

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. : 9960  
 13 Spectrum Integral : 1.128E+00  
 14 Spectrum average energy [eV] : 1.200E+05  
 15 Spectrum peak energy [eV] : 5.874E+04  
 16 Reaction rate RR = spectrum integral  
 17

	No.	Mat.	MT	E(50%) [MeV]	<RR> +/- [mb]	Unc	Unc. x.s. [%]	Unc. Sp. [%]	Unc. Total [%]
18									
19									
20									
21									
22	1	3000	1	0.16186	1.7900E+03	+/- 0.000E+00	0.00	0.00	0.00
23	2	3000	2	0.16334	1.6997E+03	+/- 0.000E+00	0.00	0.00	0.00
24	3	3000	205	0.14151	9.0239E+01	+/- 5.037E-01	0.56	0.00	0.56
25	4	3000	207	0.14145	9.0306E+01	+/- 5.037E-01	0.56	0.00	0.56
26	5	3006	1	0.18144	3.1428E+03	+/- 0.000E+00	0.00	0.00	0.00
27	6	3006	2	0.19976	1.9538E+03	+/- 0.000E+00	0.00	0.00	0.00
28	7	3006	105	0.14151	1.1889E+03	+/- 6.637E+00	0.56	0.00	0.56
29	8	3006	205	0.14151	1.1889E+03	+/- 6.637E+00	0.56	0.00	0.56
30	9	3006	207	0.14151	1.1889E+03	+/- 6.637E+00	0.56	0.00	0.56
31	10	3007	1	0.1574	1.6789E+03	+/- 0.000E+00	0.00	0.00	0.00
32	11	3007	2	0.1574	1.6788E+03	+/- 0.000E+00	0.00	0.00	0.00
33	12	3007	207	0.07423	7.2794E-02	+/- 4.830E-03	6.64	0.00	6.64
34	13	5000	1	0.09456	5.1544E+03	+/- 0.000E+00	0.00	0.00	0.00
35	14	5000	2	0.09693	4.6551E+03	+/- 0.000E+00	0.00	0.00	0.00
36	15	5000	101	0.07312	4.9834E+02	+/- 0.000E+00	0.00	0.00	0.00
37	16	5000	205	0.25023	2.0536E-01	+/- 6.119E-02	29.79	0.00	29.79
38	17	5000	207	0.07319	4.9868E+02	+/- 3.501E+00	0.70	0.00	0.70
39	18	5010	1	0.09642	5.8427E+03	+/- 0.000E+00	0.00	0.00	0.00
40	19	5010	2	0.11578	3.3334E+03	+/- 0.000E+00	0.00	0.00	0.00
41	20	5010	101	0.07312	2.5041E+03	+/- 0.000E+00	0.00	0.00	0.00
42	21	5010	107	0.07312	2.5039E+03	+/- 1.758E+01	0.70	0.00	0.70
43	22	5010	205	0.25023	1.0320E+00	+/- 3.075E-01	29.79	0.00	29.79
44	23	5010	207	0.07319	2.5059E+03	+/- 1.759E+01	0.70	0.00	0.70
45	24	5010	800	0.08502	1.8399E+02	+/- 1.727E+00	0.94	0.00	0.94
46	25	5010	801	0.07231	2.3199E+03	+/- 1.750E+01	0.75	0.00	0.75
47	26	5011	1	0.09406	4.9834E+03	+/- 0.000E+00	0.00	0.00	0.00
48	27	5011	2	0.09406	4.9834E+03	+/- 0.000E+00	0.00	0.00	0.00
49	28	11023	1	0.08535	4.7691E+03	+/- 0.000E+00	0.00	0.00	0.00
50	29	11023	2	0.08535	4.7674E+03	+/- 0.000E+00	0.00	0.00	0.00
51	30	11023	102	0.05481	1.4535E+00	+/- 1.488E-01	10.23	0.00	10.23
52	31	13027	103	2.0604	2.4801E-17	+/- 5.546E-18	22.36	0.00	22.36
53	32	15031	103	0.83879	4.6521E-07	+/- 1.763E-07	37.89	0.00	37.89
