

Table 12.9 from (1975AJ02): Electromagnetic decay of ^{12}C levels ^a

Level (MeV)	Width or τ_m			Refs.
4.44	$\Gamma_\gamma = 10.6 \pm 1.1 \text{ meV}$ $\Gamma_\gamma = 10.1 \pm 2 \text{ meV}$ $\tau_m = 55 \pm 7 \text{ fsec}$ $\Gamma_\gamma = 12.0 \pm 1.5 \text{ meV}$ $\tau_m = 65 \pm 9 \text{ fsec}$ $\Gamma_\gamma = 10.1 \pm 1.5 \text{ meV}$ $\Gamma_\gamma = 11.0 \pm 1.0 \text{ meV}$			(1967CR01) (1958RA14) (1968RI16) (1970CO09) (1970ST10)
7.66	$\Gamma_\gamma = 10.8 \pm 0.6 \text{ meV}$ $\Gamma_\pi/\Gamma = (6.9 \pm 2.1) \times 10^{-6}$ $\Gamma_\pi = 62 \pm 6 \mu\text{eV}$ $\Gamma_\pi = 59 \pm 5 \mu\text{eV}$			mean (1960AL04, 1972OB01) (1967CR01) (1970ST10)
9.64	$\Gamma_\pi = 60 \pm 4 \mu\text{eV}$ $\Gamma_{\text{rad}}/\Gamma = (4.2 \pm 0.2) \times 10^{-4} \text{ f}$ $\Gamma = (8.7 \pm 2.7) \text{ eV}$ $\Gamma_{\text{rad}} = (3.7 \pm 1.2) \text{ meV}^{\text{b}}$ $\Gamma_{\text{rad}} = (3.4 \pm 1.1) \text{ meV}$ $\Gamma_{\text{rad}}/\Gamma < 4.1 \times 10^{-7}$ $\Gamma_{\text{rad}} < 14 \text{ meV}^{\text{c}}$			mean (1974CH03) from above values from above values (1973BA73) (1974CH32) (1974CH32)
12.71	$\Gamma = 14.6 \pm 2.6 \text{ eV}$ $\Gamma_{\gamma_0} = 0.35 \pm 0.05 \text{ eV}$ $\Gamma_{\gamma_0}/\Gamma_\gamma = 0.83 \pm 0.03$ $\Gamma_\alpha/\Gamma = 0.971 \pm 0.003$ $\Gamma_\alpha = 14.2 \pm 2.5 \text{ eV}$			(1974CE01) (1974CE01) (1970RE09) (1970RE09) from above
$E_f \rightarrow$	Branching ratio (%) to			
	0	4.4	7.7	
	83 ± 3 85 ± 4	17 ± 3 15 ± 4	< 10	(1970RE09) (1972AL03)
15.11	$\Gamma_{\gamma_0} = 37.0 \pm 1.1 \text{ eV}$ $(\Gamma_{\gamma_0} = 39.4 \pm 1.5 \text{ eV})$			(1973CH16) Table 12.8 (1968AJ02)

Table 12.9 from (1975AJ02): Electromagnetic decay of ^{12}C levels ^a (continued)

Level (MeV)	Width or τ_m					Refs.
$E_f \rightarrow$	$\Gamma_{\gamma_0}/\Gamma_\gamma = 0.92 \pm 0.02$					(1972AL03)
	$\Gamma_\alpha/\Gamma = 0.041 \pm 0.009$					(1974BA42)
	$\Gamma_\alpha = 1.8 \pm 0.3 \text{ eV}$					(1974BA42)
	$\Gamma = 42 \pm 7 \text{ eV}$					from above
	Branching ratio (%) to					
	0	4.4	7.7	10.3	12.7	
	96 ± 1	1.5 ± 0.3	1.5 ± 0.2		0.7 ± 0.3	(1970RE09)
	92 ± 2	2.3 ± 0.9	2.6 ± 0.7	(1.6) ^d	1.4 ± 0.4	(1972AL03)
		2.32 ± 0.25 ^e				(1973HA1Y)

^a See also [Tables 12.10](#), [12.12](#), [12.20](#) and [12.23](#).

^b $\Gamma_{\text{rad}} \equiv \Gamma_\gamma + \Gamma_\pi$.

^c Based on $\Gamma = 34 \pm 5 \text{ keV}$: see [Table 12.8](#).

^d Undetected: branching ratio shown is derived from β -decay work ([1972AL03](#)).

^e $3.6 \pm 0.7\%$ ([1970AH02](#)).

^f $\Gamma_{\text{rad}}/\Gamma = (4.30 \pm 0.20) \times 10^{-4}$ ([1975MA2J](#): preliminary value and C.N. Davids, private communication).