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Search for electroweak production of supersymmetric particles in the two and three lepton final state at $\sqrt{s} = 13$ TeV with the ATLAS detector

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Supersymmetry gives a solution to naturalness as well as a candidate for dark matter by predicting a new bosonic (fermionic) partner for each Standard Model fermion (boson). Searches for electroweak production of supersymmetric particles decaying via sleptons and gauge bosons, W and Z , to final states with two or three leptons and missing transverse momentum were performed with the ATLAS detector. The search uses proton-proton collisions at $\sqrt{s} = 13$ TeV recorded with the ATLAS detector at the LHC during 2015 and 2016 corresponding to $36 fb^{-1}$. No significant excesses over the Standard Model were observed so exclusion limits are set on masses of the gauginos, the supersymmetric partners of W^{\pm} , Z^0 , and h , in simplified models.

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