



Contribution ID: 198

Type: **Parallel contribution**

## Anomalous like-sign dimuon charge asymmetry at D0

*Tuesday, 9 August 2011 16:40 (28 minutes)*

We present an improved measurement of the charge asymmetry  $A$  of like-sign dimuon events in  $9 \text{ fb}^{-1}$  of  $p\bar{p}$  collisions recorded with the D0 detector at a center-of-mass energy  $\sqrt{s} = 1.96 \text{ TeV}$  at the Fermilab Tevatron collider. From  $A$ , we extract the like-sign dimuon charge asymmetry in semileptonic  $b$ -hadron decays. We also study the dependence of charge asymmetry on muon impact parameter. Additional constraints on the  $CP$  violation in the  $B$  meson sector are also derived from a measurement of the flavor-specific semileptonic asymmetry in the  $B_d^0 \rightarrow \mu D + X$  channel.

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**Session Classification:** CP-Violation

**Track Classification:** CP-Violation