

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. : 9902  
 13 Spectrum Integral : 1.511E+01  
 14 Spectrum average energy [eV] : 1.324E+05  
 15 Spectrum peak energy [eV] : 5.624E-01  
 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	6.722-6	4.8489E+04	+/- 0.000E+00	0.00	0.00	0.00
23	2	3000	2	3.886-3	1.7625E+04	+/- 0.000E+00	0.00	0.00	0.00
24	3	3000	205	2.217-6	3.0668E+04	+/- 1.533E+02	0.50	0.00	0.50
25	4	3000	207	2.217-6	3.0704E+04	+/- 1.533E+02	0.50	0.00	0.50
26	5	3006	1	2.369-6	4.1937E+05	+/- 0.000E+00	0.00	0.00	0.00
27	6	3006	2	0.02369	1.5224E+04	+/- 0.000E+00	0.00	0.00	0.00
28	7	3006	105	2.217-6	4.0406E+05	+/- 2.020E+03	0.50	0.00	0.50
29	8	3006	205	2.217-6	4.0406E+05	+/- 2.020E+03	0.50	0.00	0.50
30	9	3006	207	2.217-6	4.0406E+05	+/- 2.020E+03	0.50	0.00	0.50
31	10	3007	1	3.808-3	1.8027E+04	+/- 0.000E+00	0.00	0.00	0.00
32	11	3007	2	3.522-3	1.7823E+04	+/- 0.000E+00	0.00	0.00	0.00
33	12	3007	207	2.197-6	3.8966E+01	+/- 1.296E+00	3.33	0.00	3.33
34	13	5000	1	2.994-6	3.8990E+05	+/- 0.000E+00	0.00	0.00	0.00
35	14	5000	2	7.582-4	6.2101E+04	+/- 0.000E+00	0.00	0.00	0.00
36	15	5000	101	2.191-6	3.2761E+05	+/- 0.000E+00	0.00	0.00	0.00
37	16	5000	205	0.74825	7.7594E+00	+/- 2.258E+00	29.10	0.00	29.10
38	17	5000	207	2.192-6	3.2759E+05	+/- 2.504E+03	0.76	0.00	0.76
39	18	5010	1	2.271-6	1.6822E+06	+/- 0.000E+00	0.00	0.00	0.00
40	19	5010	2	2.404-3	3.4935E+04	+/- 0.000E+00	0.00	0.00	0.00
41	20	5010	101	2.191-6	1.6463E+06	+/- 0.000E+00	0.00	0.00	0.00
42	21	5010	107	2.191-6	1.6461E+06	+/- 1.258E+04	0.76	0.00	0.76
43	22	5010	205	0.74825	3.8992E+01	+/- 1.135E+01	29.10	0.00	29.10
44	23	5010	207	2.192-6	1.6462E+06	+/- 1.258E+04	0.76	0.00	0.76
45	24	5010	800	2.205-6	1.0400E+05	+/- 8.617E+02	0.83	0.00	0.83
46	25	5010	801	2.191-6	1.5421E+06	+/- 1.255E+04	0.81	0.00	0.81
47	26	5011	1	6.704-4	6.8855E+04	+/- 0.000E+00	0.00	0.00	0.00
48	27	5011	2	6.709-4	6.8847E+04	+/- 0.000E+00	0.00	0.00	0.00
49	28	11023	1	2.874-3	1.2726E+05	+/- 0.000E+00	0.00	0.00	0.00
50	29	11023	2	2.873-3	1.2644E+05	+/- 0.000E+00	0.00	0.00	0.00
51	30	11023	102	4.760-6	3.0406E+02	+/- 1.354E+01	4.45	0.00	4.45
52	31	13027	103	1.94994	9.0359E-07	+/- 2.023E-07	22.39	0.00	22.39
