$^{12}C(^{10}B,^{9}Be)$

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu and J. E. Purcell	NDS 198,1 (2024)	1-Aug-2024

1965Sa07: $^{12}C(^{10}B,^{9}Be)$ E=105 MeV; populated ground state and unresolved states at E_x=3.5 MeV.

1974Na20: $^{12}C(^{10}B,^{9}Be)$ E=100 MeV. Measured $\sigma(\theta)$ for θ=10° to 40°, deduced level energies. Considered model dependencies for S.

2022Ar03: $^{12}C(^{10}B,^{9}Be)$ E=41.3 MeV; measured $\sigma(\theta)$ for θ=7° to 51°. Analyzed data using a modified DWBA; deduced p+$^{12}C\rightarrow^{13}N$ ANC and analyzed astrophysical reaction rates. The study included a reanalysis of the collection of low-energy (p,γ) data resulting in Γ_p=33.5 keV *10*, 46.0 keV *34* and 280 keV *50* and Γ_γ=0.63 eV *7*, 0.35 eV *8* and 2200 eV *500* for $^{13}N^{*}$(2.36, 3.50, 10.26), respectively. Note: the tail of the 10.26 MeV state is fit using data below the E_x=2 MeV region.

1975Ra13: DWBA analysis of (1974Na20) data.

1976Ku06: DWBA analysis of $^{13}N^{*}$(2.37 MeV) data from (1974Na20).

2000Fe08: $^{12}C(^{10}B,^{9}Be)$ E=100 MeV; analyzed ANC method.

^{13}N Levels

E(level)[†]
0
2.37×10^{3}
3.51×10^{3}[‡]
3.55×10^{3}[‡]
6.9×10^{3}[‡]
7.17×10^{3}[‡]
7.39×10^{3}[‡]
8.82×10^{3}

[†] From (1974Na20).

[‡] Unresolved.