$^{12}C(^{13}C,^{12}B)$

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu and J. E. Purcell	NDS 198,1 (2024)	1-Aug-2024

1987Ad07: $^{12}C(^{13}C,^{12}B)$ E=30 MeV/nucleon; measured $\sigma(\theta)$ for θ=1.8° to 5.6°. Observed low-lying states along with E_x=16.3 and 22.1 MeV, which are suggested as the J^π=5/2$^+$ and 3/2$^+$ GDR components. The same data are discussed in (1988Vo08).
1988Vo08: $^{12}C(^{13}C,^{12}B)$ E=30 MeV/nucleon; measured $\sigma(\theta)$ for θ=4° to 10°. Deduced L and S values via DWBA.
1990Br25: $^{12}C(^{13}C,^{12}B)$ E=50 MeV/nucleon; measured $\sigma(\theta)$ for θ=0° to 6°. Discussed spectroscopic factors.

^{13}N Levels

E(level)[†‡]	J^π[†]	$T_{1/2}$	L[†]	S[†]	Comments
0	1/2$^-$		1	0.48	
2.36×10^3	1/2$^+$		0	0.14	
3.55×10^3	5/2$^+$		2	0.53	
7.1×10^3	7/2$^+$		4		
7.9×10^3	3/2$^+$		2	0.14	
8.5×10^3	(1/2$^-$)		1	0.02	
11.3×10^3	(5/2$^-$)		3	0.03	
12.6×10^3	(7/2$^-$)		3	0.03	
16.2×10^3	(5/2$^+$)	4.8 MeV	2	0.52	
22.5×10^3	(3/2$^+$)	4.2 MeV	2	0.43	J^π,L: The discussion of (1987Ad07) and (1988Vo08) associates this state with the J^π=3/2$^+$ GDR at E_x=21.7 MeV; however Table 6 of (1988Vo08) shows J;L=5/2$^+$;2, which appears to be a typo.

† Reported in DWBA analysis of spectroscopic factors of (1988Vo08).
‡ (1990Br25) report poorly resolved groups at E_x=0, 2.34, 3.55, 5.4, 6.6, 7.6, 8.5, 10.5, 11.8, 13.2, 17.5, 24.0 MeV.