

Table 19.3 from (1983AJ01): States in ^{19}O from $^{13}\text{C}(^7\text{Li}, \text{p})^{\text{a}}$

E_x (MeV \pm keV)	J^{b}	E_x (MeV \pm keV)
0	$\frac{5}{2}$	$6.4662 \pm 4.8^{\text{i}}$
0.0944 ± 1.1	$\frac{3}{2}$	$6.5827 \pm 6.0^{\text{j}}$
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
$3.9449 \pm 1.4^{\text{c}}$		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
$4.7026 \pm 2.7^{\text{d}}$		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	$\frac{9}{2}, \frac{11}{2}, \frac{13}{2}^{\text{e}}$	9.324 ± 20
$5.5035 \pm 3.1^{\text{f}}$		9.43
$5.7046 \pm 4.3^{\text{g}}$		9.56
$6.1196 \pm 3.2^{\text{h}}$		9.77
6.1916 ± 5.5	$\frac{1}{2}$	9.88
6.2693 ± 2.6	$\frac{7}{2}$	9.93
$6.4058 \pm 3.1^{\text{h}}$		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.

^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 $J \geq \frac{13}{2}$.