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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      :
  ..\IRDFF-II.g725
8 Source spectrum file    :
  ..\IRDFF-II_sp.g
9 Reaction rate integ.flag :      1
10 Reaction rate norm. flag :      1
11
12 Spectrum MAT No.       :    9005
13 Spectrum Integral      :    1.000E+00
14 Spectrum average energy [eV] :    7.412E+05
15 Spectrum peak energy [eV] :    1.549E+02
16 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 [%]
22	1	3000	1	0.28914	1.8619E+03 +/- 0.000E+00	0.00	0.00	0.00
23	2	3000	2	0.28648	1.7368E+03 +/- 0.000E+00	0.00	0.00	0.00
24	3	3000	205	0.22618	7.2369E+01 +/- 3.447E-01	0.48	0.00	0.48
25	4	3000	207	0.23089	7.4861E+01 +/- 5.970E-01	0.80	0.00	0.80
26	5	3006	1	0.26479	2.8903E+03 +/- 0.000E+00	0.00	0.00	0.00
27	6	3006	2	0.28547	1.9621E+03 +/- 0.000E+00	0.00	0.00	0.00
28	7	3006	105	0.21708	8.9458E+02 +/- 4.316E+00	0.48	0.00	0.48
29	8	3006	205	0.21708	8.9458E+02 +/- 4.316E+00	0.48	0.00	0.48
30	9	3006	207	0.22221	9.2679E+02 +/- 7.754E+00	0.84	0.00	0.84
31	10	3007	1	0.29293	1.7774E+03 +/- 0.000E+00	0.00	0.00	0.00
32	11	3007	2	0.28658	1.7182E+03 +/- 0.000E+00	0.00	0.00	0.00
33	12	3007	205	5.9732	4.8380E+00 +/- 1.158E-01	2.39	0.00	2.39
34	13	3007	207	5.95916	4.8887E+00 +/- 1.158E-01	2.37	0.00	2.37
35	14	5000	1	0.25594	3.7105E+03 +/- 0.000E+00	0.00	0.00	0.00
36	15	5000	2	0.27982	3.3609E+03 +/- 0.000E+00	0.00	0.00	0.00
37	16	5000	101	0.04707	3.4128E+02 +/- 0.000E+00	0.00	0.00	0.00
38	17	5000	205	1.96917	3.3980E+00 +/- 5.593E-01	16.46	0.00	16.46
39	18	5000	207	0.04966	3.4568E+02 +/- 3.149E+00	0.91	0.00	0.91
40	19	5010	1	0.22544	4.5972E+03 +/- 0.000E+00	0.00	0.00	0.00
41	20	5010	2	0.33717	2.8673E+03 +/- 0.000E+00	0.00	0.00	0.00
42	21	5010	101	0.04706	1.7149E+03 +/- 0.000E+00	0.00	0.00	0.00
43	22	5010	107	0.04559	1.7017E+03 +/- 1.543E+01	0.91	0.00	0.91
44	23	5010	205	1.9685	1.7070E+01 +/- 2.811E+00	16.47	0.00	16.47
45	24	5010	207	0.04963	1.7369E+03 +/- 1.583E+01	0.91	0.00	0.91
46	25	5010	800	0.28088	1.9477E+02 +/- 1.297E+01	6.66	0.00	6.66
47	26	5010	801	0.03566	1.5070E+03 +/- 9.489E+00	0.63	0.00	0.63
48	27	5011	1	0.26647	3.4903E+03 +/- 0.000E+00	0.00	0.00	0.00
49	28	5011	2	0.26564	3.4835E+03 +/- 0.000E+00	0.00	0.00	0.00
50	29	5011	205	12.9335	1.3477E-03 +/- 2.267E-04	16.82	0.00	16.82
51	30	5011	207	11.1881	5.8193E-02 +/- 8.023E-03	13.79	0.00	13.79
52	31	9019	16	14.1936	1.9452E-03 +/- 5.603E-05	2.88	0.00	2.88
53	32	11023	1	0.2339	4.7769E+03 +/- 0.000E+00	0.00	0.00	0.00
54	33	11023	2	0.21696	4.5972E+03 +/- 0.000E+00	0.00	0.00	0.00
