

Energy-energy correlators in p-Pb collisions at 5 TeV with the ALICE experiment

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Energy-energy correlators (EECs) have been proposed to study the structure of energy flow within jets. These functions are defined as the energy-weighted cross-section of particle pairs inside jets. The correlation as a function of pair distance and jet transverse momentum shows a clear separation between the perturbative and non-perturbative regimes, where one can probe the dynamics of the parton shower of quarks and gluons and their subsequent confinement into hadrons. This poster will show the first measurement of 2-point EECs for inclusive jets in p-Pb collisions at 5 TeV from the ALICE experiment. By comparing this result to a p-p baseline, we will discuss sensitivity to cold nuclear matter effects in p-Pb collisions. We can use this to study changes to jet dynamics caused by interactions between color charges and a cold nuclear medium.

Category

Experiment

Collaboration

ALICE

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