Estimation of $ttZ$, QCD and rare SM processes for Top Squark Search in All Hadronic Final States

ANNA MERRITT, Univ of Illinois - Chicago, CMS COLLABORATION — A search for hadronically-decaying top squarks is presented, based on an integrated luminosity of 137 fb of proton-proton collision data recorded by the CMS experiment with a center-of-mass energy of 13 TeV. Search regions are defined in terms of the multiplicity of bottom quark jets, top quark and W boson candidates, missing transverse momentum, and the scalar sum of jet transverse momenta. Three backgrounds of the analysis will be discussed here: the QCD, irreducible $TTZ$, and rare backgrounds. The results include limits for both direct and gluino-mediated top squark production.