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Λ_c^+ cross section in pp and p-Pb collisions down to $p_T = 0$ at $\sqrt{s_{NN}} = 5.02$ TeV measured with ALICE

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The production cross sections of open heavy-flavour hadrons are typically described within the factorisation approach as the convolution of the parton distribution functions of the incoming protons, the perturbative QCD partonic cross section, and the fragmentation functions. These last are typically parametrised from measurements in e^+e^- collisions. Measurements of charm-baryon production are crucial to study the charm quark hadronisation in pp and p-Pb collisions and its difference with respect to e^+e^- collisions. Furthermore, measurements of charm-baryon production in p-Pb collisions provide important information about Cold Nuclear Matter (CNM) effects quantified in the nuclear modification factor R_{pPb} . Measurements in p-Pb collisions also help us to understand how the possible presence of collective effects could modify the production of heavy-flavour hadrons and to find similarities among pp, p-Pb and Pb-Pb systems.

In this poster, the latest measurements of Λ_c^+ performed with the ALICE detector at midrapidity in pp, and the new measurement performed down to $p_T = 0$ in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV are presented. This allows us to show the first ALICE measurement of Λ_c^+/D^0 and $\Lambda_c^+ R_{pPb}$ down to $p_T = 0$ in p-Pb collisions. The Λ_c^+/D^0 ratio at midrapidity in small systems is significantly higher than the one in e^+e^- collisions, suggesting that the fragmentation of charm is not universal across different collision systems. Results are compared with theoretical calculations.

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