Contribution ID: **27**

Type: **not specified**

Overview of the vector-like quark searches with LHC data collected by the ATLAS detector

For several decades the Standard Model of particle physics has been the best description of the elementary particles and their interactions but it wasn't until the Higgs boson discovery in 2012 that the missing piece of the Standard Model puzzle was found. Nonetheless some questions remain unanswered. One of them is the hierarchy problem and several nonsupersymmetric theories trying to solve it share the existence vectorlike quarks, new heavy quarks with the same transformation rules for the left and right chirality under the SU(2) group of the Standard Model. Since they are a common feature in different BSM models they are a natural target to be considered. In this poster the different ATLAS searches for vector-like quarks using protonproton collision in the LHC collider will be reviewed. The different analysis strategies and the interpretation of the obtained results will be discussed.

Summary

Author: ARAQUE ESPINOSA, Juan Pedro (LIP)

Presenter: ARAQUE ESPINOSA, Juan Pedro (LIP)

Session Classification: Poster Session & Finger-Food Dinner

Track Classification: Poster Session