



Contribution ID: 267

Type: Oral Presentation

Search for new physics using four charged leptons at the LHC

Wednesday, 5 July 2017 14:20 (20 minutes)

The production of four isolated charged leptons (electrons or muons) constitute a clean signature in proton-proton collisions provided by the Large Hadron Collider. A heavy scalar, H , with a mass around 270 GeV is considered as a scenario for the anomalous production of four leptons. The heavy scalar can decay directly into four leptons via the decay into two Z bosons. Another option is the decay of H into the Higgs boson and an intermediate scalar, S . The latter is assumed to have a relatively large branching fraction into leptons. The phenomenology and the status of the blinded data analysis will be summarized.

Apply to be considered for a student award (Yes / No)?

Yes

Level for award (Hons, MSc, PhD, N/A)?

MSc

Main supervisor (name and email) and his / her institution

Prof. Bruce Mellado Garcia-School of Physics-Wits university

Would you like to submit a short paper for the Conference Proceedings (Yes / No)?

Yes

Primary author: Mr RAJAOFERASON, Mampionona Ralaimiaramanana (Wits University)

Presenter: Mr RAJAOFERASON, Mampionona Ralaimiaramanana (Wits University)

Session Classification: Nuclear, Particle and Radiation Physics 2

Track Classification: Track B - Nuclear, Particle and Radiation Physics