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Search for t-channel leptoquark production in the high mass dimuon and dielectron spectra

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A search for Drell Yan production of leptoquarks is performed using proton-proton collision data collected at $\sqrt{s} = 13$ TeV using the full Run-2 dataset with the CMS detector at the LHC, CERN. The data corresponds to an integrated luminosity of approximately 137 fb^{-1} . The search spans scalar and vector leptoquarks that couple up and down quarks to electrons and muons. Dielectron and dimuon final states are considered, with dilepton invariant masses above 500 GeV. Since the Drell-Yan production of leptoquarks is non-resonant, we fit the dilepton angular distribution to templates built from reweighted Monte Carlo samples. This allows us to probe higher leptoquark masses than previous searches. 95% Exclusion limits on leptoquark Yukawa couplings are presented for leptoquark masses up to 5 TeV.

Mini Symposia (Invited Talks Only)

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