54	33	16000	15032g	1.39781	1.0875E-09	+/- 1.279E-10	11.76	0.00	11.76
55	34	16032	103	1.39781	1.1449E-09	+/- 1.346E-10	11.76	0.00	11.76
56	35	21045	1	0.07463	8.4155E+03	+/- 0.000E+00	0.00	0.00	0.00
57	36	21045	2	0.07437	8.3443E+03	+/- 0.000E+00	0.00	0.00	0.00
58	37	21045	102	0.06161	4.3420E+01	+/- 2.572E+00	5.92	0.00	5.92
59	38	22000	21046g	0	9.7935E-18	+/- 2.691E-18	27.47	0.00	27.47
60	39	22000	21047g	0	1.2277E-07	+/- 8.504E-09	6.93	0.00	6.93
61	40	22046	103	2.18439	1.1871E-16	+/- 3.261E-17	27.47	0.00	27.47
62	41	22047	103	1.02838	1.6502E-06	+/- 1.143E-07	6.93	0.00	6.93
63	42	23051	107	2.18378	4.2651E-20	+/- 0.000E+00	0.00	0.00	0.00
64	43	23051	21048g	2.18378	4.2651E-20	+/- 0.000E+00	0.00	0.00	0.00
65	44	25055	1	0.06357	8.3180E+03	+/- 0.000E+00	0.00	0.00	0.00
66	45	25055	2	0.06211	8.1075E+03	+/- 0.000E+00	0.00	0.00	0.00
67	46	25055	102	0.05885	1.9647E+01	+/- 1.363E+00	6.94	0.00	6.94

68	47	26000	24051g	0	7.8611E-06	+/-	7.662E-07	9.75	0.00	9.75
69	48	26000	25054g	0	1.1681E-07	+/-	1.492E-08	12.77	0.00	12.77
70	49	26054	1	0.07206	6.9607E+03	+/-	0.000E+00	0.00	0.00	0.00
71	50	26054	2	0.07206	6.9431E+03	+/-	0.000E+00	0.00	0.00	0.00
72	51	26054	103	0.8328	1.9984E-06	+/-	2.553E-07	12.77	0.00	12.77
73	52	26054	107	0.07098	1.3449E-04	+/-	1.311E-05	9.75	0.00	9.75
74	53	26058	1	0.09458	1.1221E+04	+/-	0.000E+00	0.00	0.00	0.00
75	54	26058	2	0.09445	1.1170E+04	+/-	0.000E+00	0.00	0.00	0.00
76	55	26058	102	0.07966	1.1004E+01	+/-	1.608E+00	14.61	0.00	14.61
77	56	27059	1	0.08348	8.5709E+03	+/-	0.000E+00	0.00	0.00	0.00
78	57	27059	2	0.08353	8.5482E+03	+/-	0.000E+00	0.00	0.00	0.00
79	58	27059	102	0.06958	2.2723E+01	+/-	5.482E-01	2.41	0.00	2.41
80	59	27059	103	0.90393	4.7652E-10	+/-	4.290E-10	90.02	0.00	90.02
81	60	27059	107	0.44878	1.9860E-08	+/-	1.912E-08	96.28	0.00	96.28
82	61	27059	25056g	0.44878	1.9860E-08	+/-	1.912E-08	96.28	0.00	96.28
83	62	28000	27058g	0	2.4750E-05	+/-	1.672E-06	6.76	0.00	6.76
84	63	28000	27060g	0	2.0685E-17	+/-	6.661E-18	32.20	0.00	32.20
85	64	28058	103	0.71661	3.6356E-05	+/-	2.457E-06	6.76	0.00	6.76
86	65	28060	103	2.16675	7.8882E-17	+/-	2.540E-17	32.20	0.00	32.20
87	66	29000	27060g	2.28829	2.7771E-19	+/-	5.294E-20	19.06	0.00	19.06
88	67	29000	29064g	0.06417	3.1582E+01	+/-	2.981E+00	9.44	0.00	9.44
89	68	29063	1	0.0834	7.9111E+03	+/-	0.000E+00	0.00	0.00	0.00
90	69	29063	2	0.08346	7.8654E+03	+/-	0.000E+00	0.00	0.00	0.00
