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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 Reaction rate integ.flag :      1
12 Reaction rate norm. flag :      1
13
14 Spectrum MAT No.       :    9437
15 Spectrum Integral      : 1.000E+00
16 Spectrum average energy [eV] : 2.073E+06
17 Spectrum peak energy [eV] : 6.748E+05
18 Reaction rate RR = average cross-section

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No.	Mat.	MT	E(50%) [MeV]	<RR> +/- [mb]	Unc	Unc. x.s. [%]	Unc. Sp. [%]	Unc. Total [%]
1	3000	1	1.82913	1.8312E+03	+/- 1.737E+00	0.00	0.09	0.09
2	3000	2	1.76171	1.6262E+03	+/- 1.580E+00	0.00	0.10	0.10
3	3000	205	3.34525	4.6711E+01	+/- 6.075E-01	1.23	0.41	1.30
4	3000	207	3.90778	5.8505E+01	+/- 2.423E+00	4.12	0.41	4.14
5	3006	1	1.44086	1.9133E+03	+/- 3.020E+00	0.00	0.16	0.16
6	3006	2	1.39085	1.4263E+03	+/- 2.175E+00	0.00	0.15	0.15
7	3006	105	0.63595	3.2486E+02	+/- 3.073E+00	0.88	0.35	0.95
8	3006	205	0.63595	3.2486E+02	+/- 3.073E+00	0.88	0.35	0.95
9	3006	207	1.61314	4.7995E+02	+/- 3.108E+01	6.47	0.21	6.47
10	3007	1	1.85546	1.8244E+03	+/- 1.735E+00	0.00	0.10	0.10
11	3007	2	1.78449	1.6426E+03	+/- 1.590E+00	0.00	0.10	0.10
12	3007	205	5.96295	2.3866E+01	+/- 6.188E-01	2.42	0.93	2.59
13	3007	207	5.96279	2.3891E+01	+/- 6.189E-01	2.42	0.93	2.59
14	5000	1	1.29677	2.4551E+03	+/- 3.125E+00	0.00	0.13	0.13
15	5000	2	1.28417	2.3213E+03	+/- 3.074E+00	0.00	0.13	0.13
16	5000	101	1.24578	9.9656E+01	+/- 3.244E-01	0.00	0.33	0.33
17	5000	205	3.66061	9.9693E+00	+/- 1.208E+00	12.11	0.39	12.12
18	5000	207	1.42866	1.0943E+02	+/- 9.217E+00	8.42	0.29	8.42
19	5010	1	1.1444	2.5968E+03	+/- 3.966E+00	0.00	0.15	0.15
20	5010	2	1.11092	2.0572E+03	+/- 3.176E+00	0.00	0.15	0.15
21	5010	101	1.24369	5.0046E+02	+/- 1.631E+00	0.00	0.33	0.33
22	5010	107	0.8672	4.4352E+02	+/- 4.716E+01	10.63	0.39	10.63
23	5010	205	3.65878	5.0062E+01	+/- 6.071E+00	12.12	0.39	12.13
24	5010	207	1.42155	5.4855E+02	+/- 4.632E+01	8.44	0.29	8.44
25	5010	800	1.80513	1.8481E+02	+/- 4.518E+01	24.45	0.13	24.45
26	5010	801	0.4237	2.5871E+02	+/- 2.108E+01	8.12	0.67	8.15
27	5011	1	1.31996	2.4199E+03	+/- 3.039E+00	0.00	0.13	0.13
28	5011	2	1.30504	2.3870E+03	+/- 3.188E+00	0.00	0.13	0.13
29	5011	205	12.7775	8.6008E-03	+/- 1.648E-03	16.96	8.91	19.16
30	5011	207	11.3925	3.3929E-01	+/- 5.502E-02	14.64	6.97	16.22
31	9019	16	13.9891	1.2591E-02	+/- 1.267E-03	2.94	9.62	10.06
32	11023	1	1.245	3.1852E+03	+/- 4.032E+00	0.00	0.13	0.13
33	11023	2	1.06545	2.6623E+03	+/- 5.053E+00	0.00	0.19	0.19
34	11023	16	15.5418	6.3996E-03	+/- 6.255E-04	1.28	9.69	9.77
