

Measurements of jet spectra and jet-particle correlations with CMS

Monday, 21 August 2017 15:00 (30 minutes)

Jet production has long been used as a probe for the hot and dense medium created in collisions of heavy ions at the LHC. As jets traverse the medium, they are expected to lose energy through radiative and collisional processes. These mechanisms are thought to be responsible for the observed suppression of high- p_T hadron and jet production, a phenomenon known as “jet quenching”. Recent measurements from CMS have shown that observations of jet energy loss in dijet systems is somewhat obfuscated due to varying energy loss magnitudes between leading and subleading jets. By measuring correlations of jets and tracks in a variety of dimensions, information regarding jet energy loss, jet broadening, and particle production can be obtained. We observe substantial modification of jet structure in Pb+Pb collisions relative to pp collisions out to very large distances from the jet axis, as well as differences in energy loss for both leading and subleading jets.

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Session Classification: Workshop session