

Studies on Λ_c^+ hadronic decays

Friday, 19 July 2019 10:00 (30 minutes)

In this talk, we would like to report our recent theoretical studies on the Λ_c^+ hadronic decays, i.e., $\Lambda_c^+ \rightarrow \pi^+ K^- p$ (charged) and $\Lambda_c^+ \rightarrow \pi^+ \bar{K}^0 n$ (neutral), using the effective Lagrangian approach. Considering the strong ud -diquark correlation inside the Λ_c^+ baryon, we confine our model to that with the $I=0$ hyperon resonances and other mesonic contributions. The Belle experiment data are reproduced qualitatively well for the charged channel, and we provide theoretical predictions for the neutral channel as well. It turns out that the $\eta\Lambda$ -channel opening effect makes a peculiar peak-like structure at $M_{K^-p} \approx 1670$ MeV and nontrivial interference effects on the Dalitz plot for the charged channel.

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