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Enhanced B0_d -> mu+ mu- Decay: What if?

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The very rare B0_d -> mu+ mu- decay may be the last chance for New Physics in flavor sector at the LHC, before the 13 TeV run in 2015. Partially motivated by the known tension in $sin(2beta/phi_1)$, enhancement beyond (3-4) x 10^-10 would likely imply the effect of a fourth generation of quarks. If observed at this level, the 126 GeV boson may not be the actual Higgs boson, while the b -> d quadrangle (modulo m_t') would jump out. The 2011-2012 data is likely not sensitive to values below 3 x 10^-10, and the mode should continue to be pursued with the 13 TeV run. We update to latest data, as well as make projections towards 13 TeV run.

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