

Table 15.18 from (1991AJ01): Resonances in $^{12}\text{C} + {}^3\text{He}$ ^a

$E({}^3\text{He})$ (MeV \pm keV)	Resonant for	$\Gamma_{\text{c.m.}}$ (keV)	J^π	E_x (MeV)
1.21	p_0, p_2		$(\frac{5}{2})^-$	13.04
1.3	$p_0 \rightarrow p_3$			13.1
2.15	n, p_0		$(> \frac{5}{2})$	13.79
2.45 ± 40	$n_0, p_0 \rightarrow p_3$	160 ± 20	$(\frac{1}{2}^-, \frac{3}{2}^-)$	14.03
2.75 ± 40	$n_0, p_1, p_2, {}^3\text{He}, \alpha_0$	340 ± 30	$\frac{1}{2}^+$	14.27
(2.87)	p_0, p_2	240		(14.37)
2.990 ± 10	$n_0, p_0, p_1, p_2, p_4,$ $p_5, p_8, {}^3\text{He}, \alpha_0$	100 ± 10	$\frac{3}{2}^+, \frac{5}{2}^+$	14.465
3.28 ± 40	$p_0, (p_1, p_2)$	180 ± 40		14.70
3.60 ± 40	p_0, p_1, p_2	400 ± 25		14.95
4.20 ± 10	p_5, p_6, α_0	65 ± 15		15.43
4.37 ± 40	$p_0, p_1, p_2, p_4, p_7,$ p_8, α_0	80 ± 25		15.57
4.65 ± 50	n_0			15.79
4.78 ± 50	${}^3\text{He}, \alpha_0$	350	$\frac{1}{2}^-, \frac{3}{2}^-$	15.90
4.97 ± 20	α_0			16.05
5.03 ± 20	$n_0, {}^3\text{He}, \alpha_0$			16.10
5.15 ± 20	$n_0, {}^3\text{He}, \alpha_0$			16.19
5.45 ± 50	${}^3\text{He}, \alpha_0$	170	$\frac{1}{2}^+$	16.43
5.85 ± 50	$n_0, {}^3\text{He}$			16.75
6.23 ± 70	γ_0	700 ± 70	$(\frac{1}{2}, \frac{3}{2})^+$	17.05 ± 0.06 ^b
6.83 ± 40	$\gamma_{1+2}, n_0, {}^3\text{He}, \alpha_0$	640 ± 120	$\frac{1}{2}^-, \frac{3}{2}^-$	17.53 ^c
7.40 ± 50	${}^3\text{He}$	200	$\frac{1}{2}^-, \frac{3}{2}^-$	17.99
7.70 ± 50	n_0, p_0			18.23
8.25 ± 70	γ_0	520 ± 110	$(\frac{1}{2}, \frac{3}{2})^+$	18.67 ± 0.06 ^b
8.70 ± 50	γ_{1+2}, n_0	1120 ± 300		19.03 ^c
9.38 ± 100	γ_0	780 ± 270	$(\frac{1}{2}, \frac{3}{2})^+$	19.57 ± 0.08
9.80 ± 50	n_0			19.91
10.45 ± 90	$\gamma_0, (p_0)$	970 ± 240	$(\frac{3}{2}, \frac{1}{2})^+$	20.42 ± 0.07 ^b
11.87 ± 80	γ_0	730 ± 120	$(\frac{3}{2}, \frac{1}{2})^+$	21.56 ± 0.07 ^b

Table 15.18 from (1991AJ01): Resonances in $^{12}\text{C} + ^3\text{He}$ ^a (continued)

$E(^3\text{He})$ (MeV \pm keV)	Resonant for	$\Gamma_{\text{c.m.}}$ (keV)	J^π	E_x (MeV)
14.7	γ_{1+2}	$\lesssim 0.5 \text{ MeV}^e$		23.8 ± 0.1^c
(17.0) ^d	^3He	≈ 600	$(\frac{13}{2}^-)$	(26.0)
(20.0) ^d	^3He	≈ 2500	$(\frac{9}{2}^-, \frac{11}{2}^-)$	(28.0)
(21.5)	^3He to $^{12}\text{C}^*(15.1)$	≈ 2500		(29.0)

^a For references see [Table 15.21 in \(1976AJ04\)](#).

^b ([1978DE33](#), [1984DE09](#) [see p.290]); $T = \frac{1}{2}$; $\Gamma_{^3\text{He}}/\Gamma_{\text{p}} = 0.17 \pm 0.07$ and 0.09 ± 0.04 for $^{15}\text{O}^*(17.05, 18.67)$.

^c ([1989KI09](#)). See also for ω_γ . See also [Table 15.19 in \(1986AJ01\)](#); $T = \frac{1}{2}$ if they are 3p4h cluster states.

^d $\Gamma_{\text{p}} = 0.06$ and $\geq 0.1 \text{ MeV}$ for $^{15}\text{O}^*(26, 28)$.

^e Estimated by reviewer.