A search for Supersymmetric Particles in events with two leptons and Etmiss with the ATLAS experiment at the LHC

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Introduction

The discovery of the Higgs boson is a very significant outcome for the discovery and assessment of Supersymmetry models. But the story far from being finished!

The 2010 ATLAS pp data

The number of observed and expected events for each SS channel in the MET > 100 GeV signal region at 14.1 pb⁻¹ is shown.

Supersymmetry signature

- The number of observed events in the signal region and each control region are the number of observed events in the signal region and each control region.

Flavour subtraction (OS)

- The number of expected events in the signal region and each control region are the number of expected events in the signal region and each control region.

Selections and signal region

The three dileptons and jets share common properties, a common set of event selection criteria and with appropriate cuts they have common background contributions.

Primary vertices

- A test of good events with MC

Background: calculated from data and simulation

- Calculated from data and simulation

OS results

- The number of observed and expected events for each SS channel in the MET > 100 GeV signal region at 14.1 pb⁻¹ is shown.

Conclusions

- The number of observed and expected events for each SS channel in the MET > 100 GeV signal region at 14.1 pb⁻¹ is shown.

References