

Contribution submission to the conference SMuK 2021

Measurement of light (anti-)nuclei production in pp collisions at $\sqrt{s} = 13$ TeV with ALICE — ●LUCA BARIOGLIO¹ and MICHAEL HABIB^{2,3} for the ALICE-Collaboration — ¹Physik Department, Technische Universität München, James-Franck-Straße 1, 85748 Garching bei München, München — ²GSI Helmholtzzentrum für Schwerionenforschung, Planckstr. 1, 64291 Darmstadt — ³Institut für Kernphysik, Technische Universität Darmstadt, Schlossgartenstr. 9, 64289 Darmstadt

Understanding the production mechanism of light (anti-)nuclei is one of the key challenges of contemporary nuclear physics. It has important consequences for astrophysics since it provides input for indirect dark matter searches with space-bound experiments. In this talk, the latest results on light (anti-)nuclei production obtained with ALICE in pp collisions at $\sqrt{s} = 13$ will be presented and compared to coalescence and thermal model predictions. In particular, the measured coalescence parameters for deuterons and helium nuclei will be compared with parameter-free theoretical predictions. The latter are constrained by femtoscopic source radius measurements and they depend directly on the nuclear wave functions.

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Topic: Schwerionenkollisionen und QCD Phasen
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