Beitrag ID: **36** Typ: **Talk**

Exploring medium properties with hard transverse momentum splittings using groomed jet substructure measurements in Pb-Pb collisions with ALICE

Dienstag, 28. März 2023 11:10 (20 Minuten)

Jet substructure observables provide unique probes of the properties of the quark-gluon plasma (QGP). In this talk, we report new measurements of groomed jet substructure in central Pb-Pb collisions at $\sqrt{s_{\mathrm{NN}}} = 5.02$ TeV. We present the first application of Dynamical Grooming in heavy-ion collisions to search for excess $k_{\mathrm{T,g}}$ emissions as a signature of point-like scattering, which is sensitive to large-angle scattering of jets off of quasi-particles in the QGP. These results are reported for the first time in central Pb-Pb collisions and over a larger jet p_{T} range than reported previously. Additionally, we present measurements employing both the Soft Drop and Dynamical Grooming algorithms, comparing results in central Pb-Pb, semicentral Pb-Pb, and pp collisions at $\sqrt{s_{\mathrm{NN}}} = 5.02$ TeV. Results with grooming methods and parameters will also be compared. The techniques developed for this measurement are more broadly applicable to jet substructure, which we will explore further in this talk. Comparisons to model calculations will also be discussed.

Experiment/Theory

ALICE

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