

Quark Matter 2019 - the XXVIIIth International Conference on Ultra-relativistic Nucleus-Nucleus Collisions



Contribution ID: 236

Type: Oral Presentation

Search for jet quenching effects in high multiplicity proton-proton collisions at $\sqrt{s} = 13$ TeV with ALICE

Tuesday 5 November 2019 11:00 (20 minutes)

The ALICE Collaboration reports a search for jet quenching effects in high multiplicity pp collisions at $\sqrt{s} = 13$ TeV, utilizing the semi-inclusive distribution of charged-particle jets recoiling from a high transverse momentum charged-hadron trigger. The multiplicity is measured using forward scintillation detectors that are separated in phase-space from the central region where the trigger and jet are measured. A data-driven statistical method is used to correct for uncorrelated jet background, which includes multi-partonic interactions. This trigger-normalized coincidence approach does not require the association of event activity with collision geometry in order to measure jet quenching, in contrast to inclusive observables, and has been used to set a stringent limit on jet quenching effects in high-multiplicity p-Pb collisions at the LHC. The magnitude of jet quenching is quantified by comparing recoil jet distributions for low and high-multiplicity pp collisions.

Author: JACOBS FOR THE ALICE COLLABORATION, Peter Martin (Lawrence Berkeley National Lab. (US))

Presenter: JACOBS FOR THE ALICE COLLABORATION, Peter Martin (Lawrence Berkeley National Lab. (US))

Session Classification: Parallel Session - Small systems II

Track Classification: Small systems