2	0.721	3.7747E+07	+/-	1.263E+04	0.00	0.03	0.03
169	148	57139	102	0.49963	6.3192E+04	+/-	3.229E+03	5.11	0.04	5.11
170	149	59141	16	11.6579	4.8525E+03	+/-	5.845E+02	11.96	1.46	12.05
171	150	64000	1	0.72446	5.4169E+07	+/-	1.797E+04	0.00	0.03	0.03
172	151	64000	2	0.54787	3.8174E+07	+/-	1.278E+04	0.00	0.03	0.03
173	152	64000	101	0.31398	1.1512E+06	+/-	4.814E+02	0.00	0.04	0.04
174	153	69169	16	10.1998	1.7338E+04	+/-	6.089E+02	3.41	0.84	3.51
175	154	69169	17	18.5186	2.1439E+01	+/-	3.697E+00	6.03	16.16	17.25
176	155	73181	1	0.7598	5.5089E+07	+/-	1.832E+04	0.00	0.03	0.03
177	156	73181	2	0.62955	3.9207E+07	+/-	1.302E+04	0.00	0.03	0.03
178	157	73181	102	0.30788	1.0389E+06	+/-	6.336E+04	6.10	0.04	6.10
179	158	74186	1	0.71202	5.5819E+07	+/-	1.854E+04	0.00	0.03	0.03
180	159	74186	2	0.51351	4.2073E+07	+/-	1.414E+04	0.00	0.03	0.03
181	160	74186	102	0.43561	3.4885E+05	+/-	7.798E+03	2.24	0.04	2.24
182	161	79197	1	0.68811	5.3398E+07	+/-	1.780E+04	0.00	0.03	0.03
183	162	79197	2	0.51279	4.1414E+07	+/-	1.393E+04	0.00	0.03	0.03
184	163	79197	16	10.351	1.5098E+04	+/-	3.247E+02	1.96	0.88	2.15
185	164	79197	102	0.29988	9.7073E+05	+/-	4.527E+03	0.46	0.04	0.47
186	165	80199	80199m	2.84379	1.2782E+06	+/-	4.604E+04	3.60	0.06	3.60
187	166	82204	82204m	4.91677	7.5555E+04	+/-	3.500E+03	4.63	0.12	4.63
188	167	83209	16	9.69883	2.8977E+04	+/-	1.231E+03	4.19	0.69	4.25
189	168	83209	17	18.2368	2.8269E+01	+/-	4.368E+00	5.42	14.47	15.45
190	169	90232	1	0.62359	6.4390E+07	+/-	2.130E+04	0.00	0.03	0.03
191	170	90232	2	0.44935	4.7146E+07	+/-	1.604E+04	0.00	0.03	0.03
192	171	90232	18	2.79164	3.5048E+05	+/-	2.029E+04	5.79	0.07	5.79
193	172	90232	102	0.48014	9.7991E+05	+/-	1.402E+04	1.43	0.04	1.43
194	173	92235	1	0.63251	6.3987E+07	+/-	2.117E+04	0.00	0.03	0.03
195	174	92235	18	0.77831	9.5129E+06	+/-	1.146E+05	1.20	0.03	1.20
196	175	92238	1	0.64178	6.4251E+07	+/-	2.125E+04	0.00	0.03	0.03
197	176	92238	2	0.46709	4.6046E+07	+/-	1.559E+04	0.00	0.03	0.03
198	177	92238	16	8.09714	6.8336E+04	+/-	3.493E+03	5.10	0.39	5.11
199	178	92238	18	2.57508	1.3790E+06	+/-	1.690E+04	1.22	0.06	1.23
200	179	92238	102	0.4692	7.3919E+05	+/-	1.339E+04	1.81	0.04	1.81
201	180	93237	1	0.63604	6.2528E+07	+/-	2.069E+04	0.00	0.03	0.03
202	181	93237	2	0.46445	4.0618E+07	+/-	1.375E+04	0.00	0.03	0.03
203	182	93237	18	1.59046	7.3732E+06	+/-	1.312E+05	1.78	0.04	1.78
204	183	94239	1	0.62863	6.4577E+07	+/-	2.135E+04	0.00	0.03	0.03
205	184	94239	2	0.47636	4.0324E+07	+/-	1.361E+04	0.00	0.03	0.03

206	185	94239	18	0.9382	1.2952E+07	+/-	1.614E+05	1.25	0.03	1.25
207	186	95241	1	0.60598	6.5788E+07	+/-	2.175E+04	0.00	0.03	0.03
208	187	95241	2	0.46378	4.5691E+07	+/-	1.547E+04	0.00	0.03	0.03
209	188	95241	18	1.88596	6.9077E+06	+/-	1.839E+05	2.66	0.05	2.66
210										
211										