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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.       :    9408
16 Spectrum Integral      :    3.312E+13
17 Spectrum average energy [eV] :    5.608E+06
18 Spectrum peak energy [eV] :    8.198E+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	5.07208	6.2691E+16 +/- 0.000E+00	0.00	0.00	0.00
23	2	3000	2	4.70946	4.9925E+16 +/- 0.000E+00	0.00	0.00	0.00
24	3	3000	205	7.61342	5.9328E+15 +/- 1.059E+14	1.79	0.00	1.79
25	4	3000	207	7.47441	7.1557E+15 +/- 2.548E+14	3.56	0.00	3.56
26	5	3006	1	5.36305	5.8348E+16 +/- 0.000E+00	0.00	0.00	0.00
27	6	3006	2	4.91213	3.8214E+16 +/- 0.000E+00	0.00	0.00	0.00
28	7	3006	105	2.47095	3.7971E+15 +/- 6.883E+13	1.81	0.00	1.81
29	8	3006	205	2.47095	3.7971E+15 +/- 6.883E+13	1.81	0.00	1.81
30	9	3006	207	6.01175	1.9396E+16 +/- 3.036E+15	15.65	0.00	15.65
31	10	3007	1	5.05088	6.3048E+16 +/- 0.000E+00	0.00	0.00	0.00
32	11	3007	2	4.69981	5.0887E+16 +/- 0.000E+00	0.00	0.00	0.00
33	12	3007	205	7.74732	6.1082E+15 +/- 1.145E+14	1.87	0.00	1.87
34	13	3007	207	7.76946	6.1504E+15 +/- 1.177E+14	1.91	0.00	1.91
35	14	5000	1	4.37063	5.8331E+16 +/- 0.000E+00	0.00	0.00	0.00
36	15	5000	2	3.55292	4.8893E+16 +/- 0.000E+00	0.00	0.00	0.00
37	16	5000	101	5.002	2.3702E+15 +/- 0.000E+00	0.00	0.00	0.00
38	17	5000	205	6.21362	7.7682E+14 +/- 6.635E+13	8.54	0.00	8.54
39	18	5000	207	6.78447	4.0454E+15 +/- 3.518E+14	8.70	0.00	8.70
40	19	5010	1	4.33878	5.9061E+16 +/- 0.000E+00	0.00	0.00	0.00
41	20	5010	2	3.61363	4.2323E+16 +/- 0.000E+00	0.00	0.00	0.00
42	21	5010	101	4.75808	1.1268E+16 +/- 0.000E+00	0.00	0.00	0.00
43	22	5010	107	2.89671	6.1515E+15 +/- 1.289E+15	20.95	0.00	20.95
44	23	5010	205	6.11812	3.7781E+15 +/- 3.330E+14	8.81	0.00	8.81
45	24	5010	207	5.87296	1.7026E+16 +/- 1.666E+15	9.79	0.00	9.79
46	25	5010	800	2.81774	3.8892E+15 +/- 1.176E+15	30.23	0.00	30.23
47	26	5010	801	3.15459	2.2624E+15 +/- 6.340E+14	28.03	0.00	28.03
48	27	5011	1	4.38189	5.8150E+16 +/- 0.000E+00	0.00	0.00	0.00
49	28	5011	2	3.5417	5.0526E+16 +/- 0.000E+00	0.00	0.00	0.00
50	29	5011	205	13.5579	3.1188E+13 +/- 5.527E+12	17.72	0.00	17.72
51	30	5011	207	12.4952	8.2061E+14 +/- 1.492E+14	18.18	0.00	18.18
52	31	9019	16	14.8548	5.9275E+13 +/- 1.563E+12	2.64	0.00	2.64
53	32	11023	1	3.89465	7.4548E+16 +/- 0.000E+00	0.00	0.00	0.00
54	33	11023	2	2.60062	4.6957E+16 +/- 0.000E+00	0.00	0.00	0.00
55	34	11023	16	16.5575	4.1445E+13 +/- 5.749E+11	1.39	0.00	1.39
56	35	11023	102	4.68396	5.9157E+12 +/- 1.895E+11	3.20	0.00	3.20
