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Signals of New Physics in $B_q^0 - \overline{B_q^0}$ Mixing

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Abstract : Discrepancy between the experimental results for the same-sign dimuon charge asymmetry measured by the D0 Collaboration and the corresponding standard model (SM) predictions gives the possibility of having new physics (NP) effects in neutral B-meson mixing. In this review article, we discuss the current status of $B_q^0 - \overline{B_q^0}$ (q = d, s) mixing within the SM as well as the signals of NP beyond the SM.

Keywords: $B_q^0 - \overline{B_q^0}$ mixing, Neutral currents, Models beyond the standard model, Z' boson

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[Full Paper]