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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.       :    9020
16 Spectrum Integral      :    5.945E-03
17 Spectrum average energy [eV] :    1.864E+06
18 Spectrum peak energy [eV] :    6.748E-01
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	1.56266	1.0959E+01 +/- 4.590E-03	0.00	0.04	0.04
23	2	3000	2	1.53613	9.6103E+00 +/- 4.116E-03	0.00	0.04	0.04
24	3	3000	205	0.20565	4.7871E-01 +/- 3.088E-03	0.64	0.10	0.65
25	4	3000	207	0.27744	5.3771E-01 +/- 1.208E-02	2.25	0.09	2.25
26	5	3006	1	0.63317	1.4395E+01 +/- 7.550E-03	0.00	0.05	0.05
27	6	3006	2	1.12549	8.6383E+00 +/- 3.516E-03	0.00	0.04	0.04
28	7	3006	105	3.872-5	4.9501E+00 +/- 2.277E-02	0.44	0.12	0.46
29	8	3006	205	3.872-5	4.9501E+00 +/- 2.277E-02	0.44	0.12	0.46
30	9	3006	207	0.01158	5.7226E+00 +/- 1.561E-01	2.73	0.11	2.73
31	10	3007	1	1.63419	1.0677E+01 +/- 4.582E-03	0.00	0.04	0.04
32	11	3007	2	1.56093	9.6902E+00 +/- 4.177E-03	0.00	0.04	0.04
33	12	3007	205	5.90867	1.1146E-01 +/- 2.769E-03	2.48	0.05	2.48
34	13	3007	207	5.90443	1.1186E-01 +/- 2.769E-03	2.48	0.05	2.48
35	14	5000	1	0.87839	1.7625E+01 +/- 8.230E-03	0.00	0.05	0.05
36	15	5000	2	1.1507	1.4505E+01 +/- 6.223E-03	0.00	0.04	0.04
37	16	5000	101	4.349-6	2.9543E+00 +/- 4.868E-03	0.00	0.16	0.16
38	17	5000	205	3.42695	5.2431E-02 +/- 6.570E-03	12.53	0.04	12.53
39	18	5000	207	4.624-6	3.0055E+00 +/- 5.430E-02	1.80	0.16	1.81
40	19	5010	1	0.25612	2.7797E+01 +/- 2.537E-02	0.00	0.09	0.09
41	20	5010	2	0.95888	1.2749E+01 +/- 5.221E-03	0.00	0.04	0.04
42	21	5010	101	4.348-6	1.4844E+01 +/- 2.446E-02	0.00	0.16	0.16
43	22	5010	107	4.076-6	1.4550E+01 +/- 2.783E-01	1.91	0.17	1.91
44	23	5010	205	3.42573	2.6336E-01 +/- 3.302E-02	12.54	0.04	12.54
45	24	5010	207	4.619-6	1.5098E+01 +/- 2.729E-01	1.80	0.16	1.81
46	25	5010	800	0.56592	1.8185E+00 +/- 2.521E-01	13.86	0.09	13.86
47	26	5010	801	3.310-6	1.2732E+01 +/- 1.486E-01	1.15	0.18	1.17
48	27	5011	1	1.2046	1.5098E+01 +/- 6.551E-03	0.00	0.04	0.04
49	28	5011	2	1.19217	1.4941E+01 +/- 6.540E-03	0.00	0.04	0.04
50	29	5011	205	12.6174	2.7909E-05 +/- 4.710E-06	16.87	0.33	16.88
51	30	5011	207	11.2189	1.2140E-03 +/- 1.700E-04	14.00	0.18	14.00
52	31	9019	16	13.788	3.7914E-05 +/- 1.182E-06	3.08	0.49	3.12
53	32	11023	1	1.04204	2.0252E+01 +/- 9.628E-03	0.00	0.05	0.05
54	33	11023	2	0.89514	1.7389E+01 +/- 8.682E-03	0.00	0.05	0.05
55	34	11023	16	15.3217	1.7051E-05 +/- 2.696E-07	1.29	0.92	1.58
56	35	11023	102	2.825-3	4.0993E-03 +/- 1.265E-04	3.08	0.13	3.09