57	36	12000	11024g	10.0062	1.1258E+15 +/- 7.570E+12	0.67	0.00	0.67
58	37	12024	103	9.99913	1.4220E+15 +/- 9.494E+12	0.67	0.00	0.67
59	38	13027	16	17.135	4.2380E+13 +/- 1.768E+12	4.17	0.00	4.17
60	39	13027	103	8.56645	1.2429E+15 +/- 2.581E+13	2.08	0.00	2.08
61	40	13027	107	10.4001	7.9865E+14 +/- 4.856E+12	0.61	0.00	0.61
62	41	13027	11024g	10.4001	7.9865E+14 +/- 4.856E+12	0.61	0.00	0.61
63	42	13027	13026g	16.8851	3.6040E+13 +/- 1.625E+12	4.51	0.00	4.51
64	43	13027	13026m	18.2821	6.3400E+12 +/- 6.970E+11	10.99	0.00	10.99
65	44	14000	13028g	8.89284	2.8024E+15 +/- 6.349E+13	2.27	0.00	2.27
66	45	14028	103	8.88992	3.0361E+15 +/- 6.885E+13	2.27	0.00	2.27
67	46	14029	13028g	17.3746	5.0305E+13 +/- 2.510E+12	4.99	0.00	4.99

68	47	15031	103	6.57814	3.1813E+15	+/-	1.057E+14	3.32	0.00	3.32
69	48	16000	15032g	6.95166	7.0314E+15	+/-	1.390E+14	1.98	0.00	1.98
70	49	16032	103	6.95084	7.4007E+15	+/-	1.463E+14	1.98	0.00	1.98
71	50	21045	1	4.83711	1.0278E+17	+/-	0.000E+00	0.00	0.00	0.00
72	51	21045	2	4.26596	6.5468E+16	+/-	0.000E+00	0.00	0.00	0.00
73	52	21045	102	2.01088	5.0377E+13	+/-	5.796E+12	11.51	0.00	11.51
74	53	22000	21046g	0	3.1918E+14	+/-	6.973E+12	2.18	0.00	2.18
75	54	22000	21047g	0	1.7884E+14	+/-	4.708E+12	2.63	0.00	2.63
76	55	22000	21048g	0	2.4249E+14	+/-	9.777E+12	4.03	0.00	4.03
77	56	22000	22045g	17.0435	5.6313E+12	+/-	2.517E+11	4.47	0.00	4.47
78	57	22046	16	17.0435	6.8259E+13	+/-	3.050E+12	4.47	0.00	4.47
79	58	22046	103	8.50655	3.7915E+15	+/-	8.441E+13	2.23	0.00	2.23
80	59	22047	103	7.66812	2.1565E+15	+/-	5.982E+13	2.77	0.00	2.77
81	60	22048	103	10.7184	3.2783E+14	+/-	1.326E+13	4.05	0.00	4.05
82	61	23051	107	11.9219	5.2086E+13	+/-	1.201E+12	2.31	0.00	2.31
83	62	23051	21048g	11.9219	5.2086E+13	+/-	1.201E+12	2.31	0.00	2.31
84	63	24000	24051g	15.4614	3.2897E+14	+/-	9.093E+12	2.76	0.00	2.76
85	64	25055	1	5.04663	1.1090E+17	+/-	0.000E+00	0.00	0.00	0.00
86	65	25055	2	4.60042	6.7368E+16	+/-	0.000E+00	0.00	0.00	0.00
87	66	25055	16	13.4732	1.3460E+15	+/-	2.336E+13	1.74	0.00	1.74
88	67	25055	102	2.06635	3.3630E+13	+/-	2.273E+13	67.60	0.00	67.60
89	68	26000	24051g	0	3.4461E+13	+/-	7.510E+11	2.18	0.00	2.18
90	69	26000	25054g	0	5.9508E+14	+/-	1.408E+13	2.37	0.00	2.37
91	70	26000	25056g	0	7.4721E+14	+/-	1.476E+13	1.98	0.00	1.98
92	71	26000	26053g	17.414	1.2935E+12	+/-	5.465E+10	4.22	0.00	4.22
93	72	26054	1	5.05823	1.0955E+17	+/-	0.000E+00	0.00	0.00	0.00
94	73	26054	2	4.18147	7.2009E+16	+/-	0.000E+00	0.00	0.00	0.00
95	74	26054	16	17.414	2.2129E+13	+/-	9.350E+11	4.22	0.00	4.22
