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$\Xi_c^{0,+}$ in pp collisions at $\sqrt{s} = 5.36$ TeV with the ALICE Experiment

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Recent measurements of the charm baryon-to-meson ratios in pp collisions show an enhancement with respect to the measurement in e^+e^- collisions indicating that coalescence could be a charm-quark hadronization mechanism at play in pp collisions in addition to charm-quark fragmentation. We further investigate charm-quark hadronization by studying the production of $\Xi_c^0 \to \Xi^-\pi^+$ and $\Xi_c^+ \to \Xi^-\pi^+\pi^+$ baryons with data from LHC Run 3, the largest dataset ever recorded by the ALICE experiment. The selection of the signal of interest out of the large combinatorial background is performed with machine learning techniques. In this poster, the status of the charm-baryon production measurement in pp collisions at $\sqrt{s} = 5.36$ TeV will be discussed, with a focus on the performance of the machine learning models used for the selection of the Ξ_c^0 and Ξ_c^+ baryons.

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