53	32	15031	103	1.83097	2.6283E+00	+/- 2.883E-01	10.97	0.00	10.97
54	33	16000	15032g	1.89664	1.2072E+00	+/- 1.425E-01	11.80	0.00	11.80
55	34	16032	103	1.89664	1.2709E+00	+/- 1.500E-01	11.80	0.00	11.80
56	35	21045	1	1.201-4	2.4062E+05	+/- 0.000E+00	0.00	0.00	0.00
57	36	21045	2	1.746-4	2.2859E+05	+/- 0.000E+00	0.00	0.00	0.00
58	37	21045	102	2.093-6	1.1315E+04	+/- 8.616E+02	7.61	0.00	7.61
59	38	22000	21047g	0	2.3296E-01	+/- 1.204E-02	5.17	0.00	5.17
60	39	22047	103	1.71033	3.1312E+00	+/- 1.618E-01	5.17	0.00	5.17
61	40	25055	1	3.628-4	6.3271E+05	+/- 0.000E+00	0.00	0.00	0.00
62	41	25055	2	3.651-4	6.1751E+05	+/- 0.000E+00	0.00	0.00	0.00
63	42	25055	102	3.073-4	1.3253E+04	+/- 5.068E+02	3.82	0.00	3.82
64	43	26000	24051g	0	5.1898E-03	+/- 5.058E-04	9.75	0.00	9.75
65	44	26000	25054g	0	1.4386E-01	+/- 2.773E-02	19.28	0.00	19.28
66	45	26054	1	8.087-3	1.1824E+05	+/- 0.000E+00	0.00	0.00	0.00
67	46	26054	2	8.099-3	1.1692E+05	+/- 0.000E+00	0.00	0.00	0.00

68	47	26054	103	1.7876	2.4612E+00	+/-	4.745E-01	19.28	0.00	19.28
69	48	26054	107	2.198-6	8.8791E-02	+/-	8.654E-03	9.75	0.00	9.75
70	49	26058	1	1.430-3	1.1551E+05	+/-	0.000E+00	0.00	0.00	0.00
71	50	26058	2	1.179-3	1.1098E+05	+/-	0.000E+00	0.00	0.00	0.00
72	51	26058	102	2.318-4	1.2551E+03	+/-	6.190E+01	4.93	0.00	4.93
73	52	27059	1	1.322-4	8.6811E+05	+/-	0.000E+00	0.00	0.00	0.00
74	53	27059	2	1.324-4	7.9269E+05	+/-	0.000E+00	0.00	0.00	0.00
75	54	27059	102	1.295-4	7.5077E+04	+/-	5.762E+02	0.77	0.00	0.77
76	55	27059	103	1.82761	2.0805E-04	+/-	1.876E-04	90.19	0.00	90.19
77	56	27059	107	1.32918	1.0750E-05	+/-	1.035E-05	96.28	0.00	96.28
78	57	27059	25056g	1.32918	1.0750E-05	+/-	1.035E-05	96.28	0.00	96.28
79	58	28000	27058g	0	6.1084E+00	+/-	2.176E-01	3.56	0.00	3.56
80	59	28058	103	1.73249	8.9728E+00	+/-	3.196E-01	3.56	0.00	3.56
81	60	29000	29064g	5.822-4	3.3618E+03	+/-	1.386E+02	4.12	0.00	4.12
82	61	29063	1	2.084-3	1.1468E+05	+/-	0.000E+00	0.00	0.00	0.00
83	62	29063	2	2.096-3	1.0931E+05	+/-	0.000E+00	0.00	0.00	0.00
84	63	29063	102	5.822-4	4.8616E+03	+/-	2.057E+02	4.23	0.00	4.23
85	64	30000	29064g	1.80936	4.9214E-01	+/-	4.189E-02	8.51	0.00	8.51
86	65	30000	29067g	2.278-4	1.6294E-01	+/-	4.014E-02	24.63	0.00	24.63
