

Phenomenology 2019 Symposium



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Minimal $SU(4)$ models and B-meson anomalies

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It has been identified decades ago that the minimal potentially realistic model with the quark-lepton symmetry has the $SU(4) \times SU(2) \times U(1)$ gauge structure and naturally contains both gauge and scalar leptoquarks. The model has been thoroughly studied by several authors.

We will comment on the capability of this model to accommodate the anomalous B-meson decay data. In particular, we will argue that the model allows for describing certain subsets of the anomalous experimental data, unavoidably predicting lepton flavor violating processes which will be testable at Belle II during the next years. On the other hand, the model is unable to simultaneously explain all the current B-anomalies and, thus, will be disproved if all those hints are confirmed as signals of New Physics.

Summary

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