^{14}C(^{3}He,α)

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

1966Ba13: ^{14}C(^{3}He,α) E=39.8-44.8 MeV; measured $\sigma(\theta)$ for θ=15° to 80°.
1971Co14: ^{14}C(^{3}He,α) E=6, 8 and 10 MeV; measured $\sigma(\theta)$ for $\theta\approx$30° to 160°. Deduced optical model parameters.
1971Ke08, 1972Ke08: ^{14}C(^{3}He,α) E=2-5.5 MeV; measured $\sigma(\theta)$ for θ=20° to 160°. Analyzed resonances in $\alpha_{0,1,2,3}$.
1984RoZQ: ^{14}C(^{3}He,α) E=25.05 MeV; measured $\sigma(\theta)$ for θ=13° to 46° at the BIG KARL spectrometer in Julich; populated ^{13}C*(15.102 MeV, T=3/2).
1994Bu01: ^{14}C(^{3}He,α) E=37.9 MeV; measured $\sigma(\theta)$ for $\theta_{c.m.}\approx$8°−160°. Analyzed rainbow scattering.

^{13}C Levels

E(level)[†]	J$^{\pi}$[†]	Comments
0	1/2^{-}	T=1/2 (1966Ba13) $p_{1/2}$ neutron picked up.
3080		E(level): Reported in (1971Ke08).
3680	3/2^{-}	T=1/2 (1966Ba13) $p_{3/2}$ neutron picked up.
3854		E(level): From (1972Ke08).
15108 *14*	3/2^{-}	T=3/2 (1966Ba13) E(level),J$^{\pi}$: See also (1984RoZQ). $p_{3/2}$ neutron picked up.

[†] From (1966Ba13), except where noted. A J dependence is found in the (1966Ba13) analysis of (^{3}He,α) angular distributions.