Contribution ID: **44** Type: **Parallel talk**

Study of angular observables in exclusive semi-leptonic B_c decays

Tuesday 15 October 2024 15:15 (15 minutes)

In this work, we focus on the angular observables such as longitudinal polarization of final leptons, τ-polarization, and forward-backward asymmetry, also including the study of the lepton flavor violating observables, the $\mathcal{R}$ Ratios in the decay channels $B_c \to \eta_c(J/\psi)\tau\nu_\tau$ & $B_c \to D(D^*)\tau\nu_\tau$ in the entire q^2 region. Our investigation is conducted within the Relativistic Independent Quark Model, emphasizing the potential model-dependent analysis of these observables. We compared our model predictions with the existing Lattice predictions encompassing strong applicability of RIQM framework in describing B_c decays. Considering the upcoming experimental upgrades & Run 3 data results on B_c meson decays, the rapid confirmation of these quantities could signify a significant detection of physics beyond the Standard Model, opening up new avenues to understand the non-trivial flavor dynamics in heavy meson decays.

Track type

Flavour Physics

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