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Typ: Talk

Novel measurements of dijet quenching with ATLAS

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High-energy partons are well established to lose energy when traversing the hot and dense medium produced in heavy-ion collisions. This results in a modification to the transverse momentum distributions of jets, producing a phenomenon known as jet quenching. It has been previously established in Pb+Pb collisions at $\sqrt{s_{NN}} = 2.76$ -TeV that jet quenching leads to significant modifications to the transverse momentum balance of dijet pairs. More differential measurements are needed to better understand the observed phenomenon. In this talk, we report new, fully unfolded measurements of the dijet momentum balance in Pb+Pb and pp collisions at $\sqrt{s_{NN}} = 5.02$ -TeV as well as in Xe+Xe collisions at $\sqrt{s_{NN}} = 5.44$ -TeV. These measurements expand upon previous publications, including the per-event yield of dijets as a function of the momentum balance, which provides insight into the nature of jet quenching. This talk will additionally present a new observable, the dijet pair nuclear modification factors projected along leading and subleading jet transverse momentum, which provides a precise quantification of asymmetric energy loss experienced by dijets.

Experiment/Theory

ATLAS

Affiliation

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

Track Klassifizierung: Jets and their modification in QCD matter