^{10}B(^{3}He,^{3}He):res

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

1987Ba34: ^{10}B(^{3}He,^{3}He) E=1.5-3.3 MeV; measured $\sigma(\theta)$ for θ=75.1°, 107.5° and 143.3°. R-matrix analysis. Deduced levels, level parameters.

See also:
1964Os02: ^{10}Be(^{3}He,t) E=5-10.5 MeV; measured excitation function.
1970Du07: ^{10}B(^{3}He,^{3}He) E=4-18 MeV; measured σ(E,θ) for θ=15° to 160°; deduced optical model parameters.
1970Nu02: ^{10}B(^{3}He,^{3}He), (^{3}He,t) E=14 MeV; measured $\sigma(\theta)$ for θ=5° to 140°; deduced optical model parameters.
1972Bu30: ^{10}B(^{3}He,^{3}He) E=13-27 MeV; measured $\sigma(\theta)$ for θ=8° to 150°; deduced optical model parameters.
1979Go07: ^{10}B(^{3}He,^{3}He) E=46.1 MeV; measured $\sigma(\theta)$ for θ=10° to 160°; deduced optical model parameters.
1980Tr02: ^{10}B(^{3}He,^{3}He) E=41 MeV; measured $\sigma(\theta)$ for θ=20° to 85°; deduced optical model parameters.

^{13}N Levels

E(level)‡	J^{π}†	Γ†	L	$E_{^3He}$(res) (MeV)†	Comments
23.25×10^3	$3/2^-$	500 keV	1	2.10	Γ: $\Gamma_{^3He}$=0.25 MeV (1987Ba34).
23.87×10^3	$3/2^-$	400 keV	1	2.90	Γ: $\Gamma_{^3He}$=0.12 MeV (1987Ba34).
23.93×10^3	$(11/2,13/2)^-$	20 keV	3	2.975	Γ: $\Gamma_{^3He}$=0.020 MeV (1987Ba34).
24.40×10^3	$(5/2,7/2)^+$	700 keV	0	3.60	Γ: $\Gamma_{^3He}$=0.35 MeV (1987Ba34). E(level): The upper energy covered in (1987Ba34) was E(^{3}He)=3.3 MeV. The authors found an improved fit by including this resonance. Fit values should be considered tentative.

† From R-matrix analysis in (1987Ba34).
‡ Level energies are deduced using E_{res}(^{3}He) and ^{10}B, ^{3}He and ^{13}C masses from (2021Wa16: AME-2020). E_x=S(^{3}He)+$E_{c.m.}$(relativistic).