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Searches for electroweak production of supersymmetric gauginos and sleptons and R-parity violating and long-lived signatures with the ATLAS detector

Many supersymmetry models feature gauginos and sleptons with masses less than a few hundred GeV. These can give rise to direct pair production rates at the LHC that can be observed in the data sample recorded by the ATLAS detector. R-parity violation introduces many viable signatures to the search for supersymmetry at the LHC. Supersymmetric particles may decay into many leptons or jets with or without missing transverse momentum. Several supersymmetric models also predict massive long-lived supersymmetric particles. The talk presents recent ATLAS results from searches for supersymmetry, including searches for directly produced gauginos and sleptons, as well as searches for SUSY models featuring long-lived particles and R-parity violation. The searches have been performed with pp collisions at a centre-of-mass energy of 13 TeV.

Collaboration name

ATLAS

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