

DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 41

Type: **Parallel talk**

Search for pair production of squarks or gluinos decaying to sleptons or W/Z bosons with two same-sign or three leptons final states using 139 fb⁻¹ ATLAS data

Thursday 30 March 2023 14:40 (20 minutes)

A new search for supersymmetry targeting pair production of squarks or gluinos decaying to sleptons or W, Z with final states with either two leptons (electrons or muons) with the same electric charge or at least three leptons is presented. The analysis uses 139 fb⁻¹ of pp collision data at 13 TeV collected with the ATLAS detector during Run 2 of the Large Hadron Collider, and simplified models with and without R-parity conservation are considered. The data-driven and Monte Carlo based methods used to estimate the Standard Model and detector backgrounds are discussed. Finally, the results in the defined signal regions, and the exclusion limits, are presented illustrating the significant improvement over the previous exclusion limits.

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

No

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Session Classification: WG3

Track Classification: WG3: Electroweak Physics and Beyond the Standard Model