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Study of $\phi(2170)$ @ BESIII

Saturday, 9 June 2018 14:30 (1:30)

Collaboration

BESIII

Abstract content

The $\phi(2170)$ maybe a strange partner of $Y(4260)$, and there are a lot of theoretical interpretations to explain the nature of $\phi(2170)$, including a traditional $s\bar{s}$ state, a $s\bar{s}g$ hybrid, tetraquark state, $\Lambda\bar{\Lambda}$ bound state, and ϕKK resonance state. Their predictions for different exclusive decays may have big discrepancy. However, there are inconsistencies on mass and width of $\phi(2170)$. There are no experimental results on exclusive decay modes predicted by theory. With 500 pb^{-1} data collected by the BESIII detector between 2.0 GeV and 3.08 GeV, we report recent results on line-shape of $e^+e^- \to K^+K^-/2(K^+K^-)/\phi\eta/\phi\eta'/\omega\pi^{0/-}$ and also extract resonance parameters by fitting Born cross sections of exclusive decay modes.

Primary author(s) : GAO, Xinlei (USTC (Hefei, China))

Presenter(s) : GAO, Xinlei (USTC (Hefei, China))

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