91	70	29063	102	0.06417	4.5672E+01	+/-	4.311E+00	9.44	0.00	9.44
92	71	29063	107	2.28829	4.0160E-19	+/-	8.370E-20	20.84	0.00	20.84
93	72	30000	29064g	0.61453	3.1878E-06	+/-	5.725E-07	17.96	0.00	17.96
94	73	30000	29067g	0.08231	5.1404E-04	+/-	1.285E-04	25.00	0.00	25.00
95	74	30064	103	0.61453	6.4833E-06	+/-	1.164E-06	17.96	0.00	17.96
96	75	30067	103	0.08037	1.3077E-02	+/-	3.269E-03	25.00	0.00	25.00
97	76	30068	1	0.11208	7.8403E+03	+/-	0.000E+00	0.00	0.00	0.00
98	77	30068	2	0.11212	7.8266E+03	+/-	0.000E+00	0.00	0.00	0.00
99	78	41093	1	0.10419	1.0234E+04	+/-	0.000E+00	0.00	0.00	0.00
100	79	41093	2	0.10487	1.0064E+04	+/-	0.000E+00	0.00	0.00	0.00
101	80	41093	102	0.05745	1.6236E+02	+/-	1.144E+00	0.70	0.00	0.70
102	81	41093	41093m	0.19762	1.6697E+00	+/-	8.903E-02	5.33	0.00	5.33
103	82	41093	41094g	0.05745	4.0547E+01	+/-	2.857E-01	0.70	0.00	0.70
104	83	41093	41094m	0.05745	1.2181E+02	+/-	8.583E-01	0.70	0.00	0.70
105	84	42000	41092m	1.09601	7.0363E-10	+/-	1.767E-10	25.12	0.00	25.12
106	85	42092	41092m	1.09601	4.8426E-09	+/-	1.216E-09	25.12	0.00	25.12
107	86	45103	45103m	0.21912	2.3842E+01	+/-	3.700E+00	15.52	0.00	15.52
108	87	47109	1	0.10036	9.0991E+03	+/-	0.000E+00	0.00	0.00	0.00
109	88	47109	2	0.10234	8.4355E+03	+/-	0.000E+00	0.00	0.00	0.00
110	89	47109	47110n	0.07935	4.6134E+01	+/-	3.130E+00	6.78	0.00	6.78
111	90	48000	1	0.10079	8.5900E+03	+/-	0.000E+00	0.00	0.00	0.00
112	91	48000	2	0.10158	8.3391E+03	+/-	0.000E+00	0.00	0.00	0.00
113	92	48000	101	0.0714	2.4632E+02	+/-	0.000E+00	0.00	0.00	0.00
114	93	49000	49114m	0.07084	2.1794E+01	+/-	6.165E-01	2.83	0.00	2.83
115	94	49113	1	0.09839	7.3252E+03	+/-	0.000E+00	0.00	0.00	0.00
116	95	49113	2	0.10125	6.6674E+03	+/-	0.000E+00	0.00	0.00	0.00
117	96	49113	102	0.06897	6.6769E+02	+/-	0.000E+00	0.00	0.00	0.00
118	97	49113	49113m	0.52278	1.5449E-02	+/-	1.461E-03	9.46	0.00	9.46
119	98	49113	49114g	0.06313	1.5966E+02	+/-	4.487E+00	2.81	0.00	2.81
120	99	49113	49114m	0.07084	5.0803E+02	+/-	1.437E+01	2.83	0.00	2.83
121	100	49115	1	0.09895	7.2762E+03	+/-	0.000E+00	0.00	0.00	0.00
122	101	49115	2	0.10139	6.7327E+03	+/-	0.000E+00	0.00	0.00	0.00
123	102	49115	102	0.06816	5.3379E+02	+/-	0.000E+00	0.00	0.00	0.00
124	103	49115	49115m	0.46634	5.0674E-02	+/-	2.114E-03	4.17	0.00	4.17
125	104	49115	49116g	0.06807	1.1196E+02	+/-	3.629E+00	3.24	0.00	3.24
126	105	49115	49116m	0.06819	4.2183E+02	+/-	1.366E+01	3.24	0.00	3.24
