

$^{14}\text{C}(\alpha,n)$ 1964A111

Type	Author	Citation	Literature Cutoff Date
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1956Sa06: $^{14}\text{C}(\alpha,n)$, threshold and reaction energy Q_0 were determined.

1964A111: $^{14}\text{C}(\alpha,n)$, $E=7.0$ - 8.6 MeV; the γ -ray de-excitation of $^{13}\text{C}^*(3.06,3.85)$ states were observed in coincidence with neutrons. ^{13}C deduced lifetime, J, π , decay modes.

 ^{17}O Levels

E(level)	J^π	$T_{1/2}$	Comments
0	$5/2^+$		$Q_0=1820$ keV 2 and the threshold energy is 2340 keV 3.
870	$1/2^+$		
3060	$1/2^-$	0.08 ps +6-4	$J^\pi, T_{1/2}$: from (1964A111).
3850	$5/2^-$	≤ 18 fs	$J^\pi, T_{1/2}$: from (1964A111), J^π is favored over $7/2^-$.

 $\gamma(^{17}\text{O})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	Comments
870	870	$1/2^+$	0	$5/2^+$		Decay via 3060.
2190	3060	$1/2^-$	870	$1/2^+$	E1	The upper limit to the unobserved decay $3.06 \rightarrow 0$ is 2%. $ M ^2(E1)=10^{-3}$ where $ M ^2$ is the ratio of the measured radiative width to the single particle estimate.
3850	3850	$5/2^-$	0	$5/2^+$	E1+M2	The upper limit to the unobserved decay $3.85 \rightarrow 0.87$ is 5%. $ M ^2(E1) \geq 10^{-3}$, $ M ^2(M2) \geq 1.5$.

 $^{14}\text{C}(\alpha,n)$ 1964A111Level Scheme