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Baryon number transport at LHC energies with the ALICE experiment (15'+5')

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The Large Hadron Collider (LHC) provided the first p+p collisions in the period of November-December 2009. Since then, a large data sample has been recorded by all LHC experiments.

This event sample allows us to study more and more exotic particles and events. The ALICE (A Large Ion Collider Experiment) experiment, though designed primarily to study heavy ion collisions, has a rich proton-proton physics program. The characteristic features of ALICE are its very low-momentum cut-off, the low material budget and the excellent PID and vertexing capabilities. In this presentation, we discuss the results from the analysis of p+p collisions at the different LHC energies $\sqrt{s} = 900\text{GeV}$, 7TeV and 2.76TeV . We concentrate on the baryon transport studies which are of great importance since they allow to determine the carrier of the baryon number (BN). In particular, the multiplicity, rapidity and transverse momentum dependence of the $p(\bar{p})/p$, $\Lambda^0(\bar{\Lambda}^0)$, Ξ^+/Ξ^- and Ω^+/Ω^- ratios will be shown. The results will be compared with different theoretical predictions. Finally, the energy dependence of the mid-rapidity ratios will be presented.

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