



Contribution ID: 24

Type: Poster

Search for dark-photons decaying to lepton-jets with the ATLAS detector at LHC

Several new physics models predict the existence of neutral particles with macroscopic life-times that decay to pairs of leptons and light hadrons with a jet-like structure (lepton-jets). These particles, decaying outside of the interaction region, will give rise to striking signatures in the detectors at the LHC. These can be detected through numerous unconventional signatures: long time-of-flight, late calorimetric energy deposits or displaced vertices. The most recent ATLAS results using data collected in proton-proton collisions at $\sqrt{s}=13\text{TeV}$ are presented. Prospects for the search for these particles with the ATLAS detector upgrade at HL-LHC are also given.

Primary author: ATLAS , Collaboration (CERN)

Presenters: ATLAS , Collaboration (CERN); SEBASTIANI, Cristiano (INFN Roma and Sapienza Universita' di Roma (IT))

Session Classification: Poster session

Track Classification: Exotics