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 RR_UNC - Calculate uncertainties in reaction rates
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 Andrej Trkov, Jozef Stefan Institute, Ljubljana, Slovenia
                  Version Jul. 2019
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 Reference x.s. file      :
..\IRDFF-II.g725
 Source spectrum file     :
..\IRDFF-II_sp.g
 Reaction rate integ.flag :      1
 Reaction rate norm. flag :      1

 Spectrum MAT No.         :   9905
 Spectrum Integral            :  1.000E+00
 Spectrum average energy [eV] :  3.045E+06
 Reaction rate RR = average cross-section
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No.	Mat.	MT	E(50%) [MeV]	<RR> +/- Unc [mb]	Unc. x.s. [%]	Unc. Sp. [%]	Unc. Total [%]
1	3000	1	2.70616	1.8908E+03 +/- 0.000E+00	0.00	0.00	0.00
2	3000	2	2.56862	1.6296E+03 +/- 0.000E+00	0.00	0.00	0.00
3	3000	205	6.00873	7.9534E+01 +/- 1.225E+00	1.54	0.00	1.54
4	3000	207	5.80753	1.0021E+02 +/- 4.211E+00	4.20	0.00	4.20
5	3006	1	2.53069	1.8820E+03 +/- 0.000E+00	0.00	0.00	0.00
6	3006	2	2.26558	1.3488E+03 +/- 0.000E+00	0.00	0.00	0.00
7	3006	105	1.01332	2.5000E+02 +/- 2.627E+00	1.05	0.00	1.05
8	3006	205	1.01332	2.5000E+02 +/- 2.627E+00	1.05	0.00	1.05
9	3006	207	3.36647	5.1999E+02 +/- 5.321E+01	10.23	0.00	10.23
10	3007	1	2.71874	1.8915E+03 +/- 0.000E+00	0.00	0.00	0.00
11	3007	2	2.58774	1.6527E+03 +/- 0.000E+00	0.00	0.00	0.00
12	3007	205	6.60126	6.5533E+01 +/- 1.308E+00	2.00	0.00	2.00
13	3007	207	6.60755	6.5736E+01 +/- 1.313E+00	2.00	0.00	2.00
14	5000	1	1.77914	2.2031E+03 +/- 0.000E+00	0.00	0.00	0.00
15	5000	2	1.69209	2.0323E+03 +/- 0.000E+00	0.00	0.00	0.00
16	5000	101	1.93828	9.0413E+01 +/- 0.000E+00	0.00	0.00	0.00
17	5000	205	4.63749	1.4927E+01 +/- 1.536E+00	10.29	0.00	10.29
18	5000	207	2.28561	1.0899E+02 +/- 9.724E+00	8.92	0.00	8.92
19	5010	1	1.77777	2.3059E+03 +/- 0.000E+00	0.00	0.00	0.00
20	5010	2	1.61716	1.7796E+03 +/- 0.000E+00	0.00	0.00	0.00
21	5010	101	1.92573	4.5124E+02 +/- 0.000E+00	0.00	0.00	0.00
22	5010	107	1.54732	3.6020E+02 +/- 4.759E+01	13.21	0.00	13.21
23	5010	205	4.62012	7.4449E+01 +/- 7.717E+00	10.37	0.00	10.37
24	5010	207	2.19434	5.3226E+02 +/- 4.882E+01	9.17	0.00	9.17
25	5010	800	2.02595	1.6966E+02 +/- 4.501E+01	26.53	0.00	26.53
26	5010	801	0.53964	1.9054E+02 +/- 2.182E+01	11.45	0.00	11.45
27	5011	1	1.77944	2.1775E+03 +/- 0.000E+00	0.00	0.00	0.00
28	5011	2	1.70506	2.0950E+03 +/- 0.000E+00	0.00	0.00	0.00
29	5011	205	13.7791	1.3910E-01 +/- 2.418E-02	17.38	0.00	17.38
30	5011	207	12.4124	3.8346E+00 +/- 6.632E-01	17.30	0.00	17.30
31	9019	16	15.0035	2.7309E-01 +/- 7.061E-03	2.59	0.00	2.59
