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Electron Identification for Jet Finding Algorithms in ALICE

BRANDON BOSWELL, CHRISTOPHER BROWN, J.L. KLAY, California Polytechnic State University, San Luis Obispo, ALICE COLLABORATION — Particle jets emitted by heavy ion collisions in the ALICE experiment at the LHC can be measured with jet-finding algorithms that have been adapted to account for the large heavy ion backgrounds. Energy hits collected from the Electromagnetic Calorimeter (EMCAL) are coupled with tracks from the Time Projection Chamber (TPC) to identify jets. By comparing the properties of jets in Pb+Pb to those found in p+p collisions we can study the energy lost by partons before they fragment into jets. In order to study the color, flavor and mass dependence of partonic interactions within a quark gluon plasma, we must isolate jets that have been created by heavy quarks. These fragment to heavy mesons that through semi-leptonic decay can produce high p_T electrons within the jets. We have combined the ALICE JetFinder with the electron identification from the EMCAL+TPC to try to tag heavy quark jets. This poster will present the status of our analysis of heavy quark jets produced in PYTHIA and HIJING simulations within the ALICE software framework, AliRoot.

Christopher Brown
California Polytechnic State University, San Luis Obispo

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