

${}^9\text{Be}(\pi^-,pt)$  2003Go08,2005Gu17

Type	Author	Citation	History	Literature Cutoff Date
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[1987Go25](#),[1987GoZN](#),[1988Go14](#),[1991Go19](#): The experiment was performed at the Leningrad Institute of Nuclear Physics. Stopped pions were captured by  ${}^9\text{Be}$ , reaction proton and triton pairs were detected and measured and a missing mass spectrum corresponding to the formation of  ${}^5\text{H}$  was determined. Structure in the spectrum was interpreted as the formation of a resonance in  ${}^5\text{H}$  with an energy of  $E_{\text{res}}=7.4$  MeV <sup>7</sup> above the  ${}^3\text{H}+2n$  threshold and width  $\Gamma=8$  MeV <sup>3</sup>. Thoennessen, ([2012Th01](#)), considers that this is the experiment in which  ${}^5\text{H}$  was first observed.

[2003Go08](#),[2005Gu07](#),[2005Gu17](#): The experiment was performed at LAMPF. The negative pions were stopped in a thin Be target, the reaction products p+t and d+d were observed and the  ${}^5\text{H}$  missing mass spectra were obtained. Resonant energies  $E_{\text{res}}$  and widths  $\Gamma$  are listed below. See similar discussion in ([2009Gu17](#),[2016Gu21](#)).

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

<u>E(level)<sup>†</sup></u>	<u><math>\Gamma</math></u>	<u><math>E_{\text{res}}({}^3\text{H}+2n)(\text{MeV})</math></u>
$2.8 \times 10^3$ <sup>6</sup>	5.5 MeV <sup>5</sup>	5.2 <sup>3</sup>
$8.0 \times 10^3$ <sup>4</sup>	7.4 MeV <sup>6</sup>	10.4 <sup>3</sup>
$16.3 \times 10^3$ <sup>6</sup>	3.9 MeV <sup>20</sup>	18.7 <sup>5</sup>
$24.2 \times 10^3$ <sup>5</sup>	3.0 MeV <sup>14</sup>	26.8 <sup>4</sup>

<sup>†</sup> From  $E_{\text{res}}-E_{\text{g.s.}}=E_{\text{res}}-2.4$  MeV <sup>3</sup>.