

$^9\text{Be}(^3\text{He},\gamma)\text{:res}$ 1972BI17,1972Li29,1974Sh01

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

- 1970BI09: $^9\text{Be}(^3\text{He},\gamma)$ E=1.670-1.770 MeV, measured $\sigma(E)$. ^{12}C deduced resonance, level-width, T.
 1972BI17: $^9\text{Be}(^3\text{He},\gamma)$ E=1-6 MeV, measured $\sigma(E,E_\gamma,\theta(\gamma))$. ^{12}C deduced resonance, level-width.
 1972Ha63: $^9\text{Be}(^3\text{He},\gamma)$ E=1.73-1.76 MeV, measured $\sigma(E,\theta=0^\circ)$. ^{12}C deduced limit on 0^+ , T=2 resonance.
 1972Li29: $^9\text{Be}(^3\text{He},\gamma)$ E=1.5-11 MeV, measured $\sigma(E,E_\gamma)$. ^{12}C deduced resonances.
 1972Wa18: $^9\text{Be}(^3\text{He},\gamma)$ E \approx 1.74 MeV, measured $\sigma(E,E_\gamma)$. ^{12}C deduced no T=2 resonance, upper limit for level-width.
 1974Sh01: $^9\text{Be}(^3\text{He},\gamma)$ E=3-26 MeV, measured $\sigma(E,E_\gamma,\theta)$. ^{12}C deduced levels, J, π , resonance parameters.

 ^{12}C Levels

E(level)	J^π	$T_{1/2}$	Comments
0			
4.4×10^3			
7.7×10^3			
9.64×10^3			
15.11×10^3			
27585? 5	(0^+)		
28.2×10^3 †	1^-	1.6^\dagger MeV	T=1; $\Gamma_{\gamma 0}\geq 11.8$ eV $\Gamma_{\gamma 1}\geq 4.6$ eV $\Gamma_{\gamma 2}\geq 11.3$ eV. E(level): From E(^3He)=2.55 MeV.
28.83×10^3 ‡ 3		1.54^\ddagger MeV 9	E(level): From E(^3He)=3.40 MeV 4.
30.29×10^3 ‡ 2		1.96^\ddagger MeV 15	E(level): From E(^3He)=5.35 MeV 3.
31.16×10^3 ‡ 2		2.10^\ddagger MeV 15	E(level): From E(^3He)=6.51 MeV 3.
32.29×10^3 # 3		$1.32^\#$ MeV 23	E(level): From E(^3He)=8.02 MeV 4.
33.47×10^3 # 14		$1.93^\#$ MeV 5	E(level): From E(^3He)=9.60 MeV 21.

† From (1972BI17).

‡ From (1972Li29,1974Sh01).

From (1974Sh01).

 $\gamma(^{12}\text{C})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	E_γ	$E_i(\text{level})$	J_i^π	E_f
12475	27585?	(0^+)	15.11×10^3	25.82×10^3	30.29×10^3		4.4×10^3
20.48×10^3	28.2×10^3	1^-	7.7×10^3	27.82×10^3	32.29×10^3		4.4×10^3
21.15×10^3	28.83×10^3		7.7×10^3	28.16×10^3	28.2×10^3	1^-	0
23.77×10^3	28.2×10^3	1^-	4.4×10^3	28.79×10^3	28.83×10^3		0
24.61×10^3	32.29×10^3		7.7×10^3	28.99×10^3	33.47×10^3		4.4×10^3
25.79×10^3	33.47×10^3		7.7×10^3	31.11×10^3	31.16×10^3		0

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Level Scheme

