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Direct CP Violation in Baryonic B-Hadron Decays

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Abstract : We study direct CP-violating asymmetries (CPAs) in the baryonic B decays of B- -> p\bar{p}M and Λb decays of Λb ®pM andΛb -> J/ΨpM with M=π-, K-,ρ-,K*- based on the generalized factorization method in the standard model (SM). In particular, we show that the CPAs in the vector modes of B-®p\bar{p}K* and Λb -> p K*- can be as large as 20%. We also discuss the simplest purely baryonic decays of Λb-> p\bar{p}n, p\bar{p}Λ, Λ\bar{p}Λ, and Λ\bar{Λ}Λ. We point out that some of CPAs are promising to be measured by the current as well as future B facilities.

Keywords : CP violation, B decays, baryonic decays, Λb decays
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