

$^7\text{Li}(\alpha, n)$ [1963Me08,1959Gi47](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu		NP A880,88 (2012)	1-Jan-2011

[1957Bi84](#): $^7\text{Li}(\alpha, N)$.[1959Gi47](#): $^7\text{Li}(\alpha, N)$.[1963Me08](#): Measured not abstracted; deduced nuclear properties.[1972Va02](#): $^7\text{Li}(\alpha, N)$ E=4.5-8.0 MeV, measured $\sigma(E, E_N, \theta)$.[1977Li19](#): $^7\text{Li}(\alpha, N)$ E<7 MeV, analyzed $\sigma(E)$.[1979Ba48](#): $^7\text{Li}(\alpha, N)$ E=3-7.5 MeV, measured σ .[1981Se04](#): $^7\text{Li}(\alpha, N)$ E=4.385-5.1 MeV, measured $\sigma(E_\alpha, \theta)$. Deduced $\sigma(E_\alpha)$.[1984OI05](#): $^7\text{Li}(\alpha, N)$ E=4.38-4.67 MeV, measured $\sigma(E)$. Deduced inverse reaction $\sigma(E)$. ^{11}B resonances deduced parameters.[1993Vl02](#): $^7\text{Li}(\alpha, N)$ E=5.5-5.8 MeV, measured photon to neutron yield ratio. ^{11}B Levels

E(level)	J^π	$T_{1/2}$	Comments
11.67×10^3 10		166 keV 40	E(level): from (1963Me08). E(level): also see (1984OI05) who use detailed balance to convert their (α, n) data into (n, α) cross sections. They deduced $E(N, \alpha)_{\text{res}} = 241$ keV 18. Γ : from (1984OI05).
11.93×10^3 3	(3/2 ⁻ , 5/2 ⁺)	194 keV 6	E(level): from $E_\alpha = 5.22$ MeV 15 (1963Me08) and $E_\alpha = 5.15$ MeV 7 (1959Gi47) and $E_\alpha = 5.15$ MeV 8 (1957Bi84). E(level): also see (1984OI05) who use detailed balance to convert their (α, n) data into (n, α) cross sections. They deduced $E(N, \alpha)_{\text{res}} = 493$ keV 4. J^π : from (1959Gi47). Γ : from (1984OI05). Also see $\Gamma_n \approx 20$ keV, $\Gamma_\alpha \approx 300$ keV (1959Gi47). In (1985Aj01) the Γ_n was listed As ≈ 300 keV with No reference.
13.15×10^3 10			E(level): from (1963Me08).
14.04×10^3 10			E(level): from (1963Me08).
14.53×10^3 10			E(level): from (1963Me08).
15.12×10^3 5			E(level): from (1963Me08).
15.88×10^3 ? 20			E(level): from (1963Me08).
16.7×10^3 3			E(level): from (1963Me08).
17.52×10^3 3			E(level): from (1963Me08).