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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.       :    9013
16 Spectrum Integral      : 1.480E+02
17 Spectrum average energy [eV] : 7.155E+05
18 Spectrum peak energy [eV] : 3.699E-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	0.2732	2.5494E+05 +/- 1.713E+01	0.00	0.01	0.01
23	2	3000	2	0.27754	2.2629E+05 +/- 1.570E+01	0.00	0.01	0.01
24	3	3000	205	1.047-3	2.0097E+04 +/- 7.340E+01	0.36	0.02	0.37
25	4	3000	207	1.154-3	2.0443E+04 +/- 9.835E+01	0.48	0.02	0.48
26	5	3006	1	0.14213	4.8878E+05 +/- 5.285E+01	0.00	0.01	0.01
27	6	3006	2	0.27964	2.2629E+05 +/- 1.632E+01	0.00	0.01	0.01
28	7	3006	105	9.142-4	2.5800E+05 +/- 9.515E+02	0.37	0.02	0.37
29	8	3006	205	9.142-4	2.5800E+05 +/- 9.515E+02	0.37	0.02	0.37
30	9	3006	207	9.949-4	2.6231E+05 +/- 1.286E+03	0.49	0.02	0.49
31	10	3007	1	0.2875	2.3573E+05 +/- 1.614E+01	0.00	0.01	0.01
32	11	3007	2	0.27739	2.2629E+05 +/- 1.575E+01	0.00	0.01	0.01
33	12	3007	205	5.86151	5.5646E+02 +/- 1.418E+01	2.55	0.04	2.55
34	13	3007	207	5.80811	5.7816E+02 +/- 1.420E+01	2.46	0.04	2.46
35	14	5000	1	0.05187	6.7786E+05 +/- 5.204E+01	0.00	0.01	0.01
36	15	5000	2	0.1424	5.0545E+05 +/- 2.682E+01	0.00	0.01	0.01
37	16	5000	101	3.839-4	1.7130E+05 +/- 3.822E+01	0.00	0.02	0.02
38	17	5000	205	2.05161	4.6256E+02 +/- 7.500E+01	16.21	0.01	16.21
39	18	5000	207	3.887-4	1.7183E+05 +/- 1.148E+03	0.67	0.02	0.67
40	19	5010	1	1.817-3	1.2413E+06 +/- 1.967E+02	0.00	0.02	0.02
41	20	5010	2	0.27908	3.7816E+05 +/- 2.018E+01	0.00	0.01	0.01
42	21	5010	101	3.838-4	8.6078E+05 +/- 1.920E+02	0.00	0.02	0.02
43	22	5010	107	3.803-4	8.5868E+05 +/- 5.784E+03	0.67	0.02	0.67
44	23	5010	205	2.05124	2.3239E+03 +/- 3.769E+02	16.22	0.01	16.22
45	24	5010	207	3.887-4	8.6343E+05 +/- 5.768E+03	0.67	0.02	0.67
46	25	5010	800	8.965-4	6.6086E+04 +/- 2.464E+03	3.73	0.02	3.73
47	26	5010	801	3.551-4	7.9259E+05 +/- 5.306E+03	0.67	0.02	0.67
48	27	5011	1	0.12412	5.3791E+05 +/- 2.883E+01	0.00	0.01	0.01
49	28	5011	2	0.12358	5.3708E+05 +/- 2.881E+01	0.00	0.01	0.01
50	29	5011	205	12.7245	1.4338E-01 +/- 2.437E-02	16.99	0.55	16.99
51	30	5011	207	11.2816	5.9680E+00 +/- 8.543E-01	14.31	0.31	14.31
52	31	9019	16	13.9286	2.0538E-01 +/- 6.350E-03	2.98	0.82	3.09
53	32	11023	1	4.111-3	1.0492E+06 +/- 1.902E+02	0.00	0.02	0.02
54	33	11023	2	3.753-3	1.0206E+06 +/- 1.899E+02	0.00	0.02	0.02
55	34	11023	16	15.4781	1.0012E-01 +/- 1.954E-03	1.30	1.46	1.95
56	35	11023	102	2.792-3	6.1012E+02 +/- 2.203E+01	3.61	0.03	3.61
