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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.       :    9106
16 Spectrum Integral      :    1.224E+04
17 Spectrum average energy [eV] :    1.589E+06
18 Spectrum peak energy [eV] :    1.849E+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	1.06064	2.2967E+07 +/- 1.642E+04	0.00	0.07	0.07
23	2	3000	2	0.96306	2.0849E+07 +/- 1.520E+04	0.00	0.07	0.07
24	3	3000	205	0.54967	6.5761E+05 +/- 5.544E+03	0.84	0.10	0.84
25	4	3000	207	1.09117	7.5898E+05 +/- 2.084E+04	2.74	0.10	2.75
26	5	3006	1	0.46105	2.8257E+07 +/- 2.114E+04	0.00	0.07	0.07
27	6	3006	2	0.49739	2.0768E+07 +/- 1.545E+04	0.00	0.07	0.07
28	7	3006	105	0.28342	6.0971E+06 +/- 3.916E+04	0.64	0.09	0.64
29	8	3006	205	0.28342	6.0971E+06 +/- 3.916E+04	0.64	0.09	0.64
30	9	3006	207	0.35613	7.4284E+06 +/- 2.682E+05	3.61	0.08	3.61
31	10	3007	1	1.12271	2.2533E+07 +/- 1.620E+04	0.00	0.07	0.07
32	11	3007	2	1.00726	2.0855E+07 +/- 1.527E+04	0.00	0.07	0.07
33	12	3007	205	5.99684	2.1084E+05 +/- 5.061E+03	2.39	0.26	2.40
34	13	3007	207	5.99584	2.1119E+05 +/- 5.062E+03	2.38	0.26	2.40
35	14	5000	1	0.61489	3.4835E+07 +/- 2.159E+04	0.00	0.06	0.06
36	15	5000	2	0.62278	3.2843E+07 +/- 2.043E+04	0.00	0.06	0.06
37	16	5000	101	0.34948	1.6890E+06 +/- 1.243E+03	0.00	0.07	0.07
38	17	5000	205	3.45238	9.2840E+04 +/- 1.158E+04	12.47	0.11	12.47
39	18	5000	207	0.3867	1.7868E+06 +/- 8.317E+04	4.65	0.07	4.65
40	19	5010	1	0.5652	3.8275E+07 +/- 2.376E+04	0.00	0.06	0.06
41	20	5010	2	0.61923	2.9426E+07 +/- 1.835E+04	0.00	0.06	0.06
42	21	5010	101	0.34926	8.4844E+06 +/- 6.247E+03	0.00	0.07	0.07
43	22	5010	107	0.31373	7.9889E+06 +/- 4.232E+05	5.30	0.08	5.30
44	23	5010	205	3.45019	4.6621E+05 +/- 5.820E+04	12.48	0.11	12.48
45	24	5010	207	0.38567	8.9660E+06 +/- 4.180E+05	4.66	0.07	4.66
46	25	5010	800	1.47534	2.1391E+06 +/- 4.038E+05	18.88	0.07	18.88
47	26	5010	801	0.22178	5.8498E+06 +/- 1.913E+05	3.27	0.09	3.27
48	27	5011	1	0.63465	3.3981E+07 +/- 2.123E+04	0.00	0.06	0.06
49	28	5011	2	0.62391	3.3693E+07 +/- 2.113E+04	0.00	0.06	0.06
50	29	5011	205	12.8053	8.0467E+01 +/- 1.389E+01	17.04	2.74	17.26
51	30	5011	207	11.3975	3.1386E+03 +/- 4.639E+02	14.69	1.60	14.78
52	31	9019	16	14.0601	1.1936E+02 +/- 5.965E+00	2.91	4.06	5.00
53	32	11023	1	0.7834	4.2060E+07 +/- 2.809E+04	0.00	0.07	0.07
54	33	11023	2	0.70907	3.7212E+07 +/- 2.582E+04	0.00	0.07	0.07
55	34	11023	16	15.6835	6.2216E+01 +/- 4.411E+00	1.35	6.96	7.09
56	35	11023	102	0.29698	4.7709E+03 +/- 2.947E+02	6.17	0.23	6.18
