

Thoughts on B-physics Anomalies

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Very recently, LHCb has reported measurements of new lepton-universality-violating (LUV) observables. I will explain the need for a modified, lepton-flavour-specific C_{10} Wilson coefficient to accommodate the data and propose three further LUV ratios which are precise probes of the ratio $C_{10\mu}/C_{10e}$. I then will argue that although the global fit favours, in addition, a sizable BSM effect in C_9 , this can perfectly well be lepton-flavour-universal. I discuss an efficient mechanism for generating it from $b \rightarrow c \bar{c} s$ 4-fermion operators, which in turn contribute in a peculiar pattern to radiative decay and B meson lifetime observables. The scenario is entirely viable and provides model-independent connections, between rare B decays and lifetime observables, and the prospect to observe the same new physics in both.

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