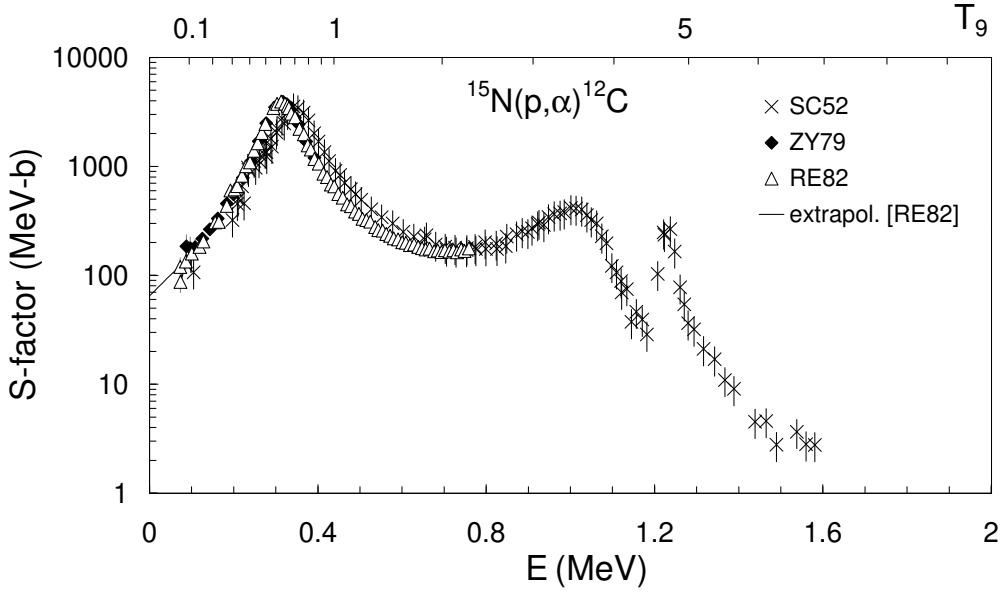
Reaction : ^{15}N(p,α)^{12}C

Data from ZY79 and RE82 between $E = 0.07$ and 0.76 MeV are used. The data of SC52 are used between $E = 0.76$ and 1.6 MeV. Below $E = 0.8$ MeV, the S-factor is dominated by the 1^- resonance at $E_r = 313.9$ keV with $\omega\gamma = 0.67 \pm 0.07$ keV [RE82], showing an interference effect with the other 1^- resonance at $E_r = 963$ keV ($\omega\gamma = 23 \pm 6$ keV [HA57b]). For $T_9 \leq 2.5$, the reaction rates are calculated using a linear interpolation between the experimental data [SC52, ZY79, RE82] and adding the contribution of the resonances at $E_r = 1537$ keV ($\omega\gamma = 6.9 \pm 1.0$ keV [HA57b]) and 2.798 keV ($\omega\gamma = 15 \pm 3$ keV [SN83, DA84]). At low energies, the Breit-Wigner extrapolation from RE82 is adopted ($S_0 = 65 \pm 7$ MeV b). For $T_9 > 2.5$, HF rates are used as explained in Sect. 2.5. Around $T_9 = 0.2$, the difference with the CA88 rates is probably due to the different resonance parameters adopted by CA88. At high temperatures, the HF rates are larger than the CA88 rates.



T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio
0.005	6.38	7.12	7.87	-26	1.0	0.07	0.80	1.00	1.21	-3	1.2	0.7	6.83	9.85	12.9	5	0.9
0.006	1.10	1.24	1.37	-23	1.0	0.08	4.05	5.04	6.04	-3	1.2	0.8	1.21	1.64	2.08	6	0.9
0.007	6.73	7.59	8.45	-22	1.0	0.09	1.62	1.99	2.36	-2	1.3	0.9	1.16	2.35	3.54	6	1.0
0.008	2.00	2.27	2.53	-20	1.0	0.1	5.43	6.53	7.62	-2	1.3	1	2.02	3.37	4.72	6	1.1
0.009	3.52	4.01	4.49	-19	1.0	0.11	1.58	1.87	2.16	-1	1.4	1.25	3.71	6.20	8.68	6	1.2
0.01	4.17	4.76	5.35	-18	1.0	0.12	4.07	4.77	5.48	-1	1.5	1.5	5.85	9.71	13.6	6	1.4
0.011	3.61	4.14	4.67	-17	1.0	0.13	0.95	1.12	1.29	0	1.6	1.75	0.55	1.34	2.14	7	1.5
0.012	2.44	2.81	3.18	-16	1.0	0.14	2.04	2.44	2.83	0	1.7	2	0.79	1.77	2.75	7	1.5
0.013	1.35	1.56	1.77	-15	1.0	0.15	4.01	4.97	5.94	0	1.8	2.5	1.13	2.59	4.05	7	1.5
0.014	6.31	7.31	8.31	-15	1.0	0.16	7.65	9.75	11.9	0	1.9	3	1.67	3.81	5.95	7	1.6
0.015	2.56	2.98	3.39	-14	1.0	0.18	2.44	3.28	4.13	1	2.1	3.5	2.26	5.13	7.99	7	1.7
0.016	0.92	1.08	1.23	-13	1.0	0.2	6.55	9.64	12.7	1	2.0	4	2.89	6.52	10.1	7	1.7
0.018	0.89	1.04	1.20	-12	1.0	0.25	5.05	8.80	12.5	2	1.5	5	4.24	9.43	14.6	7	1.9
0.02	6.27	7.39	8.52	-12	1.0	0.3	2.69	4.66	6.63	3	1.1	6	0.57	1.25	1.92	8	2.2
0.025	3.14	3.74	4.35	-10	1.0	0.35	0.89	1.66	2.43	4	0.9	7	0.71	1.55	2.39	8	2.4
0.03	6.20	7.48	8.76	-9	1.0	0.4	2.57	4.48	6.38	4	0.8	8	0.86	1.86	2.86	8	2.7
0.04	4.78	5.87	6.95	-7	1.1	0.45	5.94	9.86	13.8	4	0.8	9	1.02	2.17	3.32	8	3.0
0.05	1.06	1.31	1.57	-5	1.1	0.5	1.13	1.88	2.63	5	0.8	10	1.17	2.47	3.77	8	3.3
0.06	1.15	1.45	1.74	-4	1.1	0.6	2.88	4.91	6.94	5	0.8						