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Search for supersymmetry in events with one lepton, jets and missing transverse momentum in pp collisions at 13 TeV with CMS (15' + 5')

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Results are reported from a search for supersymmetric particles in pp collisions in the final state with a single, high pT lepton; multiple jets, including at least one btagged jet; and large missing transverse momentum. The data sample corresponds to 2.1 fb-1 recorded by the CMS experiment at ps = 13 TeV. The search focuses on processes leading to high jet multiplicities, such as gluino pair production with the gluino decaying to top quarks. The quantity MJ, defined as the sum of the masses of the large-radius jets in the event, is used in conjunction with other kinematic variables to provide discrimination between signal and backgrounds and as a key part of the background estimation method. Competitive exclusion limits are obtained.

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