

${}^6\text{Li}(\pi^-,p)$ 1990Am04

Type	Author	Citation	History	Literature Cutoff Date
Full Evaluation	J. E. Purcell, C. G. Sheu	ENSDF		28-Feb-2019

[1981SeZR](#): The missing mass spectrum resulting from stopped pions in the ${}^6\text{Li}(\pi^-,p)$ reaction was analyzed at $\theta=20^\circ$ at the LAMPF/EPICS facility. The authors suggest a $E_{\text{res}}\approx 11.0$ MeV 15 resonance with $\Gamma\approx 14$ MeV. A later comment on this work, titled “*Was ${}^5\text{H}$ Observed in the Reaction ${}^6\text{Li}(\pi,p)$?*” ([1987Ko47](#)), suggests other final state interactions involving $n+n$ and ${}^4\text{H}$ influence the observation. In ([1991Se06](#)), a final report on the ([1981SeZR](#)) data is given where evidence of involvement of dineutron emission is suggested to explain the details of the missing mass spectrum.

[1990Am04](#): The experiments were conducted at Leningrad Institute of Nuclear Physics using pion beams stopped by ${}^{6,7}\text{Li}$ targets. Observing the p spectrum from ${}^6\text{Li}$ led to a ${}^5\text{H}$ state with energy $E_{\text{res}}=11.8$ MeV 7 and width $\Gamma=5.6$ MeV 9 .

 ${}^5\text{H}$ Levels

E(level) [†]	Γ	$E_{\text{res}}({}^3\text{H}+2n)$ (MeV)
9.4×10^3 8	5.6 MeV 9	11.8 7

[†] From $E_{\text{res}}-E_{\text{g.s.}}=E_{\text{res}}-2.4$ MeV 3 .