

## RR\_UNC - Calculate uncertainties in reaction rates

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 Andrej Trkov, Jozef Stefan Institute, Ljubljana, Slovenia  
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Reference x.s. file : IRDF-v1-05.g60  
 Source spectrum file : IRDF-v1-05\_sp.g60  
 Reaction rate integ.flag : 1  
 Reaction rate norm. flag : 1

Spectrum MAT No. : 9901  
 Spectrum Integral : 1.128E+00  
 Spectrum average energy [eV] : 5.062E-02  
 Spectrum peak energy [eV] : 2.531E-02  
 Reaction rate RR = spectrum integral

No.	Mat.	MT	E(50%) [MeV]	<RR>	+/- [mb]	Unc	Unc. x.s. [%]	Unc. Sp. [%]	Unc. Total [%]
1	3006	105	2.993-8	9.3850E+05	+/-	1.267E+03	0.14	0.00	0.14
2	5000	1	3.000-8	7.7006E+05	+/-	0.000E+00	0.00	0.00	0.00
3	5000	2	4.137-8	5.0879E+03	+/-	0.000E+00	0.00	0.00	0.00
4	5000	101	2.993-8	7.6450E+05	+/-	0.000E+00	0.00	0.00	0.00
5	5000	102	2.992-8	1.0382E+02	+/-	0.000E+00	0.00	0.00	0.00
6	5000	103	2.993-8	1.1260E-01	+/-	0.000E+00	0.00	0.00	0.00
7	5000	107	2.993-8	7.6439E+05	+/-	0.000E+00	0.00	0.00	0.00
8	5010	1	2.994-8	3.8466E+06	+/-	0.000E+00	0.00	0.00	0.00
9	5010	2	4.125-8	2.5799E+03	+/-	0.000E+00	0.00	0.00	0.00
10	5010	107	2.993-8	3.8424E+06	+/-	0.000E+00	0.00	0.00	0.00
11	5010	800	2.993-8	2.4168E+05	+/-	5.960E+02	0.25	0.00	0.25
12	5010	801	2.993-8	3.6007E+06	+/-	2.957E+03	0.08	0.00	0.08
13	11023	1	4.020-8	4.3577E+03	+/-	0.000E+00	0.00	0.00	0.00
14	11023	2	4.175-8	3.8175E+03	+/-	0.000E+00	0.00	0.00	0.00
15	11023	102	2.993-8	5.2822E+02	+/-	1.056E+01	2.00	0.00	2.00
16	21045	1	3.569-8	5.2927E+04	+/-	0.000E+00	0.00	0.00	0.00
17	21045	2	4.219-8	2.5716E+04	+/-	0.000E+00	0.00	0.00	0.00
18	21045	102	2.993-8	2.7213E+04	+/-	1.868E+03	6.86	0.00	6.86
19	25055	1	3.168-8	1.5665E+04	+/-	0.000E+00	0.00	0.00	0.00
20	25055	102	2.994-8	1.3275E+04	+/-	1.728E+02	1.30	0.00	1.30
21	26058	1	4.055-8	9.8248E+03	+/-	0.000E+00	0.00	0.00	0.00
22	26058	102	2.994-8	1.3143E+03	+/-	6.665E+01	5.07	0.00	5.07
23	27059	1	3.172-8	4.4007E+04	+/-	0.000E+00	0.00	0.00	0.00
24	27059	2	4.226-8	6.8105E+03	+/-	0.000E+00	0.00	0.00	0.00
25	27059	102	2.994-8	3.7190E+04	+/-	2.417E+02	0.65	0.00	0.65
26	29063	1	3.673-8	1.0277E+04	+/-	0.000E+00	0.00	0.00	0.00
27	29063	2	4.227-8	5.8070E+03	+/-	0.000E+00	0.00	0.00	0.00
28	29063	102	2.993-8	4.4701E+03	+/-	1.852E+02	4.14	0.00	4.14
29	30067	103	2.993-8	1.2302E+00	+/-	3.076E-01	25.00	0.00	25.00
30	41093	1	4.057-8	8.3376E+03	+/-	1.334E+02	1.60	0.00	1.60
31	41093	2	4.234-8	7.1885E+03	+/-	0.000E+00	0.00	0.00	0.00
32	41093	102	2.993-8	1.1490E+03	+/-	4.588E+01	3.99	0.00	3.99
33	41093	41094g	2.993-8	2.8695E+02	+/-	0.000E+00	0.00	0.00	0.00
34	41093	41094m	2.993-8	8.6206E+02	+/-	0.000E+00	0.00	0.00	0.00
35	47109	1	3.057-8	9.3837E+04	+/-	0.000E+00	0.00	0.00	0.00
36	47109	47110n	3.026-8	4.2515E+03	+/-	2.168E+02	5.10	0.00	5.10
37	48000	1	4.518-8	3.3184E+06	+/-	0.000E+00	0.00	0.00	0.00
38	48000	2	5.834-8	1.1536E+04	+/-	0.000E+00	0.00	0.00	0.00
39	48000	101	4.513-8	3.3069E+06	+/-	0.000E+00	0.00	0.00	0.00
40	48000	102	4.513-8	3.3069E+06	+/-	0.000E+00	0.00	0.00	0.00
41	48000	103	4.248-8	1.1283E-07	+/-	0.000E+00	0.00	0.00	0.00
42	48000	107	6.784-8	3.9838E-15	+/-	0.000E+00	0.00	0.00	0.00
43	49113	1	3.349-8	1.6353E+04	+/-	0.000E+00	0.00	0.00	0.00
44	49113	2	4.233-8	4.1558E+03	+/-	0.000E+00	0.00	0.00	0.00
45	49113	102	3.066-8	1.2197E+04	+/-	0.000E+00	0.00	0.00	0.00
46	49113	49114g	3.066-8	3.9640E+03	+/-	1.609E+02	4.06	0.00	4.06
47	49113	49114m	3.066-8	8.2330E+03	+/-	3.342E+02	4.06	0.00	4.06
48	49115	1	3.119-8	2.0894E+05	+/-	0.000E+00	0.00	0.00	0.00
49	49115	2	4.199-8	2.8171E+03	+/-	0.000E+00	0.00	0.00	0.00
50	49115	102	3.105-8	2.0612E+05	+/-	0.000E+00	0.00	0.00	0.00
51	49115	49116g	3.105-8	4.3284E+04	+/-	4.404E+02	1.02	0.00	1.02
52	49115	49116n	3.105-8	1.6283E+05	+/-	1.657E+03	1.02	0.00	1.02
53	57139	1	3.747-8	2.4239E+04	+/-	0.000E+00	0.00	0.00	0.00
54	57139	2	4.237-8	1.5025E+04	+/-	0.000E+00	0.00	0.00	0.00
55	57139	102	2.995-8	9.0277E+03	+/-	3.478E+02	3.85	0.00	3.85
56	64000	1	2.750-8	3.9160E+07	+/-	0.000E+00	0.00	0.00	0.00
57	64000	2	3.753-8	1.4172E+05	+/-	0.000E+00	0.00	0.00	0.00

