

Abstract Submitted
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Search for gluino-mediated stop pair production in events with b-jets and large missing transverse momentum EGOR ANTIPOV, Oklahoma State University — A search for supersymmetry involving the pair production of gluinos decaying via stop quarks into the lightest neutralino $\tilde{\chi}_1^0$ is reported. It uses LHC proton-proton collision data at the center-of-mass energy $\sqrt{s} = 13\text{TeV}$ with an integrated luminosity of 139fb^{-1} collected with the ATLAS detector in 2015-2018. The search is performed in events containing large missing transverse momentum and several energetic jets, at least three of which must be identified as originating from b-quarks. The analysis is done in two final states, one of which is required to have at least 1 lepton, and the second one is required the veto on leptons. Expected exclusion limit for gluino and neutralino masses is evaluated using simplified signal model. It is found to be 800GeV and below for neutralino masses with gluino masses of less than 2275GeV at the 95% confidence level.

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