32	11023	1	1.79604	2.8528E+03 +/- 0.000E+00	0.00	0.00	0.00
33	11023	2	1.40808	2.2175E+03 +/- 0.000E+00	0.00	0.00	0.00
34	11023	16	16.4536	2.0413E-01 +/- 2.790E-03	1.37	0.00	1.37
35	11023	102	1.59133	2.3895E-01 +/- 7.832E-03	3.28	0.00	3.28
36	12000	11024g	9.03144	7.4119E+00 +/- 5.284E-02	0.71	0.00	0.71
37	12024	103	9.02682	9.3674E+00 +/- 6.658E-02	0.71	0.00	0.71
38	13027	16	17.1124	2.1011E-01 +/- 7.780E-03	3.70	0.00	3.70
39	13027	103	6.97424	1.2303E+01 +/- 2.499E-01	2.03	0.00	2.03
40	13027	107	9.57286	4.9329E+00 +/- 3.087E-02	0.63	0.00	0.63
41	13027	11024g	9.57286	4.9329E+00 +/- 3.087E-02	0.63	0.00	0.63
42	13027	13026g	16.7591	1.7545E-01 +/- 7.108E-03	4.05	0.00	4.05
43	13027	13026m	18.9807	3.4657E-02 +/- 3.167E-03	9.14	0.00	9.14
44	14000	13028g	7.86203	2.2541E+01 +/- 5.193E-01	2.30	0.00	2.30
45	14028	103	7.86103	2.4429E+01 +/- 5.631E-01	2.31	0.00	2.31
46	14029	13028g	17.5243	2.4853E-01 +/- 1.339E-02	5.39	0.00	5.39

68	47	15031	103	4.5106	5.8485E+01	+/- 1.888E+00	3.23	0.00	3.23
69	48	16000	15032g	4.754	1.1624E+02	+/- 2.586E+00	2.22	0.00	2.22
70	49	16032	103	4.75383	1.2236E+02	+/- 2.722E+00	2.22	0.00	2.22
71	50	21045	1	2.44054	3.3366E+03	+/- 0.000E+00	0.00	0.00	0.00
72	51	21045	2	2.09567	2.4449E+03	+/- 0.000E+00	0.00	0.00	0.00
73	52	21045	102	0.74374	3.6441E+00	+/- 3.437E-01	9.43	0.00	9.43
74	53	22000	21046g	0	3.0721E+00	+/- 7.782E-02	2.53	0.00	2.53
75	54	22000	21047g	0	2.5043E+00	+/- 6.241E-02	2.49	0.00	2.49
76	55	22000	21048g	0	1.5012E+00	+/- 6.559E-02	4.37	0.00	4.37
77	56	22000	22045g	16.9781	2.7694E-02	+/- 1.134E-03	4.09	0.00	4.09
78	57	22046	16	16.9752	3.3533E-01	+/- 1.375E-02	4.10	0.00	4.10
79	58	22046	103	7.07159	3.6850E+01	+/- 9.430E-01	2.56	0.00	2.56
80	59	22047	103	4.96738	3.2370E+01	+/- 8.311E-01	2.57	0.00	2.57
81	60	22048	103	9.63915	2.0305E+00	+/- 8.896E-02	4.38	0.00	4.38
82	61	23051	107	11.354	2.6995E-01	+/- 6.520E-03	2.42	0.00	2.42
83	62	23051	21048g	11.354	2.6996E-01	+/- 6.520E-03	2.42	0.00	2.42
84	63	24000	24051g	15.4776	1.5669E+00	+/- 4.400E-02	2.81	0.00	2.81
85	64	25055	1	2.43614	3.5108E+03	+/- 0.000E+00	0.00	0.00	0.00
86	65	25055	2	2.18295	2.3858E+03	+/- 0.000E+00	0.00	0.00	0.00
87	66	25055	16	13.6578	5.9951E+00	+/- 1.017E-01	1.70	0.00	1.70
88	67	25055	102	0.97877	2.1561E+00	+/- 7.250E-01	33.63	0.00	33.63
89	68	26000	24051g	0	2.4762E-01	+/- 6.413E-03	2.59	0.00	2.59
90	69	26000	25054g	0	9.0373E+00	+/- 2.402E-01	2.66	0.00	2.66
91	70	26000	25056g	0	5.2736E+00	+/- 1.172E-01	2.22	0.00	2.22
92	71	26000	26053g	17.438	6.2957E-03	+/- 4.432E-04	7.04	0.00	7.04
93	72	26054	1	2.36684	3.5510E+03	+/- 0.000E+00	0.00	0.00	0.00
94	73	26054	2	1.84393	2.7895E+03	+/- 0.000E+00	0.00	0.00	0.00