55	34	11023	16	15.2912	1.0583E-03 +/- 1.368E-05	1.29	0.00	1.29
56	35	11023	102	3.060-3	1.4976E+00 +/- 6.085E-02	4.06	0.00	4.06
57	36	12000	11024g	8.15876	2.8961E-01 +/- 2.393E-03	0.83	0.00	0.83
58	37	12024	103	8.15848	3.6657E-01 +/- 3.029E-03	0.83	0.00	0.83
59	38	13027	16	15.7805	9.1335E-04 +/- 3.287E-05	3.60	0.00	3.60
60	39	13027	103	5.78171	8.8805E-01 +/- 1.835E-02	2.07	0.00	2.07
61	40	13027	107	8.48967	1.7342E-01 +/- 1.272E-03	0.73	0.00	0.73
62	41	13027	11024g	8.48967	1.7342E-01 +/- 1.272E-03	0.73	0.00	0.73
63	42	13027	13026g	15.638	8.2885E-04 +/- 3.130E-05	3.78	0.00	3.78
64	43	13027	13026m	17.9071	8.4500E-05 +/- 9.889E-06	11.70	0.00	11.70
65	44	14000	13028g	7.14875	1.1913E+00 +/- 2.978E-02	2.50	0.00	2.50
66	45	14028	103	7.14867	1.2918E+00 +/- 3.230E-02	2.50	0.00	2.50
67	46	14029	13028g	15.7397	1.0601E-03 +/- 4.757E-05	4.49	0.00	4.49

68	47	15031	103	3.55306	7.9989E+00	+/-	2.776E-01	3.47	0.00	3.47
69	48	16000	15032g	3.92907	1.4389E+01	+/-	3.606E-01	2.51	0.00	2.51
70	49	16032	103	3.92907	1.5148E+01	+/-	3.796E-01	2.51	0.00	2.51
71	50	21045	1	0.10291	5.4869E+03	+/-	0.000E+00	0.00	0.00	0.00
72	51	21045	2	0.09109	5.2140E+03	+/-	0.000E+00	0.00	0.00	0.00
73	52	21045	102	0.04316	2.4104E+01	+/-	1.395E+00	5.79	0.00	5.79
74	53	22000	21046g	0	2.1229E-01	+/-	6.634E-03	3.12	0.00	3.12
75	54	22000	21047g	0	3.1339E-01	+/-	8.574E-03	2.74	0.00	2.74
76	55	22000	21048g	0	5.3949E-02	+/-	2.985E-03	5.53	0.00	5.53
77	56	22000	22045g	15.7727	1.2347E-04	+/-	5.449E-06	4.41	0.00	4.41
78	57	22046	16	15.7727	1.4966E-03	+/-	6.605E-05	4.41	0.00	4.41
79	58	22046	103	6.00923	2.5711E+00	+/-	8.041E-02	3.13	0.00	3.13
80	59	22047	103	3.51194	4.2070E+00	+/-	1.152E-01	2.74	0.00	2.74
81	60	22048	103	8.15593	7.3158E-02	+/-	4.049E-03	5.53	0.00	5.53
82	61	23051	107	9.63306	6.0129E-03	+/-	1.928E-04	3.21	0.00	3.21
83	62	23051	21048g	9.63306	6.0129E-03	+/-	1.928E-04	3.21	0.00	3.21
84	63	24000	24051g	14.6596	1.0216E-02	+/-	2.774E-04	2.72	0.00	2.72
85	64	25055	1	0.02658	8.1816E+03	+/-	0.000E+00	0.00	0.00	0.00
86	65	25055	2	0.01793	7.5551E+03	+/-	0.000E+00	0.00	0.00	0.00
87	66	25055	16	13.0375	5.7703E-02	+/-	1.497E-03	2.59	0.00	2.59
88	67	25055	102	5.819-4	3.9001E+01	+/-	1.883E+00	4.83	0.00	4.83
89	68	26000	24051g	0	1.1619E-02	+/-	4.352E-04	3.75	0.00	3.75
90	69	26000	25054g	0	1.0144E+00	+/-	3.177E-02	3.13	0.00	3.13
91	70	26000	25056g	0	2.3868E-01	+/-	6.398E-03	2.68	0.00	2.68
92	71	26000	26053g	16.7207	2.4590E-05	+/-	1.221E-06	4.97	0.00	4.97
93	72	26054	1	0.20211	5.6315E+03	+/-	0.000E+00	0.00	0.00	0.00
