

Flavor anomalies in B physics

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In the last few years, several interesting anomalies have been observed in B meson decays. First, some branching fractions and angular distributions in $b \rightarrow s \mu \mu$ seem to disagree with current Standard Model predictions. Second, LHCb has reported a measurement of an observable sensitive to lepton-flavor non-universality which is different from zero at the 2.6 sigma level. This observable is a $b \rightarrow s$ transition and the deviation is consistent with the anomalies in $b \rightarrow s \mu \mu$; thus this is very persuasive. Third, there is another hint of lepton-flavor non-universality in charged $b \rightarrow c$ semileptonic exclusive transitions, which might be related to the one in $b \rightarrow s$. I will review these B-physics anomalies, paying attention to the theoretical uncertainties in the SM predictions, and to the new physics implications.

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