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Searches for strong production of SUSY particles with two opposite-sign same-flavor leptons at CMS

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A search is presented for physics beyond the standard model in events with two opposite-sign, same-flavor leptons, jets and missing transverse momentum in the final state. The search is performed in a dataset of 35.9 fb $^{-1}$ of $\sqrt{s}=13$ TeV pp collisions recorded by the CMS experiment along the year 2016. The search targets models in which a colored particle is produced. Models are considered, in which a kinematic edge is observed in the dilepton invariant mass and models in which a Z boson arises in the decay chain of the SUSY particles. Such searches have been performed in 8 TeV pp collisions as well as 13 TeV collisions. This version of the search adds additional event categories as well as improved background estimation procedures substantially increasing the sensitivity of the search. The results are interpreted in the context of simplified models of SUSY.

Summary

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