

10th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



Contribution ID: 45

Type: Oral Presentation

Measurement of jet structure and substructure in heavy ion collisions with ATLAS

Wednesday 3 June 2020 10:30 (20 minutes)

Measurement of jet structure in heavy-ion collisions allows studying properties of the hot and dense QCD medium created in these collisions and the mechanism of the jet quenching. This talk presents the latest ATLAS measurements of the internal structure of jets to better constrain the modifications of the parton showering process. A new measurement of how the suppression of large-radius jets depends on the internal jet structure characterized by the transverse momentum scale for the hardest splitting will be presented. This measurement brings new information about the evolution of the parton shower in the medium and tests the sensitivity of the jet quenching to color coherence effects. Furthermore, a measurement of the angular distribution of charged particles around the jet axis in Pb+Pb and pp collisions at $\sqrt{s_{NN}} = 5.02$ TeV will be presented. This measurement is performed for jets with radius parameter $R = 0.4$ but is extended for particles outside the jet cone to a radial distance of 0.8.

Collaboration (if applicable)

ATLAS

Track

Jets and High Momentum Hadrons

Contribution type

Contributed Talk

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Session Classification: Parallel

Track Classification: Jets and High Momentum Hadrons