

# Search for electroweak production of charginos and sleptons decaying to final states with two leptons and missing transverse momentum at Run II with the ATLAS detector

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SUPerSYmmetry (SUSY) is one of the most promising extensions of the Standard Model. Recent results from a search for the electroweak production of charginos and sleptons decaying into final states with two leptons (electrons and/or muons) are presented. They have been obtained on  $139 \text{ fb}^{-1}$  proton-proton collisions recorded by the ATLAS detector at the Large Hadron Collider at  $\sqrt{s} = 13 \text{ TeV}$ . Three scenarios, based on simplified models, are considered: the production of lightest chargino pairs, followed by their decays into final states with leptons and the lightest neutralino via either sleptons or W bosons; direct production of slepton pairs, where each slepton decays directly into the lightest neutralino and a lepton. No significant deviations from the Standard Model expectations are observed and stringent limits at 95% confidence level are set on the masses of relevant supersymmetric particles in each of these scenarios.

**Primary author:** GRAVILI, Francesco Giuseppe (LE)

**Presenter:** GRAVILI, Francesco Giuseppe (LE)

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