57	36	12000	11024g	8.09716	2.9263E+01 +/- 2.462E-01	0.84	0.10	0.84
58	37	12024	103	8.09688	3.7040E+01 +/- 3.116E-01	0.84	0.10	0.84
59	38	13027	16	16.0169	8.7460E-02 +/- 3.546E-03	3.65	1.77	4.05
60	39	13027	103	5.62938	1.0313E+02 +/- 2.130E+00	2.07	0.04	2.07
61	40	13027	107	8.45565	1.7480E+01 +/- 1.315E-01	0.74	0.11	0.75
62	41	13027	11024g	8.45565	1.7480E+01 +/- 1.315E-01	0.74	0.11	0.75
63	42	13027	13026g	15.8835	7.8995E-02 +/- 3.341E-03	3.88	1.69	4.23
64	43	13027	13026m	17.5301	8.4657E-03 +/- 9.230E-04	10.44	3.16	10.90
65	44	14000	13028g	7.03651	1.2622E+02 +/- 3.220E+00	2.55	0.07	2.55
66	45	14028	103	7.03645	1.3686E+02 +/- 3.492E+00	2.55	0.07	2.55
67	46	14029	13028g	15.83	1.0613E-01 +/- 4.983E-03	4.41	1.61	4.70

68	47	15031	103	3.21821	1.1746E+03	+/-	4.210E+01	3.58	0.02	3.58
69	48	16000	15032g	3.61319	2.0396E+03	+/-	5.236E+01	2.57	0.02	2.57
70	49	16032	103	3.61318	2.1471E+03	+/-	5.512E+01	2.57	0.02	2.57
71	50	21045	1	0.01052	1.2054E+06	+/-	1.742E+02	0.00	0.01	0.01
72	51	21045	2	9.262-3	1.1586E+06	+/-	1.732E+02	0.00	0.01	0.01
73	52	21045	102	4.017-3	8.0547E+03	+/-	4.429E+02	5.50	0.02	5.50
74	53	22000	21046g	0	2.4544E+01	+/-	7.967E-01	3.25	0.04	3.25
75	54	22000	21047g	0	4.7045E+01	+/-	1.328E+00	2.82	0.02	2.82
76	55	22000	21048g	0	5.5318E+00	+/-	3.092E-01	5.59	0.10	5.59
77	56	22000	22045g	16.0017	1.1838E-02	+/-	5.623E-04	4.41	1.76	4.75
78	57	22046	16	16.0017	1.4349E-01	+/-	6.816E-03	4.41	1.76	4.75
79	58	22046	103	5.78399	2.9729E+02	+/-	9.657E+00	3.25	0.04	3.25
80	59	22047	103	3.08401	6.3181E+02	+/-	1.784E+01	2.82	0.02	2.82
81	60	22048	103	8.06452	7.5015E+00	+/-	4.195E-01	5.59	0.10	5.59
82	61	23051	107	9.72003	6.0347E-01	+/-	1.919E-02	3.18	0.18	3.18
83	62	23051	21048g	9.72003	6.0347E-01	+/-	1.919E-02	3.18	0.18	3.18
84	63	24000	24051g	14.6136	9.9910E-01	+/-	2.897E-02	2.70	1.06	2.90
85	64	25055	1	2.310-3	2.8009E+06	+/-	7.228E+02	0.00	0.03	0.03
86	65	25055	2	2.287-3	2.7011E+06	+/-	7.129E+02	0.00	0.03	0.03
87	66	25055	16	12.8132	6.2317E+00	+/-	1.562E-01	2.45	0.55	2.51
88	67	25055	102	3.547-4	2.4583E+04	+/-	1.133E+03	4.61	0.04	4.61
89	68	26000	24051g	0	1.2383E+00	+/-	5.105E-02	4.12	0.07	4.12
90	69	26000	25054g	0	1.3726E+02	+/-	4.578E+00	3.34	0.02	3.34
91	70	26000	25056g	0	2.5029E+01	+/-	6.752E-01	2.70	0.07	2.70
92	71	26000	26053g	16.4835	2.3933E-03	+/-	1.274E-04	4.90	2.07	5.32
93	72	26054	1	0.01141	1.1254E+06	+/-	1.916E+02	0.00	0.02	0.02
94	73	26054	2	0.01104	1.1033E+06	+/-	1.912E+02	0.00	0.02	0.02
95	74	26054	16	16.4835	4.0947E-02	+/-	2.180E-03	4.90	2.07	5.32