35	11023	102	0.98259	2.7697E-01	+/- 1.065E-02	3.82	0.48	3.85
36	12000	11024g	8.21401	1.4464E+00	+/- 3.201E-02	0.81	2.06	2.21
37	12024	103	8.2136	1.8307E+00	+/- 4.052E-02	0.81	2.06	2.21
38	13027	16	16.0947	5.7012E-03	+/- 5.802E-04	3.52	9.55	10.18
39	13027	103	5.77791	4.3837E+00	+/- 9.844E-02	2.05	0.91	2.25
40	13027	107	8.60318	8.7930E-01	+/- 2.279E-02	0.72	2.49	2.59
41	13027	11024g	8.60318	8.7930E-01	+/- 2.279E-02	0.72	2.49	2.59
42	13027	13026g	15.9181	5.0845E-03	+/- 5.273E-04	3.78	9.66	10.37
43	13027	13026m	17.8863	6.1672E-04	+/- 8.046E-05	9.46	8.98	13.05
44	14000	13028g	7.17304	5.8615E+00	+/- 1.654E-01	2.49	1.32	2.82
45	14028	103	7.17293	6.3554E+00	+/- 1.793E-01	2.49	1.32	2.82
46	14029	13028g	15.99	6.8909E-03	+/- 7.191E-04	4.42	9.45	10.44

68	47	15031	103	3.6945	3.6791E+01	+/-	1.279E+00	3.44	0.50	3.48
69	48	16000	15032g	4.03485	6.7664E+01	+/-	1.734E+00	2.50	0.55	2.56
70	49	16032	103	4.03484	7.1232E+01	+/-	1.826E+00	2.50	0.55	2.56
71	50	21045	1	1.70275	3.3722E+03	+/-	4.139E+00	0.00	0.12	0.12
72	51	21045	2	1.41773	2.6323E+03	+/-	4.641E+00	0.00	0.18	0.18
73	52	21045	102	0.56142	4.9753E+00	+/-	4.517E-01	9.05	0.72	9.08
74	53	22000	21046g	0	1.0506E+00	+/-	3.404E-02	3.10	0.95	3.24
75	54	22000	21047g	0	1.4041E+00	+/-	3.920E-02	2.75	0.49	2.79
76	55	22000	21048g	0	2.7354E-01	+/-	1.602E-02	5.39	2.28	5.85
77	56	22000	22045g	16.0654	7.6723E-04	+/-	8.050E-05	4.24	9.60	10.49
78	57	22046	16	16.0652	9.2990E-03	+/-	9.757E-04	4.24	9.60	10.49
79	58	22046	103	5.9972	1.2720E+01	+/-	4.125E-01	3.10	0.95	3.24
80	59	22047	103	3.74928	1.8838E+01	+/-	5.268E-01	2.75	0.49	2.80
81	60	22048	103	8.26641	3.7090E-01	+/-	2.172E-02	5.39	2.28	5.86
82	61	23051	107	9.88718	3.2356E-02	+/-	1.663E-03	3.08	4.12	5.14
83	62	23051	21048g	9.88718	3.2356E-02	+/-	1.663E-03	3.08	4.12	5.14
84	63	24000	24051g	14.6708	6.2178E-02	+/-	6.350E-03	2.67	9.86	10.21
85	64	25055	1	1.64235	3.5389E+03	+/-	5.103E+00	0.00	0.14	0.14
86	65	25055	2	1.44196	2.5266E+03	+/-	5.620E+00	0.00	0.22	0.22
87	66	25055	16	12.8654	3.7334E-01	+/-	3.434E-02	2.38	8.88	9.20
88	67	25055	102	0.74041	2.8442E+00	+/-	7.831E-01	27.52	0.75	27.53
89	68	26000	24051g	0	5.7826E-02	+/-	2.330E-03	3.73	1.52	4.03
90	69	26000	25054g	0	4.8286E+00	+/-	1.523E-01	3.10	0.60	3.15
91	70	26000	25056g	0	1.1886E+00	+/-	3.680E-02	2.63	1.63	3.10
92	71	26000	26053g	16.5539	1.5685E-04	+/-	1.683E-05	5.00	9.50	10.73
93	72	26054	1	1.54386	3.6293E+03	+/-	4.894E+00	0.00	0.13	0.13
94	73	26054	2	1.24016	3.0991E+03	+/-	5.808E+00	0.00	0.19	0.19
95	74	26054	16	16.5539	2.6835E-03	+/-	2.879E-04	5.00	9.50	10.73
