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## **Studies of asymmetries in semileptonic B decays at LHCb**

*Saturday, July 7, 2012 3:00 PM (15 minutes)*

During 2011 data taking, LHCb has recorded large samples of semileptonic B decays. These provide potential to study CP violation effects in all of the  $D^0$ ,  $B^0$  and  $B^0_s$  systems. For the former, the charge of the muon in  $B \rightarrow D^0 \mu^\pm X$  decays provides a novel procedure to tag the flavour of the neutral D meson at production, allowing competitive sensitivity for the measurement of the difference of CP violation asymmetries in  $D^0 \rightarrow h^+ h^-$  ( $h = K, \pi$ ). For the latter, integrated or time-dependent asymmetries between charge-conjugate final states probe CP violation in  $B^0(s)$  mixing through the measurement of the parameter  $A_{fs}$  (sometimes referred to as  $A_{sl}$ ). All of these measurements rely on data-driven techniques to obtain excellent control of systematic uncertainties. We present the status of the analyses.

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