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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.       :    9012
16 Spectrum Integral      :    2.731E+02
17 Spectrum average energy [eV] :    4.388E+05
18 Spectrum peak energy [eV] :    2.898E-02
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	4.735-8	4.1847E+06 +/- 2.616E+02	0.00	0.01	0.01
23	2	3000	2	0.06069	3.4618E+05 +/- 1.586E+01	0.00	0.00	0.00
24	3	3000	205	4.273-8	3.8256E+06 +/- 1.941E+04	0.51	0.01	0.51
25	4	3000	207	4.274-8	3.8305E+06 +/- 1.941E+04	0.51	0.01	0.51
26	5	3006	1	4.303-8	5.0723E+07 +/- 3.386E+03	0.00	0.01	0.01
27	6	3006	2	0.21222	3.0756E+05 +/- 1.589E+01	0.00	0.01	0.01
28	7	3006	105	4.272-8	5.0393E+07 +/- 2.557E+05	0.51	0.01	0.51
29	8	3006	205	4.272-8	5.0393E+07 +/- 2.557E+05	0.51	0.01	0.51
30	9	3006	207	4.273-8	5.0399E+07 +/- 2.557E+05	0.51	0.01	0.51
31	10	3007	1	0.06933	3.6238E+05 +/- 1.643E+01	0.00	0.00	0.00
32	11	3007	2	0.0508	3.4935E+05 +/- 1.596E+01	0.00	0.00	0.00
33	12	3007	205	5.8698	8.3954E+02 +/- 2.117E+01	2.52	0.04	2.52
34	13	3007	207	5.352-8	5.7174E+03 +/- 1.711E+02	2.99	0.01	2.99
35	14	5000	1	4.380-8	4.2137E+07 +/- 2.779E+03	0.00	0.01	0.01
36	15	5000	2	2.253-4	1.0477E+06 +/- 3.853E+01	0.00	0.00	0.00
37	16	5000	101	4.267-8	4.1065E+07 +/- 2.758E+03	0.00	0.01	0.01
38	17	5000	205	2.12165	6.0825E+02 +/- 9.434E+01	15.51	0.01	15.51
39	18	5000	207	4.267-8	4.1061E+07 +/- 3.180E+05	0.77	0.01	0.77
40	19	5010	1	4.280-8	2.0711E+08 +/- 1.388E+04	0.00	0.01	0.01
41	20	5010	2	5.794-3	6.3137E+05 +/- 2.369E+01	0.00	0.00	0.00
42	21	5010	101	4.267-8	2.0636E+08 +/- 1.386E+04	0.00	0.01	0.01
43	22	5010	107	4.267-8	2.0633E+08 +/- 1.598E+06	0.77	0.01	0.77
44	23	5010	205	2.12102	3.0556E+03 +/- 4.741E+02	15.51	0.01	15.51
45	24	5010	207	4.267-8	2.0634E+08 +/- 1.598E+06	0.77	0.01	0.77
46	25	5010	800	4.272-8	1.3008E+07 +/- 1.098E+05	0.84	0.01	0.84
47	26	5010	801	4.267-8	1.9332E+08 +/- 1.594E+06	0.82	0.01	0.82
48	27	5011	1	1.599-4	1.1527E+06 +/- 4.260E+01	0.00	0.00	0.00
49	28	5011	2	1.583-4	1.1512E+06 +/- 4.257E+01	0.00	0.00	0.00
50	29	5011	205	12.7519	2.2097E-01 +/- 3.760E-02	17.01	0.44	17.01
51	30	5011	207	11.2904	9.1435E+00 +/- 1.314E+00	14.37	0.25	14.37
52	31	9019	16	13.9435	3.1948E-01 +/- 9.701E-03	2.96	0.66	3.04
53	32	11023	1	2.891-3	1.6293E+06 +/- 2.320E+02	0.00	0.01	0.01
54	33	11023	2	2.890-3	1.5687E+06 +/- 2.316E+02	0.00	0.01	0.01
55	34	11023	16	15.4801	1.5793E-01 +/- 2.759E-03	1.30	1.17	1.75
56	35	11023	102	4.404-8	2.9462E+04 +/- 6.393E+02	2.17	0.01	2.17