57	36	12000	11024g	8.11491	6.1718E-03 +/- 5.162E-05	0.83	0.08	0.84
58	37	12024	103	8.11468	7.8123E-03 +/- 6.534E-05	0.83	0.08	0.84
59	38	13027	16	15.8408	1.4446E-05 +/- 5.336E-07	3.52	1.13	3.69
60	39	13027	103	5.71171	2.0526E-02 +/- 4.231E-04	2.06	0.05	2.06
61	40	13027	107	8.44803	3.6876E-03 +/- 2.756E-05	0.74	0.08	0.75
62	41	13027	11024g	8.44803	3.6876E-03 +/- 2.756E-05	0.74	0.08	0.75
63	42	13027	13026g	15.7013	1.3169E-05 +/- 5.107E-07	3.73	1.07	3.88
64	43	13027	13026m	17.4158	1.2765E-06 +/- 1.352E-07	10.38	2.11	10.59
65	44	14000	13028g	7.08719	2.6188E-02 +/- 6.620E-04	2.53	0.06	2.53
66	45	14028	103	7.08714	2.8395E-02 +/- 7.179E-04	2.53	0.06	2.53
67	46	14029	13028g	15.479	1.7919E-05 +/- 7.992E-07	4.35	0.98	4.46

68	47	15031	103	3.60515	1.8756E-01	+/-	6.518E-03	3.47	0.05	3.47
69	48	16000	15032g	3.94269	3.4035E-01	+/-	8.616E-03	2.53	0.05	2.53
70	49	16032	103	3.94268	3.5830E-01	+/-	9.071E-03	2.53	0.05	2.53
71	50	21045	1	1.32132	2.1837E+01	+/-	9.089E-03	0.00	0.04	0.04
72	51	21045	2	1.03042	1.7713E+01	+/-	7.595E-03	0.00	0.04	0.04
73	52	21045	102	6.286-6	1.1415E-01	+/-	6.255E-03	5.48	0.15	5.48
74	53	22000	21046g	0	4.8901E-03	+/-	1.558E-04	3.18	0.05	3.19
75	54	22000	21047g	0	7.1475E-03	+/-	1.986E-04	2.78	0.05	2.78
76	55	22000	21048g	0	1.1584E-03	+/-	6.483E-05	5.60	0.07	5.60
77	56	22000	22045g	15.8366	1.9575E-06	+/-	8.902E-08	4.41	1.12	4.55
78	57	22046	16	15.8366	2.3728E-05	+/-	1.079E-06	4.41	1.12	4.55
79	58	22046	103	5.88498	5.9235E-02	+/-	1.888E-03	3.19	0.05	3.19
80	59	22047	103	3.60528	9.5982E-02	+/-	2.670E-03	2.78	0.05	2.78
81	60	22048	103	8.08343	1.5709E-03	+/-	8.795E-05	5.60	0.07	5.60
82	61	23051	107	9.65616	1.2588E-04	+/-	4.066E-06	3.23	0.11	3.23
83	62	23051	21048g	9.65616	1.2588E-04	+/-	4.066E-06	3.23	0.11	3.23
84	63	24000	24051g	14.5028	1.7848E-04	+/-	4.879E-06	2.65	0.66	2.73
85	64	25055	1	0.95659	2.6669E+01	+/-	2.912E-02	0.00	0.11	0.11
86	65	25055	2	0.65481	2.0844E+01	+/-	2.811E-02	0.00	0.13	0.13
87	66	25055	16	12.7259	1.2121E-03	+/-	3.152E-05	2.58	0.33	2.60
88	67	25055	102	3.332-4	1.2672E-01	+/-	6.496E-03	5.11	0.36	5.13
89	68	26000	24051g	0	2.5544E-04	+/-	1.009E-05	3.95	0.06	3.95
90	69	26000	25054g	0	2.3952E-02	+/-	7.572E-04	3.16	0.05	3.16
91	70	26000	25056g	0	5.2090E-03	+/-	1.405E-04	2.70	0.06	2.70
92	71	26000	26053g	16.3487	3.8469E-07	+/-	2.025E-08	5.09	1.34	5.26
93	72	26054	1	1.22117	2.2631E+01	+/-	9.938E-03	0.00	0.04	0.04
94	73	26054	2	0.99951	1.9852E+01	+/-	9.242E-03	0.00	0.05	0.05
95	74	26054	16	16.3487	6.5815E-06	+/-	3.465E-07	5.09	1.34	5.26
