

Table 14.7 from (70AJ04): Energy levels of ^{14}N ^a

E_x in ^{14}N (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or Γ (keV)	Decay	Reactions
0	$1^+; 0$	stable	γ	1, 6, 7, 8, 9, 10, 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 30, 31, 32, 33, 34, 35, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 56, 57, 58, 59, 60, 61, 62, 63
2.31281 ± 0.06	$0^+; 1$	$\tau_m = 0.085 \pm 0.010$	γ	1, 6, 9, 10, 16, 17, 19, 24, 30, 31, 32, 36, 37, 39, 40, 41, 42, 43, 45, 46, 51, 52, 54, 57, 58
3.9447 ± 1.2	$1^+; 0$	0.0045 ± 0.0004	γ	1, 6, 7, 9, 10, 16, 17, 18, 19, 20, 22, 24, 30, 31, 32, 36, 37, 40, 41, 42, 43, 45, 46, 51, 52, 54, 57, 58
4.9134 ± 2.4	$(0, 1)^-; 0$	< 0.050	γ	1, 6, 7, 9, 17, 18, 19, 22, 24, 30, 31, 32, 37, 40, 41, 42, 43, 45, 46, 52, 54, 58
5.10587 ± 0.18	$2^-; 0$	12.4 ± 1.4	γ	6, 7, 16, 17, 18, 19, 22, 24, 30, 31, 32, 37, 40, 41, 42, 43, 45, 46, 52, 54, 58
5.691 ± 3	$1^-; 0$	< 0.036	γ	6, 7, 17, 18, 19, 24, 30, 31, 32, 33, 37, 41, 42, 43, 45, 46, 52, 54, 58
5.833 ± 2	$3^-; 0$	18 ± 2	γ	6, 7, 16, 17, 18, 19, 20, 24, 30, 31, 32, 33, 37, 40, 41, 42, 43, 45, 46, 52, 54, 58
6.1976 ± 2.0	$1^+; 0$		γ	1, 6, 7, 17, 18, 19, 24, 30, 31, 37, 42, 43, 45, 46, 52, 54, 58
6.4436 ± 1.6	$3^+; 0$	0.62 ± 0.06	γ	1, 6, 7, 17, 18, 20, 24, 30, 31, 37, 41, 42, 43, 46, 52, 54, 58
7.028 ± 4	$2^+; 0$	$\tau_m = 5.4 \pm 0.5$ fsec	γ	6, 7, 17, 18, 19, 24, 30, 31, 37, 39, 40, 41, 42, 43, 45, 46, 52, 54, 57, 58
7.966 ± 1	$2^{(-)}; 0$	$\Gamma < 0.37$	γ, p	6, 7, 17, 18, 19, 24, 30, 31, 40, 42, 46, 52, 54, 58
8.061 ± 2	$1^-; 1$	30 ± 1	γ, p	17, 24, 25, 30, 31, 38, 39, 42, 52, 54
8.489 ± 3	$(4^-); 0$	≤ 0.2	γ, p	6, 7, 17, 18, 19, 24, 31, 54, 58
8.617 ± 3	$0^+; 1$	7 ± 1	γ, p	17, 24, 25, 31, 52, 54, 58

Table 14.7 from (70AJ04): Energy levels of ^{14}N ^a (continued)

E_x in ^{14}N (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or Γ (keV)	Decay	Reactions
8.80 \pm 50	0 ⁻ ; 1	\approx 500	γ, p	24, 25, 31, 33, 54
8.907 \pm 3	3 ⁻ ; 1	16 \pm 2	γ, p	24, 25, 30, 31, 33, 40, 52, 54
8.963 \pm 3	5 ⁺ ; 0	< 1	γ, p	17, 18, 19, 20, 24, 31, 52
8.979 \pm 4	2 ⁺ ; (0)	9 \pm 2	γ, p	6, 7, 24, 25, 30, 31, 52
9.129 \pm 2	2 ⁻ ; 0	< 1	γ, p	6, 7, 24, 31
9.172 \pm 1.5	2 ⁺ ; 1	0.074 \pm 0.008	γ, p	17, 19, 24, 31, 38, 39, 40, 42, 52, 54, 57
9.388 \pm 4	2 ⁻ ; 0	13 \pm 3	p	6, 7, 17, 18, 19, 25, 52, 54, 58
9.508 \pm 3	2 ⁻ ; 1	41 \pm 2	γ, p	24, 25, 52, 54, 58
9.702 \pm 4	1 ⁺	15 \pm 3	p	6, 7, 17, 18, 19, 25, 52, 54, 58
10.063 \pm 15	$T = 0$			17
10.10 \pm 15	(1, 2) ⁺	5	γ, p	6, 7, 17, 18, 19, 24, 25, 52, 58
10.228 \pm 10	1 ⁽⁻⁾ ; 0	80 \pm 15	γ, p	24, 25, 52, 58
10.434 \pm 8	2 ⁺ ; 1	33 \pm 3	γ, p	6, 7, 17, 24, 25, 37, 38, 40, 52, 54, 58
10.56 \pm 10	1 ⁻	140	p, d	12, 17, 25
10.809 \pm 12	4 ⁺ ; 0			17, 18, 19, 20, 52, 58
11.04 \pm 32	1 ⁺ ; 0	95	γ, n, p, d	12, 17, 18, 19, 24, 25, 26, 40, 52, 58
11.051 \pm 14		< 30	γ, p	6, 7, 24, 52
11.246 \pm 12	3 ⁻ ; 1	11	n, p, d	12, 17, 19, 25, 26, 42, 43, 45, 52, 58
11.30	2 ⁻ ; 0	180	γ, n, p, d	12, 17, 19, 24, 25, 26, 52, 58
11.374 \pm 12	1 ⁺ ; 0	32	n, p, d	12, 13, 17, 19, 25, 26, 52, 58
11.516 \pm 13	3 ⁺	5	p, d	12, 13, 17, 19, 52, 58
11.66 \pm 40	(1 ⁺ , 2 ⁻)	\approx 95	n, p, d	12, 17, 52
11.75	1 ⁺	100	γ, n, p, d	12, 17, 24, 25, 26, 52
11.81	(2 ⁺)	\approx 100	n, p	25, 26, 52
11.95 \pm 30	2 ⁺			17, 19, 52
12.23	3 ⁻		n, p, d	12, 26, 52
12.29 \pm 15			p, α	3, 52
12.414 \pm 6	4 ⁻	37 \pm 3	n, p, d, α	3, 4, 12, 13, 17, 19
12.47 \pm 10		\approx 20	p, α	3, 24, 37
12.504 \pm 7		31 \pm 5	n, p, d, α	3, 12, 17, 24, 37, 52