57	36	12000	11024g	8.10235	4.4519E+01 +/- 3.735E-01	0.83	0.08	0.84
58	37	12024	103	8.10205	5.6350E+01 +/- 4.728E-01	0.84	0.08	0.84
59	38	13027	16	16.0131	1.3867E-01 +/- 5.416E-03	3.64	1.42	3.91
60	39	13027	103	5.67181	1.5358E+02 +/- 3.168E+00	2.06	0.03	2.06
61	40	13027	107	8.46206	2.6591E+01 +/- 1.997E-01	0.75	0.09	0.75
62	41	13027	11024g	8.46206	2.6591E+01 +/- 1.997E-01	0.75	0.09	0.75
63	42	13027	13026g	15.856	1.2511E-01 +/- 5.132E-03	3.87	1.35	4.10
64	43	13027	13026m	17.5677	1.3562E-02 +/- 1.456E-03	10.44	2.50	10.74
65	44	14000	13028g	7.03447	1.9202E+02 +/- 4.896E+00	2.55	0.06	2.55
66	45	14028	103	7.03441	2.0820E+02 +/- 5.309E+00	2.55	0.06	2.55
67	46	14029	13028g	15.8323	1.6744E-01 +/- 7.673E-03	4.40	1.29	4.58

68	47	15031	103	3.38324	1.5609E+03	+/-	5.503E+01	3.53	0.02	3.53
69	48	16000	15032g	3.82111	2.7658E+03	+/-	7.047E+01	2.55	0.02	2.55
70	49	16032	103	3.8211	2.9117E+03	+/-	7.418E+01	2.55	0.02	2.55
71	50	21045	1	2.001-7	5.2983E+06	+/-	2.901E+02	0.00	0.01	0.01
72	51	21045	2	3.171-6	3.7969E+06	+/-	2.366E+02	0.00	0.01	0.01
73	52	21045	102	4.257-8	1.4578E+06	+/-	9.247E+04	6.34	0.01	6.34
74	53	22000	21046g	0	3.6762E+01	+/-	1.176E+00	3.20	0.03	3.20
75	54	22000	21047g	0	6.1395E+01	+/-	1.710E+00	2.79	0.01	2.79
76	55	22000	21048g	0	8.4179E+00	+/-	4.708E-01	5.59	0.08	5.59
77	56	22000	22045g	15.9959	1.8757E-02	+/-	8.672E-04	4.40	1.40	4.62
78	57	22046	16	15.9959	2.2735E-01	+/-	1.051E-02	4.40	1.40	4.62
79	58	22046	103	5.81778	4.4526E+02	+/-	1.425E+01	3.20	0.03	3.20
80	59	22047	103	3.29971	8.2439E+02	+/-	2.298E+01	2.79	0.01	2.79
81	60	22048	103	8.0709	1.1415E+01	+/-	6.386E-01	5.59	0.08	5.59
82	61	23051	107	9.73475	9.2046E-01	+/-	2.916E-02	3.16	0.15	3.17
83	62	23051	21048g	9.73475	9.2046E-01	+/-	2.916E-02	3.16	0.15	3.17
84	63	24000	24051g	14.6494	1.5648E+00	+/-	4.443E-02	2.71	0.86	2.84
85	64	25055	1	3.576-4	6.4570E+06	+/-	1.323E+03	0.00	0.02	0.02
86	65	25055	2	3.776-4	5.6040E+06	+/-	1.302E+03	0.00	0.02	0.02
87	66	25055	16	12.8425	9.6045E+00	+/-	2.371E-01	2.43	0.45	2.47
88	67	25055	102	4.790-8	7.7569E+05	+/-	1.112E+04	1.43	0.01	1.43
89	68	26000	24051g	0	2.5273E+00	+/-	9.964E-02	3.94	0.04	3.94
90	69	26000	25054g	0	1.9042E+02	+/-	6.152E+00	3.23	0.02	3.23
91	70	26000	25056g	0	3.8086E+01	+/-	1.026E+00	2.69	0.06	2.69
92	71	26000	26053g	16.5133	3.8041E-03	+/-	1.959E-04	4.88	1.65	5.15
93	72	26054	1	8.155-3	1.6196E+06	+/-	2.252E+02	0.00	0.01	0.01
94	73	26054	2	8.323-3	1.4717E+06	+/-	2.243E+02	0.00	0.02	0.02
95	74	26054	16	16.5133	6.5083E-02	+/-	3.352E-03	4.88	1.65	5.15
