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Charmed meson decays at BESIII

Tuesday, 18 July 2023 14:00 (20 minutes)

BESIII has collected 2.93 and 7.33 fb^{-1} of e^+e^- collision data samples at 3.773 and 4.128-4.226 GeV, which provide the largest dataset of DD^- and $D_s D_s$ pairs in the world, respectively.

In this talk, we will report the updated measurements of $|V_{cs}|$ in $D_s^+ \rightarrow \tau^+ \nu$ and the form factor studies in $D_s^+ \rightarrow K^+ K^- e^+ \nu$ and $\pi^+ \pi^- e^+ \nu$. In addition, we will report the most updated amplitude analyses of Cabibbo-favored and -suppressed D_s decays at BESIII, including the observation of a new a_0 -like state at 1.817 GeV, the branching fraction measurements of D mesons decay involving K_L^0 and multiple kaons/pions, and the doubly Cabibbo-suppressed decay $D_0 \rightarrow K^+ \pi^- \pi^0$. We will also report the improved measurement of the strong-phase difference in quantum-correlated DD decays. Finally, we will introduce prospect on measurements of charmed meson hadronic decays with the coming 20 fb^{-1} at 3.773 GeV data collected by BESIII.

Consent

I consent to recording/broadcasting my presentation.

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