

Table 13.9 from (1976AJ04): Resonances in ${}^9\text{Be}(\alpha, \alpha_0)$ ^a

E_α (MeV)	Γ_{cm} (keV)	l_α	J^π	${}^{13}\text{C}^*$ (MeV)
1.93 ^e	180 ^e	1, 0	$\frac{5}{2}^+$	11.98
3.80	343	0, 2	$\frac{3}{2}^-$ ^b	13.28
4.00	58	(4, 6)	$(\frac{9}{2}^-)$	13.42
4.20	685	1, 3	$\frac{5}{2}^+$ ^c	13.56
4.50	247	1, 3	$\frac{3}{2}^+$ ^c	13.76
5.00	75	2, 4	$\frac{5}{2}^-$ ^d	14.11
5.075	73	3, 5	$\frac{7}{2}^+$ ^d	14.162
(5.50)	400	(1, 3)	$(\frac{5}{2}^+)$	(14.46)

^a (1973GO15): from analysis in the single-level approximation. This assumes the J^π ordering suggested by (1965LI09).

^b Favored by the analysis but the assignment is not certain and more than one state may be involved.

^c (1973DE14) suggest the opposite ordering [$\frac{3}{2}^+, \frac{5}{2}^+$]: see Table 13.8.

^d An equally good fit to the data is obtained with a $\frac{7}{2}^-$ state at 5.0 MeV and a $(\frac{3}{2}, \frac{5}{2}, \frac{7}{2})^+$ state at 5.08 MeV.

^e This resonance is reported by (1974SA16). It is not clear whether the Γ is in the c.m. or lab systems. Γ_α is given as 72 keV.