

Table 16.17 from (1986AJ04): ^{16}O states from $^{14}\text{N}(^3\text{He}, \text{p})^{16}\text{O}$ ^a

E_x (MeV \pm keV)	$\Gamma_{\text{c.m.}}$ (keV)	L	J^π
0		0 + 2	
6.052 \pm 5		(0) ^b	
6.131 \pm 4		1 + 3	
6.916 \pm 3		(0)	
7.115 \pm 3		1 + 3	
8.870 \pm 3	< 20	3 + 1	
9.614 \pm 30	510 \pm 60		
9.847 \pm 3	< 20	0(+2)	
10.356 \pm 3	25 \pm 5	^b	
10.957 \pm 1	< 12	1	
11.080 \pm 3	< 12	2 + 4 ^c	
11.098 \pm 2	< 12		
11.520 \pm 4	64 \pm 5	^b	
12.049 \pm 2	< 12	0	
12.438 \pm 3	70 \pm 10	1	
12.530 \pm 2 ^d	< 12	1 + 3	
12.797 \pm 4	40 \pm 10	1	0 ⁻ ; $T = 1$ ^f
12.970 \pm 1	< 12	1 + 3	2 ⁻ ; $T = 1$ ^f
13.105 \pm 15	160 \pm 30	0 + 3 ^c	
13.257 \pm 2	20 \pm 5	(1 + 3)	3 ⁻ ; $T = 1$ ^f
13.663 \pm 4	63 \pm 7	0	
13.869 \pm 2	85 \pm 20	(4) ^b	
13.979 \pm 2 ^d	14 \pm 5	1(+3)	
14.302 \pm 3	< 20	^b	
14.399 \pm 2 ^d	27 \pm 5	(4)	
14.818 \pm 3		2	(0 \rightarrow 4) ⁺
14.927 \pm 2 ^d	60 \pm 10	0(+2)	(0, 1, 2) ⁺ ^g
15.103 \pm 5			
15.196 \pm 3		(0 + 2)	
15.409 \pm 6		^b	

Table 16.17 from (1986AJ04): ^{16}O states from $^{14}\text{N}(^3\text{He}, \text{p})^{16}\text{O}$ ^a (continued)

E_x (MeV \pm keV)	$\Gamma_{\text{c.m.}}$ (keV)	L	J^π
15.785 ± 5 ^d	40 ± 10	2(+4)	$(2, 3, 4)^+$ ^g
16.114 ± 4 ^e			
16.209 ± 2 ^d	40 ± 10	0 + 2	
16.350 ± 13			
16.440 ± 3	~ 30	0 + 2	
16.817 ± 2	70 ± 10		
_h			

^a For references see [Table 16.17 in \(1982AJ01\)](#).

^b Mostly compound nucleus.

^c Unresolved.

^d Also reported in $\text{p}\gamma_{4.4}$ coincidences.

^e Very weak proton group. I am indebted to Prof. H.T. Richards for his comments.

^f ([1978FO27](#)) have compared the cross section ratios of these three $T = 1$ states with their analogs in ^{16}N populated in the (t, p) reaction: only the 2^- states have the expected cross section ratio of 0.5 for $(^3\text{He}, \text{p})/(\text{t}, \text{p})$. The populations of the 0^- and 3^- states in ^{16}O are lower by a factor of two.

^g ([1978FO27](#)) suggest that these two states [$^{16}\text{O}^*(14.93, 15.79)$] are 1^+ and 3^+ 2p-2h states with $T_p = T_h = 0$.

^h States at 17.82 and 18.04 (± 0.04) MeV are also reported in $\text{p}\gamma_{4.4}$ coincidences.