57	36	12000	11024g	8.22338	1.3244E+04 +/- 1.299E+02	0.81	0.55	0.98
58	37	12024	103	8.22296	1.6763E+04 +/- 1.645E+02	0.81	0.55	0.98
59	38	13027	16	16.0243	5.5317E+01 +/- 5.042E+00	3.81	8.28	9.11
60	39	13027	103	5.82298	3.8620E+04 +/- 7.984E+02	2.05	0.24	2.07
61	40	13027	107	8.61942	8.0578E+03 +/- 7.590E+01	0.72	0.61	0.94
62	41	13027	11024g	8.61942	8.0578E+03 +/- 7.590E+01	0.72	0.61	0.94
63	42	13027	13026g	15.8766	5.0218E+01 +/- 4.470E+00	4.06	7.92	8.90
64	43	13027	13026m	17.2384	5.0988E+00 +/- 9.117E-01	10.62	14.38	17.88
65	44	14000	13028g	7.20292	5.2914E+04 +/- 1.329E+03	2.48	0.39	2.51
66	45	14028	103	7.20284	5.7373E+04 +/- 1.441E+03	2.48	0.39	2.51
67	46	14029	13028g	15.8746	6.4267E+01 +/- 5.768E+00	4.70	7.65	8.97

68	47	15031	103	3.70919	3.1614E+05	+/-	1.084E+04	3.43	0.13	3.43
69	48	16000	15032g	4.05758	5.8172E+05	+/-	1.450E+04	2.49	0.14	2.49
70	49	16032	103	4.05757	6.1239E+05	+/-	1.527E+04	2.49	0.14	2.49
71	50	21045	1	0.86278	4.4703E+07	+/-	3.134E+04	0.00	0.07	0.07
72	51	21045	2	0.63448	3.7809E+07	+/-	2.806E+04	0.00	0.07	0.07
73	52	21045	102	0.22932	1.0464E+05	+/-	7.950E+03	7.60	0.11	7.60
74	53	22000	21046g	0	9.2861E+03	+/-	2.858E+02	3.07	0.25	3.08
75	54	22000	21047g	0	1.2167E+04	+/-	3.322E+02	2.73	0.13	2.73
76	55	22000	21048g	0	2.4974E+03	+/-	1.345E+02	5.36	0.56	5.39
77	56	22000	22045g	16.0175	7.5203E+00	+/-	7.041E-01	4.47	8.23	9.36
78	57	22046	16	16.0175	9.1155E+01	+/-	8.534E+00	4.47	8.23	9.36
79	58	22046	103	6.06019	1.1243E+05	+/-	3.464E+03	3.07	0.25	3.08
80	59	22047	103	3.76559	1.6322E+05	+/-	4.465E+03	2.73	0.12	2.74
81	60	22048	103	8.2906	3.3863E+03	+/-	1.825E+02	5.36	0.56	5.39
82	61	23051	107	9.89589	2.9882E+02	+/-	9.615E+00	3.06	0.99	3.22
83	62	23051	21048g	9.89589	2.9882E+02	+/-	9.615E+00	3.06	0.99	3.22
84	63	24000	24051g	14.7923	5.9576E+02	+/-	3.514E+01	2.77	5.21	5.90
85	64	25055	1	0.83678	4.6922E+07	+/-	3.581E+04	0.00	0.08	0.08
86	65	25055	2	0.63032	3.6180E+07	+/-	3.132E+04	0.00	0.09	0.09
87	66	25055	16	12.8856	3.4818E+03	+/-	1.256E+02	2.34	2.74	3.61
88	67	25055	102	0.2884	5.2760E+04	+/-	1.086E+04	20.58	0.35	20.58
89	68	26000	24051g	0	5.2227E+02	+/-	1.916E+01	3.65	0.40	3.67
90	69	26000	25054g	0	4.1702E+04	+/-	1.282E+03	3.07	0.15	3.07
91	70	26000	25056g	0	1.0769E+04	+/-	2.861E+02	2.62	0.43	2.66
92	71	26000	26053g	16.3701	1.5323E+00	+/-	1.647E-01	4.95	9.54	10.75
93	72	26054	1	0.7498	4.8559E+07	+/-	3.954E+04	0.00	0.08	0.08
94	73	26054	2	0.63128	4.3947E+07	+/-	3.776E+04	0.00	0.09	0.09
95	74	26054	16	16.3701	2.6215E+01	+/-	2.817E+00	4.95	9.54	10.75