96	75	26054	103	4.38043	8.2610E+01	+/-	2.605E+00	3.10	0.60	3.15
97	76	26054	107	7.34477	9.8932E-01	+/-	3.986E-02	3.73	1.52	4.03
98	77	26056	103	7.49735	1.2953E+00	+/-	4.011E-02	2.63	1.63	3.10
99	78	26058	1	1.30356	4.7426E+03	+/-	6.605E+00	0.00	0.14	0.14
100	79	26058	2	1.11169	3.1783E+03	+/-	7.145E+00	0.00	0.22	0.22
101	80	26058	102	0.72552	2.0370E+00	+/-	2.246E-01	11.02	0.41	11.02
102	81	27059	1	1.51612	3.7123E+03	+/-	4.522E+00	0.00	0.12	0.12
103	82	27059	2	1.14709	2.9536E+03	+/-	6.069E+00	0.00	0.21	0.21
104	83	27059	16	13.0404	3.2064E-01	+/-	2.937E-02	1.57	9.03	9.16
105	84	27059	17	22.2844	6.3674E-05	+/-	1.314E-05	7.38	19.26	20.63
106	85	27059	102	0.89277	4.9220E+00	+/-	2.007E-01	4.05	0.50	4.08
107	86	27059	103	5.84923	1.5785E+00	+/-	5.746E-02	3.51	0.98	3.64
108	87	27059	107	8.28734	1.9247E-01	+/-	8.295E-03	3.69	2.22	4.31
109	88	27059	25056g	8.28734	1.9247E-01	+/-	8.295E-03	3.69	2.22	4.31
110	89	28000	27058g	0	7.6631E+01	+/-	1.401E+00	1.74	0.55	1.83
111	90	28000	27060g	0	6.5932E-01	+/-	1.526E-02	1.87	1.37	2.31
112	91	28000	28057g	14.9353	4.4488E-03	+/-	4.395E-04	1.29	9.79	9.88
113	92	28058	16	14.9353	6.5350E-03	+/-	6.456E-04	1.29	9.79	9.88
114	93	28058	103	4.14276	1.1257E+02	+/-	2.058E+00	1.74	0.55	1.83
115	94	28060	103	6.96157	2.5138E+00	+/-	5.819E-02	1.87	1.37	2.31
116	95	29000	27060g	7.1774	4.2814E-01	+/-	1.437E-02	3.01	1.49	3.36
117	96	29000	29062g	13.7874	1.0637E-01	+/-	1.038E-02	1.41	9.66	9.76
118	97	29000	29064g	0.9765	7.4283E+00	+/-	6.176E-01	8.30	0.42	8.31
119	98	29063	1	1.47255	3.6370E+03	+/-	3.332E+00	0.00	0.09	0.09
120	99	29063	2	1.08973	2.8314E+03	+/-	5.125E+00	0.00	0.18	0.18
121	100	29063	16	13.7874	1.5383E-01	+/-	1.501E-02	1.41	9.66	9.76
122	101	29063	102	0.95118	1.0511E+01	+/-	8.928E-01	8.49	0.39	8.49
123	102	29063	107	7.1774	6.1915E-01	+/-	2.078E-02	3.01	1.49	3.36
124	103	29065	16	12.6264	5.1832E-01	+/-	4.641E-02	1.91	8.75	8.95
125	104	30000	29064g	4.1137	2.0105E+01	+/-	3.625E-01	1.71	0.58	1.80
126	105	30000	29067g	4.61739	4.2558E-02	+/-	2.278E-03	5.31	0.71	5.35
127	106	30064	103	4.1137	4.0888E+01	+/-	7.372E-01	1.71	0.58	1.80
128	107	30067	103	4.59315	1.0444E+00	+/-	5.633E-02	5.35	0.69	5.39
129	108	30068	1	1.34312	4.0060E+03	+/-	3.933E+00	0.00	0.10	0.10
130	109	30068	2	1.0454	3.2991E+03	+/-	6.099E+00	0.00	0.18	0.18
131	110	30068	29067g	15.4587	1.9830E-03	+/-	3.465E-04	14.73	9.40	17.47
132	111	33075	16	12.8644	4.8947E-01	+/-	5.231E-02	5.88	8.92	10.69
133	112	39089	16	13.8555	2.6734E-01	+/-	2.657E-02	1.27	9.86	9.94
134	113	40000	40089g	14.3767	8.5720E-02	+/-	8.502E-03	0.91	9.88	9.92