96	75	26054	103	4.27913	4.0978E-01	+/-	1.296E-02	3.16	0.05	3.16
97	76	26054	107	7.21101	4.3702E-03	+/-	1.726E-04	3.95	0.06	3.95
98	77	26056	103	7.36368	5.6769E-03	+/-	1.531E-04	2.70	0.06	2.70
99	78	26058	1	1.1158	2.9364E+01	+/-	1.200E-02	0.00	0.04	0.04
100	79	26058	2	0.88372	2.0306E+01	+/-	7.923E-03	0.00	0.04	0.04
101	80	26058	102	0.12539	2.3020E-02	+/-	1.529E-03	6.64	0.29	6.64
102	81	27059	1	0.80282	2.9098E+01	+/-	6.329E-02	0.00	0.22	0.22
103	82	27059	2	0.60097	2.4482E+01	+/-	5.804E-02	0.00	0.24	0.24
104	83	27059	16	12.8978	1.0288E-03	+/-	1.817E-05	1.73	0.36	1.77
105	84	27059	17	19.8453	4.1928E-09	+/-	1.954E-09	43.63	16.38	46.60
106	85	27059	102	1.303-4	6.1813E-01	+/-	6.979E-03	0.76	0.83	1.13
107	86	27059	103	5.72238	7.3528E-03	+/-	2.649E-04	3.60	0.05	3.60
108	87	27059	107	8.10949	8.1709E-04	+/-	3.240E-05	3.97	0.07	3.97
109	88	27059	25056g	8.10949	8.1709E-04	+/-	3.240E-05	3.97	0.07	3.97
110	89	28000	27058g	0	3.8421E-01	+/-	6.711E-03	1.75	0.05	1.75
111	90	28000	27060g	0	2.9540E-03	+/-	5.795E-05	1.96	0.05	1.96
112	91	28000	28057g	14.7483	1.2470E-05	+/-	1.866E-07	1.31	0.73	1.50
113	92	28058	16	14.7483	1.8318E-05	+/-	2.741E-07	1.31	0.73	1.50
114	93	28058	103	4.02718	5.6437E-01	+/-	9.858E-03	1.75	0.05	1.75
115	94	28060	103	6.82679	1.1264E-02	+/-	2.210E-04	1.96	0.05	1.96
116	95	29000	27060g	7.03113	1.9036E-03	+/-	5.878E-05	3.09	0.06	3.09
117	96	29000	29062g	13.6181	3.2497E-04	+/-	5.061E-06	1.49	0.47	1.56
118	97	29000	29064g	0.24315	7.4977E-02	+/-	4.397E-03	5.86	0.34	5.86
119	98	29063	1	1.1906	2.2552E+01	+/-	8.792E-03	0.00	0.04	0.04
120	99	29063	2	0.8913	1.8182E+01	+/-	7.284E-03	0.00	0.04	0.04
121	100	29063	16	13.6181	4.6995E-04	+/-	7.320E-06	1.49	0.47	1.56
122	101	29063	102	0.23462	1.0766E-01	+/-	6.374E-03	5.91	0.34	5.92
123	102	29063	107	7.03113	2.7528E-03	+/-	8.500E-05	3.09	0.06	3.09
124	103	29065	16	12.4905	1.7073E-03	+/-	3.438E-05	1.99	0.30	2.01
125	104	30000	29064g	4.01959	1.0027E-01	+/-	1.745E-03	1.74	0.05	1.74
126	105	30000	29067g	4.39433	2.0897E-04	+/-	1.150E-05	5.50	0.04	5.50
127	106	30064	103	4.01959	2.0392E-01	+/-	3.548E-03	1.74	0.05	1.74
128	107	30067	103	4.38195	5.1487E-03	+/-	2.846E-04	5.53	0.04	5.53
129	108	30068	1	1.04139	2.5780E+01	+/-	1.932E-02	0.00	0.07	0.07
130	109	30068	2	0.82442	2.2014E+01	+/-	1.853E-02	0.00	0.08	0.08
131	110	30068	29067g	15.039	5.2601E-06	+/-	8.102E-07	15.38	0.83	15.40
132	111	33075	16	12.7289	1.5875E-03	+/-	9.984E-05	6.28	0.33	6.29
133	112	39089	16	13.7064	8.1293E-04	+/-	1.162E-05	1.34	0.49	1.43