96	75	26054	103	7.03774	1.0179E+16	+/-	2.407E+14	2.36	0.00	2.36
97	76	26054	107	9.93438	5.8958E+14	+/-	1.285E+13	2.18	0.00	2.18
98	77	26056	103	9.93087	8.1376E+14	+/-	1.609E+13	1.98	0.00	1.98
99	78	26058	1	4.66635	1.2401E+17	+/-	0.000E+00	0.00	0.00	0.00
100	79	26058	2	4.42969	7.1514E+16	+/-	0.000E+00	0.00	0.00	0.00
101	80	26058	102	3.48141	3.0259E+13	+/-	4.053E+12	13.39	0.00	13.39
102	81	27059	1	5.1388	1.1410E+17	+/-	0.000E+00	0.00	0.00	0.00
103	82	27059	2	4.60632	7.1626E+16	+/-	0.000E+00	0.00	0.00	0.00
104	83	27059	16	13.6326	1.2083E+15	+/-	1.293E+13	1.07	0.00	1.07
105	84	27059	17	19.8297	5.2051E+10	+/-	2.272E+10	43.66	0.00	43.66
106	85	27059	102	2.01396	6.7650E+13	+/-	4.410E+12	6.52	0.00	6.52
107	86	27059	103	9.20477	5.1786E+14	+/-	1.423E+13	2.75	0.00	2.75
108	87	27059	107	10.59	1.6566E+14	+/-	3.821E+12	2.31	0.00	2.31
109	88	27059	25056g	10.59	1.6566E+14	+/-	3.821E+12	2.31	0.00	2.31
110	89	28000	27058g	0	8.6265E+15	+/-	1.360E+14	1.58	0.00	1.58
111	90	28000	27060g	0	3.3177E+14	+/-	4.237E+12	1.28	0.00	1.28
112	91	28000	28057g	15.8108	2.4909E+13	+/-	3.377E+11	1.36	0.00	1.36
113	92	28058	16	15.8108	3.6590E+13	+/-	4.961E+11	1.36	0.00	1.36
114	93	28058	103	6.9898	1.2672E+16	+/-	1.998E+14	1.58	0.00	1.58
115	94	28060	103	9.6378	1.2625E+15	+/-	1.612E+13	1.28	0.00	1.28
116	95	29000	27060g	9.8978	2.3868E+14	+/-	5.894E+12	2.47	0.00	2.47
117	96	29000	29062g	14.4813	4.7373E+14	+/-	5.986E+12	1.26	0.00	1.26
118	97	29000	29064g	12.7781	6.7440E+14	+/-	1.284E+13	1.90	0.00	1.90
119	98	29063	1	5.30849	1.1498E+17	+/-	0.000E+00	0.00	0.00	0.00
120	99	29063	2	4.85302	7.0357E+16	+/-	0.000E+00	0.00	0.00	0.00
121	100	29063	16	14.4813	6.8508E+14	+/-	8.656E+12	1.26	0.00	1.26
122	101	29063	102	3.09071	1.8298E+14	+/-	1.281E+13	7.00	0.00	7.00
123	102	29063	107	9.8978	3.4516E+14	+/-	8.524E+12	2.47	0.00	2.47
124	103	29065	16	13.2799	1.7759E+15	+/-	3.014E+13	1.70	0.00	1.70
125	104	30000	29064g	7.17877	2.3403E+15	+/-	3.221E+13	1.38	0.00	1.38
126	105	30000	29067g	10.6139	1.2270E+13	+/-	4.892E+11	3.99	0.00	3.99
127	106	30064	103	7.17865	4.7595E+15	+/-	6.550E+13	1.38	0.00	1.38
128	107	30067	103	9.50115	2.4463E+14	+/-	7.248E+12	2.96	0.00	2.96
129	108	30068	1	5.26983	1.1953E+17	+/-	0.000E+00	0.00	0.00	0.00
130	109	30068	2	4.59063	7.5594E+16	+/-	0.000E+00	0.00	0.00	0.00
131	110	30068	29067g	16.95	1.2939E+13	+/-	2.121E+12	16.39	0.00	16.39
132	111	33075	16	13.4637	1.7742E+15	+/-	8.253E+13	4.65	0.00	4.65
133	112	39089	16	14.4622	1.1946E+15	+/-	1.329E+13	1.11	0.00	1.11
