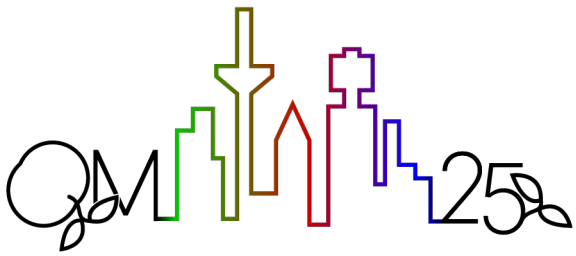

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The first measurement of energy-energy correlator of jets in PbPb collisions at CMS

Thursday 10 April 2025 10:20 (20 minutes)

Energy-energy correlators can isolate physics of different angular scales, which has attracted a lot of interest recently to study it in heavy ion environments. Any modification from proton-proton reference can reveal hints about the inner workings of the quark-gluon plasma. In this presentation, we will present the first measurement of the energy-energy correlator of jets in heavy ion collisions using lead-lead data at 5.02 TeV collected by CMS. We observe significant modifications over the pp reference and discuss the implications of these observations. We also present the possibility of extending to 3-point correlators, accessing a new phase-space for disentangling the varied mechanisms of energy loss resulting from the concurrent evolution of the jet and plasma.

Category

Experiment

Collaboration (if applicable)

CMS

Author: VIINIKAINEN, Jussi (Vanderbilt University (US))

Presenter: VIINIKAINEN, Jussi (Vanderbilt University (US))

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