96	75	26054	103	4.19962	3.2577E+03	+/-	1.052E+02	3.23	0.02	3.23
97	76	26054	107	6.48045	4.3239E+01	+/-	1.705E+00	3.94	0.04	3.94
98	77	26056	103	7.30113	4.1507E+01	+/-	1.118E+00	2.69	0.06	2.69
99	78	26058	1	3.926-4	2.0083E+06	+/-	1.044E+02	0.00	0.01	0.01
100	79	26058	2	2.575-4	1.8072E+06	+/-	1.007E+02	0.00	0.01	0.01
101	80	26058	102	4.756-8	7.6423E+04	+/-	3.747E+03	4.90	0.01	4.90
102	81	27059	1	1.302-4	1.0212E+07	+/-	3.459E+03	0.00	0.03	0.03
103	82	27059	2	1.323-4	7.6598E+06	+/-	3.173E+03	0.00	0.04	0.04
104	83	27059	16	13.0251	8.2183E+00	+/-	1.370E-01	1.60	0.48	1.67
105	84	27059	17	19.8174	6.0592E-05	+/-	2.811E-05	43.64	15.74	46.39
106	85	27059	102	6.027-8	2.5140E+06	+/-	1.729E+04	0.69	0.01	0.69
107	86	27059	103	5.65187	5.5385E+01	+/-	2.044E+00	3.69	0.03	3.69
108	87	27059	107	8.09365	5.9370E+00	+/-	2.456E-01	4.14	0.08	4.14
109	88	27059	25056g	8.09365	5.9370E+00	+/-	2.456E-01	4.14	0.08	4.14
110	89	28000	27058g	0	3.1337E+03	+/-	5.421E+01	1.73	0.02	1.73
111	90	28000	27060g	0	2.1886E+01	+/-	4.417E-01	2.02	0.05	2.02
112	91	28000	28057g	14.9102	1.1110E-01	+/-	1.784E-03	1.30	0.94	1.61
113	92	28058	16	14.9102	1.6320E-01	+/-	2.620E-03	1.30	0.94	1.61
114	93	28058	103	3.90901	4.6031E+03	+/-	7.963E+01	1.73	0.02	1.73
115	94	28060	103	6.75943	8.3450E+01	+/-	1.684E+00	2.02	0.05	2.02
116	95	29000	27060g	6.9609	1.4049E+01	+/-	4.348E-01	3.09	0.05	3.09
117	96	29000	29062g	13.7508	2.7073E+00	+/-	4.196E-02	1.42	0.62	1.55
118	97	29000	29064g	4.956-8	1.8487E+05	+/-	7.313E+03	3.96	0.01	3.96
119	98	29063	1	1.007-3	1.8978E+06	+/-	1.336E+02	0.00	0.01	0.01
120	99	29063	2	2.063-3	1.5882E+06	+/-	1.237E+02	0.00	0.01	0.01
121	100	29063	16	13.7508	3.9151E+00	+/-	6.068E-02	1.42	0.62	1.55
122	101	29063	102	4.956-8	2.6735E+05	+/-	1.059E+04	3.96	0.01	3.96
123	102	29063	107	6.9609	2.0317E+01	+/-	6.287E-01	3.09	0.05	3.09
124	103	29065	16	12.5946	1.3409E+01	+/-	2.643E-01	1.93	0.41	1.97
125	104	30000	29064g	3.9732	7.9313E+02	+/-	1.392E+01	1.76	0.02	1.76
126	105	30000	29067g	2.214-4	5.5853E+00	+/-	9.837E-01	17.61	0.01	17.61
127	106	30064	103	3.9732	1.6130E+03	+/-	2.832E+01	1.76	0.02	1.76
128	107	30067	103	2.213-4	1.3804E+02	+/-	2.435E+01	17.64	0.01	17.64
129	108	30068	1	5.177-4	2.6608E+06	+/-	8.394E+02	0.00	0.03	0.03
130	109	30068	2	5.180-4	2.5445E+06	+/-	8.237E+02	0.00	0.03	0.03
131	110	30068	29067g	15.319	4.8023E-02	+/-	7.342E-03	15.25	1.10	15.29
132	111	33075	16	12.8443	1.2582E+01	+/-	7.513E-01	5.95	0.45	5.97
133	112	39089	16	13.8184	6.8015E+00	+/-	9.725E-02	1.28	0.64	1.43
