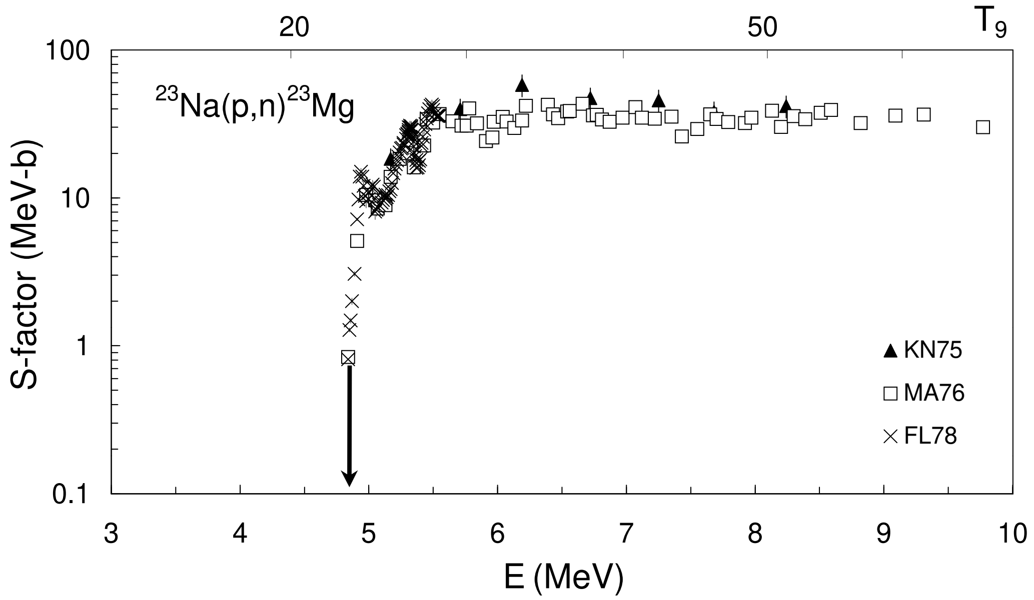
## Reaction : $^{23}$Na(p,n)$^{23}$Mg

For this endoergic reaction ($Q = -4.839$ MeV), the reaction rates are calculated using a linear interpolation between the experimental data points [KN75, MA76, FL78]. Below $T_9 \approx 8$, our rates are larger than the CA88 ones, while at the highest temperatures they come progressively in agreement. Thermalization effects ($r_{tt} = 2.6 - 2.0$ for $0.7 \leq T_9 \leq 10$) accounts for these differences at the lower temperatures (CA88 adopt $r_{tt} = 1$ at all temperatures). Our results are in agreement with those of FL78.




| $T_9$ | low | adopt | high | exp | ratio | $T_9$ | low | adopt | high | exp | ratio | $T_9$ | low | adopt | high | exp | ratio |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.7 | 3.18 | 3.46 | 3.74 | -27 | 2.9 | 1.75 | 2.64 | 2.87 | 3.11 | -6 | 1.8 | 5 | 3.59 | 3.93 | 4.27 | 3 | 1.2 |
| 0.8 | 7.23 | 7.86 | 8.49 | -23 | 2.7 | 2 | 1.47 | 1.60 | 1.73 | -4 | 1.7 | 6 | 2.44 | 2.67 | 2.91 | 4 | 1.1 |
| 0.9 | 1.77 | 1.93 | 2.08 | -19 | 2.6 | 2.5 | 4.20 | 4.58 | 4.97 | -2 | 1.6 | 7 | 0.94 | 1.03 | 1.13 | 5 | 1.1 |
| 1.0 | 9.08 | 9.88 | 10.7 | -17 | 2.4 | 3 | 1.83 | 2.00 | 2.17 | 0 | 1.5 | 8 | 2.62 | 2.89 | 3.15 | 5 | 1.0 |
| 1.25 | 6.90 | 7.50 | 8.11 | -12 | 2.2 | 3.5 | 2.75 | 3.01 | 3.26 | 1 | 1.4 | 9 | 5.92 | 6.53 | 7.14 | 5 | 1.0 |
| 1.5 | 1.22 | 1.33 | 1.44 | -8 | 1.9 | 4 | 2.09 | 2.29 | 2.49 | 2 | 1.3 | 10 | 1.10 | 1.22 | 1.33 | 6 | 0.9 |