

${}^6\text{Li}(d,\alpha)$, ${}^6\text{Li}(d,p\alpha)$ 2004Ti06

Type	Author	History	Citation	Literature Cutoff Date
Update	J. H. Kelley, J. L. Godwin, C. G. Sheu		ENSDF	31-Mar-2004

- 1967Cl06: ${}^6\text{Li}(d,\alpha)$ E=3 to 12 MeV, measured $\sigma(E,\theta)$. ${}^8\text{Be}$ deduced levels, J, π .
 1969B114: ${}^6\text{Li}(d,\alpha)$ E=6.33-7.14 MeV, measured $\sigma(E,\theta)$. ${}^8\text{Be}$ deduced resonance, Γ -level.
 1971Ne12: ${}^6\text{Li}(\text{pol. } d,\alpha)$ E=0.4, 0.6, 0.8, 0.96 MeV, measured vector, tensor analyzing power. ${}^8\text{Be}$ deduced resonances, J, π .
 1975Mc02: ${}^6\text{Li}(d,\alpha)$ E=0.5-3.4 MeV, measured $\sigma(E,\theta)$.
 1975Wi25: ${}^6\text{Li}(d,\alpha)$ E=425 keV, measured polarization.
 1977E109: ${}^6\text{Li}(d,\alpha)$ E=0.1-1.0 MeV, measured $\sigma(E,\theta)$.
 1977Ri09: ${}^6\text{Li}(d,\alpha)$ E=1.5-11.5 MeV, measured $\sigma(E,\theta)$, $\alpha(E,\theta)$. ${}^8\text{Be}$ deduced resonance structure.
 1977Mi13: ${}^6\text{Li}(d,p\alpha)$ E=7.5, 10, 10.5 MeV, measured (E,E1,E2, θ_1,θ_2). Deduced reaction mechanism.
 1979Bo33: ${}^6\text{Li}(d,\alpha)$ E=100-180 keV, measured $\sigma(E)$. Deduced astrophysical σ .
 1979Ri03: ${}^6\text{Li}(\text{pol. } d,\alpha)$ E=5.0-6.5, 8.0-10.0 MeV, measured $A_Y(\text{THETA},E)$, $A_{YY}(\text{THETA},E)$.
 1981Go19: ${}^6\text{Li}(d,\alpha)$ $E_{C.M.}$ =35-110 keV, measured $\sigma(E)$.
 1986So07: ${}^6\text{Li}(\text{pol. } d,\alpha)$, E \approx 6.9-7.05 MeV, measured $\sigma(\theta)$, $T_{20}(\text{THETA})$, $T_{21}(\text{THETA})$, $T_{22}(\text{THETA})$, $iT_{11}(\text{THETA})$. ${}^8\text{Be}$ deduced isospin forbidden decay, channel spin dependent γ ratio.
 1989Ba88: ${}^6\text{Li}(d,\alpha)$ E=18.2-36.8 MeV, measured $\sigma(\theta)$. Deduced model parameters.
 1990Sa47: ${}^6\text{Li}(\text{pol. } d,\alpha)$ E=10 MeV, analyzed tensor analyzing power data. ${}^6\text{Li}$ deduced D-state component.
 1992En01: ${}^6\text{Li}(d,\alpha)$ $E_{C.M.}$ =10-1004 keV, measured $\sigma(\theta,E)$. Deduced astrophysical S-factor vs. E, electron screening potential energy.
 1993Ce02: ${}^6\text{Li}(d,\alpha)$ $E_{C.M.}$ =20-135 keV, measured spectra, yield ratios.
 1994Ar24: ${}^6\text{Li}(d,\alpha)$ E=18.2-44.5 MeV, measured $\sigma(\theta)$. Deduced $\sigma(E)$. ${}^8\text{Be}$ deduced possible level.
 1997Cz01: ${}^6\text{Li}(d,\alpha)$ E=50-180 keV, measured $\sigma(E)$, astrophysical S-factor vs. E. Deduced subthreshold resonance contribution.
 2002Ba77: ${}^6\text{Li}(d,\alpha)$ E=low, analyzed σ . Deduced electron screening potential.
 2002Sa09: ${}^6\text{Li}(d,\alpha)$ $E_{C.M.}$ =2.3-3.5 MeV. Deduced σ , astrophysical S-factor.
 2003Pi13: ${}^6\text{Li}(d,\alpha)$ E(C.M.) \approx 10-1000 keV, analyzed astrophysical S-factors, electron screening potential energy.
 2003Sp02: ${}^6\text{Li}(d,\alpha)$ E=low, analyzed σ , astrophysical S-factors.
 2004Ka13: ${}^6\text{Li}(d,\alpha)$ E=30-75 keV, measured thick-target yields for PdLi and AuLi targets. Deduced environmental effects.

 ${}^8\text{Be}$ Levels

E(level)	J^π	$T_{1/2}$	Comments
22.24×10^3	2 ⁺		E(level): from $E_{\text{res}} = -0.05$ MeV 2.
22.8×10^3		≈ 600 keV	E(level): from $E_{\text{res}} = 0.8$ MeV and $\Gamma_{\text{lab}} \approx 800$ keV.
25.1×10^3	2 ⁺	≈ 1.05 MeV	E(level): from $E_{\text{res}} = 3.75$ MeV and $\Gamma_{\text{lab}} \approx 1.4$ MeV.
25.5×10^3	4 ⁺		
27.49×10^3	0 ⁺	T=2	
$\approx 28. \times 10^3$			
$\approx 41. \times 10^3?$			
$\approx 43. \times 10^3?$			
$\approx 50. \times 10^3?$			