127	106	57139	1	0.09503	6.7182E+03	+/-	0.000E+00	0.00	0.00	0.00
128	107	57139	2	0.09442	6.6386E+03	+/-	0.000E+00	0.00	0.00	0.00
129	108	57139	102	0.05819	2.5495E+01	+/-	1.889E+00	7.41	0.00	7.41
130	109	64000	1	0.08972	1.0077E+04	+/-	0.000E+00	0.00	0.00	0.00
131	110	64000	2	0.08798	9.1083E+03	+/-	0.000E+00	0.00	0.00	0.00
132	111	64000	101	0.06252	5.6093E+02	+/-	0.000E+00	0.00	0.00	0.00
133	112	73181	1	0.08718	1.0588E+04	+/-	0.000E+00	0.00	0.00	0.00
134	113	73181	2	0.08616	9.0466E+03	+/-	0.000E+00	0.00	0.00	0.00
135	114	73181	102	0.06592	4.9454E+02	+/-	2.875E+01	5.81	0.00	5.81
136	115	74186	1	0.08475	1.1821E+04	+/-	0.000E+00	0.00	0.00	0.00

137	116	74186	2	0.0836	1.1509E+04	+/-	0.000E+00	0.00	0.00	0.00
138	117	74186	102	0.07167	1.3507E+02	+/-	2.811E+00	2.08	0.00	2.08
139	118	79197	1	0.08678	1.1913E+04	+/-	0.000E+00	0.00	0.00	0.00
140	119	79197	2	0.0862	1.1323E+04	+/-	0.000E+00	0.00	0.00	0.00
141	120	79197	102	0.07078	4.2949E+02	+/-	2.056E+00	0.48	0.00	0.48
142	121	80199	80199m	0.64415	1.7041E-02	+/-	1.062E-03	6.23	0.00	6.23
143	122	82204	82204m	2.27564	2.1689E-16	+/-	1.687E-17	7.78	0.00	7.78
144	123	90232	1	0.09225	1.3977E+04	+/-	0.000E+00	0.00	0.00	0.00
145	124	90232	2	0.09036	1.3146E+04	+/-	0.000E+00	0.00	0.00	0.00
146	125	90232	18	0.14681	2.8347E-03	+/-	1.816E-03	64.07	0.00	64.07
147	126	90232	102	0.06531	3.2881E+02	+/-	3.514E+00	1.07	0.00	1.07
148	127	92235	1	0.09224	1.3724E+04	+/-	0.000E+00	0.00	0.00	0.00
149	128	92235	18	0.08658	1.8614E+03	+/-	2.264E+01	1.22	0.00	1.22
150	129	92238	1	0.09254	1.3533E+04	+/-	0.000E+00	0.00	0.00	0.00
151	130	92238	2	0.08982	1.2678E+04	+/-	0.000E+00	0.00	0.00	0.00
152	131	92238	18	0.1273	1.0148E-01	+/-	7.098E-03	6.99	0.00	6.99
153	132	92238	102	0.06228	2.6146E+02	+/-	4.144E+00	1.58	0.00	1.58
154	133	93237	1	0.09034	1.3535E+04	+/-	0.000E+00	0.00	0.00	0.00
155	134	93237	2	0.08872	1.1254E+04	+/-	0.000E+00	0.00	0.00	0.00
156	135	93237	18	0.17103	3.3718E+01	+/-	6.565E+00	19.47	0.00	19.47
157	136	94239	1	0.09263	1.3748E+04	+/-	0.000E+00	0.00	0.00	0.00
158	137	94239	2	0.0901	1.0848E+04	+/-	0.000E+00	0.00	0.00	0.00
159	138	94239	18	0.0981	1.7582E+03	+/-	2.219E+01	1.26	0.00	1.26
160	139	95241	1	0.09401	1.4187E+04	+/-	0.000E+00	0.00	0.00	0.00
161	140	95241	2	0.09416	1.1977E+04	+/-	0.000E+00	0.00	0.00	0.00
162	141	95241	18	0.12649	2.1436E+01	+/-	5.263E-01	2.46	0.00	2.46
163										
164										