

Table 15.4 from (1976AJ04): Energy levels of ^{15}N ^a

E_x (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
0	$\frac{1}{2}^-; \frac{1}{2}$		stable	2, 3, 4, 11, 12, 14, 16, 18, 19, 20, 21, 22, 31, 33, 34, 35, 39, 40, 42, 43, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88
5.27040 \pm 0.17	$\frac{5}{2}^+$	$\tau_m = 2.6 \pm 0.2$ $g = +(0.9 \pm 0.3)$	γ	3, 4, 11, 12, 13, 16, 17, 18, 19, 21, 29, 30, 31, 33, 39, 40, 51, 64, 68, 69, 73, 76, 77, 84, 86, 87
5.29887 \pm 0.12 ^b	$\frac{1}{2}^+$	$(2.5 \pm 0.7) \times 10^{-2}$	γ	3, 4, 11, 12, 13, 17, 18, 21, 29, 30, 31, 39, 40, 51, 60, 64, 68, 73, 76, 77, 87
6.32385 \pm 0.12	$\frac{3}{2}^-$	$(0.22 \pm 0.03) \times 10^{-3}$	γ	3, 4, 11, 12, 14, 18, 29, 30, 39, 40, 51, 64, 68, 69, 73, 75, 76, 77, 82, 84, 87
7.15536 \pm 0.11	$\frac{5}{2}^+$	0.028 \pm 0.008	γ	3, 4, 11, 12, 18, 29, 30, 33, 39, 51, 64, 68, 69, 76, 84
7.30109 \pm 0.17	$\frac{3}{2}^+$	$(0.25 \pm 0.10) \times 10^{-3}$	γ	3, 4, 11, 12, 18, 19, 29, 33, 39, 51, 60, 64, 68, 69, 76, 84
7.5671 \pm 1.0	$\frac{7}{2}^+$	0.06 \pm 0.02	γ	3, 4, 11, 12, 16, 17, 18, 19, 29, 30, 32, 39, 51, 56, 64, 68, 69, 73, 84
8.31279 \pm 0.14	$\frac{1}{2}^+$	< 0.020	γ	3, 4, 11, 12, 18, 29, 30, 35, 39, 51, 60, 68, 69, 73, 84
8.5714 \pm 1.0 ^b	$\frac{3}{2}^+$	$\lesssim 0.1$	γ	3, 4, 11, 12, 16, 17, 18, 29, 30, 39, 51, 60, 68, 69, 84
9.0500 \pm 0.7 ^b	$\frac{1}{2}^+$	$\lesssim 0.1$	γ	3, 4, 11, 12, 29, 39, 51, 60, 73
9.15224 \pm 0.22	$\frac{3}{2}^-$	< 0.040	γ	3, 4, 11, 12, 16, 17, 18, 29, 30, 35, 39, 51, 64, 68, 69
9.15527 \pm 0.11	$\frac{5}{2}$	(< 0.010)	γ	3, 4, 11, 12, 16, 17, 18, 29, 30, 35, 39, 51, 68, 69
9.225 \pm 3	$\frac{1}{2}^-$	< 0.13	γ	12, 29, 39, 51, 73
9.760 \pm 5	$\frac{5}{2}^-$		γ	12, 13, 19, 29

