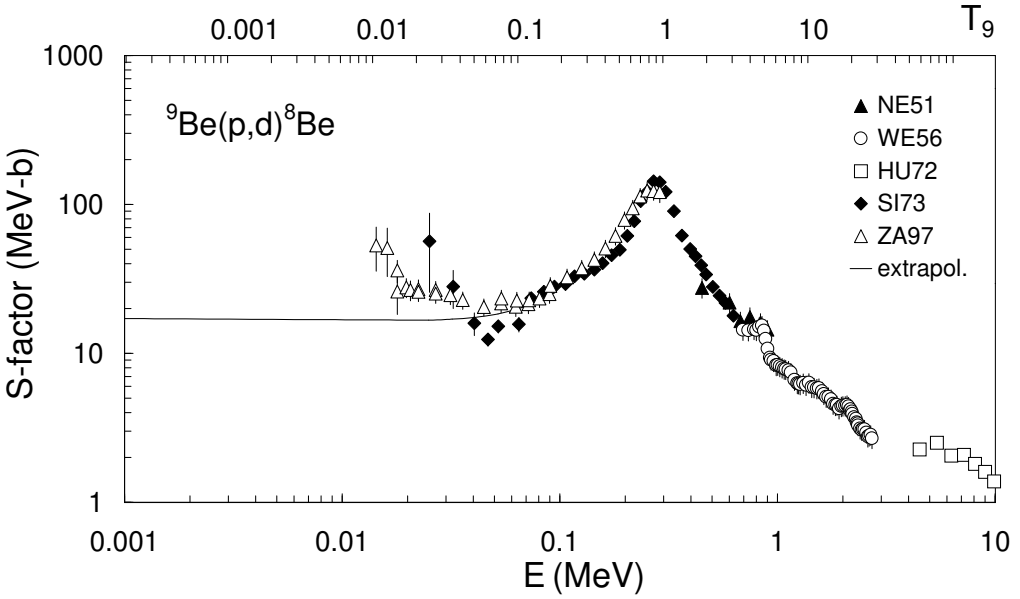
Reaction : ^{9}Be(p,d)^{8}Be

For the (p,d$_0$) channel, the data of SI73 and ZA97 are adopted below $E = 0.63$ MeV. The S-factor quoted in SI73 refers to the combined (p,d$_0$) and (p,α_0) reactions, its adopted values being a weighted average of the corresponding cross sections. Between $E = 0.67$ and 2.7 MeV, the data of NE51 and WE56 are adopted, while the data of HU72 are used between $E = 4.4$ MeV and 9.8 MeV. The low energy extrapolation ($E \leq 0.07$ MeV) is made assuming a constant S-factor, based on the S_0 value of SI73, $S_0 = 17^{+25}_{-7}$ MeV b. However, it should be pointed out that the low energy data from ZA97 show an enhancement that cannot be explained only by electron screening, but no clear explanation is given in ZA97. We have calculated the contribution of several subthreshold states in ^{10}B, but none of them is sufficiently important to explain the enhancement. Therefore, we follow SI73 for the extrapolation. The adopted reaction rates are in good agreement with the CA88 ones, except at the highest temperatures. This is probably due to the fact that CA88 did not use the high energy data adopted in the present compilation. The differences around $T_9 = 0.25$ reflect differences between our numerical integrations and the CA88 analytical approximation.



T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio
0.002	1.52	2.67	7.30	-23	1.0	0.05	0.61	1.05	1.51	0	0.9	0.6	6.38	6.79	7.19	6	0.9
0.003	3.77	6.66	17.8	-19	1.0	0.06	3.12	5.04	6.77	0	0.9	0.7	1.07	1.14	1.21	7	0.9
0.004	2.20	3.92	10.3	-16	1.0	0.07	1.17	1.78	2.26	1	0.9	0.8	1.58	1.68	1.79	7	0.9
0.005	2.03	3.63	9.32	-14	1.0	0.08	3.52	5.04	6.17	1	0.9	0.9	2.15	2.28	2.42	7	0.9
0.006	0.63	1.14	2.88	-12	1.0	0.09	0.90	1.23	1.46	2	0.9	1	2.73	2.91	3.09	7	0.9
0.007	0.99	1.80	4.44	-11	1.0	0.1	2.02	2.64	3.08	2	0.9	1.25	4.20	4.49	4.77	7	0.9
0.008	0.95	1.73	4.22	-10	1.0	0.11	4.13	5.20	5.97	2	1.0	1.5	5.55	5.95	6.35	7	0.9
0.009	0.64	1.18	2.81	-9	1.0	0.12	7.76	9.51	10.8	2	1.0	1.75	6.73	7.24	7.75	7	0.9
0.01	3.31	6.12	14.4	-9	1.0	0.13	1.37	1.64	1.84	3	1.0	2	7.75	8.37	8.99	7	0.9
0.011	1.39	2.58	5.96	-8	1.0	0.14	2.28	2.68	2.99	3	1.0	2.5	0.94	1.02	1.10	8	0.9
0.012	4.94	9.22	21.0	-8	1.0	0.15	3.64	4.20	4.66	3	1.0	3	1.05	1.15	1.26	8	0.9
0.013	1.53	2.88	6.43	-7	0.9	0.16	5.57	6.36	7.03	3	1.1	3.5	1.14	1.26	1.38	8	1.0
0.014	4.26	8.02	17.6	-7	0.9	0.18	1.19	1.34	1.46	4	1.1	4	1.21	1.34	1.47	8	1.0
0.015	1.08	2.04	4.40	-6	0.9	0.2	2.31	2.55	2.78	4	1.2	5	1.30	1.45	1.61	8	1.0
0.016	2.51	4.77	10.2	-6	0.9	0.25	8.86	9.62	10.4	4	1.2	6	1.35	1.53	1.70	8	1.1
0.018	1.12	2.15	4.43	-5	0.9	0.3	2.52	2.71	2.90	5	1.1	7	1.39	1.58	1.76	8	1.1
0.02	4.09	7.84	15.7	-5	0.9	0.35	5.81	6.22	6.62	5	1.0	8	1.42	1.61	1.80	8	1.2
0.025	0.55	1.05	1.96	-3	0.9	0.4	1.14	1.22	1.30	6	1.0	9	1.43	1.63	1.83	8	1.2
0.03	4.00	7.56	13.3	-3	0.9	0.45	1.99	2.12	2.25	6	0.9	10	1.44	1.65	1.85	8	1.3
0.04	0.74	1.35	2.13	-1	0.9	0.5	3.14	3.34	3.55	6	0.9						