

Table 14.13 from (1986AJ01): Radiative decays in $^{14}\text{N}^a$

E_i (MeV)	$J_i^\pi; T$	E_f (MeV)	$J_f^\pi; T$	Branch (%)	Γ_γ (eV)
2.31	$0^+; 1$	0	$1^+; 0$	100	$(7.2 \pm 0.8) \times 10^{-3}$
3.95	$1^+; 0$	0	$1^+; 0$	3.9 ± 0.2	(M1) $(3.6 \pm 0.7) \times 10^{-4}$ (E2) $(2.8 \pm 0.2) \times 10^{-3}$
		2.31	$0^+; 1$	96.1 ± 0.2	0.079 ± 0.010
4.92	$0^-; 0$	0	$1^+; 0$	97 ± 3	$(8.4 \pm 1.6) \times 10^{-2}$
		2.31	$0^+; 1$	< 1	
		3.95	$1^+; 0$	^b	
5.11	$2^-; 0$	0	$1^+; 0$	79.9 ± 1.0	(E1) $(8.00 \pm 0.18) \times 10^{-5}$ ^c (M2) $(2.05 \pm 0.51) \times 10^{-6}$ ^{c,d} (E3) $(1.80 \pm 0.51) \times 10^{-6}$ ^{c,d}
		2.31	$0^+; 1$	19.4 ± 1.2	$(2.04 \pm 0.13) \times 10^{-5}$ ^c
		3.95	$1^+; 0$	(0.7 ± 0.4)	$(7.4 \pm 4.2) \times 10^{-7}$ ^c
5.69	$1^-; 0$	0	$1^+; 0$	36.1 ± 1.2 ^e	$(0.9 \pm 0.5) \times 10^{-2}$
		2.31	$0^+; 1$	63.9 ± 1.2 ^e	$(1.7 \pm 0.8) \times 10^{-2}$
5.83	$3^-; 0$	0	$1^+; 0$	21.3 ± 1.3 ^f	(M2) $(4.8 \pm 1.4) \times 10^{-6}$ ^c (E3) $(6.9 \pm 1.5) \times 10^{-6}$ ^c
		5.11	$2^-; 0$	78.7 ± 1.3 ^f	(M1) $(4.32 \pm 0.11) \times 10^{-5}$ ^c (E2) $(7_{-5}^{+8}) \times 10^{-8}$ ^c
6.20	$1^+; 0$	0	$1^+; 0$	23.1 ± 1.9 ^e	$(0.9 \pm 0.1) \times 10^{-3}$
		2.31	$0^+; 1$	76.9 ± 2.0 ^e	$(3.2 \pm 0.4) \times 10^{-3}$
6.45	$3^+; 0$	0	$1^+; 0$	70.1 ± 1.5 ^e	$(7.4 \pm 0.7) \times 10^{-4}$ ^g
		3.95	$1^+; 0$	19.7 ± 1.0 ^e	$(2.1 \pm 0.3) \times 10^{-4}$
		5.11	$2^-; 0$	6.5 ± 0.6 ^e	$(0.7 \pm 0.1) \times 10^{-4}$
		5.83	$3^-; 0$	3.7 ± 0.6 ^e	$(0.4 \pm 0.1) \times 10^{-4}$
7.03	$2^+; 0$	0	$1^+; 0$	98.6 ± 0.3	(M1) $(7.8 \pm 1.1) \times 10^{-2}$ ^h (E2) $(4.3 \pm 1.0) \times 10^{-2}$
		2.31	$0^+; 1$	0.5 ± 0.1	(E2) $(6.2 \pm 1.4) \times 10^{-4}$
		3.95	$1^+; 0$	0.9 ± 0.25	$< (11 \pm 3) \times 10^{-4}$
7.97 ⁱ	$2^-; 0$	0	$1^+; 0$	55 ± 3	0.010
		3.95	$1^+; 0$	45 ± 3	0.008
8.06 ^f	$1^-; 1$	0	$1^+; 0$	80.3 ± 0.6	9.9 ± 2.5

Table 14.13 from (1986AJ01): Radiative decays in ^{14}N ^a (continued)

