

Table 14.10 from (1981AJ01): Energy levels of ^{14}N ^a

E_x in ^{14}N (MeV \pm keV)	$J^\pi; T$	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
g.s.	$1^+; 0$	stable		1, 7, 9, 10, 19, 20, 21, 22, 28, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 63, 64, 65, 67, 68, 69, 70, 71, 75
2.31287 ± 0.07	$0^+; 1$	$\tau_m = 92 \pm 10$ fsec	γ	1, 10, 19, 20, 22, 28, 34, 35, 36, 37, 40, 41, 45, 46, 47, 48, 50, 51, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71
3.9478 ± 0.4	$1^+; 0$	8.0 ± 1.0 fsec	γ	1, 7, 8, 10, 19, 20, 21, 22, 28, 34, 35, 36, 37, 40, 41, 42, 45, 46, 47, 48, 50, 51, 62, 63, 64, 66, 67, 68, 69, 70, 71
4.9150 ± 1.3	$0^-; 0$	7.6 ± 1.4 fsec	γ	1, 7, 8, 19, 20, 21, 22, 34, 35, 36, 41, 45, 46, 47, 48, 50, 51, 63, 64, 69
5.10587 ± 0.18	$2^-; 0$	6.2 ± 0.4 psec $ g = 0.66 \pm 0.04$	γ	7, 8, 19, 20, 21, 22, 34, 35, 36, 41, 45, 46, 47, 48, 50, 51, 62, 63, 64, 66, 68, 69
5.6896 ± 1.1	$1^-; 0$	16 ± 8 fsec	γ	7, 8, 19, 20, 21, 22, 28, 34, 35, 41, 45, 46, 47, 48, 50, 51, 63, 64, 69
5.83423 ± 0.21	$3^-; 0$	13.5 ± 1.0 psec	γ	7, 8, 12, 19, 20, 21, 22, 25, 34, 35, 41, 45, 46, 47, 48, 50, 51, 62, 63, 64, 66, 69
6.2035 ± 0.6	$1^+; 0$	160 ± 20 fsec	γ	1, 7, 8, 19, 20, 21, 22, 28, 34, 35, 41, 42, 47, 48, 50, 51, 63, 64, 69
6.4444 ± 1.1	$3^+; 0$	627 ± 33 fsec	γ	1, 7, 8, 19, 20, 21, 22, 28, 34, 35, 41, 46, 47, 48, 51, 63, 64, 69
7.0279 ± 1.4	$2^+; 0$	5.4 ± 0.5 fsec	γ	7, 8, 19, 20, 21, 22, 28, 34, 35, 41, 42, 46, 47, 48, 50, 51, 62, 63, 64, 68, 69
7.9666 ± 0.6	$2^-; 0$	$\Gamma = (2.5 \pm 0.7) \times 10^{-3}$	γ, p	7, 8, 19, 20, 21, 22, 28, 34, 35, 47, 63, 64, 69
8.062 ± 1.0	$1^-; 1$	30 ± 1	γ, p	19, 20, 28, 29, 34, 44, 47, 63, 64
8.4877 ± 1.2	$4^-; 0$	$\tau_m = 18.8 \pm 1$ fsec	γ, p	7, 8, 19, 20, 21, 22, 28, 34, 35, 47, 69
8.618 ± 2	$0^+; 1$	$\Gamma = 7 \pm 1$	γ, p	19, 20, 28, 29, 34, 35, 47, 63, 64, 69

Table 14.10 from (1981AJ01): Energy levels of ^{14}N ^a (continued)

