



Contribution ID: 182

Type: **Experiment**

Search for pair-produced Vector-Like Quarks with the ATLAS detector

The high energy frontier opened by the LHC is allowing us to explore physics scenarios where new physics might lay. The need to go beyond the Standard Model (SM) comes from various unanswered questions, like where does the matter-antimatter asymmetry comes from? What is the nature of Dark Matter? How can the hierarchy problem be solved?

The recent discovery of an Higgs-like boson tends to disfavour the existence of a heavy 4th generation of quarks which would change the Higgs SM cross section and branching ratio in a way it is not experimentally observed. At the same time, vector-like quarks become a more compelling possibility due to their important role stabilizing the Higgs boson mass against radiative corrections. The purpose of this poster is to review the latest results in the searches for pair production of vector-like quarks at the ATLAS experiment.

Primary author: SUCCURRO, Antonella (Universitat Autònoma de Barcelona (ES))

Presenter: SUCCURRO, Antonella (Universitat Autònoma de Barcelona (ES))

Track Classification: Poster