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Search for supersymmetry in the multijet and missing transverse momentum channel in pp collisions at 13 TeV: Search strategy JOHN BRADMILLER-FELD, Univ of California, Santa Barbara, CMS COLLABORATION — A search is presented for physics beyond the standard model at the CERN Large Hadron Collider (LHC) in events with large missing transverse energy (MHT), at least four jets, and zero electrons or muons. The multijet plus MHT final state arises in a variety of models of supersymmetry (SUSY), including those involving pair production of gluinos. Standard model (SM) backgrounds for this signature include W bosons decaying to a neutrino and charged lepton that is not identified, as well as multijet events with mis-measured jet momenta. The search is designed to extend the 8 TeV Run I limits on gluino masses with a small amount of 13 TeV data, and is performed on a sample of 2.3 fb⁻¹ collected with the CMS detector at the LHC in 2015. This talk focuses on the search strategy, including the trigger and event selection. An overview of the methods used to estimate the SM backgrounds is also presented. The results are interpreted in the context of simplified SUSY models of gluino pair production.

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