96	75	26054	103	4.05044	2.3483E+03	+/-	7.833E+01	3.34	0.02	3.34
97	76	26054	107	7.13971	2.1185E+01	+/-	8.733E-01	4.12	0.07	4.12
98	77	26056	103	7.31386	2.7277E+01	+/-	7.359E-01	2.70	0.07	2.70
99	78	26058	1	0.12353	1.0392E+06	+/-	8.916E+01	0.00	0.01	0.01
100	79	26058	2	0.09538	9.1313E+05	+/-	8.667E+01	0.00	0.01	0.01
101	80	26058	102	3.562-4	2.7534E+03	+/-	1.757E+02	6.38	0.06	6.38
102	81	27059	1	1.395-4	2.8721E+06	+/-	1.768E+03	0.00	0.06	0.06
103	82	27059	2	1.405-4	2.6966E+06	+/-	1.625E+03	0.00	0.06	0.06
104	83	27059	16	12.9998	5.3269E+00	+/-	9.078E-02	1.60	0.59	1.70
105	84	27059	17	19.8124	3.5546E-05	+/-	1.709E-05	43.59	20.30	48.09
106	85	27059	102	1.314-4	1.4476E+05	+/-	1.114E+03	0.76	0.10	0.77
107	86	27059	103	5.59624	3.7213E+01	+/-	1.412E+00	3.79	0.04	3.80
108	87	27059	107	8.08652	3.9019E+00	+/-	1.614E-01	4.14	0.10	4.14
109	88	27059	25056g	8.08652	3.9019E+00	+/-	1.614E-01	4.14	0.10	4.14
110	89	28000	27058g	0	2.3131E+03	+/-	3.997E+01	1.73	0.02	1.73
111	90	28000	27060g	0	1.4410E+01	+/-	2.949E-01	2.05	0.06	2.05
112	91	28000	28057g	14.8725	7.0781E-02	+/-	1.238E-03	1.30	1.17	1.75
113	92	28058	16	14.8725	1.0397E-01	+/-	1.819E-03	1.30	1.17	1.75
114	93	28058	103	3.70092	3.3978E+03	+/-	5.871E+01	1.73	0.02	1.73
115	94	28060	103	6.75314	5.4944E+01	+/-	1.124E+00	2.05	0.06	2.05
116	95	29000	27060g	6.9543	9.2616E+00	+/-	2.900E-01	3.13	0.06	3.13
117	96	29000	29062g	13.7462	1.7435E+00	+/-	2.829E-02	1.43	0.77	1.62
118	97	29000	29064g	5.984-4	1.2566E+04	+/-	6.334E+02	5.04	0.07	5.04
119	98	29063	1	0.04988	9.5545E+05	+/-	1.085E+02	0.00	0.01	0.01
120	99	29063	2	0.04351	9.0172E+05	+/-	1.042E+02	0.00	0.01	0.01
121	100	29063	16	13.7462	2.5213E+00	+/-	4.091E-02	1.43	0.77	1.62
122	101	29063	102	5.984-4	1.8169E+04	+/-	9.399E+02	5.17	0.07	5.17
123	102	29063	107	6.9543	1.3393E+01	+/-	4.193E-01	3.13	0.06	3.13
124	103	29065	16	12.5755	8.7103E+00	+/-	1.744E-01	1.94	0.50	2.00
125	104	30000	29064g	3.83323	5.7592E+02	+/-	1.035E+01	1.80	0.02	1.80
126	105	30000	29067g	2.88591	1.7629E+00	+/-	1.578E-01	8.95	0.03	8.95
127	106	30064	103	3.83323	1.1713E+03	+/-	2.106E+01	1.80	0.02	1.80
128	107	30067	103	2.87464	4.3511E+01	+/-	3.909E+00	8.98	0.03	8.98
129	108	30068	1	5.009-3	1.3916E+06	+/-	5.789E+02	0.00	0.04	0.04
130	109	30068	2	3.823-3	1.3509E+06	+/-	5.682E+02	0.00	0.04	0.04
131	110	30068	29067g	15.2803	3.0525E-02	+/-	4.677E-03	15.26	1.37	15.32
132	111	33075	16	12.815	8.1644E+00	+/-	4.918E-01	6.00	0.55	6.02
133	112	39089	16	13.8193	4.3763E+00	+/-	6.630E-02	1.29	0.80	1.51
134	113	40000	40089g	14.3096	1.3855E+00	+/-	1.848E-02	0.92	0.97	1.33