134	113	40000	40089g	15.0859	4.2801E+14	+/-	3.937E+12	0.92	0.00	0.92
135	114	40090	16	15.0859	8.3188E+14	+/-	7.653E+12	0.92	0.00	0.92
136	115	41093	1	4.7441	1.4671E+17	+/-	0.000E+00	0.00	0.00	0.00

137	116	41093	2	3.91967	8.7600E+16	+/-	0.000E+00	0.00	0.00	0.00
138	117	41093	102	1.17477	1.9629E+14	+/-	6.655E+12	3.39	0.00	3.39
139	118	41093	41093m	5.22526	6.5453E+15	+/-	1.928E+14	2.95	0.00	2.95
140	119	41093	41092m	12.1294	1.5044E+15	+/-	1.072E+13	0.71	0.00	0.71
141	120	41093	41094g	1.17477	4.9021E+13	+/-	1.662E+12	3.39	0.00	3.39
142	121	41093	41094m	1.17477	1.4727E+14	+/-	4.993E+12	3.39	0.00	3.39
143	122	42000	41092m	8.10494	2.3032E+14	+/-	5.020E+12	2.18	0.00	2.18
144	123	42092	41092m	8.10454	1.5849E+15	+/-	3.454E+13	2.18	0.00	2.18
145	124	45103	45103m	5.55053	3.2834E+16	+/-	1.307E+15	3.98	0.00	3.98
146	125	47109	1	4.67918	1.5431E+17	+/-	0.000E+00	0.00	0.00	0.00
147	126	47109	2	4.4061	7.8967E+16	+/-	0.000E+00	0.00	0.00	0.00
148	127	47109	47110n	1.43305	8.7475E+13	+/-	9.539E+12	10.91	0.00	10.91
149	128	48000	1	4.62167	1.5766E+17	+/-	0.000E+00	0.00	0.00	0.00
150	129	48000	2	3.91176	9.4323E+16	+/-	0.000E+00	0.00	0.00	0.00
151	130	48000	101	2.15301	8.1186E+14	+/-	0.000E+00	0.00	0.00	0.00
152	131	49000	49114m	12.4824	3.4990E+15	+/-	1.193E+14	3.41	0.00	3.41
153	132	49113	1	4.60972	1.5380E+17	+/-	0.000E+00	0.00	0.00	0.00
154	133	49113	2	3.4309	9.8167E+16	+/-	0.000E+00	0.00	0.00	0.00
155	134	49113	102	1.46513	2.6834E+15	+/-	0.000E+00	0.00	0.00	0.00
156	135	49113	49113m	5.3699	7.3343E+15	+/-	1.019E+14	1.39	0.00	1.39
157	136	49113	49114g	1.45509	5.1165E+14	+/-	2.136E+13	4.18	0.00	4.18
158	137	49113	49114m	1.4675	2.1717E+15	+/-	9.150E+13	4.21	0.00	4.21
159	138	49115	1	4.60881	1.5382E+17	+/-	0.000E+00	0.00	0.00	0.00
160	139	49115	2	3.57426	9.9600E+16	+/-	0.000E+00	0.00	0.00	0.00
161	140	49115	102	1.50399	1.8902E+15	+/-	0.000E+00	0.00	0.00	0.00
162	141	49115	49115m	5.35978	8.7681E+15	+/-	1.621E+14	1.85	0.00	1.85
163	142	49115	49114m	12.5401	3.5585E+15	+/-	1.246E+14	3.50	0.00	3.50
164	143	49115	49116g	1.45794	3.4918E+14	+/-	1.170E+13	3.35	0.00	3.35
165	144	49115	49116m	1.51556	1.5410E+15	+/-	5.129E+13	3.33	0.00	3.33
166	145	53127	16	12.3472	4.3365E+15	+/-	1.088E+14	2.51	0.00	2.51
167	146	57139	1	4.23411	1.6481E+17	+/-	0.000E+00	0.00	0.00	0.00
168	147	57139	2	3.44526	1.0653E+17	+/-	0.000E+00	0.00	0.00	0.00
169	148	57139	102	2.16496	1.1237E+14	+/-	6.859E+12	6.10	0.00	6.10
170	149	59141	16	12.5521	4.4156E+15	+/-	3.709E+14	8.40	0.00	8.40
171	150	64000	1	4.47919	1.8698E+17	+/-	0.000E+00	0.00	0.00	0.00
