



Contribution ID: 40

Type: Talk

Dark photons from hadronic showers (8'+2')

Friday, June 5, 2020 3:00 PM (10 minutes)

Neutral mesons decay is often considered the dominant production mechanism for light dark photons in proton-proton and proton-nucleus collision. However, the produced hadronic showers also transfer a relevant amount of their energies into electromagnetic subshowers. We show that in certain cases, the positrons created in these sub-showers can lead to dark photon production rates significantly larger than the meson decay ones. We present the main characteristics of this production mode and update correspondingly standard limits on vector-mediator scenarios for light dark matter.

Primary authors: DARMÉ, Luc Jean Marie (INFN - National Institute for Nuclear Physics); NARDI, Enrico; CELENTANO, Andrea (INFN-Genova); Dr MARSICANO, Luca (INFN)

Presenter: DARMÉ, Luc Jean Marie (INFN - National Institute for Nuclear Physics)

Session Classification: Friday