135	114	40090	16	14.3096	2.6928E+00	+/-	3.593E-02	0.92	0.97	1.33
136	115	41093	1	0.19526	1.1472E+06	+/-	6.232E+01	0.00	0.01	0.01

137	116	41093	2	0.18372	1.0411E+06	+/-	5.695E+01	0.00	0.01	0.01
138	117	41093	102	2.017-3	4.3470E+04	+/-	1.203E+03	2.77	0.02	2.77
139	118	41093	41093m	2.00159	7.0545E+03	+/-	2.083E+02	2.95	0.01	2.95
140	119	41093	41092m	11.1932	1.1323E+01	+/-	1.034E-01	0.86	0.31	0.91
141	120	41093	41094g	2.017-3	1.0856E+04	+/-	3.003E+02	2.77	0.02	2.77
142	121	41093	41094m	2.017-3	3.2614E+04	+/-	9.023E+02	2.77	0.02	2.77
143	122	42000	41092m	5.01208	2.6943E+01	+/-	1.148E+00	4.26	0.03	4.26
144	123	42092	41092m	5.01208	1.8543E+02	+/-	7.902E+00	4.26	0.03	4.26
145	124	45103	45103m	1.53369	4.2007E+04	+/-	1.712E+03	4.07	0.01	4.07
146	125	47109	1	0.06541	1.3996E+06	+/-	6.771E+02	0.00	0.05	0.05
147	126	47109	2	0.12197	9.4497E+05	+/-	8.225E+01	0.00	0.01	0.01
148	127	47109	47110n	1.278-4	1.5874E+04	+/-	9.547E+02	6.01	0.18	6.01
149	128	48000	1	0.14425	1.1894E+06	+/-	2.036E+02	0.00	0.02	0.02
150	129	48000	2	0.15357	9.9442E+05	+/-	6.896E+01	0.00	0.01	0.01
151	130	48000	101	9.675-5	1.1210E+05	+/-	1.861E+02	0.00	0.17	0.17
152	131	49000	49114m	6.566-4	7.4192E+03	+/-	3.076E+02	4.15	0.05	4.15
153	132	49113	1	0.09215	1.1736E+06	+/-	1.527E+02	0.00	0.01	0.01
154	133	49113	2	0.1879	8.9115E+05	+/-	5.020E+01	0.00	0.01	0.01
155	134	49113	102	6.016-4	2.4779E+05	+/-	1.259E+02	0.00	0.05	0.05
156	135	49113	49113m	2.21585	7.0403E+03	+/-	8.866E+01	1.26	0.01	1.26
157	136	49113	49114g	3.063-4	7.5360E+04	+/-	3.418E+03	4.53	0.05	4.54
158	137	49113	49114m	6.504-4	1.7243E+05	+/-	7.171E+03	4.16	0.05	4.16
159	138	49115	1	0.17007	1.0367E+06	+/-	3.076E+02	0.00	0.03	0.03
160	139	49115	2	0.23147	8.3944E+05	+/-	4.524E+01	0.00	0.01	0.01
161	140	49115	102	6.367-4	1.5498E+05	+/-	2.912E+02	0.00	0.19	0.19
162	141	49115	49115m	2.13228	8.7570E+03	+/-	1.541E+02	1.76	0.01	1.76
163	142	49115	49114m	11.6914	2.2767E+01	+/-	1.202E+00	5.27	0.37	5.28
164	143	49115	49116g	6.211-4	3.2351E+04	+/-	1.135E+03	3.50	0.19	3.51
165	144	49115	49116m	6.462-4	1.2263E+05	+/-	4.271E+03	3.48	0.19	3.48
166	145	53127	16	11.4584	2.9706E+01	+/-	9.436E-01	3.16	0.34	3.18
167	146	57139	1	0.2026	9.8245E+05	+/-	6.763E+01	0.00	0.01	0.01
168	147	57139	2	0.15702	8.8852E+05	+/-	5.596E+01	0.00	0.01	0.01
169	148	57139	102	7.455-5	1.8912E+04	+/-	1.179E+03	6.23	0.11	6.23
170	149	59141	16	11.7353	2.7647E+01	+/-	3.219E+00	11.64	0.38	11.64
171	150	64000	1	5.984-3	2.0681E+06	+/-	1.559E+03	0.00	0.08	0.08
