

Phenomenology 2021 Symposium



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The LHC limits on the B-anomalies motivated U_1 leptoquark models.

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The U_1 leptoquark is a suitable candidate to explain the persistent anomalies in the semileptonic decays of the B meson. In this talk, I will discuss how we can use the LHC data to constrain the U_1 models. Since the LHC is sensitive towards the leptoquark couplings, rather than the Wilson coefficients, I will discuss some simple scenarios with different couplings that can contribute to the relevant operators and show that the LHC data either rule out or severely constrain these simple U_1 scenarios. I will also discuss how the limits can be drawn on scenarios with multiple nonzero couplings from the high- P_T dilepton data. I will show how a TeV range U_1 can evade the dilepton limits and the direct search bounds and explain the anomalies.

Summary

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