

Jet Fragmentation in p+p, p+Pb and Pb+Pb at ATLAS

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Jets are an important tool to study the hot, dense matter produced in Pb+Pb collisions at the LHC. Due to the loss of some of the jet's energy outside the jet cone, jet rates have been found to be reduced by approximately a factor of two, in the most central events and over a wide kinematic range. In order to understand precisely how the jets are modified, it is important to measure how the jet momentum is carried by its fragmentation products. The longitudinal momentum fraction of charged particles in jets from Pb+Pb, p+Pb, and p+p collisions have been measured using the ATLAS detector. Proton-proton and p+Pb collisions provide necessary baseline measurements for quantifying the modifications in Pb+Pb collisions. In Run 1, ATLAS collected samples of p+p and Pb+Pb collisions at a center of mass energy of 2.76 TeV and a sample of p+Pb collisions at 5.02 TeV. In Run 2, large samples of p+p and Pb+Pb collisions at 5.02 TeV have been collected providing a complete set of collision systems at 5.02 TeV. In this talk, we present the status of fragmentation function measurements at 5.02 TeV in the context of detailed studies of the fragmentation in p+p and Pb+Pb collisions at 2.76 TeV.

Preferred Track

Jets and High pT Hadrons

Collaboration

ATLAS

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