Contribution ID: **19**   Type: **not specified**

Dark Matter Searches at the LHC

Thursday 24 June 2021 10:30 (10 minutes)

A recent paper has interpreted the GW190521 signal, detected with the LIGO and Virgo detectors, as being a merger of two Proca stars composed of a vector boson with a mass of the order 10ˆ-13 eV. This particle can be considered as a dark matter candidate. The Higgs Characterization model can be used to produce a similar particle, and consequently simulate its detection at the LHC.

In this talk, I will first briefly introduce the history and known properties of dark matter, then explain how a particle physics model can be made to include dark matter particles and how these would be detected at the LHC. Finally, I will outline how I will be simulating these detections in my master's thesis project.

Primary author: MARTINS, Joao

Presenter: MARTINS, Joao