

## Measurement of the antinuclei inelastic cross sections with ALICE and implications for indirect Dark Matter searches

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The measurement of the flux of low-energy cosmic antinuclei may reveal the existence of exotic processes such as dark matter annihilation, since the production rate of these ions through ordinary collisions between cosmic rays and the interstellar matter is very low. However, the lack of experimental data at low energies, where both the antinuclei production and inelastic cross sections are poorly known, prevents precise predictions of antinuclei fluxes near Earth.

In ultra-relativistic pp, p-Pb and Pb-Pb collisions at the CERN LHC, matter and antimatter are produced in almost equal abundances at midrapidity. This allows the study of the production cross sections of (anti)nuclei with high precision as well as the measurement of the absorption process of (anti)nuclei in the detector materials.

In this talk, the first results on the absorption cross sections of antideuteron and  $(\text{anti-})^3\text{He}$  in the ALICE detector materials are presented and the implications of these results for indirect Dark Matter searches near Earth are discussed.

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