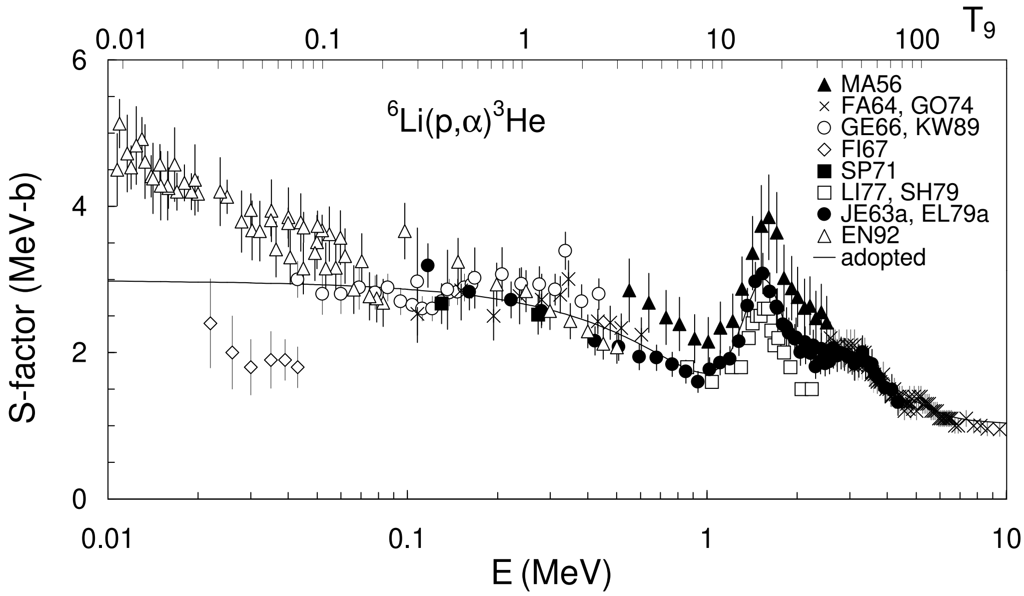
Reaction : $^6Li(p,\alpha)^3He$

Total cross sections are adopted from MA56, JE63a, FA64, GE66, SP71, GO74, LI77, EL79a, SH79 and KW89 from $E = 0.043$ to 12.08 MeV. The low-energy data from FI67 are omitted due to what appears to be normalization problems. Those from EN92 are corrected for electron screening effects ($U_e = 470$ eV and 440 eV for atomic and molecular target data, respectively). We used the extrapolation performed by KW89, $S_0 = 2.97 \pm 0.03$ MeV b and we fitted the S-factor data in the whole energy range. The fitted S-factor curve is shown in the figure. For $E \leq 0.1$ MeV, the S-factor can be well approximated by the expression $S(E) = 2.97 - 0.67\,E - 5.49\,E^2$ (E in MeV, $S(E)$ in MeV b). The differences between the adopted rates and the CA88 ones at high temperatures (about 30% at $T_9 = 10$) are probably due to the better accuracy of the numerical integration of the rate equation used here.



T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio
0.001	0.90	1.00	1.10	-24	0.9	0.04	5.58	6.20	6.82	0	0.9	0.5	1.19	1.32	1.45	6	0.9
0.002	1.97	2.19	2.41	-17	0.9	0.05	2.80	3.11	3.43	1	0.9	0.6	1.94	2.15	2.37	6	0.9
0.003	6.98	7.76	8.53	-14	0.9	0.06	0.95	1.06	1.17	2	0.9	0.7	2.85	3.16	3.48	6	0.9
0.004	1.20	1.33	1.46	-11	0.9	0.07	2.52	2.80	3.08	2	0.9	0.8	3.88	4.31	4.75	6	0.9
0.005	4.61	5.12	5.63	-10	0.9	0.08	5.61	6.23	6.85	2	0.9	0.9	5.03	5.58	6.14	6	0.9
0.006	7.43	8.25	9.08	-9	0.9	0.09	1.10	1.22	1.34	3	0.9	1	6.25	6.95	7.64	6	0.9
0.007	6.82	7.58	8.33	-8	0.9	0.1	1.96	2.17	2.39	3	0.9	1.25	0.95	1.06	1.17	7	0.9
0.008	4.23	4.70	5.17	-7	0.9	0.11	3.23	3.59	3.95	3	0.9	1.5	1.30	1.45	1.59	7	0.9
0.009	1.98	2.20	2.42	-6	0.9	0.12	5.03	5.59	6.15	3	0.9	1.75	1.66	1.84	2.03	7	0.9
0.01	7.45	8.27	9.10	-6	0.9	0.13	7.47	8.30	9.13	3	0.9	2	2.02	2.24	2.46	7	0.9
0.011	2.37	2.63	2.90	-5	0.9	0.14	1.06	1.18	1.30	4	0.9	2.5	2.73	3.03	3.33	7	0.9
0.012	6.60	7.33	8.06	-5	0.9	0.15	1.47	1.63	1.79	4	0.9	3	3.44	3.82	4.20	7	0.9
0.013	1.65	1.83	2.01	-4	0.9	0.16	1.97	2.19	2.41	4	0.9	3.5	4.14	4.60	5.06	7	0.9
0.014	3.75	4.17	4.58	-4	0.9	0.18	3.30	3.66	4.03	4	0.9	4	4.83	5.37	5.91	7	0.9
0.015	7.92	8.80	9.68	-4	0.9	0.2	5.13	5.70	6.27	4	0.9	5	6.14	6.82	7.50	7	0.9
0.016	1.57	1.74	1.92	-3	0.9	0.25	1.23	1.37	1.51	5	0.9	6	7.32	8.13	8.94	7	1.0
0.018	5.25	5.83	6.41	-3	0.9	0.3	2.38	2.65	2.91	5	0.9	7	8.34	9.27	10.2	7	1.0
0.02	1.48	1.65	1.81	-2	0.9	0.35	4.01	4.46	4.91	5	0.9	8	0.92	1.03	1.13	8	1.1
0.025	1.18	1.31	1.44	-1	0.9	0.4	6.14	6.82	7.50	5	0.9	9	1.00	1.11	1.22	8	1.2
0.03	5.69	6.32	6.95	-1	0.9	0.45	8.76	9.73	10.7	5	0.9	10	1.06	1.18	1.30	8	1.3