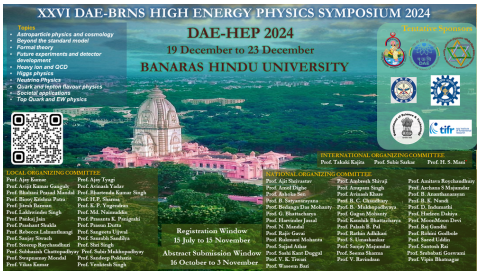

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Understanding charmonia production at the LHC: Insights from Proton-Proton collisions

The heavy-quark symmetry of Non-Relativistic Quantum Chromodynamics (NRQCD) allows to generate the predictions of the cross-section for η_c production. However, when compared to LHCb data, the NRQCD predictions fail significantly. In contrast, modified NRQCD offers a neat solution to the η_c anomaly observed by the LHCb, successfully explaining all aspects of the η_c data. We also compare recent LHCb measurements of the integrated cross-section for h_c production at $\sqrt{s}$ = 13 TeV to theoretical predictions based on both NRQCD and modified NRQCD models. The modified NRQCD approach shows good agreement with the recent LHCb data.

Field of contribution

Phenomenology

Authors: BISWAL, Sudhansu S.; MISHRA, Sushree S.; SRIDHAR, K.

Presenter: MISHRA, Sushree S.

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