

Search for Scalar Leptoquark Pair Production Decaying into Top-Quarks and Leptons at $\sqrt{s} = 13$ TeV with ATLAS detector

Wednesday, July 29, 2020 1:33 PM (3 minutes)

This poster presents a search for pair-produced scalar leptoquarks decaying to leptons and hadronic top quarks using 139 fb⁻¹ of data recorded by the ATLAS detector at $\sqrt{s} = 13$ TeV. As well as being predicted by various extensions of the Standard Model to describe the similarity between the quark and lepton sectors, leptoquarks provide a promising explanation for anomalies observed in both the lepton universality tests in B decays and muon anomalous magnetic moment measurement. Searches for pair-produced scalar leptoquarks decaying to electron-top or muon-top pairs have been performed in final states with exactly two leptons. A parameterized gradient boosted decision trees approach is used to suppress the standard model background. Improved exclusion limits are set on the leptoquark masses are set at 95% confidence level.

I read the instructions

Secondary track (number)

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Session Classification: Beyond the Standard Model - Posters

Track Classification: 03. Beyond the Standard Model