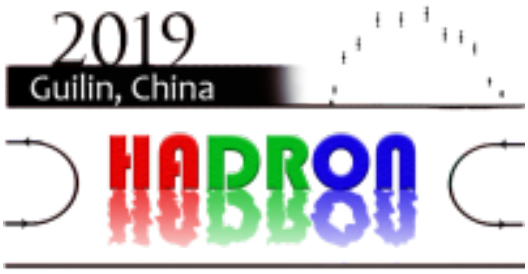

Contribution ID: **231** Type: **Parallel**

Describing the charged charmoniumlike structures in the $e^+e^- \to \pi^+\pi^-\psi(3686)$ process based on the ISPE mechanism

Wednesday, 21 August 2019 09:15 (20 minutes)

In 2017, the BESIII Collaboration announced the observation of charged charmonium-like structure in the $\psi(3686)\pi^{\pm}$ invariant mass spectrum of the $e^+e^- \to \psi(3686)\pi^+\pi^-$ process at different energy points, which makes a precise study of the $e^+e^- \to \psi(3686)\pi^+\pi^-$ process based on the initial single pion emission (ISPE) mechanism become possible. In my report, I will show that after performing a combined fit to the experimental data of the cross section of $e^+e^- \to \psi(3686)\pi^+\pi^-$, and the corresponding $\pi^{\pm}\psi(3686)$ and dipion invariant mass spectra, the observed charged charmonium-like structure in $e^+e^- \to \psi(3686)\pi^+\pi^-$ can be reproduced well based on the ISPE mechanism. And the corresponding dipion invariant mass spectrum and cross section can be depicted with the same parameters. In fact, it provides strong evidence to show that the ISPE mechanism can be as underlying mechanism resulting in such novel phenomenon.

Primary authors: Dr HUANG, Qi (University of Chinese Academy of Sciences); Dr MATSUKI, Takayuki (Tokyo Kasei University); 陈, 殿勇 (东南大学); Prof. 刘, 翔 (兰州大学)

Presenter: Dr HUANG, Qi (University of Chinese Academy of Sciences)

Session Classification: Session 3: Exotic hadrons and candidates

Track Classification: Session 3: Exotic hadrons and candidates