

## **Measurement of antiproton production in p-He collisions at LHCb to constrain the secondary cosmic antiproton flux**

*Sunday 7 May 2017 16:30 (30 minutes)*

The flux of cosmic ray antiproton is a powerful tool for indirect detection of dark matter. The sensitivity is limited by the uncertainty on the predicted antiproton flux from scattering of primary protons on the interstellar medium. This is in turn limited by the knowledge of antiproton production cross sections, notably in p-He scattering. Thanks to its internal gas target SMOG, LHCb performed the first measurement of antiproton production from collisions of LHC proton beams on He nuclei at rest. Results and prospects are presented.

**Primary author:** GRAZIANI, Giacomo (INFN, Sezione di Firenze, Italy)

**Presenter:** GRAZIANI, Giacomo (INFN, Sezione di Firenze, Italy)

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