E_i (MeV)	$J_i^\pi; T$	E_f (MeV)	$J_f^\pi; T$	Branch (%)	Γ_γ (eV)
8.49 ^f	4 ⁻ ; 0	2.31	0 ⁺ ; 1	1.40 ± 0.14	0.17 ± 0.05
		3.95	1 ⁺ ; 0	12.7 ± 0.4	1.56 ± 0.40
		4.92	0 ⁻ ; 0	1.86 ± 0.14	0.23 ± 0.06
		5.11	2 ⁻ ; 0	0.25 ± 0.14	0.03 ± 0.02
		5.69	1 ⁻ ; 0	3.5 ± 0.4	0.43 ± 0.12
		5.11	2 ⁻ ; 0	83 ± 3	(6.1 ± 1.5) × 10 ⁻³ ^j
8.62	0 ⁺ ; 1	5.83	3 ⁻ ; 0	17 ± 3	(1.3 ± 0.4) × 10 ⁻³ ^j
		0	1 ⁺ ; 0	23	1.20
8.79 ^f	0 ⁻ ; 1	3.95	1 ⁺ ; 0	24	1.26
		5.69	1 ⁻ ; 0	13	0.69
		6.20	1 ⁺ ; 0	40	
		0	1 ⁺ ; 0	90 ± 10	46 ± 12
8.91 ^f	3 ⁻ ; 1	0	1 ⁺ ; 0	1.6 ± 0.5	(6.6 ± 2.2) × 10 ⁻³
		5.11	2 ⁻ ; 0	5.4 ± 2.5	(2.3 ± 1.2) × 10 ⁻²
8.96	5 ⁺ ; 0	5.83	3 ⁻ ; 0	89 ± 3	0.37 ± 0.10
		6.45	3 ⁺ ; 0	3 ± 1	0.012 ± 0.006
		7.03	2 ⁺ ; 0	1.4 ± 0.8	0.006 ± 0.004
		0	1 ⁺ ; 0	< 1	
		6.45	3 ⁺ ; 0	100	(1.2 ± 0.2) × 10 ⁻³ ^k
9.13	3 ⁺ ; 0	0	1 ⁺ ; 0	82 ± 3	(8.5 ± 1.0) × 10 ⁻³ ^l
		5.83	3 ⁻ ; 0	9 ± 3	(0.9 ± 0.3) × 10 ⁻³ ^l
9.17 ^m	2 ⁺ ; 1	6.45	3 ⁺ ; 0	9 ± 3	(0.9 ± 0.3) × 10 ⁻³ ^l
		0	1 ⁺ ; 0	85.9 ± 1.0 ^e	6.2 ± 0.3
		2.31	0 ⁺ ; 1	0.86 ± 0.08 ^e	(6.2 ± 0.7) × 10 ⁻²
		5.69	1 ⁻ ; 0	0.50 ± 0.10 ^e	(3.6 ± 0.8) × 10 ⁻²
		5.83	3 ⁻ ; 0	0.62 ± 0.08 ^e	(4.5 ± 0.7) × 10 ⁻²
9.51 ^f	2 ⁻ ; 1	6.45	3 ⁺ ; 0	8.9 ± 0.8 ^e	0.64 ± 0.07
		7.03	2 ⁺ ; 0	3.2 ± 0.3 ^e	0.23 ± 0.03
		0	1 ⁺ ; 0	< 0.16	< 0.008
		3.95	1 ⁺ ; 0	6 ± 1	0.30 ± 0.09
		5.11	2 ⁻ ; 0	78 ± 3	3.84 ± 0.97

Table 14.13 from (1986AJ01): Radiative decays in ^{14}N ^a (continued)

E_i (MeV)	$J_i^\pi; T$	E_f (MeV)	$J_f^\pi; T$	Branch (%)	Γ_γ (eV)
		5.83	$3^-; 0$	16 ± 2	0.79 ± 0.22
10.23	$1^{(-)}; 0$	2.31	$0^+; 1$	≈ 100	4 ± 1.3
10.43 ⁿ	$2^+; 1$	0	$1^+; 0$	81.4	10.21 ± 0.65
		5.11	$2^-; 0$	2.2	0.28 ± 0.04
		5.69	$1^-; 0$	1.9	0.24 ± 0.04
		6.45	$3^+; 0$	7.4	0.93 ± 0.12
		7.03	$2^+; 0$	7.0	0.88 ± 0.12
10.81	$5^+; 0$	6.45	$3^+; 0$	100	$(1.6 \pm 0.7) \times 10^{-2}$ ^o
11.05	3^+	0	$1^+; 0$		0.12 ± 0.02
		3.95	$1^+; 0$		0.09 ± 0.02

^a See [Table 14.11 in \(1981AJ01\)](#) for the earlier references and for additional comments. See also [Table 14.14](#) here and [\(1981KO08\)](#) for additional discussions.

^b Two values have been reported: $(1.3 \pm 1.0)\%$ and $\leq 0.5\%$.

^c [\(1982BH06\)](#).

^d $\delta(\text{M2/E1}) = -0.16 \pm 0.02$, $\delta(\text{E3/E1}) = -0.15 \pm 0.025$: see [\(1981KO08\)](#).

^e Recalculated to sum to 100%: see [Table 14.11 in \(1981AJ01\)](#).

^f [\(1981KO08\)](#).

^g $\delta(\text{M3/E2}) = -0.004 \pm 0.010$.

^h $\delta(\text{E2/M1}) = 0.74 \pm 0.09$; and E.K. Warburton, private communication.

ⁱ $\Gamma_\gamma/\Gamma = (0.7 \pm 0.2)\%$; $(2J + 1)\Gamma_p = 12.6 \pm 3.6$ eV; $\Gamma = 2.5 \pm 0.7$ eV.

^j $\Gamma = (3.5 \pm 0.5) \times 10^{-2}$ eV from [Table 14.14](#); $\Gamma_p/\Gamma = 3.7 \pm 1.1$ [see [\(1981AJ01\)](#)] leads to $\Gamma_\gamma = 7.4 \pm 2.5$ meV.

^k $\Gamma = 6.3 \pm 1.0$ meV from [Table 14.14](#); $\Gamma_p/\Gamma_\gamma = 4.1 \pm 0.5$.

^l $\Gamma_p = 43_{+31}^{-15}$ meV; $\delta(\text{M3/E2}) = -0.03 \pm 0.02$.

^m $\Gamma_\gamma = 7.2 \pm 0.4$ eV [\(1981BI17\)](#) [from $^{14}\text{N}(\gamma, \gamma)$].

ⁿ See [\(1983PR1B\)](#); preliminary work). Branching ratios from Γ_γ . See also [\(1981AJ01\)](#).

^o $\Gamma_\gamma/\Gamma = (4.1 \pm 0.8)\%$; $\Gamma = 0.39 \pm 0.16$ eV.