94	73	26054	2	0.19817	5.5010E+03	+/-	0.000E+00	0.00	0.00	0.00
95	74	26054	16	16.7207	4.2071E-04	+/-	2.090E-05	4.97	0.00	4.97
96	75	26054	103	4.29731	1.7355E+01	+/-	5.436E-01	3.13	0.00	3.13
97	76	26054	107	7.29549	1.9879E-01	+/-	7.446E-03	3.75	0.00	3.75
98	77	26056	103	7.43731	2.6011E-01	+/-	6.974E-03	2.68	0.00	2.68
99	78	26058	1	0.25483	6.8748E+03	+/-	0.000E+00	0.00	0.00	0.00
100	79	26058	2	0.18953	5.9418E+03	+/-	0.000E+00	0.00	0.00	0.00
101	80	26058	102	0.04846	7.6660E+00	+/-	6.680E-01	8.71	0.00	8.71
102	81	27059	1	0.11227	6.8254E+03	+/-	0.000E+00	0.00	0.00	0.00
103	82	27059	2	0.10589	6.5562E+03	+/-	0.000E+00	0.00	0.00	0.00
104	83	27059	16	13.2678	4.8882E-02	+/-	9.034E-04	1.85	0.00	1.85
105	84	27059	102	1.334-4	8.8158E+01	+/-	6.600E-01	0.75	0.00	0.75
106	85	27059	103	5.84753	3.1846E-01	+/-	1.138E-02	3.57	0.00	3.57
107	86	27059	107	8.18519	3.8024E-02	+/-	1.428E-03	3.75	0.00	3.75
108	87	27059	25056g	8.18519	3.8024E-02	+/-	1.428E-03	3.75	0.00	3.75
109	88	28000	27058g	0	1.6456E+01	+/-	2.840E-01	1.73	0.00	1.73
110	89	28000	27060g	0	1.3262E-01	+/-	2.483E-03	1.87	0.00	1.87
111	90	28000	28057g	14.8368	7.3839E-04	+/-	9.321E-06	1.26	0.00	1.26
112	91	28058	16	14.8368	1.0846E-03	+/-	1.369E-05	1.26	0.00	1.26
113	92	28058	103	4.00569	2.4172E+01	+/-	4.172E-01	1.73	0.00	1.73
114	93	28060	103	6.93489	5.0566E-01	+/-	9.470E-03	1.87	0.00	1.87
115	94	29000	27060g	7.13455	8.5891E-02	+/-	2.612E-03	3.04	0.00	3.04
116	95	29000	29062g	14.0261	1.6259E-02	+/-	2.136E-04	1.31	0.00	1.31
117	96	29000	29064g	0.01026	2.9954E+01	+/-	1.995E+00	6.66	0.00	6.66
118	97	29063	1	0.2147	5.4132E+03	+/-	0.000E+00	0.00	0.00	0.00
119	98	29063	2	0.20133	5.1586E+03	+/-	0.000E+00	0.00	0.00	0.00
120	99	29063	16	14.0261	2.3513E-02	+/-	3.089E-04	1.31	0.00	1.31
121	100	29063	102	0.01019	4.3282E+01	+/-	2.898E+00	6.70	0.00	6.70
122	101	29063	107	7.13455	1.2421E-01	+/-	3.777E-03	3.04	0.00	3.04
123	102	29065	16	12.4931	8.1461E-02	+/-	1.558E-03	1.91	0.00	1.91
124	103	30000	29064g	4.02719	4.2306E+00	+/-	7.279E-02	1.72	0.00	1.72
125	104	30000	29067g	4.22685	9.7215E-03	+/-	5.347E-04	5.50	0.00	5.50
126	105	30064	103	4.02718	8.6040E+00	+/-	1.480E-01	1.72	0.00	1.72
127	106	30067	103	4.20794	2.3932E-01	+/-	1.324E-02	5.53	0.00	5.53
128	107	30068	1	0.22245	6.3199E+03	+/-	0.000E+00	0.00	0.00	0.00
129	108	30068	2	0.21266	6.1269E+03	+/-	0.000E+00	0.00	0.00	0.00
130	109	30068	29067g	15.2002	3.0762E-04	+/-	4.659E-05	15.15	0.00	15.15
131	110	33075	16	13.0463	7.5266E-02	+/-	4.552E-03	6.05	0.00	6.05
132	111	39089	16	14.0799	4.0888E-02	+/-	4.555E-04	1.11	0.00	1.11
