



Contribution ID: 55

Type: **Talk**

Study of charmonium spectroscopy and decays at BESIII

Monday 1 August 2022 10:10 (20 minutes)

Based on a sample of 448 million $\psi(2S)$ events and a scan data sample above 3.7 GeV with an integrated luminosity of 22/fb, charmonium spectroscopy and decays are studied. In the talk the latest results will be presented. The production of $\psi(3823)$ via $e^+e^- \rightarrow \pi^+\pi^-\psi(3823)$ is measured, the most precise measurement of the mass of $\psi(3823)$ is achieved, and the new decay modes of $\psi(3823) \rightarrow \gamma\chi_{c2}$, $\gamma\chi_{c0}$, $\pi^+\pi^0 J/\psi$, $\eta J/\psi$, and $\pi^0 J/\psi$ are searched. The new decay modes of $h_c \rightarrow p\bar{p}\eta$, $p\bar{p}\pi^0$, $p\bar{p}\pi^+\pi^-\pi^0$, $\pi^0 J/\psi$ are searched for, the mode of $p\bar{p}\eta$ is observed for the first time with significance above 5.0 sigma while evidence of $p\bar{p}\pi^+\pi^-\pi^0$ is found.

Preferred track

Hadron Spectroscopy

Subfield

HEP experiment

Attending in-person?

Yes

On behalf of collaboration?

BESIII

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Session Classification: Hadron spectroscopy 1

Track Classification: Hadron spectroscopy