

Table 15.4 from (1970AJ04): Energy levels of ^{15}N ^a

E_x (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or Γ (keV)	Decay	Reactions
0	$\frac{1}{2}^-$		stable	2, 3, 4, 8, 9, 10, 12, 13, 14, 21, 22, 23, 24, 25, 26, 29, 30, 32, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66
5.27055 ± 0.25	$\frac{5}{2}^+$	$\tau_m = 2.9 \pm 0.5$	γ	3, 4, 8, 12, 13, 21, 22, 23, 26, 29, 30, 32, 39, 42, 52, 53, 55, 58, 59, 62
5.29921 ± 0.25	$\frac{1}{2}^+$	< 0.01	γ	3, 4, 8, 12, 13, 21, 22, 23, 26, 29, 30, 32, 39, 46, 52, 53, 55, 58, 59
6.3235 ± 0.4	$\frac{3}{2}^-$	< 0.040	γ	3, 4, 8, 10, 12, 13, 21, 22, 26, 29, 30, 32, 39, 49, 52, 53, 55, 57, 58, 59, 62
7.1550 ± 0.4	$\frac{5}{2}^+$	< 0.018	γ	3, 4, 8, 12, 21, 22, 26, 29, 32, 39, 52, 53, 62
7.3010 ± 0.5	$\frac{3}{2}^+$	< 0.025	γ	3, 4, 8, 12, 13, 21, 26, 29, 32, 39, 46, 52, 53, 55, 62
7.566 ± 3	$\frac{7}{2}^+$	0.06 ± 0.02	γ	3, 4, 8, 12, 13, 21, 22, 29, 39, 52, 53, 62
8.3126 ± 0.7	$\frac{1}{2}^+$	< 0.010	γ	3, 4, 8, 21, 26, 29, 32, 39, 46, 52, 53, 55, 62
8.576 ± 2	$\frac{3}{2}^+$		γ	3, 4, 8, 13, 21, 22, 26, 32, 39, 52, 53, 62
9.053 ± 2	$\frac{1}{2}^+$		γ	2, 3, 4, 8, 21, 26, 29, 32, 39, 46, 55
9.1518 ± 0.5	$\frac{3}{2}^-$		γ	3, 4, 8, 13, 21, 22, 29, 32, 39, 52, 53
9.1549 ± 0.5	$(\frac{5}{2})$	< 0.010	γ	3, 4, 8, 13, 21, 22, 29, 32, 39, 52, 53
9.225 ± 3.5	$\frac{3}{2}$ or $\frac{1}{2}$ ^b	< 0.1	γ	21, 29, 39, 55
9.762 ± 3.5	$\frac{5}{2}^-$		γ	21, 39, 52, 53
9.829 ± 3	$\frac{7}{2}$	< 0.19	γ	2, 3, 4, 8, 21, 22, 29, 52, 53
9.929 ± 4	$(\frac{1}{2}, \frac{3}{2})^+$		γ	21, 39
10.070 ± 3	$\frac{3}{2}^+$		γ	13, 21, 39, 52, 53
10.451 ± 1	$\frac{3}{2} \rightarrow \frac{7}{2}$		γ, p	21, 22, 26, 39

Table 15.4 from (1970AJ04): Energy levels of ^{15}N ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or Γ (keV)	Decay	Reactions
10.536 \pm 1	$\frac{5}{2}^{(+)}$		γ, p	21, 26, 39
10.700 \pm 1	$\frac{3}{2}^+$		γ, p	21, 22, 26, 27, 39, 52
10.800 \pm 1	$\frac{3}{2}^{(-)}$		γ, p	2, 3, 4, 8, 13, 21, 26, 39
(10.94 \pm 30)				21
11.236 \pm 5	$\geq \frac{3}{2}$	$\Gamma = 3.3$	n	33
11.2943 \pm 1	$\frac{1}{2}^-$	7.9 \pm 0.3	γ, n, p	26, 27, 28, 33, 52
11.438 \pm 1	$\frac{1}{2}^+$	41.4 \pm 1.1	γ, n, p, α	5, 26, 27, 28, 33, 35
11.615 \pm 4	$\frac{1}{2}; \frac{3}{2}$	404.9 \pm 6.3	γ, n, p	26, 27, 28
11.764 \pm 3	$\frac{3}{2}^+$	40 \pm 3	n, p, α	5, 28, 33, 35
11.877 \pm 3	$\frac{3}{2}^-$	21 \pm 4	n, p, α	5, 28, 33, 35, 52
11.943 \pm 6	$(\frac{9}{2}^-)$	≤ 3	n	22, 33, 52
11.965 \pm 3	$\frac{1}{2}^-$	17 \pm 5	n, p, α	5, 28, 33, 35
12.097 \pm 4	$\frac{5}{2}^+$	14 \pm 5	γ, n, p, α	5, 6, 27, 28, 33, 35, 38
12.145 \pm 3	$\frac{3}{2}^-$	47 \pm 7	γ, n, p, α	5, 6, 27, 28, 33, 35, 39
12.326 \pm 4	$\frac{5}{2}^{(+)}$	22	n, p	22, 28, 33, 35
12.493 \pm 4	$\frac{5}{2}^+; \frac{1}{2}$	42	γ, n, p, α	5, 6, 28, 33, 35, 38, 52
12.52 \pm 10	$\frac{5}{2}^+; \frac{3}{2}$	80	p	27, 52
12.921 \pm 4	$\frac{3}{2}^-$	67 \pm 8	n, p, α	5, 6, 28, 33, 35, 38
12.93	$\frac{7}{2}^-$	30	p, α	6
13.028 \pm 20	$(\frac{11}{2}^-)$			22
13.14		< 3	n, p, α	5, 6, 38
13.19		6	n, p, α	5, 6, 28, 38
13.36	$\frac{3}{2}^-$	29 \pm 8	n, p, α	5, 6, 28, 38
13.40	$\frac{5}{2}^+$	≈ 60	n, p, α	6, 28, 35
(13.52)			n, p	28
13.60	$(\frac{5}{2}, \frac{7}{2})^-$	15 \pm 4	n, p, α	5, 6, 28, 33, 35, 38
13.67	$\frac{1}{2}^+$	≈ 80	n, p, α	6, 28
13.71		≈ 40	n, p, α	5, 35, 38
13.75			n, α	5
13.84		≈ 40	n, p, α	28, 35, 38
13.89			n, α	5
14.03			p, α	6
14.06			n, α	5

