



Contribution ID: 66

Type: **not specified**

Searches for NMSSM Signatures with low Missing Transverse Energy at the CMS detector at the LHC

Tuesday 9 April 2019 12:00 (15 minutes)

We examine scenarios in the Next-to-Minimal Supersymmetric Standard Model (NMSSM) whereby two Standard Model-like Higgs bosons are produced via squark and gluino decay cascades along with two light, low-momentum neutrino Lightest Supersymmetric Particles (LSPs), resulting in very little Missing Transverse Energy (MET). Firstly, by recasting a general-purpose Jets+MET α_T -based analysis we demonstrate how the sensitivity of current SUSY search efforts decreases in certain regions of parameter space within these scenarios. Finally we develop a novel search technique utilising machine learning-driven double-b-tagging variables for the case where each Higgs boson decays to a boosted bb pair.

Presenter: TITTERTON, Alexander (University of Bristol (GB))

Session Classification: Parallel stream 3