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PRODUCTION OF ANTINUCLEI IN pp COLLISIONS AT $\sqrt{s} = 7$ TeV WITH ALICE AT LHC

Content :

The first results of ALICE on the production of nuclei and antinuclei in pp collisions at $\sqrt{s} = 7$ TeV will be presented. These particles are identified using the energy loss (dE/dx) measurements from the Time Projection Chamber. The Inner Tracking System allows a precise determination of the event vertex, by which primary and secondary particles can be well separated. The high statistics of over 500 M events give a significant number of light nuclei and antinuclei such as (anti)deuterons, (anti)tritons, (anti)He3 and possibly (anti)hypertritons.

The study of nuclei and antinuclei will help to understand their production mechanisms. Antinuclei production as a function of particle multiplicity in an event will be discussed in this respect. Various particle ratios obtained from these collisions and their comparison with different model predictions such as the statistical model and the coalescence model will also be presented.

Collaboration :

ALICE Collaboration

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