

Table 13.8 from (1991AJ01): Resonances in  ${}^9\text{Be}(\alpha, \alpha_0)$  <sup>a</sup>

$E_\alpha$ (MeV)	$\Gamma_{\text{c.m.}}$ (keV)	$l_\alpha$	$J^\pi$	${}^{13}\text{C}^*$ (MeV)
3.80	343	0, 2	$\frac{3}{2}^-$ <sup>b</sup>	13.28
4.00	58	(4, 6)	$(\frac{9}{2}^-)$	13.42
4.20	685	1, 3	$\frac{5}{2}^+$ <sup>c</sup>	13.56
4.50	247	1, 3	$\frac{3}{2}^+$ <sup>c</sup>	13.76
5.00	75	2, 4	$\frac{5}{2}^-$ <sup>d</sup>	14.11
5.075	73	3, 5	$\frac{7}{2}^+$ <sup>d</sup>	14.161
(5.50)	400	(1, 3)	$(\frac{5}{2})^+$	(14.46)
6.44	<sup>e</sup>		$\frac{3}{2}^-; T = \frac{3}{2}$	15.11

<sup>a</sup> (1973GO15): from analysis in the single-level approximation. This assumes the  $J^\pi$  ordering suggested by (1965LI09). See also (1981AJ01).

<sup>b</sup> Favored by the analysis but the assignment is not certain and more than one state may be involved.

<sup>c</sup> The ordering of these two  $J^\pi$  values is not clear.

<sup>d</sup> 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.

<sup>e</sup> Weak anomaly at  $E_\alpha = 6443.5 \pm 2.0$  keV: see Table 13.6 for parameters of 15.11 MeV state, and reaction 2.