



Contribution ID: 240

Type: Oral Presentation

Search for boosted heavy neutrino with the ATLAS detector at the LHC

Wednesday, 5 July 2017 11:10 (20 minutes)

The search for the discovery potential at the LHC of a high-mass right handed (RH) gauge boson W_R which decays to a heavy neutrino and a lepton. The neutrinos that are produced are highly boosted and subsequently decay via off-shell W_R boson to jets and a lepton ($N \rightarrow ljj$). The decay products are highly collimated, forming a single neutrino jet. The focus is on the regime where the W_R is very heavy compared to the heavy Majorana neutrino N . In ATLAS, a large radius jet with an electron inside has never been looked at. The performance study will be shown

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

Dr Deepak Kar deepak.kar@cern.ch University of the Witwatersrand

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

yes

Primary author: Mr MOLUPE, Tshidiso (University of the Witwatersrand)

Co-authors: Dr ROY, Debarati (University of the Witwatersrand); Dr KAR, Deepak (University of Witwatersrand)

Presenter: Mr MOLUPE, Tshidiso (University of the Witwatersrand)

Session Classification: Nuclear, Particle and Radiation Physics 2

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