

Abstract Submitted  
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**Jet Shape Analysis for  $\sqrt{s_{NN}} = 2.76$  TeV Pb+Pb collisions using the ATLAS Detector at LHC** RYAN MANDELBAUM, Columbia University, ATLAS COLLABORATION — Observations of strongly modified dijet asymmetry distributions in Pb+Pb collisions at the LHC indicate significant quenching of jets in the hot dense medium created in the collisions. Other measurements suggest that the energy lost by the jets appears in particles at large angles with respect to the jet axis, contrary to expectations based on radiative energy loss calculations. This conclusion can be tested using measurements of jet shapes which provide direct sensitivity to the angular distribution of energy within jets and which can probe the angular distribution of medium-induced radiation. ATLAS has measured jet shapes in Pb+Pb collisions at 2.76 TeV using data collected in 2011 corresponding to an integrated luminosity of approximately  $140 \mu\text{b}^{-1}$ . Jets were reconstructed using the anti-kt algorithm with distance parameters,  $R = 0.2$  and  $0.4$ . Results will be presented for differential jet shapes and distributions of energy as a function of  $\Delta\eta$  and  $\Delta\phi$  with respect to the jet axis. The evolution of the jet shapes with collision centrality will be evaluated.

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