Contribution ID: **74** Type: **not specified**

Partial wave analysis of the charmed baryon hadronic decay $\Lambda_c^+ \to \Lambda\pi^+\pi^0$

Wednesday, 17 August 2022 19:05 (10 minutes)

Based on e^+e^- collision samples corresponding to an integrated luminosity of $4.4\ fb^{-1}$ collected with BESIII detector at center-of-mass energies between 4.6 GeV to 4.7 GeV, the first partial wave analysis of the charmed baryonic decay $\Lambda_c^+ \to \Lambda\pi^+\pi^0$ is performed. From the analysis results, the decays of $\Lambda_c^+ \to \Lambda\rho(770)^+$ and $\Sigma(1385)\pi$ are studied for the first time. In combination with the world average branching fraction $\mathcal{B}(\Lambda_c^+ \to \Lambda\pi^+\pi^0)$, we determine their absolute branching fractions for the first time. In addition, according to the results of the amplitudes from the partial wave analysis, their decay asymmetry parameters can also be obtained. These results are the first measurements in the world.

Category

poster

Primary author: XIE, Xinhai (Peking University)

Presenter: XIE, Xinhai (Peking University)

Session Classification: Posters

Track Classification: Posters