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Dijet invariant mass in pp and p–Pb collisions at $\sqrt{s_{\rm NN}}=5.02$ TeV with ALICE

In this poster, the first ALICE measurements of dijet invariant mass spectra of charged-particle jets are presented for pp and p–Pb collisions at $\sqrt{s_{\mathrm{NN}}}=5.02$ TeV. Dijet invariant mass measurements in small systems provide a baseline for dijet studies in Pb–Pb collisions, in which dijet properties can act as sensitive probes of jet quenching in the quark-gluon plasma. For this analysis, charged-particle jets are reconstructed with the resolution parameter R=0.4. Using the excellent low transverse momentum reach of ALICE, the dijet invariant mass spectrum and the nuclear modification factor R_{pA} are presented in a mass range from 75 to 150 GeV/ c^2 , which is the lowest mass range reported to date. The results are compared to different Monte Carlo simulations using nuclear PDFs, which suggest that these measurements probe nuclear matter in the antishadowing regime.

Category

Experiment

Collaboration (if applicable)

ALICE

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