

$^{12}\text{C}(\gamma,\gamma)$ 1958Ra14,1985Aj01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, J. E. Purcell and C. G. Sheu		NP A968,71 (2017)	1-Jan-2017

- 1958Ra14: ^{12}C , measured the lifetime of the $^{12}\text{C}^*(4.43\text{ MeV})$ level.
- 1967Ku11: $^{12}\text{C}(\gamma,\gamma)$ E=10-15 MeV, measured nuclear resonance fluorescence. ^{12}C levels deduced level-width, B(M1).
- 1970Ah02: $^{12}\text{C}(\gamma,\gamma)$ E=10-80 MeV, measured $\sigma(E_\gamma)$. ^{12}C deduced dipole oscillator strengths.
- 1971Fa14: $^{12}\text{C}(\gamma,\gamma)$ E<6.75 MeV, measured resonance fluorescence. ^{12}C levels deduced level-width, $T_{1/2}$.
- 1976Me25: $^{12}\text{C}(\gamma,\gamma)$ E=10-17 MeV, bremsstrahlung, measured σ . ^{12}C level deduced Γ_γ , γ -branching.
- 1976Ve06: $^{12}\text{C}(\gamma,\gamma)$ E=14.6-15.22 MeV, measured $\sigma(E)$.
- 1977Be32: $^{12}\text{C}(\gamma,\gamma)$ E=5.5-7.2 MeV, measured $\sigma(E)$.
- 1980Do04: $^{12}\text{C}(\gamma,\gamma)$ E=23.5-39 MeV, measured σ . ^{12}C deduced E2 strength.
- 1980Is09: $^{12}\text{C}(\gamma,\gamma),(\gamma,\gamma')$ E=15-30 MeV, measured $\sigma(\theta,E)$, $\sigma(\text{total},E)$. ^{12}C deduced resonances, J, π , T assignments.
- 1983Do05: $^{12}\text{C}(\gamma,\gamma)$ E=23.5-39 MeV, measured $\sigma(E)$. $^{12}\text{C}(\gamma,\gamma')$ E=23.5 MeV, measured $\sigma(\theta)$. ^{12}C deduced EWSR isoscalar, isovector E2 strength, $\Gamma_{\gamma 1}/\Gamma_{\gamma 0}$, photonuclear absorption σ .
- 1984Ha08: $^{12}\text{C}(\gamma,\gamma)$ E=150-400 MeV, measured $\sigma(E,\theta=115^\circ)$.
- 1990Sc02: $^{12}\text{C}(\gamma,\gamma),(\gamma,\gamma')$ E=15-140 MeV, measured $\sigma(E,\theta)$. ^{12}C deduced E1, E2 resonance parameters, radius parameters, polarizability of bound nucleons.
- 1992Lu01: $^{12}\text{C}(\gamma,\gamma)$ E=61,77 MeV, measured $\sigma(\theta)$, Compton scattering. Deduced bound nucleon electromagnetic polarizabilities.
- 1993Ah01: $^{12}\text{C}(\gamma,\gamma)$ E \approx 200-500 MeV, compiled, reviewed $\sigma(\theta)$ vs E data.
- 1994Wi13: $^{12}\text{C}(\gamma,\gamma),(\gamma,\gamma')$ E=200-500 MeV, measured $\sigma(\theta)$ vs E.
- 1995Ha23: $^{12}\text{C}(\gamma,\gamma)$ E=58,75 MeV, measured $\sigma(\theta)$. Deduced bound nucleon electromagnetic polarizabilities.
- 1995Ig01: $^{12}\text{C}(\gamma,\gamma),(\gamma,\gamma')$ E=158.8-290.2 MeV bremsstrahlung, measured $\sigma(\theta)$.
- 2001Wa24: $^{12}\text{C}(\gamma,\gamma),(\gamma,\gamma')$ E=84-105 MeV, measured E_γ , I_γ , $\sigma(\theta)$. Deduced approximate bound nucleon polarizabilities.

 ^{12}C Levels

E(level) [†]	$T_{1/2}$	Comments
4439.4 16	45 fs 12	$T_{1/2}$: From (1958Ra14).
9.6×10^3 2		
11.8×10^3 2		
12.7×10^3		
13.3×10^3 2		
15.11×10^3		Γ : See Table 12.15 in (1968Aj02).
16.11×10^3		
17.2×10^3 2		
18.3×10^3 2		
20.5×10^3 2		
26.5×10^3 4		
29.5×10^3 3		

[†] From references in (1980Aj01,1985Aj01).