87	66	30064	103	1.80936	1.0009E+00	+/-	8.520E-02	8.51	0.00	8.51
88	67	30067	103	2.278-4	4.0338E+00	+/-	9.937E-01	24.63	0.00	24.63
89	68	30068	1	5.182-4	2.1773E+05	+/-	0.000E+00	0.00	0.00	0.00
90	69	30068	2	5.183-4	2.1431E+05	+/-	0.000E+00	0.00	0.00	0.00
91	70	41093	1	1.824-3	1.1907E+05	+/-	0.000E+00	0.00	0.00	0.00
92	71	41093	2	2.089-3	1.0926E+05	+/-	0.000E+00	0.00	0.00	0.00
93	72	41093	102	7.309-4	8.7410E+03	+/-	2.953E+02	3.38	0.00	3.38
94	73	41093	41093m	1.37724	1.1506E+02	+/-	5.092E+00	4.43	0.00	4.43
95	74	41093	41094g	7.309-4	2.1829E+03	+/-	7.374E+01	3.38	0.00	3.38
96	75	41093	41094m	7.309-4	6.5580E+03	+/-	2.215E+02	3.38	0.00	3.38
97	76	42000	41092m	1.84475	8.8368E-03	+/-	2.220E-03	25.12	0.00	25.12
98	77	42092	41092m	1.84475	6.0818E-02	+/-	1.528E-02	25.12	0.00	25.12
99	78	45103	45103m	1.10537	8.8193E+02	+/-	3.843E+01	4.36	0.00	4.36
100	79	47109	1	5.183-6	1.7101E+06	+/-	0.000E+00	0.00	0.00	0.00
101	80	47109	2	5.569-6	2.3531E+05	+/-	0.000E+00	0.00	0.00	0.00
102	81	47109	47110n	5.166-6	6.8473E+04	+/-	4.762E+03	6.96	0.00	6.96
103	82	48000	1	1.650-4	1.7186E+05	+/-	0.000E+00	0.00	0.00	0.00
104	83	48000	2	7.638-4	1.1663E+05	+/-	0.000E+00	0.00	0.00	0.00
105	84	48000	101	1.020-6	5.3527E+04	+/-	0.000E+00	0.00	0.00	0.00
106	85	49000	49114m	4.850-6	9.6549E+03	+/-	8.401E+02	8.70	0.00	8.70
107	86	49113	1	1.465-5	4.3875E+05	+/-	0.000E+00	0.00	0.00	0.00
108	87	49113	2	8.824-4	1.0564E+05	+/-	0.000E+00	0.00	0.00	0.00
109	88	49113	102	4.832-6	3.3299E+05	+/-	0.000E+00	0.00	0.00	0.00
110	89	49113	49113m	1.53916	9.4074E+01	+/-	1.663E+00	1.77	0.00	1.77
111	90	49113	49114g	4.794-6	1.0793E+05	+/-	9.428E+03	8.74	0.00	8.74
112	91	49113	49114m	4.850-6	2.2506E+05	+/-	1.958E+04	8.70	0.00	8.70
113	92	49115	1	1.456-6	3.4261E+06	+/-	0.000E+00	0.00	0.00	0.00
114	93	49115	2	1.568-6	2.1300E+05	+/-	0.000E+00	0.00	0.00	0.00
115	94	49115	102	1.454-6	3.2125E+06	+/-	0.000E+00	0.00	0.00	0.00
116	95	49115	49115m	1.49691	1.2736E+02	+/-	2.859E+00	2.24	0.00	2.24
117	96	49115	49116g	1.454-6	6.7463E+05	+/-	2.098E+04	3.11	0.00	3.11
118	97	49115	49116m	1.454-6	2.5379E+06	+/-	7.891E+04	3.11	0.00	3.11
119	98	57139	1	8.114-5	1.4124E+05	+/-	0.000E+00	0.00	0.00	0.00
120	99	57139	2	1.605-4	1.2792E+05	+/-	0.000E+00	0.00	0.00	0.00
