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Search for direct top squark pair production in final states with one isolated lepton, jets, and missing transverse momentum in sqrt(s) = 8 TeV pp collisions using 21 fb-1 of ATLAS data

The poster presents latest results of the search for top squark pair production in final states with one isolated lepton, jets, and missing transverse momentum in sqrt{s}=8 TeV pp collisions using L=21 fb-1 of ATLAS data. Two top squark decay scenarios are considered: (a) to a top quark and a long-lived undetected neutral particle (LSP), (b) to a bottom quark and a chargino, where the chargino decays via an on- or off-shell W boson to the LSP. The analysis also employs a new dedicated shape-fit method to target the challenging parameter region where m(stop) is close to the kinematic boundary m(top) + m(LSP).

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