Table 14.7 from (70AJ04): Energy levels of ^{14}N ^a (continued)

E_x in ^{14}N (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or Γ (keV)	Decay	Reactions
12.608 \pm 6	3^+	47 \pm 3	p, d, α	3, 12, 13, 17, 19, 52
12.689 \pm 4	3^-	17 \pm 3	n, p, d, α	2, 3, 4, 12, 13, 17, 19, 26
12.793 \pm 6	4^+	18 \pm 3	n, p, d, α	2, 3, 4, 12, 13, 17, 18, 20, 52
12.825 \pm 7	4^-	7 \pm 2	n, p, d, α	3, 4, 12, 13, 52
12.853 \pm 15		71 \pm 7	n, p, d	12, 17, 26
12.942 \pm 7	4	24 \pm 4	p, d, α	3, 4, 12, 13, 17, 18
13.03		190	γ , p	24
13.05 \pm 20	$T = 0$	< 70		18
13.164 \pm 8	$(0, 1)^-$	16 \pm 6	n, p, d, α	2, 3, 4, 5, 12, 13, 17, 18, 52
13.23 \pm 10		97 \pm 7	n, p, α	2, 3, 26, 52
13.3		\approx 1000	γ , p	24
13.66 \pm 10	$(2, 3)^+$	\approx 110	p, d, α	3, 5, 12, 13
13.71 \pm 10		\approx 100	n, p	2, 3
13.75 \pm 10	$1^+; 1$	210 \pm 30	n, p, d	3, 12, 13, 26, 37, 52, 54
14.04			p, d	12, 13
14.17		290	n, p, d, α	3, 12, 13, 26
14.40		\approx 140	p, d, α	3, 12, 13
14.70			d	13, 18
14.84		140	n, p, d, α	2, 3, 12, 13, 15, 17, 26
15.0		\approx 1000	γ , p	24
15.10	6^-	40	n, p, d, α	2, 3, 13, 17, 18, 20, 26
15.26			p, d	12, 13
15.47		\approx 70	n, p, d, α	2, 3, 12, 15, 18
15.7		320	n, p, d, α	12, 13, 17, 26
16.3		140	n, p, d, α	15, 18, 26
17.2 \pm 200		\approx 400	γ , n, p, d, α	13, 15, 17, 18, 24, 26
17.7				18
\approx 18	3^-	\approx 2000	d, α	15
18.1		550	n, p	24, 26
19.6	(5^+)		p, d	12, 13, 24
20.5	(5^+)	\approx 1000	γ , n, p, d	12, 13, 24
21.15 \pm 150	(4^-)	\approx 1400	d, α	13, 15
\approx 22.5		\approx 3000	γ , n, p	24, 38

Table 14.7 from (70AJ04): Energy levels of ^{14}N ^a (continued)

E_x in ^{14}N (MeV \pm keV)	$J^\pi; T$	τ_m (psec) or Γ (keV)	Decay	Reactions
22.70 ± 100		≈ 900	d, α	15
23.0		≈ 450	γ, p	24
23.7		≈ 450	γ, p	24
≈ 23.9		≈ 1000	$\text{n}, {}^3\text{He}, \alpha$	8
≈ 24		several MeV	γ	39
≈ 30			γ	39

^a See also Tables [14.9](#) and [14.13](#).