



Contribution ID: 166

Type: Talk

A closer look at secondary antiproton production in cosmic rays and its impact on dark matter indirect searches

Tuesday, 3 September 2019 15:10 (10 minutes)

In recent years, several investigations have pointed towards an excess in the cosmic-ray antiproton data reported by the AMS-02 Collaboration. The interpretation of this result, which could potentially represent a dark matter signal, requires a thorough understanding of the systematic uncertainties associated with it. In this talk I will focus on one of these uncertainties, the one arising from our limited knowledge of the cross section describing the production of secondary antiprotons. In particular, I will illustrate how the modelling of this cross section at very low center-of-mass energies can play an important role in the fit to experimental data, with important consequences on the search for dark matter hints in the antiproton spectrum.

Primary author: VITTINO, Andrea (RWTH Aachen University)

Co-author: IBARRA, Alejandro

Presenter: VITTINO, Andrea (RWTH Aachen University)

Session Classification: Parallel Sessions: Dark Matter and Astroparticle (C.A.R.L., H08)

Track Classification: Dark Matter and Astroparticle Physics