Identifying non-photonic electrons in Pb+Pb collisions with ALICE at the LHC

CHRISTOPHER BROWN, California Polytechnic State University, San Luis Obispo — One useful method for probing a quark-gluon plasma is through analysis of partonic energy loss, which is a direct indicator of the color charge density of the plasma medium. Electrons coming from the decays of heavy quarks, the so-called “non-photonic” electrons, should be sensitive to the differences in partonic energy loss for heavy and light quarks, and yet observations at RHIC suggest that they are as suppressed as light hadrons. This talk will overview the capabilities of the ALICE Experiment at CERN to detect non-photonic electrons, particularly emphasizing the performance of the Electromagnetic Calorimeter (EM-Cal), which will be used to investigate the flavor-dependence of partonic energy loss in Pb+Pb collisions at the LHC.

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