

Abstract Submitted  
for the APR15 Meeting of  
The American Physical Society

**Simulation Studies of the DCAL Performance for the ALICE Experiment at the LHC** RYAN GOODE, NIYA TAYLOR, AUSTIN HARTON, EDMUNDO GARCIA-SOLIS, Chicago State University — The European Center for Nuclear Research (CERN) is a global laboratory that studies proton and heavy ion collisions at the Large Hadron Collider (LHC). ALICE (A Large Ion Collider Experiment) is one of the four large experiments of the LHC. ALICE is dedicated to the study of the transition of matter to Quark Gluon Plasma in heavy ion collisions. The main upgrade activity on ALICE during LHC's Long Shutdown 1 was the installation of the Dijet Calorimeter (DCAL) [1], an extension of the existing Electromagnetic Calorimeter system (EMCAL) that adds 67 degrees of azimuthal acceptance opposite to the existing 107 degrees of the EMCAL's acceptance. In this presentation, we describe the DCAL and we show some results of the performance simulation study that will help for commissioning this detector during the next run period of the LHC. This material is based upon work supported by the National Science Foundation under grants PHY-1305280 and PHY-1407051.

[1] CERN-LHCC-2010-011; ALICE-TDR-14-add-1

Edmundo Garcia-Solis  
Chicago State University

Date submitted: 20 Dec 2014

Electronic form version 1.4