Table 14.16 from (1981AJ01): Levels of ^{14}N from ^{13}C(p, γ)^{14}N and ^{13}C(p, p)^{13}C [a]

E_p (MeV ± keV)	$\Gamma_{c.m.}$ (keV)	l_p	$\omega\Gamma_\gamma$ (eV)	J^π; T	^{14}N* (MeV)	Refs.
0.4485 ± 0.5	< 0.37	2	0.022	2^-	7.9669	A
0.551 ± 1	30 ± 1	0	9.2	1^-; 1	8.062	A
1.012 ± 2	≤ 0.2	4	≈ 0.01	(4^-); 0	8.490	A, (1978KE03)
1.150 ± 2	7 ± 1	1	1.3	0^+; 1	8.618	A
1.34 ± 50	≈ 460	0	12.8	0^-; 1	8.79	A
1.462 ± 3	16 ± 2	2	0.72	3^-; 1	8.907	A
1.523 ± 2	< 1		≈ 0.003	5^+; 0	8.964	A, (1978KE03)
1.540 ± 3	8 ± 2	1, (3)	0.13	2^+	8.980	A
1.7005 ± 1	< 1		[a]	3^+; 0	9.1287	A, (1978KE01, 1978KE03)
1.7476 ± 0.9	0.07 ± 0.05		14.8	2^+; 1	9.1724	A, (1976SI07)
1.980 ± 3	13 ± 3	2		3^-, 2^-	9.388	A
2.110 ± 3	41 ± 2	2	6.2	2^-; 1	9.509	A
2.319 ± 4	15 ± 3	1		1^+	9.703	A
2.743 [b]	5	1	[c]	1^+, (2^+)	10.096	A
2.885 ± 10 [b]	80 ± 15	0, 2		$1(^-)$; 0	10.228	A
3.105 ± 7 [b]	33 ± 3	1	17	2^+; 1	10.432	A
3.20 [b]	140	0, 2		1^-	10.52	(1961KA04)
3.72 ± 30 [d]	165 ± 30				11.00	(1971RI13)
3.771 ± 5	1.2 ± 0.4		[i]	3^+	11.050	(1971RI13, 1980RA06)
3.79	100			1^+	11.07	A
3.94 ± 30 [e]	220 ± 30				11.21	(1971RI13)
3.98 [b]	11	2		3^-	11.24	(1961KA04)
4.04 [b]	175	2		2^-	11.30	A
4.14 [b]	28	1		1^+	11.39	A
4.525 ± 15 [f]	115 ± 10		[j]	1^+	11.750	A, (1971RI13)
5.325 ± 10	48 ± 7		[k]		12.492	(1971RI13)
5.88 ± 20 [d]	120 ± 30				13.01	(1971RI13)
6.20 ± 100 [g]	1000 ± 150		[l]	(2^-); 1	13.30	(1971RI13)
6.62 ± 20 [d]					13.69	(1971RI13)

Table 14.16 from (1981AJ01): Levels of ^{14}N from ^{13}C(p, γ)^{14}N and ^{13}C(p, p)^{13}C [a] (continued)

E_p (MeV ± keV)	$\Gamma_{c.m.}$ (keV)	l_p	$\omega\Gamma_\gamma$ (eV)	$J^\pi; T$	^{14}N* (MeV)	Refs.
[h]						
16.1				$2^-; 1$	22.5	(1971RI13, 1980TU01)
16.7				$2^-; 1$	23.0	(1971RI13, 1980TU01)

A: See references for this state quoted in Table 14.16 in (1970AJ04) and 14.20 in (1976AJ04).

[a] See also Table 14.11.

[b] Reduced width for proton emission is of the order of 1% of the Wigner limit (1961KA04).

[c] $(2J+1)\Gamma_\gamma = 0.5 \pm 0.2$ eV, $\Gamma = 12 \pm 3$ eV (1960RO23).

[d] Weak resonance.

[e] See also Table 14.16 in (1970AJ04).

[f] In the $\gamma_{3.09}$ channel the peak occurs 55 keV higher (1971RI13); interference effects may be present.

[g] Part of the giant dipole resonance.

[h] Some broad structures are evident in the γ_0, $\gamma_{3.68}$ and $\gamma_{3.85}$ yields (1971RI13) and in the γ_0 yield (1980TU01). See also reaction 31.

[i] $\Gamma_\gamma = 1.2 \pm 0.4$ keV (1980RA06); $\Gamma_p = 0.5\%$ of single particle unit. J^π based on angular distribution of γ_0. For nature of γ-decay see Table 14.11.

[j] $(2J+1)\Gamma_\gamma = (18.5 \pm 4.2)\Gamma/\Gamma_p$ eV; if $J = 1$, $\Gamma_\gamma \geq 6$ eV (1971RI13).

[k] $(2J+1)\Gamma_{\gamma_0} = 2.3\ \Gamma/\Gamma_p$ eV; if $\Gamma = 38$ eV is assumed (1971RI13).

[l] $(2J+1)\Gamma_{\gamma_0} \geq 200$ eV (1971RI13): thus the transition is dipole and $T = 1$. The resonance is asymmetric and it is suggested that two states are invloved, one with $J^\pi = 1^-$ at $E_x = 12.7$ and the other one with 2^- at $E_x = 13.3$ MeV.