ID de Contribution: **56** Type: **YSF (Young Scientists Forum)**

Jet Particology - Studying the Structure of Jets with the CMS Particle Flow Algorithm

dimanche 19 mars 2017 20:06 (5 minutes)

Precision measurements of jets is becoming more and more important in high-energy physics as jets are ubiquitous in LHC collision events. Jet energy corrections are one of the dominant sources of systematic uncertainties and improvements in jet calibration directly improve the accuracy of the bulk of CMS physics analyses. By the virtue of the Particle Flow (PF) event reconstruction algorithm we are able to distinguish different particle types in the collisions and thus can study also jets in the particle level. Studying the particle composition of jets gives a tool for improving jet calibration in sub-detector level and can also be used for testing the validity of QCD Monte Carlo (MC) simulations by direct data-to-MC comparisons. We present the latest results from CMS jet energy composition studies and show the remarkable agreement between LHC collision data and Pythia+Geant4 simulation.

Author: M. PEKKANEN, Juska (University of Helsinki)

Orateur: M. PEKKANEN, Juska (University of Helsinki)

Classification de Session: YSF1

Classification de thématique: Experiment