121	100	57139	102	7.263-5	1.1803E+04	+/-	6.541E+02	5.54	0.00	5.54
122	101	64000	1	2.103-5	5.7616E+05	+/-	0.000E+00	0.00	0.00	0.00
123	102	64000	2	6.693-4	1.9105E+05	+/-	0.000E+00	0.00	0.00	0.00
124	103	64000	101	6.077-6	3.8049E+05	+/-	0.000E+00	0.00	0.00	0.00
125	104	73181	1	1.023-5	9.1318E+05	+/-	0.000E+00	0.00	0.00	0.00
126	105	73181	2	1.222-4	2.4662E+05	+/-	0.000E+00	0.00	0.00	0.00
127	106	73181	102	4.452-6	6.5906E+05	+/-	2.496E+04	3.79	0.00	3.79
128	107	74186	1	1.869-5	3.6650E+06	+/-	0.000E+00	0.00	0.00	0.00
129	108	74186	2	1.870-5	3.1753E+06	+/-	0.000E+00	0.00	0.00	0.00
130	109	74186	102	1.862-5	4.8596E+05	+/-	2.192E+04	4.51	0.00	4.51
131	110	79197	1	4.910-6	1.9459E+06	+/-	0.000E+00	0.00	0.00	0.00
132	111	79197	2	1.015-5	3.9891E+05	+/-	0.000E+00	0.00	0.00	0.00
133	112	79197	102	4.883-6	1.5440E+06	+/-	3.204E+04	2.08	0.00	2.08
134	113	80199	80199m	1.51191	1.4812E+02	+/-	6.819E+00	4.60	0.00	4.60
135	114	90232	1	1.295-4	3.2575E+05	+/-	0.000E+00	0.00	0.00	0.00
136	115	90232	2	3.055-4	2.3670E+05	+/-	0.000E+00	0.00	0.00	0.00

137	116	90232	18	1.66002	3.8202E+01	+/-	2.271E+00	5.94	0.00	5.94
138	117	90232	102	2.398-5	8.4065E+04	+/-	1.611E+03	1.92	0.00	1.92
139	118	92235	1	2.375-5	5.7467E+05	+/-	0.000E+00	0.00	0.00	0.00
140	119	92235	18	1.669-5	2.6916E+05	+/-	7.475E+02	0.28	0.00	0.28
141	120	92238	1	3.675-5	6.1905E+05	+/-	0.000E+00	0.00	0.00	0.00
142	121	92238	2	1.025-4	3.3659E+05	+/-	0.000E+00	0.00	0.00	0.00
143	122	92238	18	1.67503	1.7939E+02	+/-	2.240E+00	1.25	0.00	1.25
144	123	92238	102	2.011-5	2.7459E+05	+/-	3.129E+03	1.14	0.00	1.14
145	124	93237	1	1.075-5	7.7691E+05	+/-	0.000E+00	0.00	0.00	0.00
146	125	93237	2	3.215-4	1.8941E+05	+/-	0.000E+00	0.00	0.00	0.00
147	126	93237	18	0.86806	2.6128E+03	+/-	1.596E+02	6.11	0.00	6.11
148	127	94239	1	2.280-5	6.3364E+05	+/-	0.000E+00	0.00	0.00	0.00
149	128	94239	2	5.497-4	1.6814E+05	+/-	0.000E+00	0.00	0.00	0.00
150	129	94239	18	1.197-5	2.8778E+05	+/-	6.954E+03	2.42	0.00	2.42
151	130	95241	1	1.336-6	1.4037E+06	+/-	0.000E+00	0.00	0.00	0.00
152	131	95241	2	5.357-4	1.7128E+05	+/-	0.000E+00	0.00	0.00	0.00
153	132	95241	18	1.819-6	8.6817E+03	+/-	1.507E+02	1.74	0.00	1.74
154										
155										