134	113	40000	40089g	14.2232	2.5088E-04	+/-	2.785E-06	0.94	0.60	1.11
135	114	40090	16	14.2232	4.8762E-04	+/-	5.413E-06	0.94	0.60	1.11
136	115	41093	1	1.05413	3.5394E+01	+/-	1.448E-02	0.00	0.04	0.04

137	116	41093	2	0.81395	2.8253E+01	+/-	1.187E-02	0.00	0.04	0.04
138	117	41093	102	0.25538	2.4005E-01	+/-	4.347E-03	1.81	0.13	1.81
139	118	41093	41093m	2.53273	7.8102E-01	+/-	2.067E-02	2.65	0.05	2.65
140	119	41093	41092m	11.157	2.3097E-03	+/-	2.062E-05	0.87	0.19	0.89
141	120	41093	41094g	0.25538	5.9949E-02	+/-	1.086E-03	1.81	0.13	1.81
142	121	41093	41094m	0.25538	1.8010E-01	+/-	3.261E-03	1.81	0.13	1.81
143	122	42000	41092m	5.20002	5.0916E-03	+/-	1.954E-04	3.84	0.05	3.84
144	123	42092	41092m	5.20002	3.5042E-02	+/-	1.345E-03	3.84	0.05	3.84
145	124	45103	45103m	2.19322	3.9622E+00	+/-	1.568E-01	3.96	0.05	3.96
146	125	47109	1	0.72134	4.7396E+01	+/-	1.416E-01	0.00	0.30	0.30
147	126	47109	2	0.80973	2.4169E+01	+/-	1.533E-02	0.00	0.06	0.06
148	127	47109	47110n	5.196-6	5.8003E-01	+/-	3.892E-02	6.63	1.03	6.71
149	128	48000	1	1.17022	3.6322E+01	+/-	1.542E-02	0.00	0.04	0.04
150	129	48000	2	0.95051	2.7371E+01	+/-	1.166E-02	0.00	0.04	0.04
151	130	48000	101	1.681-4	9.1961E-01	+/-	2.457E-03	0.00	0.27	0.27
152	131	49000	49114m	4.312-5	1.2121E-01	+/-	6.253E-03	5.15	0.37	5.16
153	132	49113	1	1.16571	3.5922E+01	+/-	2.159E-02	0.00	0.06	0.06
154	133	49113	2	1.07742	2.7389E+01	+/-	1.229E-02	0.00	0.04	0.04
155	134	49113	102	2.492-5	3.7803E+00	+/-	1.532E-02	0.00	0.41	0.41
156	135	49113	49113m	2.6082	8.3849E-01	+/-	1.002E-02	1.19	0.05	1.19
157	136	49113	49114g	1.493-5	1.0573E+00	+/-	6.865E-02	6.48	0.47	6.49
158	137	49113	49114m	3.259-5	2.7230E+00	+/-	1.456E-01	5.34	0.38	5.35
159	138	49115	1	0.39656	5.6903E+01	+/-	2.309E-01	0.00	0.41	0.41
160	139	49115	2	1.03834	2.8110E+01	+/-	1.527E-02	0.00	0.05	0.05
161	140	49115	102	1.458-6	2.3650E+01	+/-	2.213E-01	0.00	0.94	0.94
162	141	49115	49115m	2.54344	1.0150E+00	+/-	1.711E-02	1.68	0.05	1.69
163	142	49115	49114m	11.6201	4.5861E-03	+/-	2.492E-04	5.43	0.22	5.43
164	143	49115	49116g	1.458-6	4.9513E+00	+/-	1.547E-01	2.98	0.94	3.13
165	144	49115	49116m	1.458-6	1.8699E+01	+/-	5.822E-01	2.97	0.93	3.11
166	145	53127	16	11.4018	6.0176E-03	+/-	1.941E-04	3.22	0.21	3.23
167	146	57139	1	1.41574	3.5665E+01	+/-	1.562E-02	0.00	0.04	0.04
168	147	57139	2	1.21142	2.8315E+01	+/-	1.244E-02	0.00	0.04	0.04
169	148	57139	102	7.457-5	1.3110E-01	+/-	5.525E-03	4.16	0.69	4.21
170	149	59141	16	11.6666	5.5598E-03	+/-	6.644E-04	11.95	0.23	11.95
171	150	64000	1	1.17705	4.4541E+01	+/-	2.992E-02	0.00	0.07	0.07
