

Combined explanation of the B-anomalies.

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There are four models of tree-level new physics (NP) that can potentially simultaneously explain the $b \rightarrow s\mu^+\mu^-$ and $b \rightarrow c\ell^-\bar{\nu}$ anomalies. They are the S_3 , U_3 , and U_1 leptoquarks, and a triplet of standard-model-like vector bosons (VBs). In this talk, I describe an analysis of these models with general couplings. We find that, even in this most general case, S_3 and U_3 are excluded. For the U_1 model, I discuss the importance of the constraints from lepton-flavor-violating processes. As for the VB model, it is shown to be excluded by the LHC bounds on high-mass resonant dimuon pairs. This conclusion is reached without any assumptions about the NP couplings.

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