Abstract Submitted
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Search for physics beyond the standard model in final states involving a leptonically decaying Z boson, jets and missing transverse momentum with the CMS detector BALAJI VENKAT SATHIA NARAYANAN[1], University of California, San Diego, COMPACT MUON SOLENOID COLLABORATION[2] — A search for phenomena beyond the standard model (BSM) is presented with final states containing an on-shell Z boson decaying to two opposite sign same flavor leptons, jets, and missing transverse momentum. The search uses a data sample of proton-proton collisions at $\sqrt{s} = 13$ TeV collected over a period of three years (2016-18) with the CMS detector corresponding to an integrated luminosity of 137 fb^{-1}. A potential BSM signature that manifests as an excess of events with a lepton pair whose invariant mass is consistent with the Z boson mass is explored. The observed event yields are consistent with backgrounds expected from the standard model. The results are used to constrain BSM physics models involving pair production of gluinos, or charginos and neutralinos.

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