

Table 16.19 from (1993TI07): States of ^{16}O from $^{13}\text{C}(^6\text{Li}, t)^{16}\text{O}$

E_x (MeV \pm keV) ^a	$\Gamma_{\text{c.m.}}$ (keV) ^c	Comments ^d
0 ^b		
6.13 ^b		
7.0 [u] ^b		
8.87 ^{b, c}		c.n.
9.84 ^{b, c}		c.n.
10.36 ^{b, c}		c.n.
11.10 [u] ^{b, c}		4^+ probably dominates; m.s.
11.52 ^c		
12.05 ^c		consistent with $L = 1 \rightarrow 0^+$
12.53 ^c		consistent with $L = 2 \rightarrow 2^-$
12.97 ^c		consistent with $L = 2 \rightarrow 2^-$
13.10 [u] ^c		$L = 2$, but which state is involved?
14.3 ^c		$L = 4 \rightarrow 4^{(-)}$
14.40 ^c		anomalous shape
14.82 ^c		$L = 5$; probably $J^\pi = 6^+$
15.79 ^c		consistent with $L = 3 \rightarrow 3^+$
16.812 ± 15 ^c	28 ± 7	consistent with $L = 3 \rightarrow 3^+$
17.764 ± 15 ^{c, e}	45 ± 7	$L = 4$ or $L = 5$
18.032 ± 15 [u] ^{c, f}	40 ± 7	$L = 3$; both states are probably populated
18.640 ± 15 ^c	22 ± 7	$L = 4$ or 5 ; probably 5^+
18.976 ± 15 ^c	25 ± 7	probably 4^-
19.814 ± 15 ^c	23 ± 7	
20.5 [u]		very strongly excited

[u] = unresolved.

c.n. = formation appears to be by a compound nuclear process.

m.s. = multistep process.

^a E_x without uncertainties are from [Table 16.13](#).

^b Angular distributions have been reported at $E(^6\text{Li}) = 25$ MeV to the first seven groups shown here and at 28 MeV: see ([1986AJ04](#)) for references. See also ([1982AJ01](#)).

^c Angular distribution at $E(^6\text{Li}) = 34$ MeV (see [1983KE06](#), [1986AJ04](#)).

^d For abbreviations see above. When an L value is shown, stripping patterns are evident ([1983KE06](#)).

^e There is some evidence for a state at $E_x = 17.90$ MeV ([1983KE06](#), [1986AJ04](#)).

^f There is some evidence for a state at $E_x = 18.46$ MeV with $\Gamma \approx 60$ keV ([1983KE06](#), [1986AJ04](#)).