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Measurements of flavor specific mixing asymmetries in B0d and B0s mesons and of the like-sign dimuon charge asymmetry

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We present measurements of the flavor-specific semileptonic asymmetry for B0d and B0s mesons using the full Run II data sample collected with the D0 detector at the Fermilab Tevatron collider. Three different decay channels are analysed: B0–>mu+D+X, with D–>Kpipi, B0–>mu+D+*X with D*–>D0pi, D0–>Kpi, and B0s–>Ds+mu+X, with Ds–>phipi, phi–>KK.

We extract the charge asymmetries as a function of the proper decay
length in the case of the B0 mesons, while in the case of the B0s mesons the time integrated asymmetries are obtained. Detector related asymmetries are corrected for using data driven methods and corrections are applied using Monte Carlo simulations for the contributions from charge symmetric processes. Results with a precision comparable to the current world average are obtained and compared to the measurements obtained from the study of the dependence of the like-sign dimuon charge asymmetry as a function of the muon impact parameter.

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