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Measurements of Jets and Jet Properties in sqrt(s_NN)=2.76 TeV PbPb Collisions with the ATLAS Detector at the LHC

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Jet quenching in the hot and dense medium created in ultra-relativistic heavy ion collisions is a well-established experimental phenomenon at RHIC. It has long been anticipated that the LHC heavy ion program would substantially advance the study of jet quenching by providing access to highly energetic jets and by measuring fully-reconstructed jets. Immediately following turn-on of the LHC in November, 2010, that expectation was fulfilled through the observation of large di-jet asymmetries that may indicate substantial jet quenching. In this talk we will present recent results from ATLAS aimed to provide further understanding of this phenomenon. Measurements of single jet production, di-jet correlations and jet fragmentation in Pb+Pb collisions at $\sqrt{s_{NN}} = 2.76$~TeV will be presented. In addition to measurements from the 2010 data, results using the full 2011 run will also be presented, benefiting from a factor of 20 improvement in statistics.

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