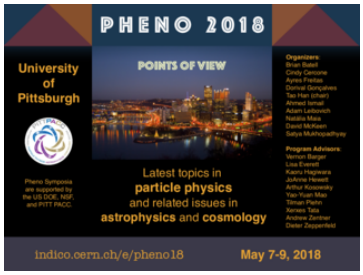

Contribution ID: **594** Type: **parallel talk**

Searches for electroweak production of supersymmetric gauginos and sleptons with the ATLAS detector

Monday 7 May 2018 16:30 (15 minutes)

Supersymmetry is one of the most motivated Standard Model extensions. Despite the meticulous search during the LHC Run I, there is no evidence supporting this theory. Starting from 2015, LHC is performing a second data taking run with a higher center of mass energy (13 TeV), providing a great occasion for the search of beyond the Standard Model physics.
An important sector is the direct production of supersymmetric electroweak particles, such as sleptons and charginos. Electroweak production cross section is lower compared to strong production, but searches performed by the ATLAS and CMS experiments during LHC Run 2 excluded squark and gluinos with masses up to 2 TeV, making electroweak production an increasingly promising probe for SUSY signals at the LHC.
Results obtained with the 2015-2016 ATLAS detector data will be presented. Direct production of electroweak particles like sleptons, charginos and neutralinos, with different signatures, will be considered. A good sensitivity is obtained in the signal regions and Run 1 results are largely improved.

Summary

Author: CARRA, Sonia (Università degli Studi e INFN Milano (IT))

Presenter: CARRA, Sonia (Università degli Studi e INFN Milano (IT))

Session Classification: SUSY II