QNP2024 - The 10th International Conference on Quarks and Nuclear Physics



Contribution ID: 9 Type: Plenary talk

Recent results on hyperon decays in BESIII

Wednesday, 10 July 2024 09:40 (40 minutes)

The BESIII experiment at the electron-positron collider BEPCII in Beijing (China) is successfully operating since 2008 and has collected large data samples in the tau-mass region, including the world's largest data samples at the J/ ψ and ψ 0 resonances. The recent observations of hyperon polarizations at BESIII opens a new window for testing CP violation, as it allows for simultaneous production and detection of hyperon and anti-hyperon pair two-body weak decays. The CP-symmetry tests can be performed in processes like e.g. $J/\psi \to \Lambda \bar{\Lambda}, J/\psi, \psi' \to \Sigma^+ \bar{\Sigma}^-$ and $J/\psi \to \Xi \bar{\Xi}$. For the $\Xi \to \Lambda \pi$ decay it is possible to perform two independent CP tests and determine the strong phase and weak phase difference.

session

D. Hadron Decays

Primary author: BATOZSKAYA, Varvara (IHEP, NCBJ)

Presenter: BATOZSKAYA, Varvara (IHEP, NCBJ)

Session Classification: Plenary session