Table 12.18 from (1985AJ01): ^{12}C levels from ^{12}C(p, p′)^{12}C* [a]

E_x (MeV ± keV)	Γ (MeV)	$J^\pi; T$	E_x (MeV ± keV)	Γ (MeV)	$J^\pi; T$
4.4390 ± 1.1 [b]	[a]	$2^+; 0$	19.40 ± 30 [d]	0.48 ± 0.04	$2^-; T = 1$
7.65400 ± 0.13	[g]	$0^+; 0$	20.27 ± 50 [e]	0.14 ± 0.05	
9.64	[g]	$3^-; 0$	20.57 ± 50	0.35 ± 0.1	$3^-; 1$
10.84		$1^-; 0$	21.65 ± 100	1.20 ± 0.15	$3^-; 0$
11.83	[h]		(21.95 ± 150)	0.8 ± 0.1	$1^-; 1$
12.71 [b]	[g]	$1^+; 0$	(22.36 ± 50) [e]	0.3 ± 0.05	
13.35	[h]		(22.6 ± 100)	0.9 ± 0.1	$1^-; 1$
14.08		$4^+; 0$	23.50 ± 50	0.23 ± 0.1	$1^-; 1$
15.11 [b]	[g]	$1^+; 1$	23.92 ± 80	0.4 ± 0.1	$1^-; 1$
15.4 ± 100 [c]	1.41 ± 0.15	$2^+; 0$	(25.3 ± 150)	0.51 ± 0.1	$1^-; 1$
16.11	[h]		$((25.8 \pm 300))$	0.75 ± 0.15	$(1^-; 1)$
16.57	[h]		(27.0 ± 300)	1.4 ± 0.2	$1^-; 1$
18.30 ± 30 [d]	0.38 ± 0.03	$(2^-; T = 0)$	(29.4 ± 300) [f]		$(2^+; 1)$

[a] See Table 12.18 in (1980AJ01) for the earlier references.

[b] On the basis of angular distributions to ^{12}C*(4.4, 12.7, 15.1) for $E_p = 22.2$ to 45 MeV, it is suggested that the E2 strength is fragmented with the major concentration, corresponding to the isoscalar E2 resonance, near 28 MeV, and subsidiary strength near 32 and 42 MeV, the latter possibly a part of the isovector quadrupole resonance (1975GE15). See also the structures reported in this table (1977BU19).

[c] (1979GO16). See also (1980CO05, 1982CO21).

[d] (1983JO08). Γ are in c.m. system. See also (1980MO06).

[e] Only observed at $E_p = 45$ MeV.

[f] Only observed at $E_p = 155$ MeV.

[g] See Table 12.7.

[h] This footnote was never defined in publication.