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# Performance of ALICE EMCal and DCal in Electron Identification

A Large Ion Collider Experiment (ALICE) is a major experiment at the Large Hadron Collider (LHC) at CERN. It is specifically designed to investigate the Quark-Gluon Plasma (QGP), a state of matter in which quarks and gluons are momentarily deconfined. The QGP is short-lived, and must therefore be studied indirectly by identifying the final-state particles produced in heavy-ion collisions. The final-state particle of interest in this poster is the electron. Electrons must be identified to study, for instance, the semi-leptonic decay channels of heavy-flavor hadrons. Because heavy-flavor quarks are created early in the collision, they travel and interact with the QCD medium. This makes them an important probe of the QGP.

One of the detectors important in identifying electrons is the Electromagnetic Calorimeter (EMCal). The ALICE

The energy loss and shower shape parameters in the EMCal can be used to distinguish electrons from hadrons. Thes

## Preferred Track

Future Experimental Facilities, Upgrades, and Instrumentation

## Collaboration

ALICE

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