96	75	26054	103	4.41769	7.1346E+05	+/-	2.193E+04	3.07	0.15	3.07
97	76	26054	107	7.38607	8.9354E+03	+/-	3.277E+02	3.65	0.40	3.67
98	77	26056	103	7.53637	1.1736E+04	+/-	3.118E+02	2.62	0.43	2.66
99	78	26058	1	0.67651	6.6990E+07	+/-	4.560E+04	0.00	0.07	0.07
100	79	26058	2	0.46666	5.0258E+07	+/-	3.843E+04	0.00	0.08	0.08
101	80	26058	102	0.35068	3.7199E+04	+/-	3.924E+03	10.55	0.14	10.55
102	81	27059	1	0.74411	5.0525E+07	+/-	3.357E+04	0.00	0.07	0.07
103	82	27059	2	0.58299	4.3899E+07	+/-	3.068E+04	0.00	0.07	0.07
104	83	27059	16	13.093	2.9983E+03	+/-	9.932E+01	1.54	2.93	3.31
105	84	27059	17	19.85	2.5356E-02	+/-	2.768E-02	43.75	100.00	109.15
106	85	27059	102	0.41216	8.2187E+04	+/-	2.090E+03	2.54	0.09	2.54
107	86	27059	103	5.91633	1.3929E+04	+/-	4.861E+02	3.48	0.25	3.49
108	87	27059	107	8.31233	1.7564E+03	+/-	6.415E+01	3.61	0.55	3.65
109	88	27059	25056g	8.31233	1.7564E+03	+/-	6.415E+01	3.61	0.55	3.65
110	89	28000	27058g	0	6.6213E+05	+/-	1.152E+04	1.73	0.14	1.74
111	90	28000	27060g	0	5.9206E+03	+/-	1.103E+02	1.83	0.36	1.86
112	91	28000	28057g	15.0178	4.2725E+01	+/-	2.494E+00	1.34	5.68	5.84
113	92	28058	16	15.0178	6.2761E+01	+/-	3.663E+00	1.34	5.68	5.84
114	93	28058	103	4.17473	9.7262E+05	+/-	1.693E+04	1.73	0.14	1.74
115	94	28060	103	7.01215	2.2574E+04	+/-	4.207E+02	1.83	0.36	1.86
116	95	29000	27060g	7.22703	3.8536E+03	+/-	1.161E+02	2.99	0.38	3.01
117	96	29000	29062g	13.7896	1.0042E+03	+/-	4.064E+01	1.39	3.80	4.05
118	97	29000	29064g	0.44401	1.2098E+05	+/-	1.180E+04	9.75	0.14	9.75
119	98	29063	1	0.71978	4.9896E+07	+/-	3.091E+04	0.00	0.06	0.06
120	99	29063	2	0.55356	4.2694E+07	+/-	2.753E+04	0.00	0.06	0.06
121	100	29063	16	13.7896	1.4522E+03	+/-	5.878E+01	1.39	3.80	4.05
122	101	29063	102	0.43404	1.7280E+05	+/-	1.706E+04	9.87	0.14	9.88
123	102	29063	107	7.22703	5.5728E+03	+/-	1.679E+02	2.99	0.38	3.01
124	103	29065	16	12.6425	4.8285E+03	+/-	1.529E+02	1.90	2.53	3.17
125	104	30000	29064g	4.14862	1.7310E+05	+/-	2.941E+03	1.69	0.14	1.70
126	105	30000	29067g	4.67955	3.7182E+02	+/-	1.957E+01	5.26	0.19	5.26
127	106	30064	103	4.14862	3.5205E+05	+/-	5.981E+03	1.69	0.14	1.70
128	107	30067	103	4.65308	9.1199E+03	+/-	4.841E+02	5.31	0.17	5.31
129	108	30068	1	0.6671	5.6013E+07	+/-	3.488E+04	0.00	0.06	0.06
130	109	30068	2	0.55325	4.9822E+07	+/-	3.226E+04	0.00	0.06	0.06
131	110	30068	29067g	15.5086	1.8376E+01	+/-	3.059E+00	15.30	6.57	16.65
132	111	33075	16	12.8851	4.5699E+03	+/-	2.932E+02	5.79	2.76	6.42
133	112	39089	16	13.8854	2.5239E+03	+/-	1.042E+02	1.27	3.93	4.13
