

Table 17.5 from (1977AJ02): Radiative transitions and lifetimes of ^{17}N states

E_i (MeV)	J_i^π	E_f (MeV)	J_f^π	Branch (%)	Γ_γ/Γ_w^e (W.u.)	δ	τ_m	Refs.			
1.37	$\frac{3}{2}^-$	0	$\frac{1}{2}^-$	100	$0.13_{-0.04}^{+0.08}$ (M1)	0.00 ± 0.03	93 ± 35 fsec	(1974RO27)			
				100	0.13 ± 0.05 (M1)			(1976GU14)			
1.85	$\frac{1}{2}^+$	0	$\frac{1}{2}^-$	90 ± 3	$(5.0 \pm 1.6) \times 10^{-6}$ (E1)	0.00 ± 0.02	41_{-9}^{+20} psec	(1974RO27, 1974RO28)			
				83 ± 3	$(5.0 \pm 2.0) \times 10^{-6}$ (E1)			(1976GU14)			
				1.37	$\frac{3}{2}^-$			10 ± 3	$(3.2 \pm 1.5) \times 10^{-5}$ (E1)	(1974RO27, 1974RO28)	
								17 ± 3	$(6 \pm 3) \times 10^{-5}$ (E1)	(1976GU14)	
1.91	$\frac{5}{2}^-$	0	$\frac{1}{2}^-$	78 ± 3	1.0 ± 0.2 (E2)	0.00 ± 0.05	11 ± 2 psec	(1974RO27, 1974RO28)			
				74 ± 4	0.8 ± 0.2 (E2)			(1976GU14)			
				1.37	$\frac{3}{2}^-$			22 ± 3	$(4.2 \pm 1.5) \times 10^{-3}$ (M1)	(1974RO27, 1974RO28)	
								26 ± 4	$(5 \pm 1) \times 10^{-3}$ (M1) ^g	(1976GU14)	
2.53	$\frac{5}{2}^+$	0	$\frac{1}{2}^-$	14 ± 4	0.28 ± 0.11 (M2)	$-0.05_{-0.14}^{+0.03}$	33 ± 3 psec	(1974RO27, 1974RO28)			
				11 ± 1	0.22 ± 0.04 (M2)			(1976GU14)			
				1.37	$\frac{3}{2}^-$			34 ± 4	$(1.0 \pm 0.2) \times 10^{-5}$ (E1)	-0.07 ± 0.18	(1974RO27, 1974RO28)
								34 ± 4	$(1.0 \pm 0.2) \times 10^{-5}$ (E1)	0.0 ± 0.1	(1976GU14)
				1.85	$\frac{1}{2}^+$			12 ± 2	9 ± 2 (E2)	0.00 ± 0.06	(1974RO27, 1974RO28)
								12 ± 2	8.1 ± 1.6 (E2)	(1976GU14)	
				1.91	$\frac{5}{2}^-$			40 ± 3	$(8 \pm 1) \times 10^{-5}$ (E1)	0.00 ± 0.06	(1974RO27, 1974RO28)
								43 ± 4	$(2.3 \pm 0.4) \times 10^{-5}$ (E1)	0.07 ± 0.07	(1976GU14)
3.13 ^a	$\frac{7}{2}^{(-)}$	1.91	$\frac{5}{2}^-$	100	$0.063_{-0.016}^{+0.036}$ (M1)	0.00 ± 0.04	275 ± 80 fsec	(1974RO27)			
				100	0.06 ± 0.02 (M1)			(1976GU14)			
3.20 ^b	$\frac{3}{2}^-$	0	$\frac{1}{2}^-$	88 ± 6	> 0.03 (M1)	-0.06 ± 0.08 ^f	< 30 fsec	(1974RO27)			
				88 ± 4	> 0.025 (M1)			(1976GU14)			
				1.91	$\frac{5}{2}^-$			12 ± 6	> 0.05 (M1)	(1974RO27)	
								12 ± 4	> 0.05 (M1)	(1976GU14)	
3.63 ^c	$(\frac{7}{2}^-, \frac{9}{2}^-)$	1.91	$\frac{5}{2}^-$	47 ± 10	0.8 ± 0.2 (E2)	0.00 ± 0.04	12 ± 2 psec	(1974RO27, 1974RO28)			
		3.13	$\frac{7}{2}^{(-)}$	53 ± 10	0.010 ± 0.03 (M1)			(1974RO27, 1974RO28)			
3.66	$(\frac{1}{2}, \frac{3}{2})^-$	1.85	$\frac{1}{2}^+$	100	$> 7 \times 10^{-4}$ (E1)		< 350 fsec	(1974RO27)			

