

Table 15.12 from (1986AJ04): Resonances in $^{14}\text{C} + \text{p}$ ^a

E_p (MeV \pm keV)	$\Gamma_{\text{c.m.}}$ (keV)	Γ_n (keV)	Γ_p (keV)	Γ_α (keV)	Γ_γ (eV)	J^π	E_x (MeV \pm keV)
0.261 \pm 0.6	< 0.5		$(0.08 \pm 0.01) \times 10^{-6}$		> 21 meV	$\frac{5}{2}^-$	10.4497 \pm 0.3 ^d
0.352 \pm 1					$(3.4 \pm 0.4) \times 10^{-2}$ ^b	$\frac{5}{2}^+$	10.5333 \pm 0.5 ^d
0.519 \pm 1			$(0.49 \pm 0.10) \times 10^{-6}$		> 40 meV	$\frac{9}{2}^+$	10.6932 \pm 0.3 ^d
0.527 \pm 1			0.2		0.37 \pm 0.07	$\frac{3}{2}^-$	10.7019 \pm 0.3 ^d
0.634 \pm 1			$(0.22 \pm 0.10) \times 10^{-3}$		0.27 \pm 0.14	$\frac{3}{2}^{(+)}$	10.804 \pm 2 ^d
1.162 \pm 2	7.9 \pm 3	2.3	5.6	< 0.3	0.29 ^c	$\frac{1}{2}^-$	11.291
1.3188 \pm 0.5	41.4 \pm 1.1	34.6 \pm 0.9	6.8 \pm 0.5	< 0.3	4.2 \pm 0.7 ^c	$\frac{1}{2}^+$	11.4376
1.509 \pm 4	404.9 \pm 6.3	4.0 \pm 0.2	400.9 \pm 6.3	< 0.3	19.2 \pm 0.4 ^c	$\frac{1}{2}^+; T = \frac{3}{2}$	11.615
1.688 \pm 3	37	36.5	0.5	< 0.3		$\frac{3}{2}^+$	11.782
1.788 \pm 3	24.5	24.5	0.03	< 0.3		$\frac{3}{2}^-, (\frac{5}{2}^-)$	11.875
1.884 \pm 3	21.5	21.2	0.3	< 0.3		$\frac{1}{2}^-$	11.965
2.025 \pm 4	14 \pm 5	12.0	1.7	0.6		$\frac{5}{2}^+$	12.096
2.077 \pm 3	47 \pm 7	30.2	16.6	2.2		$\frac{3}{2}^-$	12.145
2.272 \pm 4	22	21.7	0.3	< 0.3		$\frac{5}{2}^{(+)}$	12.327
2.450 \pm 4	44 \pm 3	28	0.3	5.5		$\frac{5}{2}^+; T = \frac{1}{2}$	12.493
2.482 \pm 8	58 \pm 4				4.6 \pm 0.7	$\frac{5}{2}^+; T = \frac{3}{2}$	12.523
2.908 \pm 4	70	25	9.0	15		$\frac{3}{2}^-$	12.920
2.93 \pm 10	81	n.r.	0.5	80		$\frac{5}{2}^+$	12.940
3.19	5.5	r.					13.18
3.38 \pm 10	24	6	6.0	12		$\frac{3}{2}^-$	13.360
3.421 \pm 10	57	20.6	35	5.5	3.0 \pm 0.9	$\frac{3}{2}^+$	13.390
3.57 \pm 10	124	\approx 75	8.0	\approx 40		$\frac{3}{2}^-$	13.537

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E_p (MeV \pm keV)	$\Gamma_{\text{c.m.}}$ (keV)	Γ_n (keV)	Γ_p (keV)	Γ_α (keV)	Γ_γ (eV)	J^π	E_x (MeV \pm keV)
3.65 \pm 10	88	≈ 16	12.0	≈ 60		$\frac{1}{2}^+$	13.612
3.71		r.					13.67
4.0	930		500		r.	$\frac{1}{2}^+$	13.9
4.1 \pm 100	98 \pm 10		25	r.		$\frac{5}{2}^+$	14.0
4.2 \pm 100				r.		$(\frac{3}{2})$	14.1
4.6 \pm 150	74 \pm 7		20	r.	(r.)	$\frac{3}{2}^-$	14.5
4.8	149 \pm 18		39	r.	(r.)	$\frac{3}{2}^+$	14.7
4.83	750				r.		14.71
5.08	158 \pm 19		20		r.	$\frac{3}{2}^+$	14.95
5.16 \pm 130	28 \pm 3		9.0	r.		$\frac{3}{2}^+$	15.0
5.54 \pm 130	39 \pm 5		12	r.	(r.)	$\frac{3}{2}^-$	15.4
5.62	750				r.		15.45
6.4 \pm 150	130 \pm 14		19	r.		$\frac{3}{2}^+$	16.2
6.70	560				r.		16.46
6.925	90 \pm 10			r.	r.	$(\frac{3}{2}^+; \frac{1}{2})$	16.67
7.18 \pm 180	110 \pm 50			r.		$\frac{5}{2}$	16.9
≈ 9					r.	$\frac{1}{2}^+; \frac{1}{2}$	19
10.0	sharp		(1000)		r.	$\frac{3}{2}^+; (T = \frac{3}{2})$	19.5 ^e
11.0	sharp				r.	$\frac{3}{2}^+$	20.5
12.35					r.		21.72
13.65					r.		22.94
16.4					r.	$(T = \frac{3}{2})$	25.5 ^e

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E_p (MeV \pm keV)	$\Gamma_{\text{c.m.}}$ (keV)	Γ_n (keV)	Γ_p (keV)	Γ_α (keV)	Γ_γ (eV)	J^π	E_x (MeV \pm keV)
≈ 29					r.		≈ 37

r. = resonant.

n.r. = non-resonant.

^a See [Tables 15.5 in \(1959AJ76\)](#), [15.11 in \(1970AJ04\)](#) and [15.12 in \(1981AJ01\)](#) for references and additional comments.

^b ω_γ (in eV).

^c Γ_{γ_0} . I am indebted to P.M. Endt for this correction.

^d E_x measured directly: see [\(1981AJ01\)](#).

^e Analog not observed in $^{14}\text{N}(p, \gamma)^{15}\text{O}$.