134	113	40000	40089g	14.5332	8.1480E+02	+/-	3.943E+01	0.92	4.75	4.84
135	114	40090	16	14.5332	1.5837E+03	+/-	7.663E+01	0.92	4.75	4.84
136	115	41093	1	0.67577	8.0071E+07	+/-	4.872E+04	0.00	0.06	0.06

137	116	41093	2	0.54695	6.8240E+07	+/-	4.380E+04	0.00	0.06	0.06
138	117	41093	102	0.33311	4.7845E+05	+/-	7.728E+03	1.61	0.09	1.62
139	118	41093	41093m	2.54748	1.3030E+06	+/-	3.376E+04	2.59	0.09	2.59
140	119	41093	41092m	11.2746	5.9533E+03	+/-	1.080E+02	0.84	1.61	1.81
141	120	41093	41094g	0.33311	1.1948E+05	+/-	1.930E+03	1.61	0.09	1.62
142	121	41093	41094m	0.33311	3.5896E+05	+/-	5.798E+03	1.61	0.09	1.62
143	122	42000	41092m	5.36771	9.3044E+03	+/-	3.391E+02	3.64	0.20	3.65
144	123	42092	41092m	5.3677	6.4036E+04	+/-	2.334E+03	3.64	0.20	3.65
145	124	45103	45103m	2.12039	6.8478E+06	+/-	2.722E+05	3.97	0.08	3.98
146	125	47109	1	0.76845	7.7309E+07	+/-	4.656E+04	0.00	0.06	0.06
147	126	47109	2	0.5419	5.5271E+07	+/-	3.490E+04	0.00	0.06	0.06
148	127	47109	47110n	0.36405	1.7307E+05	+/-	1.213E+04	7.01	0.07	7.01
149	128	48000	1	0.81244	7.7304E+07	+/-	4.658E+04	0.00	0.06	0.06
150	129	48000	2	0.62983	6.2669E+07	+/-	3.894E+04	0.00	0.06	0.06
151	130	48000	101	0.44257	1.0298E+06	+/-	7.059E+02	0.00	0.07	0.07
152	131	49000	49114m	0.78125	1.2096E+05	+/-	3.082E+03	2.54	0.19	2.55
153	132	49113	1	0.89719	7.0614E+07	+/-	4.255E+04	0.00	0.06	0.06
154	133	49113	2	0.76302	5.9568E+07	+/-	3.673E+04	0.00	0.06	0.06
155	134	49113	102	0.63817	3.2046E+06	+/-	2.262E+03	0.00	0.07	0.07
156	135	49113	49113m	2.65008	1.3749E+06	+/-	1.632E+04	1.18	0.09	1.19
157	136	49113	49114g	0.56754	6.5699E+05	+/-	1.782E+04	2.71	0.08	2.71
158	137	49113	49114m	0.65631	2.5476E+06	+/-	7.036E+04	2.76	0.07	2.76
159	138	49115	1	0.89858	7.0559E+07	+/-	4.251E+04	0.00	0.06	0.06
160	139	49115	2	0.75586	5.9680E+07	+/-	3.678E+04	0.00	0.06	0.06
161	140	49115	102	0.57445	2.3688E+06	+/-	1.611E+03	0.00	0.07	0.07
162	141	49115	49115m	2.57871	1.6696E+06	+/-	2.787E+04	1.67	0.09	1.67
163	142	49115	49114m	11.7821	1.2191E+04	+/-	6.537E+02	5.02	1.87	5.36
164	143	49115	49116g	0.52843	4.7102E+05	+/-	1.010E+04	2.14	0.07	2.14
165	144	49115	49116m	0.58675	1.8978E+06	+/-	4.109E+04	2.16	0.07	2.17
166	145	53127	16	11.5506	1.5780E+04	+/-	5.566E+02	3.06	1.75	3.53
167	146	57139	1	1.06986	7.1831E+07	+/-	4.371E+04	0.00	0.06	0.06
168	147	57139	2	0.87754	5.9328E+07	+/-	3.604E+04	0.00	0.06	0.06
169	148	57139	102	0.62461	9.8437E+04	+/-	4.938E+03	5.02	0.07	5.02
170	149	59141	16	11.8232	1.4840E+04	+/-	1.687E+03	11.20	1.92	11.37
171	150	64000	1	0.91315	8.6039E+07	+/-	5.165E+04	0.00	0.06	0.06
