

Recent BABAR results on mixing and CP violation in the charm sector

Based on the full data set recorded with the BABAR detector at center-of-mass energies at and near the Upsilon(4S) resonance, and corresponding to an integrated luminosity of approximately 468 fb⁻¹, we measure the D⁰-D⁰bar mixing parameters using a time-dependent amplitude analysis of the decay D⁰ -> pi⁺pi⁻pi⁰.

The neutral D meson candidates are selected from D^{*}(2010)⁺ -> D⁰ pi⁺ decays where the flavour at the production is identified by the charge of the low-momentum pion.

With the same data set we perform an analysis of CP-asymmetries in the singly Cabibbo-suppressed decay process D⁺ -> pi⁺ pi⁰. We discuss the sensitivity to CP-violating phases, and the corresponding New Physics constraints.

Summary

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