

Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Measurement of Double-Differential Jet Cross Section in pp Collisions at $\sqrt{s} = 5$ TeV with the CMS Detector OWEN BARON, Univ of Maryland-College Park, IAN LAFLOTTE, RAGHAV KUNNAWALKAM ELAYAVALLI, SEVIL SALUR, Rutgers, the State University of New Jersey, JOHN STROLOGAS, University of Ioannina, THE CMS COLLABORATION — Jets are highly collimated particle showers arising predominantly from hard parton scattering, such as in proton-proton collisions at the LHC. Jet measurements are a significant tool for exploring the strong coupling constant in different kinematic regions and for refining Parton Distribution Functions (PDFs). In addition, jets from proton-proton collisions are compared with those from heavy ion collisions in order to explore the differences between initial and final state effects of nuclear matter. Comparing the observed behavior of jets that have transversed the Quark-Gluon Plasma (QGP) to those from pp-collisions provides insight into the nature of this hot nuclear medium. We present preliminary results of the double-differential jet cross section from 5-TeV proton-proton collisions at the LHC using reconstructed anti- k_T Particle Flow jets at $\sqrt{s} = 5$ TeV center-of-mass energy recorded by the CMS detector. The cross sections are extended to low values of jet transverse momenta and cover a range of pseudorapidities.

Owen Baron
Univ of Maryland-College Park

Date submitted: 10 Jan 2018

Electronic form version 1.4