

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

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**Abstract:** Many supersymmetry models feature gauginos and also 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 electroweak and strong production of supersymmetric particles performed with pp collisions at a centre-of-mass energy of 13 TeV. The searches consider both R-Parity conserving and R-Parity violating SUSY scenarios, and involve final states including leptons, jets, missing transverse momentum, as well as long-lived particle signatures.

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