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58	64000	101	2.747-8	3.9018E+07	+/- 0.000E+00	0.00	0.00
59	64000	102	2.747-8	3.9018E+07	+/- 0.000E+00	0.00	0.00
60	73181	1	3.283-8	2.7130E+04	+/- 0.000E+00	0.00	0.00
61	73181	2	4.235-8	6.3873E+03	+/- 0.000E+00	0.00	0.00
62	73181	102	3.010-8	2.0741E+04	+/- 6.222E+02	3.00	3.00
63	74186	1	3.004-8	3.8235E+04	+/- 0.000E+00	0.00	0.00
64	74186	2	4.366-8	9.9262E+01	+/- 0.000E+00	0.00	0.00
65	74186	102	3.001-8	3.8134E+04	+/- 1.905E+03	5.00	5.00
66	79197	1	3.116-8	1.0809E+05	+/- 0.000E+00	0.00	0.00
67	79197	2	4.232-8	8.9141E+03	+/- 0.000E+00	0.00	0.00
68	79197	102	3.024-8	9.9175E+04	+/- 4.726E+02	0.48	0.48
69	90232	1	3.797-8	2.2001E+04	+/- 0.000E+00	0.00	0.00
70	90232	2	4.239-8	1.4707E+04	+/- 0.000E+00	0.00	0.00
71	90232	18	2.990-8	5.3739E-02	+/- 4.836E-02	90.00	90.00
72	90232	102	2.959-8	7.2939E+03	+/- 7.764E+01	1.06	1.06
73	92235	1	2.854-8	6.8559E+05	+/- 0.000E+00	0.00	0.00
74	92235	18	2.844-8	5.7090E+05	+/- 9.983E+02	0.17	0.17
75	92235	102	2.705-8	9.7744E+04	+/- 1.565E+03	1.60	1.60
76	92238	1	3.980-8	1.3177E+04	+/- 0.000E+00	0.00	0.00
77	92238	18	3.000-8	1.6841E-02	+/- 8.423E-03	50.01	50.01
78	92238	102	3.005-8	2.6880E+03	+/- 5.123E+01	1.91	1.91
79	93237	1	3.026-8	1.9052E+05	+/- 0.000E+00	0.00	0.00
80	93237	2	4.188-8	1.5820E+04	+/- 0.000E+00	0.00	0.00
81	93237	18	2.900-8	2.1199E+01	+/- 2.120E+00	10.00	10.00
82	94239	1	3.358-8	1.1048E+06	+/- 0.000E+00	0.00	0.00
83	94239	2	4.155-8	8.9103E+03	+/- 0.000E+00	0.00	0.00
84	94239	18	3.222-8	7.8948E+05	+/- 6.280E+03	0.80	0.80
85	95241	1	2.892-8	6.1560E+05	+/- 0.000E+00	0.00	0.00
86	95241	2	4.082-8	1.2122E+04	+/- 0.000E+00	0.00	0.00
87	95241	18	2.944-8	3.0604E+03	+/- 6.121E+01	2.00	2.00