95	74	26054	16	17.4379	1.0771E-01	+/- 7.582E-03	7.04	0.00	7.04
96	75	26054	103	5.25906	1.5458E+02	+/- 4.110E+00	2.66	0.00	2.66
97	76	26054	107	8.58059	4.2362E+00	+/- 1.097E-01	2.59	0.00	2.59
98	77	26056	103	8.67089	5.7445E+00	+/- 1.277E-01	2.22	0.00	2.22
99	78	26058	1	1.89165	4.3602E+03	+/- 0.000E+00	0.00	0.00	0.00
100	79	26058	2	1.71026	2.8136E+03	+/- 0.000E+00	0.00	0.00	0.00
101	80	26058	102	0.97458	1.6192E+00	+/- 1.806E-01	11.15	0.00	11.15
102	81	27059	1	2.33124	3.6323E+03	+/- 0.000E+00	0.00	0.00	0.00
103	82	27059	2	1.66994	2.6405E+03	+/- 0.000E+00	0.00	0.00	0.00
104	83	27059	16	13.8194	5.3724E+00	+/- 5.743E-02	1.07	0.00	1.07
105	84	27059	17	23.8452	1.1642E-02	+/- 7.317E-04	6.29	0.00	6.29
106	85	27059	102	1.11642	3.8294E+00	+/- 1.785E-01	4.66	0.00	4.66
107	86	27059	103	7.28321	4.7034E+00	+/- 1.412E-01	3.00	0.00	3.00
108	87	27059	107	9.54669	1.0366E+00	+/- 2.661E-02	2.57	0.00	2.57
109	88	27059	25056g	9.5467	1.0366E+00	+/- 2.661E-02	2.57	0.00	2.57
110	89	28000	27058g	0	1.3660E+02	+/- 2.265E+00	1.66	0.00	1.66
111	90	28000	27060g	0	2.5417E+00	+/- 3.543E-02	1.39	0.00	1.39
112	91	28000	28057g	15.7885	1.2145E-01	+/- 1.616E-03	1.33	0.00	1.33
113	92	28058	16	15.7885	1.7840E-01	+/- 2.374E-03	1.33	0.00	1.33
114	93	28058	103	5.0997	2.0065E+02	+/- 3.327E+00	1.66	0.00	1.66
115	94	28060	103	8.24201	9.6795E+00	+/- 1.350E-01	1.39	0.00	1.39
116	95	29000	27060g	8.51134	1.7478E+00	+/- 4.586E-02	2.62	0.00	2.62
117	96	29000	29062g	14.6445	2.1624E+00	+/- 2.797E-02	1.29	0.00	1.29
118	97	29000	29064g	2.27661	8.3761E+00	+/- 4.452E-01	5.32	0.00	5.32
119	98	29063	1	2.35512	3.5750E+03	+/- 0.000E+00	0.00	0.00	0.00
120	99	29063	2	1.71289	2.5502E+03	+/- 0.000E+00	0.00	0.00	0.00
121	100	29063	16	14.6445	3.1271E+00	+/- 4.045E-02	1.29	0.00	1.29
122	101	29063	102	1.26226	8.6036E+00	+/- 6.413E-01	7.45	0.00	7.45
123	102	29063	107	8.51133	2.5276E+00	+/- 6.631E-02	2.62	0.00	2.62
124	103	29065	16	13.4428	7.8660E+00	+/- 1.283E-01	1.63	0.00	1.63
125	104	30000	29064g	5.03695	3.6318E+01	+/- 5.345E-01	1.47	0.00	1.47
126	105	30000	29067g	7.22002	1.1223E-01	+/- 4.413E-03	3.93	0.00	3.93
127	106	30064	103	5.03688	7.3860E+01	+/- 1.087E+00	1.47	0.00	1.47
128	107	30067	103	6.64696	2.4699E+00	+/- 9.952E-02	4.03	0.00	4.03
129	108	30068	1	2.16255	3.8415E+03	+/- 0.000E+00	0.00	0.00	0.00
130	109	30068	2	1.52932	2.8857E+03	+/- 0.000E+00	0.00	0.00	0.00
131	110	30068	29067g	17.2056	6.7467E-02	+/- 9.847E-03	14.59	0.00	14.59
132	111	33075	16	13.6496	7.8684E+00	+/- 3.442E-01	4.37	0.00	4.37
133	112	39089	16	14.6236	5.4904E+00	+/- 5.875E-02	1.07	0.00	1.07
134	113	40000	40089g	15.1793	2.0218E+00	+/- 1.854E-02	0.92	0.00	0.92
