

A Common Readout System for the sPHENIX Electromagnetic and Hadronic Calorimeters

sPHENIX is the next generation detector at the Relativistic Heavy Ion Collider (RHIC) designed to explore the properties of the quark-gluon plasma through measurements of jet properties and upsilon spectroscopy. The detector consists of a 1.5T superconducting solenoid, tracking, electromagnetic and hadronic calorimeter with a high speed data acquisition system. The calorimeters use a common readout design based on Silicon Photo-Multiplier (SiPMs) as the optical sensors with the continuous digitization of the analog signals. We will present the design requirements and technology choices, along with preliminary performance results from prototype testing at the Fermilab Test Beam Facility as part of experiment T-1044.

Preferred Track

Future Experimental Facilities, Upgrades, and Instrumentation

Collaboration

sPHENIX

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