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## Enhanced $B_d \rightarrow \mu^+\mu^-$ Decay: What if?

The very rare  $B_d \rightarrow \mu^+\mu^-$  decay may be the last chance for New Physics in flavor sector at the LHC, before the 13 TeV run in late 2014. Partially motivated by the known tension in  $\sin^2\beta/\phi_1$ , enhancement beyond  $(3-4) \times 10^{-10}$  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  $b \rightarrow d$  quadrangle (modulo  $m_t'$ ) would jump out. The 2011-2012 data is likely not sensitive to values below  $3 \times 10^{-10}$ , and the mode should continue to be pursued with the 13 TeV run.

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