E_x in ^{14}N (MeV \pm keV)	$J^\pi; T$	τ_m or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
8.79 \pm 50	0 ⁻ ; 1	\approx 460	γ, p	28, 29
8.9091 \pm 1.6	3 ⁻ ; 1	19.7 \pm 1.9	γ, p	20, 28, 29, 34, 35, 45, 47, 63, 64
8.9612 \pm 1.3	5 ⁺ ; 0	$\tau_m = 105 \pm 5$ fsec	γ, p	8, 12, 20, 21, 22, 24, 25, 28, 55, 63
8.979 \pm 3	2 ⁺ ; (0)	$\Gamma = 8 \pm 2$	γ, p	7, 8, 20, 28, 29, 34, 63
9.1241 \pm 1.5	3 ⁺	$\tau_m = 13 \pm 5$ fsec	γ, p	7, 8, 20, 28
9.1287 \pm 1.0	2 ⁻ ; 0			7, 8, 34
9.1707 \pm 1.6	2 ⁺ ; 1	$\Gamma = 0.078 \pm 0.016$	γ, p	20, 28, 34, 45, 47, 64, 68
9.3860 \pm 1.4	2 ⁻ ; 3 ⁻ ; 0	15.6 \pm 2.0	p	7, 8, 20, 21, 22, 29, 34, 35, 47, 64, 69
9.509 \pm 3	2 ⁻ ; 1	41 \pm 2	γ, p	20, 28, 29, 34, 35, 47, 64, 69
9.703 \pm 4	1 ⁺ ; 0	15 \pm 3	p	7, 20, 21, 22, 29, 34, 47, 64, 69
10.063 \pm 15	3 ⁺ , \geq 4	< 10	p	8, 20
10.101 \pm 15	2 ⁺ , 1 ⁺ ; 0	5	γ, p	7, 20, 21, 22, 28, 29, 47, 69
10.228 \pm 10	1 ⁽⁻⁾ ; 0	80 \pm 15	γ, p	20, 22, 28, 29, 69
10.434 \pm 6	2 ⁺ ; 1	33 \pm 3	γ, p	7, 20, 28, 29, 41, 45, 47, 64, 69
(10.54)	(1)	(140)	p	20, 29
10.811 \pm 7	5 ⁺ ; 0	$(0.39 \pm 0.16) \times 10^{-3}$		8, 20, 21, 22, 63, 69
11.00 \pm 30		165 \pm 30	γ, p	8, 28
11.050 \pm 5	3 ⁺	1.2 \pm 0.4	γ, p	7, 8, 20, 28, 63, 68
11.07	1 ⁺ ; 0	100	n, p, d	8, 14, 21, 29, 30, 69
11.24 \pm 20	$T = 1$	220 \pm 30	γ, p, d	14, 20, 28, 69
11.24 \pm 20	(3 ⁻)	\approx 20	n, p	29, 30
11.29	2 ⁻ ; 0	180	n, p, d	14, 15, 21, 29, 30
11.357 \pm 15	1 ⁺ ; 0	30	n, p, d	14, 15, 20, 21, 29, 30, 69
11.5135 \pm 1.5	2 ⁺ , 3 ⁺	7.0 \pm 0.5	p, d	8, 14, 15, 20, 21, 69
11.68 \pm 20	1 ⁻ , 2 ⁻	150 \pm 20	n, p, d	14, 15, 20
11.741 \pm 6	1 ⁻ , 2 ⁻	40 \pm 9	(γ), p, d	14, 28
11.761 \pm 6	3 ⁻ , 4 ⁻	78 \pm 6	(γ), p, d	8, 14, 20, 28
11.807 \pm 7	(2 ⁻)	119 \pm 9	n, p, d	8, 14, 15, 17
11.874 \pm 6	(2 ⁻)	101 \pm 9	p, d	8, 14
12.20 \pm 20	1 ⁻ , 2 ⁻	300 \pm 30	n, p, d	14, 15, 21, 30, 63
(12.29 \pm 15)				20
12.408 \pm 3	(3 ⁺)	37 \pm 4	n, p, d	14, 15, 20, 21
12.418 \pm 3	(4 ⁻)	41 \pm 4	p, d, α	4, 5, 14, 20

