



Contribution ID: 561

Type: **Oral**

Looking for the dead-cone in heavy-ion collisions with energy correlators (remote)

Tuesday 5 September 2023 09:10 (20 minutes)

In this talk we use the recently introduced energy correlator framework for jet substructure in heavy-ion collisions to show how the radiation pattern of heavy quarks is modified by the presence of the QGP. We present an analytical calculation of the medium-modified 2-point energy correlator of a heavy quark jet determining how the dead-cone is populated by medium-induced radiation. We identify two regimes: the near-massless limit where the deadcone is not affected by the QGP, and the large-mass limit where the in-medium radiation begins to fill the deadcone. This study provides the first illustration of the ability of energy correlators to disentangle complicated competing jet dynamics.

Category

Theory

Collaboration (if applicable)

Primary authors: ANDRES, Carlota (Ecole Polytechnique, CPHT); MARQUET, Cyrille (CPHT - Ecole Polytechnique); DOMINGUEZ, Fabio (IGFAE); MOULT, Ian James; HOLGUIN, Jack (CPHT Ecole Polytechnique)

Presenter: MOULT, Ian James

Session Classification: Jets

Track Classification: Jets