

Table 19.4 from (1995TI07): States in ^{19}O from $^{13}\text{C}(^7\text{Li}, \text{p})^a$

E_x (MeV \pm keV)	J^b	E_x (MeV \pm keV)	J^b
0	$\frac{5}{2}$	6.4662 ± 4.8^i	
0.0944 ± 1.1	$\frac{3}{2}$	6.5827 ± 6.0^j	
1.4716 ± 1.8	$\frac{1}{2}$	6.903 ± 8	
2.3711 ± 1.9	$\frac{9}{2}$	6.988 ± 9	
2.7776 ± 1.9	$\frac{7}{2}$	7.118 ± 10	
3.0674 ± 1.6	$\frac{3}{2}$	7.242 ± 8	
3.1536 ± 2.8	$\frac{5}{2}$	7.508 ± 10	
3.2316 ± 2.3	$\frac{3}{2}$	8.048 ± 20	
3.9449 ± 1.4^c		8.132 ± 20	
4.1093 ± 1.9	$\frac{3}{2}$	8.247 ± 20	
4.3281 ± 2.4	$\frac{3}{2}, \frac{5}{2}$	8.450 ± 20	
4.4025 ± 2.7	$\frac{3}{2}, \frac{5}{2}, \frac{7}{2}$	8.561 ± 20	
4.5820 ± 4.6	$\frac{3}{2}$	8.591 ± 20	
4.7026 ± 2.7^d		8.916 ± 20	
4.9683 ± 5.5	$\frac{5}{2}, \frac{7}{2}$	8.923 ± 20	
5.0070 ± 4.5	$\frac{3}{2}, \frac{5}{2}$	9.022 ± 20	
5.0820 ± 5.4	$\frac{1}{2}$	9.064 ± 20	
5.1484 ± 3.2	$\frac{5}{2}$	9.253 ± 20	
5.3840 ± 2.8	$\frac{9}{2}, \frac{11}{2}, \frac{13}{2}^e$	9.324 ± 20	
5.5035 ± 3.1^f		9.43	
5.7046 ± 4.3^g		9.56	
6.1196 ± 3.2^h		9.77	
6.1916 ± 5.5	$\frac{1}{2}$	9.88	
6.2693 ± 2.6	$\frac{7}{2}$	9.93	
6.4058 ± 3.1^h		9.98	

^a (1977FO10); $E(^7\text{Li}) = 16.0$ MeV. Angular distributions have been reported to all states with $E_x < 6.8$ MeV. See also (1978AJ03).

^b Derived from total cross section and $2J + 1$ analysis.

^c Corresponds to unresolved states. Assuming one of these to be a $\frac{3}{2}^-$ state (see Table 19.5), the other should have $J = \frac{7}{2} \rightarrow \frac{13}{2}$.

^d May correspond to unresolved states.

^e If this group corresponds to a single state, the analysis indicates $J^\pi = \frac{9}{2}^-, \frac{11}{2}^-$ or $\frac{13}{2}^+$ (1977FO10).

^f Narrow unresolved states: see discussion in (1977FO10).

^g Cross section is too large for the known state at this energy with $J^\pi = \frac{3}{2}^+$. If this group corresponds to a doublet, the other member should have $J = \frac{1}{2} \rightarrow \frac{5}{2}$.

^h Sharp group; if due to a single state $J = \frac{11}{2} \rightarrow \frac{17}{2}$.

ⁱ $J = (\frac{7}{2}, \frac{9}{2}, \frac{11}{2})$.

^j The total cross section to this state is very high implying unresolved states: if there are two states one must have $J > \frac{13}{2}$.