

Phenomenology 2023 Symposium



Contribution ID: 161

Type: not specified

Search for long-lived particles decaying to trackless jets with advanced machine learning techniques at CMS

Tuesday 9 May 2023 17:30 (15 minutes)

Novel techniques, using trackless and delayed jet information combined in a deep neural network discriminator, can be employed to identify decays of long-lived particles. In this talk we present how such techniques could be exploited to search for long-lived particles decaying in the outer regions of the CMS silicon tracker or in the calorimeters. The results, obtained using the full Run-II dataset collected at the LHC, are interpreted in a simplified model of chargino-neutralino production, where the neutralino is the next-to-lightest supersymmetric particle, is long-lived, and decays to a gravitino and either a Higgs or Z boson.

Author: BENATO, Lisa (Hamburg University (DE))

Presenter: BENATO, Lisa (Hamburg University (DE))

Session Classification: BSM X

Track Classification: BSM