Table 13.17 from (1986AJ01): Resonances in ^{12}C(p, γ)^{13}N [a]

E_p (MeV ± keV)	$\Gamma_{c.m.}$ (keV)	Γ_{γ_0} (eV)	^{13}N* (MeV)	Res. in yield of	J^π
0.4568 ± 0.5	31.7 ± 0.8 [f]	0.64 ± 0.07 [h]	2.3649±0.0006	γ_0	$\frac{1}{2}^+$
1.699 ± 2 [b]	62 ± 4 [g]	0.64 [i]	3.511	γ_0	$\frac{3}{2}^-$
9.01 ± 150	≈ 280		10.25	γ_0	$(\frac{1}{2}^+)$
10.62 ± 120	200 ± 50	≈ 4.2 [j]	11.74	γ_0	$\frac{3}{2}^+$
12.5 ± 200	6500	≥ 1100	13.5	γ_0	$\frac{3}{2}^+$
13.12 ± 90	160 ± 20	3.7 ± 1.0 [k]	14.04	γ_0	$\frac{3}{2}^+$
14.2	[see Table 13.6]		15.0	γ_0, γ_{2+3}	$\frac{3}{2}^-$; $T = \frac{3}{2}$
14.5 ± 200 [c]	350 ± 140	≥ 0.5	15.3	γ_1	$(\frac{3}{2}^+)$
16.9			17.5	γ_0	
20 [d]			20	γ_1, γ_{2+3}	
20.5 [e]	≈ 3700		20.8	γ_0	
23			23	γ_0	
24.5			24.5	γ_{2+3}	
32.5	broad		31.9	γ_0, γ_{2+3}	

[a] For references and other comments see Table 13.21 in (1981AJ01).

[b] For a thick-target study see (1984PO13).

[c] This peak may be due to an unresolved doublet.

[d] Giant resonance for γ_1.

[e] Main dipole strength is concentrated in this peak.

[f] Recalculated on the basis of $\Gamma_{c.m.} = 33.3 \pm 1.8$ keV from (1974BL06) and 31.4 ± 0.9 keV from(1968RI16) [the value reported in (1968RI16) was Γ_{lab}; I am indebted to Prof. F.C. Barker for his comments].

[g] (1985BR06) have studied this resonance with polarized protons and analyzed the results with R-matrix theory: the E2/M1 mixing ratio is -0.102 ± 0.003 and the total width (lab) is calculated to be 62 keV. An extranuclear direct capture background appears to be necessary to explain the data.

[h] G. Fox *et al.*: see p. 662 in (1985LA06).

[i] Recalculated on the basis of total $\Gamma_{lab} = 67 \pm 4$ keV. I am indebted to Prof. F.C. Barker for his comments [see (1980BA54)].

[j] A value of 0.30 ± 0.05 is assumed for Γ_{p_0}/Γ: see Table 13.18.

[k] A value of 126 keV is taken for Γ_{p_0}.