

Table 14.18 from (1976AJ04): Excited states of ^{14}N from $^{12}\text{C}(^3\text{He}, p)^{14}\text{N}^a$

E_x (MeV \pm keV)			L^d	$J^\pi; T$
(1971DU03)	(1969HO23)	(1968MA29)		
	0		2	
	2.319 ± 15		0	
3.9502 ± 1.5	3.952 ± 15		0	
4.9153 ± 1.4	4.927 ± 15		1	
$\equiv 5.10587 \pm 0.18^b$	5.117 ± 15		1	
5.6888 ± 1.4	5.713 ± 15		1	
5.8324 ± 1.4	5.885 ± 15		3	
6.2025 ± 1.4	6.224 ± 15	6.21 ± 20	0	
6.4449 ± 1.4	6.468 ± 15	6.46 ± 18	2	
7.0279 ± 1.4	7.036 ± 15	7.01 ± 42	2	
7.9649 ± 1.4	7.974 ± 15	7.95 ± 26	3	1
	8.072 ± 15	8.05 ± 35	1	
8.4864 ± 1.5^g	8.493 ± 15	8.47 ± 30	3	$4^-; 0^{d,f}$
8.6174 ± 4	8.625 ± 15	8.61 ± 34	0	$(0^+; 1)^h$
8.9099 ± 1.9^c	8.912 ± 15			$(3^-; 1)^h$
8.9598 ± 1.4				
	8.97 ± 15	8.96 ± 19		
8.9773 ± 4				$(2^+; 0)^h$
9.1241 ± 1.5	9.126 ± 15			i
		9.15 ± 18		
9.1674 ± 1.4	9.176 ± 15		j	$(2^+; 1)^h$
9.3854 ± 1.6^c	9.389 ± 15	9.39 ± 26		$2^-; 0^{d,k}$
		9.51^f		$(2^-; 1)^h$
	9.703 ± 15	9.70 ± 22		$(1^+; 0)^h$
	10.063 ± 15^m	10.08 ± 18		$3^+, \geq 4^f$
	10.101 ± 15			$1^+, 2^+^f$
		10.23^f		1^f
	10.441 ± 15	10.43 ± 20	j	$(2^+, 1)^h$
		10.56^f		$1, 2^f$
	10.812 ± 15	10.81 ± 23		$5^+, 0^{e,f}$

Table 14.18 from (1976AJ04): Excited states of ^{14}N from $^{12}\text{C}(^3\text{He}, \text{p})^{14}\text{N}$ ^a (continued)

E_x (MeV \pm keV)			L ^d	$J^\pi; T$
(1971DU03)	(1969HO23)	(1968MA29)		
	11.053 \pm 15	11.06 \pm 50		
	11.249 \pm 15	11.27 \pm 50		
	11.357 \pm 15	11.39 \pm 40		
	11.517 \pm 15	11.51 \pm 30		
		11.66 \pm 40		
		11.79 \pm 110		
		11.95 \pm 30		
	12.29 \pm 15			
	12.425 \pm 15	12.40 \pm 30		
	12.506 \pm 15	12.50 \pm 20		
	12.608 \pm 15	12.63 \pm 25		
	12.69 \pm 15	12.74 \pm 30		
	12.80 \pm 15			
		12.90 \pm 25		
		13.15 \pm 40		
		14.91 \pm 60		
		15.8 \pm 200		
		17.4 \pm 200		

^a See also Table 14.14 in (1970AJ04).

^b All E_x shown by (1971DU03) are measured relative to this energy obtained by (1967CH19) from E_γ .

^c The widths of $^{14}\text{N}^*(8.91, 9.39)$ are, respectively, 19.7 ± 1.9 and 15.6 ± 2.0 keV.

^d (1968MA29).

^e (1972NO08): from study of angular correlations. See also (1968MA29).

^f (1974NO01): from a study of decay proton correlation ($^{12}\text{C}(^3\text{He}, \text{p}')^{14}\text{N}^*(\text{p})^{13}\text{C}_{\text{g.s.}}$) with the relevant p' group.

^g $\Gamma_p/\Gamma = 0.73 \pm 0.10$ (1974NO01).

^h Known from other data: consistent with results of (1974NO01).

ⁱ Unresolved doublet: see reactions 21 and 26.

^j $\theta_p^2(l=3) = (2.3 \pm 1.1) \times 10^{-3}$ and $< 1.6 \times 10^{-3}$ for $^{14}\text{N}^*(9.17, 10.43)$ (1974NO01).

^k The results of (1974NO01) are consistent with either $J^\pi = 2^-$ or 3^- for this state.

^l $\Gamma_\gamma/\Gamma = 0.7 \pm 0.2\%$; $(2J+1)\Gamma_p = 12.6 \pm 3.6$ eV: see Table 14.12 (1972BA56).

^m $\Gamma < 10$ keV (J.W. Noe, private communication).