
Contribution ID: **245** Type: **Poster**

# Search for the strong pair production of squarks and gluinos in events with an isolated lepton, jets and missing transverse momentum at $\sqrt{s}$ = 13 TeV with the ATLAS detector

*Monday 15 July 2019 18:30 (1h 30m)*

This poster presents the search for the strong pair production of squarks and gluinos in events with one isolated lepton, jets and missing transverse momentum in the final state. In this analysis, strongly interacting supersymmetric particles are assumed to decay into charginos $\tilde{\chi}^{\pm}1$ and light quarks, and each chargino subsequently decays into a W boson and the lightest neutralino $\tilde{\chi}01$. The analyzed ATLAS data from 2015 to 2018 corresponds to a total integrated luminosity of 139 fb−1 of proton-proton collisions at $\sqrt{s}$ = 13 TeV. The general description of the targeted signal models, expected background processes and an overview of the analysis strategy is shown. In the context of this model, a statistical interpretation of the observed data is provided and the exclusion limits on the squarks/gluinos, chargino and lightest neutralino masses are illustrated in two benchmark scenarios.

**Author:** JUSTE ROZAS, Aurelio (ICREA and IFAE (ES))

**Presenter:** GEANTA, Andrei Alexandru (IFIN-HH (RO))

**Session Classification:** Wine & Cheese Poster Session

**Track Classification:** Searches for New Physics