Table 15.4 from (1970AJ04): Energy levels of ^{15}N ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or Γ (keV)	Decay	Reactions
14.11		105	n, p, α	5, 28, 35, 38, 52
14.17	$\frac{3}{2}^{(+)}$	30 ± 5	n, p, α	5, 28, 35, 38
14.18			n, α	5
14.23			n, α	5
14.4		≈ 2000	n, p, α	33, 35, 38
14.46		≈ 180	p, α	6
14.51		130	n, p	28
14.64		50 ± 3	n, p, α	5, 35, 38
14.7		≈ 280	n, p, α	35, 38
14.81		99	n, p	28
14.90		37	n, p, α	5, 28, 38
15.00			n, p, α	5, 28
15.11			n, p, α	5, 28, 38, 52
15.29			n, α	5
15.37			n, t, α	5, 11
15.52			n, α	38
15.61			n, α	5
15.74			p, t, α	11
15.83		< 3	n, p, t, α	5, 6, 11
15.89 ± 20		< 3	n, t, α	5, 11
15.96 ± 20			n, t, α	5, 11
15.99			n, α	5
16.03			n, p, t, α	5, 6, 11, 38
16.08			n, p, t, α	5, 6, 11, 38
16.17 ± 40			n, p, t, α	5, 6, 11
16.29			n, p, t, α	5, 6, 11
16.33 ± 20			n, p, t, α	5, 6, 11, 38
16.43 ± 20			n, p, t, α	5, 6, 11, 38
16.49 ± 30			n, p, d, t, α	5, 6, 11, 16
16.59 ± 25		70	n, p, t, α	5, 6, 11, 38
16.67 ± 30		100	n, p, d, t, α	5, 6, 11, 15, 16, 33, 38
16.74			n, p, α	5, 6
16.76 ± 30			n, p, d, t, α	5, 6, 11, 15, 16

Table 15.4 from (1970AJ04): Energy levels of ^{15}N ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or Γ (keV)	Decay	Reactions
16.85 \pm 30			t, α	11
16.90		\approx 350	n, p, d, t, α	5, 6, 11, 15, 33, 38
16.98			n, p, α	5, 6, 33, 38
17.05			p, t	11
17.10		broad	d, t, α	11, 19
17.16 \pm 50			n, p, t, α	5, 6, 11
17.19			n, p, α	5, 6, 18
17.30		190	n, p, α	5, 6, 18, 38
17.36		350	n, p, d, t, α	5, 6, 11, 16, 18, 19
17.50			n, p, α	5, 6, 38
17.56			n, p, α	5, 6
17.81 \pm 40		\approx 170	n, p, d, t, α	5, 6, 18
17.70 \pm 50		\approx 500	n, d, α	15, 19
17.72 \pm 10		48 \pm 9	(p), d, t, α	16, 18, 19
17.81		170	n, α	33, 38
17.95			n, p, α	5, 6
18.07 \pm 10		19 \pm 4	(n), d, α	15, 19
18.09 \pm 20		\approx 45	(n), p, d, t	15, 16, 18
18.22		160	n, α	38
18.28 \pm 30		230 \pm 60	n, p, d, α	15, 16, 19, 38
19.16 \pm 30		\approx 130	n, d	15
19.5			γ , p	48
20.4			γ , p	48
22.7			γ , p	48
24.5			γ , p	48

^a See also Tables 15.7 and 15.10.

^b See (1967PH03).