135	114	40090	16	14.3763	1.6657E-01	+/-	1.653E-02	0.91	9.88	9.92
136	115	41093	1	1.22293	5.7203E+03	+/-	7.091E+00	0.00	0.12	0.12

137	116	41093	2	0.92995	4.4304E+03	+/-	1.028E+01	0.00	0.23	0.23
138	117	41093	102	0.64787	2.4631E+01	+/-	5.629E-01	2.20	0.63	2.29
139	118	41093	41093m	2.64979	1.4409E+02	+/-	3.767E+00	2.60	0.28	2.61
140	119	41093	41092m	11.28	6.4527E-01	+/-	4.936E-02	0.85	7.60	7.65
141	120	41093	41094g	0.64787	6.1512E+00	+/-	1.406E-01	2.20	0.63	2.29
142	121	41093	41094m	0.64787	1.8480E+01	+/-	4.223E-01	2.20	0.63	2.29
143	122	42000	41092m	5.31262	1.0639E+00	+/-	4.010E-02	3.69	0.78	3.77
144	123	42092	41092m	5.31262	7.3217E+00	+/-	2.760E-01	3.69	0.78	3.77
145	124	45103	45103m	2.33787	7.1719E+02	+/-	2.832E+01	3.94	0.19	3.95
146	125	47109	1	1.33714	5.7573E+03	+/-	5.274E+00	0.00	0.09	0.09
147	126	47109	2	1.02035	3.6358E+03	+/-	7.150E+00	0.00	0.20	0.20
148	127	47109	47110n	0.72695	9.4953E+00	+/-	7.155E-01	7.53	0.38	7.54
149	128	48000	1	1.35616	5.8522E+03	+/-	5.070E+00	0.00	0.09	0.09
150	129	48000	2	1.09607	4.3385E+03	+/-	7.587E+00	0.00	0.17	0.17
151	130	48000	101	0.97786	6.2911E+01	+/-	1.858E-01	0.00	0.30	0.30
152	131	49000	49114m	1.30846	8.7081E+00	+/-	2.718E-01	2.89	1.18	3.12
153	132	49113	1	1.43293	5.5101E+03	+/-	3.648E+00	0.00	0.07	0.07
154	133	49113	2	1.20775	4.3963E+03	+/-	6.442E+00	0.00	0.15	0.15
155	134	49113	102	1.12704	2.1628E+02	+/-	5.976E-01	0.00	0.28	0.28
156	135	49113	49113m	2.70051	1.5572E+02	+/-	1.909E+00	1.18	0.32	1.23
157	136	49113	49114g	1.08682	4.2710E+01	+/-	1.367E+00	3.18	0.33	3.20
158	137	49113	49114m	1.1366	1.7357E+02	+/-	5.693E+00	3.27	0.26	3.28
159	138	49115	1	1.43397	5.5088E+03	+/-	3.621E+00	0.00	0.07	0.07
160	139	49115	2	1.20156	4.3910E+03	+/-	6.470E+00	0.00	0.15	0.15
161	140	49115	102	1.09362	1.5523E+02	+/-	4.510E-01	0.00	0.29	0.29
162	141	49115	49115m	2.64259	1.8786E+02	+/-	3.185E+00	1.67	0.30	1.70
163	142	49115	49114m	11.7558	1.3183E+00	+/-	1.262E-01	5.07	8.11	9.57
164	143	49115	49116g	1.03578	2.9967E+01	+/-	7.738E-01	2.56	0.32	2.58
165	144	49115	49116m	1.10769	1.2526E+02	+/-	3.288E+00	2.61	0.28	2.62
166	145	53127	16	11.5298	1.7080E+00	+/-	1.465E-01	3.08	8.00	8.58
167	146	57139	1	1.58909	5.8965E+03	+/-	2.272E+00	0.00	0.04	0.04
168	147	57139	2	1.36588	4.5814E+03	+/-	4.249E+00	0.00	0.09	0.09
169	148	57139	102	1.28109	6.6902E+00	+/-	3.405E-01	5.08	0.32	5.09
170	149	59141	16	11.7952	1.6046E+00	+/-	2.258E-01	11.31	8.38	14.07
171	150	64000	1	1.49773	6.7181E+03	+/-	3.617E+00	0.00	0.05	0.05
172	151	64000	2	1.20444	4.1153E+03	+/-	5.919E+00	0.00	0.14	0.14
