

Lepton Flavor Violation in tau and B meson decays.

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Lepton flavor violating decays such as $\tau \rightarrow \mu^+ \mu^- \mu^+$ or $B^- \rightarrow D^+ \mu^- \mu^-$ are sensitive probes of New Physics (NP). The discovery of neutrino oscillations implies that at some level there is lepton flavor violation, and in many well motivated extensions of the SM the effects are expected to be visible in $\tau \rightarrow \mu^+ \mu^- \mu^+$ decays. LHCb is well suited for this analysis due to the large tau production from charm decays and LHCb's excellent invariant mass resolution. Like-sign dimuon final states such as $B^- \rightarrow D^+ \mu^- \mu^-$ can be sensitive to the existence of Majorana neutrinos. The status of these analyses with $\sim 1 \text{ fb}^{-1}$ of pp collisions collected by LHCb in 2011 at $\sqrt{s}=7 \text{ TeV}$ is reviewed.

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