

Design and test-beam performance of the sPHENIX calorimeter system

The sPHENIX Collaboration at RHIC is planning a major upgrade to the PHENIX experiment by constructing an entirely new spectrometer based on the former BaBar solenoid magnet that will enable a comprehensive study of jets and heavy quarkonia in relativistic heavy ion collisions. The calorimeter system of the sPHENIX experiment will cover an acceptance of ± 1.1 units in pseudorapidity and full azimuth with a tungsten-scintillating fiber electromagnetic calorimeter, surrounded by two layers of steel-scintillator sampling hadronic calorimeters. The first prototype of this integrated calorimeter system has been tested at Fermilab in April of 2016, while the second prototype is taking data in early 2017. Design considerations, test beam results and performance projection for the sPHENIX calorimeter system will be presented in this talk.

Preferred Track

Future Experimental Facilities, Upgrades, and Instrumentation

Collaboration

sPHENIX

Primary author: Dr HUANG, Jin (Brookhaven National Lab)

Presenter: Dr HUANG, Jin (Brookhaven National Lab)

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