173	152	64000	101	0.7913	9.2967E+01	+/-	4.789E-01	0.00	0.52	0.52
174	153	69169	16	10.3359	5.2106E+00	+/-	3.306E-01	3.26	5.45	6.35
175	154	69169	17	18.4404	1.0401E-02	+/-	1.109E-03	5.82	8.94	10.67
176	155	73181	1	1.59432	6.9899E+03	+/-	2.749E+00	0.00	0.04	0.04
177	156	73181	2	1.45336	4.5948E+03	+/-	3.853E+00	0.00	0.08	0.08
178	157	73181	102	0.81057	8.4667E+01	+/-	4.622E+00	5.44	0.50	5.46
179	158	74186	1	1.61585	6.9564E+03	+/-	3.431E+00	0.00	0.05	0.05
180	159	74186	2	1.34727	4.5655E+03	+/-	5.660E+00	0.00	0.12	0.12
181	160	74186	102	1.01236	3.3180E+01	+/-	8.316E-01	2.49	0.32	2.51
182	161	79197	1	1.71892	6.6523E+03	+/-	3.531E+00	0.00	0.05	0.05
183	162	79197	2	1.52417	4.6260E+03	+/-	4.522E+00	0.00	0.10	0.10
184	163	79197	16	10.491	4.5835E+00	+/-	2.749E-01	1.90	5.69	6.00
185	164	79197	102	0.71528	7.6090E+01	+/-	5.355E-01	0.52	0.48	0.70
186	165	80199	80199m	3.04993	2.8978E+02	+/-	1.063E+01	3.65	0.35	3.67
187	166	82204	82204m	4.96029	1.9175E+01	+/-	8.932E-01	4.60	0.72	4.66
188	167	83209	16	9.82138	8.4339E+00	+/-	4.991E-01	4.04	4.32	5.92
189	168	83209	17	18.1588	1.3539E-02	+/-	1.385E-03	4.96	8.94	10.23
190	169	83209	37	26.5251	1.3831E-05	+/-	5.976E-06	38.30	20.00	43.21
191	170	83209	152	29.75	9.7872E-12	+/-	3.353E-12	27.82	20.00	34.26
192	171	90232	1	1.59788	7.7099E+03	+/-	3.943E+00	0.00	0.05	0.05
193	172	90232	2	1.23918	4.8204E+03	+/-	6.821E+00	0.00	0.14	0.14
194	173	90232	18	2.95219	8.1311E+01	+/-	4.713E+00	5.78	0.37	5.80
195	174	90232	102	0.89494	9.1407E+01	+/-	2.550E+00	2.77	0.35	2.79
196	175	92235	1	1.6167	7.7137E+03	+/-	3.769E+00	0.00	0.05	0.05
197	176	92235	18	1.66907	1.2258E+03	+/-	1.478E+01	1.21	0.04	1.21
198	177	92238	1	1.60439	7.7699E+03	+/-	3.634E+00	0.00	0.05	0.05
199	178	92238	2	1.25467	4.7903E+03	+/-	6.439E+00	0.00	0.13	0.13
200	179	92238	16	8.16818	1.8390E+01	+/-	1.005E+00	5.10	1.98	5.46
201	180	92238	18	2.72691	3.1537E+02	+/-	4.013E+00	1.22	0.35	1.27
202	181	92238	102	0.91373	6.8441E+01	+/-	1.385E+00	1.99	0.38	2.02
203	182	93237	1	1.61017	7.5453E+03	+/-	3.801E+00	0.00	0.05	0.05
204	183	93237	2	1.37823	4.2981E+03	+/-	5.174E+00	0.00	0.12	0.12
205	184	93237	18	2.01924	1.3518E+03	+/-	2.292E+01	1.69	0.14	1.70

206	185	94239	1	1.59655	7.7555E+03	+/-	3.870E+00	0.00	0.05	0.05
207	186	94239	2	1.39952	4.3170E+03	+/-	4.875E+00	0.00	0.11	0.11
208	187	94239	18	1.741	1.7957E+03	+/-	2.238E+01	1.25	0.03	1.25
209	188	95241	1	1.5571	7.7794E+03	+/-	4.311E+00	0.00	0.06	0.06
210	189	95241	2	1.38049	4.8301E+03	+/-	5.565E+00	0.00	0.12	0.12
211	190	95241	18	2.1943	1.3844E+03	+/-	3.925E+01	2.83	0.20	2.84
212										
213										