

Measurement of jet fragmentation functions and shapes in PbPb collisions at $\sqrt{s_{NN}}=2.76\text{TeV}$ with CMS

Monday, 4 November 2013 13:50 (20 minutes)

We present measurements of the jet fragmentation functions and transverse momentum profiles (shapes) in PbPb collisions at 2.76 TeV per nucleon-pair center of mass energy with the CMS detector. Jets are reconstructed by the anti-kT sequential clustering algorithm with a resolution parameter of 0.3, using particle-flow objects that combine tracking and calorimetric information. In this talk the jet properties of inclusive jets with transverse momentum $p_T > 100$ GeV/c in PbPb collisions are measured for reconstructed charged particles with $p_T > 1$ GeV/c in a cone of radius $\sqrt{(\Delta\phi)^2 + (\Delta\eta)^2} = 0.3$ around the jet axis. A data sample of PbPb collisions collected in 2011 at a center-of-mass energy of $\sqrt{s_{NN}} = 2.76$ TeV corresponding to an integrated luminosity of $150 \mu\text{b}^{-1}$ is used. The results for PbPb collisions as a function of collision centrality are compared to reference distributions based on the full 2013 pp statistics collected at the same collision energy. Centrality-dependent modifications of the fragmentation functions and shapes are revealed.

Primary author: Dr MAO, Yaxian (Vanderbilt University)

Presenter: Dr MAO, Yaxian (Vanderbilt University)

Session Classification: Jet Quenching and Observables

Track Classification: Jet Quenching and Observables