

Charmed meson decays at BESIII

Saturday 20 July 2024 14:45 (15 minutes)

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

We will present the observation of $D^+ \rightarrow K_s a^0(980)$ and a new a^0 -like state with a mass of 1.817 GeV, and the determination of U-spin breaking parameters of the decay $D^0 \rightarrow K_L \pi^+ \pi^-$, along with the amplitude analyses of $D^{0(+)} \rightarrow 4\pi$ and $D^+ \rightarrow K_s \pi^+ \pi^0 \pi^0$. Our presentation will also include the latest measurements of quantum-correlated DD decays, including the CP-even fraction of $D^0 \rightarrow K_s \pi^+ \pi^- \pi^0$, $KK\pi\pi$.

We will also present study of $D_s^* \rightarrow e\nu$ and the improved measurements of $|Vcs|$ and D_s decay constant in $D_s^+ \rightarrow \mu^+ \nu$ and $\tau^+ \nu$. Furthermore, we will present the $D_s \rightarrow \eta^{(\prime)}$, $D_s \rightarrow f^0(980)$, and $D_s \rightarrow \phi$ form factor studies.

Alternate track

1. Strong Interactions and Hadron Physics

I read the instructions above

Yes

Authors: ZHENG, Bo; ZHENG, Bo (University of South China); BIANCHI, Fabrizio

Co-author: Dr ZHENG, Bo (University of South China)

Presenter: Dr ZHENG, Bo (University of South China)

Session Classification: Quark and Lepton Flavour Physics

Track Classification: 05. Quark and Lepton Flavour Physics