172	151	64000	2	0.03122	1.2511E+06	+/-	8.808E+01	0.00	0.01	0.01
173	152	64000	101	1.142-7	6.3617E+05	+/-	1.549E+03	0.00	0.24	0.24
174	153	69169	16	10.2586	9.4967E+01	+/-	3.188E+00	3.35	0.22	3.36
175	154	69169	17	18.0299	1.3583E-01	+/-	1.042E-02	6.57	3.96	7.67
176	155	73181	1	0.01393	1.9077E+06	+/-	3.251E+02	0.00	0.02	0.02
177	156	73181	2	0.03069	1.2679E+06	+/-	1.345E+02	0.00	0.01	0.01
178	157	73181	102	1.712-4	4.3181E+05	+/-	2.152E+04	4.98	0.05	4.98
179	158	74186	1	2.114-4	3.4464E+06	+/-	4.361E+03	0.00	0.13	0.13
180	159	74186	2	2.120-4	3.0004E+06	+/-	3.784E+03	0.00	0.13	0.13
181	160	74186	102	1.886-5	2.8665E+05	+/-	1.050E+04	3.66	0.20	3.66
182	161	79197	1	0.01388	1.9184E+06	+/-	7.685E+02	0.00	0.04	0.04
183	162	79197	2	0.02395	1.4567E+06	+/-	1.429E+02	0.00	0.01	0.01
184	163	79197	16	10.4097	8.3034E+01	+/-	1.614E+00	1.93	0.23	1.94
185	164	79197	102	1.663-4	3.3225E+05	+/-	8.625E+03	2.59	0.20	2.60
186	165	80199	80199m	2.33123	1.2184E+04	+/-	4.541E+02	3.73	0.01	3.73
187	166	82204	82204m	4.70317	4.8566E+02	+/-	2.291E+01	4.72	0.03	4.72
188	167	83209	16	9.73207	1.5700E+02	+/-	6.491E+00	4.13	0.18	4.13
189	168	83209	17	17.8035	1.8028E-01	+/-	1.251E-02	5.99	3.50	6.94
190	169	90232	1	0.06009	1.8243E+06	+/-	1.859E+02	0.00	0.01	0.01
191	170	90232	2	0.04905	1.4718E+06	+/-	1.233E+02	0.00	0.01	0.01
192	171	90232	18	2.31688	3.3288E+03	+/-	1.936E+02	5.82	0.01	5.82
193	172	90232	102	1.993-4	1.5569E+05	+/-	2.635E+03	1.69	0.05	1.69
194	173	92235	1	0.04426	1.9132E+06	+/-	1.359E+02	0.00	0.01	0.01
195	174	92235	18	1.472-3	4.6723E+05	+/-	2.690E+03	0.58	0.01	0.58
196	175	92238	1	0.03021	2.0115E+06	+/-	3.776E+02	0.00	0.02	0.02
197	176	92238	2	0.02684	1.5883E+06	+/-	2.137E+02	0.00	0.01	0.01
198	177	92238	16	8.06714	3.7157E+02	+/-	1.894E+01	5.10	0.10	5.10
199	178	92238	18	2.22653	1.3662E+04	+/-	1.672E+02	1.22	0.01	1.22
200	179	92238	102	6.748-5	2.0463E+05	+/-	1.750E+03	0.85	0.10	0.86
201	180	93237	1	0.03407	1.9350E+06	+/-	1.441E+02	0.00	0.01	0.01
202	181	93237	2	0.05917	1.1996E+06	+/-	6.810E+01	0.00	0.01	0.01
203	182	93237	18	1.34283	8.8980E+04	+/-	1.768E+03	1.99	0.01	1.99
204	183	94239	1	0.03128	2.0149E+06	+/-	1.944E+02	0.00	0.01	0.01
205	184	94239	2	0.06226	1.1696E+06	+/-	6.680E+01	0.00	0.01	0.01

206	185	94239	18	1.891-3	4.7075E+05	+/-	8.226E+03	1.75	0.02	1.75
207	186	95241	1	0.04752	1.9527E+06	+/-	1.517E+02	0.00	0.01	0.01
208	187	95241	2	0.082	1.2283E+06	+/-	6.756E+01	0.00	0.01	0.01
209	188	95241	18	1.5963	8.0291E+04	+/-	2.004E+03	2.50	0.01	2.50
210										
211										