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Beitrag ID: 37

Typ: Talk

Observation of medium-induced yield enhancement and acoplanarity broadening of low- p_T jets in pp and Pb-Pb collisions at $\sqrt{s_{NN}}$ = 5.02 TeV with ALICE

Dienstag, 28. März 2023 12:10 (20 Minuten)

The measurement of jets recoiling from a trigger hadron provides unique probes of medium-induced modification of jet production. Jet deflection via multiple soft scatterings with the medium constituents or single-hard Molière scatterings off quasi-particles in the medium are expected to modify the azimuthal correlation between the trigger hadron and recoiling jet. The *R*-dependence of recoil jet yield also probes jet energy loss and intra-jet broadening. In this talk we present measurements of the semi-inclusive distribution of chargedparticle jets recoiling from a trigger hadron in pp and Pb-Pb collisions at $\sqrt{s_{\rm NN}} = 5.02$ TeV. We employ precise, data-driven subtraction of the large uncorrelated background contaminating the measurement in Pb-Pb collisions, enabling the exploration of medium-induced modification of jet production and acoplanarity over a wide phase space, including the low jet $p_{\rm T}$ region for large jet resolution parameter *R*. Hadron-jet acoplanarity in pp collisions will be also presented, which provides a sensitive test of pQCD calculations, as well as a crucial data reference for in-medium jet deflection studies in Pb-Pb collisions. We observe that the jet yield at low $p_{\rm T}$ and at large azimuthal angle between the trigger hadron and jet is significantly enhanced in Pb-Pb collisions with respect to pp collisions. Comparison to theoretical calculations incorporating jet quenching will also be discussed.

Experiment/Theory

ALICE

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Sitzung Einordnung: Parallel: Jets and their modification in QCD Matter

Track Klassifizierung: Jets and their modification in QCD matter