Table 17.5 from (1977AJ02): Radiative transitions and lifetimes of ^{17}N states (continued)

E_i (MeV)	J_i^π	E_f (MeV)	J_f^π	Branch (%)	Γ_γ/Γ_w ^e (W.u.)	δ	τ_m	Refs.
3.91	$\leq \frac{7}{2}$	1.91	$\frac{5}{2}^-$	100	$(8_{-3}^{+5}) \times 10^{-2}$ (M1) ^h		52 ± 22 fsec	(1974RO27)
4.01	$(\frac{3}{2})$	1.85	$\frac{1}{2}^+$	$\leq 15 \pm 5$ ^d			< 15 fsec	(1974RO27)
		2.53	$\frac{5}{2}^+$	85 ± 5	0.55 (M1)			(1974RO27)
4.21	$\leq \frac{5}{2}$	1.37	$\frac{3}{2}^-$	100			< 70 fsec	(1974RO27)
4.42	$\leq \frac{7}{2}$	1.91	$\frac{5}{2}^-$	100			(< 60) fsec	(1974RO27)
5.17	$(\frac{7}{2}^+, \frac{9}{2}^+)$	2.53	$\frac{5}{2}^+$	37 ± 7	> 15 (E2)		< 60 fsec	(1974RO27)
		3.13	$\frac{7}{2}^{(-)}$	63 ± 7				(1974RO27)
5.20	$(\frac{1}{2}, \frac{3}{2}, \frac{5}{2})^+$	1.85	$\frac{1}{2}^+$	≈ 42			< 95 fsec	(1974RO27)
		1.91	$\frac{5}{2}^-$	≈ 58				(1974RO27)
5.51	$(\frac{3}{2})^-$	0	$\frac{1}{2}^-$	≈ 50			< 100 fsec	(1974RO27)
		1.37	$\frac{3}{2}^-$	≈ 50				(1974RO27)
5.77	$\leq \frac{7}{2}$	1.37	$\frac{3}{2}^-$	≈ 25			< 120 fsec	(1974RO27)
		1.91	$\frac{5}{2}^-$	≈ 25				(1974RO27)
		4.01	$(\frac{3}{2})$	≈ 50 ^d				(1974RO27)

^a Branches to $^{17}\text{N}^*(0, 1.37, 1.85, 2.53)$ are, respectively, < 2 , < 5 , < 2 and $< 3\%$ (1976GU14).

^b Branches to $^{17}\text{N}^*(1.37, 1.85, 2.53)$ are, respectively, < 5 , < 6 and $< 3\%$ (1976GU14).

^c Branches to $^{17}\text{N}^*(0, 1.37, 1.85, 2.53, 3.20)$ are, respectively, < 10 , < 10 , < 7 , < 3 , $< 2\%$ (1974RO28).

^d This branch is uncertain.

^e Assuming pure multipole transitions and J^π shown: see also Table 2 in the Introduction.

^f Or $\delta = 2.1 \pm 0.4$ (1976GU14).

^g $\Gamma_\gamma/\Gamma_w = 0.4_{-1.3}^{+0.4}$ (E2) (1976GU14).

^h This number appears to be in error: see Table 2 in the Introduction.