172	151	64000	2	1.00057	2.6509E+01	+/-	1.084E-02	0.00	0.04	0.04
173	152	64000	101	7.608-6	3.8324E+00	+/-	2.405E-02	0.00	0.63	0.63
174	153	69169	16	10.2139	1.9744E-02	+/-	6.724E-04	3.40	0.14	3.41
175	154	69169	17	17.9663	1.9860E-05	+/-	1.429E-06	6.66	2.72	7.19
176	155	73181	1	1.18642	4.8008E+01	+/-	4.613E-02	0.00	0.10	0.10
177	156	73181	2	1.20631	2.9345E+01	+/-	1.313E-02	0.00	0.04	0.04
178	157	73181	102	4.490-6	5.4563E+00	+/-	1.890E-01	3.39	0.72	3.46
179	158	74186	1	0.53889	6.5930E+01	+/-	3.305E-01	0.00	0.50	0.50
180	159	74186	2	0.21884	4.9142E+01	+/-	2.865E-01	0.00	0.58	0.58
181	160	74186	102	1.864-5	3.5105E+00	+/-	1.535E-01	4.19	1.25	4.37
182	161	79197	1	0.8954	5.3071E+01	+/-	1.532E-01	0.00	0.29	0.29
183	162	79197	2	1.116	3.0676E+01	+/-	2.031E-02	0.00	0.07	0.07
184	163	79197	16	10.3578	1.7202E-02	+/-	3.377E-04	1.96	0.14	1.96
185	164	79197	102	4.897-6	1.1469E+01	+/-	2.614E-01	1.95	1.18	2.28
186	165	80199	80199m	2.9129	1.5351E+00	+/-	5.643E-02	3.68	0.05	3.68
187	166	82204	82204m	4.84691	9.2497E-02	+/-	4.311E-03	4.66	0.05	4.66
188	167	83209	16	9.6959	3.3036E-02	+/-	1.388E-03	4.20	0.12	4.20
189	168	83209	17	17.6664	2.6729E-05	+/-	1.751E-06	6.11	2.37	6.55
190	169	90232	1	1.30546	4.8001E+01	+/-	1.984E-02	0.00	0.04	0.04
191	170	90232	2	0.93664	3.1033E+01	+/-	1.192E-02	0.00	0.04	0.04
192	171	90232	18	2.81559	4.2883E-01	+/-	2.484E-02	5.79	0.05	5.79
193	172	90232	102	3.244-3	1.2009E+00	+/-	1.912E-02	1.54	0.39	1.59
194	173	92235	1	1.25543	4.9607E+01	+/-	1.946E-02	0.00	0.04	0.04
195	174	92235	18	1.07952	9.0891E+00	+/-	8.808E-02	0.97	0.05	0.97
196	175	92238	1	1.24377	5.0167E+01	+/-	3.109E-02	0.00	0.06	0.06
197	176	92238	2	0.92773	3.1473E+01	+/-	1.491E-02	0.00	0.05	0.05
198	177	92238	16	8.07896	7.8885E-02	+/-	4.021E-03	5.10	0.08	5.10
199	178	92238	18	2.61344	1.6832E+00	+/-	2.063E-02	1.22	0.05	1.23
200	179	92238	102	2.088-5	2.1894E+00	+/-	2.766E-02	0.95	0.83	1.26
201	180	93237	1	1.16038	5.0922E+01	+/-	2.622E-02	0.00	0.05	0.05
202	181	93237	2	1.05067	2.7270E+01	+/-	9.871E-03	0.00	0.04	0.04
203	182	93237	18	1.89863	7.5985E+00	+/-	1.283E-01	1.69	0.05	1.69
204	183	94239	1	1.20041	5.0926E+01	+/-	2.236E-02	0.00	0.04	0.04
205	184	94239	2	1.07899	2.7179E+01	+/-	9.883E-03	0.00	0.04	0.04

206	185	94239	18	1.24021	1.2790E+01	+/-	1.415E-01	1.10	0.07	1.11
207	186	95241	1	1.00762	5.5608E+01	+/-	4.134E-02	0.00	0.07	0.07
208	187	95241	2	1.05393	3.0276E+01	+/-	1.092E-02	0.00	0.04	0.04
209	188	95241	18	2.07503	7.7082E+00	+/-	2.145E-01	2.78	0.05	2.78
210										
211										