QCD@Work - International Workshop on QCD - Theory and Experiment



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Hyperon Physics at BESIII

Tuesday, 18 June 2024 15:30 (20 minutes)

With large datasets of J/ψ and $\psi(3686)$ resonances collected at BESIII through electron-positron annihilation, highly precise polarization measurements and studies on the properties of entangled hyperon-antihyperon pairs are available. The BESIII collaboration has recently presented a series of analyses on the transverse polarization measurements in the processes of J/ψ and $\psi(3686)$ decaying into $\Lambda\bar{\Lambda}$, $\Sigma\bar{\Sigma}$, and $\Xi\bar{\Xi}$. The weak decay parameters are independently determined in both hyperon mode and antihyperon mode, guided by the non-zero polarization. A direct CP conservation test can then be conducted with the hyperon-antihyperon decay parameters.

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