133	112	40000	40089g	14.4511	1.3801E-02	+/-	1.183E-04	0.86	0.00	0.86
134	113	40090	16	14.4511	2.6825E-02	+/-	2.299E-04	0.86	0.00	0.86
135	114	41093	1	0.30472	7.9087E+03	+/-	0.000E+00	0.00	0.00	0.00
136	115	41093	2	0.2894	7.4222E+03	+/-	0.000E+00	0.00	0.00	0.00

137	116	41093	102	0.02513	1.2003E+02	+/-	1.903E+00	1.59	0.00	1.59
138	117	41093	41093m	2.04689	4.3825E+01	+/-	1.167E+00	2.66	0.00	2.66
139	118	41093	41092m	11.1385	1.0941E-01	+/-	9.606E-04	0.88	0.00	0.88
140	119	41093	41094g	0.02513	2.9976E+01	+/-	4.751E-01	1.59	0.00	1.59
141	120	41093	41094m	0.02513	9.0056E+01	+/-	1.427E+00	1.59	0.00	1.59
142	121	42000	41092m	5.29846	2.1806E-01	+/-	8.256E-03	3.79	0.00	3.79
143	122	42092	41092m	5.29846	1.5007E+00	+/-	5.682E-02	3.79	0.00	3.79
144	123	45103	45103m	1.31941	2.8109E+02	+/-	1.170E+01	4.16	0.00	4.16
145	124	47109	1	0.31045	7.4583E+03	+/-	0.000E+00	0.00	0.00	0.00
146	125	47109	2	0.27003	6.0878E+03	+/-	0.000E+00	0.00	0.00	0.00
147	126	47109	47110n	0.10272	2.9625E+01	+/-	1.901E+00	6.42	0.00	6.42
148	127	48000	1	0.32992	7.1923E+03	+/-	0.000E+00	0.00	0.00	0.00
149	128	48000	2	0.30067	6.4889E+03	+/-	0.000E+00	0.00	0.00	0.00
150	129	48000	101	0.07531	1.7885E+02	+/-	0.000E+00	0.00	0.00	0.00
151	130	49000	49114m	0.08695	1.6935E+01	+/-	4.500E-01	2.66	0.00	2.66
152	131	49113	1	0.33502	6.4526E+03	+/-	0.000E+00	0.00	0.00	0.00
153	132	49113	2	0.33702	5.7124E+03	+/-	0.000E+00	0.00	0.00	0.00
154	133	49113	102	0.06892	5.2134E+02	+/-	0.000E+00	0.00	0.00	0.00
155	134	49113	49113m	2.37016	4.1640E+01	+/-	5.046E-01	1.21	0.00	1.21
156	135	49113	49114g	0.0305	1.3146E+02	+/-	3.999E+00	3.04	0.00	3.04
157	136	49113	49114m	0.08343	3.8988E+02	+/-	1.049E+01	2.69	0.00	2.69
158	137	49115	1	0.34708	6.3080E+03	+/-	0.000E+00	0.00	0.00	0.00
159	138	49115	2	0.34181	5.6706E+03	+/-	0.000E+00	0.00	0.00	0.00
160	139	49115	102	0.0771	3.7956E+02	+/-	0.000E+00	0.00	0.00	0.00
161	140	49115	49115m	2.25763	5.1996E+01	+/-	8.858E-01	1.70	0.00	1.70
162	141	49115	49114m	11.5327	2.1871E-01	+/-	1.197E-02	5.47	0.00	5.47
163	142	49115	49116g	0.07347	7.8431E+01	+/-	1.871E+00	2.39	0.00	2.39
164	143	49115	49116m	0.0781	3.0113E+02	+/-	7.100E+00	2.36	0.00	2.36
165	144	53127	16	11.3468	2.8703E-01	+/-	9.457E-03	3.29	0.00	3.29
166	145	57139	1	0.37065	6.0115E+03	+/-	0.000E+00	0.00	0.00	0.00
167	146	57139	2	0.32918	5.4890E+03	+/-	0.000E+00	0.00	0.00	0.00
168	147	57139	102	0.01391	2.2029E+01	+/-	1.596E+00	7.25	0.00	7.25
169	148	59141	16	11.5701	2.6621E-01	+/-	3.212E-02	12.06	0.00	12.06
170	149	64000	1	0.27874	8.3901E+03	+/-	0.000E+00	0.00	0.00	0.00
