

# Search for semi-leptonic decays $\Lambda_c^+ \rightarrow \Lambda \pi^+ \pi^- e^+ \nu_e$ and $\Lambda_c^+ \rightarrow p K_S \pi^- e^+ \nu_e$

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Based on  $4.4 fb^{-1}$  of  $e^+e^-$  annihilation data collected in the energy region between 4.6 GeV and 4.7 GeV with the BESIII detector at the BEPCII collider, we search for semi-leptonic decays  $\Lambda_c^+ \rightarrow \Lambda \pi^+ \pi^- e^+ \nu_e$  and  $\Lambda_c^+ \rightarrow p K_S \pi^- e^+ \nu_e$ , using double tag technique. The measurement of  $\Lambda_c^+ \rightarrow \Lambda^* e^+ \nu_e$  is important for validating different theoretical-model calculations and helping us understand the nature of  $\Lambda^*$  baryon resonances. Since there is no significant signal on data, we set upper limits on branching fractions at 90% confidence level. This analysis will enhance our knowledges of charmed baryon decays.

## Category

poster

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