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SUSY searches with two opposite-sign same-flavor leptons at CMS

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A search is presented for physics beyond the standard model in final states with two opposite-sign same-flavor leptons, jets, and missing transverse momentum. The data sample corresponds to an integrated luminosity of 2.2 inverse fb of proton-proton collisions at sqrt{s}=13 TeV collected with the CMS detector at the CERN LHC in 2015. The analysis focuses on the invariant mass distribution of the lepton pair, searching for a kinematic edge or a resonant-like excess compatible with the Z boson mass. The kinematic edge search includes phase-space regions matching the previous 8 TeV analysis where CMS reported a 2.6 sigma excess. The resonant Z boson peak search includes a region where ATLAS reported a 3.0 sigma excess at 8 TeV. Additional event categories are included in both searches beyond those in the 8 TeV analysis to increase sensitivity to new physics. The observations in all signal regions are consistent with the expectations from the standard model, and the results are interpreted in the context of simplified models of supersymmetry.

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