Table 15.4 from (1976AJ04): Energy levels of $^{15}\text{N}^a$ (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
9.829 \pm 3	$\frac{7}{2}$	< 0.19	γ	3, 4, 12, 17, 18, 19, 29, 30, 32, 39, 51, 68, 69
9.928 \pm 4	$(\frac{1}{2}, \frac{3}{2})^+$	$\lesssim 0.1$	γ	12, 18, 19, 29, 39, 51, 76
10.070 \pm 3	$\frac{3}{2}^+$		γ	12, 18, 29, 51, 68, 69
10.4497 \pm 0.3	$\frac{5}{2}^-$	$\Gamma < 0.5$	γ, p	4, 11, 12, 19, 29, 30, 39, 51
10.5333 \pm 0.5	$\frac{5}{2}^+$		γ, p	4, 11, 12, 18, 29, 35, 39, 51
10.6932 \pm 0.3	$\frac{9}{2}^+$		γ, p	4, 12, 16, 17, 18, 30, 31, 35, 36, 68
10.7019 \pm 0.3 ^c	$\frac{3}{2}^-$	$\Gamma = 0.2$ keV	γ, p	12, 29, 30, 35, 36, 51, 68, 76
10.804 \pm 2	$\frac{3}{2}^{(+)}$	< 1×10^{-3}	γ, p	5, 12, 18, 35, 36, 37, 45, 46
11.235 \pm 5	$\geq \frac{3}{2}$	3.3	n	39, 45
11.2929 \pm 0.8	$\frac{1}{2}^-$	8 \pm 3	γ, n, p	12, 35, 36, 37, 39, 45, 68
11.4375 \pm 0.7	$\frac{1}{2}^+$	41.4 \pm 1.1	γ, n, p, α	5, 12, 18, 35, 36, 37, 45, 46
(11.44)		$\ll 40$		39
11.615 \pm 4	$\frac{1}{2}^+; T = \frac{3}{2}$	405 \pm 6	γ, n, p	12, 35, 36, 37
11.778 \pm 5	$\frac{3}{2}^+$	40	n, p, α	5, 36, 37, 45, 46
11.876 \pm 3	$\frac{3}{2}^-$	25	n, p, α	5, 36, 37, 45, 46
11.942 \pm 6	$\frac{11}{2}$	≤ 3.0	n, α	4, 5, 12, 18, 30, 32, 45, 68
11.965 \pm 3	$\frac{1}{2}^-$	17	n, p	4, 12, 17, 18, 30, 32, 36, 37, 45, 46
12.095 \pm 3	$\frac{5}{2}^+$	14 \pm 5	n, p, α	5, 6, 36, 37, 38, 39, 45, 46, 50
12.145 \pm 3	$\frac{3}{2}^-$	47 \pm 7	n, p, α	5, 6, 36, 37, 45, 46, 50
12.327 \pm 4	$\frac{5}{2}$	22	n, p	17, 18, 30, 36, 37, 45, 46
12.493 \pm 4	$\frac{5}{2}^+; \frac{1}{2}$	40 \pm 5	n, p, α	5, 6, 31, 36, 37, 38, 45, 46, 50
12.522 \pm 8	$\frac{5}{2}^+; \frac{3}{2}$	58 \pm 4	γ, p	35, 68
12.559 \pm 10	$(\frac{9}{2})$			4, 12, 17, 18, 68
12.920 \pm 4	$\frac{3}{2}^-$	56 \pm 11	n, p, α	5, 6, 9, 18, 19, 36, 37, 38, 45, 46, 50
12.940 \pm 10	$\frac{5}{2}^+$	81	p, α	6, 9, 36, 38
13.004 \pm 10	$\frac{11}{2}^-$			4, 11, 12, 16, 18, 30, 31, 32
13.149 \pm 10		7 \pm 3	n, p, α	5, 6, 19, 50
13.173 \pm 7	$(\frac{9}{2})$	7 \pm 3	n, p, α	4, 5, 6, 12, 16, 17, 18, 31, 37, 45, 50

Table 15.4 from (1976AJ04): Energy levels of ^{15}N ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
13.362 \pm 8	$\frac{3}{2}^-$	16 \pm 8	n, p, α	5, 6, 9, 36, 37, 38, 50
13.390 \pm 10	$\frac{3}{2}^+$	56	γ , n, p, α	6, 9, 35, 36, 37, 38, 46
13.537 \pm 10	$\frac{3}{2}^-$	85 \pm 30	n, p, α	5, 9, 12, 36, 37, 38
13.608 \pm 7	$\frac{5}{2}^-$	18 \pm 4	n, p, α	5, 6, 18, 45, 46, 50
(13.612 \pm 10)	$\frac{1}{2}^+$	90	n, p, α	9, 36, 37, 38
13.713 \pm 10		26 \pm 8	n, p, α	5, 46, 50
13.84 \pm 30	$\frac{3}{2}^+$	75	n, p, α	4, 5, 9, 12, 45, 46, 50
13.9	$\frac{1}{2}^+$	930	γ , p	35, 36
13.99 \pm 30		98 \pm 10	n, p, α	5, 36, 38
14.090 \pm 7		22 \pm 6	n, p, α	4, 5, 12, 18, 38, 45, 46, 50, 68
14.10 \pm 30	$\frac{3}{2}^+$	\approx 100	n, p, α	4, 5, 9, 12, 38, 45, 46, 50, 68
14.162 \pm 10	$(\frac{3}{2})$	27 \pm 6	n, α	4, 5, 12, 45, 46, 50, 68
14.24 \pm 40	$\frac{5}{2}^+$	150	α	9
14.38 \pm 40	$\frac{7}{2}^+$	100	α	9
14.4		\approx 1900	n, p, α	45, 46, 50
14.55 \pm 20		74 \pm 7	n, p, α	5, 36, 38, 45, 46, 50
14.647 \pm 10		33 \pm 6	n, α	5
14.71		750	γ , p	35
14.720 \pm 10		140 \pm 20	n, p, α	5, 11, 12, 18, 38, 45, 46, 50, 62
14.86 \pm 20		48 \pm 11	n, α	5, 9, 50
14.920 \pm 10		13 \pm 3	n, (p), α	5, 36
15.025 \pm 10		13 \pm 3	n, (p), α	5, 36
15.09 \pm 20		80 \pm 25	n, p, α	5, 9, 32, 36, 38, 45, 50, 68
15.288 \pm 10		22 \pm 6	n, p, α	5, 9, 35, 36, 38, 50
15.373 \pm 10	$\frac{13}{2}^+, \frac{15}{2}^+$			4, 11, 12, 16, 17, 18, 31
15.38 \pm 40		75 \pm 25	n, t, α	5, 9, 15, 19
15.43 \pm 20		\approx 100	n, α	5, 9
15.45		750	γ , p	35
15.53 \pm 20		\approx 35	n, α	5
15.60 \pm 20		95 \pm 25	n, α	5, 62
(15.782 \pm 10)				18
15.93 \pm 20		35 \pm 5	n, t, α	5, 15, 17

