



Contribution ID: 48

Type: **Parallel Session Talk**

Search for supersymmetry in final states with photons and missing transverse momentum in pp collisions at 13 TeV using the CMS detector

Wednesday 10 April 2019 11:10 (25 minutes)

Supersymmetry (SUSY) is a theoretical favored extension of the standard model (SM) since it provides explanations for several issues. Models with general gauge mediation (GGM), have the additional benefit of naturally suppressing flavor violations in the SUSY sector. Many of those models predict the production of events with photons and significant missing transverse momentum. The results of a search for new physics in final states with photons and missing transverse momentum are reported. The data sample corresponds to an integrated luminosity of 35.9 fb^{-1} collected at a center-of-mass energy of 13 TeV using the CMS detector at the CERN LHC. The analysis exploits data-driven techniques for the estimation of different backgrounds and the results are used to set cross section limits on gluino and squark pair production in the GGM model framework. This analysis gives a substantial improvement in sensitivity compared to the search performed by the CMS collaboration on the smaller 2015 dataset.

Author: CMS COLLABORATION

Presenter: MAJOR, Peter (Eotvos Lorand University (HU))

Session Classification: WG3: Higgs and BSM Physics in Hadron Collisions

Track Classification: WG3: Higgs and BSM Physics in Hadron Collisions