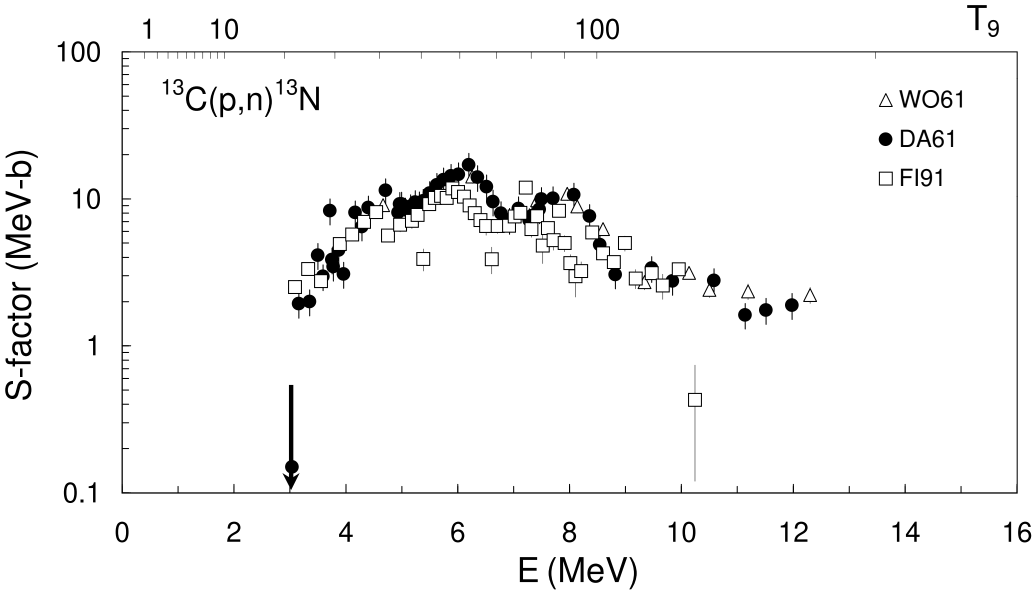
Reaction : $^{13}C(p,n)^{13}N$

The rates of this reaction ($Q = -3.003$ MeV) are obtained by numerical integration of the experimental data of WO61, DA61 and FI91, with a linear interpolation between the data points. Above the neutron threshold in ^{14}N (10.55 MeV), the level density is very high (47 levels between $E_x = 10.55$ MeV and $E_x = 15$ MeV, as indicated by the experimental data). Below $T_9 = 1$, the present rates are slightly smaller than the CA88 ones, due to the new data of FI91, which are in general lower than the data of WO61 and DA61 used in CA88. Above $T_9 = 1$, the present rates are larger (up to a factor of 2.6 at $T_9 = 10$) due to the numerical integration of the rate formula, which is more accurate than the analytical treatment of CA88, especially at high temperatures, and to our thermalization corrections which are larger ($r_{tt} = 1.10$ to 1.36 at $T_9 = 5$ to 10) than the CA88 ones ($r_{tt} = 1$ at all T_9).



T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio
0.5	5.00	6.39	7.78	-23	0.7	1.5	1.20	1.42	1.64	-2	1.1	5	1.81	2.16	2.52	5	1.7
0.6	6.40	7.91	9.41	-18	0.8	1.75	3.41	4.03	4.65	-1	1.1	6	6.17	7.38	8.59	5	1.8
0.7	2.81	3.41	4.02	-14	0.9	2	4.19	4.97	5.75	0	1.2	7	1.49	1.79	2.08	6	2.0
0.8	1.51	1.81	2.12	-11	0.9	2.5	1.42	1.69	1.96	2	1.2	8	2.99	3.57	4.14	6	2.3
0.9	2.00	2.39	2.77	-9	1.0	3	1.51	1.80	2.09	3	1.3	9	5.03	6.00	6.98	6	2.4
1	0.99	1.18	1.37	-7	1.0	3.5	8.20	9.79	11.4	3	1.4	10	7.74	9.23	10.7	6	2.6
1.25	1.11	1.32	1.52	-4	1.0	4	2.95	3.52	4.09	4	1.5						