## 63<sup>rd</sup> ANNUAL CONFERENCE OF THE SA INSTITUTE OF PHYSICS



Contribution ID: 113 Type: Oral Presentation

## The compatibility of the LHC data with new bosons

Friday, 29 June 2018 12:20 (20 minutes)

With the discovery of a Higgs boson at the Large Hadron Collider (LHC) new window of exploration of fundamental interactions is now available. The study of the couplings of this Higgs boson to other particles and the search for new bosons have become a focus. Based on features of the data collected by experiments at the LHC during Run 1 the hypothesis of a new boson was formulated and the compatibility with the data was estimated. In this hypothesis the new boson would have a mass around 270 GeV and would decay in to the Higgs boson and another scalar, referred to as S, among other decays. This results in a number of predictions that will be summarized. The compatibility of the hypothesis with new data reported by the experiments will also be discussed.

Please confirm that you<br/>br>have carefully read the<br/>dr>abstract submission instructions<br/>br>under the menu item<br/>br>"Call for Abstracts"<br/>br><b/(Yes / No)</b>

Yes

Consideration for < br>student awards < br> < b> Choose one option < br> from those below. < /b> < br> N/A < br> Hons < br> MSc < br> PhD

N/A

Supervisor details<br/>
br><br/>
br> If not a student, type N/A.</b><br/>
br> Student abstract submision<br/>
br> requires supervisor permission:<br/>
br> please give their name,<br/>
institution and email address.

N/A

Primary author: Prof. MELLADO, Bruce (University of the Witwatersrand)

**Presenter:** Prof. MELLADO, Bruce (University of the Witwatersrand) **Session Classification:** Nuclear, Particle and Radiation Physics

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