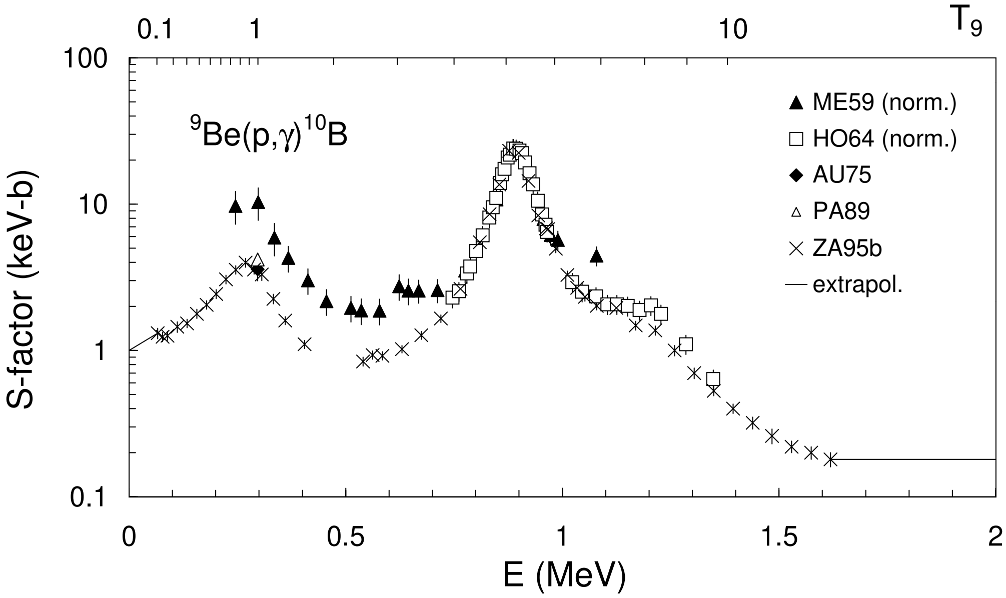
Reaction : ^{9}Be(p,γ)^{10}B

The data from ZA95b are adopted. They cover the energy region from 65 to 1620 keV, and are in agreement with the data of HO64, AU75 and PA89. The data of ME59 are omitted due to discrepancies in the quoted partial cross sections. The narrow resonance at $E_{\rm r} = 974.2$ keV ($\omega\gamma = 0.73 \pm 0.10$ eV) [FO49, HO53, MO56, BO64, HO64, ZA95b], not shown in the figure, has a negligible contribution to the rates. The reliability of the reaction rates below $T_9 = 0.1$ depends on the validity of the extrapolated value $\mathcal{S}_0 = 1$ keV b proposed by ZA95b. This $\mathcal{S}_0$ value is not supported by the data of CE92 ($\mathcal{S}_0 = 4.2$ keV b), which indicate a constant S-factor below 150 keV. The reason for this discrepancy is not clear, and we adopted the data of ZA95b because they are in agreement with the rest of the existing data in the energy range of overlapping data. Between $T_9 = 3.5$ and 10, the rates are calculated by assuming that $S(E > 1.62$ MeV) has a constant value equal to the measured one at 1.62 MeV with 50% of uncertainty. The present reaction rates are about 2 to 5 times lower than the CA88 ones in the region $0.3 \leq T_9 \leq 2$. This is due to the use by CA88 of the ME59 data, which overestimate the contribution of the $E_{\rm r} = 296.8$ keV resonance by similar factors.



T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio	T_9	low	adopt	high	exp	ratio
0.003	2.93	4.03	5.13	-23	0.9	0.06	2.91	3.34	3.77	-4	0.9	0.6	1.96	2.11	2.27	2	0.2
0.004	1.75	2.39	3.03	-20	0.9	0.07	1.02	1.15	1.29	-3	0.9	0.7	3.2	3.44	3.68	2	0.2
0.005	1.64	2.23	2.82	-18	0.9	0.08	2.84	3.18	3.52	-3	0.9	0.8	4.68	5.04	5.39	2	0.2
0.006	5.25	7.07	8.9	-17	0.9	0.09	6.75	7.5	8.24	-3	0.8	0.9	6.46	6.95	7.44	2	0.2
0.007	0.83	1.12	1.4	-15	0.9	0.1	1.42	1.57	1.72	-2	0.8	1	8.55	9.2	9.84	2	0.2
0.008	0.81	1.09	1.36	-14	0.9	0.11	2.73	2.99	3.26	-2	0.8	1.25	1.59	1.7	1.82	3	0.3
0.009	5.59	7.41	9.23	-14	0.9	0.12	4.85	5.31	5.76	-2	0.8	1.5	2.73	2.92	3.12	3	0.4
0.01	2.94	3.87	4.81	-13	0.9	0.13	8.14	8.88	9.62	-2	0.8	1.75	4.31	4.61	4.92	3	0.5
0.011	1.25	1.64	2.03	-12	0.9	0.14	1.3	1.41	1.53	-1	0.8	2	6.31	6.75	7.18	3	0.6
0.012	4.51	5.9	7.28	-12	0.9	0.15	1.99	2.16	2.34	-1	0.8	2.5	1.08	1.16	1.23	4	0.7
0.013	1.42	1.85	2.27	-11	0.9	0.16	2.95	3.2	3.45	-1	0.8	3	1.53	1.64	1.75	4	0.8
0.014	4	5.18	6.35	-11	0.9	0.18	5.93	6.42	6.91	-1	0.8	3.5	1.94	2.07	2.21	4	0.8
0.015	1.02	1.32	1.62	-10	0.9	0.2	1.09	1.18	1.27	0	0.8	4	2.29	2.46	2.62	4	0.8
0.016	2.41	3.1	3.79	-10	0.9	0.25	3.79	4.08	4.38	0	0.7	5	2.7	2.9	3.11	4	0.9
0.018	1.1	1.41	1.71	-9	0.9	0.3	0.99	1.07	1.15	1	0.6	6	2.92	3.15	3.38	4	0.9
0.02	4.09	5.17	6.26	-9	0.9	0.35	2.14	2.31	2.47	1	0.5	7	3.04	3.29	3.54	4	0.9
0.025	5.62	6.99	8.37	-8	0.9	0.4	4	4.3	4.61	1	0.4	8	3	3.26	3.52	4	0.9
0.03	4.15	5.08	6.02	-7	0.9	0.45	6.66	7.16	7.67	1	0.3	9	2.94	3.23	3.52	4	1.0
0.04	7.63	9.11	10.6	-6	0.9	0.5	1.02	1.09	1.17	2	0.3	10	2.93	3.24	3.55	4	1.0
0.05	6.04	7.05	8.07	-5	0.9												