135	114	40090	16	15.1751	3.9233E+00	+/- 3.598E-02	0.92	0.00	0.92
136	115	41093	1	1.77622	5.1790E+03	+/- 0.000E+00	0.00	0.00	0.00

137	116	41093	2	1.24498	3.6739E+03	+/- 0.000E+00	0.00	0.00	0.00
138	117	41093	102	0.72247	1.7154E+01	+/- 3.981E-01	2.32	0.00	2.32
139	118	41093	41093m	3.31489	1.7334E+02	+/- 4.358E+00	2.51	0.00	2.51
140	119	41093	41092m	11.9904	6.9397E+00	+/- 4.957E-02	0.71	0.00	0.71
141	120	41093	41094g	0.72247	4.2840E+00	+/- 9.943E-02	2.32	0.00	2.32
142	121	41093	41094m	0.72247	1.2870E+01	+/- 2.987E-01	2.32	0.00	2.32
143	122	42000	41092m	6.41396	2.5851E+00	+/- 7.268E-02	2.81	0.00	2.81
144	123	42092	41092m	6.41364	1.7789E+01	+/- 5.002E-01	2.81	0.00	2.81
145	124	45103	45103m	3.17234	8.3261E+02	+/- 3.224E+01	3.87	0.00	3.87
146	125	47109	1	1.89999	5.3084E+03	+/- 0.000E+00	0.00	0.00	0.00
147	126	47109	2	1.43398	3.1074E+03	+/- 0.000E+00	0.00	0.00	0.00
148	127	47109	47110n	0.86812	6.8821E+00	+/- 5.675E-01	8.25	0.00	8.25
149	128	48000	1	1.8967	5.3971E+03	+/- 0.000E+00	0.00	0.00	0.00
150	129	48000	2	1.4726	3.7091E+03	+/- 0.000E+00	0.00	0.00	0.00
151	130	48000	101	1.30867	4.9595E+01	+/- 0.000E+00	0.00	0.00	0.00
152	131	49000	49114m	11.6693	2.1035E+01	+/- 5.997E-01	2.85	0.00	2.85
153	132	49113	1	1.97965	5.1485E+03	+/- 0.000E+00	0.00	0.00	0.00
154	133	49113	2	1.55448	3.7923E+03	+/- 0.000E+00	0.00	0.00	0.00
155	134	49113	102	1.26312	1.6419E+02	+/- 0.000E+00	0.00	0.00	0.00
156	135	49113	49113m	3.28212	1.9039E+02	+/- 2.211E+00	1.16	0.00	1.16
157	136	49113	49114g	1.22635	3.2180E+01	+/- 1.114E+00	3.46	0.00	3.46
158	137	49113	49114m	1.27185	1.3201E+02	+/- 4.702E+00	3.56	0.00	3.56
159	138	49115	1	1.98106	5.1482E+03	+/- 0.000E+00	0.00	0.00	0.00
160	139	49115	2	1.55452	3.7948E+03	+/- 0.000E+00	0.00	0.00	0.00
161	140	49115	102	1.24956	1.1802E+02	+/- 0.000E+00	0.00	0.00	0.00
162	141	49115	49115m	3.27005	2.2765E+02	+/- 3.640E+00	1.60	0.00	1.60
163	142	49115	49114m	12.5374	1.6061E+01	+/- 5.901E-01	3.67	0.00	3.67
164	143	49115	49116g	1.18371	2.2499E+01	+/- 5.946E-01	2.64	0.00	2.64
165	144	49115	49116m	1.26525	9.5520E+01	+/- 2.569E+00	2.69	0.00	2.69
166	145	53127	16	12.278	1.9710E+01	+/- 5.080E-01	2.58	0.00	2.58
167	146	57139	1	2.12678	5.5973E+03	+/- 0.000E+00	0.00	0.00	0.00
168	147	57139	2	1.79283	4.0874E+03	+/- 0.000E+00	0.00	0.00	0.00
169	148	57139	102	1.52987	5.5323E+00	+/- 2.868E-01	5.18	0.00	5.18
170	149	59141	16	12.5607	1.9842E+01	+/- 1.706E+00	8.60	0.00	8.60
171	150	64000	1	2.08717	6.3423E+03	+/- 0.000E+00	0.00	0.00	0.00
172	151	64000	2	1.66542	3.6115E+03	+/- 0.000E+00	0.00	0.00	0.00
173	152	64000	101	0.93385	6.7549E+01	+/- 0.000E+00	0.00	0.00	0.00