134	113	40000	40089g	14.3398	2.1654E+00	+/-	2.607E-02	0.92	0.78	1.20
135	114	40090	16	14.3398	4.2087E+00	+/-	5.068E-02	0.92	0.78	1.20
136	115	41093	1	1.871-3	2.0225E+06	+/-	7.884E+01	0.00	0.00	0.00

137	116	41093	2	2.056-3	1.8123E+06	+/-	6.996E+01	0.00	0.00	0.00
138	117	41093	102	1.184-4	1.3803E+05	+/-	3.688E+03	2.67	0.01	2.67
139	118	41093	41093m	2.1774	8.1183E+03	+/-	2.297E+02	2.83	0.01	2.83
140	119	41093	41092m	11.1978	1.7343E+01	+/-	1.549E-01	0.86	0.25	0.89
141	120	41093	41094g	1.184-4	3.4472E+04	+/-	9.210E+02	2.67	0.01	2.67
142	121	41093	41094m	1.184-4	1.0356E+05	+/-	2.767E+03	2.67	0.01	2.67
143	122	42000	41092m	5.1224	3.9082E+01	+/-	1.578E+00	4.04	0.03	4.04
144	123	42092	41092m	5.1224	2.6897E+02	+/-	1.086E+01	4.04	0.03	4.04
145	124	45103	45103m	1.72582	4.5657E+04	+/-	1.841E+03	4.03	0.01	4.03
146	125	47109	1	5.105-6	1.9047E+07	+/-	7.248E+03	0.00	0.04	0.04
147	126	47109	2	1.146-5	2.4750E+06	+/-	6.241E+02	0.00	0.03	0.03
148	127	47109	47110n	5.073-6	7.6483E+05	+/-	4.657E+04	6.09	0.04	6.09
149	128	48000	1	7.784-8	2.1305E+08	+/-	1.540E+04	0.00	0.01	0.01
150	129	48000	2	6.854-5	2.3873E+06	+/-	1.311E+02	0.00	0.01	0.01
151	130	48000	101	7.698-8	2.1057E+08	+/-	1.533E+04	0.00	0.01	0.01
152	131	49000	49114m	1.887-6	9.8746E+04	+/-	6.894E+03	6.98	0.02	6.98
153	132	49113	1	1.442-5	4.9825E+06	+/-	8.517E+02	0.00	0.02	0.02
154	133	49113	2	1.627-3	1.5385E+06	+/-	8.458E+01	0.00	0.01	0.01
155	134	49113	102	1.886-6	3.4015E+06	+/-	8.035E+02	0.00	0.02	0.02
156	135	49113	49113m	2.33848	8.3358E+03	+/-	1.024E+02	1.23	0.01	1.23
157	136	49113	49114g	1.884-6	1.1005E+06	+/-	7.738E+04	7.03	0.02	7.03
158	137	49113	49114m	1.887-6	2.3010E+06	+/-	1.607E+05	6.98	0.02	6.98
159	138	49115	1	1.418-6	3.9232E+07	+/-	1.186E+04	0.00	0.03	0.03
160	139	49115	2	1.764-6	2.3101E+06	+/-	4.761E+02	0.00	0.02	0.02
161	140	49115	102	1.407-6	3.6871E+07	+/-	1.139E+04	0.00	0.03	0.03
162	141	49115	49115m	2.2659	1.0261E+04	+/-	1.773E+02	1.73	0.01	1.73
163	142	49115	49114m	11.6922	3.4931E+01	+/-	1.837E+00	5.25	0.30	5.26
164	143	49115	49116g	1.407-6	7.7427E+06	+/-	1.712E+05	2.21	0.03	2.21
165	144	49115	49116m	1.407-6	2.9128E+07	+/-	6.439E+05	2.21	0.03	2.21
166	145	53127	16	11.4604	4.5548E+01	+/-	1.442E+00	3.15	0.28	3.17
167	146	57139	1	1.682-6	3.0232E+06	+/-	1.447E+02	0.00	0.00	0.00
168	147	57139	2	7.619-6	2.3869E+06	+/-	1.009E+02	0.00	0.00	0.00
169	148	57139	102	5.148-8	5.5388E+05	+/-	2.269E+04	4.10	0.01	4.10
170	149	59141	16	11.7379	4.2428E+01	+/-	4.927E+00	11.61	0.31	11.61
171	150	64000	1	3.079-8	1.8422E+09	+/-	1.485E+05	0.00	0.01	0.01