Table 15.4 from (1976AJ04): Energy levels of ^{15}N ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
15.944 \pm 15		21 \pm 6	n, t, α	5, 15
16.026 \pm 10		62 \pm 12	n, t, α	5, 9, 15, 18, 32
16.190 \pm 10			n, t, α	5, 17, 18, 32
16.26 \pm 20		130 \pm 14	n, p, t, α	5, 9, 15, 17, 19, 36, 38, 50
16.32 \pm 20		\approx 30	n, p, t, α	5, 15
16.39 \pm 20		44 \pm 11	n, p, t, α	5, 15, 17, 50
16.46		560	γ , p	35
16.576 \pm 15		27 \pm 15	n, p, t, α	5, 15, 38, 50
16.677 \pm 15	$\frac{3}{2}^+; \frac{1}{2}$	90 \pm 10	γ , n, p, d, t, α	5, 15, 23, 24, 26, 35, 38, 45, 50, 62
16.76 \pm 30			n, t, α	15, 17, 62
16.85 \pm 30	$\frac{5}{2}$	110 \pm 50	n, p, t, α	13, 15, 38, 45, 50
16.91		\approx 350	n, p, t, α	15, 23, 24
(17.05)			p, t	15
17.11		broad	d, t, α	15, 27
(17.16 \pm 50)			t, α	15
17.23 \pm 40		\approx 175	d, t	26
17.37 \pm 40		\approx 250	n, p, t	15, 24, 26, 27, 45, 50
17.58 \pm 40		\approx 175	n, d, t, α	26, 50
17.67 \pm 40		\approx 500	γ , n, d, α	22, 23, 27
17.72 \pm 10		48 \pm 10	n, (p), d, t, α	19, 24, 26, 27, 50
17.81		167	n, α	19, 45, 50
18.06 \pm 10		19 \pm 4	(n), d, α	17, 23, 27
18.09 \pm 20		\approx 40	(n), p, d, t	23, 24, 26
18.22		158	n, α	45, 50
18.28 \pm 30		235 \pm 60	n, p, d, α	23, 24, 27, 50'
19.16	$(\frac{1}{2}^+; \frac{1}{2})$	\approx 130	(γ), n, p, d	23, 32, 35
19.5	$\frac{3}{2}^+; (\frac{3}{2})$	\approx 400	γ , p	35, 36
(19.77 \pm 60)				17
20.5	$\frac{3}{2}^+$	\approx 400	γ , n, p	12, 23, 24, 35, 62
21.72			γ , p, d	22, 35, 62
22.9			γ , p	29, 35
25.5	($T = \frac{3}{2}$)		γ , p	35

Table 15.4 from (1976AJ04): Energy levels of ^{15}N ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
(26.8)			t	15
≈ 37			γ, p	35

^a See also Tables [15.5](#), [15.6](#) and [15.12](#).

^b See [Table 15.2](#).

^c See, however, ([1976KO11](#)).