

# Energy-energy correlators of inclusive jets from small to large collision systems with the ALICE experiment

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Jet substructure is a powerful tool for performing fundamental QCD tests in elementary particle collisions and offers unique insight into the microscopic structure of the QGP in heavy-ion collisions. Defined as the energy-weighted cross section of particle pairs inside jets, the two-point energy-energy correlator (EEC) is a novel jet substructure observable probing the correlation of energy flow within jets. In pp collisions, the angular dependence of the EEC cross section shows a distinct separation of the perturbative and non-perturbative regimes, revealing the partonic dynamics of jet formation and the confinement of partons into hadrons. There have also been an increasing number of theory studies predicting how the presence of the deconfined medium modifies the EECs with respect to the vacuum results. In this talk, we present the first measurements of the EECs for inclusive jets in p-Pb and Pb-Pb collisions at 5 TeV from the ALICE experiment. By comparing our results to a measured pp baseline, we can study the modifications in jet evolution caused by interactions with both a cold nuclear medium and the quark-gluon plasma.

## Category

Experiment

## Collaboration

ALICE

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