171	150	64000	2	0.22827	6.5863E+03	+/-	0.000E+00	0.00	0.00	0.00
172	151	64000	101	0.01269	4.7015E+02	+/-	0.000E+00	0.00	0.00	0.00
173	152	69169	16	10.2534	9.3944E-01	+/-	3.206E-02	3.41	0.00	3.41
174	153	69169	17	17.9249	1.3851E-03	+/-	1.043E-04	7.53	0.00	7.53
175	154	73181	1	0.26833	8.4535E+03	+/-	0.000E+00	0.00	0.00	0.00
176	155	73181	2	0.23083	6.4008E+03	+/-	0.000E+00	0.00	0.00	0.00
177	156	73181	102	3.747-3	5.0045E+02	+/-	1.928E+01	3.85	0.00	3.85
178	157	74186	1	0.23547	8.9685E+03	+/-	0.000E+00	0.00	0.00	0.00
179	158	74186	2	0.18181	7.7005E+03	+/-	0.000E+00	0.00	0.00	0.00
180	159	74186	102	6.186-3	1.3410E+02	+/-	1.639E+00	1.22	0.00	1.22
181	160	79197	1	0.21807	8.6858E+03	+/-	0.000E+00	0.00	0.00	0.00
182	161	79197	2	0.18531	7.3414E+03	+/-	0.000E+00	0.00	0.00	0.00
183	162	79197	16	10.4015	8.1729E-01	+/-	1.593E-02	1.95	0.00	1.95
184	163	79197	102	7.076-3	4.0915E+02	+/-	1.033E+01	2.52	0.00	2.52
185	164	80199	80199m	2.59657	7.5164E+01	+/-	2.670E+00	3.55	0.00	3.55
186	165	82204	82204m	4.95152	3.9234E+00	+/-	1.812E-01	4.62	0.00	4.62
187	166	83209	16	9.65682	1.5810E+00	+/-	6.681E-02	4.23	0.00	4.23
188	167	83209	17	17.9167	1.8031E-03	+/-	1.162E-04	6.44	0.00	6.44
189	168	90232	1	0.25325	1.0038E+04	+/-	0.000E+00	0.00	0.00	0.00
190	169	90232	2	0.20614	8.3253E+03	+/-	0.000E+00	0.00	0.00	0.00
191	170	90232	18	2.65079	1.9725E+01	+/-	1.143E+00	5.79	0.00	5.79
192	171	90232	102	0.05042	2.7415E+02	+/-	3.376E+00	1.23	0.00	1.23
193	172	92235	1	0.2527	9.9934E+03	+/-	0.000E+00	0.00	0.00	0.00
194	173	92235	18	0.21881	1.5758E+03	+/-	1.676E+01	1.06	0.00	1.06
195	174	92238	1	0.25692	9.9898E+03	+/-	0.000E+00	0.00	0.00	0.00
196	175	92238	2	0.20242	8.1557E+03	+/-	0.000E+00	0.00	0.00	0.00
197	176	92238	16	8.12068	3.7081E+00	+/-	1.890E-01	5.10	0.00	5.10
198	177	92238	18	2.45115	7.8749E+01	+/-	9.628E-01	1.22	0.00	1.22
199	178	92238	102	0.034	2.2513E+02	+/-	2.551E+00	1.13	0.00	1.13
200	179	93237	1	0.24833	9.8564E+03	+/-	0.000E+00	0.00	0.00	0.00
201	180	93237	2	0.20671	7.0364E+03	+/-	0.000E+00	0.00	0.00	0.00
202	181	93237	18	1.13868	5.8676E+02	+/-	1.308E+01	2.23	0.00	2.23
203	182	94239	1	0.25391	1.0118E+04	+/-	0.000E+00	0.00	0.00	0.00
204	183	94239	2	0.21243	6.9020E+03	+/-	0.000E+00	0.00	0.00	0.00
205	184	94239	18	0.35635	1.7762E+03	+/-	2.091E+01	1.18	0.00	1.18

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206	185	95241	1	0.25357	1.0343E+04	+/-	0.000E+00	0.00	0.00	0.00
207	186	95241	2	0.2248	7.6725E+03	+/-	0.000E+00	0.00	0.00	0.00
208	187	95241	18	1.55153	4.7906E+02	+/-	1.136E+01	2.37	0.00	2.37
209										
210										