Table 13.14 from (1986AJ01): Energy levels of ^{13}N

E_x (MeV ± keV)	$J^\pi; T$	$\Gamma_{c.m.}$ (keV)	Decay	Reactions
g.s.	$\frac{1}{2}^-; \frac{1}{2}$	$\tau_{1/2} = 9.965 \pm 0.004$ min	β^+	1, 2, 6, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 37, 38, 39
2.3649 ± 0.6	$\frac{1}{2}^+$	$\Gamma_{c.m.} = 31.7 \pm 0.8$	γ, p	6, 9, 10, 11, 15, 16, 22, 26, 27, 30, 32, 33, 35
3.511 ± 2	$\frac{3}{2}^-$	62 ± 4	γ, p	2, 6, 8, 9, 10, 11, 15, 16, 18, 20, 23, 26, 27, 28, 29, 30, 31, 32, 34, 35
3.547 ± 4	$\frac{5}{2}^+$	47 ± 7	p	2, 6, 8, 9, 11, 15, 16, 18, 20, 22, 23, 26, 27, 28, 30, 32
6.364 ± 9	$\frac{5}{2}^+$	11	p	7, 9, 11, 16, 27, 32, 34
6.886 ± 8	$\frac{3}{2}^+$	115 ± 5	p	7, 9, 11, 27, 32
7.155 ± 5	$\frac{7}{2}^+$	9 ± 0.5	p	7, 9, 11, 16, 27, 32
7.376 ± 9	$\frac{5}{2}^-$	75 ± 5	p	7, 8, 9, 11, 16, 27, 28, 29, 30, 31, 32, 34
7.9	$\frac{3}{2}^+$	≈ 1500	p	9, 11, 16, 32
8.918 ± 11	$\frac{1}{2}^-$	230	p	9, 11, 16, 29, 30, 31, 32, 34
9.00	$\frac{9}{2}^+$	280 ± 30		7, 16, 26, 27, 31
9.476 ± 8	$\frac{3}{2}^-$	30	p	7, 9, 11, 16, 27, 29, 31
10.25 ± 150	$(\frac{1}{2}^+)$	≈ 280	γ, p	10
10.36	$\frac{5}{2}^-$	30	p	7, 9, 11, 16, 27, 29
10.36	$\frac{7}{2}^-$	76	p	7, 11, 16, 27
10.833 ± 9	$\frac{1}{2}^-$			7, 9, 27, 34
11.530 ± 12	$\frac{5}{2}^+$	430 ± 35	p	7, 9, 11
11.70 ± 30	$\frac{5}{2}^-$	115 ± 30	p	11
11.74 ± 40	$\frac{3}{2}^+$	240 ± 30	γ, p	10, 11
11.74 ± 50	$\frac{3}{2}^-$	530 ± 80	p	11
11.878 ± 12	$\frac{3}{2}^-$	380 ± 50	p	8, 9, 11, 30, 34

Table 13.14 from (1986AJ01): Energy levels of ^{13}N (continued)

E_x (MeV ± keV)	$J^\pi; T$	$\Gamma_{c.m.}$ (keV)	Decay	Reactions
12.13 ± 50	$\frac{7}{2}^-$	250 ± 30	p	11, 16, 35
12.558 ± 23		> 400		9
12.937 ± 24		> 400		9
13.5 ± 200	$\frac{3}{2}^+$	≈ 6500	γ, p	10, 11
14.05 ± 20	$\frac{3}{2}^+; \frac{1}{2}$	165 ± 20	γ, p, α	10, 11, 14
15.06457 ± 0.4 [a]	$\frac{3}{2}^-; \frac{3}{2}$	0.86 ± 0.12	γ, p, α	9, 10, 11, 14, 26, 27, 34
15.3 ± 200	$(\frac{3}{2}^+)$	350 ± 150	γ, p	10
15.99 ± 30	$\frac{7}{2}^+; \frac{1}{2}$	135 ± 90	p, α	11, 14, 27
16.0		≈ 500	p	11
17.5			γ, p	10, 11
18.15 ± 30	$\frac{3}{2}^+; \frac{1}{2}$	320 ± 80	p	11
18.17 ± 20	$\frac{1}{2}^-; \frac{1}{2}$	225 ± 50	p, α	11, 14
18.406 ± 5	$\frac{3}{2}^+; \frac{3}{2}$	66 ± 8	p, α	9, 11, 14
18.961 ± 10	$\frac{3}{2}^-$ or $\frac{7}{2}^+; \frac{3}{2}$	23 ± 5	p, α	9, 11, 14
19.83	$\frac{5}{2}^-; \frac{1}{2}$	1000	p, α	11, 14
19.88	$\frac{7}{2}^+; \frac{1}{2}$	750	p	11
20.2	$\frac{5}{2}^-$	1000	p	11
20.9 ± 300	$\frac{1}{2}^+$	1200	γ, p	10, 11
21.4	$\frac{5}{2}^-$	750	p	11
21.7	$\frac{3}{2}^+$		p	11
22.4 ± 500	$\frac{1}{2}^+$		p	11
23			γ, p	10
23.3		400	p, ^{3}He	3
23.83 ± 50		350 ± 50	p, ^{3}He	3
24.4		700	p, ^{3}He	3
(24.6)		120	p, ^{3}He	3
25.6 ± 100	$(\frac{3}{2})^-$	240 ± 80	p, ^{3}He	3, 11
25.9		1000	(n), p, d, ^{3}He, α	3, 4, 5
26.84			p	11

Table 13.14 from (1986AJ01): Energy levels of ^{13}N (continued)

E_x (MeV $\pm$ keV)	$J^\pi; T$	$\Gamma_{c.m.}$ (keV)	Decay	Reactions
28			(γ), p, ^{3}He, (α)	2, 3, 5
(31)			p	11
32		≈ 2000	γ, d, ^{3}He, α	2, 4, 5, 10

[a] See also Table 13.7.