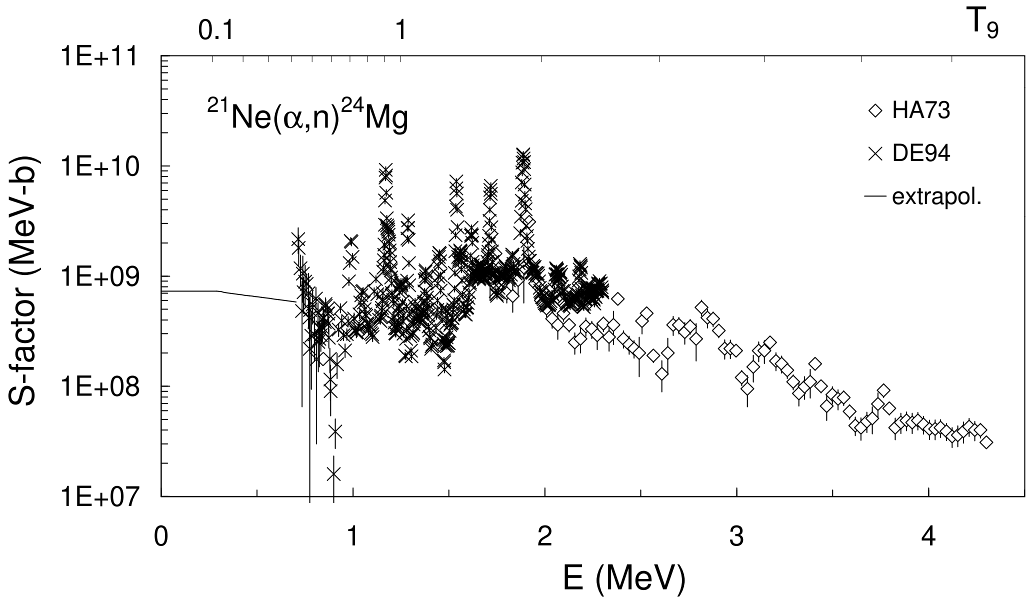
Reaction: ^{21}Ne(α,n)^{24}Mg

Use is made of the experimental cross sections from HA73 and DE94b covering the energy range $0.714 \leq E \leq 4.3$ MeV. The adopted rates result from a low energy extrapolation based on a HF calculation from DE94b. The results of DE94b are partially documented in KU95. For the lower limit of the rates, the S-factor curve without any resonance below $E = 0.714$ MeV is considered, and only the tails of observed resonances at energies $E > 0.714$ MeV are assumed to contribute. The upper limit is determined by assuming that all the known states in the compound nucleus [EN90] give rise to resonances in the S-factor. The strengths of these resonances are calculated by the Wigner limit. HF rates are used for $T_9 > 2.5$, following the procedure explained in Sect. 2.5. The differences between the adopted rates and the CA88 ones are due to the differences in the average S-factor, which is higher in CA88.



T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio
0.1	0.03	6.32	498	-25	0.3	0.4	1.60	3.65	164	-9	0.3	2.5	4.50	5.18	5.86	3	1.0
0.11	0.01	1.38	100	-23	0.3	0.45	2.14	3.74	155	-8	0.3	3	2.29	2.70	3.12	4	1.1
0.12	0.01	2.12	156	-22	0.3	0.5	2.00	2.90	92.3	-7	0.3	3.5	7.84	9.54	11.2	4	1.1
0.13	0.01	2.44	183	-21	0.3	0.6	7.87	9.38	134	-6	0.3	4	2.05	2.57	3.09	5	1.1
0.14	0.01	2.20	159	-20	0.3	0.7	1.40	1.56	9.55	-4	0.4	5	0.83	1.11	1.39	6	1.0
0.15	0.01	1.62	105	-19	0.3	0.8	1.44	1.57	4.75	-3	0.5	6	2.13	3.09	4.05	6	1.0
0.16	0.01	1.01	55.5	-18	0.3	0.9	1.03	1.11	2.05	-2	0.6	7	4.12	6.57	9.02	6	0.9
0.18	0.02	2.55	88.0	-17	0.3	1	5.57	5.99	8.35	-2	0.6	8	0.65	1.17	1.69	7	0.8
0.2	0.06	4.11	81.0	-16	0.3	1.25	1.59	1.71	1.91	0	0.8	9	0.89	1.84	2.79	7	0.7
0.25	0.07	1.10	11.5	-13	0.3	1.5	1.83	1.98	2.15	1	0.9	10	1.05	2.64	4.22	7	0.7
0.3	1.35	7.93	188	-12	0.3	1.75	1.17	1.28	1.40	2	0.9						
0.35	0.71	2.33	90.2	-10	0.3	2	5.04	5.61	6.19	2	1.0						