

Table 14.3 from (1991AJ01): Energy Levels of ^{14}C ^a

E_x in ^{14}C (MeV \pm keV)	$J^\pi; T$	τ or $\Gamma_{\text{c.m.}}$	Decay	Reactions
g.s.	$0^+; 1$	$\tau_{1/2} = 5730 \pm 40$ y	β^-	1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39
6.0938 ± 0.2 ^b	1^-	$\tau_m < 10$ fs	γ	3, 4, 6, 7, 8, 12, 15, 16, 18, 20, 22, 23, 26, 35, 38
6.5894 ± 0.2 ^b	0^+	4.3 ± 0.6 ps	γ	3, 4, 6, 8, 12, 16
6.7282 ± 1.3 ^b	3^-	96 ± 11 ps	γ	3, 4, 6, 7, 8, 9, 15, 16, 18, 20, 22, 23, 24, 26, 28, 35, 38
6.9026 ± 0.2 ^b	0^-	$ g = 0.272 \pm 0.007$ 36 ± 4 fs	γ	3, 4, 7, 8, 12, 16, 18, 22
7.0120 ± 4.2 ^b	2^+	13 ± 2 fs	γ	3, 4, 6, 7, 8, 15, 16, 18, 22, 23, 24, 26, 38, 39
7.3414 ± 3.1 ^b	2^-	160 ± 60 fs	γ	3, 4, 7, 8, 15, 16, 18, 20, 22, 26, 35, 38
8.3179 ± 0.8	2^+	$\Gamma = 3.4 \pm 0.7$ keV	γ, n	3, 4, 6, 7, 8, 9, 12, 13, 15, 16, 22, 23, 26, 32, 34, 35, 39
9.746 ± 7	0^+			8, 38
9.801 ± 6	3^-	45 ± 12	γ, n	3, 6, 7, 8, 13, 15, 16, 22, 26, 38
10.425 ± 5	2^+		n	3, 6, 8, 13, 15, 16, 22, 26, 38
10.449 ± 7	≥ 1		n	3, 6, 7, 8, 13, 15, 38
10.498 ± 4	(3^-)	26 ± 8	n	3, 7, 8, 13, 15, 16, 23, 38
10.736 ± 5	4^+	20 ± 7		3, 6, 7, 8, 9, 15, 16, 26, 32
11.306 ± 15	1^+	46 ± 12	γ, n	3, 6, 13, 21, 22, 26, 38

Table 14.3 from (1991AJ01): Energy Levels of ^{14}C ^a (continued)

E_x in ^{14}C (MeV \pm keV)	$J^\pi; T$	τ or $\Gamma_{\text{c.m.}}$	Decay	Reactions
11.395 \pm 8	1^-	22 ± 7	n	3, 6, 7, 8, 16, 26
(11.5)	$1^- + 2^-$	broad	n	13
11.666 \pm 10	4^-	20 ± 7	γ	3, 6, 7, 8, 9, 15, 16, 22, 23, 24, 26, 38
11.730 \pm 9	(5^-)			3, 6, 7, 8, 9, 15, 23
11.9 \pm 300	(1^-)	950 ± 300	n	13, 16
12.583 \pm 10	$(2^-, 3^-)$	95 ± 15	n	3, 7, 8, 13, 16, 23, 26, 38
12.863 \pm 8		30 ± 10	n	3, 7, 8, 13, 16, 22
12.963 \pm 9	(3^-)	30 ± 10	n	3, 7, 8, 13, 16, 26
(13.50 \pm 100)		< 200		15
13.7	2^-	≈ 1800	n	13
(14.05 \pm 100)		< 200		15
14.667 \pm 20	(4^+)	57 ± 15	n	3, 6, 7, 13
14.868 \pm 20	$(6^+, 5^-)$			3, 6, 7, 8, 9, 15, 38
15.20 \pm 23	4^-			3, 6, 7, 15, 22, 23
(15.37 \pm 30)				3
15.44 \pm 40	(3^-)		n	3, 13
(16.02 \pm 50)	(4^+)		n	3, 13
16.43 \pm 16				3, 6, 7, 8
(16.57 \pm 40)				3
16.715 \pm 30	(1^+)	≈ 200	γ, n	3, 6, 12
17.30 \pm 30	4^-		γ	3, 6, 7, 22, 23, 24
(17.5)	(1^+)	≈ 200	γ, n	12
17.95 \pm 40				3
18.10 \pm 40				3
18.5		broad		15
20.4		wide		33
(21.4)				6
22.1 \pm 100	$(2^-; T = 2)^c$		γ	22

Table 14.3 from (1991AJ01): Energy Levels of ^{14}C ^a (continued)

E_x in ^{14}C (MeV \pm keV)	$J^\pi; T$	τ or $\Gamma_{\text{c.m.}}$	Decay	Reactions
23.288 ± 15 ^d	$4^-; (T = 2)$	≈ 50	γ	6, 15
24.4 ± 100		< 300		22, 23
24.5		wide		15, 23

^a See also [Tables 14.4](#) here and in (1986AJ01), as well as [Tables 14.8](#) and [14.9](#) and reaction [22](#).

^b See also reaction [16](#).

^c If this is the isobaric analog state of $^{14}\text{B}_{\text{g.s.}}$, then the $^{14}\text{B}-^{14}\text{C}$ Coulomb energy difference is calculated to be 2.25 ± 0.10 MeV ([1989PL05](#)).

^d See also reactions [6](#) and [15](#).