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# Search for New Physics with Rare Heavy Flavour Decays at LHCb

*Monday, 6 December 2010 17:00 (25 minutes)*

The LHCb experiment has the potential, during the 2010-11 run, to observe, or improve significantly the exclusion bounds on, the rare decays B_s ->\mu^+\mu^- and D^0 -> \mu^+\mu^-. These studies will provide very sensitive probes of New Physics effects. High sensitivity to New Physics contributions is also achieved by searching for direct CP violation in B^0 -> K*gamma, performing a time dependent analysis of B_s \to \phi\gamma, and making an angular study of the decay B^0 -> K*\mu^+\mu^-. Here also significant results are expected from the present run. Preparations for these analyses will be presented, and studies shown of how existing data can be used to validate the analysis strategy.

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