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Exploring jet sub-structure in Pb-Pb collisions at 2.76 TeV with ALICE

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We explore the possible modification of the inclusive charged jet substructure due to jet quenching in Pb-Pb collisions at 2.76 TeV by measuring a set of jet shapes. The set of shapes includes the first order angularity, the pTD and the difference between the leading and subleading tracks of the jet. The shapes are measured with a constituent cutoff of 0.15 GeV and small jet resolution R = 0.2. New techniques for background subtraction are applied and a 2D unfolding is performed to correct the shapes to particle level. We further present differential studies of jet suppression measured via full jet R_{AA} as function of sub-jet structure. We systematically study the jet R_{AA} by selecting jets with different sub-jet structure (using collinear and infrared safe observable(s) that are robust against heavy-ion background) and present comparison to a variety of jet quenching Monte Carlo models.

On behalf of collaboration:

ALICE

Primary author: CUNQUEIRO MENDEZ, Leticia (CERN)Presenter: CUNQUEIRO MENDEZ, Leticia (CERN)Session Classification: Jets and High pT Hadrons II

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