174	153	69169	16	11.0671	4.4668E+01	+/- 1.182E+00	2.65	0.00	2.65
175	154	69169	17	19.3615	6.6510E-01	+/- 3.390E-02	5.10	0.00	5.10
176	155	73181	1	2.20225	6.7028E+03	+/- 0.000E+00	0.00	0.00	0.00
177	156	73181	2	1.96242	4.1971E+03	+/- 0.000E+00	0.00	0.00	0.00
178	157	73181	102	0.97696	6.1842E+01	+/- 3.243E+00	5.24	0.00	5.24
179	158	74186	1	2.26241	6.7055E+03	+/- 0.000E+00	0.00	0.00	0.00
180	159	74186	2	1.9666	4.1488E+03	+/- 0.000E+00	0.00	0.00	0.00
181	160	74186	102	1.23624	2.5751E+01	+/- 7.116E-01	2.76	0.00	2.76
182	161	79197	1	2.44189	6.5690E+03	+/- 0.000E+00	0.00	0.00	0.00
183	162	79197	2	2.20374	4.3487E+03	+/- 0.000E+00	0.00	0.00	0.00
184	163	79197	16	11.2911	4.1141E+01	+/- 6.553E-01	1.59	0.00	1.59
185	164	79197	102	0.90264	5.5665E+01	+/- 3.002E-01	0.54	0.00	0.54
186	165	80199	80199m	3.90296	3.9104E+02	+/- 1.343E+01	3.44	0.00	3.44
187	166	82204	82204m	6.15785	4.3220E+01	+/- 1.794E+00	4.15	0.00	4.15
188	167	83209	16	10.546	6.3316E+01	+/- 2.107E+00	3.33	0.00	3.33
189	168	83209	17	19.2279	8.2120E-01	+/- 3.244E-02	3.95	0.00	3.95
190	169	83209	37	28.2433	8.0281E-03	+/- 1.695E-03	21.11	0.00	21.11
191	170	83209	152	38.7846	4.7868E-05	+/- 6.947E-06	14.51	0.00	14.51
192	171	90232	1	2.35129	7.5137E+03	+/- 0.000E+00	0.00	0.00	0.00
193	172	90232	2	2.03074	4.4307E+03	+/- 0.000E+00	0.00	0.00	0.00
194	173	90232	18	4.18178	1.1974E+02	+/- 6.870E+00	5.74	0.00	5.74
195	174	90232	102	1.01985	6.7280E+01	+/- 2.413E+00	3.59	0.00	3.59
196	175	92235	1	2.37716	7.5466E+03	+/- 0.000E+00	0.00	0.00	0.00
197	176	92235	18	2.43122	1.2488E+03	+/- 1.507E+01	1.21	0.00	1.21
198	177	92238	1	2.36061	7.5924E+03	+/- 0.000E+00	0.00	0.00	0.00
199	178	92238	2	2.10115	4.4664E+03	+/- 0.000E+00	0.00	0.00	0.00
200	179	92238	16	8.78088	8.9599E+01	+/- 4.562E+00	5.09	0.00	5.09
201	180	92238	18	3.68894	4.2606E+02	+/- 5.224E+00	1.23	0.00	1.23
202	181	92238	102	1.00987	5.0151E+01	+/- 1.088E+00	2.17	0.00	2.17
203	182	93237	1	2.36919	7.3849E+03	+/- 0.000E+00	0.00	0.00	0.00
204	183	93237	2	2.23148	4.0740E+03	+/- 0.000E+00	0.00	0.00	0.00
205	184	93237	18	2.76314	1.4849E+03	+/- 2.543E+01	1.71	0.00	1.71

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    185 94239      1  2.35792 7.5735E+03 +/- 0.000E+00     0.00   0.00   0.00
    186 94239      2  2.27138 4.1073E+03 +/- 0.000E+00     0.00   0.00   0.00
    187 94239     18  2.45857 1.8340E+03 +/- 2.286E+01     1.25   0.00   1.25
    188 95241      1  2.32606 7.5692E+03 +/- 0.000E+00     0.00   0.00   0.00
    189 95241      2  2.29741 4.6071E+03 +/- 0.000E+00     0.00   0.00   0.00
    190 95241     18  2.93687 1.5819E+03 +/- 4.622E+01     2.92   0.00   2.92
```