

Abstract Submitted  
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**Jet studies in preparation for ATLAS: from pp to heavy ion collisions** ARTHUR MORAES, BNL, ATLAS COLLABORATION — The Large Hadron Collider (LHC) will collide protons at centre-of-mass energies many times greater than any sub-atomic particle collision ever performed in laboratory and will also run a variety of ion beams, thus providing proton-ion and ion-ion collisions. Designed to perform very precise measurements at the LHC, the ATLAS detector will play a key role in revealing the most interesting and complicated features of proton-proton, proton-nucleus and nucleus-nucleus collisions at the LHC. Understanding the structure of jets will be of fundamental importance in the identification of the Higgs and Supersymmetry in proton collisions, as well as a variety of other new physics phenomena in heavy ion collisions such as jet quenching. The ATLAS calorimeter is particularly well designed and should allow excellent jet energy and profile measurements. This talk focuses on jet studies in preparation for heavy ion collisions at ATLAS. Predictions for jet distributions in proton-proton collisions will also be shown and used to provide insights into the measurement of new physics signatures in heavy ion collisions.

Arthur Moraes  
BNL

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