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E_x in ^{14}N (MeV \pm keV)	$J^\pi; T$	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
(12.47 \pm 5)		≈ 20	p, α	4
12.497 \pm 4		35 \pm 10	γ , n, p, d, α	4, 14, 20, 28, 41, 63, 68
12.594 \pm 3	3 ⁺	48 \pm 2	n, p, d, α	4, 14, 15, 20, 21, 30, 63
12.688 \pm 4	3 ⁻	22 \pm 4	n, p, d, α	3, 4, 5, 6, 14, 15, 20, 21, 30
(12.708 \pm 9)		(43 \pm 15)	p, d	14
12.792 \pm 4	4 ⁺	18 \pm 3	n, p, d, α	4, 5, 6, 12, 14, 15, 20, 24
(12.813 \pm 5)		37 \pm 6	p, d	14
12.819 \pm 4	4 ⁻	8 \pm 3	n, p, d, α	4, 5, 14, 15
12.857 \pm 6		78 \pm 10	n, p, d	14, 30
12.923 \pm 5	(4 ⁺)	25 \pm 3	p, d, α	4, 5, 14, 15, 20
13.03 \pm 15		≈ 100	γ , p	8, 21, 28
13.166 \pm 5	(1 ⁺)	15 \pm 5	n, p, d, α	3, 4, 5, 6, 14, 15, 20
13.192 \pm 10	3 ⁺	65 \pm 10	α	6, 20
13.243 \pm 10	2 ⁻	92 \pm 5	n, p, α	3, 4, 30
13.30 \pm 40	(2 ⁻); 1	1000 \pm 150	γ , p	28
13.656 \pm 5	(2 ⁺ , 3 ⁺)	≈ 90	n, p, d, α	3, 4, 6, 14
13.714 \pm 5	2, 3 ⁺	105 \pm 25	n, p, d, α	3, 4, 5
13.71 \pm 30	1 ⁺ ; 1	180 \pm 25	(γ), n, p, d, α	3, 4, 6, 14, 15, 28, 64
13.72 \pm 20		110	p, α	4
14.04 \pm 30		100	n, p, d, α	3, 4, 14, 15, 30
14.16 \pm 30		230	n, p, d, α	3, 4, 14, 15
14.25 \pm 50	3 ⁺	420 \pm 100	p, α	4, 6
14.30 \pm 20		150	p, α	4
14.56 \pm 20		100	n, p, α	3, 4
14.59 \pm 30		50	n, p, α	3, 4
14.66 \pm 10	2 ⁻	100 \pm 20	α	6
14.73 \pm 30		125	n, p, α	3, 4
14.86 \pm 30		140	n, p, d, α	3, 4, 14, 15, 17, 30
14.92 \pm 25		43 \pm 8	n, p, α	3, 4, 20, 30
15.015 \pm 15		≈ 60	n, α	3, 30
15.24 \pm 20		100	p, d, α	4, 8, 14, 15
15.43 \pm 20		100	n, p, d, α	3, 4, 14, 17, 21
15.7 \pm 150		≈ 300	n, p, d, α	14, 15, 17, 20, 30
16.21 \pm 20		125	(γ), n, p, α	3, 4, 30, 45
16.40 \pm 20		150	p, d, α	4, 17
16.8	4 ⁺ ; $T = 0 + 1$	≈ 300	d, α	17
16.91 \pm 20	(5 ⁻); 0 + 1	≈ 100	p, d, α	4, 17

Table 14.10 from (1981AJ01): Energy levels of ^{14}N ^a (continued)

E_x in ^{14}N (MeV \pm keV)	$J^\pi; T$	τ_m or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
17.17 \pm 20	$4^+; 0+1$	≈ 300	n, p, d, α	4 , 14 , 15 , 17 , 21 , 30
18.1	$(1^-, 2^+); 0+1$	(≈ 300)	d, α	17
18.1	$4^+; 0+1$	≈ 600	d, α	17 , 30
18.2	$3^-; 0+1$	(≈ 400)	d, α	17
18.4	$3^-; 0+1$	(≈ 300)	d, α	17
18.50	$5^-; 0+1$	≈ 60	d, α	17
18.8	$4^+; 0+1$	(≈ 400)	d, α	17
20.1	$1^-; 0+1$	(≈ 500)	d, α	17
20.8	$5^-; 0+1$	≈ 600	d, α	17
20.8	$(3^-, 4^+); 0+1$	(≈ 500)	d, α	17
21.3	$4^+; 0+1$	(≈ 1000)	d, α	17
21.5	$3^-; 0+1$	(≈ 500)	d, α	17
21.7	$5^-; 0+1$	≈ 200	d, α	17
21.8		650	γ , ^3He	9
22.5 \pm 100	$5^-; 0+1$	610 \pm 100	d, α	17
22.5	$(2^-); 1$		γ , p	28
23.0	$(0, 1, 2)^-; 1$	≈ 3000	γ , n	43
23.0	$2^-; 1$		γ , p	28
23.3 \pm 100	$5^-; 0+1$	500 \pm 100	d, α	17
24.0		≈ 1000	n, ^3He , α	9

^a See also [Tables 14.11](#) and [14.12](#).