172	151	64000	2	5.398-8	9.8489E+06	+/-	5.509E+02	0.00	0.01	0.01
173	152	64000	101	3.070-8	1.8321E+09	+/-	1.480E+05	0.00	0.01	0.01
174	153	69169	16	10.2679	1.4501E+02	+/-	4.855E+00	3.34	0.18	3.35
175	154	69169	17	18.0343	2.1894E-01	+/-	1.593E-02	6.58	3.11	7.28
176	155	73181	1	4.978-6	9.6077E+06	+/-	2.231E+03	0.00	0.02	0.02
177	156	73181	2	1.355-4	2.9076E+06	+/-	3.260E+02	0.00	0.01	0.01
178	157	73181	102	4.394-6	6.4887E+06	+/-	2.081E+05	3.21	0.03	3.21
179	158	74186	1	1.866-5	3.3137E+07	+/-	1.839E+04	0.00	0.06	0.06
180	159	74186	2	1.871-5	2.6994E+07	+/-	1.595E+04	0.00	0.06	0.06
181	160	74186	102	1.825-5	5.9757E+06	+/-	1.450E+05	2.43	0.04	2.43
182	161	79197	1	4.838-6	2.1922E+07	+/-	7.932E+03	0.00	0.04	0.04
183	162	79197	2	9.909-6	4.3368E+06	+/-	8.928E+02	0.00	0.02	0.02
184	163	79197	16	10.4149	1.2684E+02	+/-	2.456E+00	1.93	0.19	1.94
185	164	79197	102	4.801-6	1.7448E+07	+/-	2.733E+05	1.57	0.04	1.57
186	165	80199	80199m	2.50807	1.4711E+04	+/-	5.419E+02	3.68	0.01	3.68
187	166	82204	82204m	4.81316	7.0146E+02	+/-	3.276E+01	4.67	0.02	4.67
188	167	83209	16	9.73979	2.3937E+02	+/-	9.887E+00	4.13	0.15	4.13
189	168	83209	17	17.7699	2.8929E-01	+/-	1.910E-02	6.00	2.76	6.60
190	169	90232	1	7.067-5	4.7056E+06	+/-	4.509E+02	0.00	0.01	0.01
191	170	90232	2	1.236-4	3.4080E+06	+/-	2.446E+02	0.00	0.01	0.01
192	171	90232	18	2.4606	4.0710E+03	+/-	2.361E+02	5.80	0.01	5.80
193	172	90232	102	2.315-5	1.0924E+06	+/-	1.504E+04	1.38	0.02	1.38
194	173	92235	1	4.557-8	3.9687E+07	+/-	2.533E+03	0.00	0.01	0.01
195	174	92235	18	4.085-8	3.0667E+07	+/-	1.435E+05	0.47	0.01	0.47
196	175	92238	1	3.677-5	6.6363E+06	+/-	1.496E+03	0.00	0.02	0.02
197	176	92238	2	1.007-4	3.9909E+06	+/-	5.741E+02	0.00	0.01	0.01
198	177	92238	16	8.07082	5.6498E+02	+/-	2.880E+01	5.10	0.08	5.10
199	178	92238	18	2.33753	1.6441E+04	+/-	2.011E+02	1.22	0.01	1.22
200	179	92238	102	2.005-5	2.4085E+06	+/-	2.694E+04	1.12	0.05	1.12
201	180	93237	1	4.055-7	1.9292E+07	+/-	1.586E+03	0.00	0.01	0.01
202	181	93237	2	3.341-5	3.1002E+06	+/-	1.193E+02	0.00	0.00	0.00
203	182	93237	18	1.43166	9.8754E+04	+/-	2.318E+03	2.35	0.01	2.35
204	183	94239	1	8.492-8	8.4502E+07	+/-	6.526E+03	0.00	0.01	0.01
205	184	94239	2	2.922-4	2.4240E+06	+/-	9.938E+01	0.00	0.00	0.00

206	185	94239	18	6.964-8	5.5102E+07	+/-	6.684E+05	1.21	0.01	1.21
207	186	95241	1	1.354-7	5.4853E+07	+/-	4.767E+03	0.00	0.01	0.01
208	187	95241	2	1.898-4	2.6431E+06	+/-	1.015E+02	0.00	0.00	0.00
209	188	95241	18	3.032-7	3.7288E+05	+/-	6.188E+03	1.66	0.01	1.66
210										
211										