172	151	64000	2	0.66268	5.8502E+07	+/-	3.580E+04	0.00	0.06	0.06
173	152	64000	101	0.33937	1.7005E+06	+/-	1.457E+03	0.00	0.09	0.09
174	153	69169	16	10.333	4.8098E+04	+/-	1.658E+03	3.25	1.16	3.45
175	154	69169	17	17.7805	7.7693E+01	+/-	1.541E+01	6.80	18.63	19.84
176	155	73181	1	0.97848	8.8230E+07	+/-	5.303E+04	0.00	0.06	0.06
177	156	73181	2	0.81069	6.1504E+07	+/-	3.710E+04	0.00	0.06	0.06
178	157	73181	102	0.33526	1.5332E+06	+/-	8.597E+04	5.61	0.08	5.61
179	158	74186	1	0.93215	8.9177E+07	+/-	5.364E+04	0.00	0.06	0.06
180	159	74186	2	0.64387	6.4994E+07	+/-	3.990E+04	0.00	0.06	0.06
181	160	74186	102	0.50717	5.2678E+05	+/-	1.180E+04	2.24	0.08	2.24
182	161	79197	1	0.93645	8.5498E+07	+/-	5.159E+04	0.00	0.06	0.06
183	162	79197	2	0.67697	6.4539E+07	+/-	3.948E+04	0.00	0.06	0.06
184	163	79197	16	10.4811	4.2324E+04	+/-	9.504E+02	1.89	1.21	2.25
185	164	79197	102	0.3222	1.4150E+06	+/-	6.619E+03	0.46	0.08	0.47
186	165	80199	80199m	2.99711	2.5543E+06	+/-	9.210E+04	3.60	0.10	3.61
187	166	82204	82204m	5.02351	1.6687E+05	+/-	7.644E+03	4.58	0.19	4.58
188	167	83209	16	9.8149	7.7857E+04	+/-	3.224E+03	4.03	0.96	4.14
189	168	83209	17	17.6502	1.0679E+02	+/-	1.838E+01	6.11	16.09	17.21
190	169	90232	1	0.82603	1.0174E+08	+/-	6.103E+04	0.00	0.06	0.06
191	170	90232	2	0.54833	7.1764E+07	+/-	4.466E+04	0.00	0.06	0.06
192	171	90232	18	2.92794	7.1080E+05	+/-	4.111E+04	5.78	0.11	5.78
193	172	90232	102	0.53787	1.4635E+06	+/-	2.462E+04	1.68	0.07	1.68
194	173	92235	1	0.83998	1.0130E+08	+/-	6.075E+04	0.00	0.06	0.06
195	174	92235	18	1.02346	1.5344E+07	+/-	1.849E+05	1.20	0.06	1.20
196	175	92238	1	0.84862	1.0175E+08	+/-	6.097E+04	0.00	0.06	0.06
197	176	92238	2	0.5757	7.0392E+07	+/-	4.355E+04	0.00	0.06	0.06
198	177	92238	16	8.17797	1.6838E+05	+/-	8.632E+03	5.10	0.56	5.13
199	178	92238	18	2.69095	2.7619E+06	+/-	3.392E+04	1.22	0.10	1.23
200	179	92238	102	0.52805	1.1039E+06	+/-	2.016E+04	1.83	0.07	1.83
201	180	93237	1	0.84315	9.9052E+07	+/-	5.940E+04	0.00	0.06	0.06
202	181	93237	2	0.58108	6.2439E+07	+/-	3.856E+04	0.00	0.06	0.06
203	182	93237	18	1.799	1.3215E+07	+/-	2.286E+05	1.73	0.07	1.73
204	183	94239	1	0.82976	1.0209E+08	+/-	6.119E+04	0.00	0.06	0.06
205	184	94239	2	0.59909	6.2121E+07	+/-	3.820E+04	0.00	0.06	0.06

206	185	94239	18	1.20166	2.1232E+07	+/-	2.645E+05	1.24	0.06	1.25
207	186	95241	1	0.79636	1.0354E+08	+/-	6.208E+04	0.00	0.06	0.06
208	187	95241	2	0.5768	7.0090E+07	+/-	4.326E+04	0.00	0.06	0.06
209	188	95241	18	2.05892	1.2855E+07	+/-	3.518E+05	2.74	0.08	2.74
210										
211										