

$^{12}\text{C}(^7\text{Li},^7\text{Be})$ 1990Na24

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

1973Ba34: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=52 MeV, measured $\sigma(E(^7\text{Be}))$, Q.

1984Ba53: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=78 MeV, analyzed $\sigma(\theta)$. Deduced reaction mechanism.

1984G106: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=78 MeV, measured $\sigma(\theta)$, $\sigma(E(^7\text{Be}))$. Deduced single-step, spin flip charge exchange process dominance. ^{12}B levels deduced J, π , configuration.

1987Na16,1990Na03: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=150 MeV, measured $\sigma(E(^7\text{Be}),\theta)$, $\sigma(\theta)$. ^{12}B deduced levels, J, π , giant resonances, Γ . DWBA calculations.

1989Ga26: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=78 MeV, compiled, analyzed data. Deduced precritical effects role, form factor radial dependence.

1990Na24: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=14-26 MeV/nucleon, measured $\sigma(\theta)$, $\sigma(E(^7\text{Be}))$. Deduced reaction mechanism.

1991Na12,1991Na17,1992Na13: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=26 MeV/nucleon, measured ejectile energy spectra, (particle) γ -coin. ^{12}C deduced isovector spin excitation relative strength, $\sigma(E,\Delta S=0,1)$.

1994Na17: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=100 MeV/nucleon, analyzed $\sigma(\theta)$, $\gamma(^7\text{Be})$ -coin data. ^{12}B deduced isovector giant resonance excitation features. DWBA analysis.

1996Ja08: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=350 MeV, measured $\sigma(\theta)$. ^{12}B deduced isovector giant resonances, J, π , Γ .

1996Wi05: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=70 MeV/nucleon, measured (particle) γ -coin.

1998Na14,1998Na16,1999Na36,2001Na18: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=65 MeV/nucleon, measured ($^7\text{Be})\gamma$ -coin, E_γ , $I_\gamma(\theta)$. Deduced reaction mechanism relative spin-flip, non-spin-flip strengths. Deduced relationship between σ and B(GT).

1999An13: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=350 MeV, measured particle spectra, angular distributions, E_γ , $I_\gamma(\theta)$. ^{12}B deduced resonance features, spinflip ratios, spinflip enhancement, effective number of participating protons.

2006Sa28: $^{12}\text{C}(^7\text{Li},^7\text{Be})$ E=82 MeV, measured $\sigma(\theta)$, energy spectra. Deduced one- and two-step reaction mechanisms. DWBA and coupled reaction channels analysis.

 ^{12}B Levels

E(level) ^{ab}	J ^{π}	E(level) ^{ab}	J ^{π}	Γ ^{&}
0		4.52×10^3	$4^{-\dagger}$	
0.95×10^3		5.7×10^3		
1.67×10^3		$6.2 \times 10^3?$		
2.62×10^3		7.6×10^3	$1^{-\dagger}$	2.1 MeV
3.39×10^3		$7.8 \times 10^3 \ddagger$	\ddagger	4.0 MeV 5
3.76×10^3		$12.8 \times 10^3 \#$ 5	$\#$	3.5 MeV 5
4.30×10^3		$17.8 \times 10^3 @$ 15	@	3.5 MeV 15
4.37×10^3	$2^{-\dagger}$			

^{\dagger} Spin Dipole Resonance (1991Na12,1991Na17,1994Na17).

^{\ddagger} Giant Dipole Resonance (1992Na13).

^{$\#$} Isovector Giant Quadrupole Resonance (1992Na13).

[@] Isovector Giant Monopole Resonance (1992Na13).

[&] From (1992Na13).

^a From (1990Na03,1990Na24), except where noted.

^b In (1990Aj01), levels at $E_x=21.8$ and 23.9 were erroneously reported; those energies are from the corresponding estimated ^{12}C analog state energies.