$^{12}C(^{20}Ne,X)$:resonance 1985Fl06

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 201,1 (2025)	31-Oct-2024

1985Fl06: ($^{20}Ne,\alpha$),($^{20}Ne,^{8}Be$) E=12-15 MeV (center of mass) ^{20}Ne beam was from the University of Oxford vertical 10-MV Van de Graaff accelerator. Targets were self-supporting foils of natural carbon with thicknesses of ≈15 to 25 $\mu g/cm^2$. Reaction products were detected with a Si(Li) detector (FWHM≈200 keV). Measured energy spectrum, $\sigma(\theta)$. Deduced levels, L-transfers.

2017Pa03: ($^{20}Ne,\gamma$) E=145 MeV ^{20}Ne beam from the K-130 cyclotron at the Variable-Energy Cyclotron Centre (VECC), Kolkata. Measured high-energy GDR (giant dipole resonance) γ rays using the LAMBDA spectrometer. Deduced GDR parameters. See also 2010Pa18 with E(beam)=145 and 160 MeV. 2017Pa03 also measured GDR using $^{28}Si(\alpha,\gamma)$.

2004Ki07,2003Wo17: ($^{20}Ne,\gamma$) E=5.2 MeV/nucleon ^{20}Ne beam from the cyclotron at the Heavy-Ion Laboratory of Warsaw University. High energy γ rays were detected with the JANOSIK detector setup. Deduced GDR parameters.

^{32}S Levels

E(level)[†]	J^{π}[‡]	L[‡]	Comments
14.7×10^3 *3*			E(level): giant dipole resonance (GDR), with Γ=6.0 MeV *8* (2017Pa03).
17.4×10^3			E(level): giant dipole resonance (GDR), with Γ=13.3 MeV (2004Ki07).
25.6×10^3 *8*			E(level): giant dipole resonance (GDR), with Γ=7.3 MeV *13* (2017Pa03).
31900[@]	8^+	8[@]	
32200[#]	10^+	10[#]	
32600[@]	$9^-,(8^+)$	9,(8)[@]	
33100[@]	8^+	8[@]	
33400[#]	11^-	11[#]	

[†] From 1985Fl06, unless otherwise noted.
[‡] From analysis of measured $\sigma(\theta)$ (1985Fl06).
[#] From ($^{20}Ne,\alpha$) (1985Fl06).
[@] From ($^{20}Ne,^{8}Be$) (1985Fl06).