172	151	64000	2	3.87298	9.3643E+16	+/-	0.000E+00	0.00	0.00	0.00
173	152	64000	101	1.37352	9.2552E+14	+/-	0.000E+00	0.00	0.00	0.00
174	153	69169	16	11.4573	8.8779E+15	+/-	2.160E+14	2.43	0.00	2.43
175	154	69169	17	18.5208	1.1815E+14	+/-	7.460E+12	6.31	0.00	6.31
176	155	73181	1	4.48925	1.9965E+17	+/-	0.000E+00	0.00	0.00	0.00
177	156	73181	2	3.88298	1.1282E+17	+/-	0.000E+00	0.00	0.00	0.00
178	157	73181	102	1.43725	8.2635E+14	+/-	5.622E+13	6.80	0.00	6.80
179	158	74186	1	4.54236	1.9954E+17	+/-	0.000E+00	0.00	0.00	0.00
180	159	74186	2	4.07852	1.0868E+17	+/-	0.000E+00	0.00	0.00	0.00
181	160	74186	102	1.73167	4.1754E+14	+/-	1.526E+13	3.66	0.00	3.66
182	161	79197	1	4.71049	2.0054E+17	+/-	0.000E+00	0.00	0.00	0.00
183	162	79197	2	4.27481	1.1816E+17	+/-	0.000E+00	0.00	0.00	0.00
184	163	79197	16	11.6514	8.3174E+15	+/-	1.295E+14	1.56	0.00	1.56
185	164	79197	102	1.55422	7.2259E+14	+/-	5.854E+12	0.81	0.00	0.81
186	165	80199	80199m	5.92221	1.7451E+16	+/-	5.624E+14	3.22	0.00	3.22
187	166	82204	82204m	7.84945	3.4967E+15	+/-	1.321E+14	3.78	0.00	3.78
188	167	83209	16	11.0348	1.1852E+16	+/-	3.649E+14	3.08	0.00	3.08
189	168	83209	17	18.3807	1.4462E+14	+/-	8.176E+12	5.65	0.00	5.65
190	169	90232	1	4.79482	2.2732E+17	+/-	0.000E+00	0.00	0.00	0.00
191	170	90232	2	4.52657	1.1792E+17	+/-	0.000E+00	0.00	0.00	0.00
192	171	90232	18	7.34074	6.9231E+15	+/-	4.017E+14	5.80	0.00	5.80
193	172	90232	102	1.36786	9.7589E+14	+/-	4.748E+13	4.87	0.00	4.87
194	173	92235	1	4.81273	2.2955E+17	+/-	0.000E+00	0.00	0.00	0.00
195	174	92235	18	6.06528	4.5704E+16	+/-	5.574E+14	1.22	0.00	1.22
196	175	92238	1	4.81159	2.3117E+17	+/-	0.000E+00	0.00	0.00	0.00
197	176	92238	2	4.71168	1.2437E+17	+/-	0.000E+00	0.00	0.00	0.00
198	177	92238	16	9.49261	1.2987E+16	+/-	6.616E+14	5.09	0.00	5.09
199	178	92238	18	7.01659	2.1759E+16	+/-	2.693E+14	1.24	0.00	1.24
200	179	92238	102	1.27272	7.6058E+14	+/-	1.964E+13	2.58	0.00	2.58
201	180	93237	1	4.8359	2.2557E+17	+/-	0.000E+00	0.00	0.00	0.00
202	181	93237	2	4.76204	1.1542E+17	+/-	0.000E+00	0.00	0.00	0.00
203	182	93237	18	5.86956	5.9138E+16	+/-	1.031E+15	1.74	0.00	1.74
204	183	94239	1	4.83512	2.3058E+17	+/-	0.000E+00	0.00	0.00	0.00
205	184	94239	2	4.74937	1.1695E+17	+/-	0.000E+00	0.00	0.00	0.00

206	185	94239	18	5.5727	6.4929E+16	+/-	8.164E+14	1.26	0.00	1.26
207	186	95241	1	4.8798	2.3012E+17	+/-	0.000E+00	0.00	0.00	0.00
208	187	95241	2	4.83341	1.3123E+17	+/-	0.000E+00	0.00	0.00	0.00
209	188	95241	18	5.9064	6.5532E+16	+/-	2.066E+15	3.15	0.00	3.15
210										
211										