

Two-particle correlations in pp, p-Pb and Pb-Pb collisions measured in ALICE

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Two-particle correlation studies in high-multiplicity pp and p-Pb collisions at LHC energies have revealed unexpected structures. A symmetric double-ridge correlation pattern was found in p-Pb collisions at $\sqrt{s_{NN}}=5.02$ TeV that extends to large differences in pseudorapidity. This observation can be attributed to collective behavior in the initial and final state of the collision using saturation and hydrodynamic models.

To further investigate these effects, two-particle azimuthal correlations have been studied for inclusive and identified charged particles in pp collisions at $\sqrt{s}=7$ TeV and p-Pb collisions at $\sqrt{s_{NN}}=5.02$ TeV. The results are compared to those from Pb-Pb collisions.

Saturation effects in p-Pb are expected to be enhanced in the low-x regime of the nucleus that can be probed at forward rapidities. Potential future measurements in this kinematic region are discussed.

Keywords

forward-central, correlations, p-Pb, LHC, ALICE, low-x, saturation

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