

Latest results on light (anti-)nuclei production in Pb-Pb collisions with ALICE at the LHC

Thursday, 30 July 2020 11:00 (24 minutes)

New results on the production of light nuclei, including deuterons, tritons, ^3He , ^4He and the corresponding anti-nuclei in Pb-Pb collisions at $\sqrt{s_{\text{NN}}} = 2.76$ TeV and $\sqrt{s_{\text{NN}}} = 5.02$ TeV will be presented and compared with theoretical predictions to provide insight into their production mechanisms in heavy-ion collisions.

Furthermore, new measurements of the elliptic and the triangular flow of deuteron and ^3He produced in Pb-Pb collisions at $\sqrt{s_{\text{NN}}} = 5.02$ TeV will be presented and compared to lower energy results and to the expectations from coalescence and hydrodynamic models. The measurement of the elliptic and triangular flow of light nuclei provides a powerful tool to give insight into their production mechanism and freeze-out properties at a late stage of the collision evolution.

Finally, the large variety of measurements performed with the ALICE apparatus at different energies allows us to constrain the models of the production mechanisms of light flavour baryon clusters, in particular those based on the coalescence and statistical hadronisation approaches.

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Secondary track (number)

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